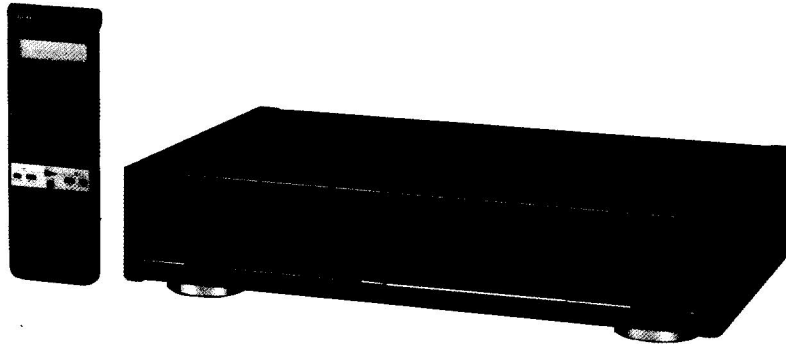


EV-S1000B

RMT-451

SERVICE MANUAL

French Model



Hi8

U' MECHANISM

For Mechanical ADJUSTMENTS, refer to the "8 mm Video MECHANICAL ADJUSTMENT MANUAL III" (9-972-732-11)

The electrical and mechanical specifications of EV-S1000B are about the same as those of EV-S1000E AEP, UK Model.

This manual contains only the points which differ from EV-S1000E AEP, UK Model.

Please refer to the EV-S1000E AEP, UK Model Service Manual (9-972-889-11) for the related information not contained in this manual.

• MAINLY ELECTRICAL DIFFERENCE

☐ : The Same Contents

Description	Model	EV-S1000B French Model	EV-S1000E AEP Model	EV-S1000E UK Model	Pages on EV-S1000E Service Manual
PS-196 BOARD, COMPLETE	A-7061-815-A	A-7061-815-A	A-7061-815-A	A-7061-898-A	107 - 171 181 - 182
DS-35 BOARD, COMPLETE	A-7061-892-A	A-7061-892-A	A-7061-816-A	A-7061-892-A	144 - 156
FL-24 BOARD, COMPLETE	A-7061-893-A	A-7061-893-A	A-7061-811-A	A-7062-055-A	175 - 176 179 - 180
TU-100 BOARD, COMPLETE	A-7061-894-A	A-7061-894-A	A-7061-814-A	A-7061-897-A	167 - 170
FE-17 BOARD, COMPLETE	A-7061-895-A	A-7061-895-A	-	-	-
NM-2 BOARD, COMPLETE	-	-	-	A-7061-899-A	171 - 172
YC-64 BOARD, COMPLETE	A-7061-900-A	A-7061-900-A	A-7061-900-A	A-7061-896-A	129 - 133

• SERVICE OF REMOTE COMMANDER RMT-451

Remote commander RMT-451 is available as a unit. But as individual parts the battery case lid of commander is only available.

8 STEREO VIDEO CASSETTE RECORDER

SONY®



SPECIFICATIONS

Système

Système d'enregistrement vidéo	Système FM à balayage hélicoïdal par deux têtes rotatives
Système d'enregistrement audio (Enregistrement normal)	Standard: Système FM à tête rotative (2 canaux) PCM: Système PCM (2 canaux) Système CCIR, PAL
Système couleur	Couleur DDR SECAM à PAL, convertible
Cassettes utilisables	Cassettes du format vidéo 8 mm
Vitesse de bande	SP: 20,051 mm/sec. LP: 10,058 mm/sec.
Durée maximale d'enregistrement/lecture	SP: 1 h 30 min. (avec Sony E5/P5-90) LP: 3 h (avec Sony E5/P5-90)
Durée d'avance rapide/rebobinage	Env. 4 min. (avec Sony E5/P5-90)

Modulation de impulsions codées (PCM)

Fréquence d'échantillonnage	31,25 kHz
Fréquence audio	De 20 Hz à 15 kHz
Plage dynamique	Plus de 90 dB
Pleurage et scintillement	Moins de 0,005% RMS

Sortie

Couverture des canaux	Système B/G: VHF E2 à E4, E5 à E12 UHF E21 à E69 Canaux de télévision par câble S3 à S20 Système L: VHF F2 à F4, F5 à F10 UHF F21 à F69 Canaux de télévision par câble (B) à Q
Système de programmation	60 programmes
Signal de sortie haute fréquence	Canaux UHF E30 — E39 (variable) 75 ohms, asymétrique
Entrée d'antenne	75 ohms, prise d'antenne asymétrique

Entrées et sorties

LINE IN 1/2	VIDEO: Prise coaxiale phono (1 chaque) 1 Vc-c, 75 ohms, asymétrique, sync négative AUDIO: Prise coaxiale phono (2 chaque) 47 kilohms, -7,5 dBs (0 dBs = 0,775 V rms) S VIDEO: Prise mini DIN à 4 broches (1 chaque) Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative Signal de chrominance: 0,3 Vc-c, 75 ohms, asymétrique
LINE OUT	VIDEO: Prise coaxiale phono (1) 1 Vc-c, 75 ohms, asymétrique, sync négative AUDIO: Prise coaxiale phono (2 chaque) Impédance de sortie inférieure à 1 kilohm, -7,5 dBs avec charge 10 kilohms, asymétrique S VIDEO: Prise mini DIN à 4 broches (1) Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative Signal de chrominance: 0,3 Vc-c, 75 ohms, asymétrique
MONITOR OUT	EURO-AV: 21 broches (1) Sortie vidéo; broche 19 1 Vc-c, 75 ohms, asymétrique, sync négative (avec commande de changement) Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative Signal de chrominance: broche 15 0,3 Vc-c, 75 ohms, asymétrique Sortie audio: broches 1 et 3 Impédance de sortie: Moins de 1 kilohm, -6 dBs avec charge 10 kilohms, asymétrique S VIDEO: Prise mini DIN à 4 broches Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative Signal de chrominance: 0,3 Vc-c, 75 ohms, asymétrique

C+IN/OUT	<p>Entrée vidéo: 7 broches DIN (broche 5) 1 Vc-c, 75 ohms, asymétrique, sync négative</p> <p>Sortie vidéo: Prise DIN à 7 broches (broche 7) 1 Vc-c, 75 ohms, asymétrique, sync négative</p> <p>Entrée audio: Prise DIN à 7 broches (broche 4) 47 kohms, -6 dBs (0dBs=0,775 efficace)</p> <p>Sortie audio: Prise DIN à 7 broches (broche 6) Impédance de sortie moins de 1 kohm, -6 dBs avec charge de 10 kohms, asymétrique</p>
CONTROL L (LANC):	<p>Panneau arrière: Prise DIN à 5 broches (1)</p> <p>Panneau avant: Prise stéréo mini-mini format (1)</p>
Prise casque (HEADPHONES):	Prise stéréo mini format (1) -20 dBs, 8 ohms
Entrée microphone (MIC):	Prise mini format (1) -60 dBs, pour microphone à faible impédance

Section minuterie

Horloge	Verrouillage par cristal
Mode de commande	Magnétoscope 1/2/3
Indication horaire	Par cycle de 24 heures
Réglage horaire	Seulement pour enregistrement de 6 programmes par mois maximum
Protection minuterie	Par capaciteur à auto-recharge incorporé Durée de protection: Jusqu'à 1 heure à la fois

Données générales

Alimentation	Secteur 220 V, 50 Hz
Consommation	28 W
Température d'exploitation	De 5 à 40°C (de 41 à 104°F)
Température d'entreposage	De -20 à 60°C (de -4 à 140°F)
Dimensions	470 x 101 x 305 mm (l/h/p) (18 5/8 x 4 x 12 1/8 pouces) (panneaux latéraux en bois compris)
Poids	6,5 kg (14 liv. 5 on.)

Télécommande sans fil RMT-451

Système de contrôle	Par infrarouge
Alimentation	Courant continu 3,0 V, deux piles R6 selon la désignation IEC
Mode de commande	Magnétoscope 1/2/3
Dimensions hors tout	Env. 77 x 18 x 220 mm (l/h/p) (3 1/8 x 3/4 x 8 3/4 pouces)
Poids	170 g (5 on.) sans les piles

Accessoires fournis

Télécommande sans fil RMT-451 avec 2 piles R6	(1)
Câble coaxial 75 ohms	(1)
Câble de raccordement audio (2 phono à 2 phono)	(1)
Câble de raccordement vidéo (phono à phono)	(1)
Câble de raccordement vidéo pour connecteur S VIDEO (DIN 4 broches à DIN 4 broches)	(1)
Câble de contrôle (prise stéréo mini-mini format à prise stéréo mini-mini format)	(1)
Tournevis	(1)
Cassette de nettoyage	(1)

La conception et les spécifications peuvent être modifiées sans préavis.

Remarque



Cet appareil est conforme à la Directive 87/308/EEC de la CEE en ce qui concerne la suppression des interférences.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!


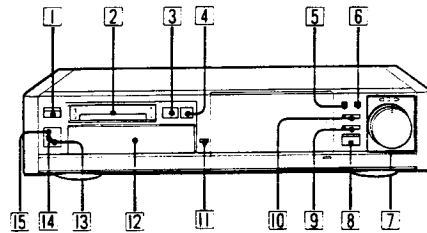
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS

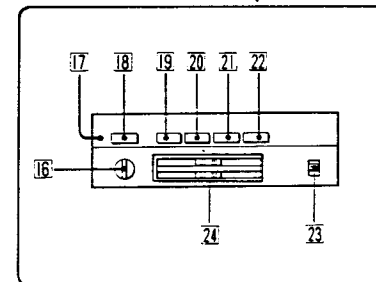
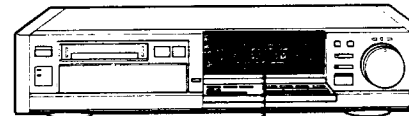
<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	GENERAL		4.	PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM	
	Nomenclature	5	4-1.	Frame Schematic Diagram	62
	Connexions	9	4-2.	Printed Wiring Boards and Schematic Diagram	65
	Exploitation télécommandée	11		TU-100 Board	65
	La système Menu	12		FE-17 Board	69
	Réglage de la date et de l'horloge	14		FL-24 Board	72
	Ajustement du téléviseur	14	5.	EXPLODED VIEWS	
	Préréglage des canaux actifs	15			
	Réglage du mode	17			
	Maniement des cassettes vidéo	19			
	Lecture	20			
	Enregistrement dim programme télévisé	26			
	Réglage du niveau d'enregistrement	28			
	Enregistrement déclenché par minuterie	29			
	Enregistrement instantané par minuterie	33			
	Utilisation du compteur de bande	34			
	Fonction d'indexation	35			
	Avant le montage	37			
	Montage de base	39			
	Montage synchronisé	40			
	Montage par insertion	43			
	Montage manuel par assemblage	44			
	Montage manuel par insertion	45			
	Copie audio	46			
	Le système vidéo Hi8 (High Eight)	47			
2.	DISASSEMBLY				
2-1.	Removal of RJ-5, RJ-6, FE-17, Rear Frame, and RF Modulator	48			
3.	DIAGRAMS				
3-1.	Circuit Boards Location	50			
3-2.	Overall Block Diagram	51			
3-3.	Timer/Tuner Control Peripheral Circuit Interface (IC005 on FL-24 Board)	55			
3-4.	Control Display Block Diagram	57			
3-5.	Tuner Block Diagram	59			

Nomenclature

Panneau avant



- 1 Interrupteur de mise sous tension/attente (ON/STANDBY)
- 2 Logement de cassette
- 3 Touche d'éjection (± EJECT)
- 4 Témoin d'enregistrement/lecture Hi8
Il s'allume pour signaler que l'enregistrement ou la lecture Hi8 est possible.
- 5 Touche de contrôle de lecteur (PLAYER)
- 6 Touche de contrôle d'enregistreur (RECORDER)
- 7 Bague et témoin de montage à navette (arrière/avant) (EDIT SHUTTLE - REVERSE/FORWARD)
- 8 Touche et témoin de montage synchronisé (SYNCHRO EDIT)
- 9 Touche et témoin d'attente de montage (EDIT STANDBY)
- 10 Touche et témoin de surveillance de montage (EDIT MONITOR)
- 11 Poussoir d'ouverture (PUSH OPEN)
- 12 Panneau d'affichage
- 13 Capteur de télécommande
- 14 Témoin stéréo haute fidélité (HI-FI STEREO)
Il s'allume à la lecture d'une piste audio Hi-Fi, enregistrée en mode bilingue ou stéréo. Il s'allume aussi quand l'enregistrement s'accomplit en mode stéréo ou bilingue sur la piste Hi-Fi.
- 15 Témoin de son numérique (PCM)
Il s'allume à l'enregistrement ou à la lecture de la piste audio PCM.

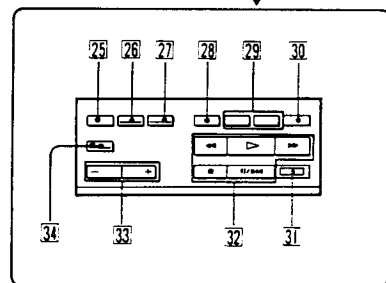
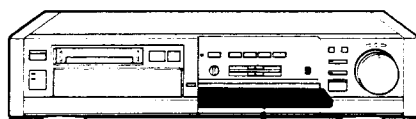


- 16 Réglage du niveau au casque (PHONE LEVEL)
- 17 Touche de réinitialisation
Appuyer sur cette touche avec un objet pointu, comme un stylo à bille, si le magnéscope ne fonctionne pas même quand les touches d'exploitation sont enclenchées. Lorsque cette touche est enfoncée, les informations de la mémoire sont effacées. Avant de remettre le magnéscope en service, procéder à une réinitialisation des informations.
- 18 Touche de mode Hi8
- 19 Touche de remise à zéro du compteur (COUNTER RESET)
- 20 Touche d'antenne TV/magnéscope (TV/VTR)
- 21 Touche de mode d'enregistrement (REC MODE SPLP)
- 22 Sélecteur d'entrée (INPUT SELECT)
- 23 Sélecteur de surveillance du son (AUDIO MONITOR)
[PCM/MIX/STD (HI-FI)]
- 24 Réglages du niveau d'enregistrement (REC LEVEL)

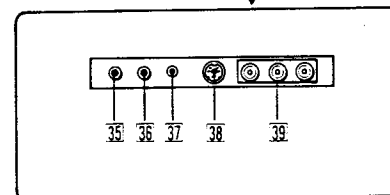
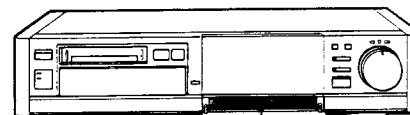
This section is extracted from instruction manual.

SECTION 1 GENERAL

Nomenclature

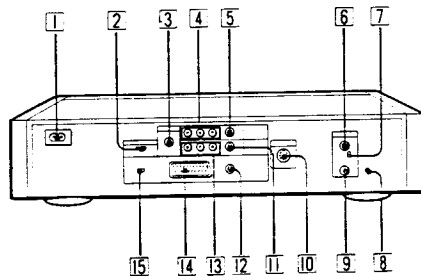


- 25 Touche de vérification de minuterie (TIMER CHECK)
- 26 Touche de mise en marche/arrêt d'enregistrement par minuterie (TIMER REC ON/OFF)
- 27 Touche d'enregistrement instantané par minuterie (QUICK TIMER)
- 28 Touche d'indexation (INDEX)
- 29 Touches de marquage/effacement d'index (INDEX MARK/ERASE)
- 30 Touche de montage (EDIT)
- 31 Touche d'enregistrement (• REC)
- 32 Touches de transport de bande
←← REW (rebobinage), ▷ PLAY (lecture), ▷ FF (avance rapide), ■ STOP (arrêt), ||| PAUSE/STILL (pause/image fixe)
- 33 Touches de programme (PROGRAM +/-)
- 34 Touche et témoin de copie sonore (AUDIO DUB)



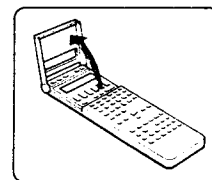
- 35 Prise de casque (HEADPHONES) (prise stéréo mini format)
- 36 Prise de microphone (MIC) (prise mini format)
- 37 Prise de contrôle L (CONTROL L) (LANC) (prise stéréo mini-mini format)
- 38 Connecteur d'entrée de ligne vidéo 2 S (LINE IN 2 S VIDEO) (4 broches mini DIN)
- 39 Connecteurs d'entrée de ligne vidéo/audio 2 (LINE IN 2 VIDEO/AUDIO) (prise coaxiale phono)
Lors du branchement d'un équipement monaural sur ces prises, utiliser uniquement la prise LINE IN 2 AUDIO L (MONO).

A propos du connecteur LANC
Le sigle "LANC" indique le "système à bus de contrôle pour application locale". Le connecteur LANC s'emploie pour contrôler le transport de la bande d'un appareil vidéo et de périphériques qui lui sont raccordés. Ce connecteur remplit la même fonction que les connecteurs, appelés CONTROL L et REMOTE.



Panneau arrière

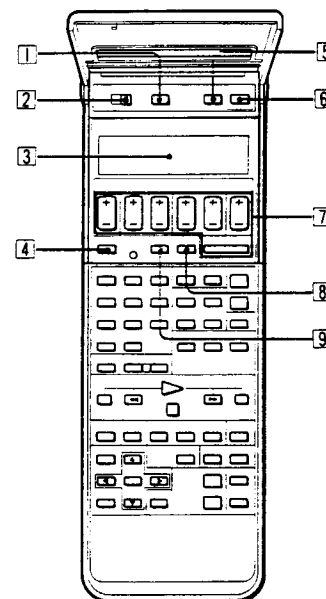
- 1 Prise d'entrée secteur (AC INPUT)
- 2 Sélecteur de mode de commande (COMMAND MODE)
- 3 Connecteur de contrôle (CONTROL L LANC) (5 broches DIN)
- 4 Prises d'entrée de ligne vidéo/audio 1 (LINE IN 1 VIDEO/AUDIO) (prises coaxiales phono)
- 5 Connecteur d'entrée de ligne vidéo 1 S (LINE IN 1 S VIDEO) (4 broches mini DIN)
- 6 Prise d'entrée d'antenne (AERIAL IN)
- 7 Sélecteur distant/local (DX/LOCAL)
- 8 Vis de canal haute fréquence (RF CHANNEL) (Canaux 30 à 39)
- 9 Prise de sortie d'antenne (AERIAL OUT)
- 10 Connecteur d'entrée/sortie de CANAL PLUS (C+ IN/OUT) (7 broches DIN)
- 11 Connecteur de sortie de ligne S vidéo (LINE OUT S VIDEO) (4 broches mini DIN)
- 12 Connecteur de sortie de contrôle S vidéo (MONITOR OUT S VIDEO) (4 broches mini DIN)
- 13 Prises de sortie de ligne vidéo/audio (LINE OUT VIDEO/AUDIO) (prises coaxiales phono)
- 14 Connecteur de sortie de surveillance (MONITOR OUT EURO-AV) (21 broches CENELEC)
- 15 Sélecteur de sortie vidéo (VIDEO OUT) (VIDEO ou S VIDEO)



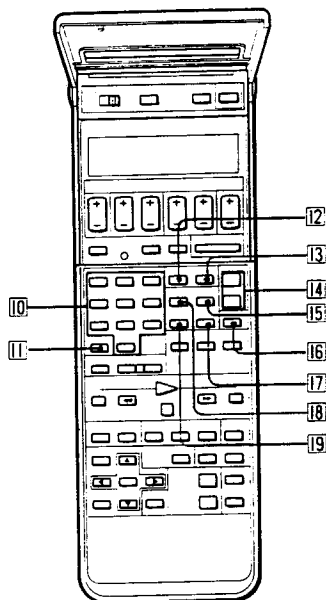
Télécommande RMT-451

Avant la mise en service

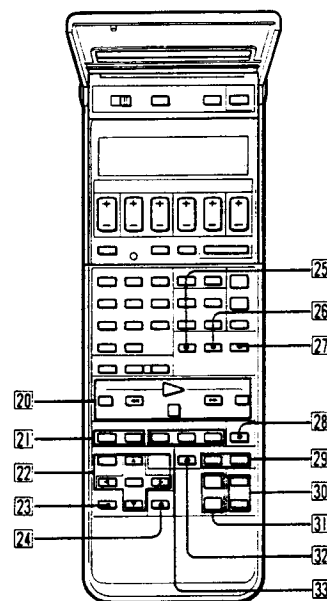
- Les touches de la télécommande, portant le même nom ou le même symbole que celles de l'appareil, remplissent la même fonction.
- Les touches sur le dessus desquelles est inscrit un point rouge peuvent servir à contrôler un téléviseur Sony portant la marque , pourvu que le sélecteur de télécommande TV/VTR soit réglé sur TV.
- Laisser le couvercle supérieur fermé, sauf quand il est indiqué de l'ouvrir.



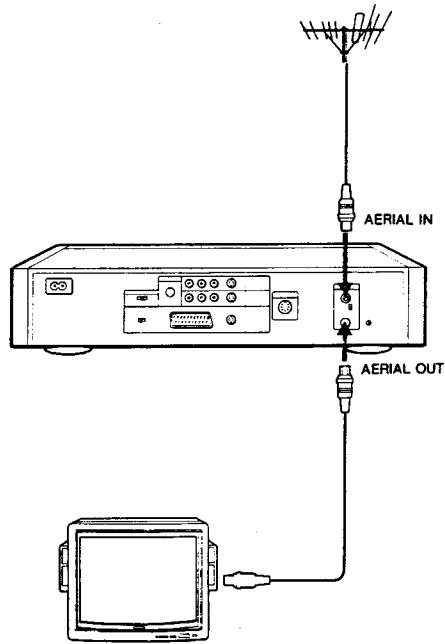
- 1 Touche de mise en marche/arrêt d'enregistrement par minuterie (TIMER REC ON/OFF)
- 2 Sélecteur de télécommande de téléviseur/magnétoscope (TV/VTR)
Le régler sur VTR pour contrôler à distance ce magnétoscope ou sur TV pour contrôler le téléviseur.
- 3 Affichage par cristaux liquides
- 4 Touche de mode commande (COMMAND MODE)
- 5 Sélecteur de téléviseur/magnétoscope (TV/VTR)
- 6 Touche de mise sous tension/attente (⏻)
- 7 Touches de réglage d'enregistrement par minuterie/horloge
 - Jour (DAY)
 - Moment de mise en marche (TURN ON)
 - Moment de mise à l'arrêt (TURN OFF)
 - Position de programme (PROG)
 - Transmission des instructions (TRANSMIT)
- 8 Touche de mémorisation (MEMORY)
- 9 Touche de réglage d'horloge (CLOCK SET/START)



- 10** **Touches numériques de position de programme**
Appuyer pour choisir directement la position de programme. Pour entrer les chiffres des unités, appuyer sur 0, puis sur le numéro souhaité.
- 11** **Touche des dizaines (- / -)**
Appuyer pour choisir un numéro de position de programme supérieur à 9. Pour choisir 23, par exemple, appuyer sur - / -, puis sur 2 et 3.
- 12** **Sélecteur d'entrée (INPUT SELECT)**
Ouvrir le couvercle pour choisir le signal d'entrée pour l'enregistrement déclenché par minuterie. Refermer le couvercle pour changer le réglage d'entrée actuel.
- 13** **Sélecteur de mode d'enregistrement (REC MODE)**
- 14** **Touches de programme (PROG +/-)**
- 15** **Touche de programme principal/auxiliaire (MAINSUB)**
- 16** **Touche d'indexation (INDEX)**
- 17** **Touche de remise à zéro du compteur (COUNTER RESET)**
- 18** **Touche d'écran de données (DATA SCREEN)**
- 19** **Touche de surveillance de montage (EDIT MONITOR)**



- 20** **Touches d'exploitation de base**
Touche de pause (II PAUSE)
Touche d'enregistrement (● REC)
Touche de recherche (⏪ / ⏩ SEARCH)
Touche de lecture (▶ PLAY)
Touche de rebobinage (⏮ REW)
Touche d'avance rapide (⏭ FF)
Touche d'arrêt (■ STOP)
- 21** **Touches de montage à navette (SHUTTLE EDIT </>)**
- 22** **Touches d'exploitation de menu**
MENU
EXECUTE
Touches de déplacement du curseur (▲ / ▼ / ◀ / ▶)
- 23** **Touche de mémorisation de fonction (FUNCTION MEMORY)**
- 24** **Touche de minuterie sur écran (TIMER ON SCREEN)**
- 25** **Touche de cadre (III FRAME)**
- 26** **Touche de ralenti (X 1/5)**
- 27** **Touche de vitesse double (X 2)**
Quand cette touche est actionnée, le son reproduit change automatiquement en monaural, même si le témoin STEREO est allumé sur le panneau d'affichage.
- 28** **Touche d'exploration de télévision (TV SCAN)**
- 29** **Touche de marquage et d'effacement d'index (INDEX MARK et ERASE)**
- 30** **Touches de vérification/annulation de minuterie (TIMER CHECK/TIMER CLEAR)**
- 31** **Touches de volume du son télévisé (VOL +/-)**
Appuyer pour ajuster l'intensité sonore du téléviseur. Elles agissent seulement sur les téléviseurs Sony, portant le symbole .
- 32** **Touche de copie de son (AUDIO DUB)**
- 33** **Touches d'image dans l'image (P In P)**

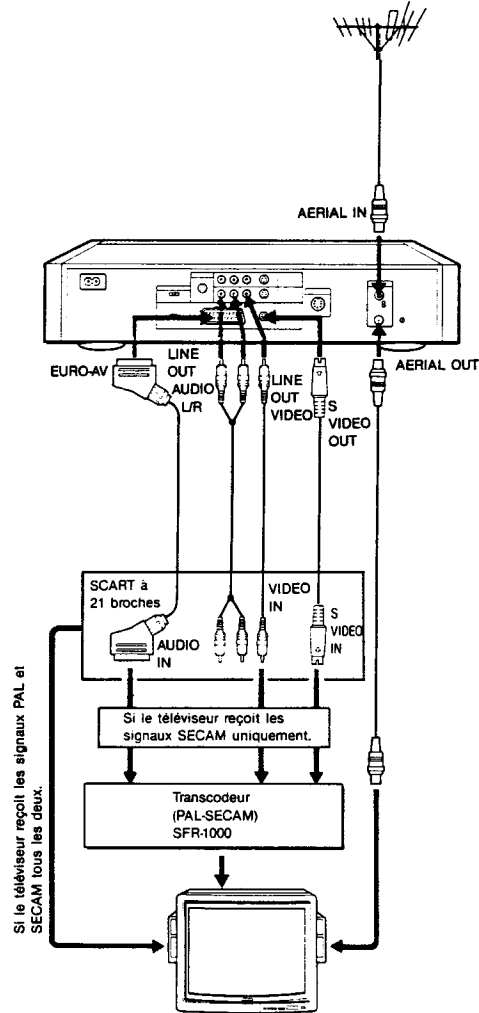


Avant d'effectuer les branchements

- Mettre hors tension cet appareil et le téléviseur.
- Ne pas brancher le cordon d'alimentation secteur avant d'avoir achevé toutes les autres connexions.
- Effectuer des connexions fermes car un branchement relâché peut entraîner une distorsion des images.

Branchements d'un téléviseur sans entrées audio/vidéo

- 1 Débrancher le câble d'antenne sur le téléviseur au niveau de sa prise.
- 2 Raccorder le câble d'antenne sur la borne AERIAL IN du magnéscope.
- 3 Raccorder l'entrée d'antenne du téléviseur sur la borne AERIAL OUT du magnéscope à l'aide du câble fourni.



Si le téléviseur reçoit les signaux PAL et SECAM tous les deux.

Branchements d'un téléviseur avec entrée audio/vidéo

Des branchements sur les entrées audio/vidéo du téléviseur procurent des images de meilleure qualité à la lecture. Les signaux de sortie des bornes EURO-AV, LINE OUT, VIDEO et S VIDEO OUT de ce magnéscope sont basés sur le système vidéo PAL. Si le téléviseur est d'un modèle uni-système SECAM, un transcodeur PAL-SECAM est requis pour le visionnage de l'image en cours d'enregistrement/lecture sur ce magnéscope.

Si le téléviseur est doté d'un connecteur EURO-AV

- 1 Effectuer les démarches 1 à 3 sous "Branchements d'un téléviseur sans entrées audio/vidéo".
- 2 Raccorder la borne LINE OUT AUDIO/MONITOR OUT EURO-AV du magnéscope sur la borne d'entrée audio/EURO-AV du téléviseur à l'aide d'un câble en option.
- 3 Régler le sélecteur VIDEO OUT (VIDEO ou S VIDEO) du panneau arrière sur S VIDEO pour obtenir des images dont le signal de luminance et de chrominance est séparé, c'est-à-dire le même que le signal vidéo provenant du connecteur S VIDEO. Régler sur VIDEO pour obtenir les signaux vidéo standards.

Si le téléviseur est doté d'un connecteur d'entrée S VIDEO

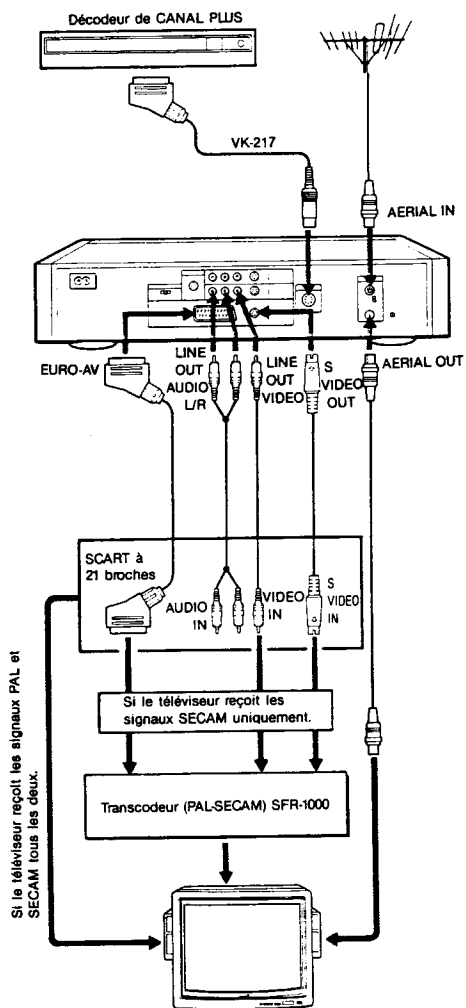
- 1 Effectuer les démarches 1 à 3 sous "Branchements d'un téléviseur sans entrées audio/vidéo".
- 2 Raccorder la borne LINE OUT AUDIO/MONITOR OUT S VIDEO du magnéscope sur l'entrée AUDIO/S VIDEO du téléviseur à l'aide du câble fourni.

Si le téléviseur est doté de prises d'entrée audio/vidéo

- 1 Effectuer les démarches 1 à 3 sous "Branchements d'un téléviseur sans entrées audio/vidéo".
- 2 Raccorder les prises LINE OUT AUDIO/VIDEO du magnéscope sur les prises d'entrée audio/vidéo du téléviseur.

Remarques

- Si ce magnéscope est raccordé à un téléviseur ou à un moniteur qui ne possède pas d'entrée S VIDEO et que le sélecteur VIDEO OUT (VIDEO ou S VIDEO) est réglé sur S VIDEO, l'image sera affichée sur l'écran, mais sans couleur.
- Éviter d'effectuer simultanément les connexions VIDEO et S VIDEO.
- L'affichage sur écran ne sera pas fourni au téléviseur si le branchement est effectué via les prises LINE OUT AUDIO/VIDEO.



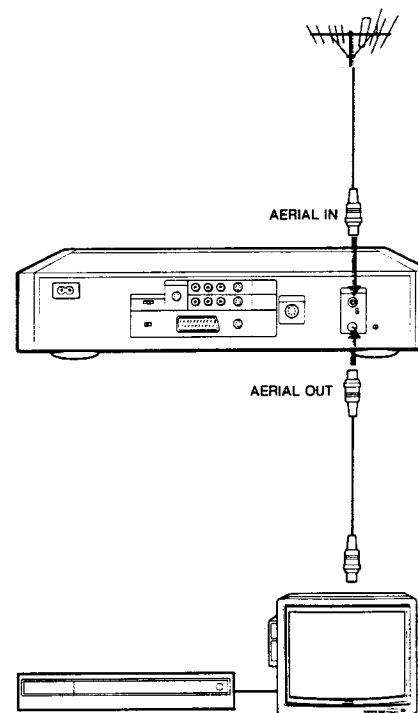
Connexion pour la réception de CANAL PLUS

Ce magnétoscope est capable de recevoir et d'enregistrer des émissions CANAL PLUS en utilisant un décodeur de CANAL PLUS. Procéder aux connexions en se référant à l'exemple.

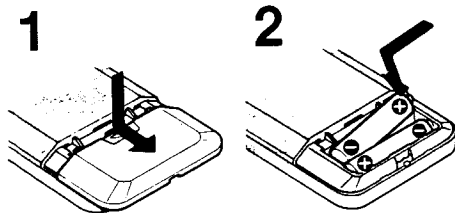
- 1 Raccorder le magnétoscope au téléviseur en se reportant à "Connexions".
- 2 Raccorder la borne C+ IN/OUT du magnétoscope au décodeur de CANAL PLUS à l'aide d'un cordon VK-217 en option.

Pour regarder un programme CANAL PLUS pendant l'enregistrement d'une émission télévisée ordinaire

- 1 Raccorder le magnétoscope au téléviseur en se référant à "Connexions".
- 2 Raccorder le téléviseur au décodeur de CANAL PLUS à l'aide d'un cordon approprié.



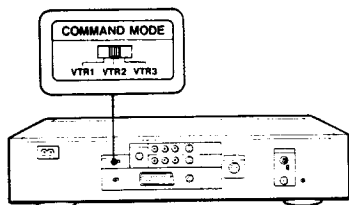
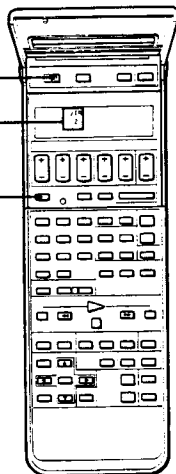
Exploitation télécommandée



Sélecteur de télécommande téléviseur/magnétoscope TV / VTR

Indicateur de mode de commande (COMMAND MODE)

Touche de mode COMMAND MODE



Préparation de la télécommande

Mise en place des piles

- 1 Glisser le couvercle pour le retirer.
- 2 Installer deux piles R6 (format AA) en respectant leurs polarités.
- 3 Refermer le couvercle.
L'horloge de la télécommande indique - D-:--. Régler la date et l'horloge en se référant à "Réglage de la date et de l'horloge".

Réglage du mode de commande

Régler le sélecteur COMMAND MODE à l'arrière de ce magnétoscope au même numéro que celui qui est indiqué sur l'affichage. Normalement, régler sur VTR 2. Pour changer le réglage sur la télécommande, appuyer de façon répétée sur COMMAND MODE.

Remarque sur les piles

A raison d'une exploitation normale, les piles dureront pendant six mois environ. Si l'on prévoit de ne pas utiliser la télécommande pendant longtemps, en retirer les piles pour éviter les dégâts qu'y provoquerait une fuite de leur électrolyte.

Télécommande d'autres appareils Sony

Contrôle d'un autre magnétoscope, muni d'un sélecteur de mode de commande

Régler des modes de commande différents pour ce magnétoscope (par exemple VTR 2) et pour l'autre magnétoscope (VTR 1). Choisir VTR 1 sur la télécommande pour contrôler l'autre magnétoscope et choisir VTR 2 pour contrôler celui-ci.

Contrôle d'un appareil sans sélecteur de mode de commande

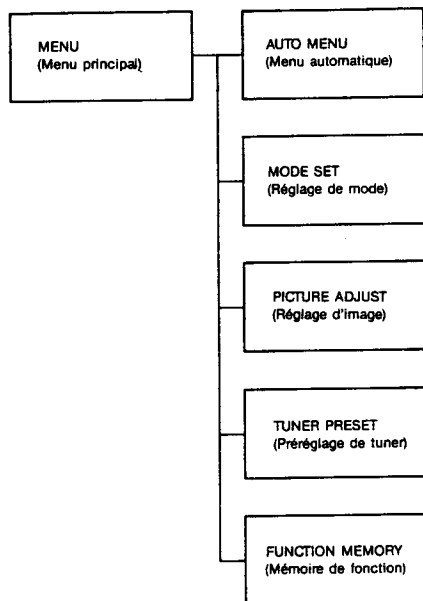
Changer comme suit le réglage sur la télécommande pour contrôler chaque type de magnétoscope.

VTR 1: Magnétoscopes à télécommande par infrarouge Sony Betamax

VTR 2: Magnétoscopes à télécommande par infrarouge Sony 8 mm

VTR 3: Magnétoscopes à télécommande par infrarouge Sony VHS

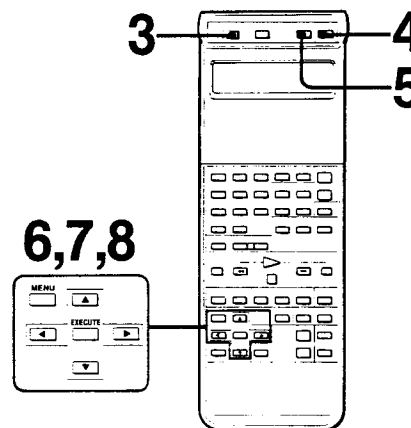
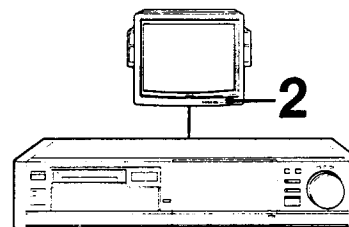
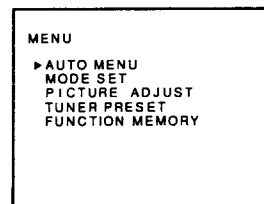
Le système Menu



Aperçu

Ce magnétoscope fait appel à un "système Menu" par lequel sont effectués les divers réglages et ajustements, nécessaires à l'exploitation. Le système menu de cet appareil comprend cinq affichages de menus différents qu'il est possible de choisir à partir du MENU principal.

Consulter les pages suivantes pour les détails sur chaque menu.



Appel de l'affichage de Menu

- 1** Confirmer que le magnétoscope et le téléviseur sont correctement raccordés. Raccorder le magnétoscope et le téléviseur à l'aide de la prise AERIAL OUT, du connecteur MONITOR OUT EURO-AV ou du connecteur MONITOR OUT S VIDEO sur le magnétoscope en se reportant au chapitre "Connexions".
- 2** Mettre le téléviseur sous tension. Choisir la position de programme pour la lecture par magnétoscope si le branchement est effectué à l'aide de la prise AERIAL OUT sur le magnétoscope. Choisir l'entrée de magnétoscope si le branchement est effectué à l'aide du connecteur MONITOR OUT EURO-AV ou S VIDEO.
- 3** Régler le sélecteur de télécommande TV/VTR sur VTR.
- 4** Appuyer sur ON/STANDBY.
- 5** Appuyer sur TV/VTR pour allumer le témoin VTR. Quand le branchement est effectué via la prise AERIAL OUT sur le magnétoscope.
- 6** Appuyer sur MENU. Le MENU principal apparaît alors sur l'écran.
- 7** Choisir le menu souhaité en déplaçant le curseur. Appuyer sur ▲ pour remonter ou sur ▼ pour descendre sur la liste.
- 8** Appuyer sur EXECUTE. Le menu choisi apparaît alors sur l'écran du téléviseur.

Effacement de l'affichage du menu
Appuyer une nouvelle fois sur MENU.

Remarque
L'affichage du menu n'apparaîtra pas sur l'écran du téléviseur si le branchement a été effectué via le connecteur LINE OUT S VIDEO ou les prises LINE OUT VIDEO.

AUTO MENU

▶ PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC

Menu automatique (AUTO MENU)

Le magnétoscope peut être réglé pour passer à la séquence d'exploitation souhaitée. En ce qui concerne le fonctionnement réel, voir sous "Designation du mode d'exploitation souhaité" en page 46.

TUNER PRESET PROG1
 SYSTEM •L B/G
 NORMAL/CATV •NORM CATV
 ▶CHANNEL SET 2
 AFT •ON OFF
 FINE TUNING

Préréglage de tuner (TUNER PRESET)

Le préréglage des canaux actifs et la syntonisation précise d'une station faible sont possibles à partir de ce menu. En ce qui concerne les applications réelles, voir sous "Préréglage des canaux actifs" en page 27.

MODE SET

▶X2 AUDIO •ON OFF
 LANG MODE M •S
 SHUTTLE MODE •A B
 AUDIO LINE IN •ST BIL
 PFS ON OFF
 TIMER TITLE •ON OFF
 COLOUR SYSTEM •AUTO PAL

Réglage de mode (MODE SET)

Divers réglages de mode peuvent être effectués à partir de ce menu. En ce qui concerne les détails sur chaque réglage, voir sous "Réglage du mode" en page 31.

FUNCTION MEMORY

PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 ▶[AUTO MENU]

Mémoire de fonction (FUNCTION MEMORY)

Une séquence d'opérations données à exécuter par le magnétoscope peut être mémorisée par la touche FUNCTION MEMORY de la télécommande. Une simple poussée sur la touche FUNCTION MEMORY lancera alors la séquence en question. Voir sous "Attribution d'un mode de menu automatique à la touche FUNCTION MEMORY" en page 48.

PICTURE ADJUST

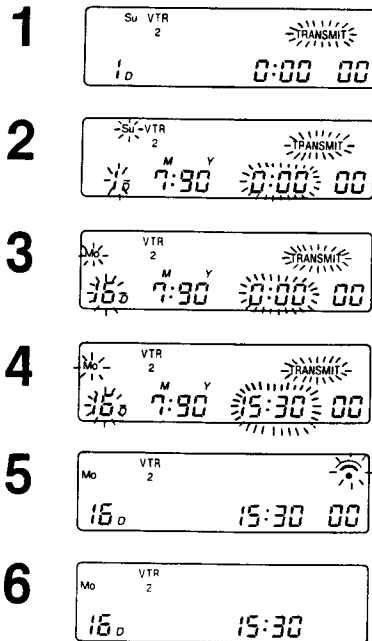
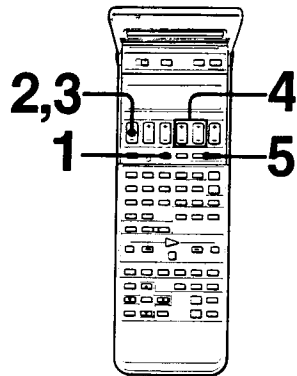
▶ SHARPNESS
 SLOW
 STILL
 x2



Réglage d'image (PICTURE ADJUST)

L'image reproduite peut être ajustée à partir de ce menu pour en obtenir la qualité optimale. Voir sous "Réglages de l'image" en page 41.

Réglage de la date et de l'horloge



Avant de commencer les réglages

Par la télécommande, il est possible de régler l'heure et la date entre les années 1990 et 2004.

Marche à suivre

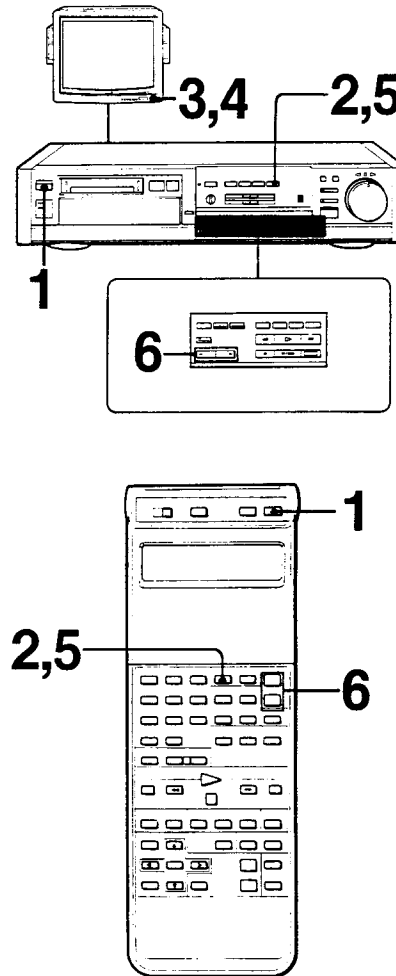
Exemple: Pour régler à 15h30, le lundi 16 juillet 1990.

- 1 Ouvrir le couvercle et appuyer sur CLOCK SET.
- 2 Appuyer sur la touche D (date) jusqu'à affichage de 7 M 90 Y (c.à.d. 7e mois de 1990). Les jours avanceront lentement de 30 jours, puis le mois avancera.
- 3 Appuyer sur le côté + ou - de la touche D (jour) jusqu'à affichage de 16 D (16e jour). Le jour de la semaine apparaît automatiquement.
- 4 Appuyer sur les touches H (heure) et M (minute) sous TURN OFF pour régler à 15 h 30.
- 5 Diriger la télécommande vers le magnétoscope et appuyer sur TRANSMIT. Une tonalité confirme que les réglages de la date et de l'horloge sont mémorisés par le magnétoscope.
- 6 Vérifier le panneau d'affichage de l'appareil et refermer le couvercle.

Si l'indication 0:00 clignote sur l'appareil
Si l'alimentation électrique a été interrompue pendant plus d'une heure, l'indication 0:00 clignotera lors de la remise sous tension. Dans ce cas, il est nécessaire de recommencer les réglages de la date et de l'heure.

Si une brève tonalité retentit de façon répétée
Le magnétoscope se trouve en mode d'enregistrement par minuterie ou d'enregistrement instantané par minuterie et les réglages ne peuvent donc pas être transmis.

Ajustement du téléviseur



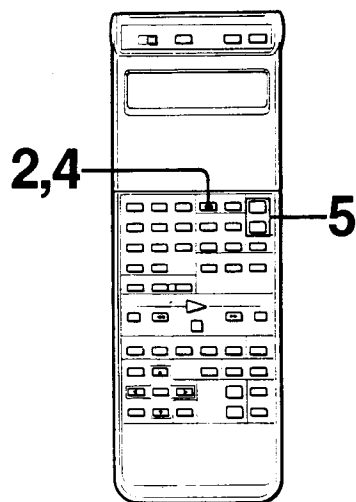
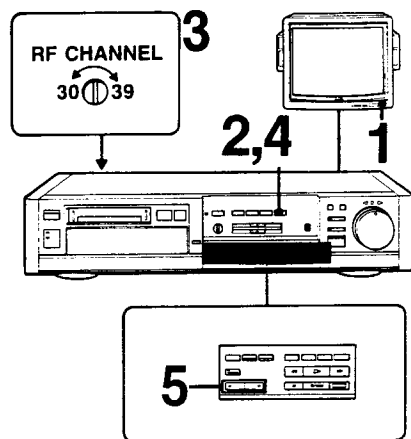
Avant de commencer

Si le magnétoscope et le téléviseur ont été raccordés à l'aide de la borne AERIAL OUT du magnétoscope, une des positions de programme de télévision doit être ajustée pour recevoir le signal de lecture du magnétoscope. Si le raccordement entre le téléviseur et le magnétoscope a été effectué d'une autre façon, sauter cette étape.

Marche à suivre

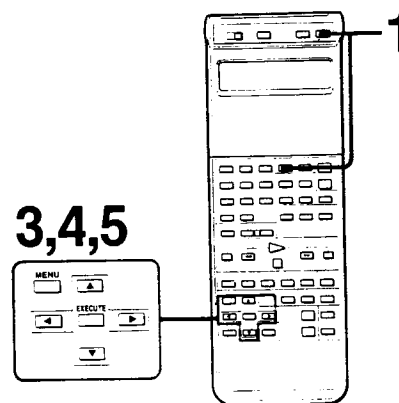
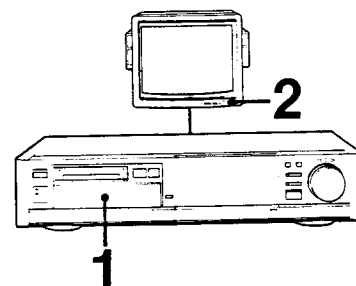
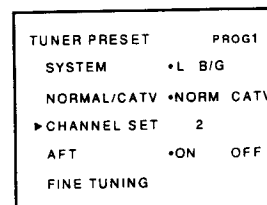
- 1 Effectuer les branchements en se référant à "Connexions" et appuyer sur ON/STANDBY.
- 2 Appuyer sur INPUT SELECT pour allumer LINE L2 sur le panneau d'affichage. Ne raccorder aucun équipement sur la prise LINE IN 2 VIDEO.
- 3 Mettre le téléviseur sous tension et choisir une position de programme, non utilisée pour la réception des stations de télévision.
- 4 Faire l'accord du téléviseur de sorte qu'un écran bleu, indiquant le compteur horaire et la vitesse de bande, soit clairement visible sur le téléviseur.
- 5 Appuyer sur INPUT SELECT pour allumer TUNER sur le panneau d'affichage.
- 6 Appuyer sur PROG (PROGRAM) +/- et confirmer que l'écran change à un autre programme.

Le téléviseur est alors accordé pour recevoir l'image reproduite par le magnétoscope. Avant la lecture d'une bande vidéo, choisir la position de programme, définie à l'étape 3. Si l'on hésite sur la manière d'accorder le téléviseur, consulter le mode d'emploi de ce dernier ou s'adresser à un concessionnaire.



Si l'image de lecture est perturbée

- 1 Sur le téléviseur, choisir une position de programme entre les canaux UHF 30 et 39, de manière qu'aucune image n'apparaisse sur l'écran et qu'un grésillement constant ou aucun bruit ne soit entendu.
- 2 Appuyer sur INPUT SELECT pour allumer LINE L2 sur le panneau d'affichage. Ne raccorder aucun équipement sur la prise LINE IN 2 VIDEO.
- 3 Tourner la vis RF CHANNEL à l'aide du tournevis fourni jusqu'à obtention d'un écran non perturbé.
- 4 Appuyer sur INPUT SELECT pour allumer TUNER sur le panneau d'affichage.
- 5 Appuyer sur la touche PROG (PROGRAM) +/- et confirmer que l'écran change à un programme différent.

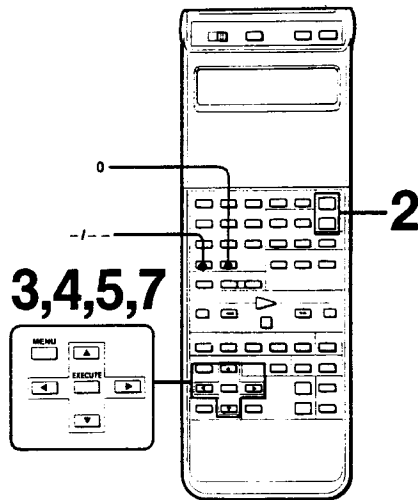
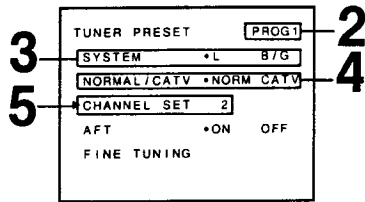


Avant de commencer

- Ce magnétoscope permet de recevoir les canaux suivants:
 - Système L: Canaux VHF F2 — F4, F5 — F10
 - Canaux UHF F21 — F69
 - Canaux de télévision par câble (B) — Q
 - Système B/G: Canaux VHF E2 — E4, E5 — E12,
 - Canaux UHF E21 — E69, et canaux par câble S3 — S20
- Les canaux recevables dépendent du système de radiodiffusion télévisée de sa région.
- Un maximum de 60 stations peuvent être affectées à n'importe quelle position de programme.
- Le menu de préréglage du tuner (TUNER PRESET) peut être affiché seulement si la connexion magnétoscope — téléviseur a été faite via la prise AERIAL OUT du magnétoscope, le connecteur MONITOR OUT EURO-AV ou S VIDEO.

Appel du menu TUNER PRESET

- 1 Mettre le magnétoscope sous tension et appuyer sur INPUT SELECT pour allumer le témoin TUNER et le numéro de la position de programme sur le panneau d'affichage.
- 2 Mettre le téléviseur sous tension. Régler à la position de programme pour la lecture du magnétoscope si la connexion magnétoscope — téléviseur a été faite via la prise AERIAL OUT sur le magnétoscope. Choisir l'entrée VTR si la connexion magnétoscope — téléviseur a été faite via la borne MONITOR OUT EURO-AV ou S VIDEO.
- 3 Appuyer sur MENU tandis que le magnétoscope est en mode d'arrêt. Le MENU principal apparaît.
- 4 Par les touches "▲" ou "▼", amener le curseur sur TUNER PRESET.
- 5 Appuyer sur EXECUTE. Le menu de préréglage de tuner (TUNER PRESET) apparaît.



Accord d'un canal souhaité

- 1 Appeler le menu TUNER PRESET.
- 2 Choisir la position de programme souhaitée en appuyant sur PROG (PROGRAM) +/-.
- 3 Amener le curseur sur la ligne SYSTEM à l'aide de la touche ▲ ou ▼. Choisir L pour recevoir des signaux SECAM ou B/G pour des signaux PAL à l'aide de la touche ◀ ou ▶.
- 4 Amener le curseur sur la ligne NORMAL/CATV à l'aide de la touche ▲ ou ▼. Choisir NORM pour recevoir des programmes normaux ou CATV pour des programmes CATV à l'aide de la touche ◀ ou ▶.
- 5 Amener le curseur sur CHANNEL SET par les touches "▲" ou "▼" et continuer d'appuyer sur ◀ ou ▶.
Le numéro de canal augmente automatiquement par la touche ▶ et il diminue par la touche ◀. Le numéro cesse de changer quand le premier canal recevable dans sa région est détecté et ce canal est alors affiché sur l'écran.
- 6 Pour attribuer un canal à la position de programme suivante, répéter les étapes de 1 à 5.
- 7 Appuyer sur EXECUTE pour mémoriser les canaux attribués et repasser à l'écran original.

Affectation directe des canaux

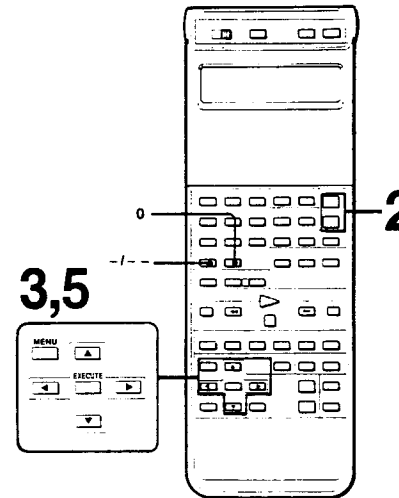
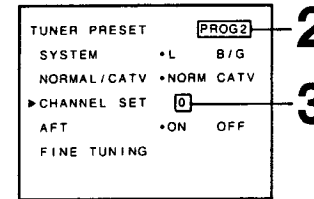
A l'étape 5 sous "Accord d'un canal souhaité", amener le curseur sur CHANNEL SET. Entrer les numéros de programme souhaités à l'aide des touches numériques de position de programme et de la touche -/-. Pour entrer un numéro d'un chiffre, appuyer sur 0, puis sur le chiffre souhaité. Pour entrer un numéro de deux chiffres, appuyer sur -/-, sur le numéro de la dizaine et enfin sur le numéro de l'unité.

Remarque

Si l'image obtenue sur l'écran à l'étape 5 est si distordue que l'on ne peut lire l'écran de menu, débrancher d'abord le câble d'antenne au niveau de la prise AERIAL IN, répéter ensuite l'étape 5 et rebrancher ensuite le câble d'antenne sur la prise AERIAL IN.

Balayage des canaux sur le téléviseur
Quand la touche ▶ est enfoncée aux étapes 5 et 6, les canaux sont balayés dans l'ordre suivant. Quand la touche ◀ est enfoncée, le balayage des canaux s'effectue dans l'ordre inverse.

SYSTEME L: VHF (F2-F10) → UHF (F21-F69) → CATV (B-Q)
SYSTEME B/G: VHF (E2-E21) → UHF (E21-E89) → CATV (S3-S20)



Effacement des positions de programme inutiles

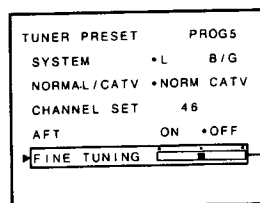
Il est possible de programmer le magnétoscope de manière que seules apparaissent les positions de programme souhaitées quand on appuie sur PROG (PROGRAM) +/-.

- 1 Appeler le menu TUNER PRESET.
- 2 Appuyer sur PROG (PROGRAM) +/- pour appeler la position de programme superflue.
- 3 Appuyer sur -/-, puis sur 0, ou maintenir la touche ◀ ou ▶ enfoncée jusqu'à affichage de 0.
- 4 Répéter les étapes 2 et 3 pour chacune des positions de programme à effacer.
- 5 Appuyer sur EXECUTE.

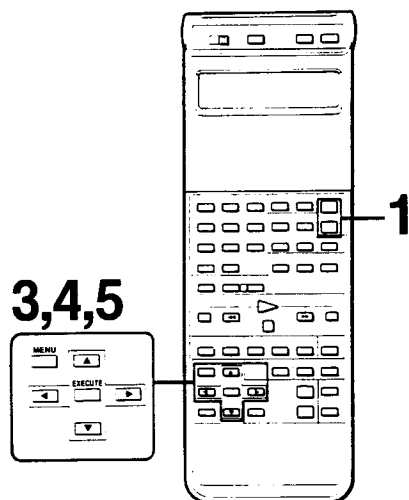
Pour entrer à nouveau une position de programme effacée

Effectuer les démarches expliquées sous "Accord d'un canal souhaité".

Préréglage des canaux actifs



3

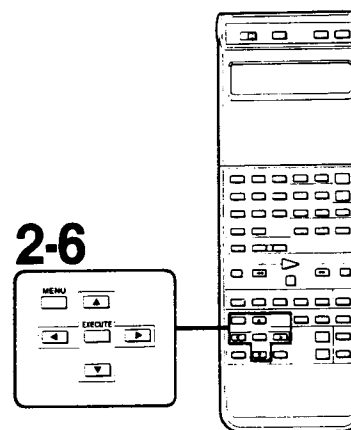
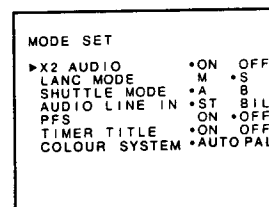


Accord manuel précis sur une station faible

Si la position AFT ON est choisie sur le menu TUNER PRESET, le magnétoscope effectuera automatiquement la syntonisation des canaux. Toutefois, si l'image d'un canal reçu par le magnétoscope est distordue à cause d'interférences des signaux, on pourra y remédier en procédant à une syntonisation manuelle précise.

- 1 Choisir la position de programme distordue en appuyant sur la touche PROG (PROGRAM) +/-.
- 2 Appeler le menu TUNER PRESET.
- 3 Amener le curseur sur FINE TUNING.
- 4 Appuyer sur la touche ◀ ou ▶ jusqu'à obtention de la meilleure image possible. L'indication AFT OFF sera automatiquement choisie et l'indicateur de syntonisation précise apparaît.
- 5 Appuyer sur EXECUTE pour mémoriser cette position et repasser ensuite à l'écran original.

Réglage du mode



Vérifier le réglage sur le menu MODE SET avant d'utiliser le magnétoscope. Procéder aux changements selon les modes de fonctionnement que l'on veut obtenir de son magnétoscope.

Marche à suivre

- 1 Appuyer sur MENU. Le MENU principal apparaît.
- 2 Amener le curseur sur MODE SET à l'aide de la touche "▲" ou "▼".
- 3 Appuyer sur EXECUTE. Le menu de réglage de mode (MODE SET) apparaît.
- 4 Choisir le mode à ajuster à l'aide de la touche "▲" ou "▼".
- 5 Choisir le mode souhaité par la touche ◀ ou ▶.
- 6 Appuyer sur EXECUTE. Le mode choisi sera mémorisé et le menu MODE SET disparaît.

Détails sur le menu de réglage de mode "MODE SET"

X 2 AUDIO ON/OFF

Choisir la position ON si l'on souhaite entendre le son pendant la lecture à vitesse double (X 2) et il sera automatiquement changé en monaural. Choisir la position OFF si l'on ne désire pas entendre le son pendant cette lecture.

LANC MODE M/S

Cette sélection est nécessaire lors du contrôle à distance d'un autre équipement vidéo par ce magnétoscope, ou lors du contrôle de ce magnétoscope à partir d'un autre équipement vidéo via le connecteur CONTROL L. Choisir M pour contrôler un autre équipement vidéo par ce magnétoscope, ou choisir S pour contrôler ce dernier par un autre équipement vidéo.

Remarque que le magnétoscope se placera automatiquement en mode LANC MODE "M" dans les cas suivants:

- 1) Si la touche de contrôle PLAYER est actionnée et qu'elle est allumée.
- 2) Si la touche EDIT STANDBY est actionnée et qu'elle est allumée.

Dans ce cas, ce magnétoscope ne peut pas être contrôlé à partir de l'autre appareil vidéo. Pour revenir au mode LANC MODE S, appeler le menu MODE SET et choisir la ligne LANC MODE S.

SHUTTLE MODE A/B

Changer ce réglage en fonction du type d'équipement vidéo que l'on désire contrôler à partir de ce magnétoscope. Choisir "A" si une télécommande avec fonction JOG/SHUTTLE (impulsion/navette) ne peut pas être utilisée pour l'autre équipement vidéo. Par contre, choisir "B" si une télécommande avec fonction JOG/SHUTTLE peut être utilisée pour l'autre équipement vidéo.

AUDIO LINE IN ST (stéréo)/BIL (bilingue)

Choisir "ST" pour recevoir les sources de programme stéréo par les prises AUDIO LINE IN. Choisir "BIL" pour recevoir les sources de programme bilingue par les prises AUDIO LINE IN.

PFS (Sélection d'image fine)

Si l'image est distordue ou présente des traînées, choisir ON ou OFF selon la position qui fournit les meilleurs résultats. Normalement, choisir OFF.

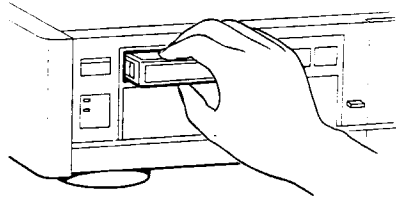
TIMER TITLE ON/OFF

Choisir ON pour lancer un enregistrement par minuterie avec un titre "minuterie". Sinon, choisir OFF. Voir en page 61 pour les détails sur "Enregistrement d'un titre de minuterie".

COLOUR SYSTEM AUTO/PAL

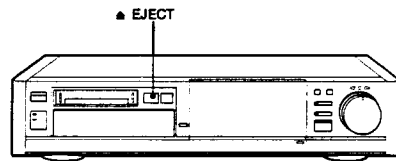
Normalement, régler sur AUTO. Selon le programme télévisé, le système couleur sera automatiquement commuté sur SECAM ou sur PAL. Choisir PAL si le signal est trop faible ou si l'image est distordue. Les programmes SECAM risquent de ne pas apparaître parfaitement.

Maniement des cassettes vidéo



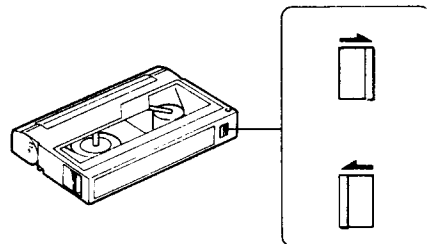
Insertion de la cassette

Installer la cassette en la poussant légèrement, sa fenêtre dirigée vers le haut. L'insertion de la cassette entraîne la mise sous tension automatique du magnétoscope.



Ejection de la cassette

Appuyer sur \blacktriangle EJECT de l'appareil. Si l'appareil est hors tension, la poussée sur la touche \blacktriangle EJECT le mettra sous tension, éjectera la cassette et coupera à nouveau l'alimentation. La touche \blacktriangle EJECT n'agit pas pendant l'enregistrement ou en mode de pause à l'enregistrement.



Protection contre l'effacement

Le fait d'enregistrer sur une bande déjà enregistrée aura pour conséquence d'effacer les informations qui s'y trouvaient. Pour éviter un effacement accidentel, glisser le segment rouge de la cassette de manière à couvrir la cavité.

Durée d'enregistrement/lecture

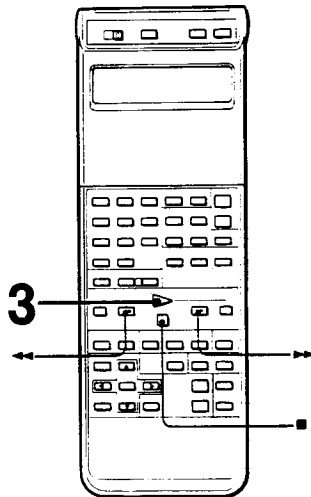
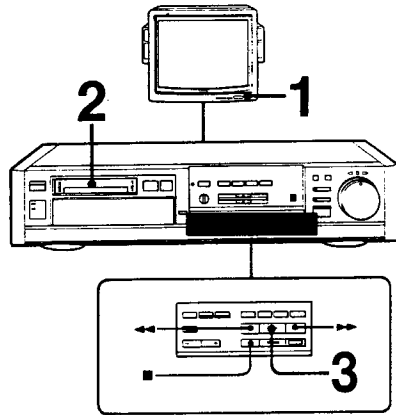
La durée d'enregistrement d'une cassette en mode LP est double de celle du mode SP. Cependant, pour obtenir des images d'excellente qualité, l'emploi du mode SP est conseillé. La vitesse d'enregistrement se choisit par la touche REC MODE, tandis que, pour la lecture, la sélection de la vitesse est automatique.

Type de cassette	Mode SP	Mode LP
P5-15MP	15 min.	30 min.
P5-30MP/E5-30HME	30 min.	1 heure
P5-60MP/E5-60HME	60 min.	2 heures
P5-90MP/E5-90HME	90 min.	3 heures

Remarques sur les cassettes

- Ne jamais rien insérer dans les petits orifices à l'arrière de la cassette car c'est par leur forme que le magnétoscope distingue entre les cassettes Hi8 et les cassettes 8 mm standard.
- Ranger les cassettes dans leur étui et les conserver en position verticale pour éviter l'infiltration de poussières et un enroulement irrégulier.
- Pour enregistrer à partir du début de la bande, faire fonctionner le magnétoscope, pendant 15 secondes environ au début de la bande, avant de lancer l'enregistrement. Cette action évite de manquer le point de départ lors de la lecture sur un magnétoscope.
- Quand le magnétoscope n'est pas en service, en retirer la cassette.

Lecture



Lecture d'une cassette

1 Mettre le téléviseur sous tension et choisir la position de programme réservée au magnétoscope.
Si la connexion magnétoscope-téléviseur a été faite via les prises MONITOR OUT EURO-AV ou VIDEO LINE OUT sur le magnétoscope, choisir l'entrée pour le magnétoscope.

2 Installer une cassette.
Le magnétoscope sera mis sous tension.

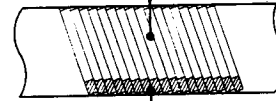
3 Appuyer sur la touche \triangleright .
La lecture est lancée.

Arrêt de la lecture
Appuyer sur \blacksquare .

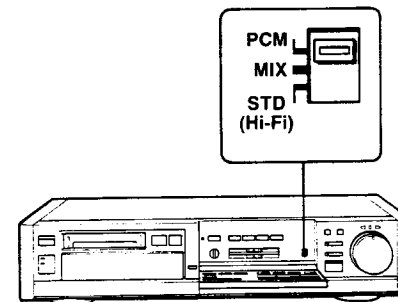
Rebobinage de la bande
Appuyer sur \leftarrow .

Avance rapide de la bande
Appuyer sur \rightarrow .

Piste standard: Son stéréo hi-fi



Piste PCM: Son stéréo numérique



Sélection du son à surveiller

Aperçu de l'enregistrement sonore sur une bande vidéo

Sélection de la piste de lecture

Choisir la piste que l'on souhaite reproduire en réglant le sélecteur AUDIO MONITOR.

PCM

Pour reproduire les signaux stéréo numériques enregistrés sur la piste PCM. Si rien n'a été enregistré sur la piste PCM, la piste stéréo hi-fi sera automatiquement reproduite.

MIX

Pour reproduire le son mixé de la piste PCM et de la piste standard.

STD (Hi-Fi)

Pour reproduire le son stéréo Hi-Fi, enregistré sur la piste standard.

Sélection du son à reproduire après copie de sons additionnels

Régler le sélecteur AUDIO MONITOR de la manière suivante.

PCM

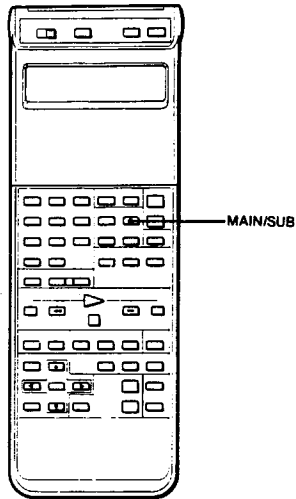
Pour reproduire le son copié en plus (piste PCM) uniquement.

MIX

Pour reproduire le son copié en plus (piste PCM) et le son original (piste standard).

Remarques

- Laisser normalement le sélecteur AUDIO MONITOR sur PCM pour obtenir un son de lecture de haute qualité.
- Les sons copiés en plus ne sont pas audibles si le sélecteur AUDIO MONITOR est réglé sur STD (Hi-Fi).

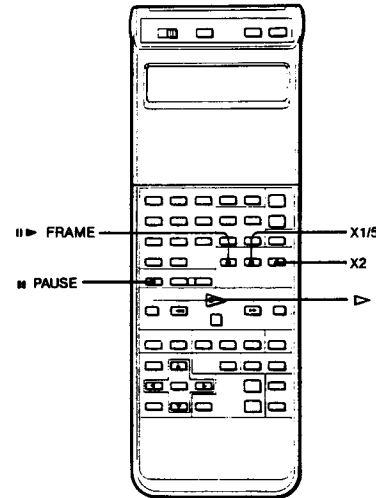
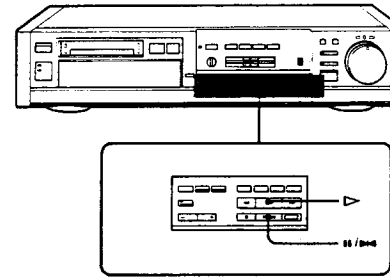


Sélection du son à reproduire sur une bande stéréo/bilingue
 Choisir le son que l'on désire reproduire à l'aide de la touche MAIN/SUB de la télécommande.

Type de bande	Touche et témoin MAIN/SUB
Stéréo	Chaque poussée fait changer le son reproduit en: STEREO (son stéréo) ← ↓ L (canal gauche) ↓ R (canal droit)
Bilingue	Chaque poussée fait changer le son reproduit en: MAIN/ (son principal) ← ↓ SUB/ (son auxiliaire) ↓ MAIN/ SUB/ (son principal/ canal gauche et auxiliaire/canal droit)

Si le son est inaudible ou audible de façon intermittente
 Quand est reproduite sur cet appareil une bande enregistrée sur un caméscope ou un magnétoscope ne disposant pas de la fonction PCM, régler le sélecteur AUDIO MONITOR sur STD. Il se peut que le témoin PCM clignote, mais ceci n'affectera pas le son.

Si la connexion est faite sur un téléviseur sans entrées vidéo/audio
 Pour écouter le son reproduit en stéréo, effectuer un branchement sur une chaîne stéréo.



Les divers modes de lecture

Pause de lecture/image fixe

Appuyer sur **II** du magnétoscope, ou sur **II** ou **II** de la télécommande pendant la lecture. Appuyer sur **▷** pour repasser à la lecture normale.

Lecture image par image (Télécommande uniquement)

Appuyer sur **II** en mode d'image fixe. Chaque poussée sur la touche **II** fait avancer l'image d'un cadre. Appuyer sur **▷** pour repasser à la lecture normale.

Lecture au ralenti

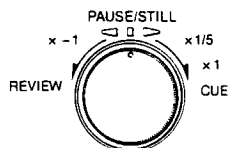
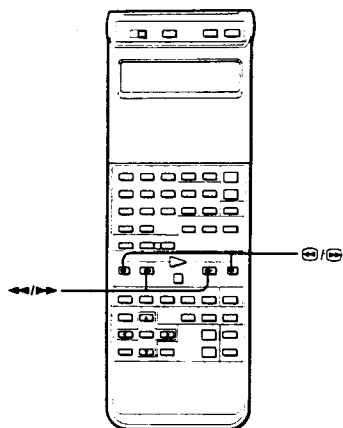
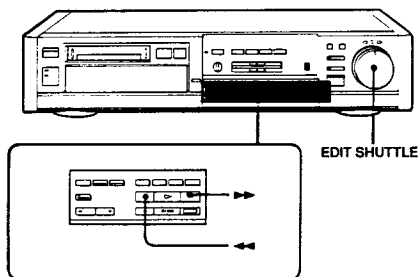
Appuyer sur **X 1/5** pour obtenir une lecture à un cinquième de la vitesse normale. Le réglage de vitesse est possible à partir de tout mode de lecture. Appuyer sur **▷** pour repasser à la lecture normale.

Lecture à vitesse double

Appuyer sur **X 2** pour une lecture à vitesse double. Le son reste audible si la position **X 2 AUDIO ON** a été choisie sur le menu **MODE SET** (page 31). Par une poussée sur cette touche, le son est automatiquement changé en monaural. Le réglage de vitesse est possible à partir de tout mode de lecture. Appuyer sur **▷** pour repasser à la lecture normale.

Remarque

La lecture au ralenti est automatiquement annulée après une minute.



Recherche d'image

Appuyer sur ◀ ou ▶ pendant la lecture. Aussi longtemps que la touche est actionnée, l'exploration des images s'accomplit en marche arrière par la touche ◀ et en marche avant par la touche ▶. Relâcher la touche pour repasser au mode de lecture antérieur.

Recherche continue d'image

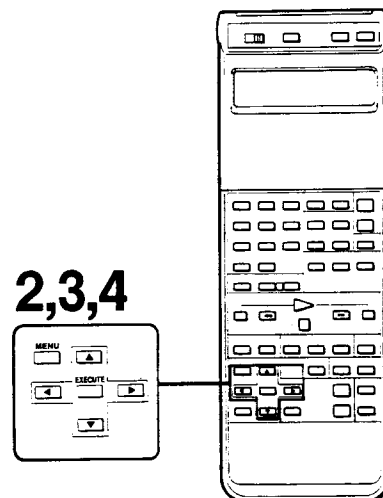
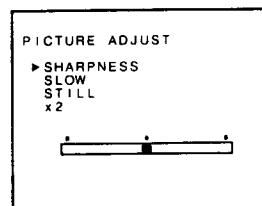
Appuyer sur ⏮ ou ⏭ SEARCH pendant la lecture. L'exploration des images se poursuit en marche arrière ou en marche avant, même après que la touche ⏮ ou ⏭ a été relâchée. Appuyer sur ▶ pour repasser à la lecture normale.

Recherche visible d'images

Appuyer sur ▶ pendant l'avance rapide ou sur ◀ pendant le rebobinage. Les images défilant en mode d'avance rapide ou de rebobinage sont alors visibles pendant que la touche est actionnée.

Utilisation de la bague EDIT SHUTTLE

Divers modes de lecture peuvent être choisis en maintenant la bague EDIT SHUTTLE à la position illustrée. La tourner dans le sens horaire pour un défilement vers l'avant et dans le sens anti-horaire pour un défilement vers l'arrière. La libération de la bague fournira une image en mode PAUSE/STILL (pause/arrêt sur image). Appuyer sur ▶ pour repasser à la lecture normale.



Réglages de l'image

Il est possible d'ajuster l'image selon ses préférences en se servant du menu PICTURE ADJUST (ajustement d'image). Appeler le menu PICTURE ADJUST en suivant les démarches ci-après:

- 1 Appuyer sur MENU. Le MENU principal apparaît.
- 2 Amener le curseur sur PICTURE ADJUST à l'aide de "▲" ou "▼".
- 3 Appuyer sur EXECUTE. Le menu PICTURE ADJUST apparaît.
- 4 Amener le curseur au paramètre à ajuster en se servant de "▲" ou "▼".
- 5 Appuyer sur ◀ ou ▶ pour ajuster l'image.
- 6 Appuyer sur EXECUTE pour mémoriser le réglage et effacer le menu PICTURE ADJUST.

Détail de chaque paramètre

SHARPNESS (netteté)

Appuyer sur ▶ pour obtenir une image plus nette ou sur ◀ pour une image plus douce. Ce réglage est possible uniquement en mode de lecture.

SLOW (ralenti)

Appuyer sur ◀ ou ▶ pour éliminer les bandes parasites qui risquent d'apparaître à la lecture au ralenti. Ce réglage est possible uniquement en mode de lecture au ralenti.

STILL (image fixe)

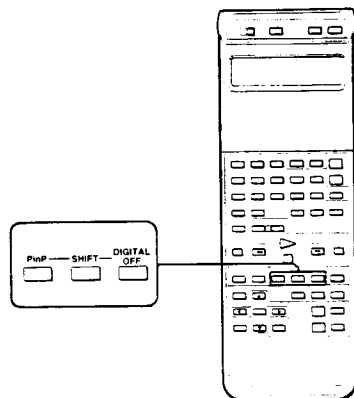
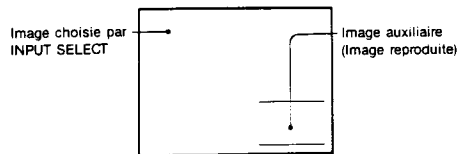
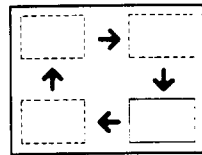
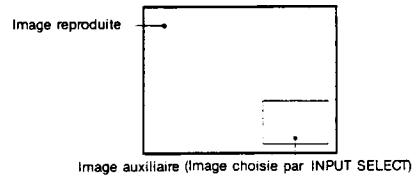
Appuyer sur ◀ ou ▶ pour supprimer les vibrations verticales de l'image en mode d'arrêt sur image. Ce réglage est possible uniquement en mode d'arrêt sur image.

X 2 (vitesse double)

Appuyer sur ◀ ou ▶ pour éliminer les bandes parasites qui risquent d'apparaître à la lecture à vitesse double. Ce réglage est possible uniquement en mode de lecture à vitesse double.

Remarque

La position du curseur changera lors du changement du mode de lecture.



Insertion d'une image auxiliaire sur l'image reproduite—P in P

Appel de l'écran auxiliaire
Appuyer sur "P in P" pendant la lecture. Quand TUNER est choisi par INPUT SELECT, l'image télévisée peut être vue sur l'écran auxiliaire.

Déplacement de la position de l'image auxiliaire

Appuyer sur SHIFT. La position sera déplacée dans l'ordre illustré.

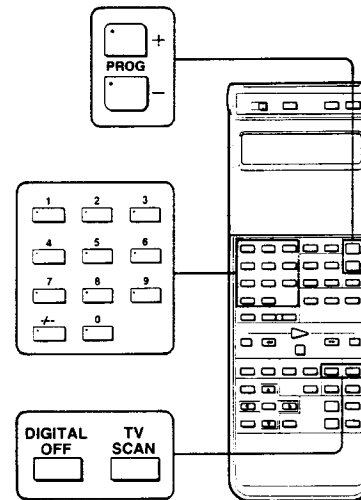
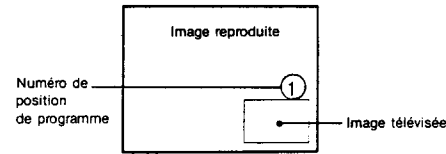
Inversion de la position de l'image auxiliaire

Appuyer à nouveau sur "P in P".
Suppression de l'image auxiliaire
Appuyer sur DIGITAL OFF. La position de l'image auxiliaire sera placée en mémoire.

Son en mode "P in P" (Image dans l'image)

Lorsque la connexion magnétoscope-téléviseur est effectuée via les prises MONITOR OUT du magnétoscope: Le son de l'image principale est audible.

Lorsque la connexion magnétoscope-téléviseur est effectuée via les prises LINE OUT du magnétoscope: En mode de lecture, le son de l'image reproduite sur ce magnétoscope est audible. Dans les autres modes, le son de la source d'entrée sélectionnée sur ce magnétoscope, est audible.



Vision des canaux télévisés en succession—Exploration des programmes télévisés

Pendant la lecture d'une bande, il est possible de regarder, pendant quelques secondes et dans un ordre préréglé, chacun des programmes télévisés.

Marche à suivre

Appuyer sur TV SCAN pendant la lecture. Un programme télévisé sera affiché sur l'écran auxiliaire pendant quelques secondes avec le numéro de position de programme. Une fois que toutes les stations préréglées ont été affichées, la première position de programme apparaît à nouveau.

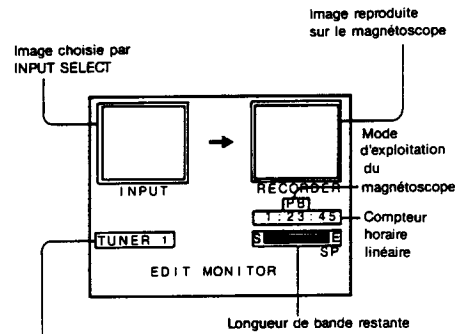
Obtention de la position de programme souhaitée sur l'écran auxiliaire

Appuyer sur le numéro de position de programme ou sur la touche PROG (PROGRAM) +/-.

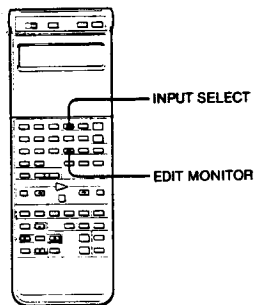
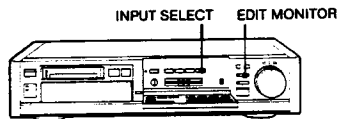
Annulation de l'image auxiliaire

Une fois que l'exploration des programmes télévisés est achevée, appuyer sur DIGITAL OFF. Pendant l'exploration, entrer directement la position de programme de l'émission souhaitée par les touches numériques de position de la télécommande ou les touches PROG (PROGRAM) +/-.

**Vision simultanée de deux images—
EDIT MONITOR**



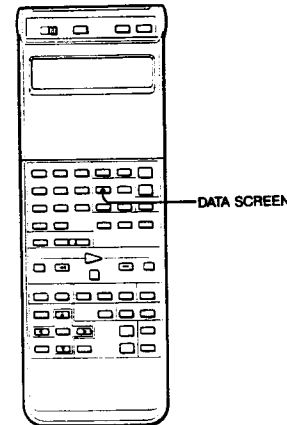
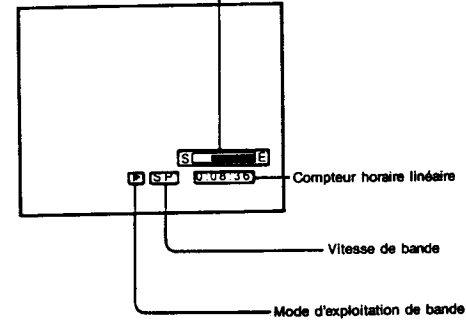
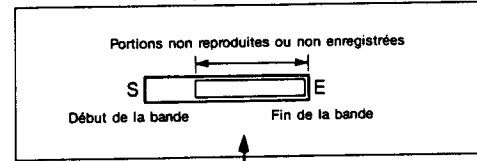
Source choisie par INPUT SELECT



Appuyer sur EDIT MONITOR sur la télécommande ou sur le magnétoscope. L'image reproduite de ce magnétoscope et l'image choisie par le sélecteur INPUT SELECT peuvent être vues simultanément sur l'écran de surveillance de montage (EDIT MONITOR).

Consulter la section "Montage" pour les utilisations pratiques de l'écran de "Surveillance de montage" pendant le montage.

Longueur de bande restante



Ecran de données

Les informations, indiquées ci-contre, apparaissent automatiquement à titre de référence sur l'écran au cours de la lecture ou de l'enregistrement. Noter, toutefois, que l'écran de données n'apparaît pas quand la connexion magnétoscope—téléviseur est effectuée via la prise VIDEO LINE OUT de cet appareil.

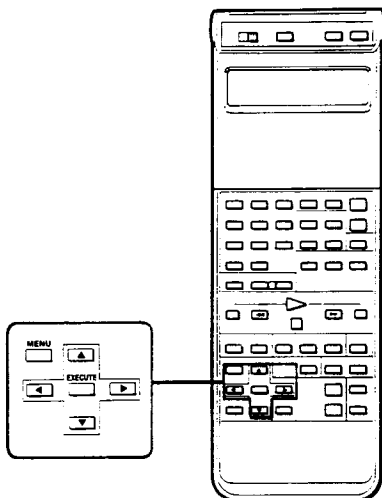
Effacement ou affichage de l'écran de données

Appuyer sur la touche DATA SCREEN de la télécommande.

Remarque sur l'indicateur de longueur de bande restante
Cet indicateur montre approximativement quelle longueur reste encore sur la bande.

AUTO MENU

▶ PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC



Désignation du mode d'exploitation souhaité

En se guidant sur le menu automatique (AUTO MENU), il est possible de faire passer automatiquement le magnéscope par la séquence d'exploitation souhaitée.

- 1 Appuyer sur MENU.
Le MENU principal apparaît.
- 2 Amener le curseur sur AUTO MENU à l'aide de la touche "▲" ou "▼".
- 3 Appuyer sur EXECUTE.
Le menu AUTO MENU apparaît.
- 4 Par la touche "▲" ou "▼", amener le curseur à la séquence d'exploitation souhaitée.
- 5 Appuyer sur EXECUTE.
L'opération choisie commence.
Cette opération est affichée sur l'écran pendant quelques secondes.

Modes du menu automatique

PLAY — REW — POWER OFF: Cette séquence reproduit la bande, la rebobine quand elle arrive à son extrémité et coupe l'alimentation électrique.

GO TO ZERO — STOP: Cette séquence recherche le point zéro du compteur et arrête la bande. Voir page 64.

GO TO ZERO — PLAY: Cette séquence recherche le point zéro du compteur et y lance la lecture. Voir page 65.

REW — POWER OFF: Cette séquence rebobine la bande jusqu'à son début et coupe l'alimentation électrique.

REW — EJECT — POWER OFF: Cette séquence rebobine la bande jusqu'à son début, éjecte la cassette et coupe l'alimentation électrique.

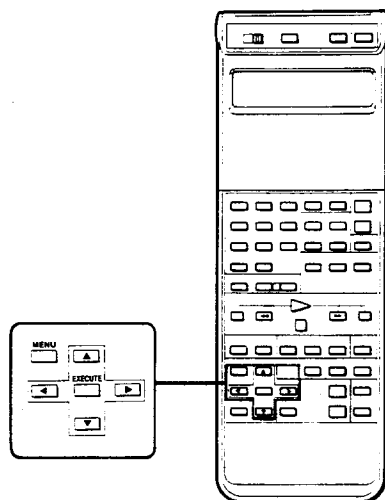
REW — PLAY: Cette séquence rebobine la bande jusqu'à son début et y lance la lecture.

REW — TIMER REC: Cette séquence rebobine la bande jusqu'à son début et passe en mode d'attente à enregistrement par minuterie. Une cassette, dont la languette rouge est visible, sera éjectée.

Remarque sur la séquence REW — TIMER REC

Si le magnéscope se trouve en mode d'attente à l'enregistrement par minuterie, appuyer d'abord sur TIMER REC (ON/OFF) pour annuler le mode d'attente, puis mettre l'appareil sous tension et appeler le menu AUTO MENU en consultant les démarches de la page 46.

FUNCTION MEMORY
 PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 ▶ [AUTO MENU]

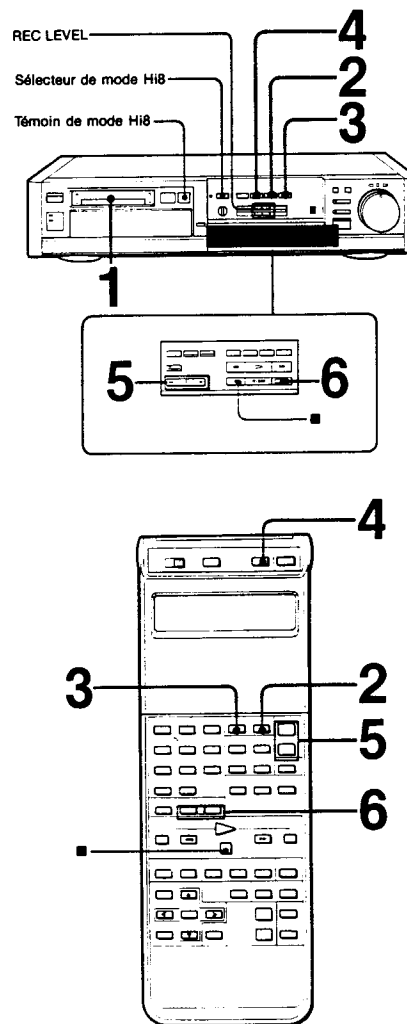


Attribution d'un mode de menu automatique à la touche FUNCTION MEMORY

Un des modes du menu AUTO MENU peut être attribué à la touche FUNCTION MEMORY de la télécommande.

- 1 Appuyer sur MENU.
Le MENU principal apparaît.
- 2 Par la touche "▲" ou "▼", amener le curseur à FUNCTION MEMORY.
- 3 Appuyer sur EXECUTE.
Le menu FUNCTION MEMORY (mémorisation de fonction) apparaît.
- 4 Amener le curseur à la séquence d'exploitation souhaitée.
- 5 Appuyer sur EXECUTE.
L'opération choisie est alors attribuée à la touche FUNCTION MEMORY. Chaque fois que celle-ci sera actionnée en mode d'arrêt, l'opération choisie sera exécutée.

Si "AUTO MENU" est choisi à l'étape 4, le menu "AUTO MENU" sera immédiatement affiché quand la touche FUNCTION MEMORY sera actionnée, ce qui donnera un accès direct au menu AUTO MENU.



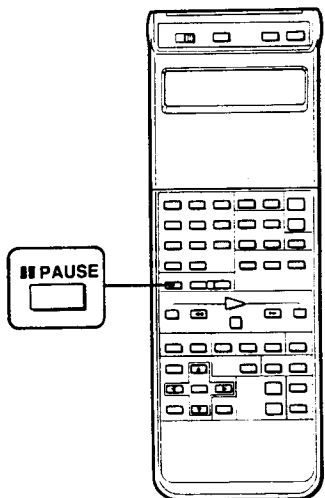
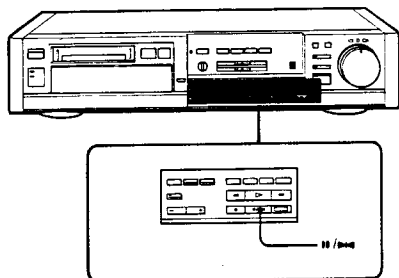
Avant de commencer

- Confirmer que toutes les connexions ont été bien faites.
- Mettre le téléviseur sous tension et choisir l'entrée vidéo sur le téléviseur ou choisir la position de programme pour le magnétoscope.
- A l'emploi d'une cassette Hi8, vérifier le témoin Hi8. L'allumer en mode Hi8, mais l'éteindre pour enregistrer en mode 8 mm standard.
- Ajuster les réglages REC LEVEL au niveau adéquat (voir page 53).
- Les indications de l'écran de données ne seront pas enregistrées.

Marche à suivre

- 1 Installer une cassette.
L'appareil est automatiquement mis sous tension.
- 2 Par le sélecteur REC MODE, choisir la vitesse d'enregistrement: SP ou LP.
- 3 Appuyer sur INPUT SELECT de sorte que le témoin TUNER apparaisse sur le panneau d'affichage.
- 4 Appuyer sur TV/VTR de sorte que le témoin VTR apparaisse sur le panneau d'affichage (seulement quand la connexion téléviseur - magnétoscope a été effectuée via la prise AERIAL OUT sur le magnétoscope.)
- 5 A l'aide de PROG (PROGAM) +/-, choisir la position de programme à enregistrer.
- 6 Appuyer sur la touche adéquate tout en appuyant sur la touche • REC de la télécommande, ou appuyer sur la touche • REC de l'appareil.
L'enregistrement est alors lancé.

Arrêt de l'enregistrement
 Appuyer sur ■ (STOP).



Coupure de scènes par enregistrement superposé

Aperçu

En se servant du mode de pause à l'enregistrement, on pourra éviter d'enregistrer des scènes inutiles lorsqu'elles apparaissent et reprendre ensuite l'enregistrement en douceur. En outre, en utilisant les touches SHUTTLE EDIT de la télécommande ou la bague EDIT SHUTTLE du magnétoscope, on pourra éliminer les scènes superflues en rebobinant et/ou en avançant la bande. On passera alors au mode de pause à l'enregistrement et on pourra poursuivre l'enregistrement en douceur.

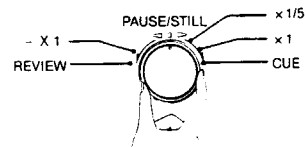
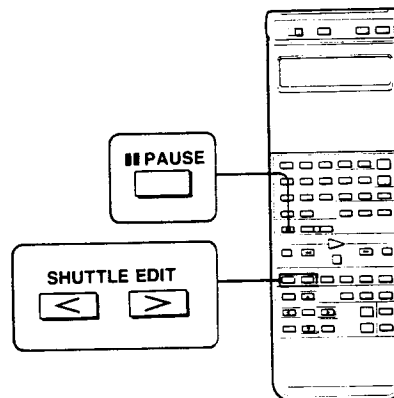
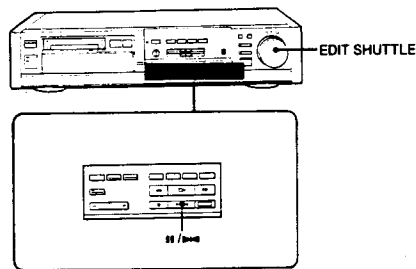
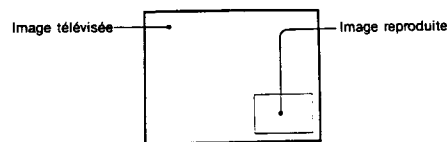
Marche à suivre

Démarches de base

- 1 Au cours de l'enregistrement, appuyer sur **II PAUSE** de la télécommande ou sur **II/PAUSE** PAUSE/STILL du magnétoscope. Le magnétoscope se place en mode de pause à l'enregistrement.
- 2 Appuyer sur **II PAUSE** au point souhaité pour continuer l'enregistrement.

Remarque

Pour la protection de la bande et des têtes vidéo, le mode pause est automatiquement annulé après 7 minutes environ et le magnétoscope se place alors en mode d'arrêt.

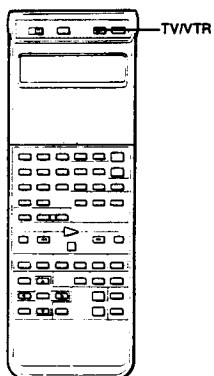


Démarches évoluées

- 1 Au cours de l'enregistrement d'une émission télévisée, appuyer sur **II PAUSE** de la télécommande ou sur **II/PAUSE** PAUSE/STILL du magnétoscope. Le magnétoscope se place en mode de pause à l'enregistrement.
- 2 Rebobiner la bande par SHUTTLE EDIT < ou > de la télécommande ou EDIT SHUTTLE du magnétoscope de manière à localiser le point où doit se poursuivre l'enregistrement. Un écran "P in P" (image dans l'image) apparaît et il est possible de visionner l'image reproduite sur l'écran auxiliaire.

Emploi de SHUTTLE EDIT < ou > :
Appuyer sur < pour faire revenir l'image (x 1 la vitesse).
Appuyer sur > pour faire avancer l'image (x 1 la vitesse).
- 3 Relâcher la touche SHUTTLE EDIT ou la bague EDIT SHUTTLE au point désiré. L'écran auxiliaire disparaît et le magnétoscope se place en mode de pause à l'enregistrement après 2 secondes environ.
- 4 Appuyer sur **II PAUSE** de la télécommande ou sur **II/PAUSE** PAUSE/STILL du magnétoscope quand on désire poursuivre l'enregistrement.

Enregistrement d'un programme télévisé

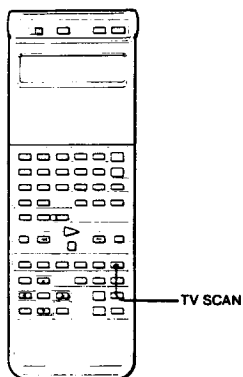


Vision d'une émission télévisée pendant un enregistrement

Si la connexion magnéscope-téléviseur a été faite via **MONITOR OUT EURO-AV** Appuyer sur TV/VTR pour éteindre le témoin VTR. Le programme choisi sur le téléviseur apparaît sur l'écran.

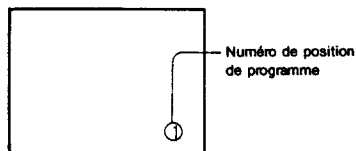
Si la connexion magnéscope-téléviseur a été faite via les prises **LINE OUT VIDEO/S VIDEO/AUDIO** ou **MONITOR OUT S VIDEO** Appuyer sur TV/VTR pour éteindre le témoin VTR. Choisir l'entrée tuner sur le téléviseur et changer la position de programme sur le téléviseur.

Si la connexion magnéscope-téléviseur a été faite via les prises **AERIAL** Appuyer sur TV/VTR pour éteindre le témoin VTR et changer la position de programme sur le téléviseur en se servant des touches de numéro de position de programme.

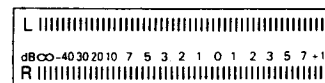
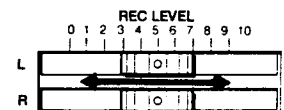


Exploration des programmes télévisés

En regardant les programmes télévisés, appuyer sur TV SCAN et l'on pourra visionner pendant quelques secondes chacun des programmes télévisés dans l'ordre pré-réglé en mémoire.



Réglage du niveau d'enregistrement



Ajuster les réglages REC LEVEL pour obtenir le niveau audio approprié en observant l'indicateur de crête sur le panneau d'affichage.

Niveau d'enregistrement adéquat

Enregistrement d'une source à signaux de fréquence moyenne et basse (p.ex. des voix)
Ajuster de façon que l'élément au niveau 0 dB s'allume en présence du niveau de signal le plus haut.

Enregistrement d'une source à signaux de fréquence moyenne et haute (p.ex. trompette, son aigu de violons)
Ajuster de façon que l'élément au niveau -1 à -3 dB s'allume en présence du niveau le plus haut.

Remarques

- Pendant la lecture, l'indicateur de crête de programme affiche la crête du son enregistré.
- Après l'enregistrement, il est conseillé de ramener les réglages REC LEVEL à leur niveau minimum pour la lecture. Ces commandes n'affectent pas le volume pendant la lecture, mais des parasites risquent d'apparaître quand la lecture est arrêtée, ce qui pourrait endommager les haut-parleurs s'ils sont raccordés.

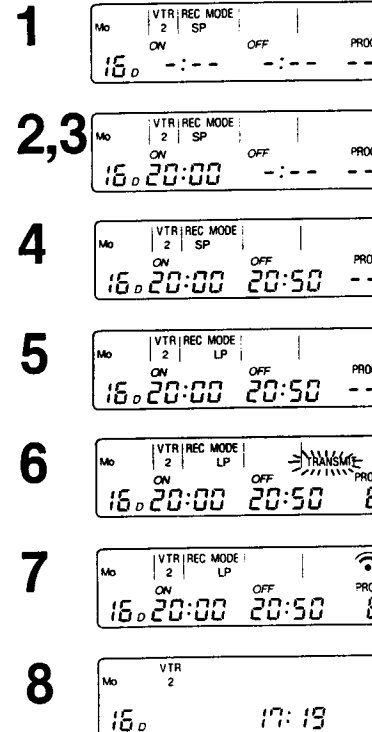
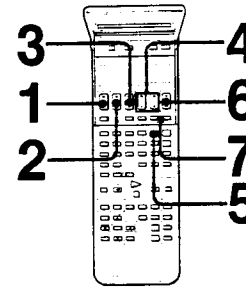
Enregistrement déclenché par minuterie

Enregistrement par minuterie sur ce magnétoscope

Un maximum de six programmes peuvent être pré-réglés sur cet appareil jusqu'à un mois à l'avance.

Avant de commencer

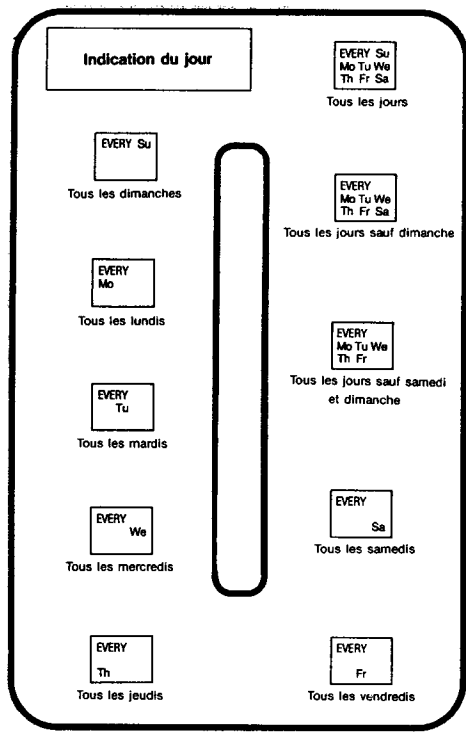
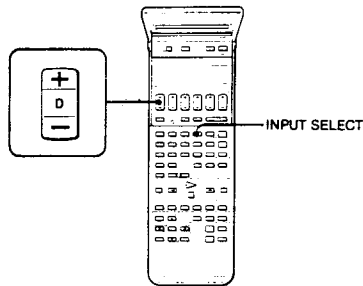
- Mettre le téléviseur sous tension et l'ajuster pour recevoir l'image du magnétoscope.
- Confirmer que les horloges de la télécommande et du magnétoscope coïncident et indiquent l'heure actuelle.



Marche à suivre

Exemple: Pour enregistrer l'émission de 20:00 à 20:50 le lundi 16 juillet 1990 à la position de programme 8 en mode SP.

- 1 Ouvrir le couvercle de la télécommande et appuyer sur D jusqu'à apparition de 16. Le jour de la semaine "MO" (lundi) est ajusté automatiquement.
- 2 Poser l'heure de mise en marche de l'enregistrement par TURN ON H.
- 3 Poser la minute de mise en marche de l'enregistrement par TURN ON M.
- 4 Poser l'heure et la minute de la fin de l'enregistrement par TURN OFF H et M.
- 5 Choisir le mode d'enregistrement, SP ou LP, par la touche REC MODE.
- 6 Choisir la position de programme par la touche PROG. Le témoin TRANSMIT clignote pour signaler que tous les paramètres ont été entrés.
- 7 Diriger la télécommande vers le magnétoscope et appuyer sur TRANSMIT. Avec un "bip", le magnétoscope se place en mode d'attente à l'enregistrement. La liste de programmation (PROGRAM LIST) apparaît sur l'écran pendant quelques secondes.
- 8 Refermer le couvercle de la télécommande de manière que l'heure actuelle apparaisse sur son affichage à cristaux liquides. Au moment programmé, le magnétoscope se met sous tension, il commence l'enregistrement et il se met hors tension lorsqu'il est terminé.



Préréglage d'autres programmes

Effectuer les démarches de 1 à 6 avant l'étape 7.

Enregistrement depuis l'appareil raccordé aux prises LINE IN VIDEO/AUDIO/S VIDEO 1 ou 2

Appuyer sur INPUT SELECT à l'étape 5 pour changer l'indication de PROG—à LINE L1 ou LINE L2.

Enregistrement quotidien/hebdomadaire

Ce magnétoscope peut être préréglé pour enregistrer le même programme chaque jour de la semaine (enregistrement quotidien) ou le même programme un jour donné de chaque semaine (enregistrement hebdomadaire).

Au lieu de l'étape 1 sous "Marche à suivre", appuyer sur D — de la télécommande pour changer l'affichage dans l'ordre indiqué sur l'illustration. Quand le mode d'enregistrement souhaité est posé et transmis au magnétoscope, le témoin correspondant s'allume sur le panneau d'affichage.

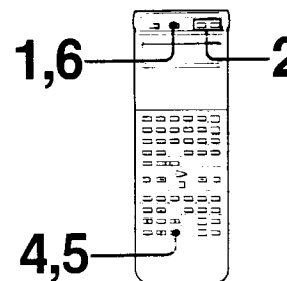
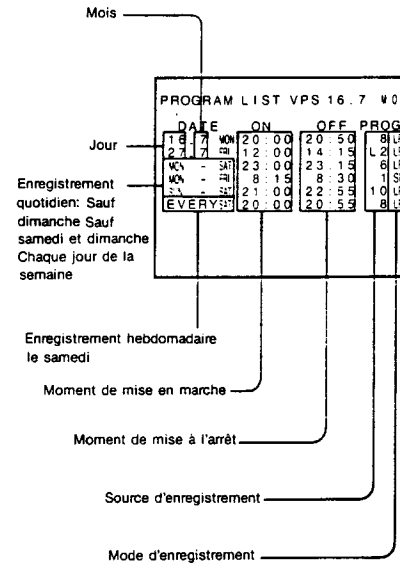
Si une brève tonalité répétée est audible quand TRANSMIT est actionnée. Une brève tonalité indique que les instructions ne sont pas reçues par le magnétoscope. Appuyer sur TRANSMIT une nouvelle fois avant de refermer le couvercle, puis vérifier les points suivants.

- Un réglage illogique a été effectué.
- Le préréglage de la minuterie est possible seulement quand le magnétoscope est éteint ou arrêté ou en mode d'enregistrement par minuterie.
- Six préréglages de minuterie ont déjà été mémorisés.
- La bande est à son extrémité.

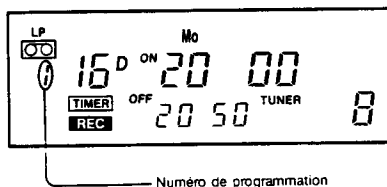
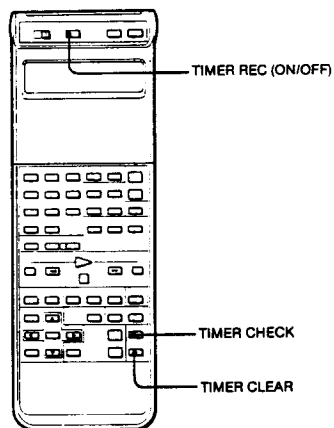
Vérification des préréglages de la minuterie

Il est possible de vérifier les préréglages en affichant la liste de programmation (PROGRAM LIST) sur l'écran. Si le magnétoscope est sous tension, appuyer simplement sur TIMER ON SCREEN. S'il se trouve en mode d'attente à l'enregistrement par minuterie, procéder comme expliqué ci-après.

- 1 Appuyer sur TIMER REC (ON/OFF) pour éteindre le témoin TIMER REC sur le panneau d'affichage.
- 2 Mettre le magnétoscope sous tension et appuyer sur le sélecteur TV/VTR pour allumer le témoin VTR.
- 3 Mettre le téléviseur sous tension. Régler à la position de programme pour la lecture du magnétoscope si la connexion magnétoscope - téléviseur a été effectuée via la prise AERIAL OUT du magnétoscope. Choisir l'entrée VTR sur le téléviseur si la connexion magnétoscope - téléviseur est faite via les prises MONITOR OUT EURO-AV/S VIDEO ou LINE OUT VIDEO/AUDIO/S VIDEO.
- 4 Appuyer sur TIMER ON SCREEN. L'affichage PROGRAM LIST apparaît sur l'écran.
- 5 Appuyer à nouveau sur TIMER ON SCREEN pour repasser à l'affichage original.
- 6 Appuyer sur TIMER REC (ON/OFF) pour repasser en mode d'attente à l'enregistrement par minuterie.



DATE	ON	OFF	PROG
16.7 MON	20:00	20:50	8 LP
27.7 VEN	12:00	14:15	L2 LP
MON - SAT	23:00	23:15	6 LP
MON - VEN	8:15	8:30	1 SP
SAT - SUN	21:00	22:55	10 LP
EVERYSAT	20:00	20:55	8 LP



Annulation/Modification d'un réglage de minuterie

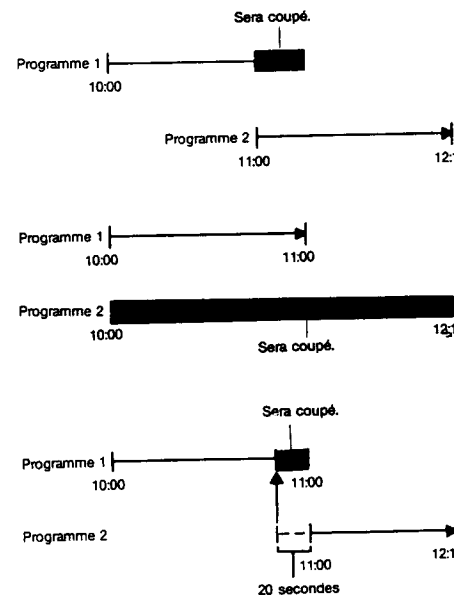
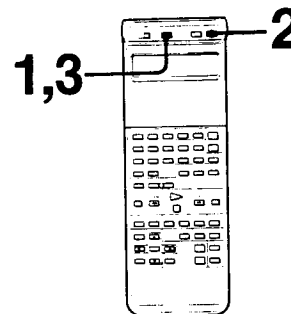
En consultant la PROGRAM LIST

- 1 Afficher la liste PROGRAM LIST en se reportant aux étapes de 1 à 4 sous "Vérification des préreglages de la minuterie".
- 2 Appuyer sur TIMER CHECK pour appeler le curseur sur l'écran et amener celui-ci au paramètre qu'il y a lieu de corriger ou d'annuler.
- 3 Pour annuler le paramètre en question, appuyer sur TIMER CLEAR. S'il y a d'autres préreglages sur l'affichage PROGRAM LIST, appuyer sur TIMER REC ON/OFF pour repasser au mode d'attente à l'enregistrement par minuterie.

Pour corriger un paramètre, ré-entrer tous les préreglages sur la télécommande. Voir les étapes 1 à 7 sous "Enregistrement déclenché par minuterie — Marche à suivre". Dans ce cas, le magnéto-scope se place automatiquement en mode d'attente à l'enregistrement par minuterie.

Effacement d'un paramètre sans consultation de la PROGRAM LIST

- 1 Appuyer sur TIMER REC (ON/OFF).
- 2 Appuyer de façon répétée sur TIMER CHECK jusqu'à apparition du programme souhaité.
- 3 Appuyer sur TIMER CLEAR.
- 4 Appuyer sur TIMER REC (ON/OFF) pour repasser au mode d'attente d'enregistrement par minuterie si d'autres programmations ont été faites en prévision de l'enregistrement par minuterie.



Utilisation du magnéto-scope pendant le mode d'attente d'enregistrement par minuterie

- 1 Appuyer sur TIMER REC (ON/OFF) pour éteindre le témoin TIMER REC.
- 2 Mettre le magnéto-scope sous tension. Le magnéto-scope peut alors être utilisé.
- 3 Après utilisation du magnéto-scope, appuyer sur TIMER REC (ON/OFF) et rallumer le témoin TIMER REC pour repasser en mode d'attente en vue de l'enregistrement programmé sur la minuterie.

En cas de chevauchement des préreglages de la minuterie

Si le préreglage de deux programmes chevauche

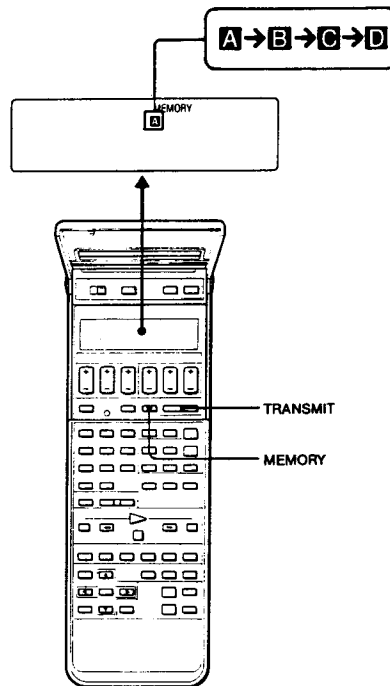
L'enregistrement du programme suivant commencera automatiquement avant que ne s'achève le premier.

Si le moment de mise en marche de deux programmes coïncide

Le magnéto-scope enregistrera l'émission ayant le plus petit numéro de programmation ou placée en premier sur la liste de programmation. L'émission ayant un numéro plus grand ou placée plus loin sur la liste sera effacée de celle-ci.

Si le moment d'arrêt d'enregistrement du programme 1 et celui de mise en marche d'enregistrement du programme 2 coïncident

Les 20 dernières secondes du programme 1 ne seront pas enregistrées car le magnéto-scope se placera en mode de pause à l'enregistrement pour le programme 2 avant la fin du programme 1.



Mémorisation par la télécommande des postes souvent utilisés

Les postes, définis pour un programme d'enregistrement par minuterie, sont effacés de l'affichage par cristaux liquides dès qu'est refermé le couvercle de la télécommande. De même, ils sont éliminés de la mémoire une fois que l'enregistrement a été effectué. Toutefois, il est possible de mémoriser les moments de mise en marche/arrêt et la position de programme pour un maximum de quatre programmations et de les rappeler par la suite. Ceci permet d'avoir facilement accès aux postes souvent utilisés, notamment pour ses feuillets hebdomadaires favoris. La date d'enregistrement sera automatiquement changée à la semaine suivante après que l'enregistrement est achevé.

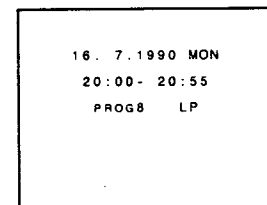
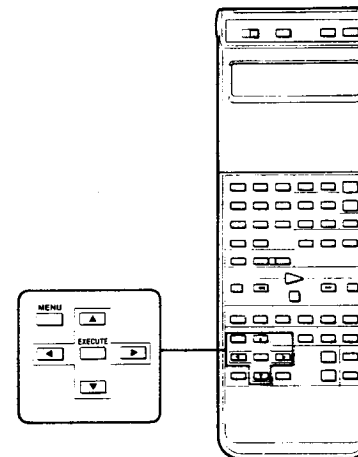
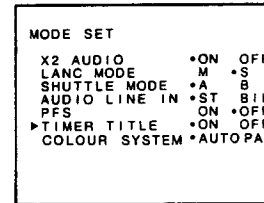
Marche à suivre

Exemple: Pour mémoriser les données d'enregistrement par minuterie dans MEMORY A.

- 1 Appuyer sur MEMORY pour spécifier MEMORY A.
- 2 Poser tous les postes pour l'enregistrement par minuterie en se référant à "Enregistrement par minuterie-Marche à suivre".
- 3 Appuyer sur MEMORY pour changer l'indication en B, C ou D et répéter l'étape 2 pour les autres programmes. Les postes ainsi définis resteront en mémoire, même si le couvercle de la télécommande est refermé.

Rappel et changement des postes

- 1 Appuyer sur MEMORY pour appeler l'indication souhaitée de la mémoire (A, B, C ou D).
- 2 Effectuer les modifications adéquates.
- 3 Appuyer sur TRANSMIT. Le magnétoscope se place en mode d'attente à l'enregistrement par minuterie.

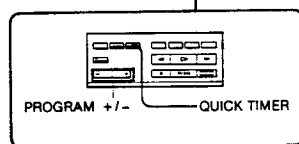
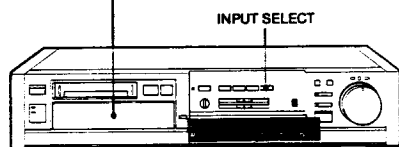
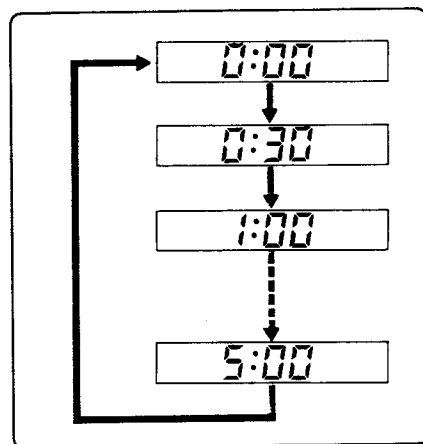


Enregistrement d'un titre de minuterie

Un "écran de titre", comportant l'heure du début/fin de l'enregistrement, sa date et la position de programme, peut être enregistré pendant 3 secondes sur la bande avant le début de l'enregistrement déclenché par minuterie. Ce "titre" s'avèrera pratique pour localiser le début d'un programme donné lorsque plusieurs ont été enregistrés successivement sur une même bande. L'enregistrement du titre peut être effectué ou non, en procédant comme suit.

- 1 Avant de régler la minuterie, appuyer sur MENU. Le MENU principal apparaît.
- 2 Par la touche "▲" ou "▼", amener le curseur sur MODE SET.
- 3 Appuyer sur EXECUTE. Le menu MODE SET apparaît.
- 4 Par la touche "▲" ou "▼", amener le curseur sur TIMER TITLE.
- 5 Appuyer sur ◀ ou ▶ pour choisir ON afin d'enregistrer le titre de minuterie, ou OFF pour enregistrer sans titre.
- 6 Appuyer sur EXECUTE pour mémoriser le réglage. Si ON a été choisi à l'étape 5, le titre de minuterie sera automatiquement enregistré avant le début de l'enregistrement, déclenché par la minuterie.

Enregistrement instantané par minuterie



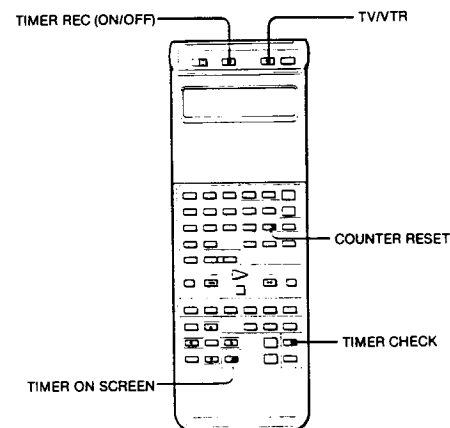
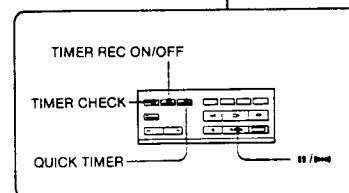
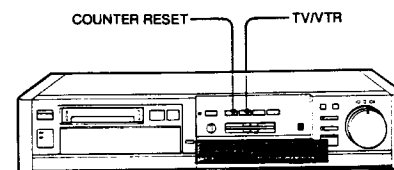
Qu'est-ce qu'un enregistrement instantané par minuterie?

Grâce à cette fonction, il est possible d'effectuer rapidement un enregistrement car la minuterie peut être programmée jusqu'à une durée de 5 heures par tranche de 30 minutes.

Marche à suivre

Si un enregistrement est en cours, ignorer les étapes de 1 à 3.

- 1 Appuyer sur INPUT SELECT de manière à allumer le témoin TUNER.
- 2 Installer une cassette.
- 3 Appuyer sur QUICK TIMER.
Le témoin TIMER s'allume sur le panneau d'affichage.
- 4 Choisir la position de programme souhaitée par PROG (PROGRAM) +/- tandis que, sur l'affichage, clignotent 0:00 et le numéro de position de programme.
- 5 Appuyer à nouveau sur QUICK TIMER pour lancer l'enregistrement.
- 6 Appuyer à nouveau sur QUICK TIMER pour poser la durée de l'enregistrement.
Appuyer dans les 30 secondes à compter de l'étape 3; faute de quoi, l'alimentation électrique sera coupée. Chaque poussée sur QUICK TIMER fait changer l'indication du panneau d'affichage par tranche de 30 minutes.
- 7 La durée d'enregistrement est décomptée minute par minute jusqu'à 0:00, moment où le magnétoscope est automatiquement mis hors tension.



Touches utilisables pendant l'enregistrement instantané par minuterie

- **TV/VTR** arrête temporairement l'enregistrement instantané.
- **TIMER REC ON/OFF** arrête l'enregistrement instantané par minuterie.
- **QUICK TIMER** change la durée d'enregistrement.
- **TIMER ON SCREEN** affiche la liste PROGRAM LIST.
- **TIMER CHECK** déplace le curseur sur la PROGRAM LIST ou change le numéro de programmation sur le panneau d'affichage.
- **COUNTER RESET** ramène le compteur à zéro.
- **TV/VTR** change l'écran à un autre programme, reçu sur le téléviseur.

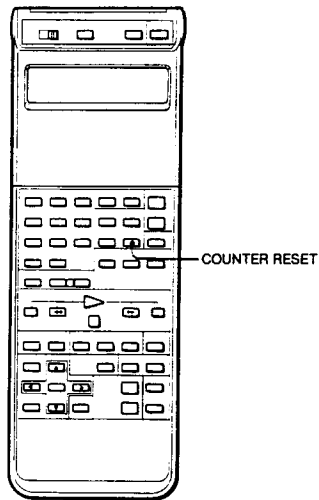
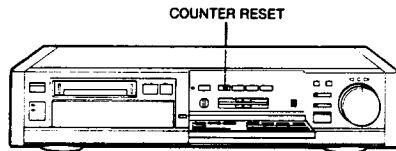
Si une interruption de courant se produit pendant l'enregistrement instantané par minuterie

L'enregistrement s'arrête et le magnétoscope est mis hors service. Si l'interruption dure moins d'une heure et si le courant est rétabli pendant la durée prévue pour l'enregistrement interrompu, il se poursuivra à partir de cet instant.

Si l'appareil se trouve en mode d'attente à l'enregistrement par minuterie

Appuyer sur TIMER REC ON/OFF pour éteindre le témoin TIMER REC, puis appuyer sur QUICK TIMER.

Utilisation du compteur de bande



Compréhension de la position zéro du compteur

Le compteur de bande de ce magnéscope servira de référence pour localiser une scène donnée après l'enregistrement ou pendant la lecture. Appuyer sur COUNTER RESET pour ramener le compteur à "0H00M00S" (position zéro du compteur) avant la mise en service. Le magnéscope affichera la longueur de la bande pendant son enregistrement ou sa lecture.

Retour à zéro

Le magnéscope peut retrouver la position zéro du compteur et s'y arrêter. Cette fonction s'avère pratique pour localiser une scène particulière après l'enregistrement ou la lecture.

- 1 Appuyer sur COUNTER RESET au point souhaité pendant l'enregistrement ou la lecture.
- 2 Appuyer sur ■ pour arrêter la bande après l'enregistrement ou la lecture.
- 3 Appuyer sur MENU et choisir AUTO MENU. Pour l'utilisation, voir sous " Désignation du mode d'exploitation souhaité " (page 46).
- 4 Amener le curseur sur "GO TO ZERO — STOP".
- 5 Appuyer sur EXECUTE.

AUTO MENU

PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 ► GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC

Lecture après retour à zéro

Le magnéscope peut rechercher la position zéro du compteur et y commencer la lecture après l'enregistrement ou la lecture.

- 1 Répéter les étapes 1 à 3 sous "Retour à zéro".
- 2 Amener le curseur sur "GO TO ZERO — PLAY".
- 3 Appuyer sur EXECUTE.

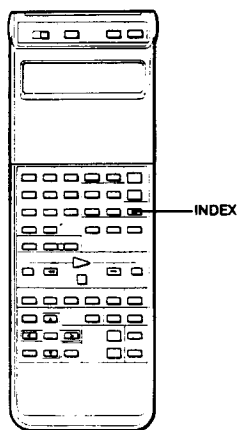
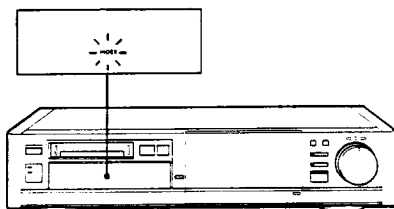
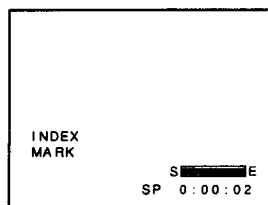
Remarques

- Il se peut que la lecture du compteur et le point de la bande ne correspondent pas parfaitement. Se servir du compteur comme référence.
- Après plusieurs défilements en avance rapide ou en rebobinage, il se produira un décalage de plusieurs secondes sur l'affichage du compteur.
- Il se produira, de même, un décalage de plusieurs secondes quand est reproduite une bande, enregistrée successivement en mode SP et LP mélangé, ou une bande où se trouvent des espaces vierges entre les enregistrements.
- Si le retour à zéro ou la lecture après retour à zéro est commandé à un délai de ± 1 minute, la recherche du point 0H00M00S prendra plus de temps.
- La bande s'arrête approximativement au point "0H00M00S" pendant le retour à zéro.

AUTO MENU

PLAY-REW-POWER OFF
 ► GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC

Fonction d'indexation



Marquage des signaux d'indexation

Une position donnée sur une bande peut être facilement localisée par détection de signaux d'indexation. Il existe deux façons, une automatique et une manuelle, de marquer ces signaux. Lorsqu'un signal d'indexation a été posé, le témoin INDEX clignote sur le panneau d'affichage et le témoin INDEX MARK s'allume sur l'écran du téléviseur.

Pose automatique d'index

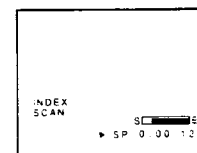
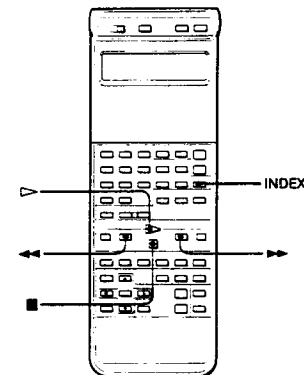
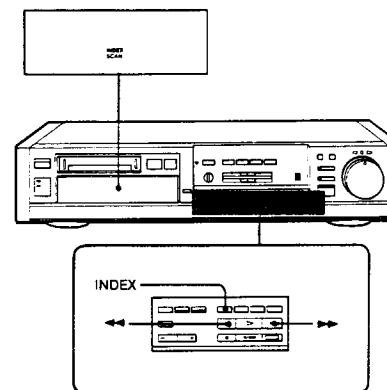
Un index est automatiquement placé sur la bande quand le magnétoscope commence un enregistrement.

Pose manuelle d'index

Des signaux d'indexation peuvent être posés aux points souhaités pendant l'enregistrement ou la lecture. Il suffit d'appuyer sur INDEX MARK pour en poser un.

Remarques

- Laisser un intervalle d'au moins 2 minutes entre deux points d'indexation de manière que le magnétoscope puisse les détecter avec précision.
- Le son enregistré sur la bande sera inaudible et une barre noire apparaîtra dans le bas de l'image pendant le marquage d'un signal d'indexation au cours de la lecture. Cependant, les signaux enregistrés ne seront nullement affectés.
- Quand le témoin EDIT est allumé sur le panneau d'affichage, la pose ou l'effacement de signaux d'indexation est impossible.
- La pose de signaux d'indexation est impossible sur une bande dont le segment de sécurité est ouvert.



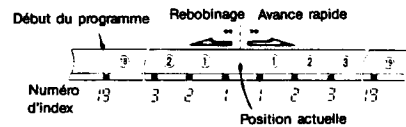
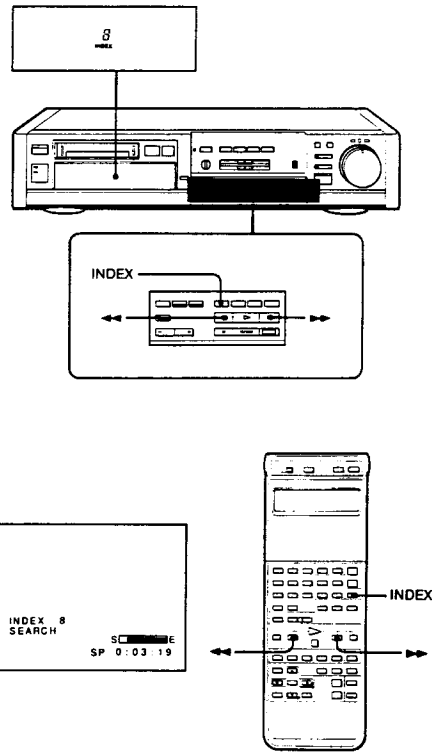
Exploration des points d'indexation—INDEX SCAN

Exploration du début de chaque point d'indexation pendant la surveillance de l'image

- 1 Installer une cassette où ont été marqués des points d'indexation.
- 2 Appuyer sur INDEX en mode de lecture ou de pause à la lecture.
- 3 Appuyer sur ►► pour passer ou sur ◀◀ pour revenir à l'index suivant.
La bande est explorée en avant par ►► et en arrière par ◀◀ jusqu'au point d'indexation suivant et elle y sera reproduite pendant 10 secondes environ.
- 4 Pour continuer la lecture, appuyer sur ▷. Si aucune touche n'est actionnée, la bande est automatiquement explorée jusqu'à l'index suivant ou précédent.

Exploration au début de chaque point d'indexation sans vision de l'image

- 1 Installer une cassette où ont été marqués des points d'indexation.
- 2 Appuyer sur INDEX en mode d'arrêt.
- 3 Appuyer sur ►► pour passer ou sur ◀◀ pour revenir à l'index suivant.
La bande sera avancée par ►► ou rebobinée par ◀◀ jusqu'au point d'indexation sans aucune image sur l'écran et elle sera ensuite reproduite pendant 10 secondes environ.
- 4 Appuyer sur ▷ pour continuer la lecture à partir de ce point d'indexation.
Si aucune touche n'est actionnée, la bande est automatiquement explorée jusqu'à l'index suivant ou précédent.

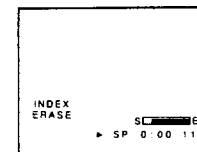
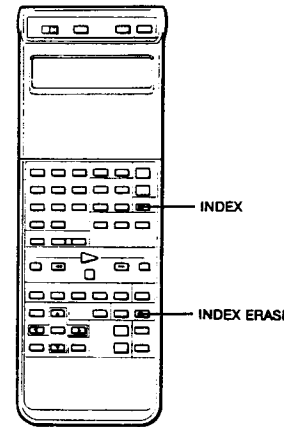
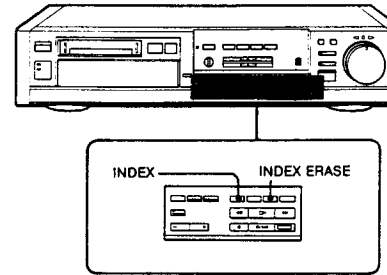


**Recherche d'un point d'indexation—
INDEX SEARCH**

Une recherche directe d'un point d'indexation donné est possible en déterminant à combien d'index celui de destination se trouve, en amont ou en aval, par rapport à la position actuelle sur la bande. Il est possible de rechercher un maximum de 19 index à partir de la position courante. Le magnéscope fait alors le décompte des index à chercher et il affiche leur nombre sur l'écran du téléviseur et sur le panneau d'affichage.

- 1 Installer une cassette, comportant des points d'indexation.
- 2 Appuyer sur INDEX en mode d'arrêt, de lecture ou de pause à la lecture.
- 3 Appuyer sur INDEX jusqu'à ce que soit indiqué, sur l'écran du téléviseur ou sur le panneau d'affichage, le nombre d'index à décompter pour atteindre la scène souhaitée.
- 4 Appuyer respectivement sur ← ou sur → si l'index est en amont ou en aval de la position actuelle sur la bande.
Le magnéscope commence la recherche et le nombre d'index est décompté jusqu'à zéro. La lecture commence.

Correction d'un nombre d'index
Appuyer sur ■ et répéter les étapes 2 à 4 ci-avant.



Effacement d'un index

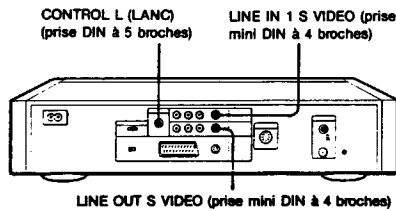
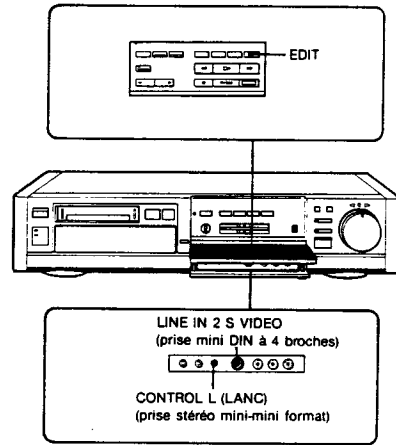
Il est possible d'effacer un index, placé sur une bande.

- 1 Installer une cassette, comportant des points d'indexation.
- 2 Localiser l'index à effacer par exploration ou recherche d'index.
- 3 Dans les 10 secondes environ, appuyer sur INDEX ERASE pendant que la bande est reproduite.
Si le signal d'indexation est effacé pendant l'exploration d'index, la lecture normale commence.
Si le signal d'indexation est effacé pendant la recherche d'index, la lecture normale commence.

Remarques

- Appuyer sur INDEX ERASE plus de 2 secondes après le début de la lecture.
- Il sera impossible d'effacer un signal d'indexation si le segment de sécurité de la cassette est ouvert.
- Pendant l'effacement d'un signal d'indexation, le son original de la bande devient inaudible et une barre noire apparaît dans le bas de l'image reproduite. Toutefois, les signaux enregistrés ne seront nullement affectés.
- Quand le témoin EDIT est allumé sur le panneau d'affichage, la pose et l'effacement de signaux d'indexation sont impossibles.
- Les signaux d'indexation, posés par un magnéscope tel que ceux de la série EV-S850 peuvent être détectés par cet appareil, mais pas être effacés. De même, les signaux d'indexation, posés par ce magnéscope, peuvent être détectés par un de la série EV-S850, mais pas être effacés.
- Lorsque le son d'une portion, où se trouve un signal d'indexation, est copié, il se peut que le signal en question soit effacé.

Avant le montage



On pourra créer ses propres programmes vidéo en faisant appel au montage de bandes avec d'autres magnétoscopes. Examiner les exemples suivants, pour acquérir les notions qui permettront d'accroître le plaisir de la vidéo.

Emploi du mode EDIT

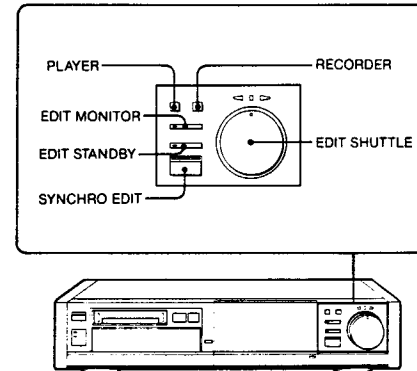
Le mode EDIT, mis en service par la touche EDIT de l'appareil, permet la lecture d'images de plus haute qualité pendant les travaux de montage. Si l'autre magnéscope, nécessaire au montage, est doté de cette fonction, la mettre en service. Noter, toutefois, que même en utilisant le mode EDIT pendant le montage, la qualité du son et des images de la bande montée sera légèrement inférieure à celle de l'originale. Eviter, dès lors, d'utiliser une bande montée pour en faire des copies.

Emploi du connecteur CONTROL L (LANC)

Si le second magnéscope est pourvu d'un connecteur de contrôle Sony LANC CONTROL L (prise stéréo mini-mini format ou de type DIN à 5 broches), des travaux de montage synchronisé sont possibles. Le second magnéscope sera télécommandé par les commandes de la section de montage du panneau avant de cet appareil. Se reporter à l'exemple suivant pour connaître, par la pratique, les réglages et les démarches à effectuer pour un montage synchronisé.

Utilisation des prises S VIDEO

Vérifier si le deuxième magnéscope est doté de prises d'entrée et de sortie S VIDEO. Le fait d'employer ces prises permet d'obtenir des images montées de meilleure qualité.



Fonctions pratiques pour le montage synchronisé

Bague EDIT SHUTTLE (montage à navette)
Elle permet un accès rapide à la scène souhaitée, tant sur l'appareil enregistreur que sur le lecteur.

Touche et témoin PLAYER/RECORDER
Le témoin s'allume pour indiquer quel magnéscope doit être contrôlé par la bague EDIT SHUTTLE.

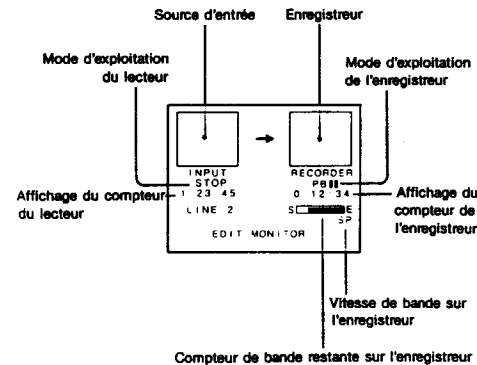
Touche EDIT MONITOR
Elle affiche l'image de l'appareil enregistreur ainsi que la source d'entrée sur l'écran.

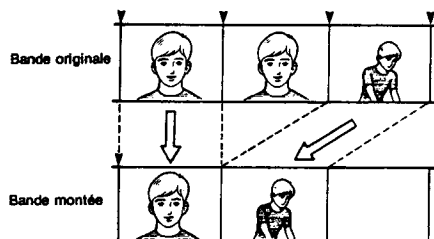
Touche EDIT STANDBY
Elle affiche automatiquement l'écran de surveillance de montage (EDIT MONITOR) lorsque l'enregistreur est en mode de pause à l'enregistrement et le lecteur en mode de pause à la lecture. L'entrée LINE IN 2 sera automatiquement choisie comme source d'entrée.

Remarque
Lorsque l'autre magnéscope est contrôlé par la bague EDIT SHUTTLE, tourner lentement celle-ci pour ne pas dépasser la position de la vitesse de bande souhaitée.

Affichage EDIT MONITOR pendant le montage

Remarques
• Le câble avec un astérisque (*) est optionnel.
• La flèche → indique le parcours du signal.



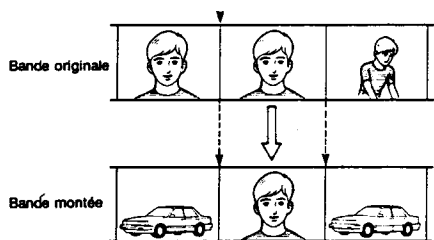


Les diverses méthodes de montage de bande

Diverses méthodes permettent de réaliser facilement des montages précis avec ce magnétoscope. Choisir la méthode qui convient à l'objectif visé et à l'équipement vidéo/audio utilisé.

Montage par assemblage

Seules les portions souhaitées d'une bande originale sont montées, une à une, sur une autre bande.

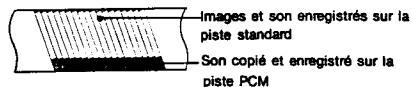


Montage par insertion

Une portion pré-enregistrée d'une bande peut être remplacée par une nouvelle scène. Déterminer le seuil du début et le seuil de la fin sur le magnétoscope enregistreur.

Montage audio

Le son enregistré sur la piste audio PCM peut être remplacé par un nouveau son sans modifier les images et le son, enregistrés sur la piste standard.

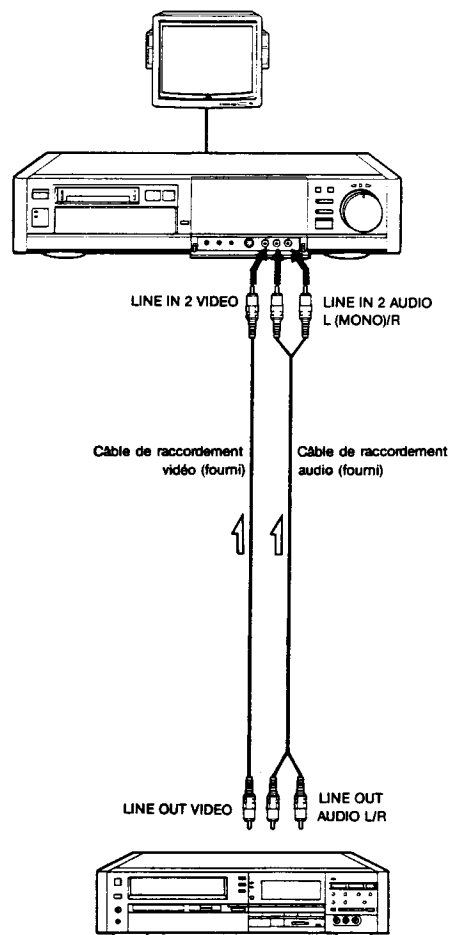


Remarques

- Il se peut que l'image soit distordue au seuil final d'un montage à insertion.
- La lecture à diverses vitesses d'une bande montée depuis ou sur un autre magnétoscope risque de subir des distorsions.

Méthode de montage	P: Lecteur R: Enregistreur	Page
Montage de base	P: Un magnétoscope R: Ce magnétoscope	74-
	P: Ce magnétoscope R: Un magnétoscope	75-
Montage par assemblage (Avec emploi de fonction de montage synchronisé)	P: Caméscope 8 mm avec prise REMOTE (stéréo mini format) R: Ce magnétoscope	76-
	P: Magnétoscope 8 mm ou VHS avec connecteur CONTROL L (LANC) (DIN 5 broches) R: Ce magnétoscope	79-
Montage à insertion (Avec emploi de fonction de montage synchronisé)	P: Caméscope 8 mm avec prise REMOTE (stéréo mini format) R: Ce magnétoscope	82-
Montage manuel par assemblage	P: Un magnétoscope R: Ce magnétoscope	85-
Montage manuel par insertion	P: Un magnétoscope R: Ce magnétoscope	87-
Copie audio	P: a) Chaîne audio b) Microphone R: Ce magnétoscope	89-

Montage de base



(1) Montage d'une bande depuis un autre magnétoscope

Connexions

- Effectuer les branchements en observant l'illustration.
- Si l'autre magnétoscope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, raccorder la fiche blanche à la prise de sortie audio de l'autre magnétoscope et la fiche blanche à l'autre bout sur la prise LINE IN 2 AUDIO L (MONO) de ce magnétoscope-ci.

Préparatifs

Sur l'autre magnétoscope, c.à.d. le lecteur

- Mettre le mode EDIT en service s'il en est équipé.

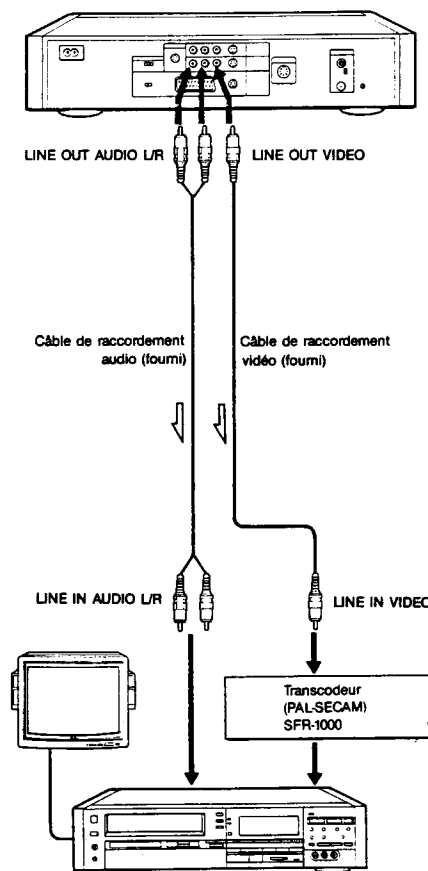
Sur ce magnétoscope-ci, c.à.d. l'enregistreur

- A l'aide du sélecteur INPUT SELECT, choisir l'entrée de ligne auquel est raccordé le lecteur.
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).

Marche à suivre

- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et installer la bande à enregistrer dans l'enregistreur.
- 3 Effectuer la lecture sur le lecteur et l'enregistrement sur l'enregistreur.

Remarque
Eviter d'effectuer simultanément les connexions VIDEO et S VIDEO.



(2) Montage d'une bande vers un autre magnétoscope

Connexions

- Effectuer les branchements en observant l'illustration.
- Si l'autre magnétoscope est muni d'un connecteur d'entrée S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, effectuer le branchement avec un câble de raccordement audio RK-C71 en option.
- Si l'autre magnétoscope est d'un modèle unisystème SECAM, effectuer les connexions en utilisant un transcodeur PAL-SECAM comme illustré.

Préparatifs

Sur ce magnétoscope-ci, c.à.d. le lecteur

- Régler le sélecteur AUDIO MONITOR à la position adéquate en se reportant à "Sélection du son à surveiller" en page 37.
- Mettre le mode EDIT en service.

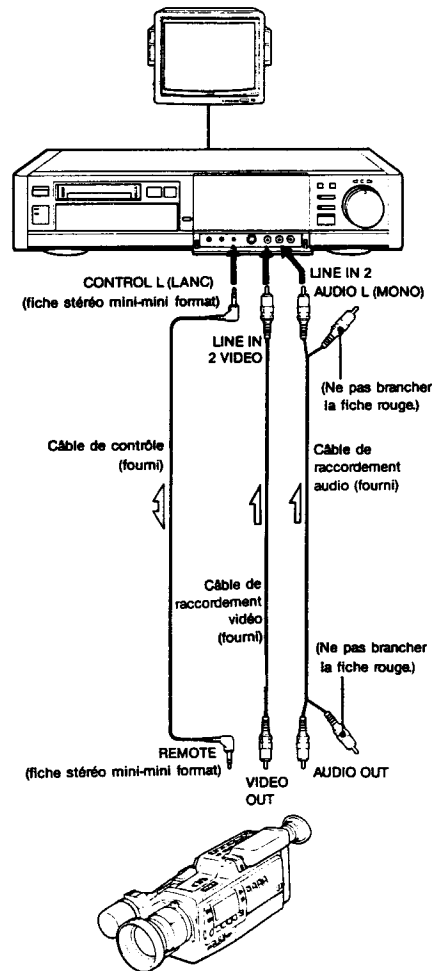
Sur l'autre magnétoscope, c.à.d. l'enregistreur

- Choisir l'entrée de ligne à laquelle est raccordé le lecteur.
- Mettre le mode EDIT en service si l'appareil en est équipé.

Marche à suivre

- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et installer la bande à enregistrer dans l'enregistreur.
- 3 Effectuer la lecture sur le lecteur et l'enregistrement sur l'enregistreur.

Montage synchronisé



(1) Montage d'une bande depuis un caméscope 8 mm

Connexions

- Effectuer les branchements en observant l'illustration.
- Si le caméscope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, raccorder la fiche blanche à la prise de sortie audio de l'autre magnétoscope et la fiche blanche à l'autre bout sur la prise LINE IN 2 AUDIO L (MONO) de ce magnétoscope-ci.

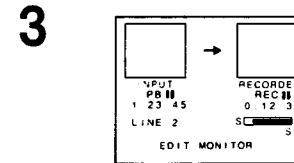
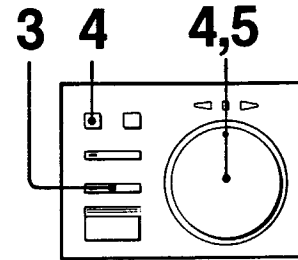
Préparatifs

Sur l'autre magnétoscope, c.à.d. le lecteur

- Mettre le mode EDIT en service s'il est disponible.
- Choisir LANC MODE S ou l'équivalent si cette sélection est possible.

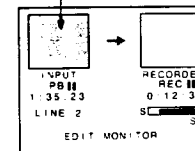
Sur ce magnétoscope-ci, c.à.d. l'enregistreur

- Choisir LANC MODE M sur le menu MODE SET (page 31).
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- En fonction de l'autre magnétoscope, choisir SHUTTLE MODE A ou B sur le menu MODE SET (page 31).



4,5

Déterminer le seuil du montage.



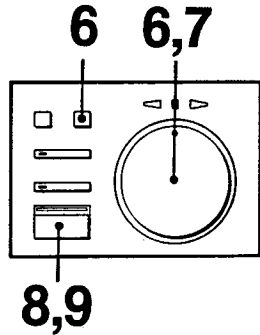
Marche à suivre

- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.
- 3 Appuyer sur la touche EDIT STANDBY de l'enregistreur. L'écran EDIT MONITOR est alors affiché et LINE IN 2 sera automatiquement choisi pour le lecteur. La touche de contrôle PLAYER s'allumera. L'enregistreur se place alors en mode de pause à l'enregistrement, tandis que le lecteur entre en mode de pause à la lecture.
- 4 Confirmer que la touche de contrôle PLAYER est allumée et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ sur le lecteur. Les vitesses de lecture utilisables sont: REVIEW, PB II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), PB (vitesse normale en avant) et CUE.

Remarque

La lecture x 1/5 est contrôlable sur l'autre magnétoscope si celui-ci est doté de la fonction de vitesse de lecture x 1/5.

- 5 Relâcher la bague EDIT SHUTTLE dès qu'est trouvé le point souhaité. Le lecteur s'y place en mode de pause à la lecture.



6 Appuyer sur la touche de contrôle RECORDER pour allumer et agir sur la bague EDIT SHUTTLE pour localiser le point de départ sur l'enregistreur.

Les vitesses de lecture utilisables sont: REVIEW, - x 1 (vitesse normale en arrière), REC II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), x 1 (vitesse normale en avant) et CUE.

7 Relâcher la bague EDIT SHUTTLE dès que le point souhaité est localisé. L'enregistreur s'y place en mode de pause à l'enregistrement.

8 Appuyer sur SYNCHRO EDIT. Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.

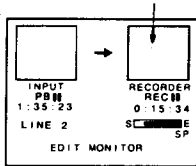
9 Appuyer sur SYNCHRO EDIT au seuil final du montage. Le lecteur s'y place en mode de pause à la lecture et l'enregistreur en mode de pause à l'enregistrement.

Montage de plusieurs scènes
Répéter les étapes de 4 à 9.

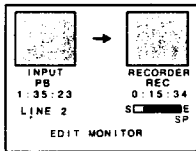
A la fin du montage
Appuyer sur la touche EDIT STANDBY. Les deux appareils s'arrêtent et l'affichage EDIT MONITOR repasse à l'écran de télévision normal.

6
7

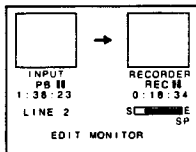
Déterminer le seuil du montage.



8



9



(2) Montage d'une bande depuis un magnétoscope 8 mm ou VHS

Connexions

- Effectuer les branchements en observant l'illustration.
- Si l'autre magnétoscope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, effectuer le branchement avec un câble de raccordement audio RK-C71 en option.

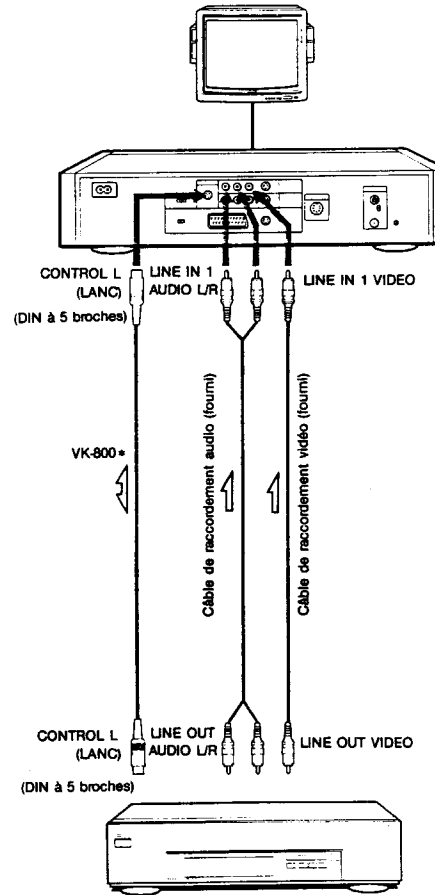
Préparatifs

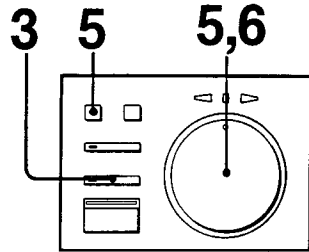
Sur l'autre magnétoscope, c.à.d. le lecteur

- Mettre le mode EDIT en service s'il est disponible.
- Choisir LANC MODE S ou l'équivalent si cette sélection est disponible.

Sur ce magnétoscope-ci, c.à.d. l'enregistreur

- Choisir LANC MODE M sur le menu MODE SET (page 31).
- A l'aide de REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement avec le réglage REC LEVEL (page 53).
- En fonction de l'autre magnétoscope, choisir SHUTTLE MODE A ou B sur le menu MODE SET (page 31).





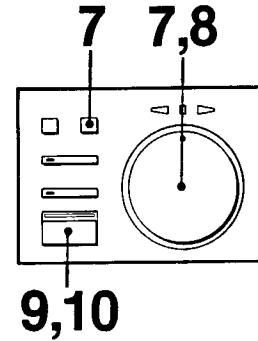
Marche à suivre

- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.
- 3 Appuyer sur la touche EDIT STANDBY de l'enregistreur. L'écran EDIT MONITOR est alors affiché. La touche de contrôle PLAYER s'allumera. L'enregistreur se place alors en mode de pause à l'enregistrement, tandis que le lecteur entre en mode de pause à la lecture.
- 4 Appuyer sur INPUT SELECT pour changer l'affichage de la source d'entrée, de LINE 2 à LINE 1.
- 5 Confirmer que la touche de contrôle PLAYER est allumée et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ sur le lecteur. Les vitesses de lecture utilisables sont: REVIEW, PB II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), PB (vitesse normale en avant) et CUE.

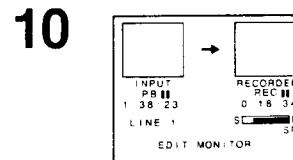
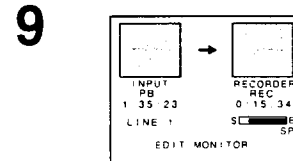
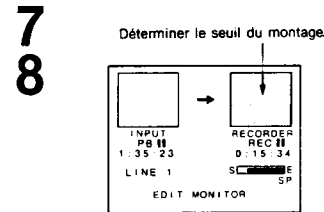
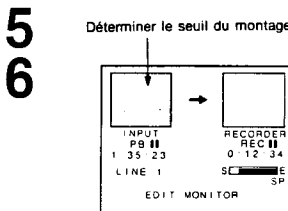
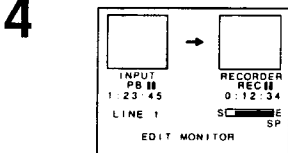
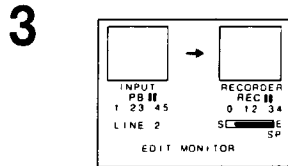
Remarque

La lecture x 1/5 est contrôlable sur l'autre magnétoscope si celui-ci est doté de la fonction de vitesse de lecture x 1/5.

- 6 Relâcher la bague EDIT SHUTTLE dès qu'est trouvé le point souhaité. Le lecteur s'y place en mode de pause à la lecture.



- 7 Appuyer sur la touche de contrôle RECORDER pour allumer et agir sur la bague EDIT SHUTTLE pour localiser le point de départ sur l'enregistreur. Les vitesses de lecture utilisables sont: REVIEW, - x 1 (vitesse normale en arrière), REC II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), x 1 (vitesse normale en avant) et CUE.
- 8 Relâcher la bague EDIT SHUTTLE dès que le point souhaité est localisé. L'enregistreur s'y place en mode de pause à l'enregistrement.
- 9 Appuyer sur SYNCHRO EDIT. Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.
- 10 Appuyer sur SYNCHRO EDIT au seuil final du montage. Le lecteur s'y place en mode de pause à la lecture et l'enregistreur en mode de pause à l'enregistrement.



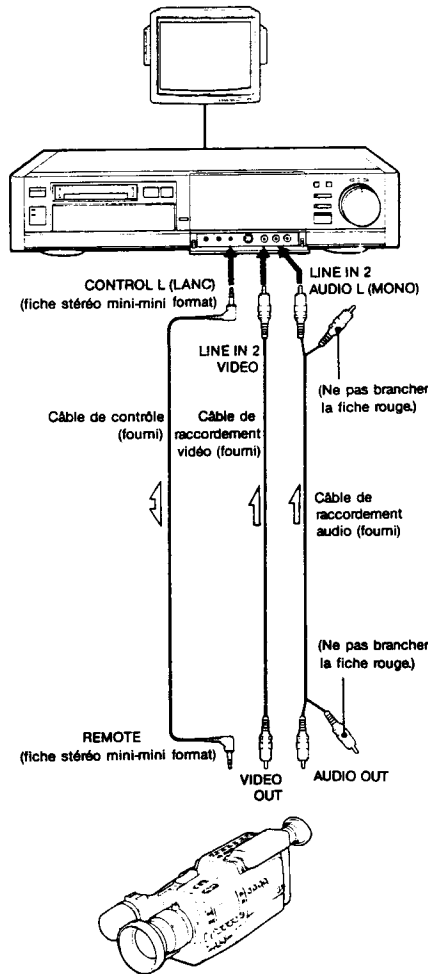
Montage de plusieurs scènes
Répéter les étapes de 4 à 10.

A la fin du montage
Appuyer sur la touche EDIT STANDBY. Les deux appareils s'arrêtent et l'affichage EDIT MONITOR repasse à l'écran de télévision normal.

Raccordement du lecteur sur LINE IN 2
Se servir du câble de raccordement VK-810 en option (prise DIN 5 broches à stéréo mini-mini format) pour le branchement de CONTROL L LANC. Les démarches seront les mêmes que sous "(1) Montage d'une bande depuis un caméscope 8 mm".

Montage par insertion

(1) Insertion de scènes depuis un caméscope 8 mm



Connexions

- Effectuer les branchements en observant l'illustration.
- Si le caméscope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnéto est du type monaural, raccorder la fiche blanche à la prise de sortie audio de l'autre magnéto et la fiche blanche à l'autre bout sur la prise LINE IN 2 AUDIO L (MONO) de ce magnéto-ci.

Préparatifs

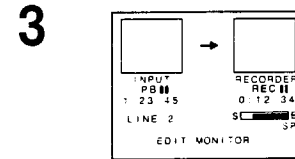
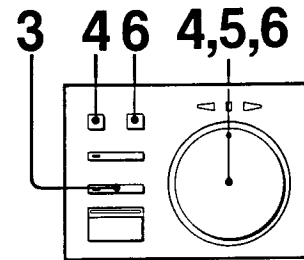
Sur l'autre magnéto, c.à.d. le lecteur

- Mettre le mode EDIT en service s'il est disponible.
- Choisir LANC MODE S ou l'équivalent si cette sélection est possible.

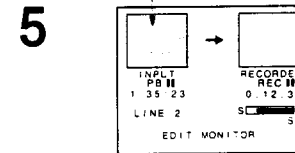
Sur ce magnéto-ci, c.à.d. l'enregistreur

- Choisir LANC MODE M sur le menu MODE SET (page 31).

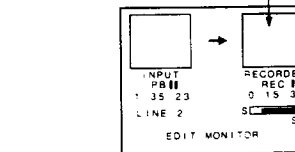
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- En fonction de l'autre magnéto, choisir SHUTTLE MODE A ou B sur le menu MODE SET (page 31).



4 Déterminer le seuil de départ du montage.



6 Déterminer le seuil de sortie du montage par insertion.



Marche à suivre

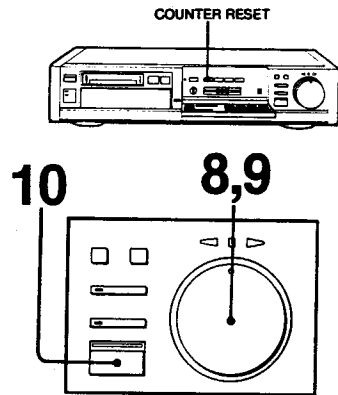
- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.
- 3 Appuyer sur la touche EDIT STANDBY de l'enregistreur. L'écran EDIT MONITOR est alors affiché et LINE 2 sera automatiquement choisi pour le lecteur. La touche de contrôle PLAYER s'allumera. L'enregistreur se place alors en mode de pause à l'enregistrement, tandis que le lecteur entre en mode de pause à la lecture.
- 4 Confirmer que la touche de contrôle PLAYER est allumée et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ sur le lecteur. Les vitesses de lecture utilisables sont: REVIEW, PB II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), PB (vitesse normale en avant) et CUE.

Remarque

La lecture x 1/5 est contrôlable sur l'autre magnéto si celui-ci est doté de la fonction de vitesse de lecture x 1/5.

- 5 Relâcher la bague EDIT SHUTTLE dès qu'est trouvé le point souhaité. Le lecteur s'y place en mode de pause à la lecture.
- 6 Appuyer sur la touche de contrôle RECORDER pour allumer et agir sur la bague EDIT SHUTTLE pour localiser le point où doit s'achever l'insertion. Les vitesses de lecture utilisables sont: REVIEW, - X 1 (vitesse normale en arrière), REC II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), x 1 (vitesse normale en avant) et CUE.

Montage par insertion

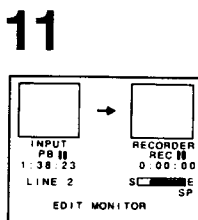
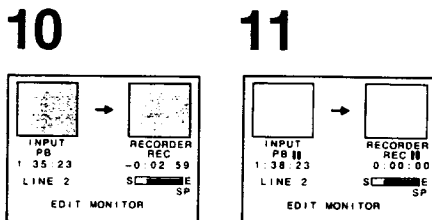
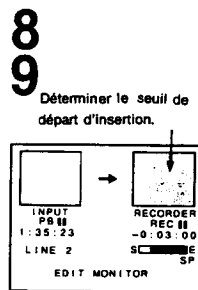
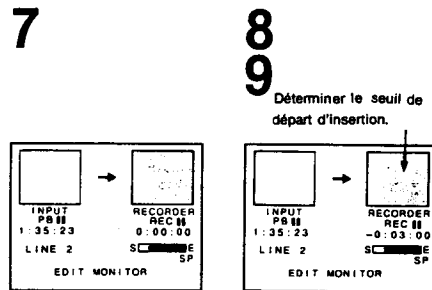


- 7** Appuyer sur la touche COUNTER RESET. Le compteur de bande de l'enregistreur affichera 0H00M00S.
- 8** Agir sur la bague EDIT SHUTTLE pour rebobiner la bande et localiser le seuil où l'insertion doit commencer sur l'enregistreur.
- 9** Relâcher la bague EDIT SHUTTLE quand le seuil souhaité est trouvé. L'enregistreur s'y place en mode de pause à l'enregistrement.
- 10** Appuyer sur la touche SYNCHRO EDIT. Le lecteur commence la lecture et l'enregistreur l'enregistrement.
- 11** L'enregistrement s'arrête quand le compteur parvient à zéro. Le lecteur se place en mode de pause à la lecture et l'enregistreur en mode de pause à l'enregistrement.

Montage de plusieurs scènes
Répéter les étapes de 4 à 11.

A la fin du montage
Appuyer sur la touche EDIT STANDBY. Les deux appareils s'arrêtent et l'affichage EDIT MONITOR repasse à l'écran de télévision normal.

Remarque pendant le montage synchronisé
La touche COUNTER RESET est inopérante.



Montage manuel par assemblage

(1) Montage d'une bande depuis un autre magnétoscope

Connexions

- Effectuer les branchements en consultant l'illustration sous "Montage de base (1) Montage d'une bande depuis un autre magnétoscope" (page 74).

Préparatifs

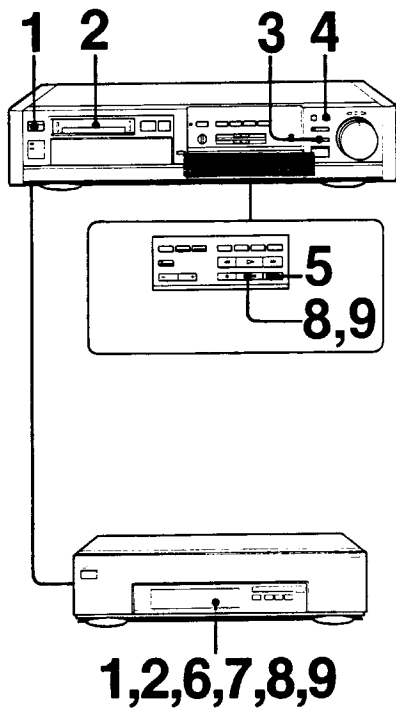
Sur l'autre magnétoscope, c.à.d. le lecteur

- Mettre le mode EDIT en service s'il est disponible.

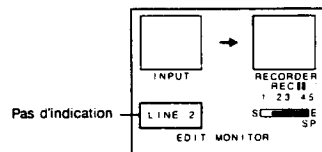
Sur ce magnétoscope-ci, c.à.d. l'enregistreur

- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- Avec le sélecteur INPUT SELECT, choisir l'entrée de ligne à laquelle le lecteur est raccordé.

Montage manuel par assemblage



3



Montage manuel par insertion

Marche à suivre

- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.
- 3 Appuyer sur la touche EDIT MONITOR de l'enregistreur. L'écran EDIT MONITOR sera affiché.
- 4 Appuyer sur la touche de contrôle RECORDER pour allumer et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ de l'enregistrement sur l'enregistreur. Une libération de la bague EDIT SHUTTLE fait entrer l'enregistreur en mode de pause à la lecture.
- 5 Appuyer sur ● REC pour placer l'enregistreur en mode de pause à l'enregistrement.
- 6 Mettre le lecteur en service avec ses commandes et localiser le seuil de départ de la lecture.
- 7 Placer le lecteur en mode de pause à la lecture.
- 8 Annuler simultanément le mode de pause sur les deux magnétoscopes. Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.
- 9 Pour arrêter l'enregistrement, appuyer sur la touche II PAUSE de l'enregistreur, puis du lecteur.

Montage de plusieurs scènes

Répéter les étapes de 4 à 9.

A la fin du montage

Arrêter les deux magnétoscopes.

(1) Montage d'une bande depuis un autre magnétoscope

Connexions

- Effectuer les branchements en consultant l'illustration sous "Montage de base (1) Montage d'une bande depuis un autre magnétoscope" (page 74).

Préparatifs

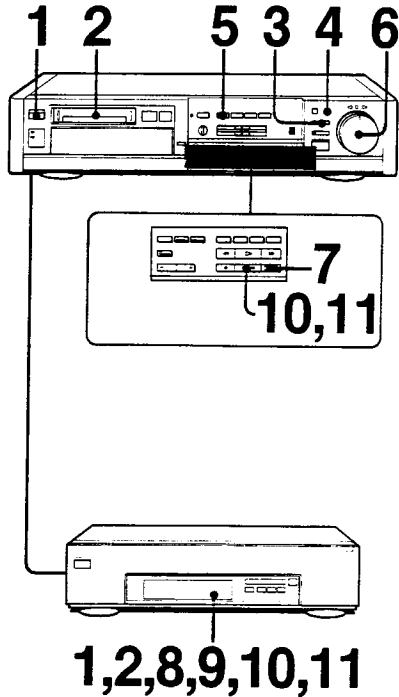
Sur l'autre magnétoscope, c.à.d. le lecteur

- Mettre le mode EDIT en service s'il est disponible.

Sur ce magnétoscope-ci, c.à.d. l'enregistreur

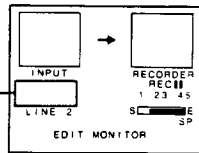
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- Avec le sélecteur INPUT SELECT, choisir l'entrée de ligne à laquelle le lecteur est raccordé.

Montage manuel par insertion



3

Pas d'indication



Marche à suivre

- 1 Mettre les deux appareils sous tension.
- 2 Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.
- 3 Appuyer sur la touche EDIT MONITOR de l'enregistreur. L'écran EDIT MONITOR sera affiché.
- 4 Appuyer sur la touche de contrôle RECORDER pour l'allumer et agir sur la bague EDIT SHUTTLE pour localiser le seuil où l'insertion doit s'achever.
- 5 Appuyer sur la touche COUNTER RESET. Le compteur de bande de l'enregistreur est ramené à 0H00M00S.
- 6 Agir sur la bague EDIT SHUTTLE pour rebobiner la bande et localiser le point où l'insertion doit commencer sur l'enregistreur. La libération de la bague EDIT SHUTTLE fait entrer l'enregistreur en mode de pause à la lecture.
- 7 Appuyer sur ● REC pour placer l'enregistreur en mode de pause à l'enregistrement.
- 8 Mettre le lecteur en service avec ses commandes et localiser le seuil de départ de la lecture.
- 9 Régler le lecteur en mode de pause à la lecture.
- 10 Annuler simultanément le mode de pause sur les deux magnétoscopes. Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.
- 11 Ramener l'enregistreur en mode de pause à l'enregistrement quand le compteur atteint zéro. Régler le lecteur en mode de pause à la lecture.

Montage de plusieurs scènes

Répéter les étapes de 4 à 11.

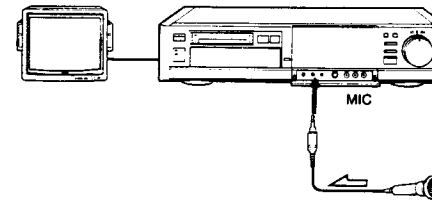
A la fin du montage
Arrêter les deux magnétoscopes.

Copie audio

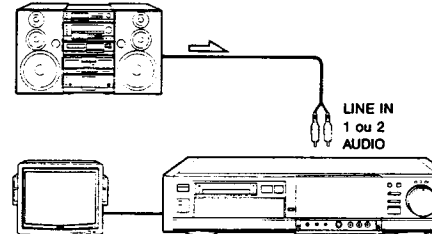
Tout en regardant ses images sur l'écran, il est possible d'ajouter de la musique ou des commentaires sur une bande préalablement enregistrée. Le son copié sera enregistré sur la piste PCM.

Connexions

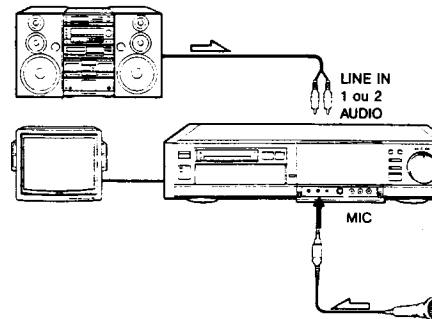
Copie du son d'un microphone



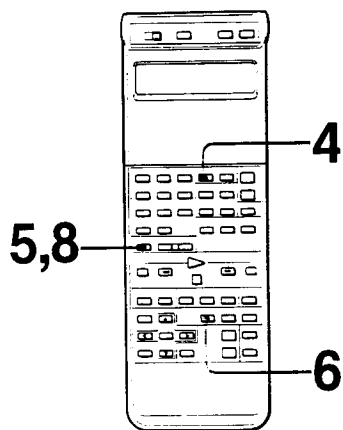
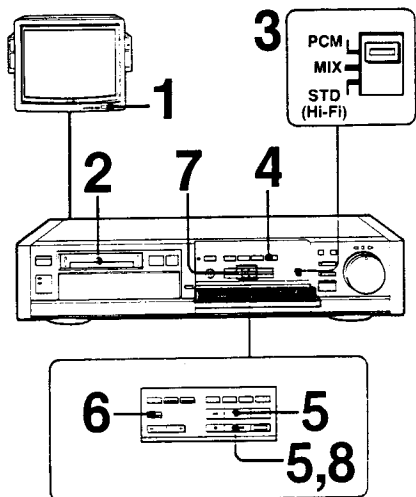
Copie du son d'une chaîne audio



Copie du son d'un microphone et d'une chaîne audio



Remarque
Un microphone alimenté par enfilage ne peut pas être utilisé avec ce magnétoscope.



Marche à suivre

- 1 Mettre le téléviseur sous tension et choisir l'entrée, réservée au magnétoscope, ou choisir la position de programme pour le magnétoscope.
- 2 Installer une cassette. L'appareil sera automatiquement mis sous tension.
- 3 Régler le sélecteur AUDIO MONITOR sur PCM ou MIX.
- 4 A la copie du son de la chaîne audio, choisir l'entrée de ligne à laquelle la chaîne audio est raccordée en appuyant sur INPUT SELECT.
- 5 Reproduire la cassette pour localiser le point où la copie audio doit commencer et appuyer sur PAUSE/STILL (W) ou sur II PAUSE.
- 6 Appuyer sur AUDIO DUB. Le témoin AUDIO DUB s'allume sur le magnétoscope.
- 7 Faire fonctionner les sources audio et ajuster le réglage REC LEVEL.
- 8 Appuyer à nouveau sur PAUSE/STILL (W) ou sur II PAUSE pour libérer le mode de pause à la lecture. La copie audio commence.

Arrêt temporaire de la copie audio
Appuyer sur PAUSE/STILL (W) ou sur II PAUSE.

Arrêt de la copie audio
Appuyer sur ■ STOP.

Copie du son d'un programme télévisé
Appuyer sur INPUT SELECT pour afficher le témoin TUNER et choisir la position de programme souhaitée. Effectuer ensuite les étapes de 2 à 5.

Remarques

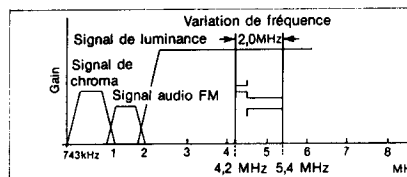
- Pendant la copie, une bande noire ou des parasites apparaissent au centre et dans le bas de l'écran, mais l'image enregistrée n'en sera nullement affectée.
- Le son copié ne peut pas être reproduit sur un magnétoscope ou un caméscope dépourvu de la fonction d'enregistrement/lecture PCM.

Le système vidéo Hi8 (High Eight)

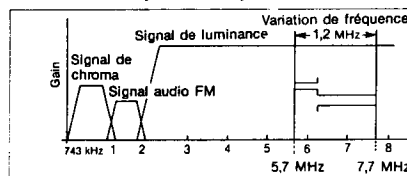
Haute qualité d'image

Un élément essentiel pour la qualité de l'image est sa capacité de véhiculer l'information. Or, cette capacité peut être accrue par décalage de la fréquence porteuse FM. Dans le système vidéo de norme Hi8, la plage de la fréquence porteuse FM du signal de luminance a été portée à 5,7 - 7,7 MHz, alors qu'elle est de 4,2 - 5,4 MHz dans le cas du système vidéo 8 mm standard. Grâce à cette amélioration, la définition horizontale est augmentée.

Attribution de fréquences du système vidéo 8 mm standard



Attribution de fréquences du système vidéo Hi8



Bande de haute qualité, adaptée au système vidéo de norme Hi8

Des bandes à métal évaporé ont été mises au point en exclusivité pour l'enregistrement Hi8. La forte énergie magnétique de ces bandes à métal évaporé, qui autorise un enregistrement à densité élevée, et la technologie de l'enregistrement vidéo Hi8 permettent de couvrir une large plage de fréquence et d'obtenir des images enregistrées d'une qualité excellente.

Connecteurs d'entrée/sortie S VIDEO (signal de luminance/chrominance séparé)

Un appareil vidéo traditionnel transmet ou reçoit un signal vidéo composite, mais ce dernier a tendance à produire des interférences qui amoindrissent la qualité des images. En revanche, le connecteur S VIDEO transmet ou reçoit le signal vidéo, séparé en signal de luminance et en signal de chrominance.

Les papillotements et le maculage des couleurs de l'image sont atténués par cette séparation des signaux vidéo, tandis que la netteté est améliorée au point que les cheveux ou les lignes ténues restent clairement visibles. En outre, le connecteur S VIDEO garantit une perte minimale de la qualité de l'image lors des travaux de montage de bande.

Compatibilité avec un magnétoscope 8 mm standard

Consulter le tableau ci-après en ce qui concerne la compatibilité entre le système vidéo de norme Hi8 et le système 8 mm standard.

Enregistrement sur ce magnétoscope

Bande utilisée	Témoin Hi8	Système d'enregistrement
Bande Hi8	Allumé	Hi8
Bande Hi8	Eteint	Système 8 mm standard
Bande 8 mm standard	Eteint automatiquement	Système 8 mm standard

Lecture sur ce magnétoscope

Bande utilisée	Système de lecture
Bande enregistrée selon le système vidéo Hi8	Le système vidéo de la source à reproduire est automatiquement choisi.
Bande enregistrée selon le système vidéo 8 mm	

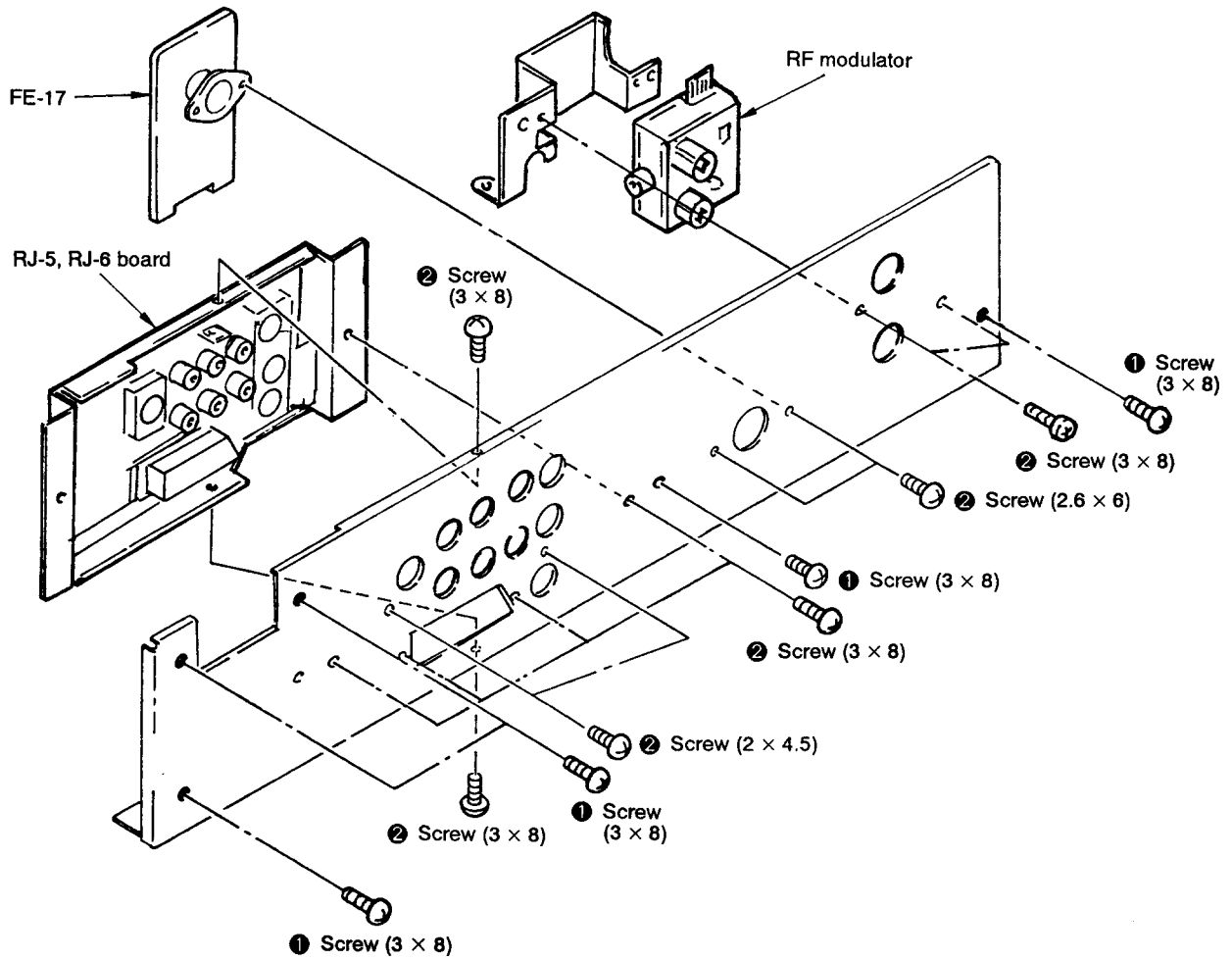
Remarques

- L'enregistrement et la lecture Hi8 ne sont possibles qu'avec une bande Hi8.
- Une bande 8 mm standard ne peut servir pour l'enregistrement ou la lecture selon le système vidéo de norme Hi8.
- La vitesse d'enregistrement du système vidéo Hi8 est compatible avec le système vidéo 8 mm standard. La durée d'enregistrement/lecture est de 1,5 heure en mode SP et de 3 heures en mode LP en utilisant une bande E5-90HME ou équivalente.

SECTION 2 DISASSEMBLY

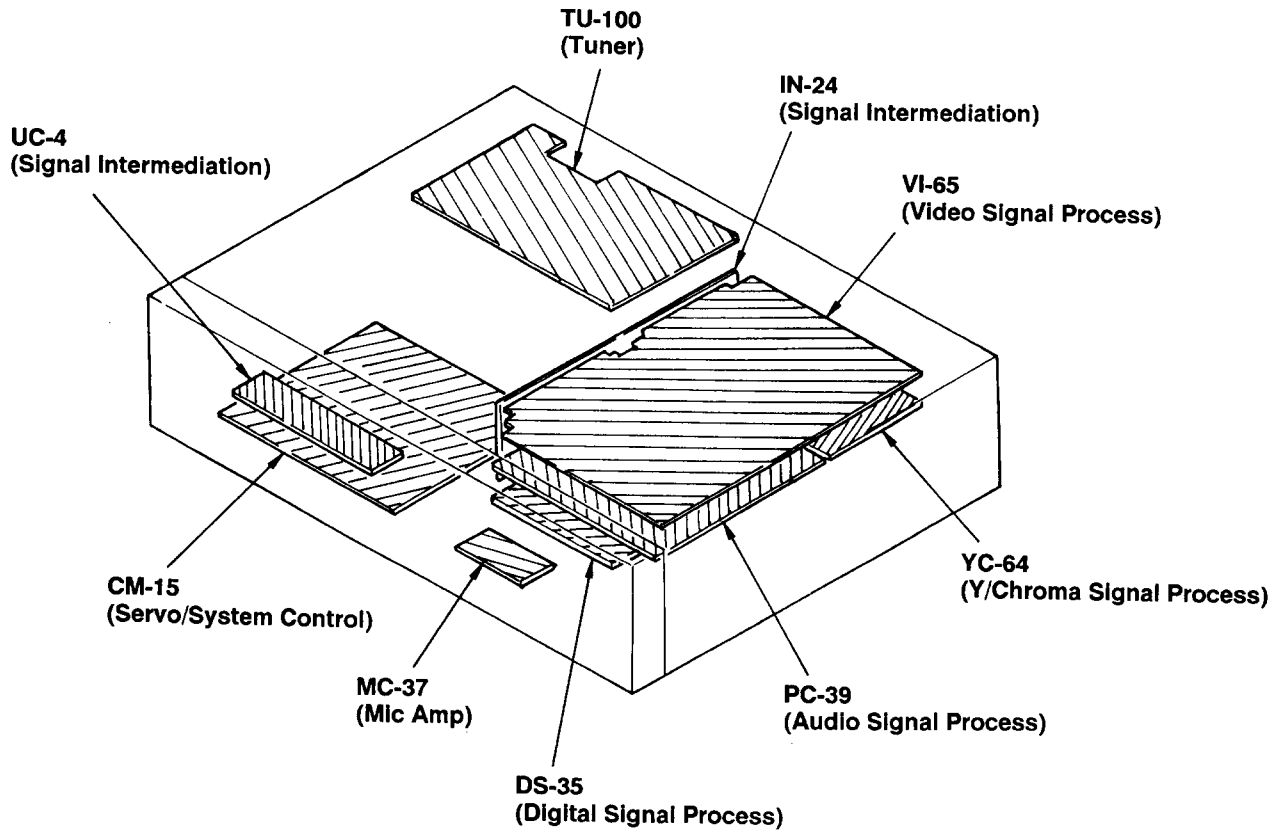
Note: Follow the disassembly procedure in the numerical order given.

2-1. (3-7.) REMOVAL OF RJ-5, RJ-6, FE-17, REAR FRAME, AND RF MODULATOR

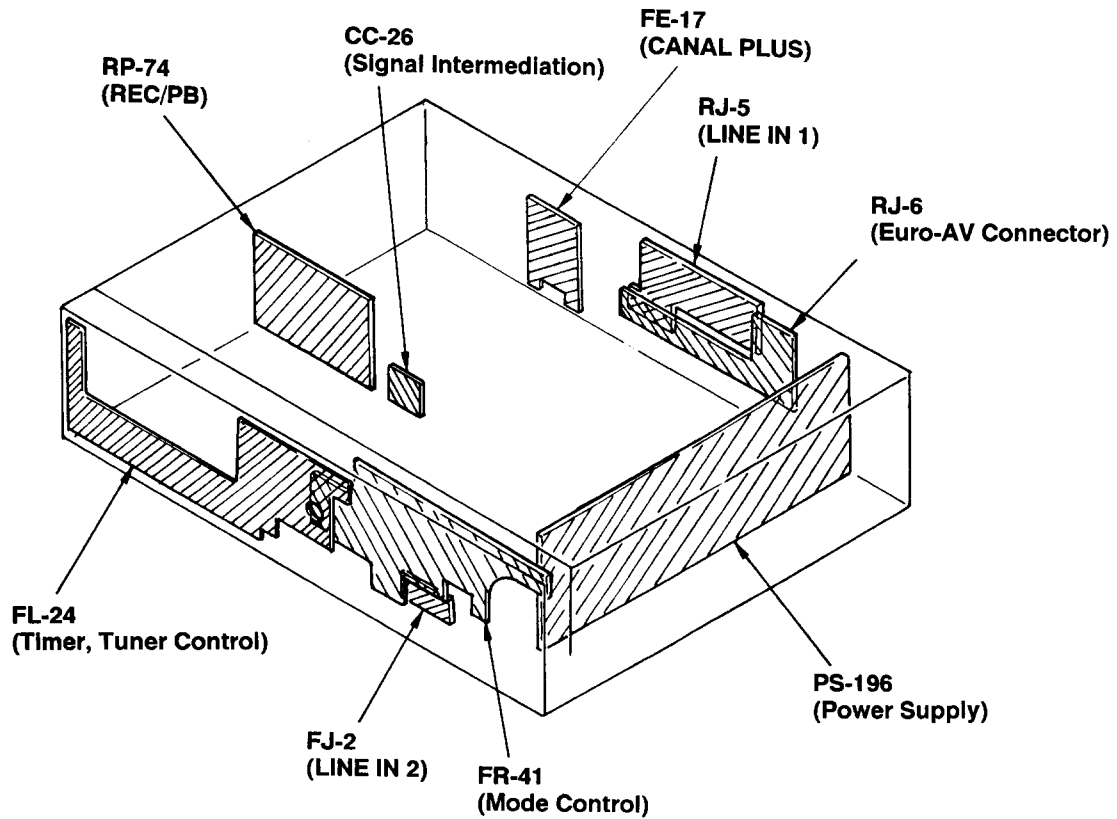


SECTION 3 DIAGRAMS

3-1. (4-1.) CIRCUIT BOARDS LOCATION



FE-17 (CANAL PLUS)



3-3. (4-11.) TIMER/TUNER CONTROL PERIPHERAL CIRCUIT INTERFACE (IC005 ON FL-24 BOARD)

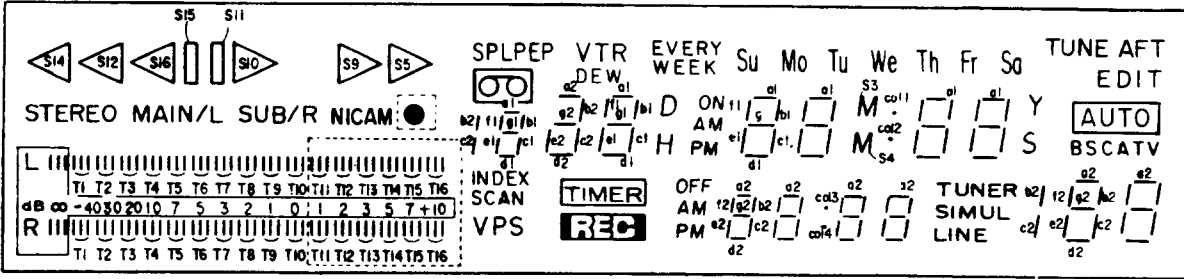
SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL																																																																																
AD0	I	⑩ Pin	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">0V</td> <td style="width: 10%;">1</td> <td style="width: 10%;">1.6</td> <td style="width: 10%;">2.3</td> <td style="width: 10%;">2.9</td> <td style="width: 10%;">3.6</td> <td style="width: 10%;">4.3</td> </tr> <tr> <td>AD0</td> <td>EJECT</td> <td>STOP</td> <td>PB</td> <td>REC</td> <td>A INS</td> <td></td> <td></td> </tr> <tr> <td>AD1</td> <td>FF</td> <td>REW</td> <td>PAUSE</td> <td>INDEX</td> <td>MARK</td> <td>ERASE</td> <td></td> </tr> <tr> <td>AD2</td> <td>CH +</td> <td>CH -</td> <td>T. REC</td> <td>QUICK TIMER</td> <td>EDIT</td> <td>TIMED CHECK</td> <td>TEST 2</td> </tr> <tr> <td>AD3</td> <td>INPUT SELECT</td> <td>EDIT MONITOR</td> <td>SYNCRO EDIT</td> <td>SP/LP</td> <td>COUNTER RESET</td> <td>AUDIO M1</td> <td>AUDIO M2</td> </tr> <tr> <td>AD4</td> <td>HI 8</td> <td>TV/VTR</td> <td>PLAYER</td> <td>RECORDER</td> <td>EDIT STANBY</td> <td>X120</td> <td>TEST 1</td> </tr> <tr> <td>AD5</td> <td>SERVICE</td> <td></td> <td></td> <td></td> <td></td> <td>REMOCON 1</td> <td>REMOCON 2</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">PCM</td> <td style="width: 10%;">MIX</td> <td style="width: 10%;">STD</td> </tr> <tr> <td>AUDIO M1</td> <td>×</td> <td>○</td> <td>×</td> </tr> <tr> <td>AUDIO M2</td> <td>×</td> <td>×</td> <td>○</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">VTR1</td> <td style="width: 10%;">VTR2</td> <td style="width: 10%;">VTR3</td> </tr> <tr> <td>REMOCON 1</td> <td>○</td> <td>×</td> <td>×</td> </tr> <tr> <td>REMOCON 2</td> <td>×</td> <td>○</td> <td>×</td> </tr> </table>		0V	1	1.6	2.3	2.9	3.6	4.3	AD0	EJECT	STOP	PB	REC	A INS			AD1	FF	REW	PAUSE	INDEX	MARK	ERASE		AD2	CH +	CH -	T. REC	QUICK TIMER	EDIT	TIMED CHECK	TEST 2	AD3	INPUT SELECT	EDIT MONITOR	SYNCRO EDIT	SP/LP	COUNTER RESET	AUDIO M1	AUDIO M2	AD4	HI 8	TV/VTR	PLAYER	RECORDER	EDIT STANBY	X120	TEST 1	AD5	SERVICE					REMOCON 1	REMOCON 2		PCM	MIX	STD	AUDIO M1	×	○	×	AUDIO M2	×	×	○		VTR1	VTR2	VTR3	REMOCON 1	○	×	×	REMOCON 2	×	○	×
	0V	1		1.6	2.3	2.9	3.6	4.3																																																																											
AD0	EJECT	STOP		PB	REC	A INS																																																																													
AD1	FF	REW		PAUSE	INDEX	MARK	ERASE																																																																												
AD2	CH +	CH -		T. REC	QUICK TIMER	EDIT	TIMED CHECK	TEST 2																																																																											
AD3	INPUT SELECT	EDIT MONITOR		SYNCRO EDIT	SP/LP	COUNTER RESET	AUDIO M1	AUDIO M2																																																																											
AD4	HI 8	TV/VTR	PLAYER	RECORDER	EDIT STANBY	X120	TEST 1																																																																												
AD5	SERVICE					REMOCON 1	REMOCON 2																																																																												
	PCM	MIX	STD																																																																																
AUDIO M1	×	○	×																																																																																
AUDIO M2	×	×	○																																																																																
	VTR1	VTR2	VTR3																																																																																
REMOCON 1	○	×	×																																																																																
REMOCON 2	×	○	×																																																																																
AD1	I	⑪ Pin																																																																																	
AD2	I	⑫ Pin																																																																																	
AD3	I	⑬ Pin																																																																																	
AD4	I	⑭ Pin																																																																																	
AD5	I	⑮ Pin																																																																																	
E CS	O	⑰ Pin	"H" pulse on the channel selection.																																																																																
E CLK	O	⑱ Pin	Pulse train when Pin ⑰ is "H".																																																																																
E DATA	I/O	⑲ Pin	Pulse train I/O when Pin ⑰ is "H".																																																																																
E BUSY	I	⑳ Pin	"L" pulse during Data writing.																																																																																
VTR/TV	O	㉑ Pin	"L" when the antenna selector is TV.																																																																																
IN SEL 1	O	㉒ Pin	"H" when selecting LINE input on rear.																																																																																
IN SEL 2	O	㉓ Pin	"H" when selecting LINE input on front.																																																																																
POWER CONT	O	㉗ Pin	"H" when the power is on.																																																																																
POWER FAIL	I	㉙ Pin	"L" when UN 5V is 4.0 – 4.3V or less.																																																																																
TT CS	I	㉚ Pin	1V cycle "L" pulse.																																																																																
TU V DET	I	㉜ Pin	"L" during TUNER VIDEO receiving.																																																																																
V _L	O	㉞ Pin	"L" on receiving TUNER VL.																																																																																
WG/UK	I	㉟ Pin	"H" for AEP model, "L" for UK model. Pull up to "H".																																																																																
SECAM/PAL	O	㊱ Pin	"H" on receiving System L, "L" on system B/G.																																																																																
TA MUTE	O	㊴ Pin	"H" pulse when the channel selection.																																																																																
N. C	I	㊵ Pin	Not used																																																																																
N. C	I	㊶ Pin	Not used																																																																																
LATCH	O	㊸ Pin	"H" pulse when the channel selection.																																																																																
CLOCK	O	㊹ Pin	Pulse train when Pin ㊸ is "H".																																																																																
DATA	O	㊺ Pin	Pulse train when Pin ㊸ is "H".																																																																																

FL-24 (TIMER, TUNER CONTROL) PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

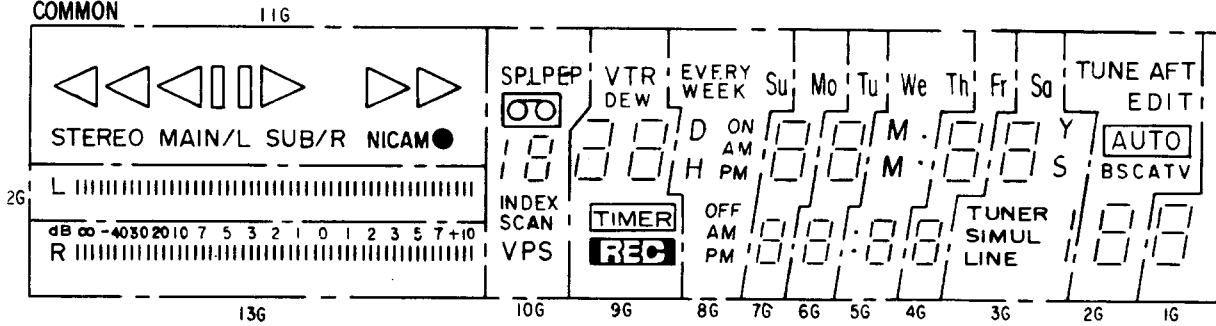
- Ref. No.: FL-24 Board; 11,000 Series -

• ND001

SEGMENT

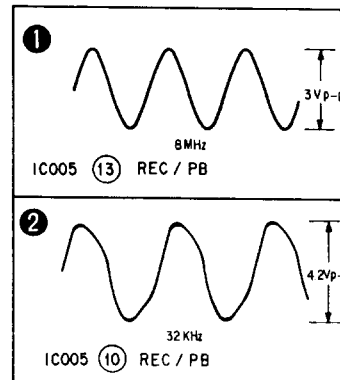


COMMON



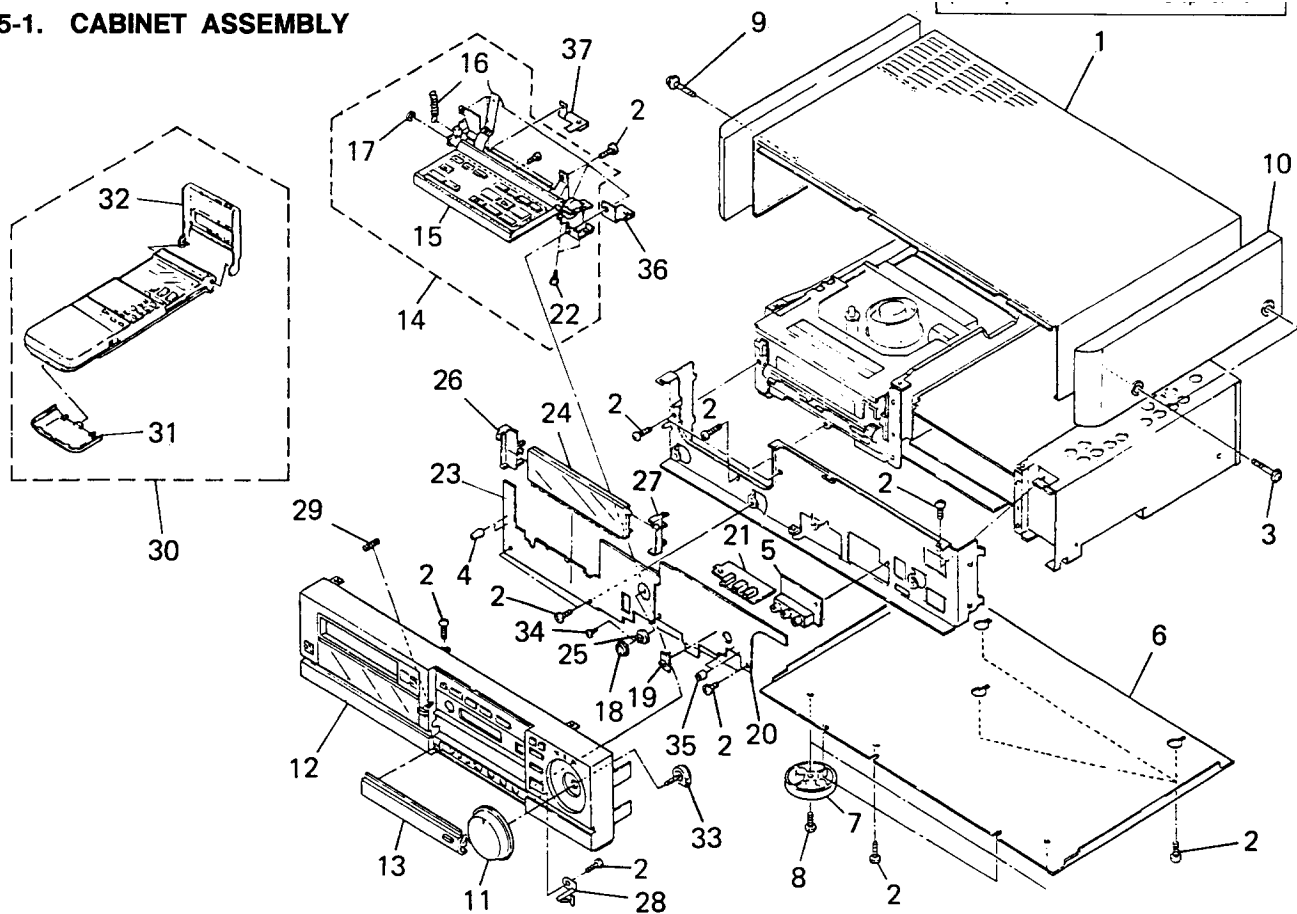
INTERNAL CONNECTION

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	STEREO	EP	VTR	EVERY WEEK	Mo	Tu	We	Fr	Sa	TUNE	
S2	MAIN	a1	a1	Su	a1	a1	Th	a1	a1	AFT	
S3	L	b1	b1	D	b1	b1	M Up	b1	b1	EDIT	
S4	NICAM	c1	c1	H	c1	c1	M Down	c1	c1		
S5	▷ R	d1	d1		d1	d1	* co14	d1	d1	CATV	
S6	●	e1	e1	PM	e1	e1	* co13	e1	e1	AUTO	
S7	SUB	f1	f1	ON	f1	f1	* co11	f1	f1		
S8	R	g1	g1	AM	g1	g1	* co12	g1	g1		
S9	▷ M								Y	BS	
S10	▷ L	◻	g2		a2	a2	a2	a2	S	a2	a2
S11	◻ R	SP	b2		b2	b2	b2	b2	b2, c2	b2	b2
S12	◻ M	VPS	c2	OFF	c2	c2	c2	c2	TUNER	c2	c2
S13		LP	DEW	PM	d2	d2	d2	d2	LINE	d2	d2
S14	◻ L	b2, c2	e2	AM	e2	e2	e2	e2	SIMUL	e2	e2
S15	◻ L	INDEX	TIMER		f2	f2	f2	f2		f2	f2
S16	◻ R	SCAN	REC		g2	g2	g2	g2		g2	g2

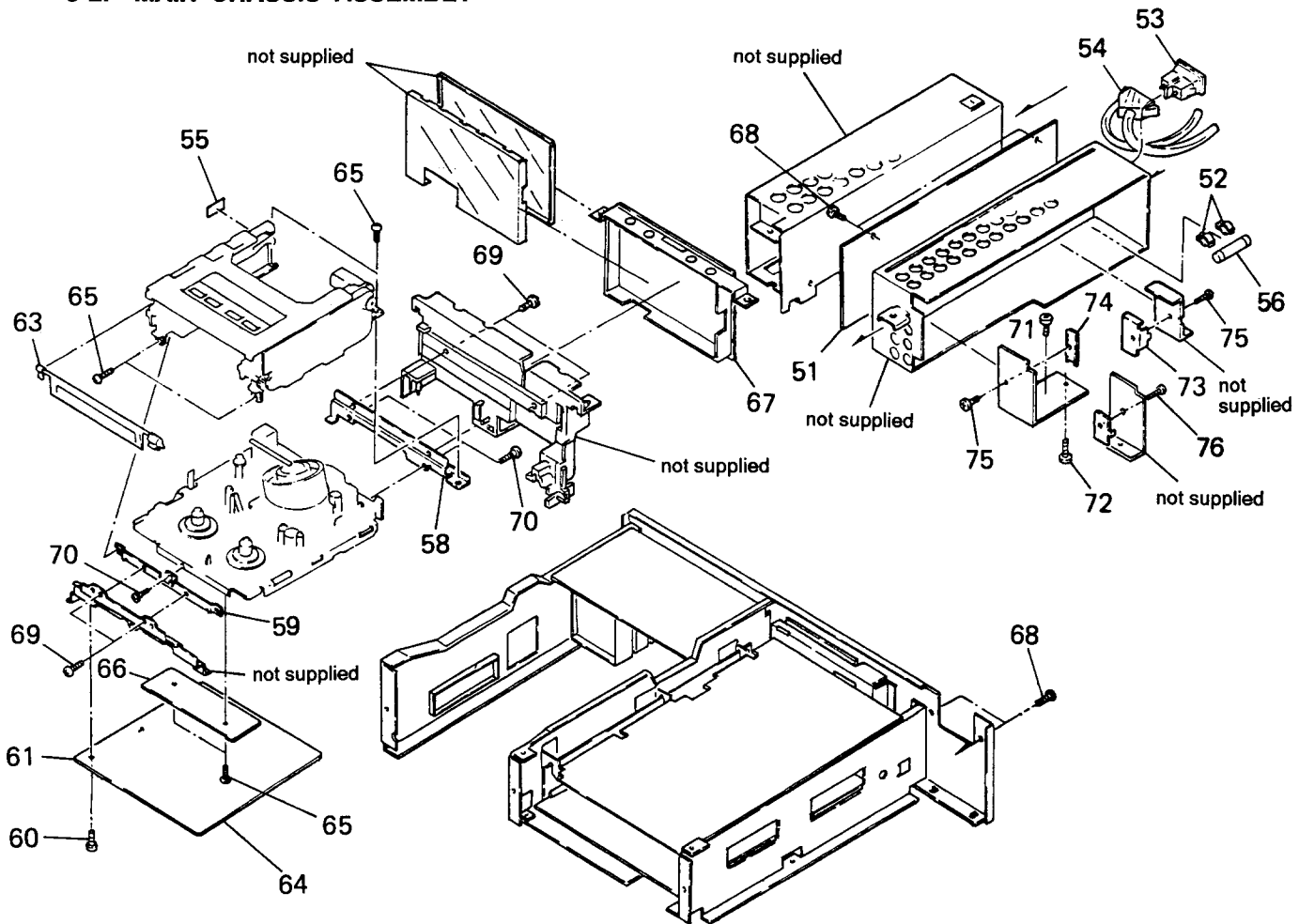


TIMER, TUNER CONTROL

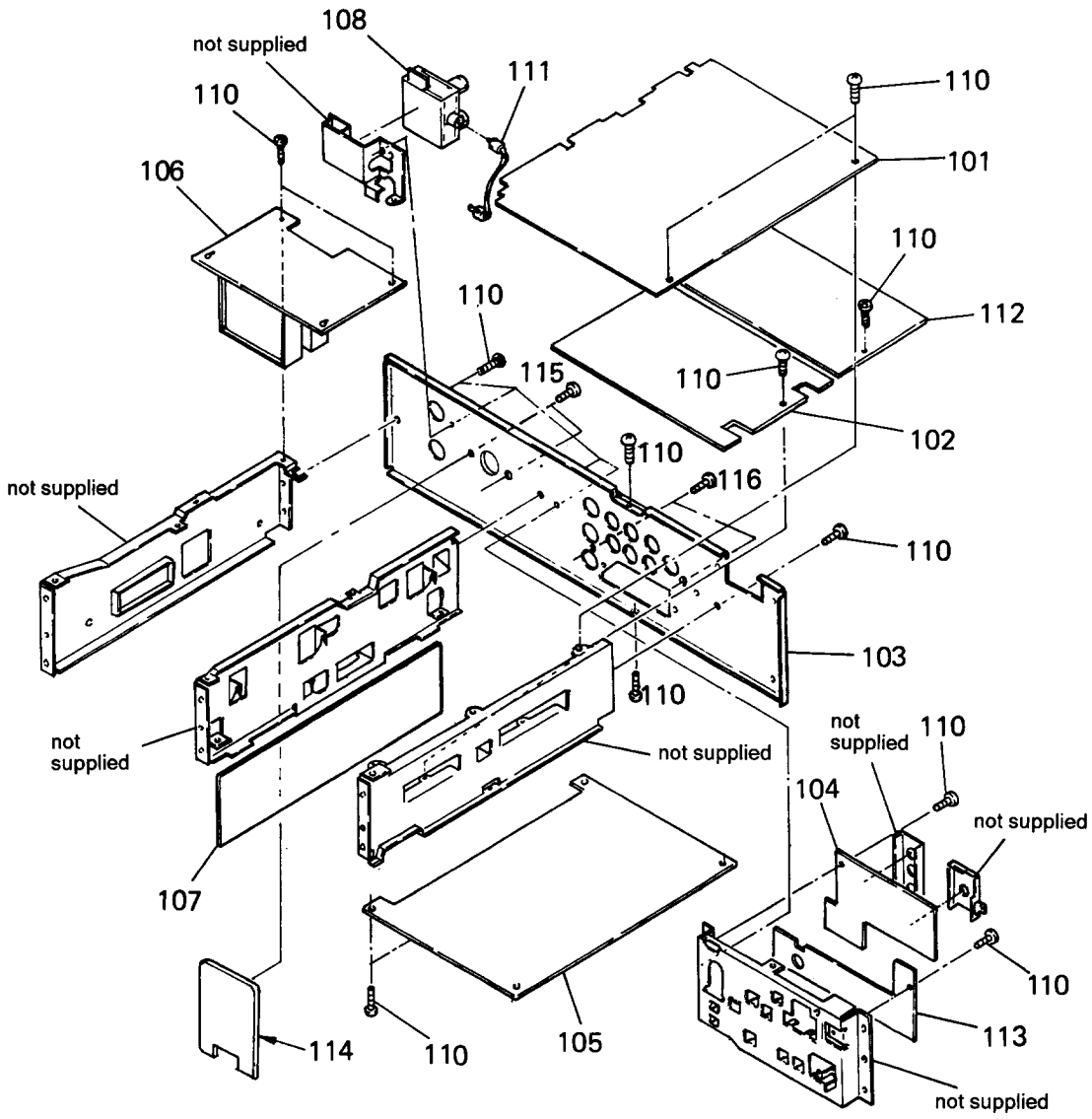
5-1. CABINET ASSEMBLY



5-2. MAIN CHASSIS ASSEMBLY



5-3. MAIN BOARD ASSEMBLY



SECTION 7 ELECTRICAL ADJUSTMENT

7-1. (9-9.) TUNER SYSTEM ADJUSTMENT

7-1-1. (9-9-1.) RF AGC Adjustment (IF001 Unit/TU-100 Board)

Signal	Broadcast TV signal
Adjustment element	VR of IF001 unit

[Adjustment Method]

- 1) Adjust the monitor TV to a maximum contrast.
- 2) Turn the VR to make snow noise visible.
- 3) Turn the VR in an opposite direction and set it to the point where the snow noise disappears.
- 4) Receive each channel and confirm that there are no beat picture corruption snow noises due to cross modulation.

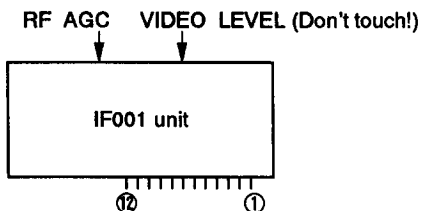


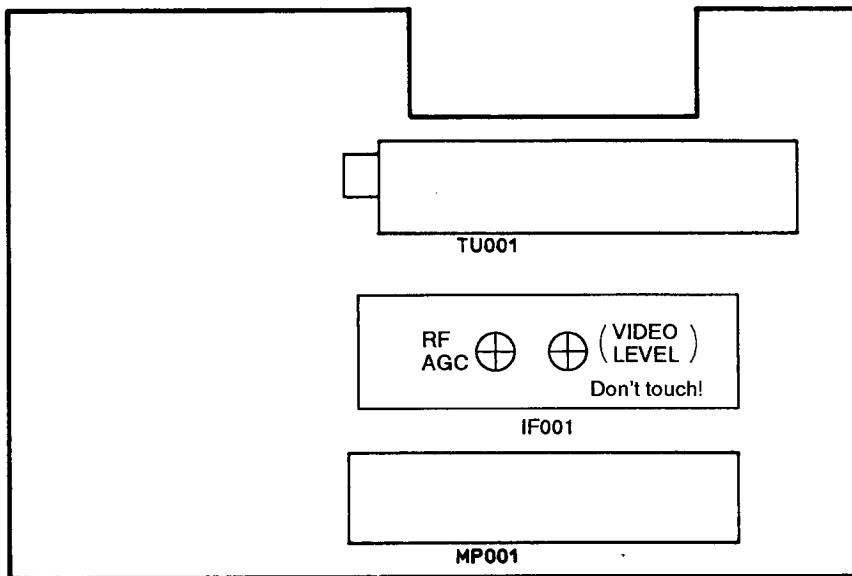
Fig. 8-28.

Note: Don't touch the video level volume.

When rotating it, feed the SECAM 97% modulated video signal, and adjust with the video level volume so that the video level at pin ⑫ VIDEO DET OUT becomes 2 V_{p-p}.

7-2. (9-10.) ARRANGEMENT DIAGRAM FOR ADJUSTING PARTS

TU-100 BOARD (COMPONENT SIDE)

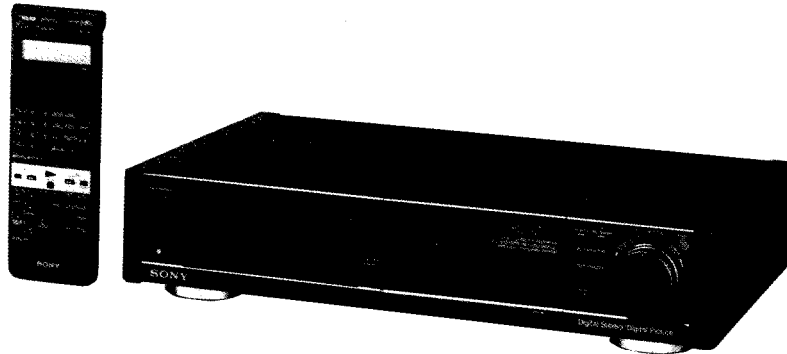


EV-S1000E

RMT-451

SERVICE MANUAL

AEP Model
UK Model



Hi8

MECHANISM

SPECIFICATIONS

For Mechanical ADJUSTMENTS, refer to the "8 mm Video MECHANICAL ADJUSTMENT MANUAL III" (9-972-732-11)

System

Video recording system	Rotary two-head helical scanning FM system
Audio recording system (Normal recording)	Standard: Rotary head FM system (2 channels) PCM: PCM system (2 channels)
Colour system	EV-S1000E: DDR SECAM to PAL colour, convertible EV-S1000E (UK): CCIR system B, G, and H, PAL colour
Usable cassettes	8 mm video format cassette
Tape speed	SP: 20.051 mm/sec. LP: 10.058 mm/sec.
Maximum recording/playback time	SP: 1 hour 30 min. (with Sony E5/P5-90) LP: 3 hours (with Sony E5/P5-90)
Fast-forward/rewind time	Approx. 4 min. (with Sony E5/P5-90)

PCM

Sampling frequency	31.25 kHz
Audio frequency	20 Hz to 15 kHz
Dynamic range	More than 90 dB
Wow and flutter	Less than 0.005 % RMS

Tuner Section

Channel coverage	EV-S1000E: VHF E2 to E4, E5 to E12 UHF E21 to E69 Cable TV: channels S01 to S03, S1 to S20, S21 to S41 EV-S1000E (UK): UHF 321 to B68 60 programmes
Programming system	EV-S1000E: West German two-carrier system
Stereo/bilingual system	EV-S1000E (UK): NICAM
RF output signal	EV-S1000E: UHF channels E30 — E39 (variable) EV-S1000E (UK): UHF channels B30 — B39 (variable)
Aerial input	75 ohms, unbalanced 75-ohms asymmetric aerial socket

— Continued on page 2 —

• SERVICE OF REMOTE COMMANDER RMT-451

Remote commander RMT-451 is available as a unit. But as individual parts the battery cap lid of commander is only available.



8 VIDEO CASSETTE RECORDER

SONY®

Inputs and Outputs

LINE IN 1/2	<p>VIDEO: Phono jack (1 each) 1 Vp-p, 75 ohms, unbalanced, sync negative</p> <p>AUDIO: Phono jack (2 each) 47 kilohms, - 7.5 dBs (0 dBs = 0.775 V rms)</p> <p>S VIDEO: 4-pin mini DIN (1 each) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced</p>	<p>HEADPHONES jack: Stereo minijack (1), - 20 dBs, 8 ohms</p> <p>MIC (microphone) input: Minijack (1) - 60 dBs, for low impedance microphone</p>
LINE OUT	<p>VIDEO: Phono jack (1) 1 Vp-p, 75 ohms, unbalanced, sync negative</p> <p>AUDIO: Phono jack (2 each) Output impedance less than 1 kilohms, - 7.5 dBs with 10 kilohms load unbalanced</p> <p>S VIDEO: 4-pin mini DIN (1) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced</p>	<h3>Timer Section</h3> <p>Clock Crystal locked</p> <p>Command mode VTR 1/2/3</p> <p>Time indication 24-hour cycle</p> <p>Timer setting Only for recording 6 programmes in one month at max.</p> <p>Timer back-up Built-in self-charging capacitor Back-up duration: Up to 1 hour at one time</p>
MONITOR OUT	<p>EURO-AV: 21-pin (1) Video out: pin 19 1 Vp-p, 75 ohms, unbalanced, sync negative (with change-over switch) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: PIN 15 0.30 Vp-p, 75 ohms, unbalanced PIN 21 S VIDEO/VIDEO: S VIDEO Audio out: pins 1 and 3 Output impedance Less than 1 kilohms, - 6dBs with 10 kilohms load, unbalanced</p> <p>S VIDEO: 4-pin, mini DIN (1) Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced</p>	<h3>General</h3> <p>Power requirements EV-S1000E: 220 V AC, 50 Hz EV-S1000E (UK): 240 V AC, 50 Hz</p> <p>Power consumption EV-S1000E: 28 W EV-S1000E (UK): 30 W</p> <p>Operating temperature 5°C to 40°C (41°F to 104°F)</p> <p>Storage temperature - 20°C to 60°C (- 4°F to 140°F)</p> <p>Dimensions EV-S1000E: 470 x 105 x 305 mm (w/h/d) (18 5/8 x 4 1/4 x 12 1/8 inches) (including side woods) EV-S1000E (UK): 430 x 105 x 305 mm (w/h/d) (17 x 4 1/4 x 12 1/8 inches)</p> <p>Weight EV-S1000E: 6.5 kg (14 lb 5 oz) EV-S1000E (UK): 5.9 kg (13 lb)</p>
CONTROL L (LANC):	<p>Rear panel: 5-pin DIN (1) Front panel: stereo minimini-jack (1)</p>	<h3>Wireless Commander RMT-451</h3> <p>Remote control system Infrared control</p> <p>Power requirements 3.0 V DC, two IEC designation R6 batteries</p> <p>Command mode VTR 1/VTR 2/VTR 3</p> <p>Dimensions Approx. 77 x 18 x 220 mm (w/h/d) (3 1/8 x 3/4 x 8 3/4 inches) including projecting parts and controls</p> <p>Weight 170 g (5 oz) excluding batteries</p>

Accessories Supplied

Wireless Remote Commander RMT-451 with two R6 batteries	(1)
75-ohm coaxial cable	(1)
Audio connecting cable (2 phono to 2 phono)	(1)
Video connecting cable (phono to phono)	(1)
Video connecting cable for S VIDEO connector (4-pin DIN to 4-pin DIN)	(1)
Control cable (stereo minimini jack to stereo minimini jack)	(1)
Screwdriver	(1)
Cleaning cassette	(1)

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!



COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

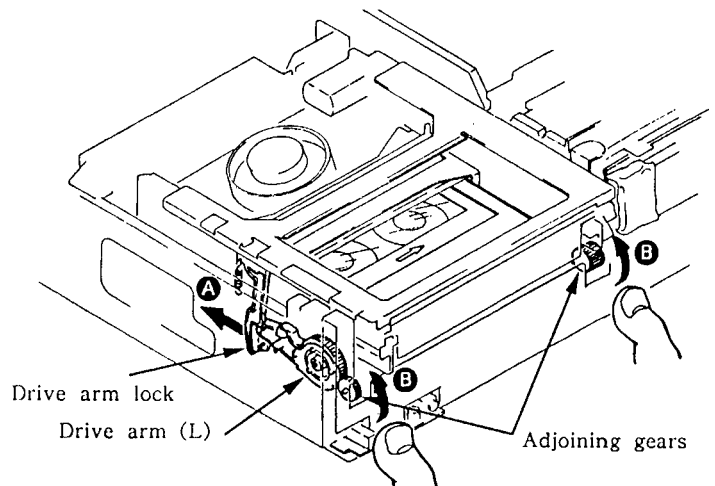
<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	SERVICE NOTE		4.	DIAGRAMS	
1-1.	Ejecting a Malfunctioning Videocassette	7	4-1.	Circuit Boards Location	57
1-2.	Replacing the External Casing	7	4-2.	Overall Block Diagram	59
1-3.	Replacing the Videocassette Door Assembly	7	4-3.	Video Block Diagram (1)	63
1-4.	Cleaning the Video Head and Transport System	8	4-4.	Video Block Diagram (2)	67
1-5.	Notes for Cassette Compartment Ass'y Installation	8	4-5.	System Control, Servo Block Diagram	71
1-6.	Replacing the Rotating Drum	9	4-6.	System Control-Video, Audio Block Interface	75
2.	GENERAL		4-7.	System Control-Servo Peripheral Circuit Interface	76
	Precautions	10	4-8.	System Control-System Control Peripheral Circuit Interface	80
	Hi8 (High Eight) Video System	10	4-9.	System Control-Mechanism Block Interface	82
	Operational Parts	11	4-10.	Mode Control Peripheral Circuit Interface	83
	Connections	15	4-11.	Timer/Tuner Control Peripheral Circuit Interface	85
	Remote Control Operation	16	4-12.	Control Display Block Diagram	87
	The Menu System	16	4-13.	Tuner Block Diagram	89
	Date and Clock Setting	19	4-14.	Digital Block Diagram	93
	Adjusting the TV	19	4-15.	Audio Block Diagram	98
	Presetting the Active Channels	20	4-16.	Power Block Diagram	102
	Mode Setting	22	5.	PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS	
	Handling Video Cassettes	23	5-1.	Frame Schematic Diagram	103
	Playback	24	5-2.	Printed Wiring Boards and Schematic Diagrams	
	Recording TV Programmes	31		RP-74	107
	Recording Level Adjustment	33		VI-65	115
	Recording Stereo/Bilingual Programmes	33		YC-64	129
	Timer Recording	35		CM-15, UC-4, CC-26	134
	Quick Timer Recording	39		DS-35	144
	Use of the Tape Counter	40		PC-39	157
	Index Function	41		TU-100	167
	Before Editing	43		NM-2	171
	Basic Editing	45		MC-37	173
	Synchronized Editing	46		FL-24	175
	Insert Editing	49		PS-196	177
	Audio Dubbing	52		IN-24	183
3.	DISASSEMBLY			RJ-5, RJ-6	187
3-1.	Removal of Front Panel, Case Upper, Plate Bottom ...	53		FR-41, FJ-2	191
3-2.	Removal of VI-65, PC-39, YC64, FR-41, FJ-2 Boards ...	53	5-3.	Semiconductors	198
3-3.	Removing Boards Connected by a Board-to-Board Connector	54	6.	EXPLODED VIEWS	
3-4.	Removal of DS-35, TU-100, RP-74, IN-24, CM-15, PS-196 Boards	54	6-1.	Cabinet Assembly	199
3-5.	Removal of CC-26 Board	54	6-2.	Main Chassis Assembly	200
3-6.	Removal of CM-15, UC-4 Boards	54	6-3.	Main Board Assembly	201
3-7.	Removal of RJ-5, RJ-6 and Rear Frame, RF Modulator	55	6-4.	Cassette Compartment Assembly	202
3-8.	Removal of MD, Cassette Compartment Block	55	6-5.	MD Block Assembly-1	203
3-9.	Removal of MD Section	55	6-6.	MD Block Assembly-2	204
3-10.	Internal Views	56	6-7.	MD Block Assembly-3	205

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
7.	ELECTORICAL PARTS LIST				
	RJ-5, RJ-6, CM-15 Boards	206		9-5-15. Chroma Emphasis fo Adjustment	266
	RP-74 Board	210		9-5-16. Carrier Balance Adjustment	266
	VI-65 Board	212		9-5-17. fo VCO Adjustment	266
	FL-24 Board	225		9-5-18. GCA Gain Adjustment	267
	FR-41 Board	226		9-5-19. REC Y Level Adjustment	267
	MC-37 Board	228		9-5-20. REC C Level Adjustment	267
	TU-100 Board	229		9-5-21. D. O. C. Level Adjustment	267
	PS-196 Board	230	9-6.	SECAM-PAL Conversion System Adjustment	
	DS-35 Board	232		(AEP model only)	268
	IN-24 Board	239		9-6-1. fh VCO Adjustment	268
	FJ-2, YC-64 Boards	240		9-6-2. I REF Adjustment	268
	PC-39 Board	243		9-6-3. Bell Filter Adjustment	269
	UC-4, CC-26, FP-237, FP-90, NM-2 Boards	251		9-6-4. Colour Level Adjustment	269
	Hardware List	253		9-6-5. R-Y fo Adjustment	269
				9-6-6. B-Y fo Adjustment	270
8.	MECHANICAL ADJUSTMENTS	254	9-7.	Digital Adjustments	270
8-1.	Tape Pass Adjustment	254		9-7-1. Decoder-osciliated Free Run Frequency	
8-1-1.	Setting the Track Shift Mode	254		Adjustment	270
8-1-2.	Preparation for Adjustment	254		9-7-2. Encoder-oscillated Free Run Frequency	
				Adjustment	270
9.	ELECTRICAL ADJUSTMENTS			9-7-3. TINT Adjustment	270
9-1.	Preparations	255		9-7-4. V OUT SUB Colour Level Adjustment	271
9-1-1.	Connection of Equipment	255		9-7-5. V OUT SUB C Hue Adjustment	271
9-1-2.	Confirmation of Input Signal	256		9-7-6. Write Clock Adjustment	272
9-2.	Power Supply Block Adjustment	258		9-7-7. S OUT SUB C Hue Adjustment	272
9-2-1.	Voltage Check	258		9-7-8. SUB Y Level Adjustment	272
9-3.	System Control System Adjustment	259		9-7-9. Color Level Adjustment	272
9-3-1.	Timer Clock Adjustment	259		9-7-10. CG OSC Adjustment	272
9-4.	Servo System Adjustment	259	9-8.	Audio System Adjustment	273
9-4-1.	PWM Oscillation Frequency	259		9-8-1. PCM Audio System Adjustment	273
9-4-2.	Switching position Adjustment	259		9-8-2. AFM Audio System Adjustmfent	275
9-5.	Video Adjustment	260	9-9.	Tuner System Adjustment	278
9-5-1.	Playback Frequency Characteristics			9-9-1. RF AGC Adjustment	278
	Adjustment	260		9-9-2. Receive Separation (MPX) Adjustment	278
9-5-2.	Flying Erase Check	261	9-10.	Arrangement Diagram for Adjustment Parts	279
9-5-3.	FSC fo Adjustment	261			
9-5-4.	ORC SP (LP) Adjustment	261			
9-5-5.	Y/C Separation Comb-type Filter Adjustment	262			
9-5-6.	Y Comb-type Filter Adjustment	262			
9-5-7.	SYNC AGC Adjustment	262			
9-5-8.	PB Emphasis out Level Adjustment	263			
9-5-9.	Deemphasis Adjustment	263			
9-5-10.	STD Mode PB Y Level Adjustment	263			
9-5-11.	Hi8 Mode PB Y Level Adjustment	264			
9-5-12.	STD Mode Y FM Carrier Frequency,				
	Y FM Deviation Adjustment	264			
9-5-13.	Hi8 Mode Y FM Carrier Frequency,				
	Y FM Deviation Adjustment	265			
9-5-14.	378fh VCO Adjustment	266			

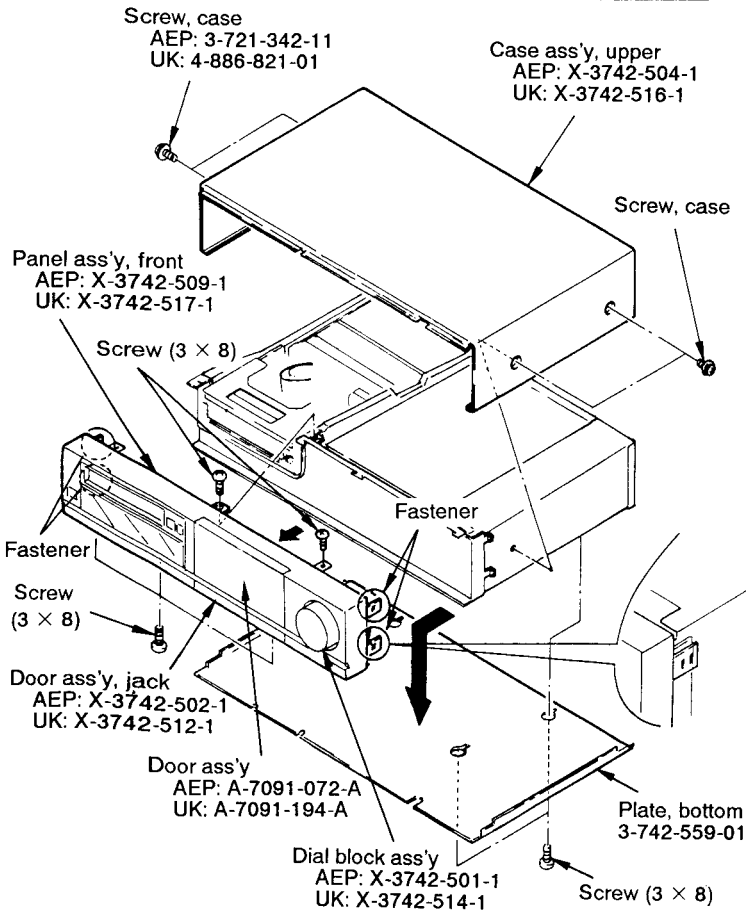
**SECTION 1
SERVICE NOTE**

1-1. Ejecting a malfunctioning videocassette

- A. If the videocassette cannot be ejected because the videotape is still wrapped around the drum, remove the CM-15 board on the lower part of the mechanical section. Turn the capstan motor wheel in either direction and turn either the S or T reel to return the tape to the cassette. After the tape is back inside the cassette, proceed to step "B" if necessary.
- B. If the videotape is in the cassette half and cannot be ejected :
- 1) Remove the front panel. Remove the drive arm lock (located between the L frame and the left part of the cassette control section) away from the drive arm (L) in the direction of the arrow **A**.
 - 2) Use both thumbs to turn the adjoining gears in the direction of arrow **B**.



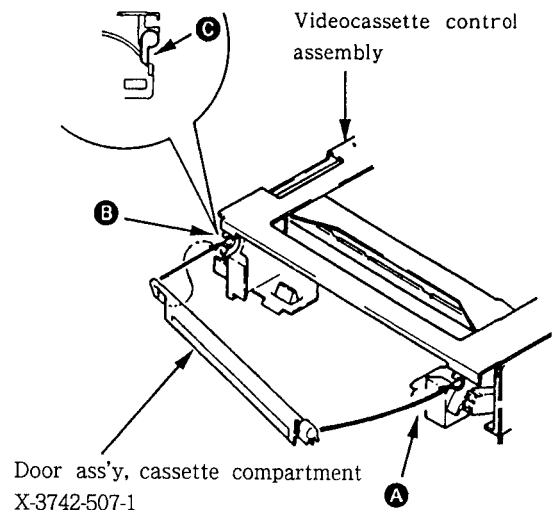
1-2. Replacing the external casing



Note: Remove the locks of the five fasteners, then remove the front panel.

1-3. Replacing the videocassette door assembly

- 1) Remove the front panel.
- 2) Remove the videocassette door assembly first from part **A**, then from part **B**.



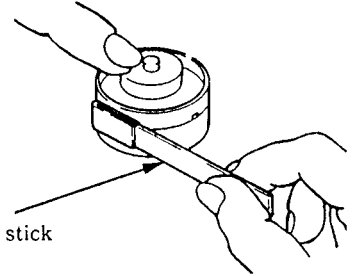
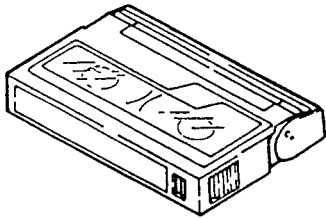
- 3) When reinstalling the videocassette door assembly, install at part **B** first. Install it on the fastener of part **C** as shown in the figure. Then install at part **A** with the door assembly lowered vertically.

1-4. Cleaning the video head and transport system

Procedure 1

[Using a cleaning tape]

- Use the V8-25CLN cleaning tape. (Before using the cleaning tape, read the instructions carefully.)



Head cleaner stick
(3-601-330-99)

[Cleaning the transport system]

- ① Apply the cleaning fluid to the head cleaner stick.
- ② Use the head cleaner stick to clean the tape guide, pinch roller, and other parts that come in direct contact with the tape.

Procedure 2

[Using cleaning fluid]

- ① Remove the video deck's upper casing.
- ② Apply the cleaning fluid to the head cleaner stick (Ref. No. 3-601-330-99).
- ③ As shown in the figure on the right, gently contact the head cleaner stick to the video head, and clean while turning the rubber part on the top of the rotating drum.

1-5. Notes for cassette compartment ass'y installation

1. After installing the cassette compartment ass'y onto the MD block ass'y, look from the front panel and check if the tab of the eject lever (MD block ass'y) is properly latched onto the rear of the knob of the lock slider (cassette compartment ass'y). See Fig. 1.
2. If the tab is latched on the reverse, use the tip of a screwdriver to lightly push the eject lever. Then install the cassette compartment ass'y.

Notes

1. When the MD block ass'y is not in the STOP position, the eject lever might not be able to move.
2. If the cassette compartment is not properly installed on the MD block ass'y (improper latching between the cassette compartment ass'y's lock slider and the MD block ass'y's eject lever) and the unit's AC plug is inserted into a power outlet, the cassette door and holder will operate repeatedly regardless of the ON/OFF setting of the power switch. The cassette will not be loaded even when it is inserted.

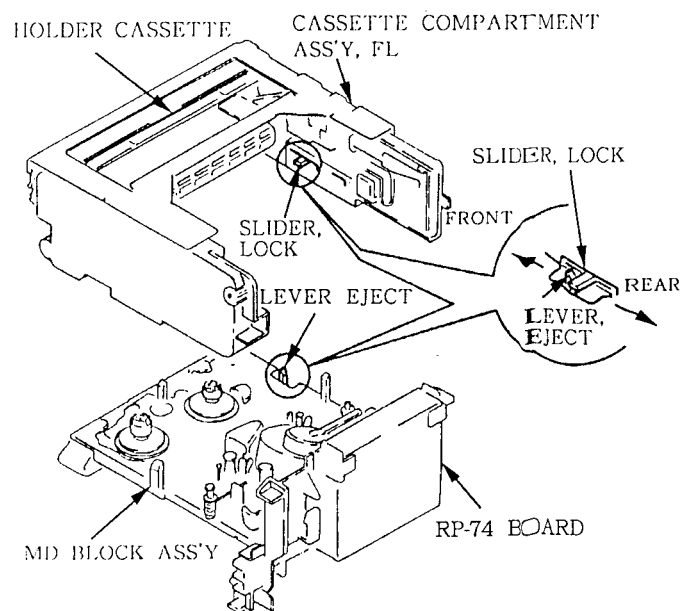


Fig. 1.

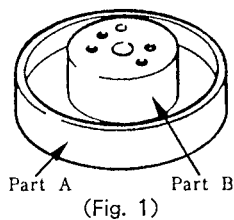
1-6.

Replacing the rotating drum

Procedure 3

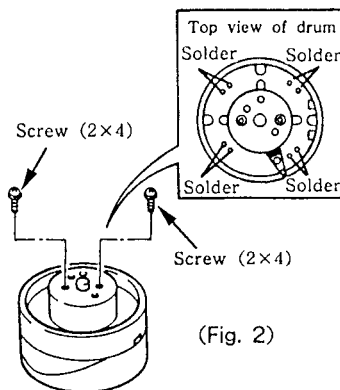
Precautions

- Be especially careful when handling the video head and terminals.
- Hold the drum by the upper part (Part B), do not touch the side of the drum (Part A) directly. See Fig. 1.

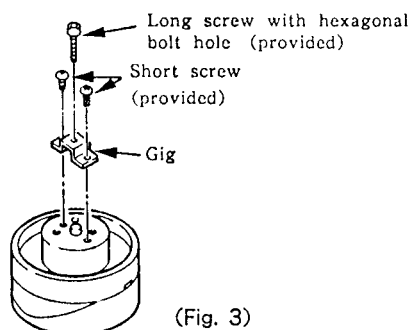


Removing the rotating drum

- ① As shown in Fig. 2, remove the two short screws (2×4).
- ② Completely remove the eight soldering points on the rotating drum's board. Refer to Fig. 2.

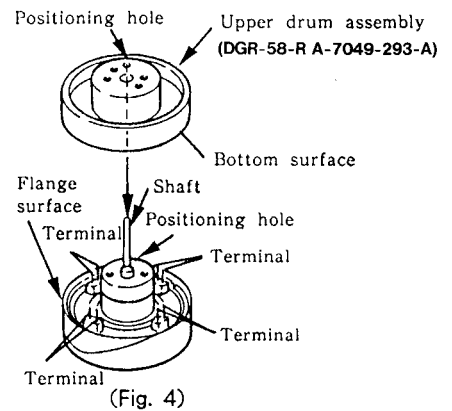


- ③ While referring to Fig. 3, use the two short screws supplied with the jig (which comes with the spare rotating drum) to fasten the jig to the drum. Then screw in the long screw until the drum is removed.

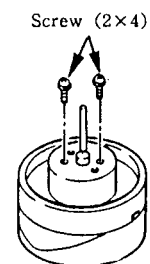


Installing the new drum

- ① Clean the flange surface and the new rotating drum's bottom surface. Refer to Fig. 4.
- ② While referring to Fig. 4, insert the supplied shaft through the jig and into the positioning hole of the lower drum. Slip the shaft into new rotating drum's positioning hole and gently set the rotating drum.



- ③ With the shaft still inserted in the positioning hole, use your hand to push down the rotating drum lightly. If the drum does not go down completely, refer to Fig. 5 and gradually tighten the two long screws (2×5) alternately to fasten the rotating drum.
- ④ Take out the shaft. If the shaft cannot be readily taken out, redo the procedure from step 2.



- ⑤ While referring to Fig. 2, solder the board's eight places and eight terminals.
- ⑥ After the rotating drum is replaced, use a head cleaner stick to clean the video head and transport system. Follow Procedure 2 of "Cleaning the video head and transport system."

SECTION 2 GENERAL

This section is extracted from instruction manual.

Precautions

On Safety

- For EV-S1000E (UK), operate on 240 V AC, 50 Hz. For EV-S1000E, operate on 220 V AC, 50 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- If the unit will not be used for an extended period, unplug it from the mains outlet. To disconnect the cord, pull it out by the plug. Never pull the lead itself.
- The unit is not disconnected from the mains (AC power source) as long as it is connected to the mains outlet, even if the unit itself has been turned off.

On Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, such as microwave ovens or large loudspeakers.
- Do not place any heavy object on the unit.

On Operation

- When the unit is not in use, turn the power off to conserve energy and to extend its life.
- Remove and store video cassettes after recording or playback.

On Cleaning

- Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth slightly moistened with a mild detergent solution.
- Do not use any type of solvent, such as alcohol or benzene, which might damage the finish.

On Repacking

- Do not throw away the carton and packing materials. They make an ideal container to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

On Cassette Care

- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

On the Remote Controller

Be sure not to lose the Remote Commander. Some function of this VTR can not be performed without the Remote Commander.

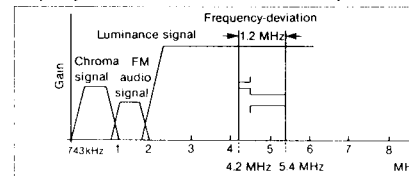
If you have any questions about the unit, contact your Sony service facility.

Hi8 (High Eight) Video System

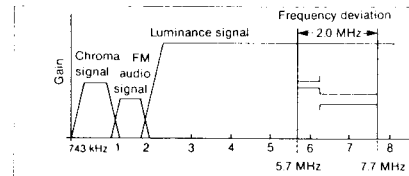
High Quality Picture

Information capacity is the key element for picture improvement. It can be increased by shifting the FM carrier frequency range. In the Hi8 video system, the FM carrier frequency range of the luminance signal is shifted to 5.7 — 7.7 MHz, up from the 4.2 — 5.4 MHz of the standard 8 mm video system. Thanks to this improvement, the horizontal resolution is increased.

Frequency allocation of the standard 8 mm video system



Frequency allocation of the Hi8 video system



High Grade Tape to Match the Hi8 Video System

Metal evaporated tapes have been developed exclusively for Hi8 recording. The high magnetic energy of the metal evaporated tape which allows for high-density recording, coupled with the Hi8 video recording technology will cover a wide frequency range to achieve recording of excellent picture quality.

S VIDEO (Separated Luminance/Chrominance Signal) Input/Output Connectors

Conventional video equipment transmits or receives the composite video signal. The composite video signal is liable to produce interference resulting in picture quality loss. On the other hand, the S VIDEO connector transmits or receives the video signal separated into the luminance signal and the chrominance signal.

Flickers and colour blur in the picture are minimized with the separated video signals and picture sharpness is enhanced to such an extent that even hair and fine stripes are clearly visible. The S VIDEO connector also assures minimum loss in picture quality during editing.

Compatibility with a Standard 8 mm Video Cassette Recorder

Refer to the chart below for the compatibility between the Hi8 video system and the standard 8 mm system.

Recording with this VTR

Tape used	Hi8 indicator	Recording system
Hi8 tape	On	Hi8
	Off	Standard 8 mm video system
Standard 8 mm tape	Automatically turned off	Standard 8 mm video system

Playback with this VTR

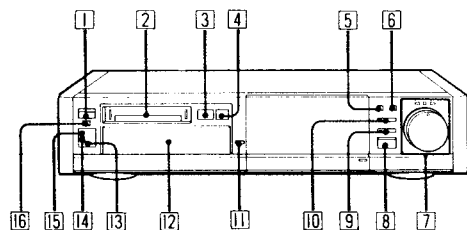
Tape used	Playback system
Tape recorded in Hi8 video system	The recording video system is automatically selected
Tape recorded in standard 8 mm video system	

Notes

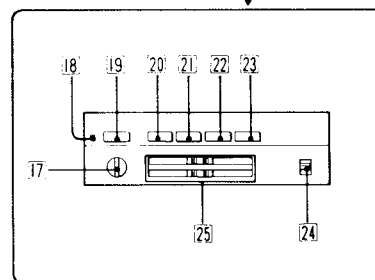
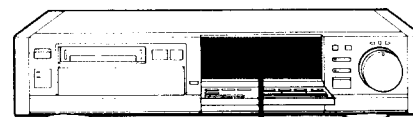
- Hi8 recording or playback can only be performed with a Hi8 tape.
- A standard 8 mm tape cannot be recorded or played back using the Hi8 video system.
- The recording tape speed of the Hi8 video system is compatible with the standard 8 mm video system. Recording/playback time is 1.5 hours in the SP mode and 3 hours in the LP mode using a P5/E5-90HME tape or equivalent.

Operational Parts

Front Panel

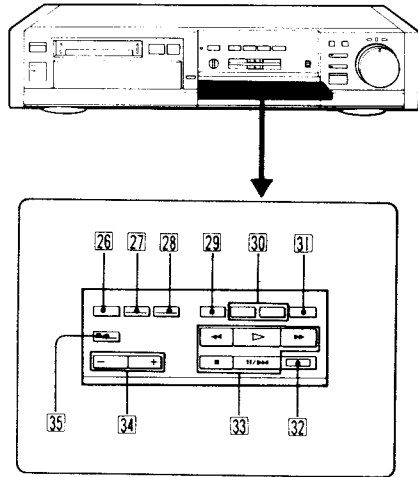


- 1. ON/STANDBY switch
- 2. Cassette compartment
- 3. EJECT button
- 4. Hi8 (Recording/playback) indicator
Lights to indicate that Hi8 recording or playback can be performed.
- 5. PLAYER control button
- 6. RECORDER control button
- 7. EDIT SHUTTLE (REVERSE/FORWARD) and indicator
- 8. SYNCHRO EDIT button and indicator
- 9. EDIT STANDBY button and indicator
- 10. EDIT MONITOR button and indicator
- 11. PUSH OPEN button
- 12. Display window
- 13. Remote sensor
- 14. Hi-Fi STEREO indicator
Lights when playing back the Hi-Fi audio track recorded in the bilingual or stereo mode. Also lights when recording is made in the bilingual or stereo mode on the Hi-Fi track.
- 15. PCM indicator
Lights when recording on or playing back the PCM audio track.
- 16. ON/STANDBY lamp [for EV-S1000E (UK) only.]
Lights when the VTR is in the standby mode.

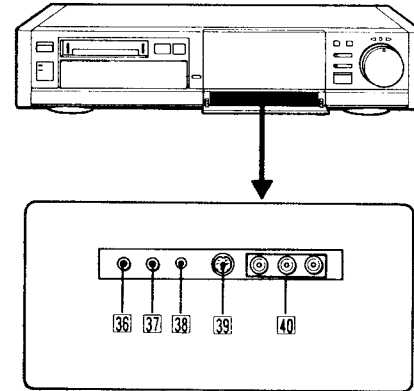


- 17. PHONE LEVEL (headphones level) control
- 18. Reset switch
Press this switch with a pointed object such as a ball point pen if the VTR does not operate even when pressing the operating buttons. When this switch is pressed, the information entered to the VTR's memory will be lost. Reset the information before operating the VTR again.
- 19. Hi8 mode button
- 20. COUNTER RESET button
- 21. TV/VTR button
- 22. REC MODE SP/LP button
- 23. INPUT SELECT button
- 24. AUDIO MONITOR select switch
(PCM/MIX/STD (Hi-Fi))
- 25. REC LEVEL controls

Operational Parts

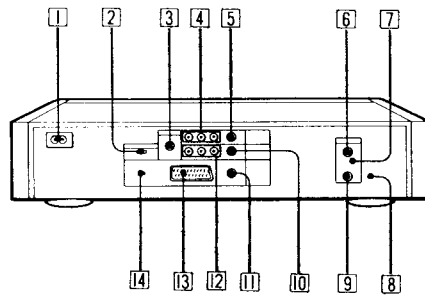


- 26 TIMER CHECK button
- 27 TIMER REC ON/OFF button
- 28 QUICK TIMER button
- 29 INDEX button
- 30 INDEX MARK/ERASE buttons
- 31 EDIT button
- 32 ● REC (recording) button
- 33 Tape transport buttons
◀ REW (rewind), ▶ PLAY (playback), ▶▶ FF (fast-forward), ■ STOP, || PAUSE/STILL
- 34 PROGRAM +/- buttons
- 35 AUDIO DUB button and indicator



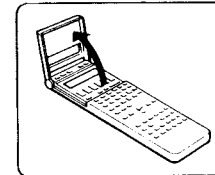
- 36 HEADPHONES jack (stereo minijack)
- 37 MIC (microphone) jack (minijack)
- 38 CONTROL L (LANC) jack (stereo mini-minijack)
- 39 LINE IN 2 S VIDEO connector (4-pin DIN)
- 40 LINE IN 2 VIDEO/AUDIO jacks (phono)
When connecting a monaural equipment to these jacks, connect to the LINE IN 2 AUDIO L (MONO) jack only.

About LANC
LANC stands for Local Application Control Bus System. The LANC connector is used for controlling the tape transport of video equipment and peripherals connected to it. This connector has the same function as the connectors indicated as CONTROL L or REMOTE.



Rear Panel

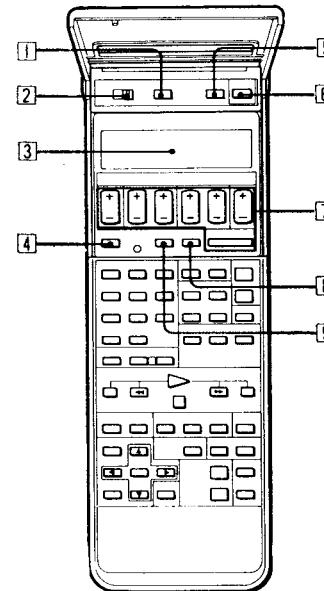
- 1 AC INPUT
- 2 COMMAND MODE selector
- 3 CONTROL L (LANC) connector (5-pin DIN)
- 4 LINE IN 1 VIDEO/AUDIO jacks (phono)
- 5 LINE IN 1 S VIDEO connector (4-pin DIN)
- 6 AERIAL IN socket
- 7 DX/LOCAL switch
- 8 RF CHANNEL screw (30 CH to 39 CH)
- 9 AERIAL OUT socket
- 10 LINE OUT S VIDEO connector (4-pin DIN)
- 11 MONITOR OUT S VIDEO connector (4-pin DIN)
- 12 LINE OUT VIDEO/AUDIO jacks (phono)
- 13 MONITOR OUT EURO-AV connector (21-pin CENELEC)
- 14 VIDEO OUT (VIDEO or S VIDEO) selector



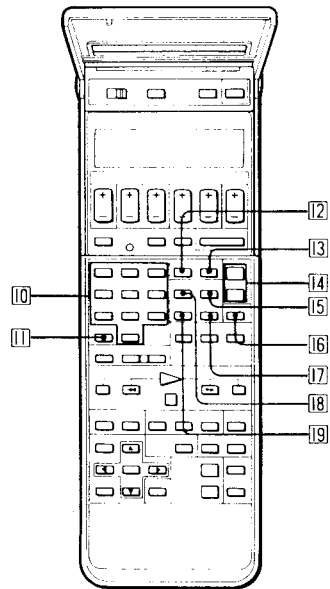
Remote Commander RMT-451

Before you begin

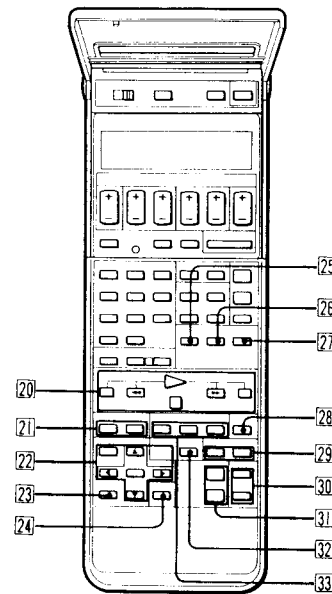
- The buttons on the Commander with the same name or mark as those on the unit have the same function.
- The buttons with a red dot inscribed on top can be used to remotely control Sony TV's with the mark when the TV/VTR remote control selector is set to TV.
- Keep the upper cover closed except where noted.



- 1 TIMER REC (ON/OFF) button
- 2 TV/VTR remote control selector
Set to VTR to control this VTR and set to TV to control the TV.
- 3 LCD (Liquid-crystal) display
- 4 COMMAND MODE button
- 5 TV/VTR button
- 6 (on/standby) button
- 7 Timer recording/clock set buttons
 - 1 DAY
 - 2 TURN ON time
 - 3 TURN OFF time
 - 4 PROG (programme position)
 - 5 TRANSMIT
- 8 MEMORY button
- 9 CLOCK SET (SET/START) button

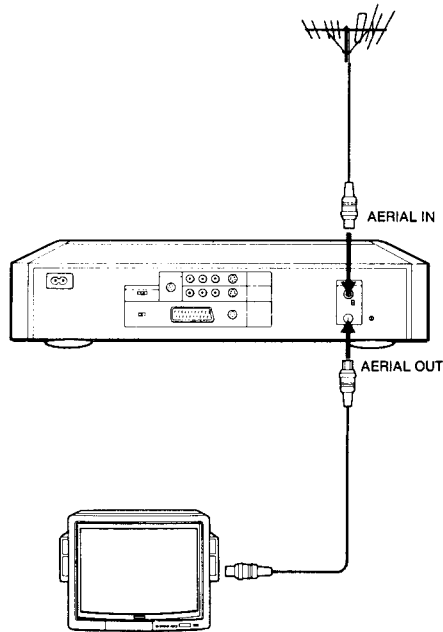


- 10 **Programme position number buttons**
Press to select the programme position directly. To enter single digit numbers, press 0 and then the desired number.
- 11 **- / - - (10's digit) button**
Press to select a programme position number over 9.
To select 23, press - / - , then 2 and 3.
- 12 **INPUT SELECT button**
Open the cover to select the input signal for timer recording. Close the cover to change the current input setting.
- 13 **REC MODE select button**
- 14 **PROG (programme) + / - buttons**
- 15 **MAIN/SUB button**
- 16 **INDEX button**
- 17 **COUNTER RESET button**
- 18 **DATA SCREEN button**
- 19 **EDIT MONITOR button**



- 20 **Basic operational buttons**
 - PAUSE button
 - REC (recording) buttons
 - SEARCH button
 - ▶ PLAY
 - ◀ REW (rewind)
 - ▶▶ FF (fast-forward)
 - STOP
- 21 **SHUTTLE EDIT < / > buttons**
- 22 **Menu operation buttons**
 - MENU
 - EXECUTE
 - Cursor shift buttons ▲ / ▼ / ◀ / ▶
- 23 **FUNCTION MEMORY button**
- 24 **TIMER ON SCREEN button**
- 25 **▄▶ FRAME button**
- 26 **X1/5 button**
- 27 **X2 button**
When this button is pressed, the playback sound will automatically be changed to monaural, even though the STEREO indicator will be turned on in the display window.
- 28 **TV SCAN button**
- 29 **INDEX MARK and ERASE button**
- 30 **TIMER CHECK/TIMER CLEAR buttons**
- 31 **VOL (TV volume) + / - buttons**
Press to control the volume of the TV. Effective only for Sony TVs with the mark.
- 32 **AUDIO DUB button**
- 33 **P in P (picture in picture) buttons**

Connections

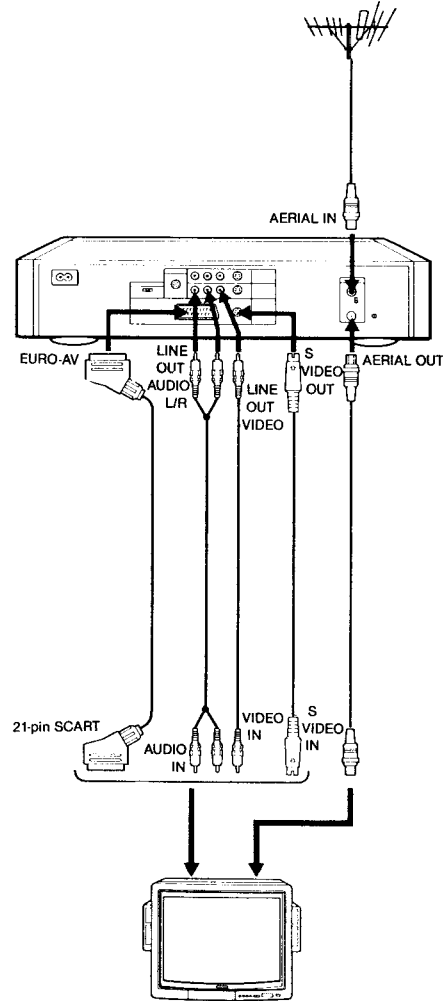


Before You Begin

- Turn off the power to the unit and TV.
- Do not connect the mains lead until all of the other connections are complete.
- Connect firmly as a loose connection may cause picture distortion.

To Connect a TV without Audio/video Inputs

- 1 Remove the aerial cable on the TV from its socket.
- 2 Connect the aerial cable to AERIAL IN on the VTR.
- 3 Connect the aerial input of the TV to AERIAL OUT on the VTR using the supplied cable.



To Connect a TV with Audio/video Inputs

Connections using the audio/video inputs on the TV provide a better quality playback picture.

If your TV is equipped with an EURO-AV connector

- 1 Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."
- 2 Connect LINE OUT AUDIO/MONITOR OUT EURO-AV of the VTR to the audio input/ EURO-AV on the TV with an optional cable.
- 3 Set the VIDEO OUT (VIDEO or S VIDEO) selector on the rear panel to S VIDEO to view the picture of the Luminance and Chrominance separated signal, i.e. the same as the video signal output from the S VIDEO connector. Set it to VIDEO to output standard video signals.

If your TV is equipped with S VIDEO input connector

- 1 Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."
- 2 Connect LINE OUT AUDIO/MONITOR OUT S VIDEO of the VTR to the AUDIO/S VIDEO input on the TV with the supplied cable.

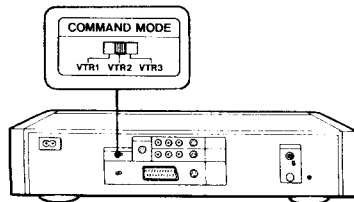
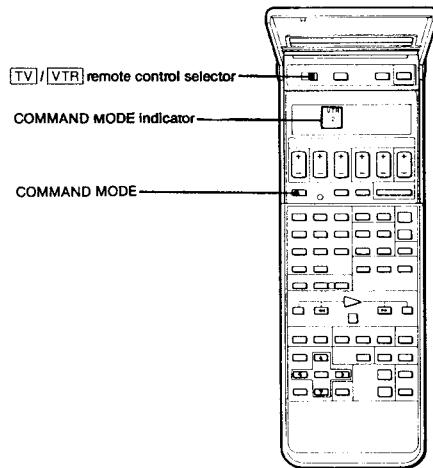
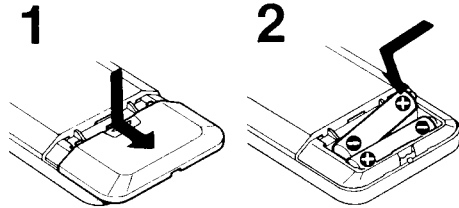
If your TV is equipped with audio/video input jacks

- 1 Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."
- 2 Connect LINE OUT AUDIO/VIDEO jacks on the VTR to the audio/video input jacks on the TV.

Notes

- If this VTR is connected to a TV or monitor which does not have S VIDEO input, and the VIDEO OUT (VIDEO or S VIDEO) selector is set to S VIDEO, picture will be displayed on the screen but without colour.
- Avoid making VIDEO and S VIDEO connections at the same time.
- The on-screen display will not be output to the TV if connection is made via LINE OUT AUDIO/VIDEO jacks.

Remote Control Operation



Preparing the Commander

Battery insertion

- 1 Slide and remove the cover.
- 2 Insert two R6 (size AA) batteries with the correct polarity.
- 3 Close the cover.
The clock on the Commander will read - D
---. Set the date and clock referring to "Date and Clock Setting."

Command mode setting

Set the COMMAND MODE selector on the rear of this VTR to the same number displayed in the LCD display. Normally set to VTR 2. To change the setting on the Commander, press COMMAND MODE repeatedly.

Note on batteries

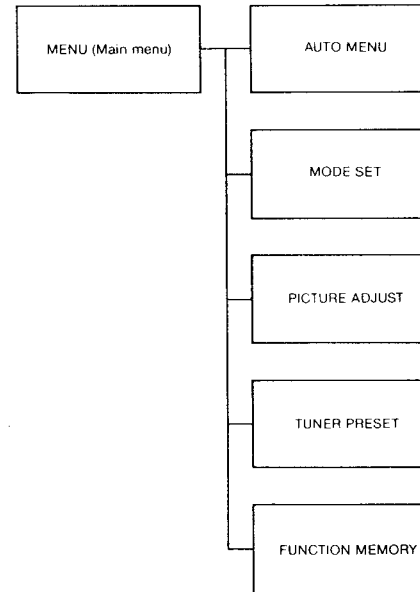
With normal operation, batteries will last for about six months. If the Commander will not be used for a long period, remove the batteries to avoid possible damage from battery leakage.

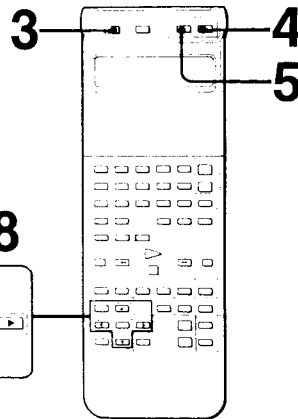
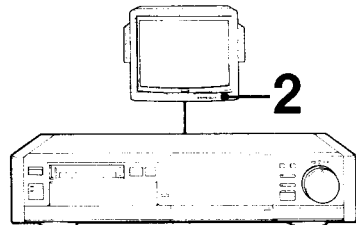
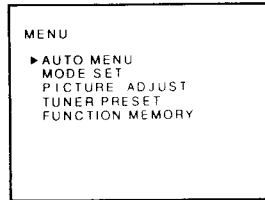
The Menu System

Overview

This VTR employs a menu system in which various settings and adjustments necessary for operation can be made. The menu system of this VTR consists of five different menu displays which can be selected from the main MENU.

Refer to the following pages for the details of each menu.



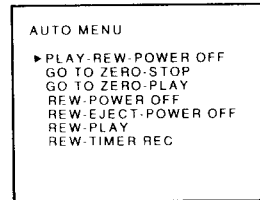


To Call Up the Menu Display

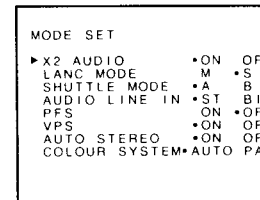
- 1 Check that the VTR and the TV are connected properly.**
Connect the VTR and the TV using the AERIAL OUT socket, MONITOR OUT EURO-AV connector, or the MONITOR OUT S VIDEO connector on the VTR referring to "Connections."
- 2 Turn on the TV.**
Select the programme position for VTR playback if connection is made using the AERIAL OUT socket on the VTR. Select VTR input if connection is made using the MONITOR OUT EURO-AV or S VIDEO connector.
- 3 Set the TV/VTR remote control selector to VTR.**
- 4 Press ON/STANDBY.**
- 5 Press TV/VTR to turn on the VTR indicator.**
When connection is made via the AERIAL OUT socket on the VTR.
- 6 Press MENU.**
The main MENU will appear on the screen.
- 7 Select the desired menu by moving the cursor.**
Press ▲ to go up, and ▼ to go down.
- 8 Press EXECUTE.**
The selected menu will appear on the TV screen.

To erase the menu display
Press MENU again.

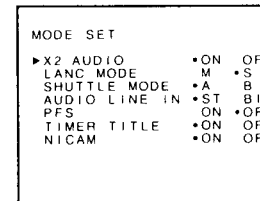
Note
The menu display will not be output to the TV screen if connection is made via the LINE OUT S VIDEO connector or LINE OUT VIDEO jacks.



EV-S1000E



EV-S1000E (UK)



AUTO MENU

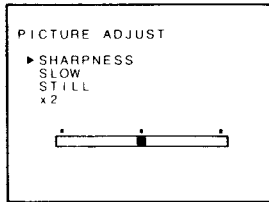
The VTR can be set to enter the desired operational sequence. For the actual operation, refer to "Assigning a Desired Operation Mode" on page 45.

MODE SET

Various mode settings can be made in this menu. For details of each setting, refer to "Mode Setting" on page 30.

PICTURE ADJUST

The playback picture can be adjusted to obtain maximum quality in this menu. Refer to "Picture Adjustments" on page 40



FUNCTION MEMORY

FUNCTION MEMORY

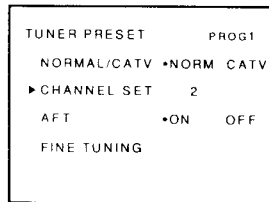
A desired operational sequence of the VTR can be assigned to the FUNCTION MEMORY button on the Commander. With a press of the FUNCTION MEMORY button, the selected sequence will begin. Refer to "Assigning an Auto Menu Mode to the FUNCTION MEMORY Button" on page 47.

PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 ▶ [AUTO MENU]

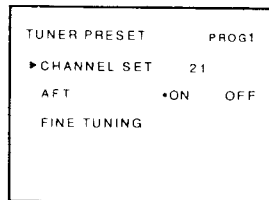
TUNER PRESET

Presetting of the active channels and fine tuning of a weak station can be performed in this menu. For the actual operation, refer to the "Presetting the Active Channels" on page 26

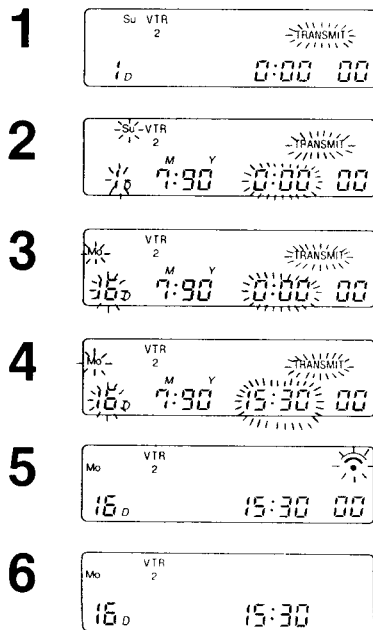
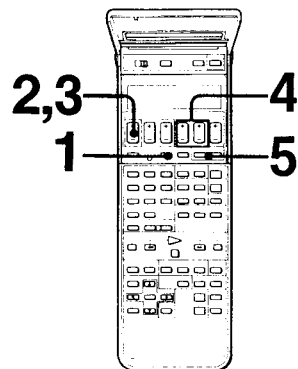
EVS1000E



EVS1000E (UK)



Date and Clock Setting



Before You Begin

The time and date between the years 1990 and 2004 can be set with the Commander.

Operation

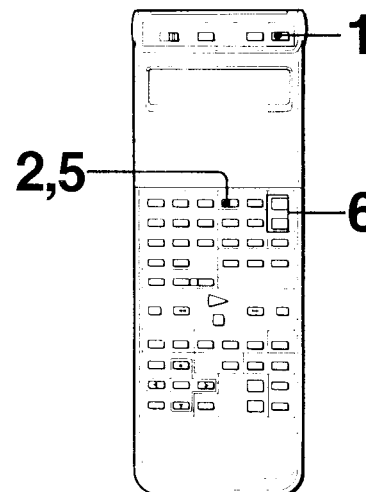
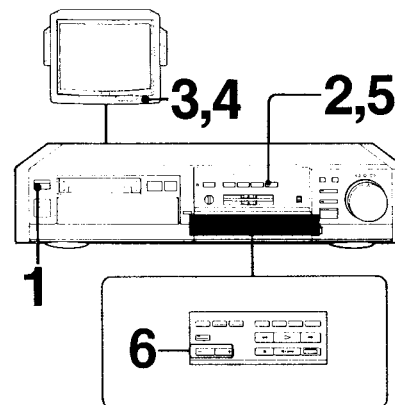
Example: To set to 15:30, Monday, July 16, 1990.

- 1** Open the cover and press CLOCK SET.
- 2** Press the D (day) button until 7 M 90 Y is displayed.
The day will be advanced slowly up to 30 days ahead and then the month will be advanced.
- 3** Press the + side or - side of the D (day) button until 16 D is displayed.
The day of the week appears automatically.
- 4** Press the H (hour) and M (minute) buttons under TURN OFF to set to 15:30.
- 5** Point the Commander at the VTR and press TRANSMIT.
- 6** Check the display window on the unit and close the cover.

When 0:00 is blinking on the unit
Any time power is interrupted for more than one hour, you will see 0:00 blinking when power is restored. You will have to re-set the date and clock again.

When a short beep sounds repeatedly
The VTR is in the timer recording or quick timer recording mode and the setting cannot be transmitted.

Adjusting the TV



Before You Begin

If you have connected your VTR and TV using the AERIAL OUT on the VTR, one of the television programme positions must be adjusted to receive the VTR's playback signal. If TV — VTR connection is made by other means, skip this step.

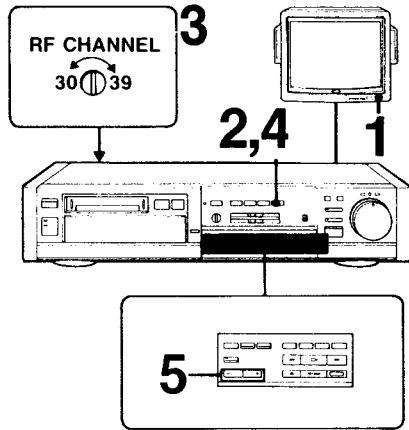
Operation

- 1** Make connections referring to "Connections" and press ON/STANDBY.
- 2** Press INPUT SELECT to light LINE L2 in the display window.
Do not connect any equipment to the LINE IN 2 VIDEO jack.
- 3** Turn on the TV and select a programme position that is not used to receive a TV station.
- 4** Tune the TV so that a blue screen with time counter and tape speed indication is clearly seen on the TV screen.
- 5** Press INPUT SELECT to light TUNER in the display window.
- 6** Press the PROG (PROGRAM) +/- and check that the screen changes to a different programme.

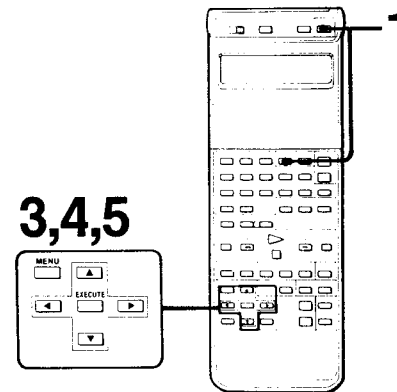
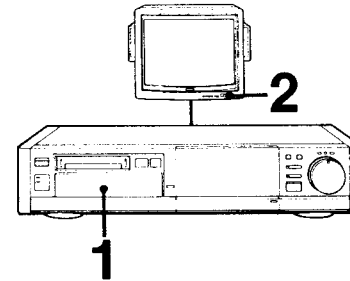
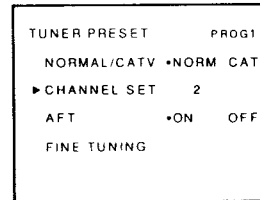
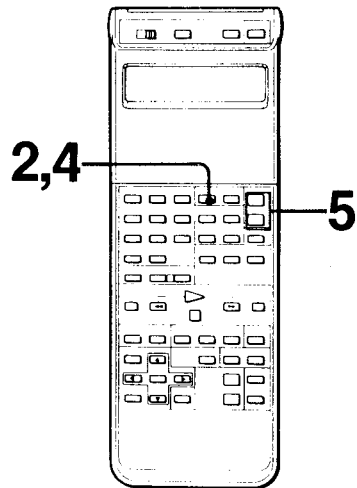
Now your TV is tuned to receive the VTR's playback picture. Whenever playing back a tape, select the programme position you chose in step 3. If you are not sure how to tune your TV, refer to the TV's instruction manual or consult your dealer.

Presetting the Active Channels

When the Playback Picture is not Free of Disturbance



- 1 Select a programme position on the TV between UHF channels 30 and 39, so that the TV shows no picture and a steady rustling sound or no sound is heard.
- 2 Press INPUT SELECT to light LINE L2 in the display window. Do not connect any equipment to the LINE IN 2 VIDEO jack.
- 3 Turn the RF CHANNEL screw with the supplied screwdriver until an undistorted screen is obtained.
- 4 Press INPUT SELECT to light TUNER in the display window.
- 5 Press PROG (PROGRAM) + / - and check that the screen changes to a different programme.



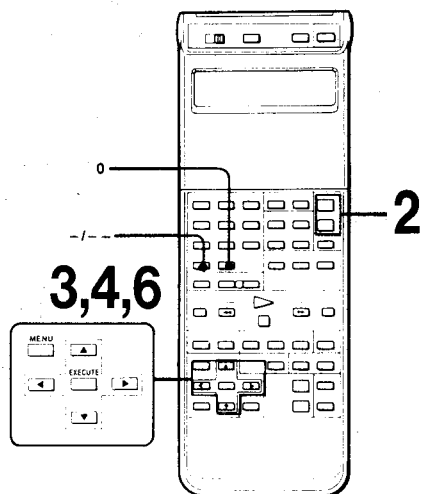
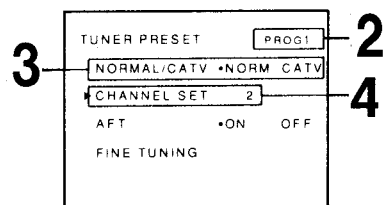
Before You Begin

- Your VTR is capable of receiving the following channels:
- EV-S1000E: VHF channels E2 — E4, E5 — E12, UHF channels E21 — E69, and cable TV channels S01 — S03, S1 — S20 and S21 — S41
- EV-S1000E (UK): UHF channels B21 — B68
- The receivable channels are governed by the TV broadcasting system in your area.
- Up to 60 channels can be allocated to any desired programme position.
- The TUNER PRESET menu can be displayed only when VTR — TV connection is made via the AERIAL OUT socket on the VTR, the MONITOR OUT EURO-AV or S VIDEO.

To Call Up the TUNER PRESET Menu

- 1 Turn on the VTR and press INPUT SELECT to light the TUNER indicator and the programme position number in the display window.
- 2 Turn on the TV. Set to the programme position for the VTR playback if VTR — TV connection is made via the AERIAL OUT socket on the VTR. Select VTR input if VTR — TV connection is made via MONITOR OUT EURO-AV or S VIDEO.
- 3 Press MENU while the VTR is in the stop mode. The main MENU appears.
- 4 Move cursor with ▲ or ▼ to TUNER PRESET.
- 5 Press EXECUTE. The TUNER PRESET menu appears.

Note for the users of EV-S1000E (UK)
The TUNER PRESET menu of the EV-S1000E (UK) does not have the NORMAL/CATV selection which is shown in the illustration.



Tuning a Desired Channel

[For EV-S1000E (UK), skip steps 1 and 2.]

- 1 Call up the TUNER PRESET menu.
- 2 Select the desired programme position by pressing PROG (PROGRAM) +/-.
- 3 Move cursor to NORMAL/CATV with ▲ or ▼. Select NORM to receive normal programmes and CATV to receive CATV programmes with ◀ or ▶.
- 4 Move cursor to CHANNEL SET with ▲ or ▼ and keep pressing ◀ or ▶. The channel number automatically increases with ▶ and decreases with ◀. The number stops changing when the first channel received in your area is detected and that channel will be displayed.
- 5 To allocate a channel to the next programme position, repeat steps 2 to 4.
- 6 Press EXECUTE to store the allocated channels and return to original screen.

To Allocate the Channels Directly

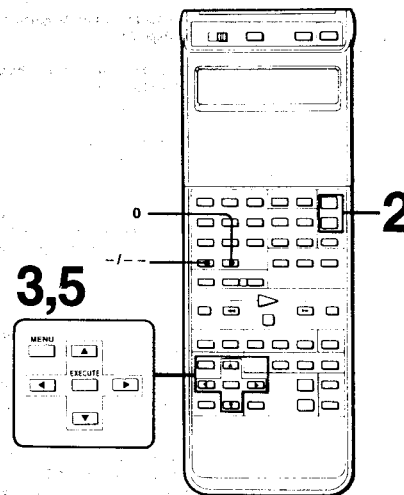
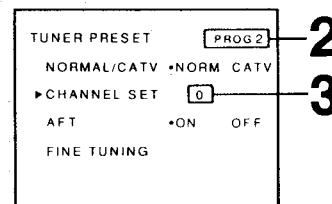
In step 4 in "Tuning a Desired Channel," set the cursor to CHANNEL SET. Enter the desired programme numbers using the programme position number and -/-- buttons. To enter one's digits, press 0 and then the desired number. To enter two-digit numbers, press -/--, the ten's digit number, and lastly the one's digit number.

Note

If the picture displayed on the screen in step 4 is so distorted that you cannot identify the menu operation screen, first pull out the aerial cable from the AERIAL IN socket, next repeat step 4, then return the aerial cable to the AERIAL IN socket.

Channel scanning on your VTR

- When ▶ is pressed in steps 4 and 5, the channels are scanned in the following order. When ◀ is pressed the scanning order is reversed.
VHF (E2-E12) → UHF (E21-E69) → CATV (S1-S20) → HYPER BAND (S21-S41) → CATV (S01-S05).
- The EV-S1000E (UK) only scans UHF channels B21 to B68.
- In Italy, channels 13 to 20 correspond to channels A to H.



Erasing Unwanted Programme Positions

The VTR can be preset so that only the desired programme positions will appear when you press PROG (PROGRAM) +/-.

- 1 Call up the TUNER PRESET menu.
- 2 Press PROG (PROGRAM) +/- to call up the unused programme position.
- 3 Press -/-- and then 0 or keep pressing ◀ or ▶ until 0 is displayed.
- 4 Repeat steps 2 and 3 to erase other programme positions.
- 5 Press EXECUTE.

To enter the erased programme positions again

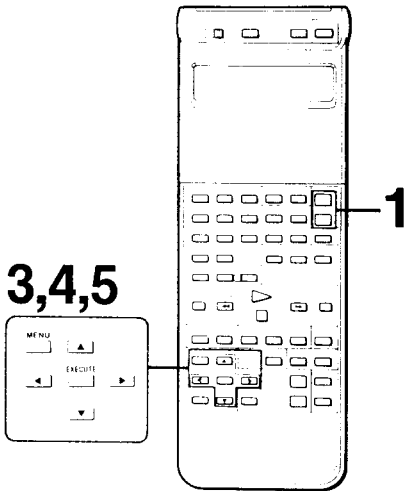
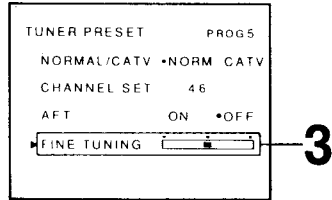
Follow the procedure in "Tuning a Desired Channel."

Mode Setting

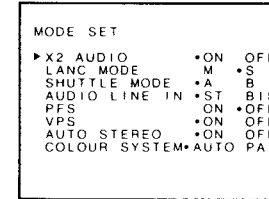
Manually Fine-tuning a Weak Station

If AFT ON is selected in the TUNER PRESET menu, the VTR automatically tunes the received channels. However, when the programme received on the VTR is distorted due to signal interference, manual fine tuning may solve the problem.

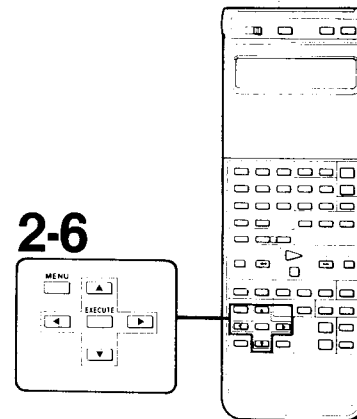
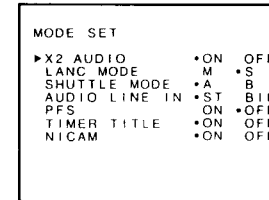
- 1 Select the distorted programme position by pressing PROG (PROGRAM) +/-.
- 2 Call up the TUNER PRESET menu.
- 3 Move cursor to FINE TUNING.
- 4 Press ◀ or ▶ until the best picture is obtained. AFT OFF will be automatically selected. The fine tuning meter appears.
- 5 Press EXECUTE to store that position and return to the original screen.



EV-S1000E



EV-S1000E (UK)



Check the setting in the MODE SET menu before operating this VTR. Make changes depending upon the features you wish to enjoy on this VTR.

Operation

- 1 Press MENU.
The main MENU appears.
- 2 Move cursor by using ▲ or ▼ to MODE SET.
- 3 Press EXECUTE.
The MODE SET menu appears.
- 4 Select the mode to be set by using ▲ or ▼.
- 5 Select the desired mode by using ◀ or ▶.
- 6 Press EXECUTE.
The selected mode will be stored and the MODE SET menu will be erased.

Mode Setting

Details of the MODE SET Menu

X2 AUDIO ON/OFF

Select ON if you wish to hear the sound during x2 speed playback. The playback sound will automatically be switched to monaural. Select OFF if you do not wish to hear the sound during x2 speed playback.

LANC MODE M/S*

This selection is necessary when remotely controlling other video equipment with this VTR, or when controlling this VTR with other video equipment via the CONTROL L connector. Select M to control other video equipment with this VTR. Select S to control this VTR with other video equipment.

Note that the VTR will automatically enter the LANC MODE M mode in the following cases:

- 1) When the PLAYER control button is pressed and the button is turned on.
- 2) When the EDIT STANDBY button is pressed and the indicator is turned on.

SHUTTLE MODE A/B

Change the setting depending upon the type of video equipment you wish to control with this VTR. Select A when a remote commander with JOG/SHUTTLE function cannot be used for the other video equipment. Select B when a remote commander with JOG/SHUTTLE function can be used for the other video equipment.

AUDIO LINE IN ST(stereo)/BIL(bilingual)

Select ST to receive stereo programme sources from the AUDIO LINE IN jacks.

Select BIL to receive bilingual programme sources from the AUDIO LINE IN jacks.

PFS (picture fine select)

If the picture is distorted or has streaks, switch to ON or OFF whichever provides a better picture. Normally, select OFF.

VPS ON/OFF [not available for EV-S1000E (UK)]

Select ON to record a TV programme using the VPS function. Select OFF otherwise. See "VPS Function" on page 65 for details.

TIMER TITLE ON/OFF [for EV-S1000E (UK) only]

Select ON to start timer recording with a timer title. Select OFF otherwise. See "Recording a Timer Title" on page 64 for details.

AUTO STEREO [not available for EV-S1000E (UK)]

Normally set to ON to receive and record the stereo/bilingual broadcast programmes automatically. Select OFF if there is too much interference in the stereo sound. The broadcast will be received in monaural.

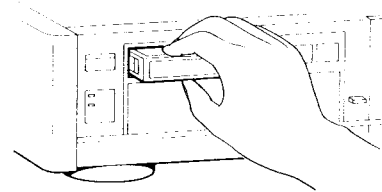
NICAM ON/OFF [for EV-S1000E (UK) only]

Select ON to receive and record the stereo/bilingual programmes based on the "NICAM" system adopted in the United Kingdom. Otherwise, select OFF.

COLOUR SYSTEM AUTO/PAL [not available for EV-S1000E (UK)]

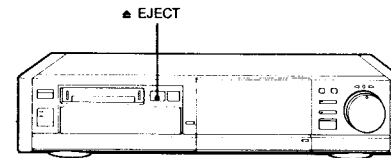
Normally set to AUTO. According to the TV programme, the colour system will automatically be switched to PAL or DDR SECAM. Select PAL if the signal is too weak or the picture is distorted. DDR SECAM programmes may not be displayed properly.

Handling Video Cassettes



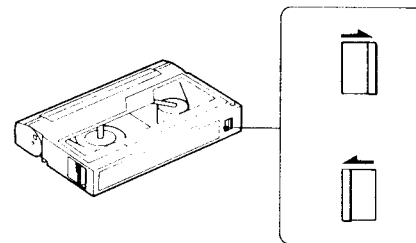
Cassette Insertion

Insert the cassette by slowly pressing it with the window facing upwards. When a cassette is inserted, the power will be turned on automatically.



Cassette Ejection

Press \blacktriangle EJECT on the unit. When the VTR is turned off, pressing the \blacktriangle EJECT button will turn on the unit, eject the cassette, and turn it off again. \blacktriangle EJECT will not function during recording or recording pause mode.



Erase Protection

When recording is made on a pre-recorded tape, the previous recording will be erased. To avoid unintentional erasure, slide out the red tab on the cassette to cover the opening.

Recording/playback Time

The recording time of a cassette in the LP mode is twice as long as that in the SP mode. However, to obtain better quality picture, use of SP mode is recommended. The recording speed can be selected with the REC MODE button. The playback speed will automatically be detected.

Type of Cassette	SP mode	LP mode
P5-15MP	15 min.	30 min.
P5-30MP/E5-30HME	30 min.	1 hour
P5-60MP/E5-60HME	60 min.	2 hours
P5-90MP/E5-90HME	90 min.	3 hours

Notes on cassettes

- Never insert anything in the small holes at the rear of the cassette as the VTR distinguishes between Hi8 cassette tapes and standard 8 mm cassette tapes by the shape of the holes.
- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- To record from the beginning of the tape, run the VTR for about 15 seconds at the beginning of the cassette before recording. It will avoid missing the starting point during playback on a video cassette recorder.
- When the VTR is not in use, remove the cassette.

Playing a Tape

1 Turn on the TV and select the programme position for the VTR.
If VTR-TV connection is made via the MONITOR OUT EURO-AV or VIDEO LINE OUT jacks on the VTR, select the input for the VTR.

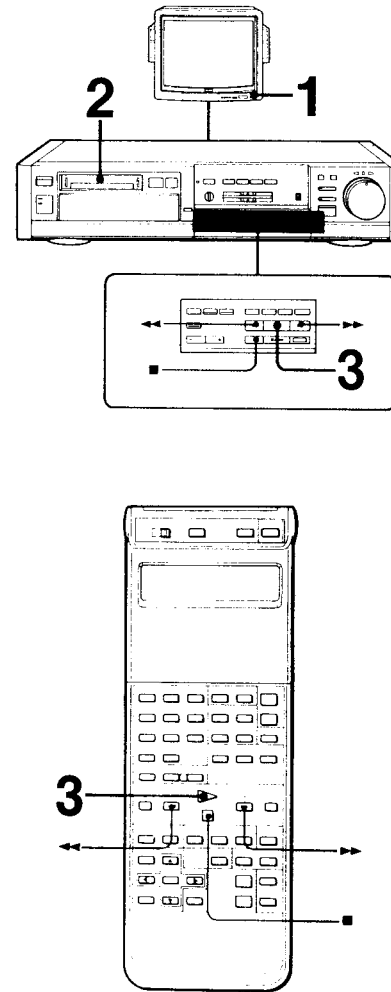
2 Insert a cassette.
The VTR will be turned on.

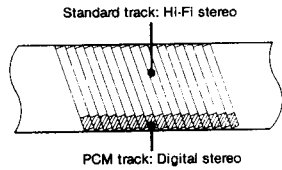
3 Press >
Playback starts.

To stop playback
Press ■

To rewind the tape
Press ◀

To advance the tape rapidly
Press ▶▶





Selecting the Monitor Sound

Audio recording pattern on the video tape

Selecting the playback track

Choose the desired track to be played back by setting the AUDIO MONITOR switch.

PCM

To playback the digital stereo signals recorded on the PCM track. When nothing is recorded on the PCM track, Hi-Fi stereo track will automatically be played back.

MIX

To playback the mixed sound of the PCM track and the standard track.

STD (Hi-Fi)

To playback the Hi-fi stereo track recorded on the standard track.

Selecting the playback sound after dubbing additional sounds

Set the AUDIO MONITOR switch in the following manner.

PCM

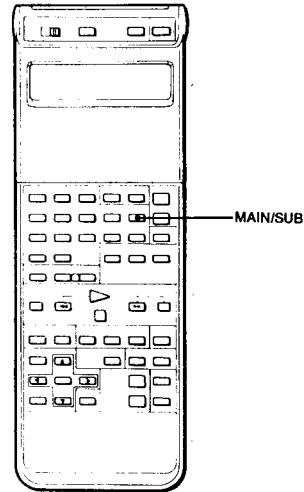
To playback the additionally dubbed sound (PCM track) only.

MIX

To playback both the additionally dubbed sound (PCM track) and the original sound (standard track).

Notes

- Normally set the AUDIO MONITOR switch to PCM to enjoy high quality playback sound.
- The additionally dubbed sound cannot be heard if the AUDIO MONITOR switch is set to STD (Hi-Fi).



Selecting the playback sound of a stereo/bilingual tape

Choose the desired sound to be played back with the MAIN/SUB button on the Commander.

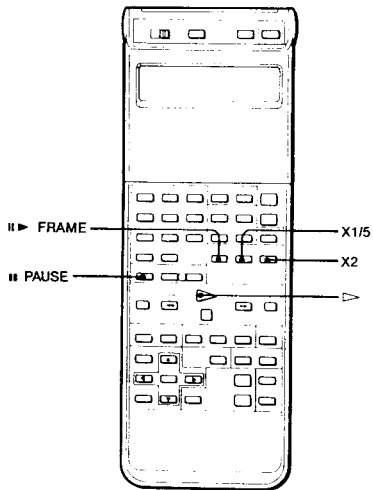
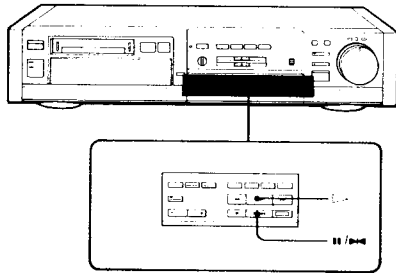
Type of tape	MAIN/SUB button and indicator
Stereo	<p>Each press changes the playback sound to:</p> <p>STEREO (stereo sound) →</p> <p>L (left channel)</p> <p>R (right channel)</p>
Bilingual	<p>Each press changes the playback sound to:</p> <p>MAIN/ (main sound) →</p> <p>SUB/ (sub sound)</p> <p>MAIN/SUB/ (main/left channel and sub/right channel)</p>

If the sound is not heard or heard only intermittently

When a tape which has been recorded on a video camera recorder or a video cassette recorder without the PCM function is played back on this unit, set the AUDIO MONITOR selector to STD. The PCM indicator may blink, but it will not affect the sound.

When connection is made to a TV without video/audio inputs

To monitor the playback sound in stereo, make connection to a stereo system.



Various Playback Modes

Playback pause/still

Press **II/III** on the unit, or **II** or **II▶** on the Commander during playback. Press **▶** to resume normal playback.

Frame-by-frame playback (Commander only)

Press **II▶** in the playback still mode. Each press of **II▶** will advance the picture one frame. Press **▶** to resume normal playback.

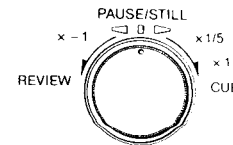
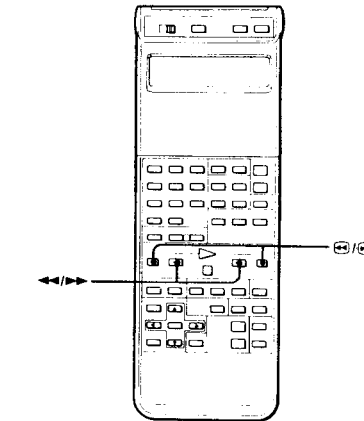
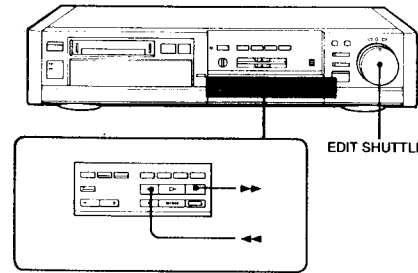
Slow speed playback

Press **X1/5** for slow playback at 1/5 times normal speed. The speed setting can be made from any playback mode. Press **▶** to resume normal playback.

Double speed playback

Press **X2** for double speed playback. The sound can be heard when **X2 AUDIO ON** is selected in the **MODE SET** menu (see page 30). The sound will automatically be switched to monaural when this button is pressed. The speed setting can be made from any playback mode. Press **▶** to resume normal playback.

Note
Slow speed playback will automatically be cancelled after one minute.



Picture search

Press **◀** or **▶** during playback. The picture will be scanned in reverse with **◀** and forward with **▶** as long as they are pressed. Release the button to return to the previous playback mode.

Locked picture search

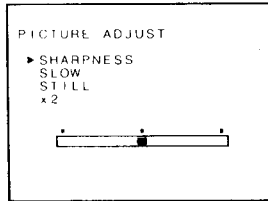
Press **◀** or **▶** SEARCH during playback. The picture will keep on scanning in reverse with **◀** and in forward with **▶** even after the button is released. To resume normal playback, press **▶**.

FR picture search

Press **▶** during fast-forward or **◀** during rewind modes. The fast-forward or rewind mode picture can be viewed while the button is pressed.

Using the EDIT SHUTTLE

Various playback modes can be selected by holding the EDIT SHUTTLE in the position illustrated. Turn it clockwise for forward direction and counterclockwise for reverse direction. Releasing it will make the picture enter the PAUSE/STILL mode. To resume normal playback, press **▶**.



Picture Adjustments

The picture can be adjusted as desired using the PICTURE ADJUST menu. Call up the PICTURE ADJUST menu referring to the following procedure:

- 1** Press MENU.
The main MENU appears.
- 2** Move cursor to PICTURE ADJUST by using ▲ or ▼.
- 3** Press EXECUTE.
The PICTURE ADJUST menu appears.
- 4** Move cursor to the parameter to be adjusted by using ▲ or ▼.
- 5** Press ◀ or ▶ to adjust the picture.
- 6** Press EXECUTE to store the setting and erase the PICTURE ADJUST menu.

Details of each parameter

SHARPNESS

Press ▶ for a sharper picture. Press ◀ for a softer picture. Adjustable only in the playback mode.

SLOW

Press ◀ or ▶ to clear out the noise bands that may appear during slow speed playback. Adjustable only in the slow speed playback mode.

STILL

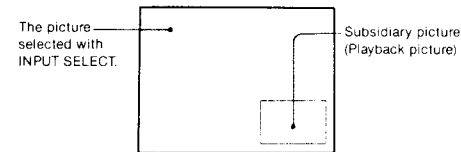
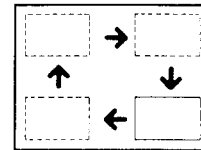
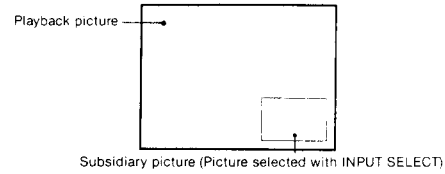
Press ◀ or ▶ so that the vertical shaking of the picture during the still mode will stop. Adjustable only in the still mode.

X2

Press ◀ or ▶ to clear out the noise bands that may appear during the x2 playback mode. Adjustable only in the x2 mode.

Note

The cursor position will change when the VTR's playback mode changes.



Inserting a Subsidiary Picture in the Playback Picture — P in P

Calling-up the subsidiary screen

Press P in P during playback.
When TUNER is selected with INPUT SELECT, the TV picture can be viewed in the subsidiary screen.

Changing the position of the subsidiary picture

Press SHIFT.
The position will be shifted as illustrated.

Inverting the position of the subsidiary picture

Press P in P again.

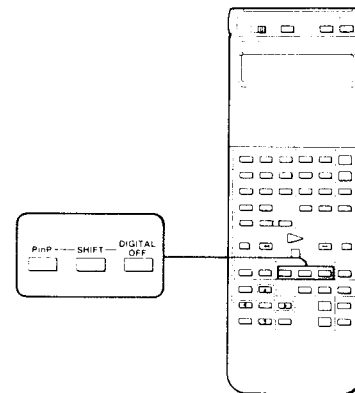
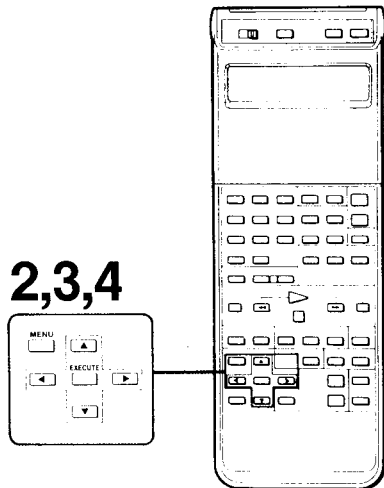
To turn off the subsidiary picture

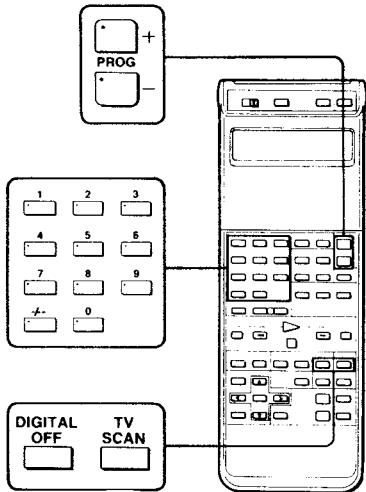
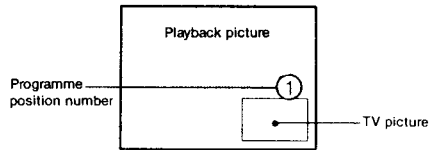
Press DIGITAL OFF.
The position of the subsidiary picture will be stored in the memory.

Sound during P in P

If VTR-TV connection is made via the MONITOR OUT jacks on the VTR:
The sound of the main picture is output.

If VTR-TV connection is made via the LINE OUT jacks on the VTR:
During playback, the sound of the playback picture of this VTR is output. In other modes, the sound of the input source selected on this VTR is output.





Watching TV Channels in Succession — TV Scan

You can watch each TV programme for a few seconds, in the preset order, while playing back a tape.

Operation

Press TV SCAN during playback.
The TV programme will be displayed in the subsidiary picture for a few seconds with the programme position number. After all of the preset programmes are displayed, the first preset programme position will appear again.

Watching the desired programme position in the subsidiary screen

Press the channel number button or press PROG (PROGRAM) + I-.

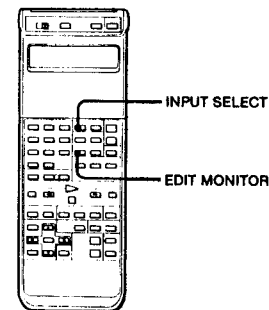
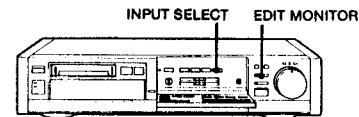
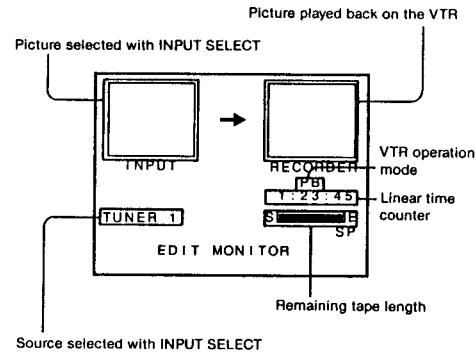
Turning off the subsidiary picture

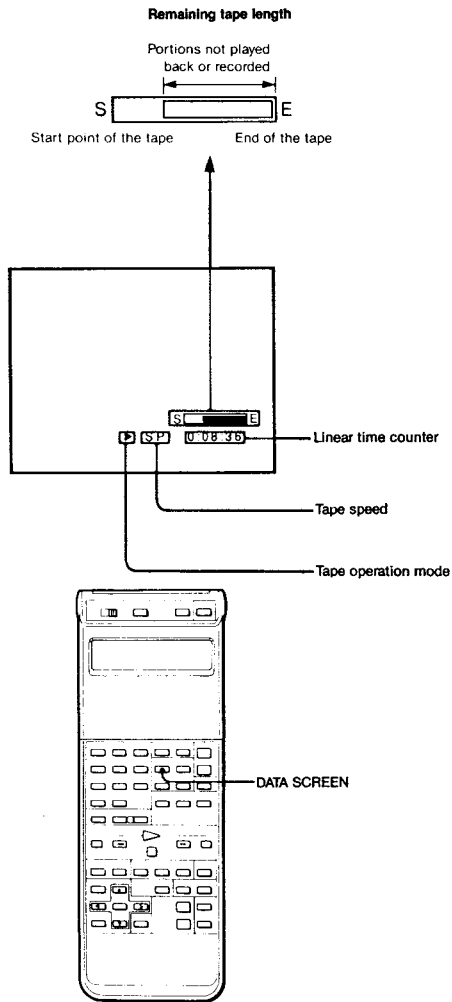
After TV scanning is completed, press DIGITAL OFF.
During TV scanning, enter the programme position of the desired programme directly by the programme position number buttons on the Commander or the PROG(PROGRAM) + I- buttons.

Watching Two Pictures Simultaneously — EDIT MONITOR

Press EDIT MONITOR on the Commander or the VTR.
The playback picture of this VTR and the picture selected by the INPUT SELECT button can be viewed simultaneously in the EDIT MONITOR screen.

Refer to the "Editing" section for the convenient use of EDIT MONITOR screen during editing.





Data Screen

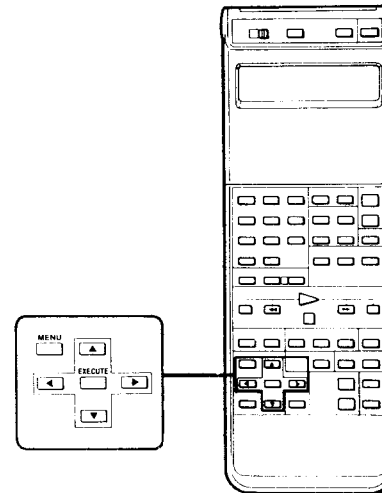
Data screen information illustrated on the left will automatically appear on the screen during playback or recording as a reference. Note, however, that the data screen will not be displayed when VTR — TV connection is made via the VIDEO LINE OUT jack of this unit.

To erase or display the data screen
Press DATA SCREEN on the Commander.

Note on the remaining tape length indicator
The remaining tape length indicator shows the approximate amount of tape left.

AUTO MENU

- ▶ PLAY-REW-POWER OFF
- GO TO ZERO-STOP
- GO TO ZERO-PLAY
- REW-POWER OFF
- REW-EJECT-POWER OFF
- REW-PLAY
- REW-TIMER REC



Assigning a Desired Operation Mode

Guided by the AUTO MENU, you can make the VTR enter the desired operational sequence automatically.

- 1 Press MENU.**
The main MENU appears.
- 2 Move cursor by using ▲ or ▼ to AUTO MENU.**
- 3 Press EXECUTE.**
The AUTO MENU appears.
- 4 Move cursor by using ▲ or ▼ to the desired operational sequence.**
- 5 Press EXECUTE.**
The selected operation will begin.
The selected operation will be displayed on the screen for a few seconds.

Auto Menu Modes

PLAY - REW - POWER OFF plays back the tape, rewinds the tape when the end is reached, and turns the power off.

GO TO ZERO - STOP searches for the counter zero point and stops. See page 69.

GO TO ZERO - PLAY searches for the counter zero point and starts playback. See page 70.

REW - POWER OFF rewinds the tape to the beginning and turns the power off.

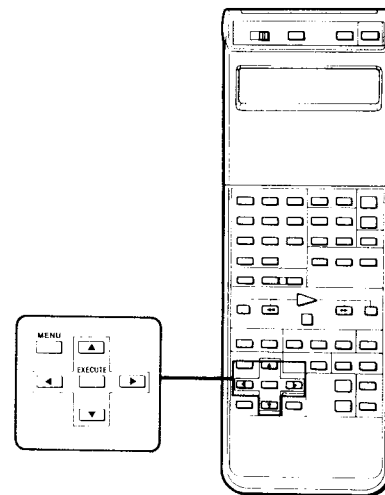
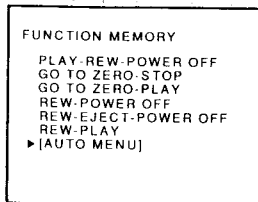
REW - EJECT - POWER OFF rewinds the tape to the beginning, ejects the cassette, and turns the power off.

REW - PLAY rewinds the tape to the beginning and starts playback.

REW - TIMER REC rewinds the tape to the beginning and enters the timer recording standby mode for timer recording. A cassette with its red tab slid out will be ejected.

Note on REW - TIMER REC

If the VTR is in the timer recording standby mode, first press **TIMER REC (ON/OFF)** to cancel the standby mode, next turn on the power to the unit, then call up the **AUTO MENU** referring to the procedure on page 45.



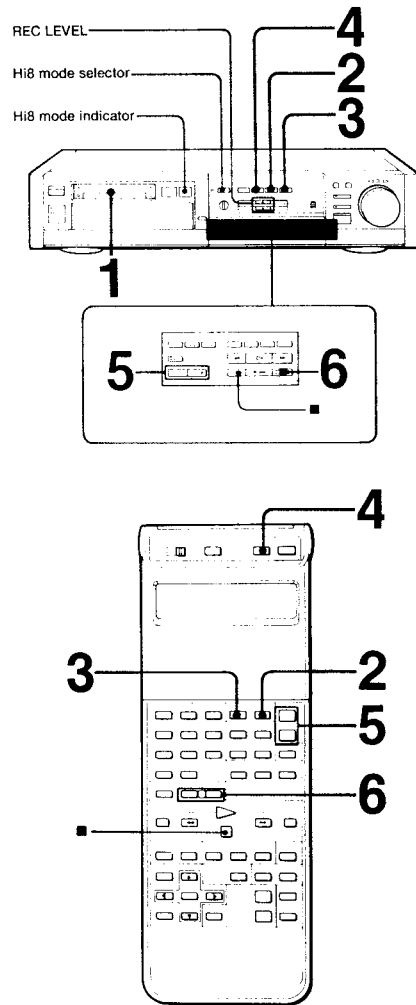
Assigning an Auto Menu Mode to the FUNCTION MEMORY Button

One of the AUTO MENU modes can be assigned to the FUNCTION MEMORY button on the Commander.

- 1 Press MENU.**
The main MENU appears.
- 2 Move cursor with ▲ or ▼ to FUNCTION MEMORY.**
- 3 Press EXECUTE.**
The FUNCTION MEMORY menu appears.
- 4 Move cursor to the desired operational sequence.**
- 5 Press EXECUTE.**
Now the selected operation is assigned to the FUNCTION MEMORY button. Every time FUNCTION MEMORY is pressed in the stop mode, the selected operation will begin.

If [AUTO MENU] is selected in step 4, AUTO MENU will be displayed immediately when FUNCTION MEMORY is pressed, providing a direct access to the AUTO MENU

Recording TV Programmes



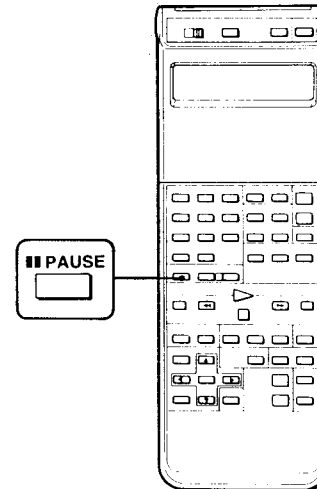
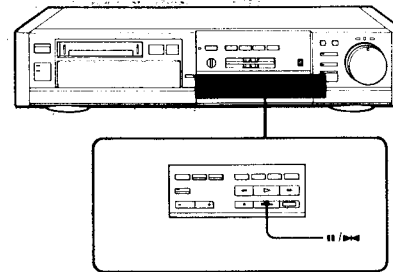
Before You Begin

- Check that all of the connections are complete.
- Turn on the TV and select the video input on the TV or select the programme position for the recorder.
- Check the Hi8 indicator when using a Hi8 tape. Turn it on to record in the Hi8 mode. Turn it off to record in the standard 8 mm mode.
- Set the REC LEVEL controls to the appropriate level. (see page 52).
- Data screen displays will not be recorded.

Operation

- 1 Insert a cassette.
The power will automatically be turned on.
- 2 Select the recording speed, SP or LP, with REC MODE.
- 3 Press INPUT SELECT so that the TUNER indicator appears in the display window.
- 4 Press TV/VTR so that the VTR indicator is turned on in the display window (only when TV - VTR connection is made via the AERIAL OUT socket on the VTR).
- 5 Select the programme position to be recorded with PROG (PROGRAM) + / -.
- 6 Press the right button while pressing ● REC on the Commander, or press the ● REC button on the unit.
Recording will begin.

To stop recording
Press ■ STOP.



To Cut Out Scenes by Recording Over It

Overview

Using the recording pause mode, you can stop recording when an unwanted scene appears and then resume recording smoothly. Moreover, utilizing the SHUTTLE EDIT buttons on the Commander or the EDIT SHUTTLE on the VTR, it is possible to cut out unwanted scenes by rewinding and/or advancing the tape, then entering the recording pause mode, and resume recording smoothly.

Operation

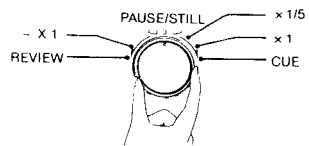
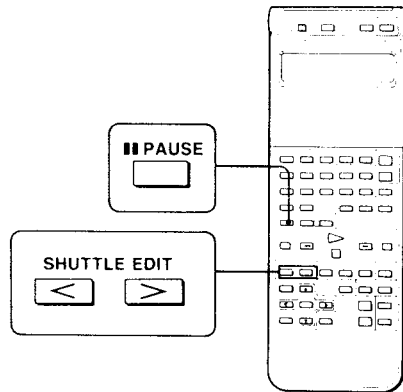
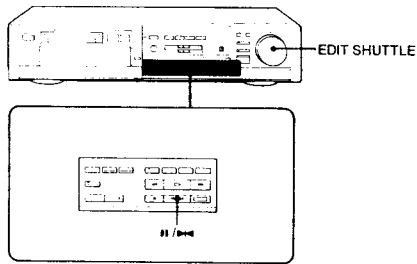
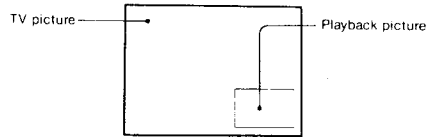
Basic

- 1 While recording, press ■ PAUSE on the Commander or ■ PAUSE/STILL on the VTR. The VTR will enter the recording pause mode.
- 2 Press ■ PAUSE at the desired point to continue recording.

Note

To protect the tape and video heads, the pause mode will be automatically released after about 7 minutes and the VTR will enter the stop mode.

Recording TV programmes

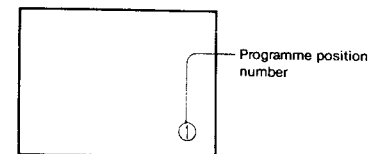
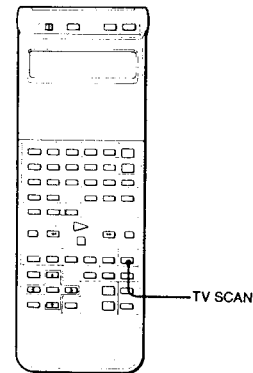
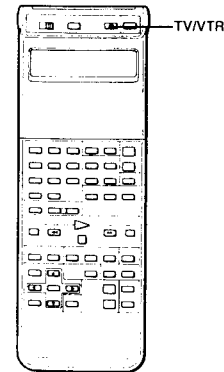


Advanced

- 1 While recording TV broadcasts, press **PAUSE** on the Commander or **PAUSE/STILL** on the VTR.
The VTR will enter the recording pause mode.
- 2 Rewind the tape with **SHUTTLE EDIT <** or **>** on the Commander or **EDIT SHUTTLE** on the VTR to locate the point to resume recording.
A P in P screen will be appear and the playback picture can be viewed in the subsidiary display.

Using the **SHUTTLE EDIT <** or **>**:
Press **<** to reverse the picture (x 1 speed).
Press **>** to advance the picture (x 1 speed).

Using the **EDIT SHUTTLE**:
Turn to the left to search in reverse.
Turn to the right to search in forward.
The playback speed is as indicated in the illustration.
- 3 Release the **SHUTTLE EDIT** button or the **EDIT SHUTTLE** at the desired point.
The subsidiary screen will be cleared and the VTR enters the recording pause mode after approximately 2 seconds.
- 4 Press **PAUSE** on the Commander or **PAUSE/STILL** on the unit when you wish to resume recording.



Watching a TV Broadcast While Recording

If VTR-TV connection is made using the MONITOR OUT EURO-AV

Press **TV/VTR** to turn off the VTR indicator. The programme selected on the TV appears on the screen.

If VTR-TV connection is made using the LINE OUT VIDEO/S VIDEO/AUDIO or MONITOR OUT S VIDEO jacks

Press **TV/VTR** to turn off the VTR indicator. Select the tuner input on the TV and change the programme position on the TV.

If VTR-TV connection is made using the AERIAL sockets

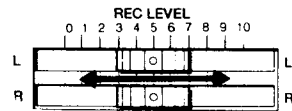
Press **TV/VTR** to turn off the VTR indicator and change the programme position using the programme position number buttons on the TV.

To Scan TV Programmes

While viewing TV programmes, press **TV SCAN**. You can watch each TV programme for a few seconds in the order that you have preset them.

Recording Level Adjustment

Adjust the REC LEVEL controls to record in the appropriate audio level referring to the peak programme meter in the display window.



Appropriate Recording Level

Recording sources with medium or lower frequency signals (e.g. vocals)

Adjust so that the element at the 0dB level lights at the highest signal level.

Recording sources with medium or high frequency signals (e.g. trumpets, treble sound of violins)

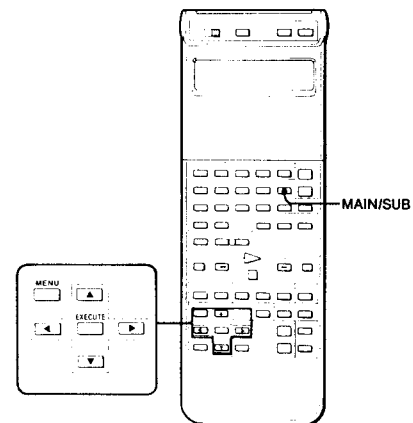
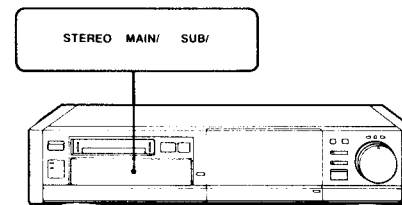
Adjust so that the element at the -1 to -3dB level lights at the highest level.

Notes

- During playback, the peak programme meter shows the peak of the recording sound.
- After recording, it is recommended that the REC LEVEL controls are set to the minimum levels for playback. These controls do not affect the volume during playback but noise may occur when playback is stopped and this may damage the speakers, if connected.

Recording Stereo/Bilingual Programmes

MODE SET			
X2 AUDIO		•ON	•OFF
LANG MODE	M	•S	
SHUTTLE MODE	A	•B	
AUDIO LINE IN	•ST	•BIL	
PFS	•ON	•OFF	
VPS	•ON	•OFF	
▶AUTO STEREO	•ON	•OFF	
COLOUR SYSTEM	•AUTO	•PAL	



EVS1000E

The EVS1000E receives and records stereo/bilingual programmes based on the "Zweiton" system adopted in West Germany. To receive "Zweiton" broadcasts, select AUTO STEREO ON in the MODE SET menu (page 30).

Stereo programmes

When a stereo programme is received, the STEREO indicator appears in the display window. The MAIN/SUB button does not function for the stereo programme of the Zweiton system.

Bilingual programmes

When a bilingual programme is received, MAIN/ appears in the display window. If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

Display	Sound to be heard
MAIN/	Main sound
SUB/	Sub sound
MAIN/ SUB/	Main sound on the left channel and sub sound on the right channel

To record

A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as listed below, regardless of the sound being monitored.

Track		Sound to be recorded	
		Stereo	Bilingual
PCM and Standard (Hi-Fi)	Left channel	Left channel	Main
	Right channel	Right channel	Sub

To record

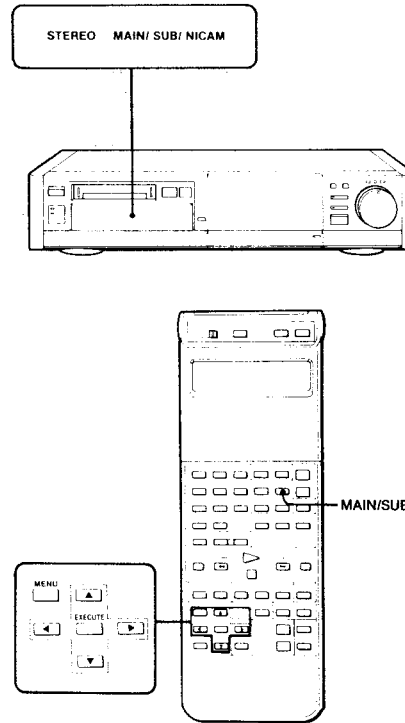
A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as follows, regardless of the sound being monitored.

Track		Sound to be recorded	
		Stereo	Bilingual
PCM and Standard (Hi-Fi)	Left channel	Left channel	Main
	Right channel	Right channel	Sub

Understanding the NICAM broadcast

NICAM broadcasting has two-channel digital sounds called NICAM L and R channels in addition to the standard sound. The NICAM L and R are assigned to the stereo left and right channels or the main and sub sounds of a bilingual programme. The standard sound of most NICAM broadcasts is the mixed sound of the left and right channels for a stereo programme, and the main sound for a bilingual programme.

MODE SET		
X2 AUDIO	• ON	• OFF
LANC MODE	M	• S
SHUTTLE MODE	• A	B
AUDIO LINE IN	• ST	BIL
PFS	• ON	• OFF
TIMER TITLE	• ON	• OFF
▶NICAM	• ON	• OFF



EVS-1000E (UK)

The EVS-1000E (UK) receives and records stereo/ bilingual programmes based on the "NICAM" system adopted in the United Kingdom. To receive "NICAM" broadcasts, select NICAM ON in the MODE SET menu. If you do not wish to record in the NICAM system, select NICAM OFF in the MODE SET menu (page 30).

Stereo programmes

When a stereo programme is received, STEREO and NICAM indicators appear in the display window.

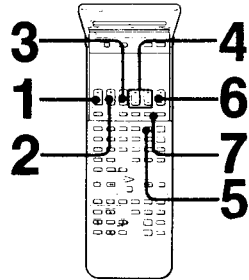
Display	Sound to be heard
STEREO	Left channel sound on the left channel
NICAM	Right channel sound on the right channel

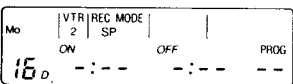
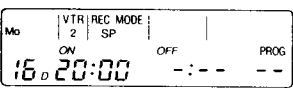
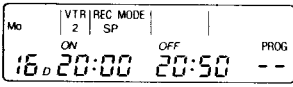
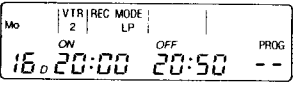
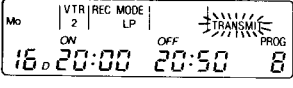
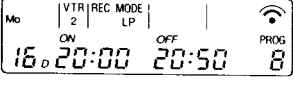
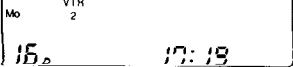
Bilingual programmes

When a bilingual programme is received, NICAM and MAIN/ appears in the display window. If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

Display	Sound to be heard
MAIN/ NICAM	Main sound
SUB/ NICAM	Sub sound
MAIN/ SUB/ NICAM	Main sound on the left channel Sub sound on the right channel

Timer Recording



- 1 
- 2,3 
- 4 
- 5 
- 6 
- 7 
- 8 

Timer Recording on this VTR

Up to six preselected programmes, can be set on this unit, up to one month in advance.

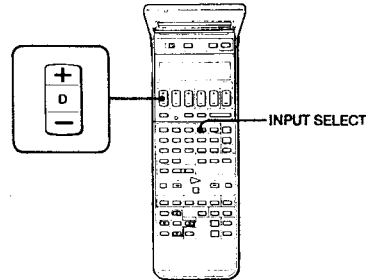
Before You Begin

- Turn on the TV and adjust it to view the VTR picture.
- Check to see that the clock on the Commander and the VTR show the present time.
- To operate the EV-S1000E read "VPS Function" first.

Operation

Example: To record a programme broadcast from 20:00 to 20:50 on Monday, July 16, 1990 on programme position 8 in the LP mode.

- 1 Open the cover of the Commander and press D until 16 appears. The day of the week, Mo (Monday), is automatically set.
- 2 Set the recording start hour with TURN ON H.
- 3 Set the recording start minute with TURN ON M.
- 4 Set the recording end hour and minute with TURN OFF H and M.
- 5 Set the recording mode, SP or LP with the REC MODE button.
- 6 Set the programme position with the PROG button. The TRANSMIT indicator blinks to indicate that all of the items are entered.
- 7 Point the Commander to the VTR and press TRANSMIT. With a beep sound, the VTR enters the recording standby mode. The PROGRAM LIST appears on the screen for a few seconds.
- 8 Close the cover of the Commander so that the present time appears on the LCD display. The VTR turns on, starts recording at the selected time, and turns off after recording ends.



To Set Other Programmes

Repeat steps 1 to 6 before step 7.

To record from equipment connected to LINE IN VIDEO/AUDIO/S VIDEO 1 or 2 jacks

Press INPUT SELECT in step 5 to change the indication from PROG — to LINE L1 or LINE L2.

Daily/Weekly Recording

This VTR can be preset to record the same programme each day of the week (daily recording) or the same programme on a specific day of every week.

Instead of step 1 in the "Operation", press D — on the Commander to change the LCD display in the order shown in the illustration. When the desired recording mode is set and transmitted to the VTR, the corresponding indicator lights in the display window.

Date indication

EVERY Su Every Sunday	EVERY Mo Tu We Th Fr Sa Every day
EVERY Mo Every Monday	EVERY Mo Tu We Th Fr Sa Every day except Sunday
EVERY Tu Every Tuesday	EVERY Mo Tu We Th Fr Every day except Saturday and Sunday
EVERY We Every Wednesday	EVERY Sa Every Saturday
EVERY Th Every Thursday	EVERY Fr Every Friday

If a short beep sounds repeatedly when TRANSMIT is pressed

A short beep indicates that the transmission is not received by the VTR. Press TRANSMIT again before closing the cover, then check the items below.

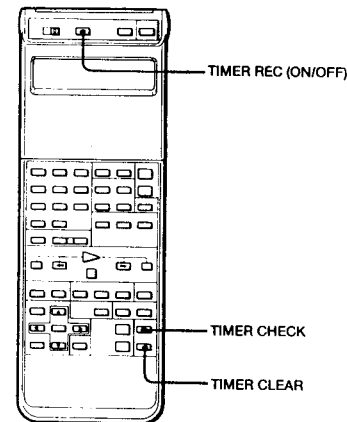
- An illogical setting has been made.
- Timer setting can only be performed when the VTR is turned off, or in the stop, or timer recording mode.
- Six timer settings have already been made.
- The tape is at its end.

Checking the Timer Settings

The timer settings can be checked by displaying the PROGRAM LIST on the screen. If the power to the VTR turned on, simply press **TIMER ON SCREEN**. If the VTR is in the timer recording standby mode, follow the procedure below.

- 1 Press **TIMER REC (ON/OFF)** to turn off the **TIMER REC** indicator in the display window.
- 2 Turn on the VTR and press **TV/VTR** to light the VTR indicator.
- 3 Turn on the TV.
Set to the programme position for VTR playback if the VTR — TV connection is made via the AERIAL OUT socket on the VTR. Select VTR input on the TV if the VTR — TV connection is made via MONITOR OUT EURO-AV/S VIDEO or LINE OUT VIDEO/AUDIO/S VIDEO jacks.
- 4 Press **TIMER ON SCREEN**.
The PROGRAM LIST display appears on the screen.
- 5 Press **TIMER ON SCREEN** again to return to the original screen.
- 6 Press **TIMER REC (ON/OFF)** to return to the timer recording standby mode.

PROGRAM LIST VPS 16.7 MON				
DATE	ON	OFF	PROG	
16.7 MON	20:00	20:50	8 LP	
27.7 FRI	12:00	14:15	L2 LP	
MON - SAT	23:00	23:15	6 LP	
MON - FRI	8:15	8:30	1 SP	
SUN - SAT	21:00	22:55	10 LP	
EVERYSAT	20:00	20:55	8 LP	



Clearing/Correcting the Timer Setting

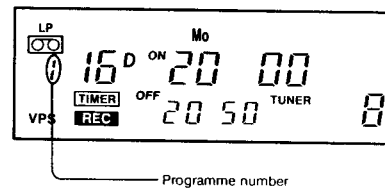
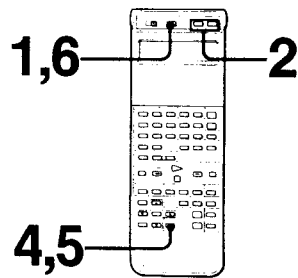
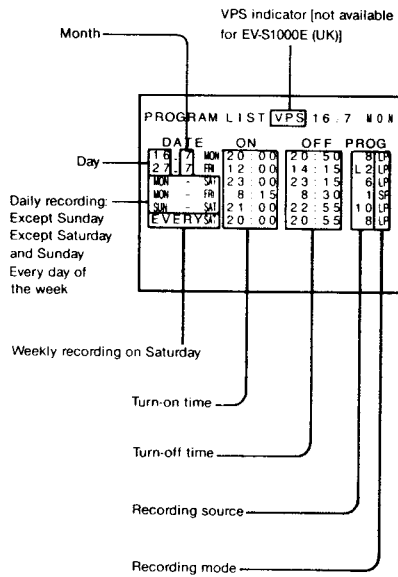
Referring to the PROGRAM LIST

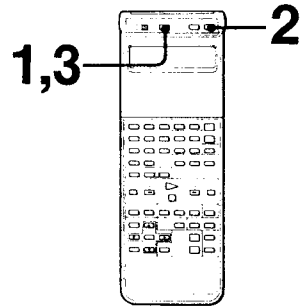
- 1 Display the **PROGRAM LIST** referring to steps 1 to 4 in "Checking the Timer Settings."
- 2 Press **TIMER CHECK** to call up the cursor on the screen and move the cursor to the setting you want to correct or clear.
- 3 To clear the setting, press **TIMER CLEAR**.
If there are other timer settings on the **PROGRAM LIST** display, press **TIMER REC ON/OFF** to return to the timer recording standby mode.

To correct the setting, re-enter all of the items using the **Commander**. Refer to "Timer Recording — Operation" steps 1 to 7.
In this case, the VTR automatically enters the timer recording standby mode.

Clearing the setting without the PROGRAM LIST

- 1 Press **TIMER REC (ON/OFF)**.
- 2 Press **TIMER CHECK** repeatedly until the desired programme appears.
- 3 Press **TIMER CLEAR**.
- 4 Press **TIMER REC (ON/OFF)** to return to the timer recording standby mode if there are other programmes set for timer recording.





Using the VTR during Timer Recording Standby Mode

- 1 Press **TIMER REC (ON/OFF)** to turn off the **TIMER REC** indicator.
- 2 Turn on the power of the VTR. The VTR is ready to be used.
- 3 After using the VTR, press **TIMER REC (ON/OFF)** and turn on the **TIMER REC** indicator to re-enter the standby mode for timer recording.

When the Timer Settings Overlap

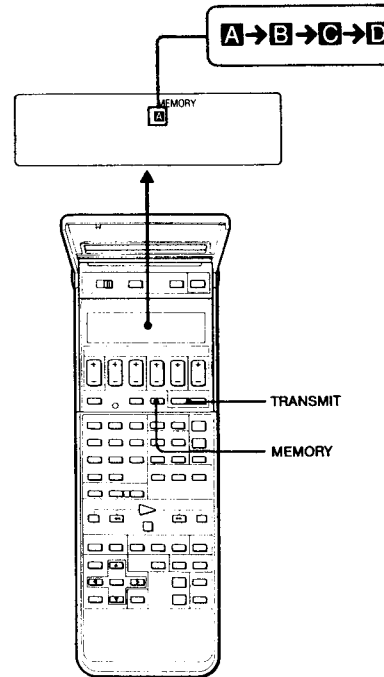
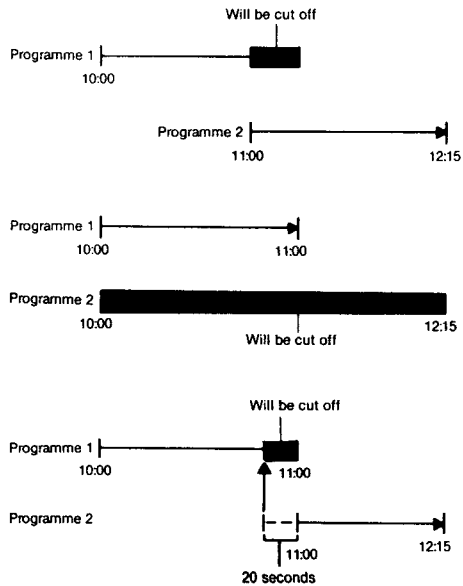
If the setting of two programmes overlap
The recording of the following programme will begin automatically before the preceding programme ends.

If the turn on time of two programmes are the same

The VTR will record the programme with the smaller programme number or listed first on the programme list. The programme with the larger programme number or listed lower in the list will be cleared from the programme list.

If the recording end time of programme 1 and the recording start time of programme 2 are the same

The last 20 seconds of programme 1 will not be recorded because the VTR will enter the recording pause mode for programme 2 before programme 1 ends.



To Store the Frequently Used Items in the Commander

The items selected for one timer recording programme will be erased from the LCD when the Commander cover is closed. It will be cleared from the programme list when recording is over. However, the turn-on/turn-off time and the programme position of up to four programmes can be stored in the Commander to be recalled later. This enables you to quickly access the most frequently used items, especially your favorite weekly programmes. The recording date will automatically be shifted to the next week after the recording is over.

Operation

Example: To store a timer recording data in **MEMORY A**.

- 1 Press **MEMORY** to indicate **MEMORY A**.
- 2 Set all of the items for timer recording referring to "Timer Recording — Operation."
- 3 Press **MEMORY** to change the indication to **B, C, or D**, and repeat step 2 for other programmes. The items set will be kept in the memory even when the Commander cover is closed.

Recalling and changing the items

- 1 Press **MEMORY** to call up the desired memory indication (**A, B, C, or D**).
- 2 Make whatever changes necessary.
- 3 Press **TRANSMIT**. The VTR enters the timer recording standby mode.

MODE SET			
X2 AUDIO		•ON	OFF
LANC MODE	M	•S	
SHUTTLE MODE	•A	B	
AUDIO LINE IN	•ST	BIL	
PFS	ON	•OFF	
▶TIMER TITLE	•ON	OFF	
NICAM	•ON	OFF	

Recording a Timer Title

A timer title screen consisting of the recording start/end time, date of recording, and the programme position can be recorded on the tape for 3 seconds before the timer recording. The timer title is convenient for locating the beginning of a desired programme when several programmes are recorded on a single tape. Note that the timer title will be automatically recorded for EV-S1000E but will be turned off when using the VPS function. For EV-S1000E (UK), the timer title recording can be turned on and off by following the procedure below.

- 1** Before setting the timer, press MENU.
The main MENU appears.
- 2** Move cursor with ▲ or ▼ to MODE SET.
- 3** Press EXECUTE.
The MODE SET menu appears.
- 4** Move cursor with ▲ or ▼ to TIMER TITLE.
- 5** Press ◀ or ▶ to select ON to record the timer title, and OFF to record without timer title.
- 6** Press EXECUTE to store the setting.
If ON is selected in step 5, the timer title will automatically be recorded before the timer recording starts.

MODE SET			
X2 AUDIO		•ON	OFF
LANC MODE	M	•S	
SHUTTLE MODE	•A	B	
AUDIO LINE IN	•ST	BIL	
PFS	ON	•OFF	
▶VPS	•ON	OFF	
AUTO STEREO	•ON	OFF	
COLOUR SYSTEM	•AUTO	PAL	

**VPS (Video Programme System)
Function — not available for
EV-S1000E (UK)**

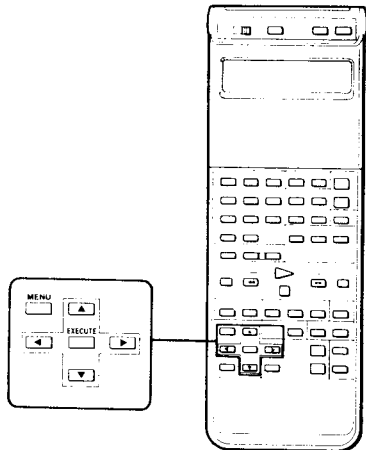
The German broadcasting system transmits VPS signals with the TV programmes which assures that your timer recording will be performed without missing any portion of it regardless of any changes in broadcasting time, extension, or broadcast interruption which might occur before or during that programme.

Operation

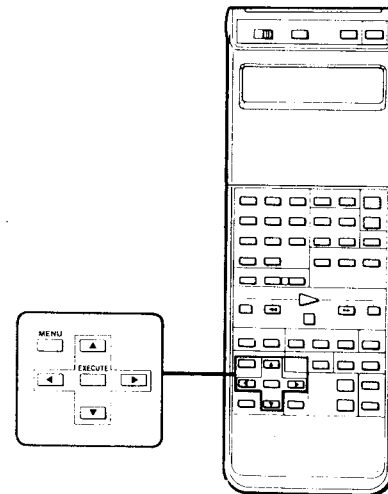
- 1** Check whether VPS is transmitted with the programme to be recorded.
- 2** Call up the MODE SET menu referring to "Mode Setting" on page 30.
- 3** Select VPS ON so that the VPS indicator lights in the display window.
- 4** Set the timer referring to "Timer Recording — Operation."

Notes

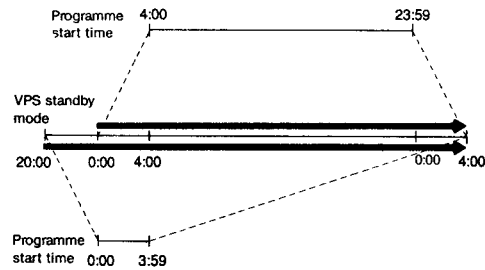
- The VPS function can be turned on only when the TIMER REC indicator is turned off.
- If the VPS signal was not received on the VTR because it was too weak or because the station failed to transmit, timer recording will be performed without the VPS function regardless of the VPS indication.
- The recording will stop when the VTR receives a VPS programme interruption code during recording, for example, when an urgent news bulletin is inserted. As soon as the interrupted programme resumes, recording will continue.



16. 7. 1990 MON
20:00 - 20:55
PROG B LP



Timer Recording



VPS Standby Mode

The VTR will be turned on to standby for VPS recording before the turn-on time and remains turned on past the preset turn-on time until the VPS signal is received to prepare for any change in the actual broadcast time.

When the VPS timer recording is set for a programme which is expected to start between 4:00 and 23:59?

The VTR will be turned on at 0:00 that day and will keep on waiting for the VPS signal until 4:00 of the next day.

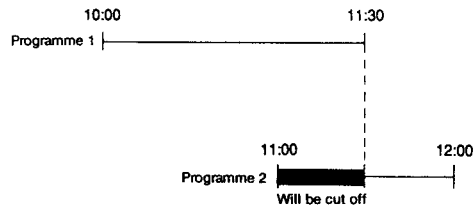
When the VPS timer recording is set for a programme which is expected to start between 0:00 and 3:59?

The VTR will be turned on at 20:00 the day before the recording day and will keep on waiting for the VPS signal until 4:00 on the next day.

If the actual recording time overlaps with the next timer recording programme

There may be cases when the actual broadcast time of two timer recording programmes overlap owing to the shift made by the VPS signal. In this case, the programme that was broadcast first always has priority.

The recording of the second programme will begin only after the first programme is over.



Quick Timer Recording

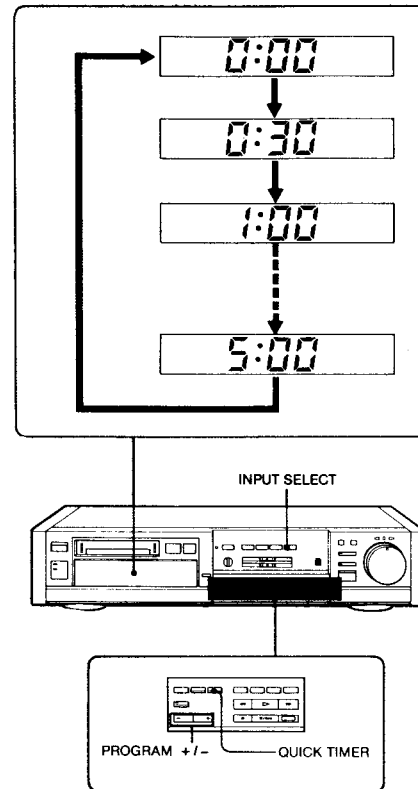
What is Quick Timer Recording?

With the quick timer recording function, simple and rough timer recording can be made. The timer can be set to operate within 5 hours in units of 30 minutes.

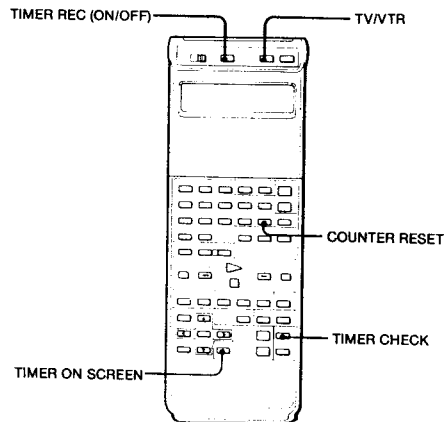
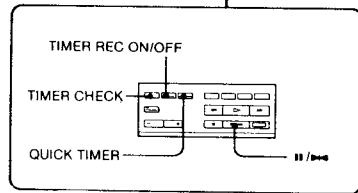
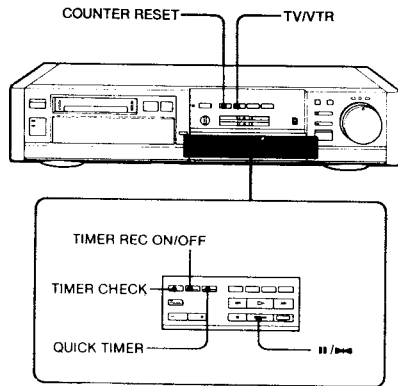
Operation

If you are recording, skip steps 1 to 3.

- 1 Press **INPUT SELECT** so that **TUNER** indicator is turned on.
- 2 Insert a cassette.
- 3 Press **QUICK TIMER**.
TIMER indicator lights in the display window.
- 4 Select the desired programme position with **PROG (PROGRAM) +/-** while 0:00 and the programme position number are blinking in the display window.
- 5 Press **QUICK TIMER** again to start recording.
- 6 Press **QUICK TIMER** again to set the recording duration.
Press within 30 seconds from step 3, otherwise the power will be turned off. Each press of **QUICK TIMER** changes the indication in the display window in units of 30 minutes.
- 7 The recording duration will decrease minute by minute until 0:00 when the VTR will be automatically turned off.



Quick Timer Recording



Buttons operable during quick timer recording

- **II / PAUSE** stops quick timer recording momentarily.
- **TIMER REC ON/OFF** stops timer recording.
- **QUICK TIMER** changes the recording duration.
- **TIMER ON SCREEN** displays the PROGRAM LIST.
- **TIMER CHECK** moves the cursor in the PROGRAM LIST or changes the programme number in the display window.
- **COUNTER RESET** resets the counter to zero.
- **TV/VTR** switches the screen to another programme received on the TV.

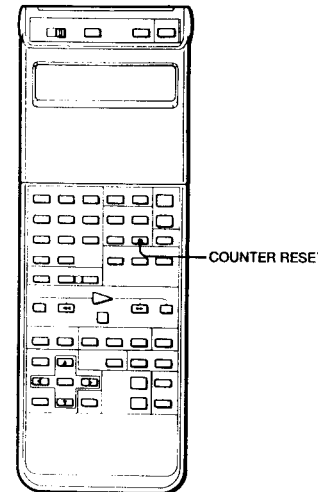
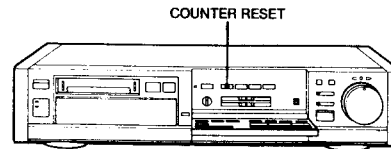
If power interruption occurs during quick timer recording

Recording will stop and the VTR will be turned off. If the power interruption lasted for less than one hour, and if the power recovered within the quick timer duration, recording will resume from that instant.

If the unit is in the time recording standby mode

Press **TIMER REC ON/OFF** to turn off the **TIMER REC** indicator, then press **QUICK TIMER**.

Use of the Tape Counter



AUTO MENU

- ▶ PLAY-REW-POWER OFF
- ▶ GO TO ZERO-STOP
- ▶ GO TO ZERO-PLAY
- ▶ REW-POWER OFF
- ▶ REW-EJECT-POWER OFF
- ▶ REW-PLAY
- ▶ REW-TIMER REC

Understanding Counter Zero Position

The tape counter on this VTR can be used as a reference when you wish to locate a certain scene after recording or playback. Press **COUNTER RESET** to set the counter to "0H00M00S" (counter zero position) before operation. The VTR will keep counting the length of tape being played back or recorded.

Tape Return

The VTR can search for the counter zero position and stop. This function is useful for locating a particular scene after recording or playback.

- 1 Press **COUNTER RESET** at the desired scene during recording or playback.
- 2 Press **■** to stop after recording or playback.
- 3 Press **MENU** and select **AUTO MENU**. See "Assigning a Desired Operation Mode" (page 45) for operation.
- 4 Move cursor to "GO TO ZERO — STOP."
- 5 Press **EXECUTE**.

Index Function

AUTO MENU

PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 ▶ GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC

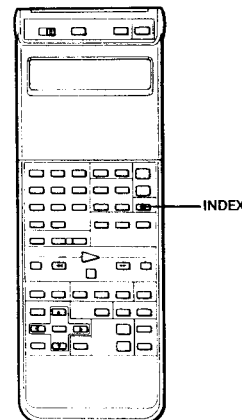
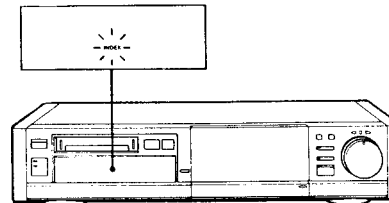
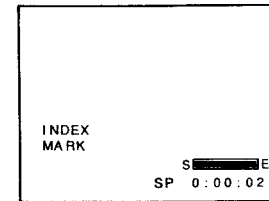
Tape Return Play

The VTR will even search and start playback from the counter zero position after recording or playback.

- 1 Repeat steps 1 to 3 in the "Tape Return" operation.
- 2 Move cursor to "GO TO ZERO — PLAY"
- 3 Press EXECUTE.

Notes

- The counter reading and the point on the tape may not correspond exactly. Use the counter as a reference.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward or rewind operations.
- There will be a time lag of several seconds when a tape recorded in LP and SP mixed or a tape with blank portion between recordings is played back.
- If tape return or tape return play is operated within ± 1 minute, it may take extra time to search for the 0H00M00S point.
- The tape will stop at the approximate "0H00M00S" point during tape return operation.



Marking Index Signals

The desired position on a tape can be located easily by detecting the index signals. There are two ways in which to mark index signals, automatic and manual.

When the index signal is being marked, INDEX flashes in the display window and INDEX MARK lights on the TV screen.

Automatic index mark

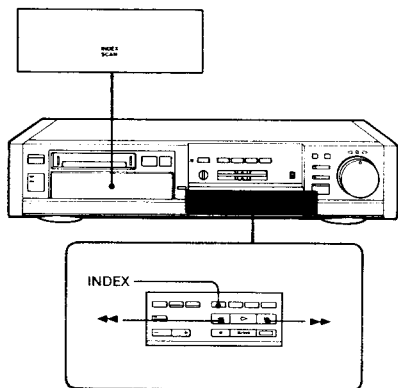
An index signal is automatically marked on the tape when the VTR starts recording.

Manual index mark

Index signals can be marked at desired scenes during recording or playback. Press INDEX MARK to mark an index.

Notes

- Leave an interval of more than 2 minutes between two index points so that the VTR can detect each INDEX signal accurately.
- The sound recorded on the tape will not be heard and a black bar appears at the bottom of the picture while the index signal is being marked during playback. However, the recorded signals are not affected.
- When the EDIT indicator is turned on in the display window, marking or erasing of index signals cannot be performed.
- Index signals cannot be marked on a tape whose safety tab is slid out.



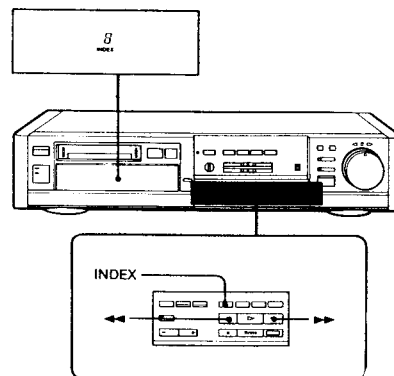
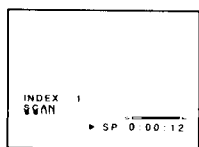
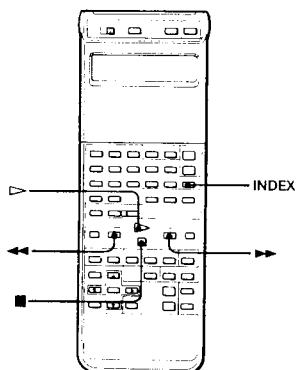
To Scan the Index Points — INDEX SCAN

To scan the beginning of each index point while monitoring the picture

- 1 Insert a cassette with index signals marked.
- 2 Press INDEX in the playback or playback pause mode.
- 3 Press ►► to advance and ◀◀ to go back to the next index.
The tape will be scanned forward with ►► and scanned in reverse with ◀◀ to the next index point and will be played back for approximately 10 seconds.
- 4 To continue playback, press ►►.
When no button is pressed, the picture is automatically scanned to the next or previous index.

To scan the beginning of each index point without viewing the picture

- 1 Insert a cassette with index signals.
- 2 Press INDEX in the stop mode.
- 3 Press ►► to advance and ◀◀ to go back to the next index.
The tape will be advanced with ►► and rewind with ◀◀ to the index mark point without picture on the screen and then will be played back for approximately 10 seconds.
- 4 Press ►► to continue playback from that index point.
When no button is pressed, the picture will be automatically scanned to the next or previous index.

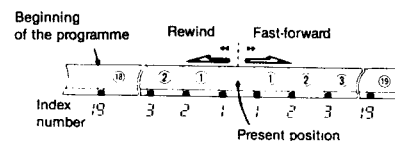
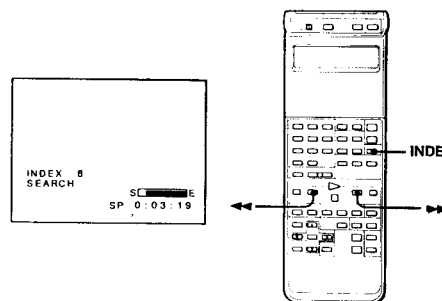


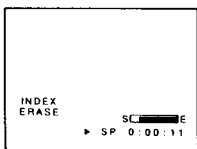
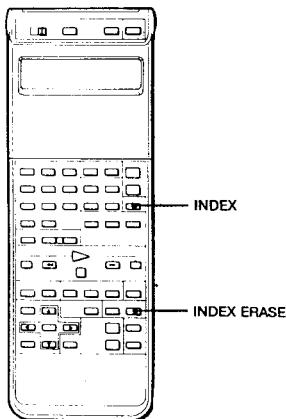
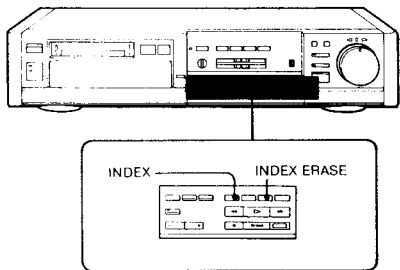
To Search for the Index Point — INDEX SEARCH

Direct search of the desired index point can be performed by assigning the number of how many indexes ahead or behind it is from the current tape position. Up to 19 indexes from the current position can be searched for. The VTR counts down how many more indexes should be searched for and displays the number on the TV screen and in the display window.

- 1 Insert a cassette with index signals.
- 2 Press INDEX in the stop or playback or playback pause mode.
- 3 Press INDEX again until the number of indexes that should be counted to reach the desired scene is displayed on the TV screen and the display window.
- 4 Press ◀◀ if the index is behind or ►► if the index is ahead of the current tape position. The VTR starts searching and the index number will be counted down to zero. Playback starts.

To correct the index number
Press ■ and repeat steps 2 to 4 above.





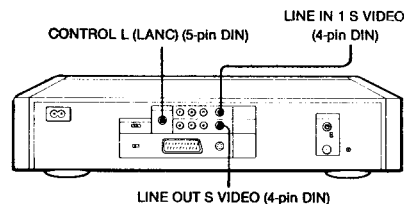
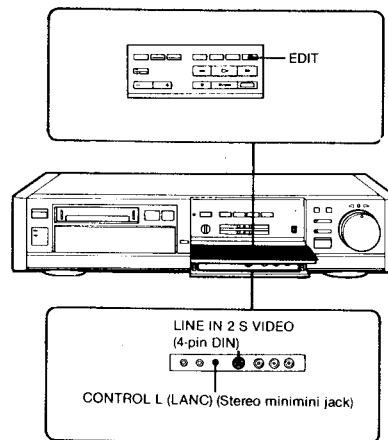
Erasing an Index

The index marked on the tape can be erased.

- 1** Insert a cassette with index signals.
- 2** Locate the index to be erased by index scan or index search.
- 3** Within approximately 10 seconds, while the tape is being played back, press INDEX ERASE. When the index signal is erased during index scan mode, index scan will resume. When the index signal is erased during index search mode, normal playback will begin.

Notes

- Press INDEX ERASE more than 2 seconds after the playback starts.
- If the safety tab on the cassette is slid out, the index signal cannot be erased.
- While an index signal is being erased, the original sound recorded on the tape cannot be heard and a black bar appears at the bottom of the playback picture. However, recorded signals are not affected.
- When the EDIT indicator is turned on in the display window, marking or erasing of index signals cannot be performed.
- The index signals marked by a VTR such as the EV-S850 series can be detected with this unit but cannot be erased. The index signals marked by this unit can be detected with a VTR such as the EV-S850 series but cannot be erased.
- When the audio is dubbed in the portion where an index was marked, the index signal may be erased.



You can create your own video programme by editing with other VTRs. Take a look at the following examples to expand your pleasure in video operation.

Use of the EDIT mode

The EDIT mode activated by the EDIT button on the unit enables playback of a higher quality picture during editing. If your other VTR is equipped with this function, turn it on. However, note that even when using the EDIT mode during editing, the quality of the edited tape will have a certain extent of degradation in picture and sound. Avoid using the edited tape for multiple generations of editing.

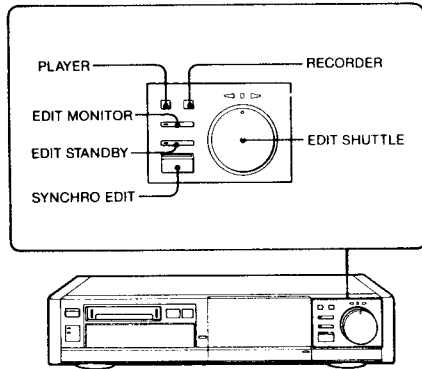
Use of the CONTROL L (LANC) connector

If your second VTR is equipped with a Sony control terminal LANC CONTROL L connector (stereo minimini jack or 5-pin DIN type), synchronized editing can be performed. The second VTR can be remotely controlled with this VTR by using the editing section on the front panel. Refer to the following example for the actual settings and operation to perform synchronized editing.

Use of the S VIDEO jacks

Check whether your second VTR is equipped with S VIDEO input or output jacks. Use of the S VIDEO jacks will result in higher quality edited picture.

Before Editing



Useful Functions during Synchronized Editing

EDIT SHUTTLE

Enables quick access to the desired scene, both on the recorder and the player.

PLAYER/RECORDER buttons and indicator
Turns on to indicate which VTR should be controlled by the EDIT SHUTTLE.

EDIT MONITOR button

Displays the picture of the recorder as well as the input source on the screen.

EDIT STANDBY button


Automatically displays the EDIT MONITOR screen with the recorder in the recording pause mode and the player in the playback pause mode. LINE IN 2 will be automatically be selected as the input source.

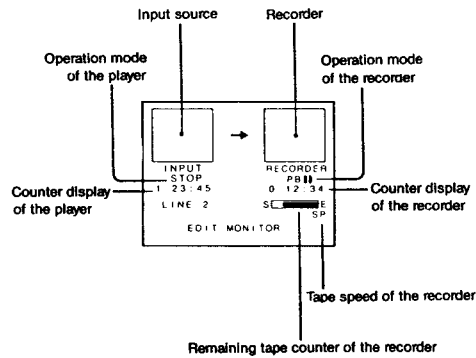
Note

When controlling the other VTR with the EDIT SHUTTLE, turn the EDIT SHUTTLE slowly not to go past the desired tape speed position.

EDIT MONITOR Display during Editing

Notes

- The cable with a * (asterisk) is optional.
- The  mark indicates the signal flow.

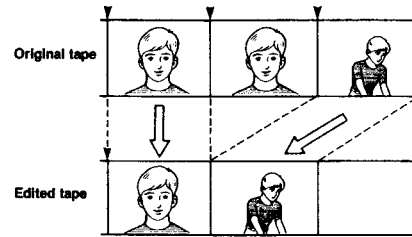


Various Tape Editing Methods

Various methods for easy and accurate tape editing are available with the VTR. Select the method according to your purpose and to the video/audio equipment you are using.

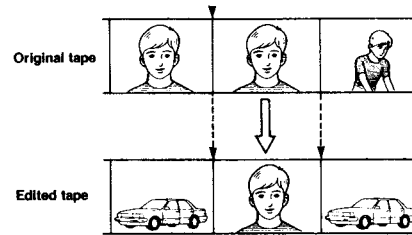
Assemble Editing

Only the desired portions of an original tape can be edited onto another tape, one portion at a time.



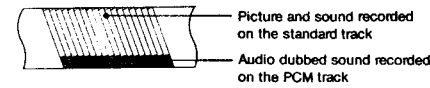
Insert Editing

A prerecorded portion of a tape can be replaced with a new scene. Decide the start point and the end point on the recording VTR.



Audio dubbing

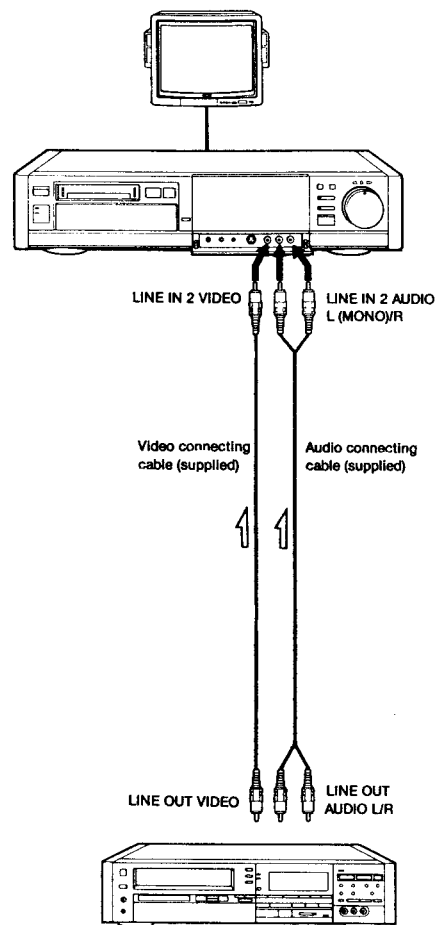
The sound recorded on the PCM audio track can be replaced with a new sound without changing the picture and sound recorded on the standard track.



Notes

- The picture may be distorted at the end point of an insert editing.
- Playback in various speeds may be distorted when edited from or onto another VTR.

Editing Method	P: player R: recorder	Page
Basic Editing	P: VTR R: This VTR	79
	P: This VTR R: VTR	80
Assemble Editing (Using the Synchronized Editing Function)	P: 8 mm camera recorder with REMOTE (stereo minimini) jack R: This VTR	81
	P: 8 mm or VHS VTRs with a CONTROL L (LANC) (5-pin DIN) connector R: This VTR	84
Insert Editing (Using the Synchronized Editing Function)	P: 8 mm camera recorder with REMOTE (stereo minimini) jack R: This VTR	87
Manual Assemble Editing	P: VTR R: This VTR	90
Manual Insert Editing	P: VTR R: This VTR	92
Audio Dubbing	P: a) Audio system b) Microphone R: This VTR	94



(1) Editing a Tape from Another VTR

Connection

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

Preparation

- On the other VTR = player**
- Activate the EDIT mode if it is equipped.

On this VTR = recorder

- Select the line input that the player is connected to with INPUT SELECT.
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).

Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Playback with the player and record with the recorder.

Note

Avoid making both the VIDEO and S VIDEO connection at the same time.

(2) Editing a Tape to Another VTR

Connection

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO input connector, make the connection.
- If the other VTR is a monaural type, make connections with the optional RK-C71 audio connecting cable.

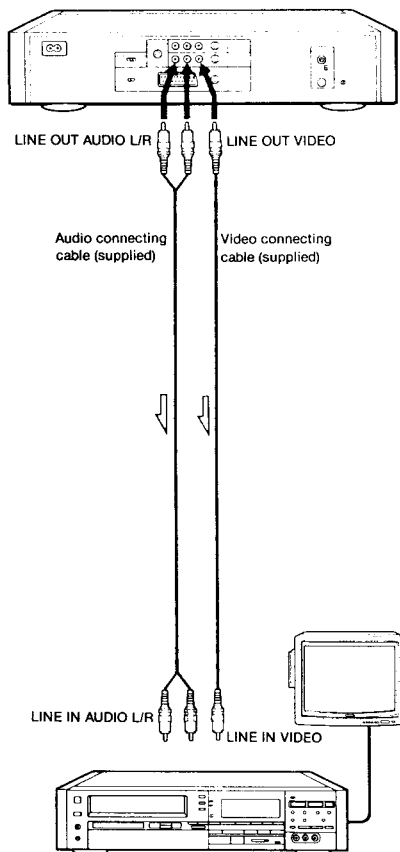
Preparation

- On this VTR = player**
- Set AUDIO MONITOR to the appropriate position referring to "Selecting the Monitor Sound" page 36.
 - Activate the EDIT mode.

- On the other VTR = recorder**
- Select the line input that the player is connected to.
 - Activate the EDIT mode if it is equipped

Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Playback with the player and record with the recorder.



(1) Editing a Tape from a 8 mm Camera Recorder

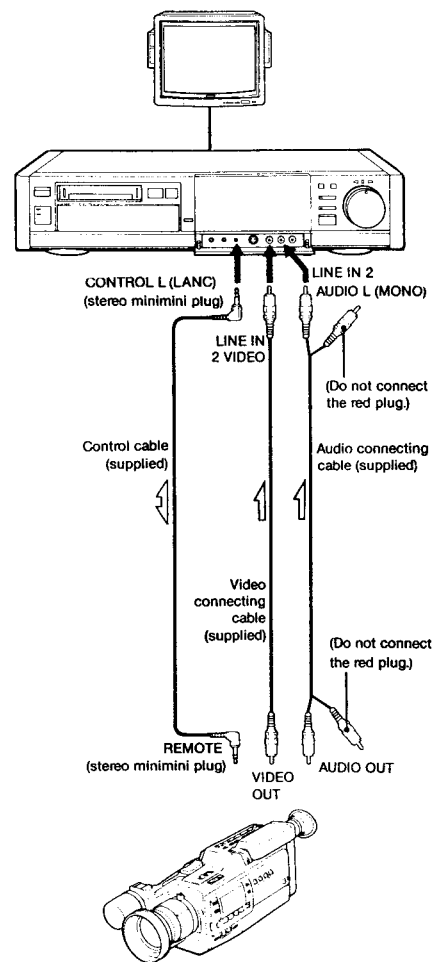
Connection

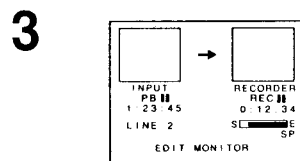
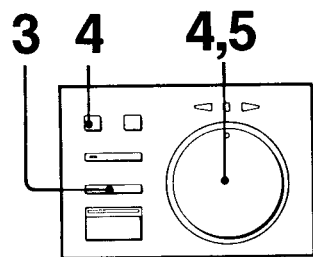
- Make connections referring to the illustration.
- If the camera recorder is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

Preparation

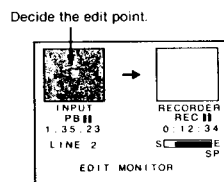
- On the other VTR = player**
- Activate the EDIT mode if it is available
 - Select LANC MODE S or the equivalent if selection is available.

- On this VTR = recorder**
- Select LANC MODE M in the MODE SET menu (page 30).
 - Select the recording mode SP or LP with REC MODE.
 - Adjust the recording level with REC LEVEL (page 52).
 - Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).





4,5

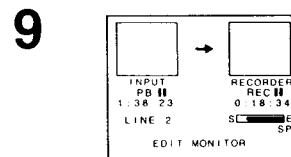
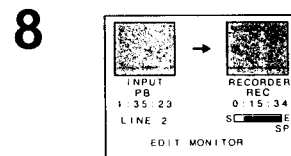
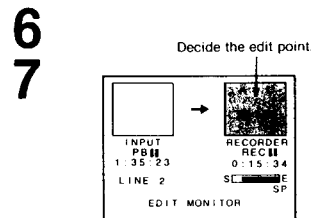
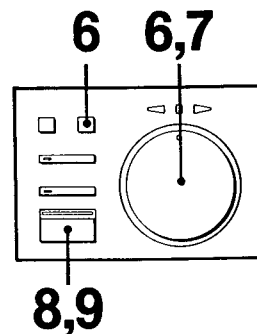


Operation

- 1** Turn on the power to both units.
- 2** Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3** Press **EDIT STANDBY** on the recorder. The **EDIT MONITOR** screen will be displayed. **LINE IN 2** will automatically be selected for the player. The **PLAYER** control button will be turned on. The recorder enters the recording pause mode. The player enters the playback pause mode.
- 4** Check that the **PLAYER** control button is turned on and turn the **EDIT SHUTTLE** to locate the start point of the player. The available playback speeds are: **REVIEW**, **PB** (when **EDIT SHUTTLE** is released), $\times 1/5$ (slow forward), **PB** (normal speed forward), and **CUE**.

Note
 $\times 1/5$ speed playback on the other VTR is controllable if $\times 1/5$ speed playback is available on the other VTR.

- 5** Release the **EDIT SHUTTLE** when the desired point is found. The player enters the playback pause mode.



- 6** Press **RECORDER** control button to turn it on and turn the **EDIT SHUTTLE** to locate the start point of the recorder. The available playback speeds are: **REVIEW**, $\times 1$ (normal speed reverse), **REC** (when the **EDIT SHUTTLE** is released), $\times 1/5$ (slow forward), $\times 1$ (normal speed forward), and **CUE**.
- 7** Release the **EDIT SHUTTLE** when the desired point is found. The recorder enters the recording pause mode.
- 8** Press **SYNCHRO EDIT**. The player will start playback and the recorder starts recording.
- 9** Press **SYNCHRO EDIT** at the edit end point. The player will enter the playback pause mode and the recorder enters the recording pause mode.

To edit more scenes
 Repeat steps 4 to 9.

When editing is completed
 Press **EDIT STANDBY**. Both units will stop and the **EDIT MONITOR** display will return to the TV programme screen.

(2) Editing a Tape from a 8 mm or VHS VTR

Connection

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO output connector, make the connection.
- If the player is a monaural type, make connections with the optional RK-C71 audio connecting cable.

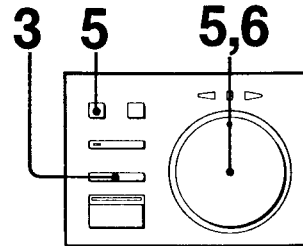
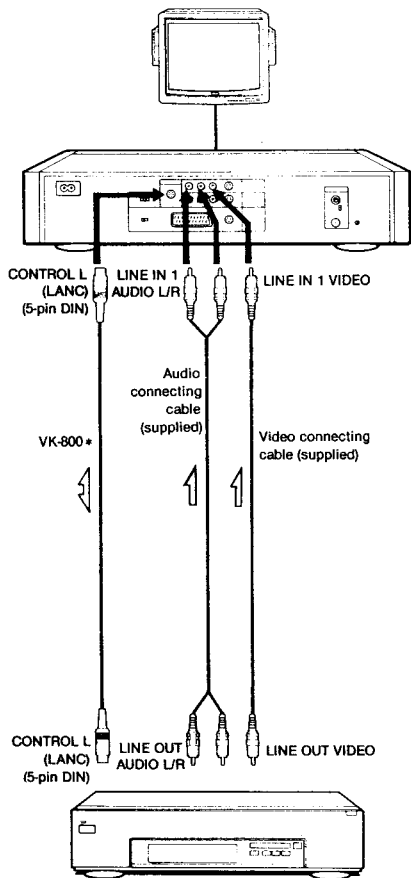
Preparation

On the other VTR = player

- Activate the EDIT mode if it is available.
- Select LANC MODE S or the equivalent if selection is available.

On this VTR = recorder

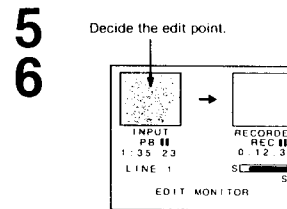
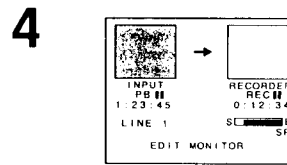
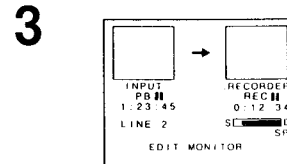
- Select LANC MODE M in the MODE SET menu (page 30).
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).



Operation

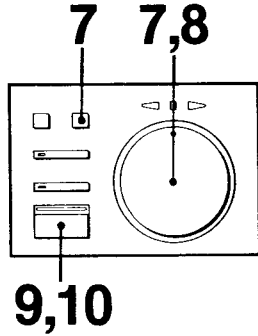
- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT STANDBY on the recorder. The EDIT MONITOR screen will be displayed. The PLAYER control button will be turned on. The recorder enters the recording pause mode. The player enters the playback pause mode.
- 4 Press INPUT SELECT to change the input source display from LINE 2 to LINE 1.
- 5 Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player. The available playback speeds are: REVIEW, PB II (when EDIT SHUTTLE is released), x 1/5 (slow forward), PB (normal speed forward), and CUE.

Note
x 1/5 speed playback on the other VTR is controllable if x 1/5 speed playback is available on the other VTR.



- 6 Release the EDIT SHUTTLE when the desired point is found. The player enters the playback pause mode.

Insert Editing



- 7** Press **RECORDER** control button to turn it on and turn the **EDIT SHUTTLE** to locate the start point of the recorder.
The available playback speeds are: REVIEW, - x 1 (normal speed reverse), REC II (when the EDIT SHUTTLE is released), x 1/5 (slow forward), x 1 (normal speed forward), and CUE.
- 8** Release the **EDIT SHUTTLE** when the desired point is found.
The recorder enters the recording pause mode.
- 9** Press **SYNCHRO EDIT**.
The player will start playback and the recorder starts recording.
- 10** Press **SYNCHRO EDIT** at the edit end point.
The player will enter the playback pause mode and the recorder enters the recording pause mode.

To edit more scenes
Repeat steps 4 to 10.

When editing is completed
Press **EDIT STANDBY**.
Both units will stop and the **EDIT MONITOR** display will return to the TV programme screen.

To connect the player to LINE IN 2
Use the optional VK-810 connecting cable (5-pin DIN to stereo minimini jack) for the **CONTROL L LANC** connection. The operation will be the same as that in "(1) Editing a Tape from a 8 mm Camera Recorder."

(1) Inserting Scenes from a 8 mm Camera Recorder

Connection

- Make connections referring to the illustration.
- If the camera recorder is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the **LINE IN 2 AUDIO L (MONO)** jack of this VTR.

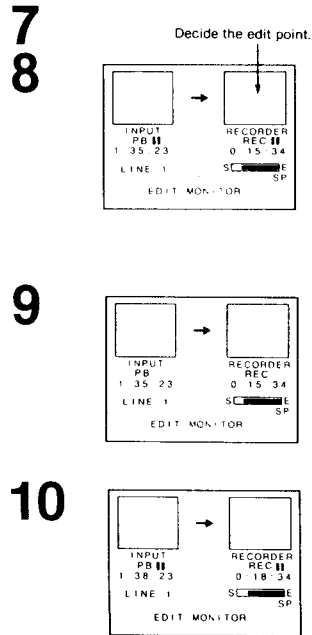
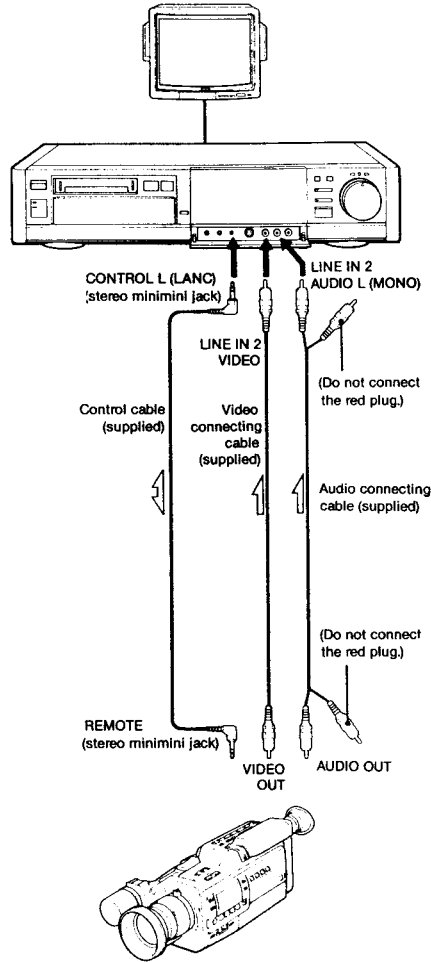
Preparation

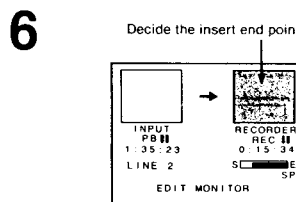
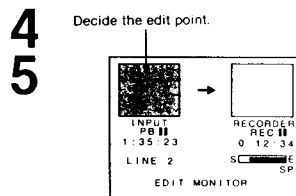
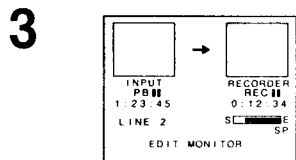
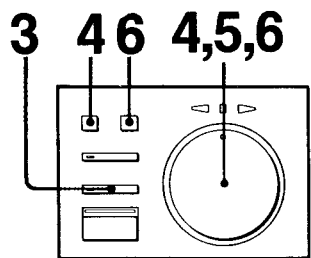
On the other VTR = player

- Activate the **EDIT** mode if it is available.
- Select **LANC MODE S** or the equivalent if selection is available.

On this VTR = recorder

- Select **LANC MODE M** in the "MODE SET menu" (page 30).
- Select the recording mode **SP** or **LP** with **REC MODE**.
- Adjust the recording level with **REC LEVEL** (page 52).
- Check the other VTR and select **SHUTTLE MODE A** or **B** in the **MODE SET** menu (page 30).



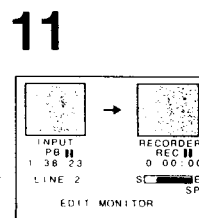
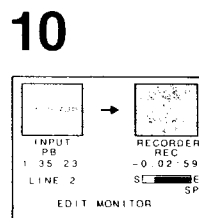
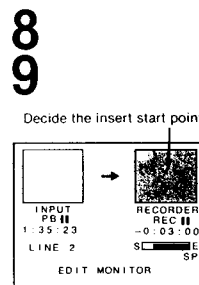
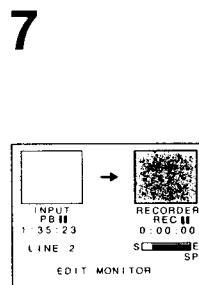
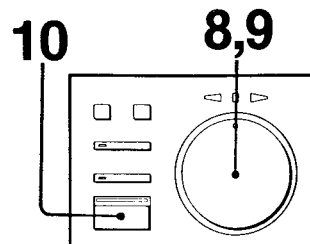
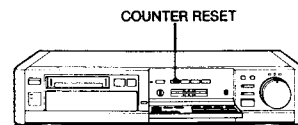


Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT STANDBY on the recorder. The EDIT MONITOR screen will be displayed. LINE 2 will automatically be selected for the player. The PLAYER control button will be turned on. The recorder enters the recording pause mode. The player enters the playback pause mode.
- 4 Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player. The available playback speeds are: REVIEW, PB II (when EDIT SHUTTLE is released), x 1/5 (slow forward), PB (normal speed forward), and CUE.

Note
x 1/5 speed playback on the other VTR is controllable if x 1/5 speed playback is available on the other VTR.

- 5 Release the EDIT SHUTTLE when the desired point is found. The player enters the playback pause mode.
- 6 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate where insertion should end. The available playback speeds are: REVIEW, - x 1 (normal speed reverse), REC II (when the EDIT SHUTTLE is released), x 1/5 (slow forward), x 1 (normal speed forward), and CUE.



- 7 Press COUNTER RESET. The tape counter for the recorder will be 0H00M00S.
- 8 Turn the EDIT SHUTTLE to rewind the tape to locate where the insertion should start on the recorder.
- 9 Release the EDIT SHUTTLE when the desired point is found. The recorder enters the recording pause mode.
- 10 Press SYNCHRO EDIT. The player will start playback and the recorder starts recording.
- 11 Recording will stop when the counter reaches zero. The player will enter the playback pause mode and the recorder enters the recording pause mode.

To edit more scenes
Repeat steps 4 to 11.

When editing is completed
Press EDIT STANDBY. Both units will stop and the EDIT MONITOR display will return to the TV programme screen.

Note during synchronized editing
COUNTER RESET will not function.

(1) Editing a Tape from Another VTR

Connection

- Make connections referring to the illustration in "Basic Editing (1) Editing a Tape from Another VTR" (page 79).

Preparation

On the other VTR = player

- Activate the EDIT mode if it is available.

On this VTR = recorder

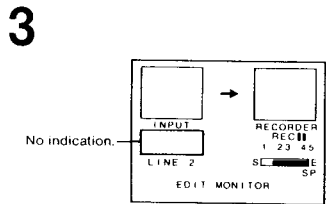
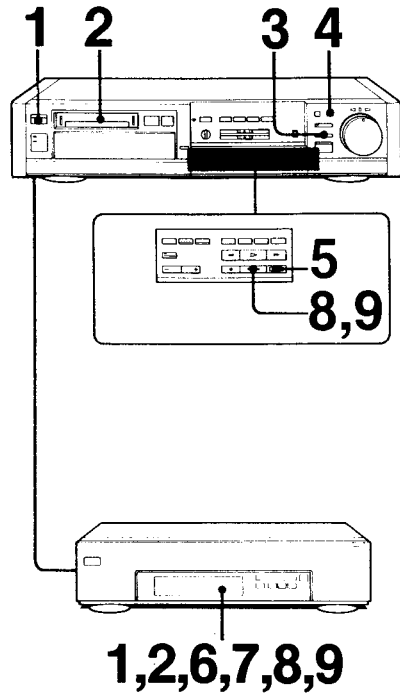
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Select the line input that the player is connected to with INPUT SELECT.

Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT MONITOR on the recorder. The EDIT MONITOR screen will be displayed.
- 4 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate the recording start point of the recorder. Releasing the EDIT SHUTTLE makes the recorder enter the playback pause mode.
- 5 Press ● REC to make the recorder enter the recording pause mode.
- 6 Playback the player using the controls on the player and locate the playback start point.
- 7 Set the player in the playback pause mode.
- 8 Release the pause mode on both VTRs simultaneously. The player starts playback and the recorder starts recording.
- 9 To stop recording, press ■ PAUSE on the recorder and then the player.

To edit more scenes
Repeat steps 4 to 9.

When editing is completed
Stop both VTRs.



(1) Editing a Tape from Another VTR

Connection

- Make connections referring to the illustrations in "Basic Editing (1) Editing a Tape from Another VTR" (page 79).

Preparation

On the other VTR = player

- Activate the EDIT mode if it is available.

On this VTR = recorder

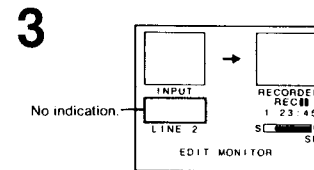
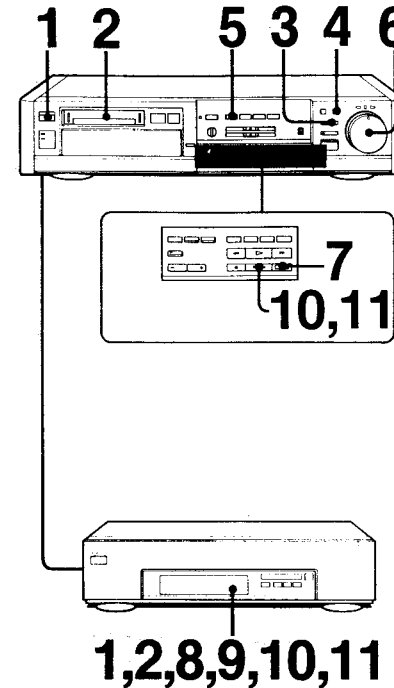
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Select the line input that the player is connected to with INPUT SELECT.

Operation

- 1 Turn on the power to both units.
- 2 Insert a source tape into the player. Insert a tape for recording into the recorder.
- 3 Press EDIT MONITOR on the recorder. The EDIT MONITOR screen will be displayed.
- 4 Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate where the insertion should end.
- 5 Press COUNTER RESET. The tape counter for the recorder will be 0H00M00S.
- 6 Turn the EDIT SHUTTLE to rewind the tape to locate where the insertion should start on the recorder. Releasing the EDIT SHUTTLE makes the recorder enter the playback pause mode.
- 7 Press ● REC to set the recorder in the recording pause mode.
- 8 Playback the player using the controls on the player and locate the playback start point.
- 9 Set the player in the playback pause mode.
- 10 Release the pause mode on both VTRs simultaneously. The player starts playback and the recorder starts recording.
- 11 Set the recorder in the recording pause mode when the counter reaches zero. Set the player in the playback pause mode.

To edit more scenes
Repeat steps 4 to 11.

When editing is completed
Stop both VTRs.

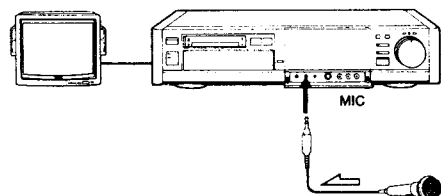


Audio Dubbing

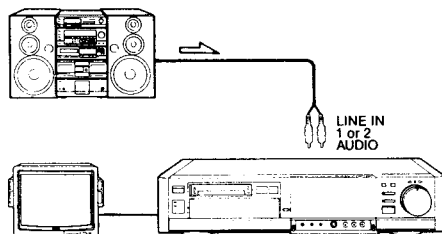
You can additionally record music or narration on a pre-recorded tape while watching the playback picture of the tape. Audio dubbed sound will be recorded on the PCM track.

Connection

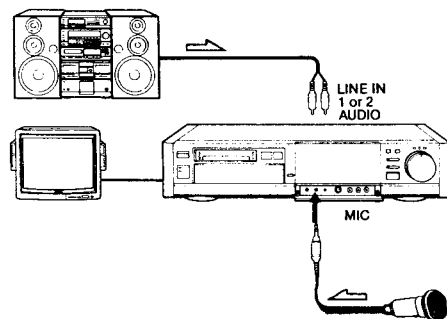
To dub the sound from the microphone



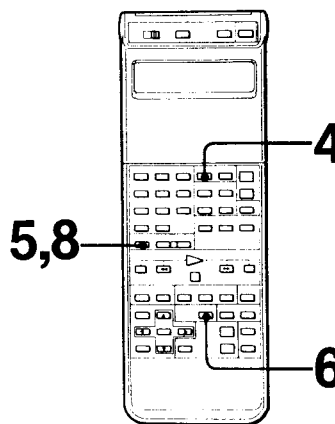
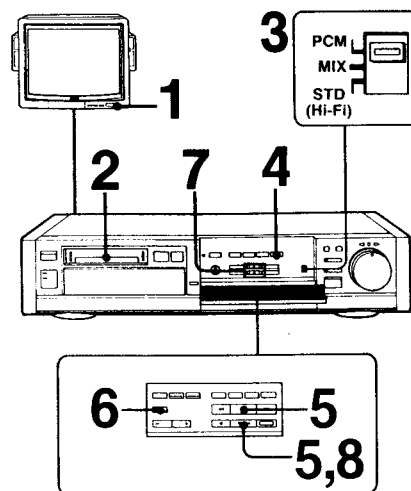
To dub to sound from the audio system



To dub the sound from both the microphone and the audio system



Note
A plug-in power microphone cannot be used with this VTR.



Operation

- 1 Turn on the TV and select the input for the VTR or select the programme position for the VTR.
- 2 Insert a cassette. The power will automatically be turned on.
- 3 Set the AUDIO MONITOR switch to PCM or MIX.
- 4 When dubbing the sound from the audio system, select the line input that the audio system is connected to by pressing INPUT SELECT.
- 5 Playback the tape to locate the point where the audio dubbing should start and press PAUSE/STILL or PAUSE.
- 6 Press AUDIO DUB. The AUDIO DUB indicator on the VTR will turn on.
- 7 Playback the audio sources and adjust the REC LEVEL.
- 8 Press PAUSE/STILL or PAUSE again to release the playback pause mode. Audio dubbing will start.

To stop audio dubbing momentarily
Press PAUSE/STILL or PAUSE.

To stop audio dubbing
Press STOP.

To dub the sound from a TV programme
Press INPUT SELECT to display TUNER indicator and select the desired programme position. Then proceed with steps 2 to 5.

Notes

- During dubbing, a black band or picture noise appears in the center and lower portions of the screen, but the recorded picture will not be affected.
- The audio dubbed sound cannot be played back on a VTR or a video camera recorder without the PCM recording/playback function.

SECTION 3 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

3-1. REMOVAL OF FRONT PANEL, CASE UPPER, PLATE BOTTOM

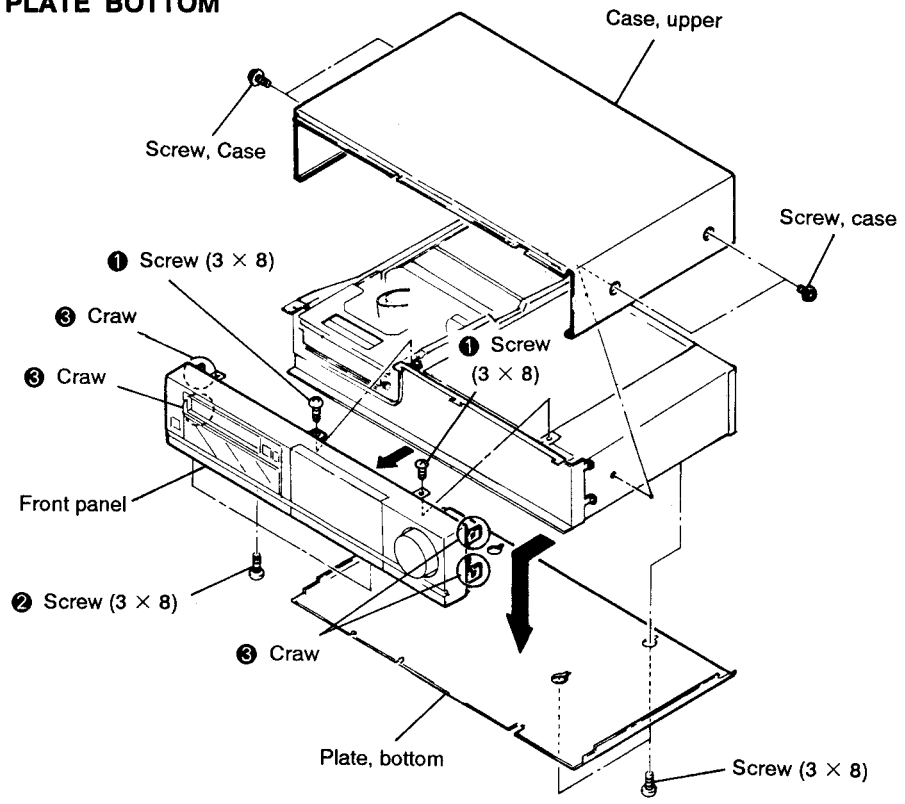


Fig. 3-1.

3-2. REMOVAL OF VI-65, PC-39, YC-64, FR-41, FJ-2 BOARDS

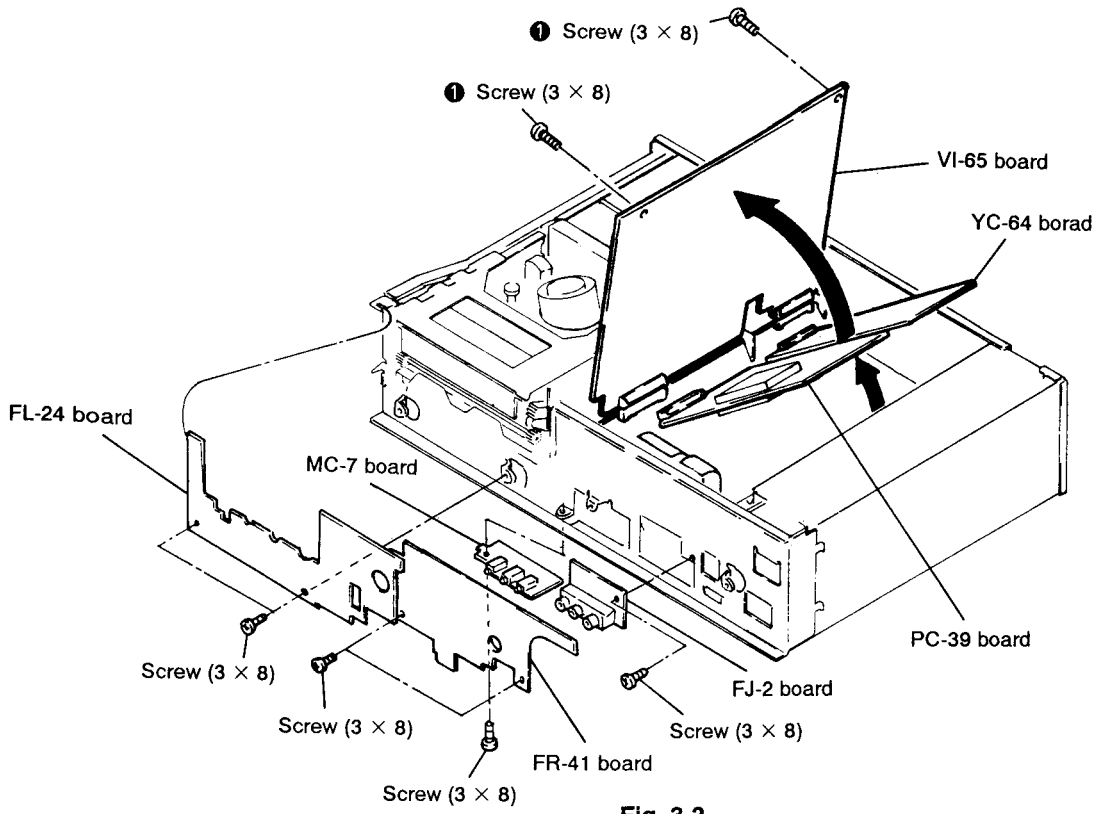


Fig. 3-2.

3-3. REMOVING BOARDS CONNECTED BY A BOARD-TO-BOARD CONNECTOR

Example: Removing the VI-65 board from the IN-24 board.

- 1) Stand the VI-65 board as shown in Fig. 3-3. **A**.
- 2) As shown in Fig. 3-3. **B**, pull out the VI-65 board at a 20° angle from the IN-24 board.
- 3) Remove the PC-39 board, YC-64 board or other board in the same way.
- 4) To reinstall the board, align the connectors as shown in Fig. 3-3. **C**, then insert the board.

Note: Pulling out the board forcefully may damage the connector or pattern. Therefore use care when removing the board.

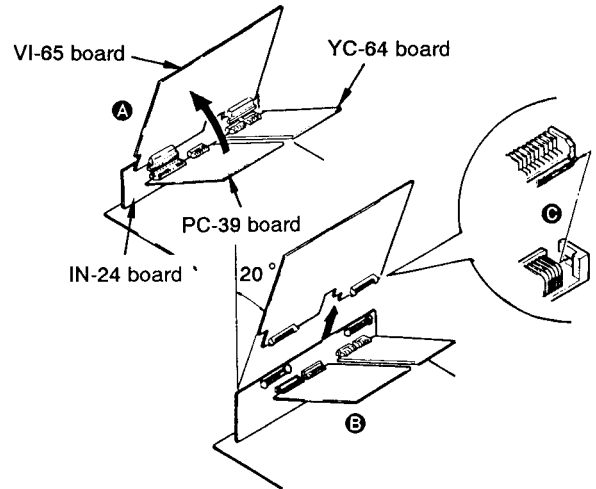


Fig. 3-3.

3-4. REMOVAL OF DS-35, TU-100, RP-74, IN-24, CM-15, PS-196 BOARDS

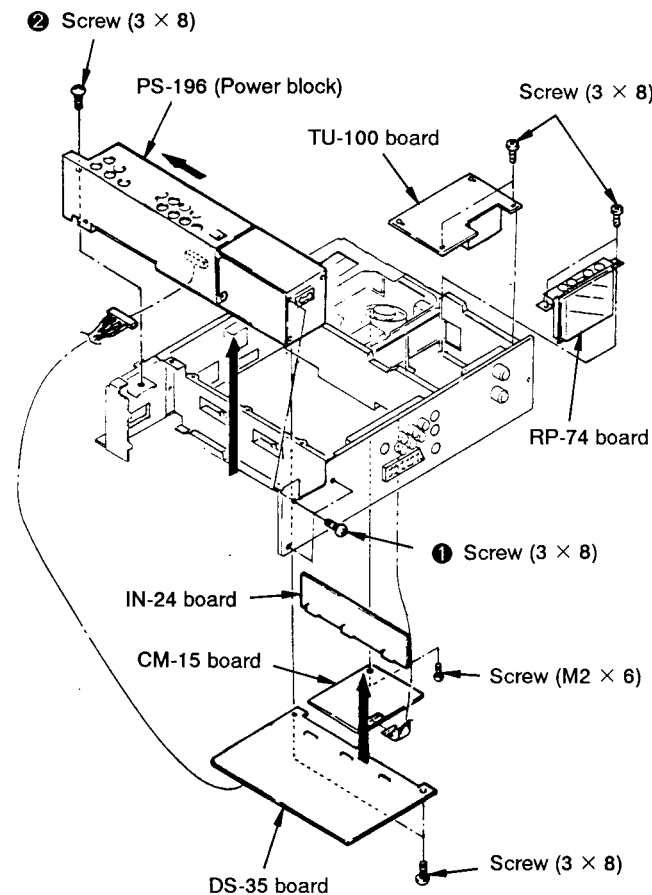


Fig. 3-4.

3-5. REMOVAL OF CC-26 BOARD

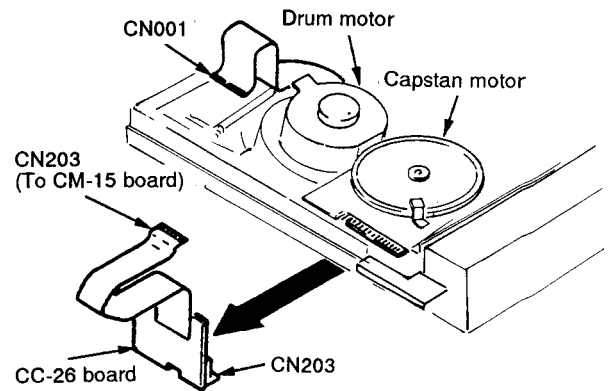


Fig. 3-5.

3-6. REMOVAL OF CM-15, UC-4 BOARDS

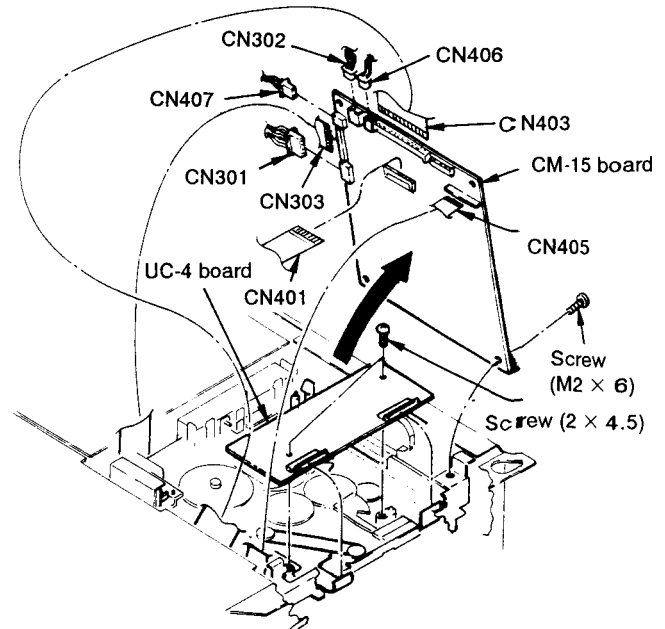


Fig. 3-6.

3-7. REMOVAL OF RJ-5, RJ-6 AND REAR FRAME, RF MODULATOR

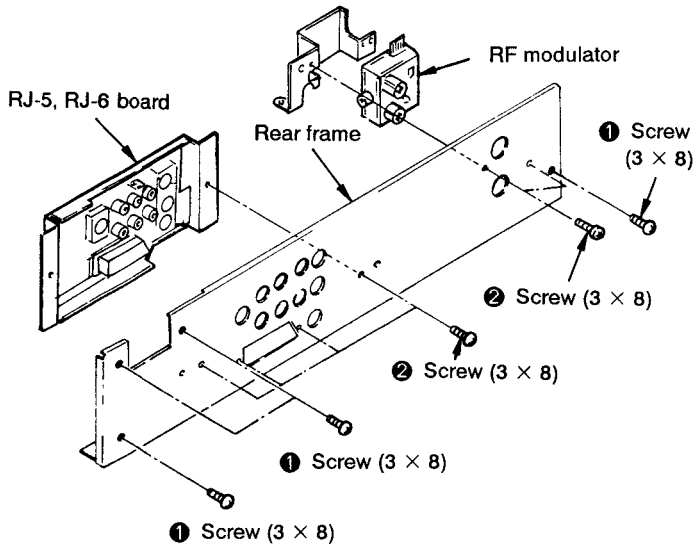


Fig. 3-7.

3-8. REMOVAL OF MD, CASSETTE COMPARTMENT BLOCK

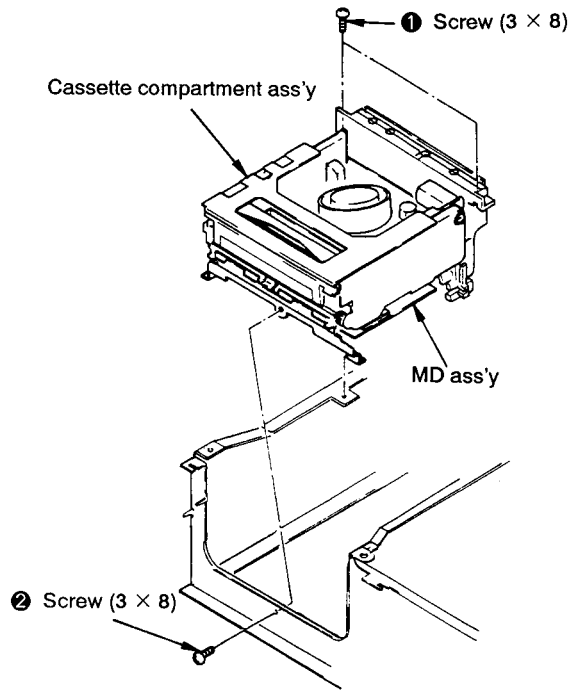


Fig. 3-8.

3-9. REMOVAL OF MD SECTION

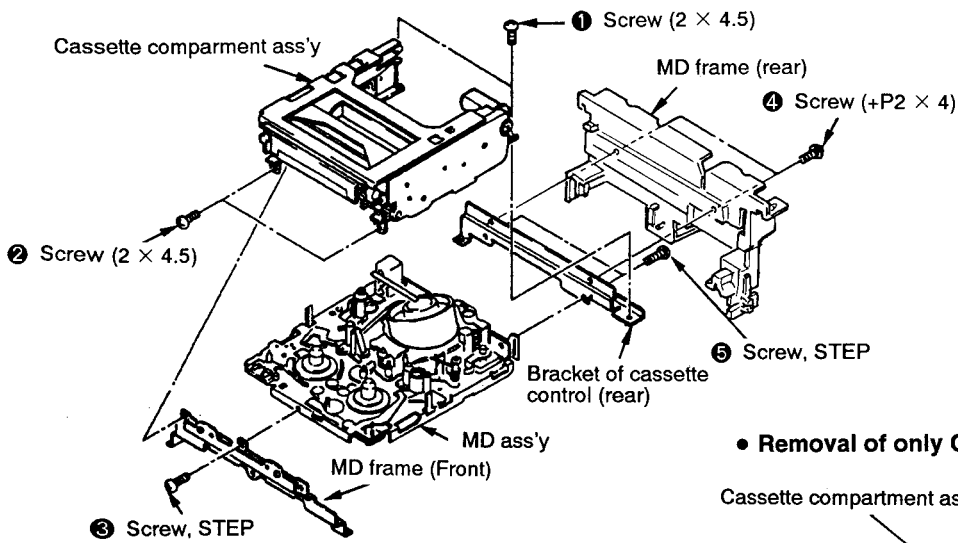
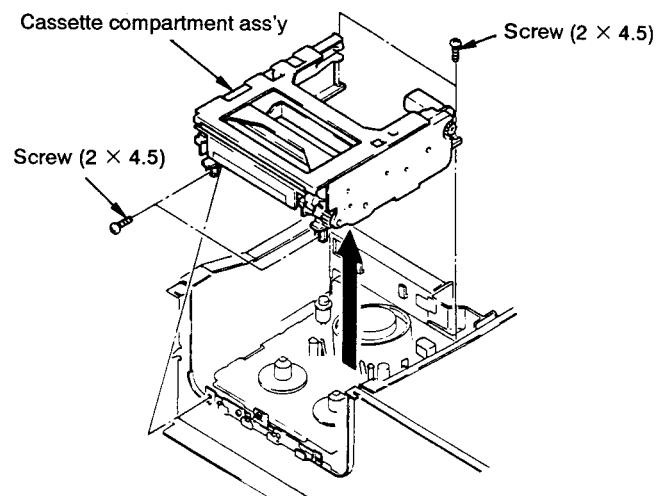


Fig. 3-9.

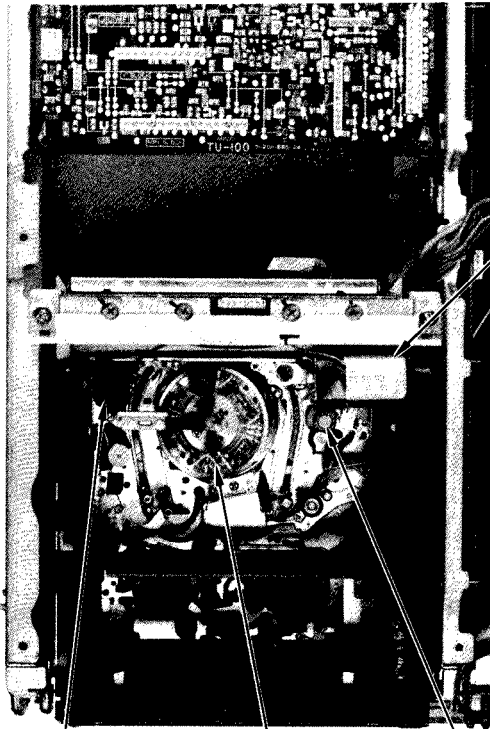
• Removal of only Cassette Compartment Ass'y



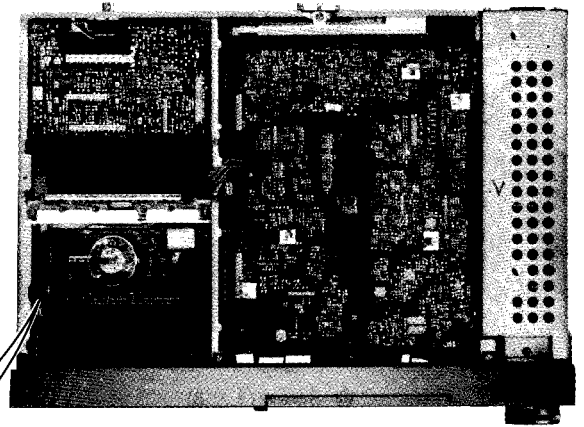
- Notes for cassette compartment ass'y installation.
- For the installation procedure, see page 8.

3-10. INTERNAL VIEWS

– Upper Side –



X-3731-108-1
FRONT Loading
motor



Threading motor
A-7040-160-A

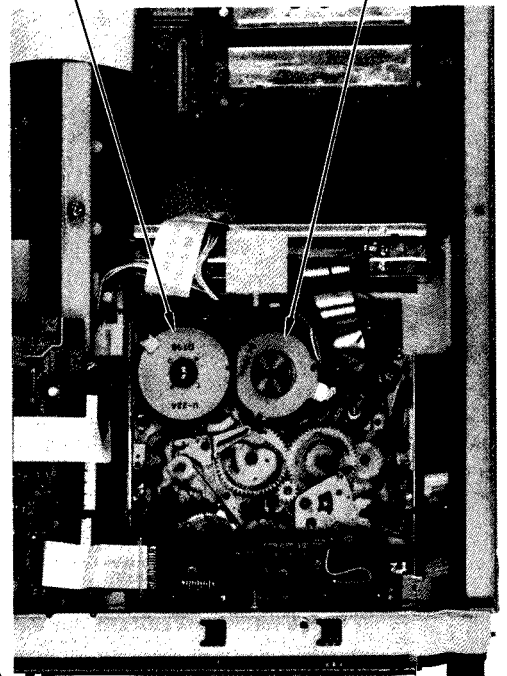
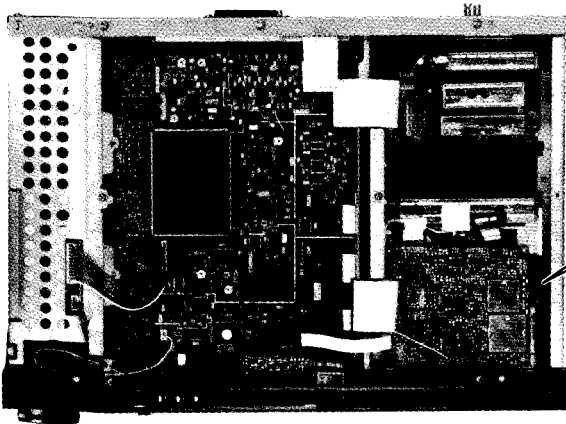
Drum
Drum Ass'y (DGU-58A-R)
A-7048-339-A
Upper Drum Ass'y (DGR-58-R)
A-7049-293-A

Capstan

8-835-331-01
Capstan motor

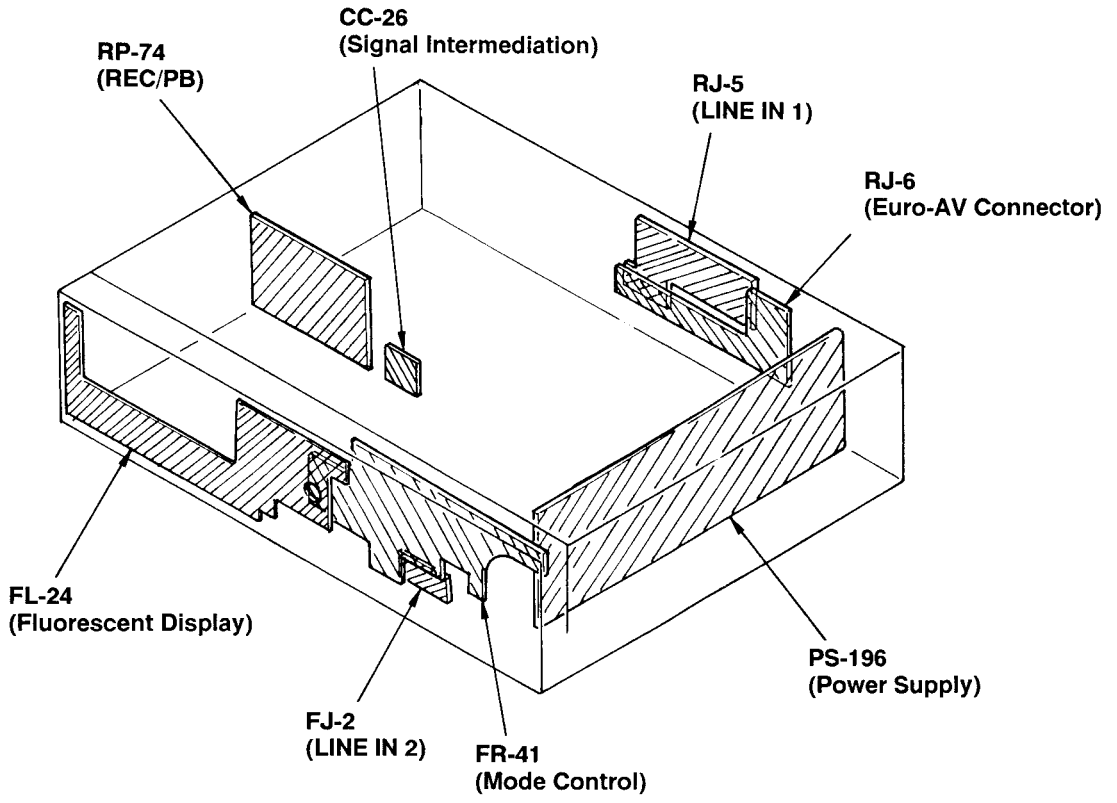
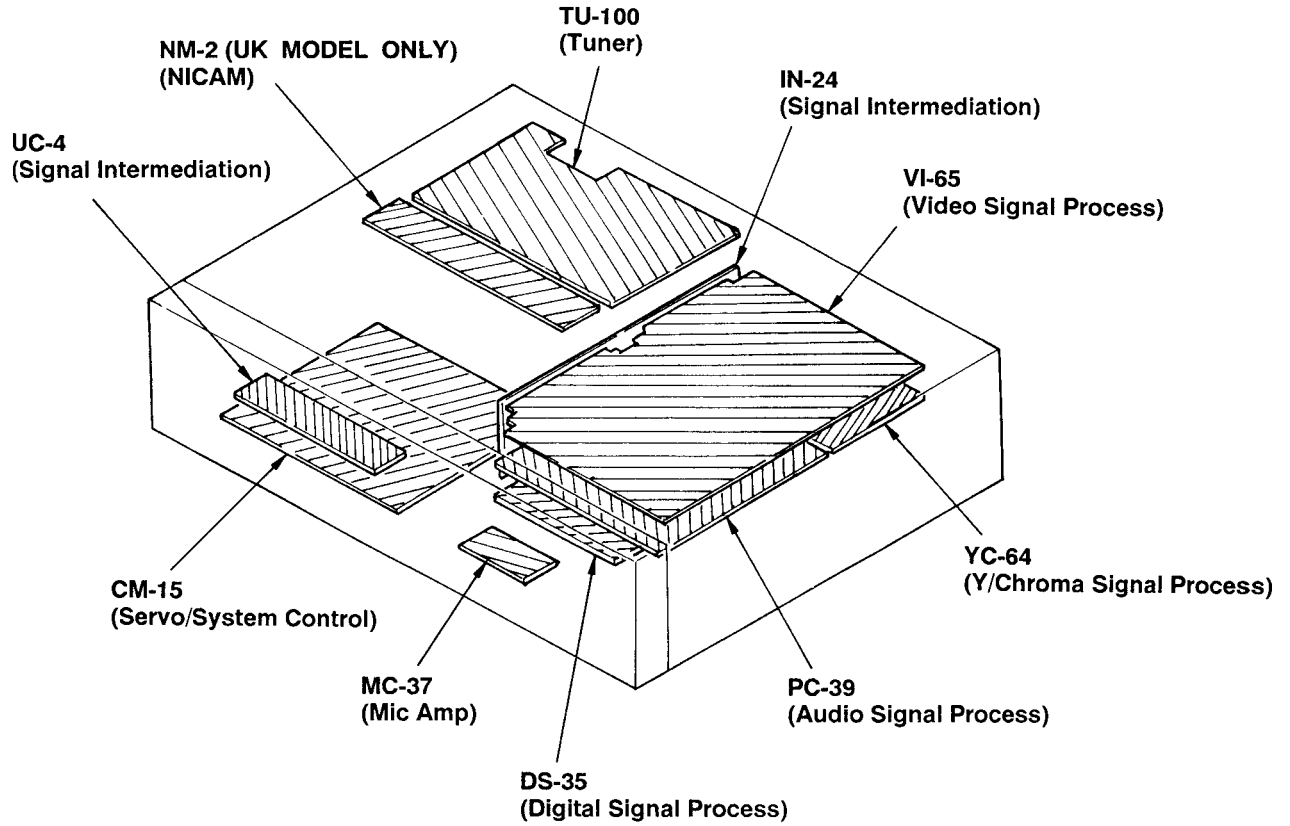
Drum motor

– Bottom Side –

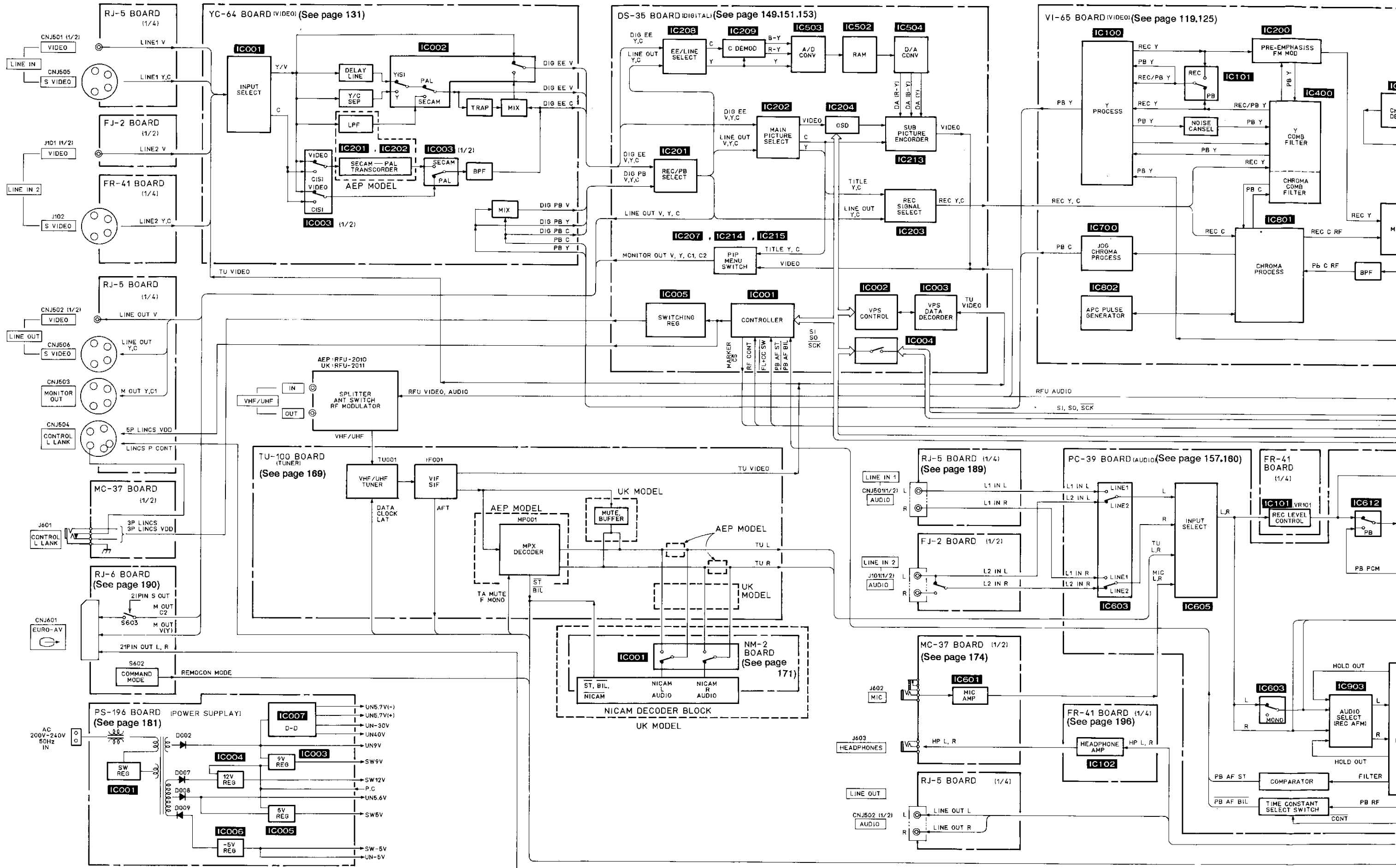


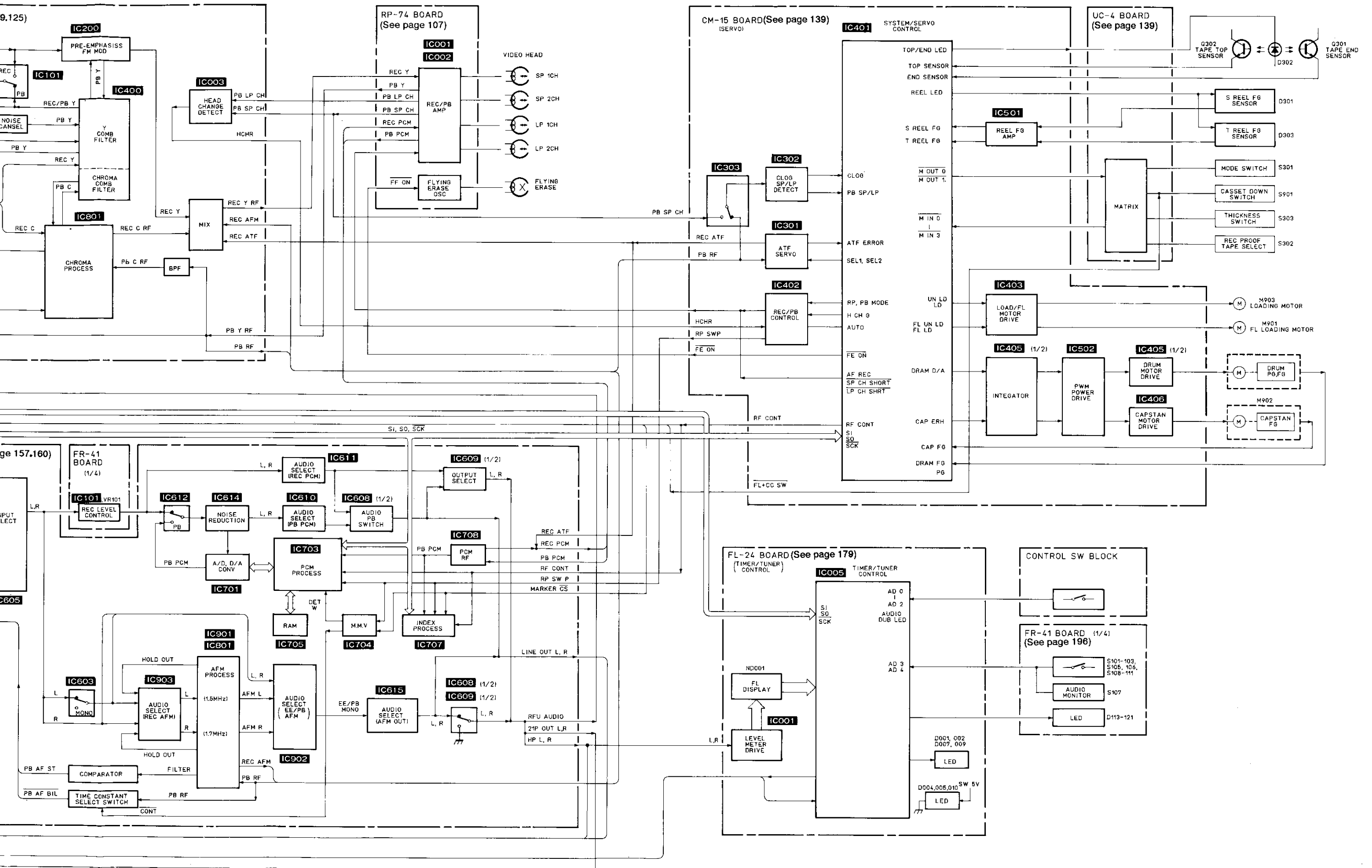
**SECTION 4
DIAGRAMS**

4-1. CIRCUIT BOARDS LOCATION

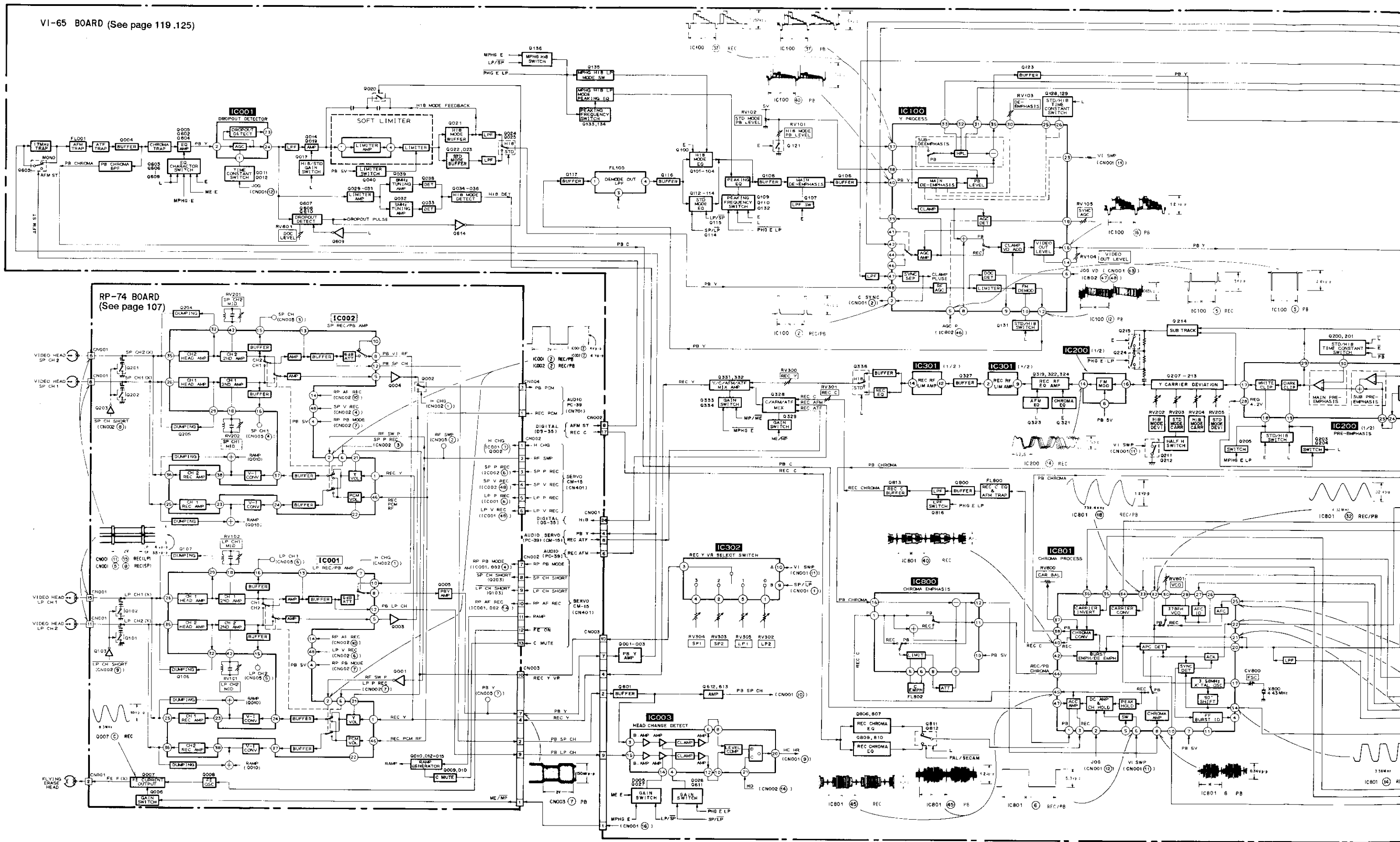


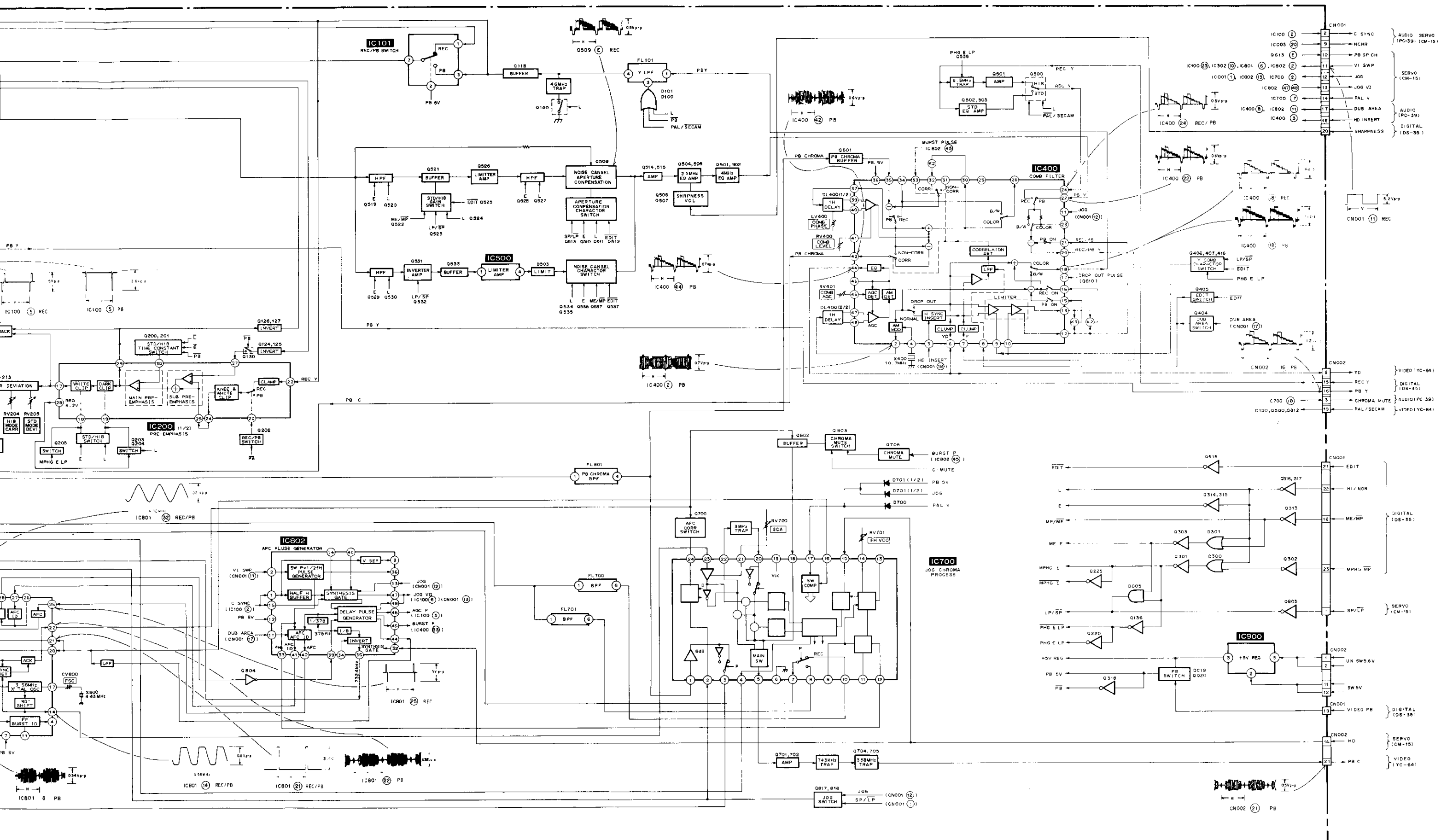
4-2. OVERALL BLOCK DIAGRAM

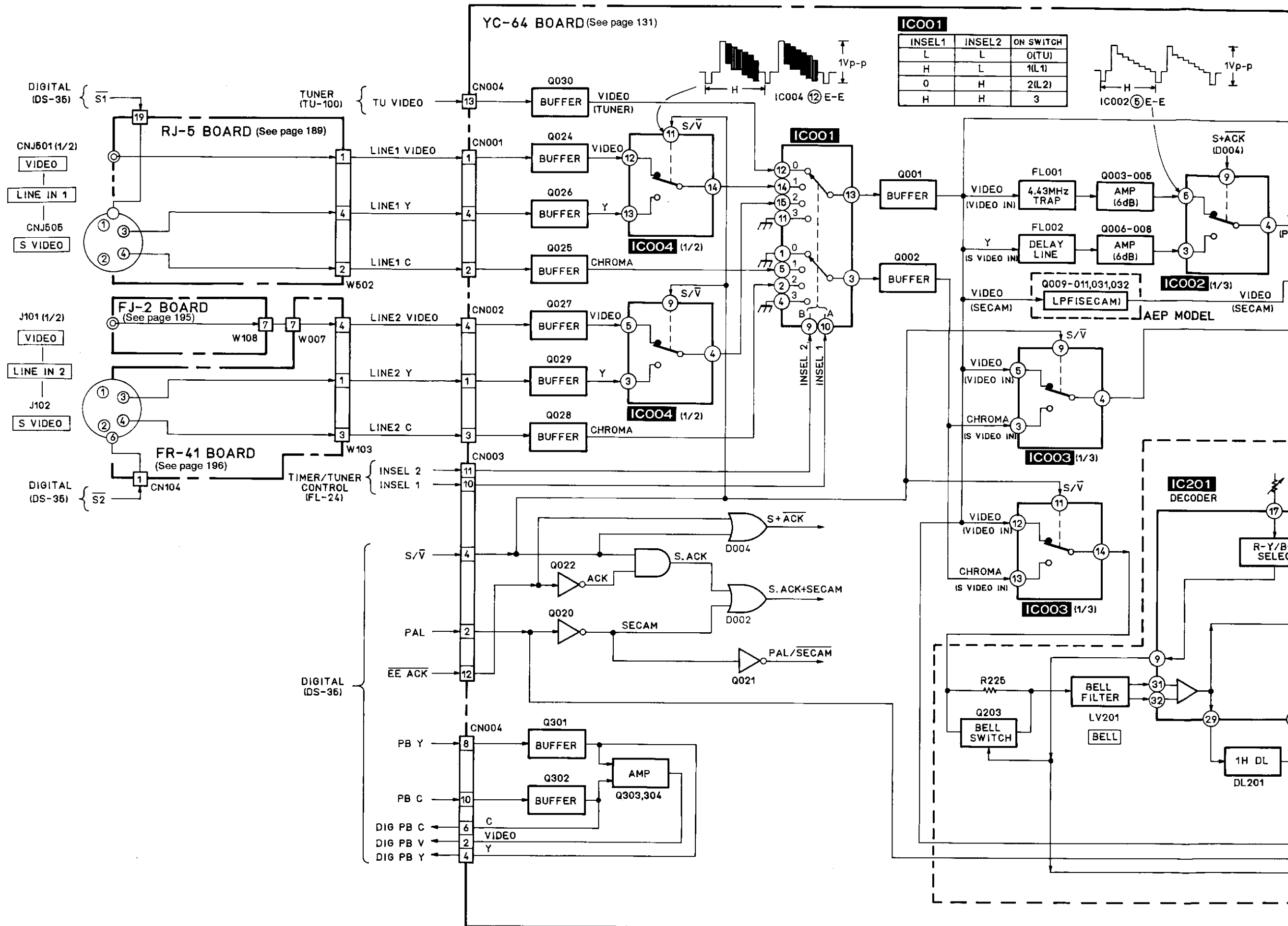


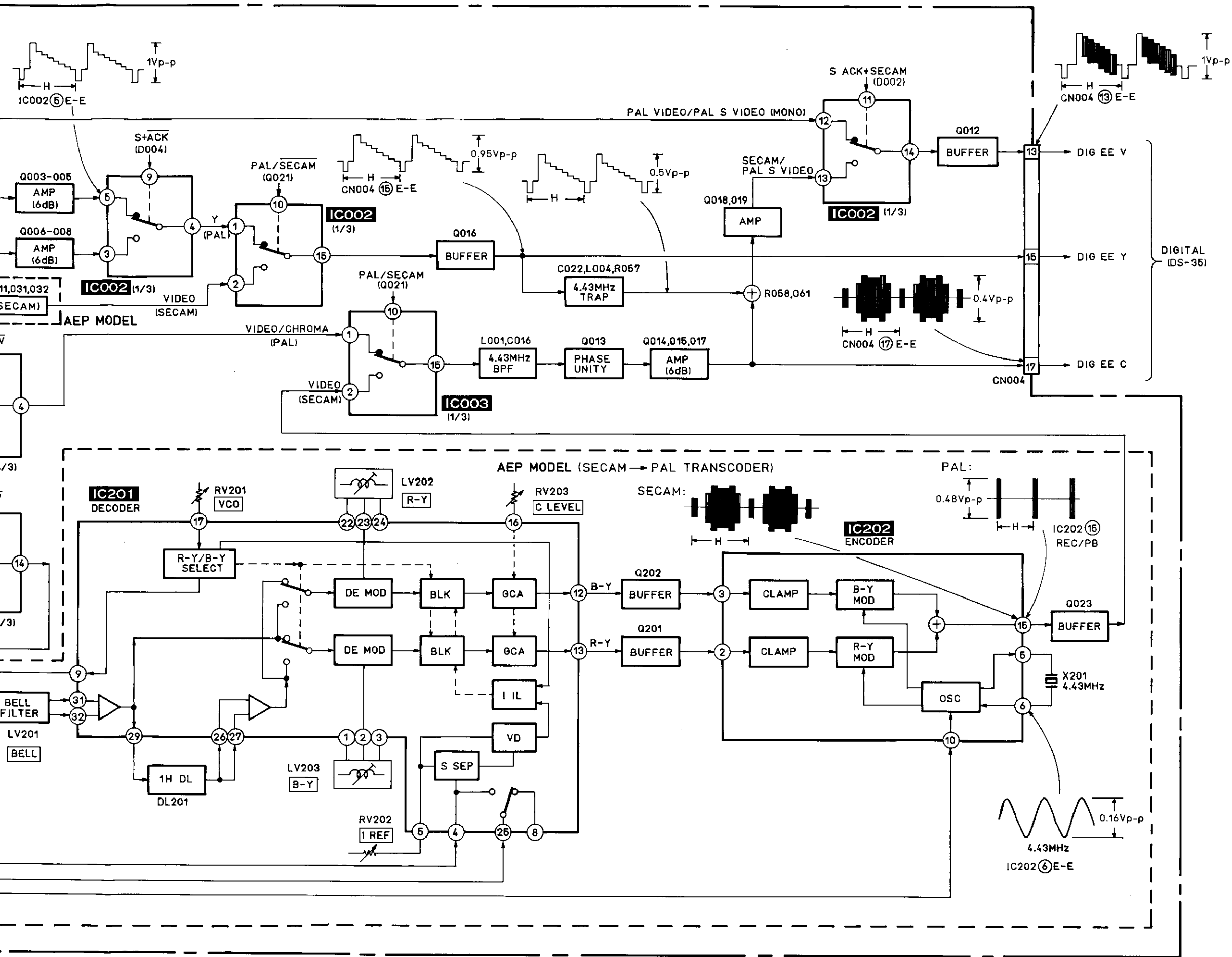


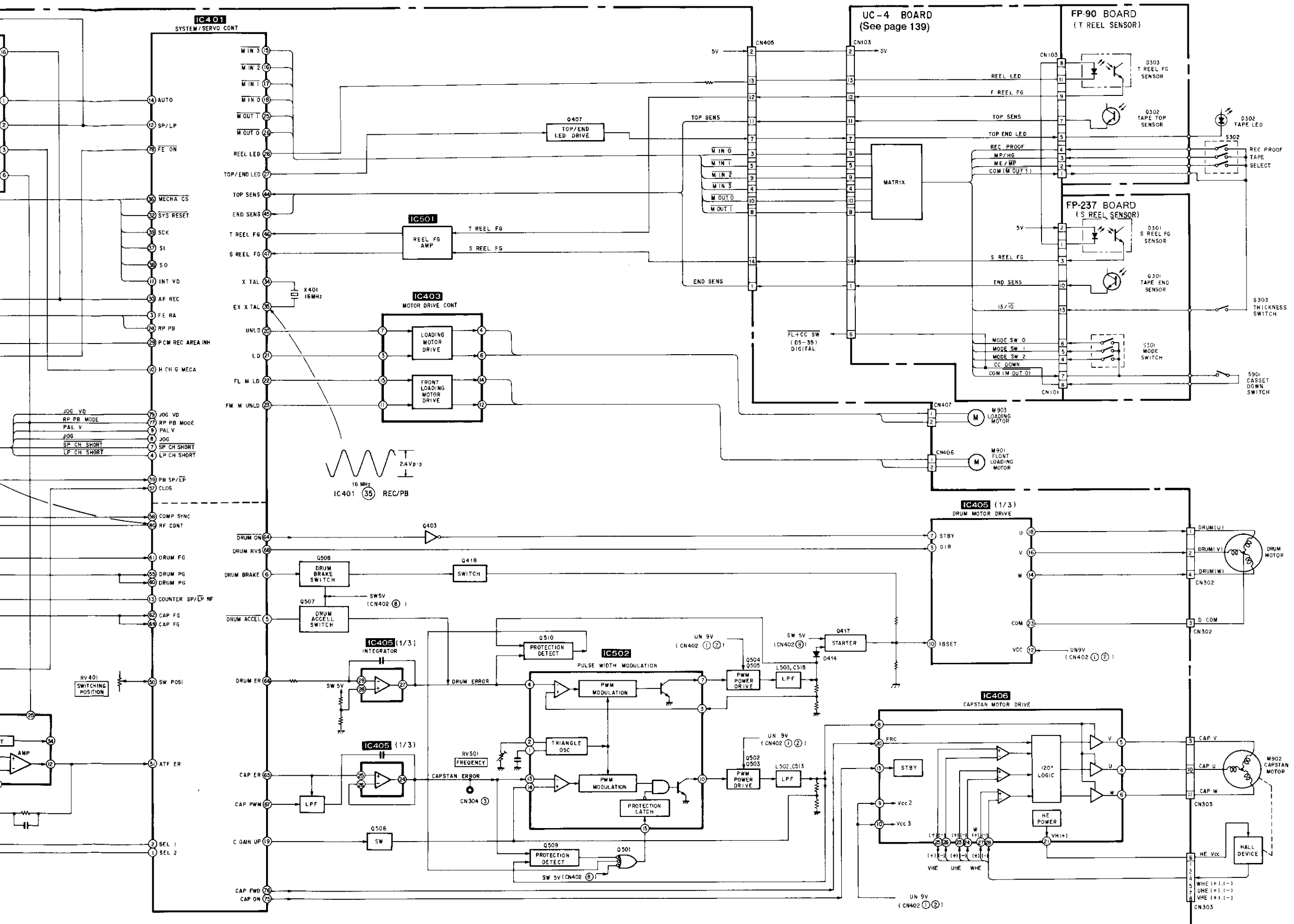
4-3. VIDEO BLOCK DIAGRAM (1)











4-6. SYSTEM CONTROL – VIDEO, AUDIO BLOCK INTERFACE (CM-15 BOARD IC401)

SIGNAL	I/O	Pin No.	EJECTED	THREAD- ING	UN THREAD- ING	STOP	FF	REW	CUE	REVIEW	PB	PB · PAUSE	REC	REC · PAUSE	X2	SLOW	AF REC	AF REC P.
SEL 2	O	IC401 ① Pin	H	H	H	H	H	H	*3	*3	*2	H	*1	L	*17	*18	*19	H
SEL 1	O	IC401 ② Pin	H	H	H	H	H	H	*3	*3	*2	H	*1	H	*17	*18	*19	H
$\overline{\text{DRUM ON}}$	O	IC401 ③ Pin	H	L	L	H	L	L	L	L	L	L	L	L	L	L	L	L
INT VD	O	IC401 ⑩ Pin	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
SW POSI	I	IC401 ⑪ Pin	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5
ATF ERROR	I	IC401 ⑫ Pin	*6	*6	*6	*6	*7	*7	*7	*7	*7	*7	*6	*6	*7	*7	*7	*7
DRUM PG	I	IC401 ⑬, ⑭ Pin	L	*8	*8	L	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8
DRUM FG	I	IC401 ⑮ Pin	H	*9	*9	H	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
CAP FG	I	IC401 ⑯, ⑰ Pin	H/L	PULSE	PULSE	H/L	*10	*10	*10	*10	*10	H/L	*10	H/L	*10	H/L	*10	H/L
CAP ERH	O	IC401 ⑱ Pin	*11	*11	*11	L	*11	*11	*11	*11	*11	L	*11	L	*11	*11	*11	L
DRUM ERROR	O	IC401 ⑲ Pin	L	*12	*12	L	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12
CAP PWM	O	IC401 ⑳ Pin	L	*13	*13	L	*13	*13	*13	*13	*13	L	*13	L	*13	*13	*13	L
DRUM RVS	O	IC401 ㉑ Pin	"L"	*14	L	L	L	L	L	L	L	L	L	L	L	L	L	L
CAP ON	O	IC401 ㉒ Pin	L	H	H	L	H	H	H	H	H	L	H	L	H	H/L	H	L
CAP FWD	O	IC401 ㉓ Pin	L	L	H	L	H	L	H	L	H	H	H	L	H	H/L	H	L
RF CONT	O	IC401 ㉔ Pin	*16	*16	*16	"H" or "L"	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16	*16

- *1. Refer to timing chart 1.
- *2. Refer to timing chart 2.
- *3. Refer to timing chart 3.
- *4. 1V period "H" pulse.
- *5. DC voltage set with RV102 (Switching position adjustment).
- *6. Approx. 2.5Vdc.
- *7. ATF error voltage.
- *8. 2V period "H" pulse.
- *9. 1.4msec period pulse.

- *10. Pulses in proportion to frequency of the tape speed.
- *11. Pulse output for rising or falling edges of the capstan.
- *12. 6msec period PWM signal (tri-state) of "H", "L" and "HI-Z" (2.5Vdc).
- *13. 64 μ sec period PWM signal.
- *14. Momentarily "H" when threading of full top tape.
- *16. 2V period duty 50% pulse.

4-7. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT

SIGNAL	I/O	Pin No.	STOP	FF
SP P REC	O	CN401 ③ Pin	L	L
LP V REC	O	CN401 ④ Pin	L	L
LP P REC	O	CN401 ⑤ Pin	L	L
SP V REC	O	CN401 ⑥ Pin	L	L
$\overline{\text{SP CH SHORT}}$	O	CN401 ⑧ Pin	*13	L
$\overline{\text{LP CH SHORT}}$	O	CN401 ⑨ Pin	*13	H
JOG	O	IC401 ⑩ Pin	L	L
SP/LP	O	IC401 ⑫ Pin	H/L	H/L
SYSCON SO (SI)	O	IC401 ⑬ Pin	*9	*9
$\overline{\text{SYSCON SCK}}$ (SCK)	I	IC401 ⑭ Pin	*10	*10
CLOG	I	IC401 ⑮ Pin	H	*5
COMP SYNC	I	IC401 ⑯ Pin	*6	*6
PB SP/LP	I	IC401 ⑰ Pin	L	*7
RP PB MODE	O	IC401 ⑱ Pin	L	L
FF ON	O	IC401 ㉑ Pin	H	H
JOG VD	O	IC401 ㉒ Pin	L	L
RF CONT*1	O	IC401 ㉓ Pin	1.8Vdc	*11

- *1. According to recorded mode of playback tape. (SP... "H", LP... "L")
- *2. According to SP/LP selector (S602) setting. (SP... "H", LP... "L")
- *3. 1V period "H" pulse.
- *5. Non-signal "H" normal "L"
- *6. Positive compound synchronizing signal.
- *7. SP mode recording tape "H"
LP mode recording tape "L"
- *9. 1V period "L" pulse train.
- *10. 1V p
- *11. 2V p
- *12. PCM
- *13. Acco
- (SP.
- *14. Acco
- *15. Acco
- (SP.
- *16. "H"

REC	REC PAUSE	X2	SLOW	AF REC	AF REC P.
*1	L	*17	*18	*19	H
*1	H	*17	*18	*19	H
L	L	L	L	L	L
*4	*4	*4	*4	*4	*4
*5	*5	*5	*5	*5	*5
*6	*6	*7	*7	*7	*7
*8	*8	*8	*8	*8	*8
*9	*9	*9	*9	*9	*9
*10	H/L	*10	H/L	*10	H/L
*11	L	*11	*11	*11	L
*12	*12	*12	*12	*12	*12
*13	L	*13	*13	*13	L
L	L	L	L	L	L
H	L	H	H/L	H	L
H	L	H	H/L	H	L
*16	*16	*16	*16	*16	*16

HI-Z" (2.5Vdc).

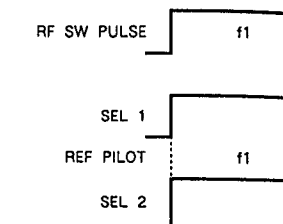
4-7. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (CM-15 BOARD IC401)

SIGNAL	I/O	Pin No.	STOP	FF	REW	CUE	REVIEW	PB	PB PAUSE	REC	REC PAUSE	X2	SLOW	AF REC	AF REC PAUSE
SP P REC	O	CN401 ③ Pin	L	L	L	L	L	L	L	*16	L	L	L	*16	L
LP V REC	O	CN401 ④ Pin	L	L	L	L	L	L	L	*2	L	L	L	L	L
LP P REC	O	CN401 ⑤ Pin	L	L	L	L	L	L	L	*16	L	L	L	*16	L
SP V REC	O	CN401 ⑥ Pin	L	L	L	L	L	L	L	*2	L	L	L	L	L
SP CH SHORT	O	CN401 ⑧ Pin	*13	L	H	H	H	*13	*14	*15	*15	*14	*14	*13	*14
LP CH SHORT	O	CN401 ⑨ Pin	*13	H	H	H	H	*13	*14	*15	*15	*14	*14	*13	*14
JOG	O	IC401 ⑧ Pin	L	L	L	H	H	L	H	L	L	H	H	L	H
SP/LP	O	IC401 ⑫ Pin	H/L	H/L	H/L	*1	*1	*1	*1	*2	*2	*1	*1	*1	*1
SYSCON SO (SI)	O	IC401 ⑳ Pin	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
SYSCON SCK (SCK)	I	IC401 ㉑ Pin	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10
CLOG	I	IC401 ⑵ Pin	H	*5	*5	*5	*5	*5	H	H	H	H	H	H	H
COMP SYNC	I	IC401 ⑶ Pin	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
PB SP/LP	I	IC401 ⑶ Pin	L	*7	*7	*7	*7	L	L	L	L	L	L	L	L
RP PB MODE	O	IC401 ⑴ Pin	L	L	L	H	H	H	H	L	L	H	H	H	H
FF ON	O	IC401 ⑴ Pin	H	H	H	H	H	H	H	L	H	H	H	*12	H
JOG VD	O	IC401 ⑴ Pin	L	L	L	*3	*3	L	*3	L	L	*3	*3	*3	*3
RF CONT*1	O	IC401 ⑴ Pin	1.8Vdc	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11

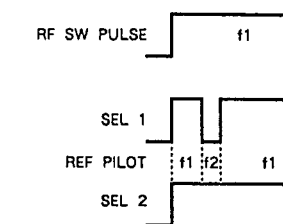
- *1. According to recorded mode of playback tape. (SP...“H”, LP...“L”)
- *2. According to SP/LP selector (S602) setting. (SP...“H”, LP...“L”)
- *3. 1V period “H” pulse.
- *5. Non-signal “H” normal “L”
- *6. Positive compound synchronizing signal.
- *7. SP mode recording tape “H”
LP mode recording tape “L”
- *9. 1V period “L” pulse train.

- *10. 1V period “L” pulse train.
- *11. 2V period duty 50% pulse.
- *12. PCM eria “L” when SP after recording, Normally: “H”
- *13. According to recorded mode of playback tape. (SP...“L”, LP...“H”)
- *14. According to HCHG.
- *15. According to SP/LP selector (S602) setting. (SP...“L”, LP...“H”)
- *16. “H” in PCM area according to REC SP/LP.

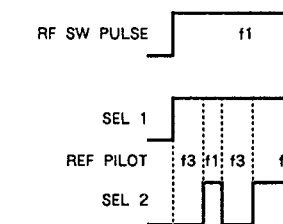
TIMING CHART 1 (REC)



TIMING CHART 2 (PB)



TIMING CHART 3 (CUE)

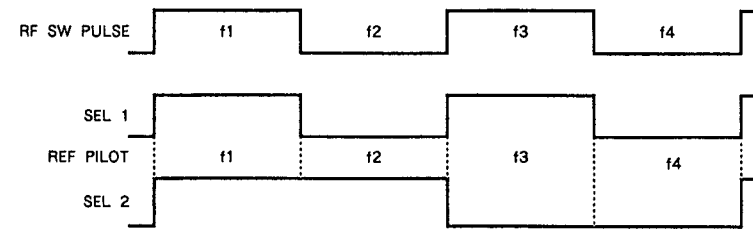


T INTERFACE (CM-15 BOARD IC401)

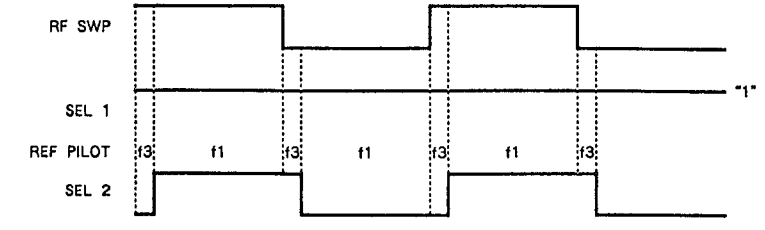
	CUE	REVIEW	PB	PB-PAUSE	REC	REC-PAUSE	X2	SLOW	AF REC	AF REC PAUSE
	L	L	L	L	*16	L	L	L	*16	L
	L	L	L	L	*2	L	L	L	L	L
	L	L	L	L	*16	L	L	L	*16	L
	L	L	L	L	*2	L	L	L	L	L
	H	H	*13	*14	*15	*15	*14	*14	*13	*14
	H	H	*13	*14	*15	*15	*14	*14	*13	*14
	H	H	L	H	L	L	H	H	L	H
	*1	*1	*1	*1	*2	*2	*1	*1	*1	*1
	*9	*9	*9	*9	*9	*9	*9	*9	*9	*9
	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10
	*5	*5	*5	H	H	H	H	H	H	H
	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
	*7	*7	L	L	L	L	L	L	L	L
	H	H	H	H	L	L	H	H	H	H
	H	H	H	H	L	H	H	H	*12	H
	*3	*3	L	*3	L	L	*3	*3	*3	*3
	*11	*11	*11	*11	*11	*11	*11	*11	*11	*11

"L" pulse train.
 duty 50% pulse.
 "L" when SP after recording, Normally: "H"
 to recorded mode of playback tape.
 LP... "H"
 to HCHG.
 to SP/LP selector (S602) setting.
 LP... "H"
 M area according to REC SP/LP.

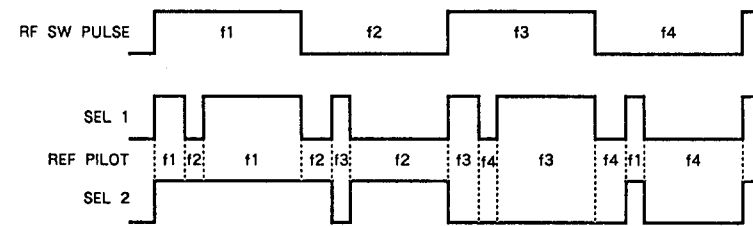
TIMING CHART 1 (REC)



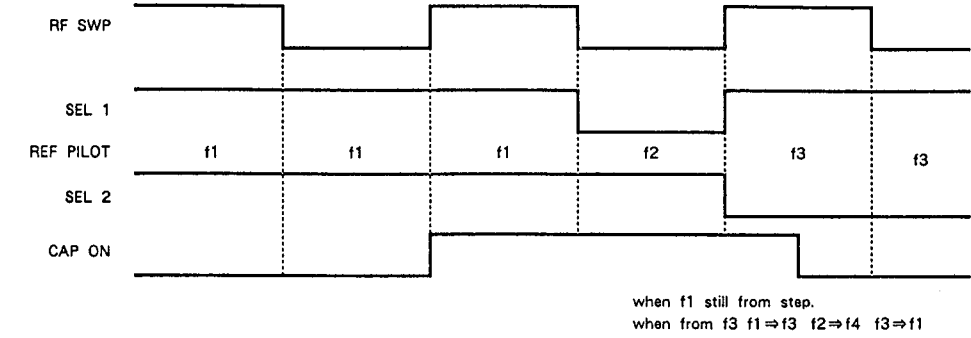
TIME CHART (X2)



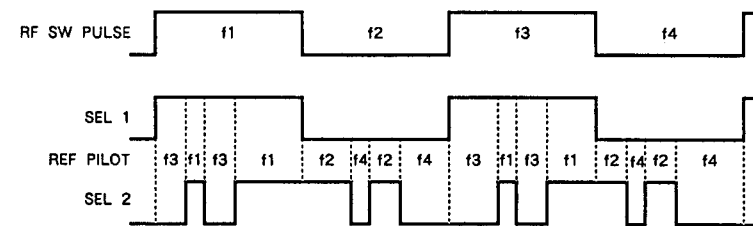
TIMING CHART 2 (PB)



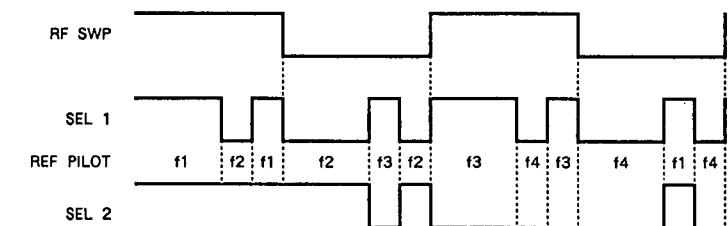
TIME CHART (SLOW)



TIMING CHART 3 (CUE/REVIEW)



TIME CHART (AF REC)



4-8. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (CM-15 BOARD IC401)

SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL
$\overline{\text{SYSCON SCK}}$	I	IC401 ⑳ Pin	1V period "L" pulse train
CLOG	I	IC401 ⑵ Pin	Normal playback: "L" ("H" when PB RF signal is not reproduced due to head clog, etc.)
PB SP/ $\overline{\text{LP}}$	I	IC401 ⑶ Pin	Recording speed mode detection signal in FF, REW, CUE or REVIEW ("H" in SP mode, "L" in LP mode)
UNLD	O	IC401 ⑷ Pin	Normally: "L" ("H" in Unthreading, pulse is output in Mechanical mode transition)
LD	O	IC401 ⑸ Pin	Normally: "L" ("H" in Threading, "H" pulse is output in Mechanical mode transition)
FL UNLD	O	IC401 ⑹ Pin	Normally: "L" ("H" in Front roading)
LD	O	IC401 ⑺ Pin	Normally: "L" ("H" in Front unroading)
FERA	O	IC401 ⑻ Pin	Normally: "L" ("H" in After recording mask eria)
$\overline{\text{DRUM ACCELL}}$	O	IC401 ⑽ Pin	Normally: "L" (An instant "L" in slow)
DRUM BRAKE	O	IC401 ⑾ Pin	Normally: "L" (An instant "H" in LP slow)
H CHG MECHA	O	IC401 ⑿ Pin	Normally: "L", when slow, $\times 2$ and STILL is unphase ("H":SP head side, "L": LP head side)
C GAIN UP	O	IC401 ⑿ Pin	Normally: "L" ("H" in FF/REW)
REEL LED	O	IC401 ⑿ Pin	Reel led flicker pulse
PCM REC INH	O	IC401 ⑿ Pin	Normally: "H" ("L" in PCM REC)
AF REC	O	IC401 ⑿ Pin	Normally: "L" ("H" in After recording)
$\overline{\text{LP CH SHORT}}$	O	IC401 ⑿ Pin	"L" during SP head playback, "H" during LP head playback.
$\overline{\text{SP CH SHORT}}$	O	IC401 ⑿ Pin	"L" during LP head playback, "H" during SP head playback.
PAL V	O	IC401 ⑿ Pin	20 msec cycle pulse. "H" for 1 msec.
COUNTER SP/ $\overline{\text{LP}}$ RF	O	IC401 ⑿ Pin	Normally "L". "H" when C/R, FF/REW.
PCM PB	O	IC401 ⑿ Pin	"H" during PCM playback.

4-9. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE (CM-15 BOARD IC401, CN4)

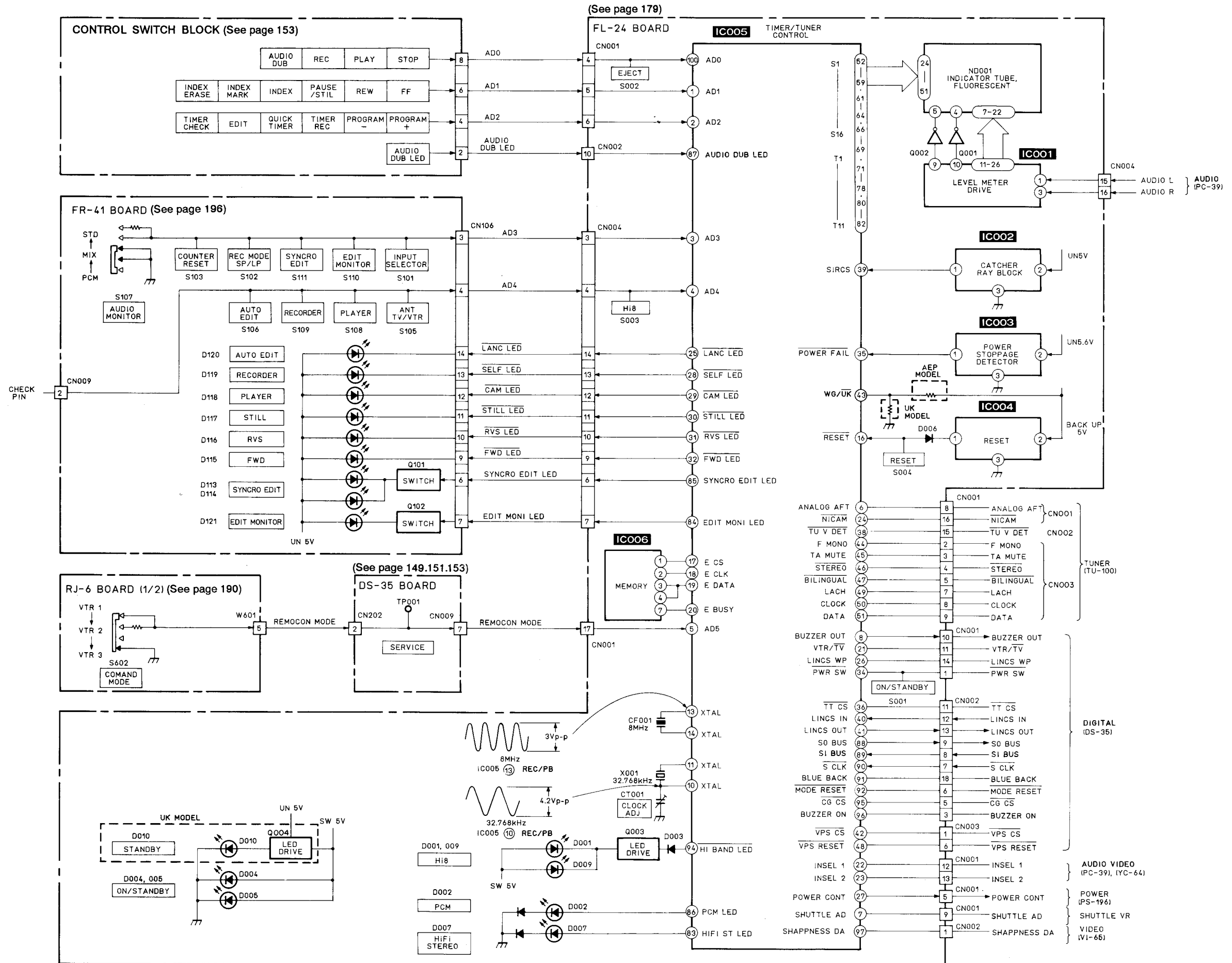
SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL																
$\overline{\text{S REEL FG}}$	I	CM-15 CN405 ⑿ Pin	Pulse (5.0Vp-p) that is generated by S-reel rotation. It is approx. 1sec period in REC/PB (SP) mode.																
MODE SW 2	I	UC-4 CN001 ⑿ Pin	<table border="1"> <thead> <tr> <th></th> <th>EJECTED</th> <th>THREADING UNTHREADING</th> <th>STOP</th> </tr> </thead> <tbody> <tr> <td>MODE SW 2(⑿-⑴)</td> <td>○</td> <td>×</td> <td>×</td> </tr> <tr> <td>MODE SW 1(⑴-⑵)</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>MODE SW 0(⑵-⑶)</td> <td>×</td> <td>×</td> <td>○</td> </tr> </tbody> </table>		EJECTED	THREADING UNTHREADING	STOP	MODE SW 2(⑿-⑴)	○	×	×	MODE SW 1(⑴-⑵)	○	○	○	MODE SW 0(⑵-⑶)	×	×	○
	EJECTED	THREADING UNTHREADING		STOP															
MODE SW 2(⑿-⑴)	○	×		×															
MODE SW 1(⑴-⑵)	○	○		○															
MODE SW 0(⑵-⑶)	×	×	○																
MODE SW 1	I	UC-4 CN001 ⑿ Pin																	
MODE SW 0	I	UC-4 CN001 ⑿ Pin																	
$\overline{\text{M OUT 0}}$ (COM)	O	UC-4 CN001 ⑿ Pin																	
CC DOWN	I	UC-4 CN001 ⑿ Pin	It is connected to cassette compartment down detection switch. When cassette compartment comes down, Pins ⑿ and ⑴ are circuited.																
$\overline{\text{M OUT 0}}$ (COM)	O	UC-4 CN001 ⑿ Pin	When cassette compartment comes up, connection betw and ⑴ open.																
END SENS	I	CM-15 CN405 ⑿ Pin	Normally: "L" ("H" pulse is output in tape end or cassette																
13/10	I	UC-4 CN001 ⑿ Pin	"L" pulse when a thick tape using.																
$\overline{\text{M OUT 1}}$ (COM)	O	CM-15 CN405 ⑿ Pin	13/10, MP, COM of REC PROOF SW. Always "L" pulse.																
MP HG	I	CM-15 CN405 ⑿ Pin	"L" pulse (20msec period) is output when normal MP tap																
TOP END LED	I	CM-15 CN405 ⑿ Pin	"L" pulse (approx. 1Vp-p) (pulse period is changed from according to operation mode.)																
TOP SENS	O	CM-15 CN405 ⑿ Pin	Normally: "L" ("H" pulse is output in tape or cassette un																
ME/ $\overline{\text{MP}}$	I	UC-4 CN002 ⑿ Pin	"H" in MP tape ("L" pulse (20msec period) in cassette u																
REC PROOF	I	UC-4 CN002 ⑿ Pin	"H" when recording possible cassette is loaded "L" pulse (20msec period) is output, when recording inh is loaded.																
$\overline{\text{T REEL FG}}$	I	CM-15 CN405 ⑿ Pin	Pulse (5.0Vp-p) that is generated by T-reel rotation, in F mode, it is approx. 1sec period.																

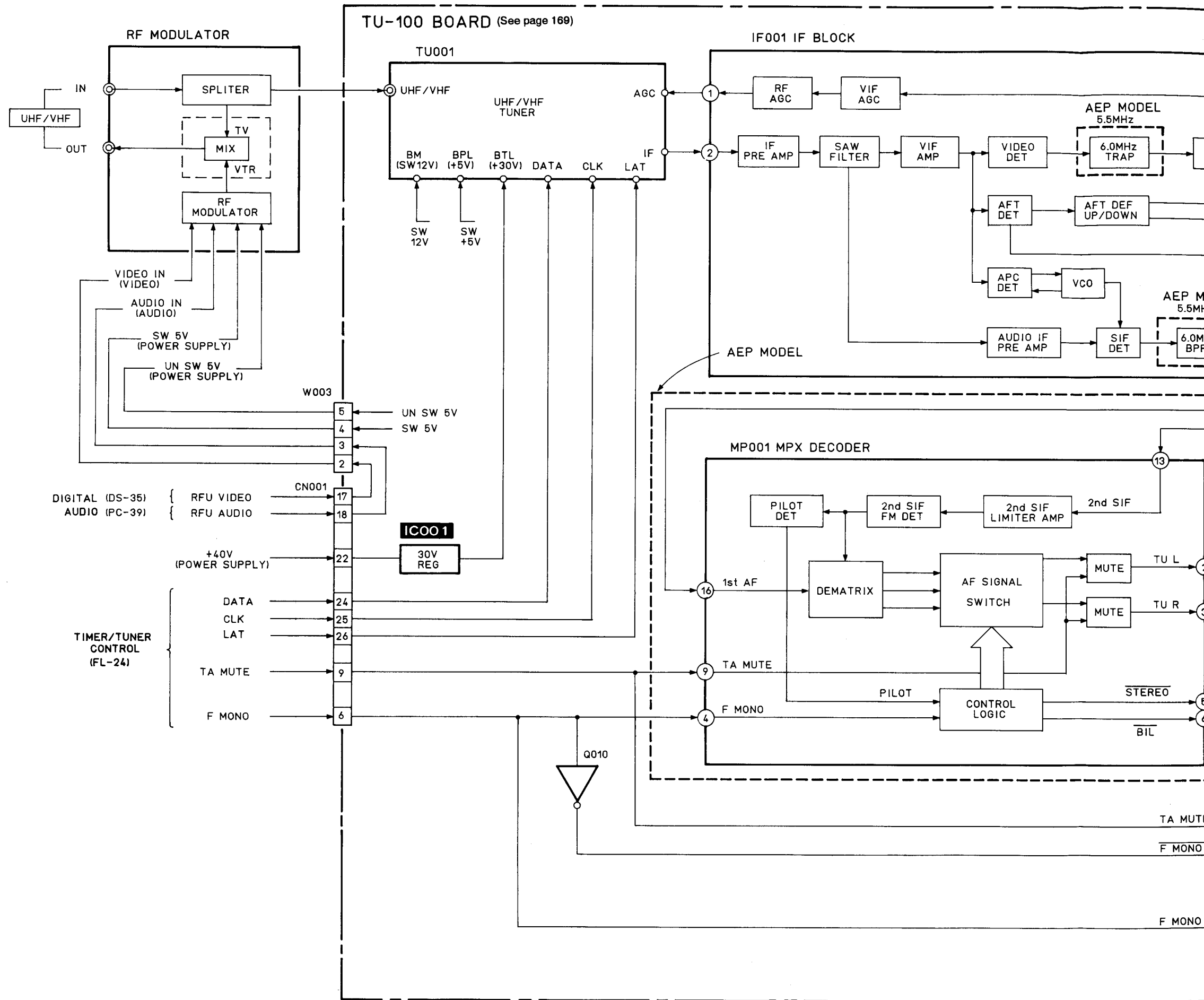
M BLOCK INTERFACE (CM-15 BOARD IC401, CN405, UC-4 BOARD)

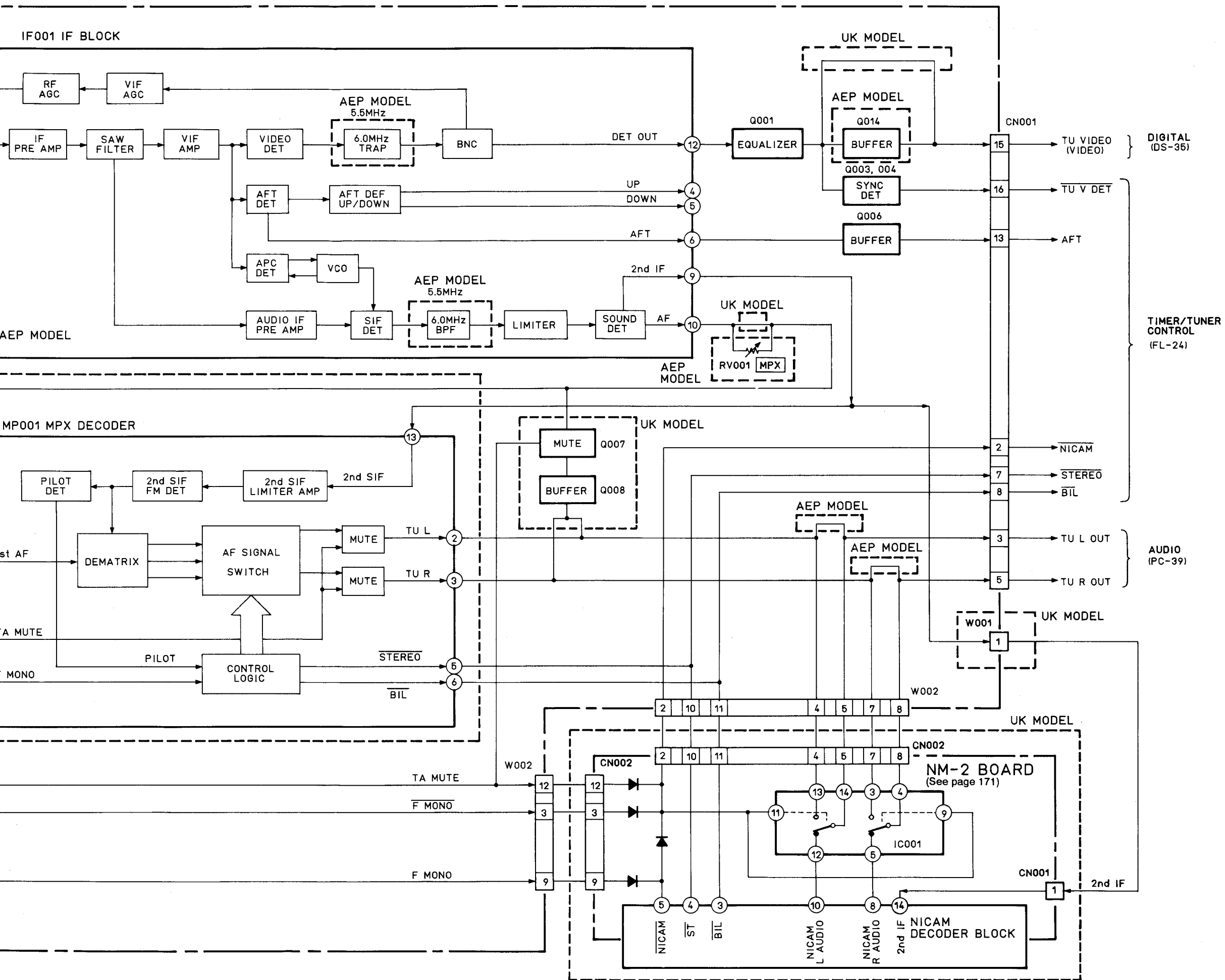
INPUT OUTPUT LEVEL				
Pulse (5.0Vp-p) that is generated by S-reel rotation. It is approx. 1sec period in REC/PB (SP) mode.				
Pins are connected to mode switch for mechanical position detection.				
	EJECTED	THREADING UNTHREADING	STOP	REC/PB/FF/ REW/CUE/ REVIEW/PAUSE
MODE SW 2(④-⑦)	○	×	×	○
MODE SW 1(⑤-⑦)	○	○	○	×
MODE SW 0(⑥-⑦)	×	×	○	○
×...Open ○...Short				
It is connected to cassette compartment down detection (CC DOWN) switch. When cassette compartment comes down, Pins ⑧ and ⑦ are short-circuited. When cassette compartment comes up, connection between Pins ⑧ and ⑦ open.				
Normally: "L" ("H" pulse is output in tape end or cassette unloaded)				
"L" pulse when a thick tape using.				
13/10, MP, COM of REC PROOF SW. Always "L" pulse.				
"L" pulse (20msec period) is output when normal MP tape is used.				
"L" pulse (approx. 1Vp-p) (pulse period is changed from 12 to 170msec according to operation mode.)				
Normally: "L" ("H" pulse is output in tape or cassette unloaded)				
"H" in MP tape ("L" pulse (20msec period) in cassette unloaded)				
"H" when recording possible cassette is loaded "L" pulse (20msec period) is output, when recording inhibiting cassette is loaded.				
Pulse (5.0Vp-p) that is generated by T-reel rotation, in REC/PB (SP) mode, it is approx. 1sec period.				

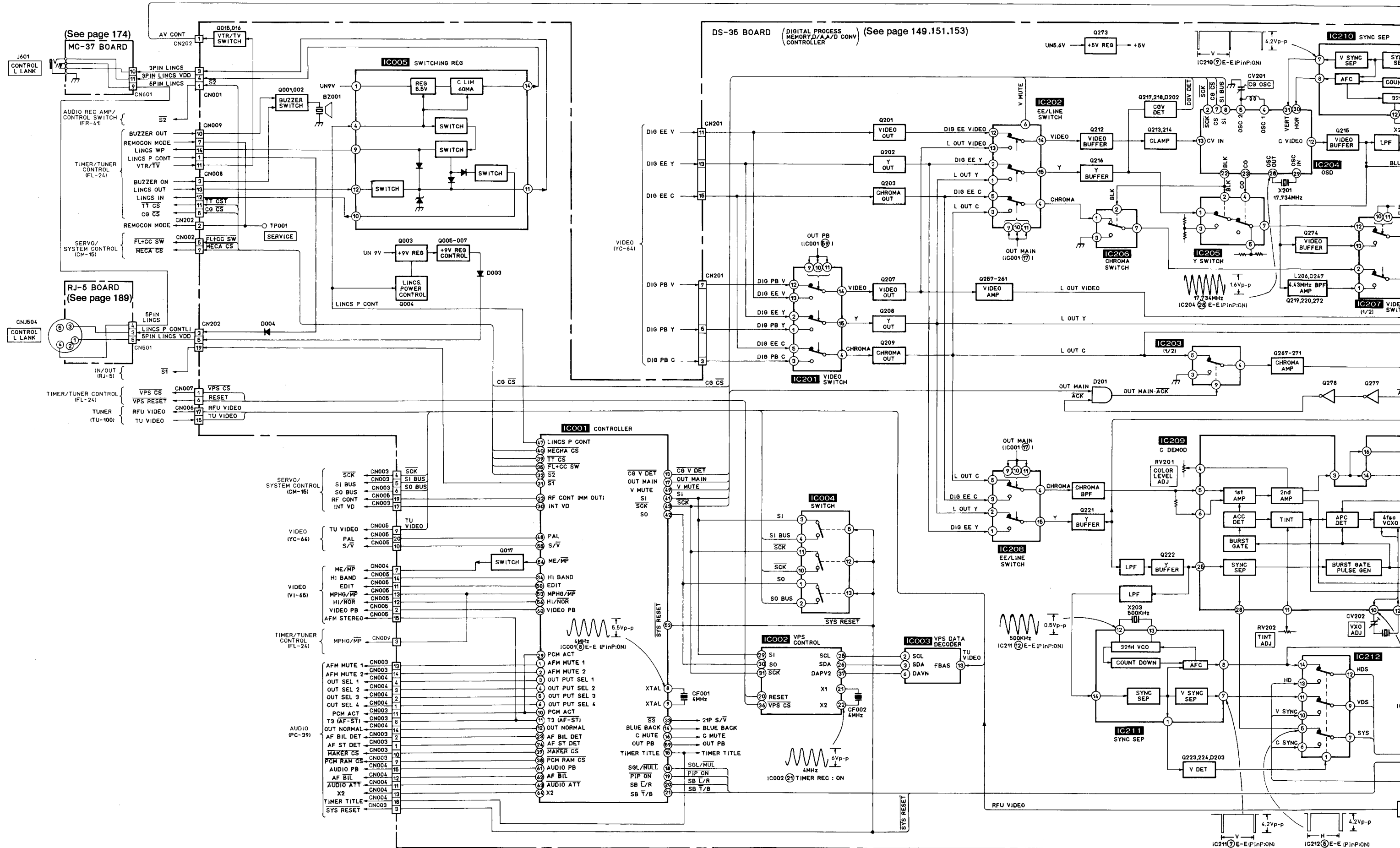
4-10. MODE CONTROL PERIPHERAL CIRCUIT INTERFACE (IC001 ON DS-35 BOARD)

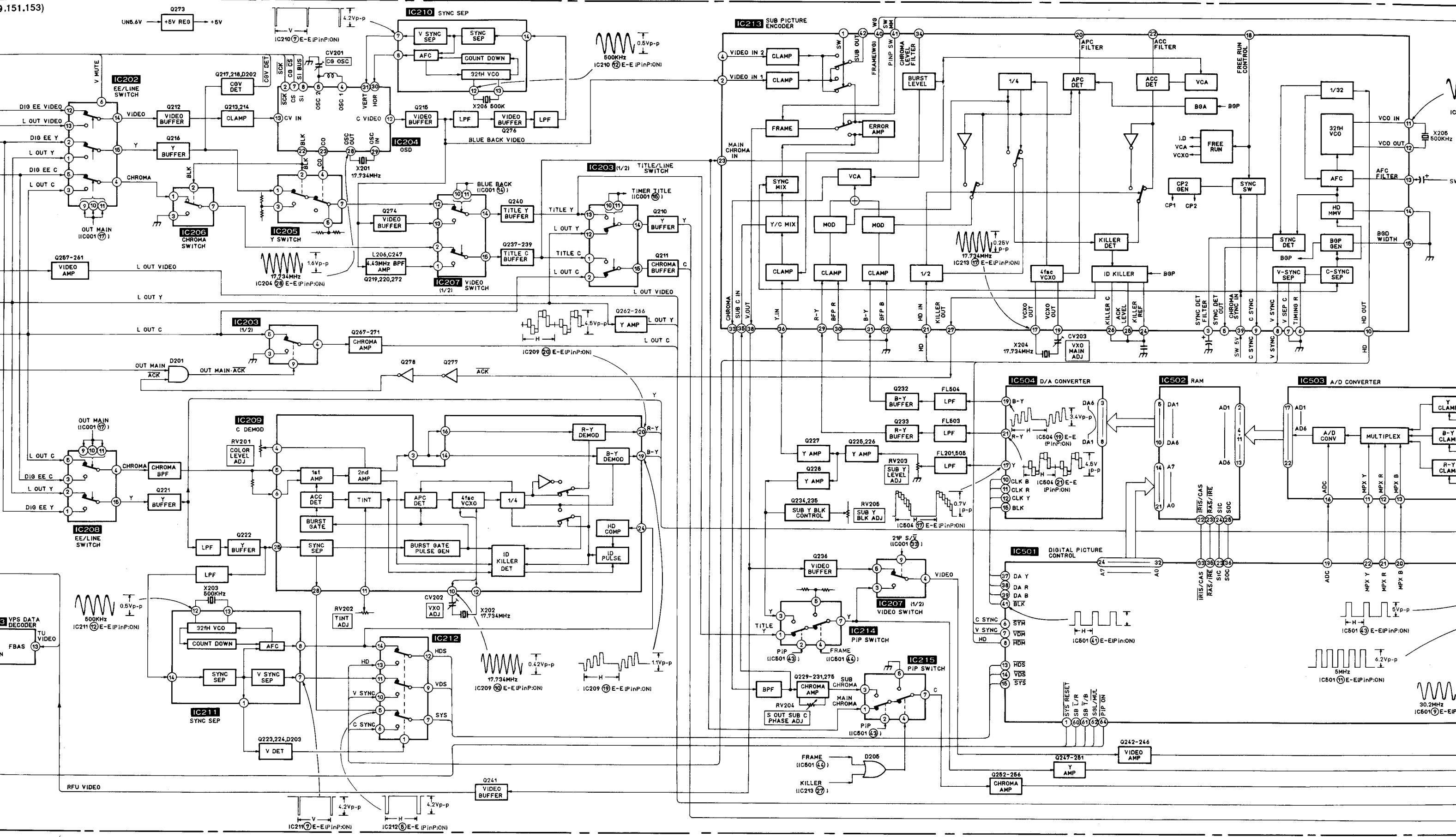
SIGNAL	I/O	Pin No.	INPUT OUTPUT LEVEL
AFM MUTE 1	O	① Pin	"L" when AUDIO MONITOR switch is PCM.
AFM MUTE 2	O	② Pin	"L" when AUDIO MONITOR switch is PCM.
OUTPUT SEL 1	O	③ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
OUTPUT SEL 2	O	④ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
OUTPUT SEL 3	O	⑤ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
OUTPUT SEL 4	O	⑥ Pin	"H" when AUDIO MONITOR switch is PCM. However, MONO STEREO.
PCM ACT	I	⑩ Pin	"H" during PCM recorded tape playback.
AF ST	O	⑪ Pin	"L" during AFM STEREO recorded tape playback.
TIMER TITLE	O	⑮ Pin	"H" during TIMER TITLE recording.
AF BIL DET	I	⑳ Pin	"L" during AFM BILINGUAL recorded tape playback.
AF ST DET	I	㉑ Pin	"H" during AFM STEREO recorded tape playback.
S1	I	㉑ Pin	"L" when S terminal is connected on the rear side.
S2	I	㉒ Pin	"L" when S terminal is connected on the front side.
HI BAND	I	㉔ Pin	"H" during HI BAND recorded tape playback.
MAKER CS	O	㉗ Pin	1V cycle "L" pulse (only when the power is on).
PCM RAM CS	O	㉘ Pin	1V cycle "L" pulse (only when the power is on).
TT CS	O	㉙ Pin	1V cycle "L" pulse.
MECHA CS	O	㉚ Pin	1V cycle "L" pulse (only when the power is on).
LINCS P COST	O	㉛ Pin	"H" when the power is on and LANC M/S=S.
PAL	O	㉜ Pin	"H" when COLOUR SYSTEM SELECT SW is PAL.
V MUTE	O	㉝ Pin	"H" during VIDEO MUTE.
SYS RESET	O	㉞ Pin	"H" when the power is on.
MPHG/MP	O	㉟ Pin	"H" when MPHG cassette is in.
ME/MP	O	㊱ Pin	"H" when ME cassette is in.
HI/NOR	O	㊲ Pin	"H" during HI BAND recorded tape playback.
OUT PB	O	㊳ Pin	"H" during playback.
VIDEO PB	O	㊴ Pin	"H" during playback.
AUDIO PB	O	㊵ Pin	"H" during playback. (However, "L" when AUDIO INCERT.)
AF BIL	O	㊶ Pin	"L" during AFM BILINGUAL recorded tape playback.
AUDIO ATT	O	㊷ Pin	"L" during INDEX MARK on playback.
X2	O	㊸ Pin	X2

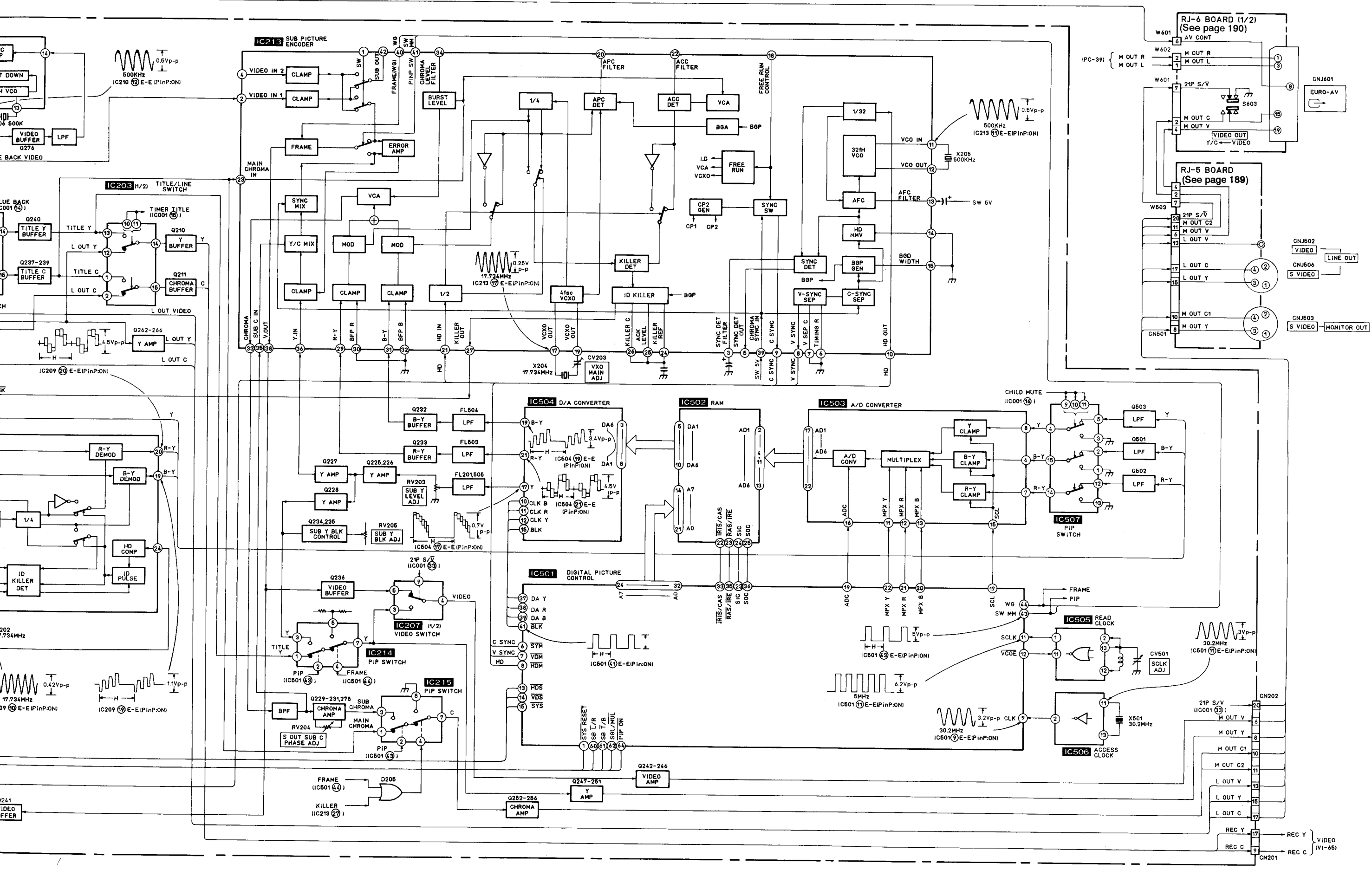


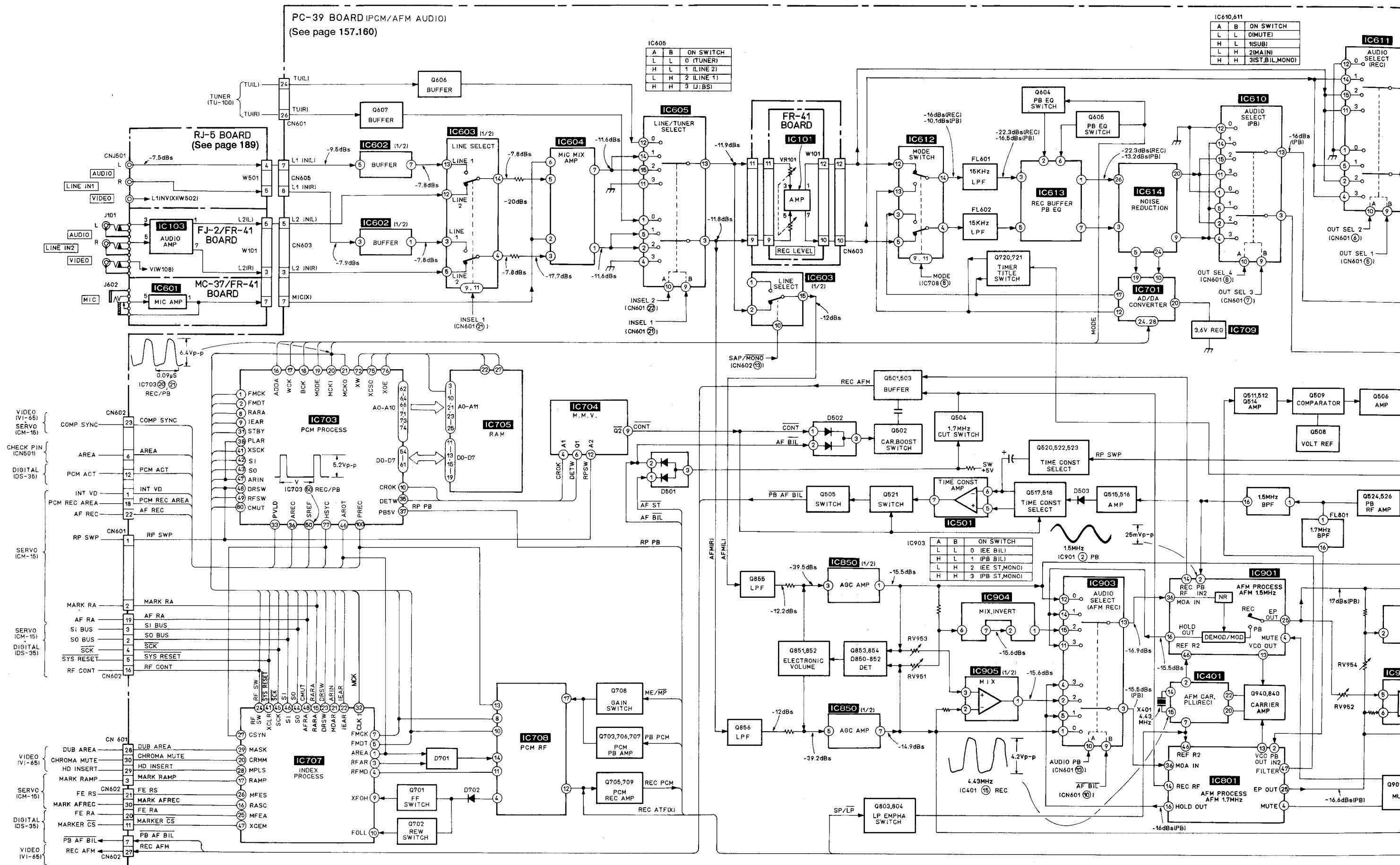










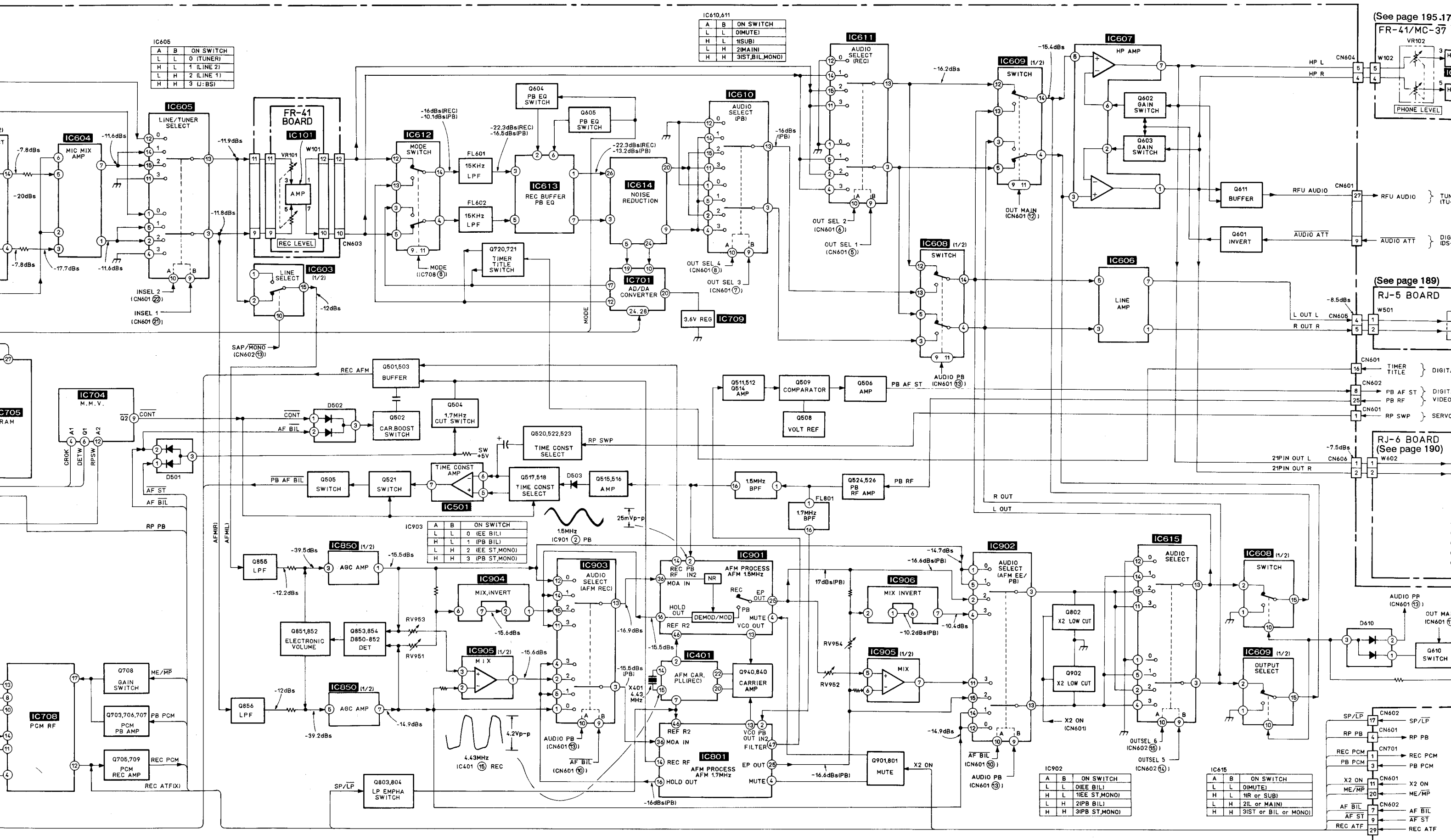


PC-39 BOARD (PCM/AFM AUDIO)
(See page 157.160)

A	B	ON SWITCH
L	L	0 (TUNER)
H	L	1 (LINE 2)
L	H	2 (LINE 1)
H	H	3 (J:BS)

A	B	ON SWITCH
L	L	0 (MUTE)
H	L	1 (SUB)
L	H	2 (MAIN)
H	H	3 (ST,BIL,MONO)

- VIDEO (VI-65)
- SERVO (CM-15)
- CHECK PIN (CN501)
- DIGITAL (DS-35)
- INT VD
- PCM REC AREA
- AF REC
- RP SWP
- MARK RA
- AF RA
- SI BUS
- SO BUS
- SCK
- SYS RESET
- RF CONT
- VIDEO (VI-65)
- SERVO (CM-15)
- DIGITAL (DS-35)
- VIDEO (VI-65)
- SERVO (CM-15)
- DIGITAL (DS-35)
- VIDEO (VI-65)



A	B	ON SWITCH
L	L	0 (TUNER)
H	L	1 (LINE 2)
L	H	2 (LINE 1)
H	H	3 (J-B5)

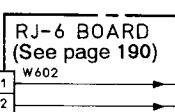
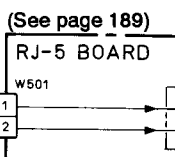
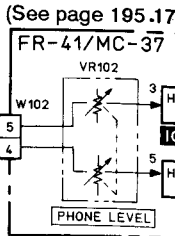
A	B	ON SWITCH
L	L	0(MUTE)
H	L	1(SUB)
L	H	2(MAIN)
H	H	3(ST,BIL,MONO)

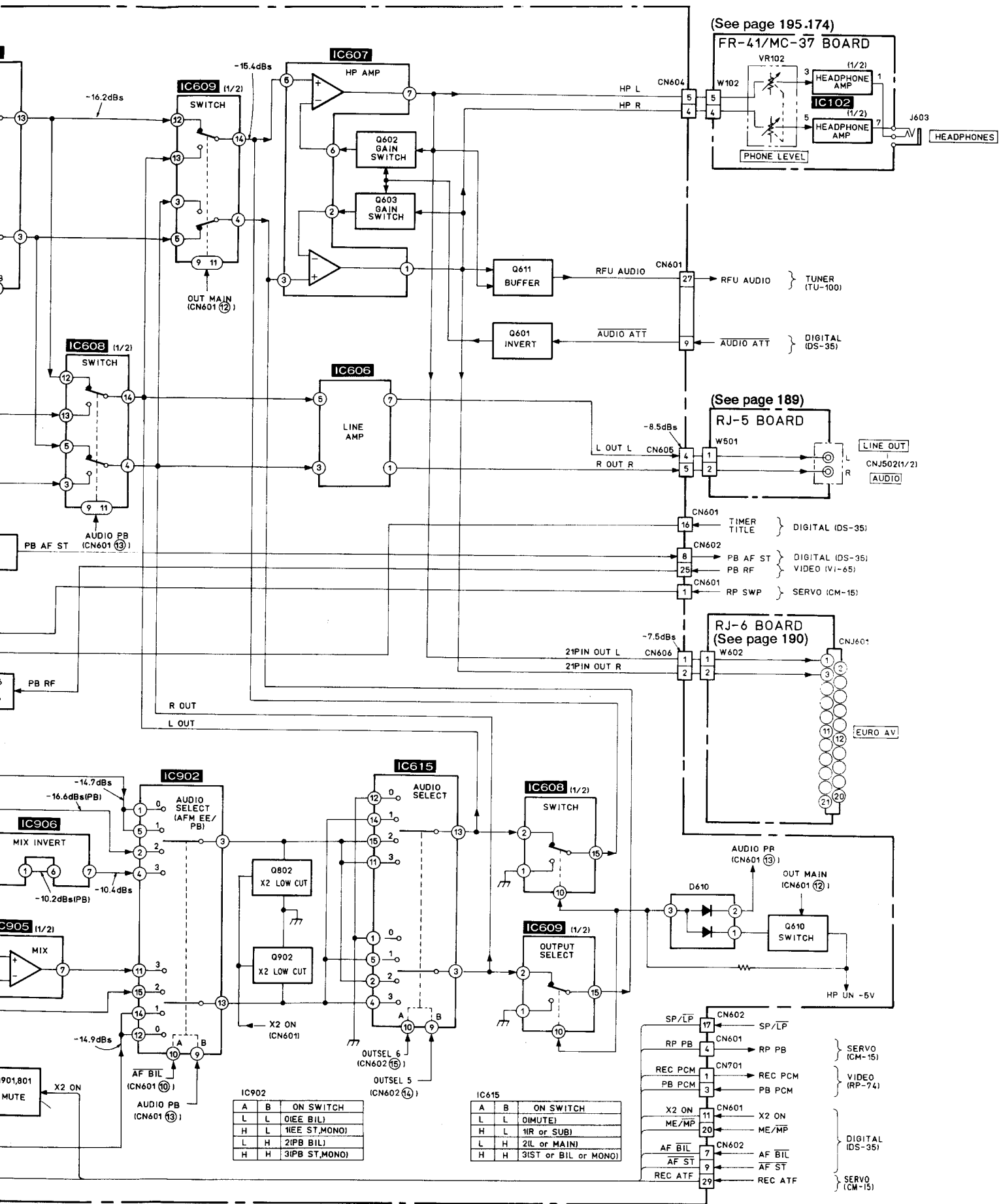
A	B	ON SWITCH
L	L	0 (EE BIL)
H	L	1 (PB BIL)
L	H	2 (EE ST,MONO)
H	H	3 (PB ST,MONO)

A	B	ON SWITCH
L	L	0(MUTE)
H	L	1(EE ST,MONO)
L	H	2(PB BIL)
H	H	3(PB ST,MONO)

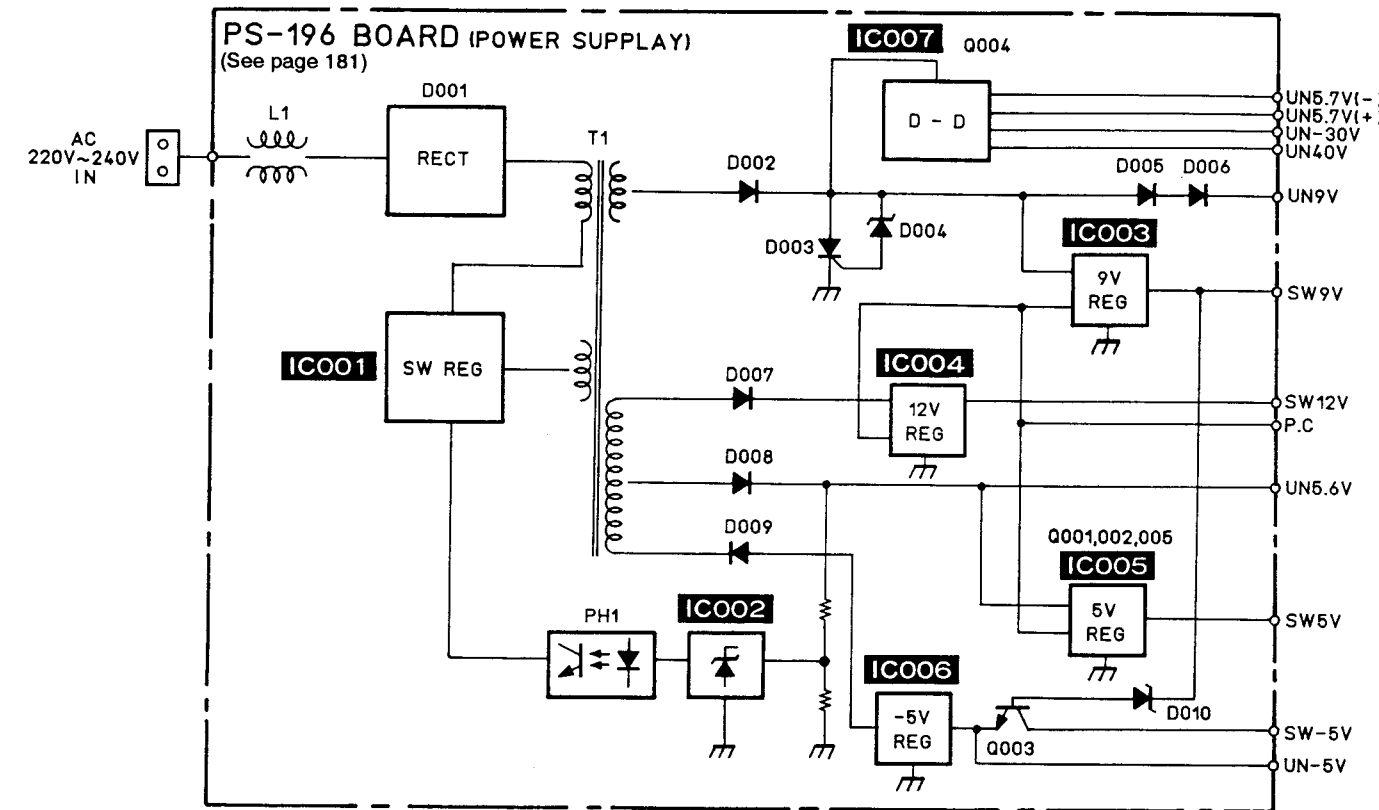
A	B	ON SWITCH
L	L	0(MUTE)
H	L	1(EE ST,MONO)
L	H	2(L or MAIN)
H	H	3(ST or BIL or MONO)

SP/LP	CN602	SP/LP
RP PB	CN601	RP PB
REC PCM	CN701	REC PCM
PB PCM	CN601	PB PCM
X2 ON	CN601	X2 ON
ME/MP	CN601	ME/MP
AF BIL	CN602	AF BIL
AF ST	CN602	AF ST
REC ATF	CN601	REC ATF





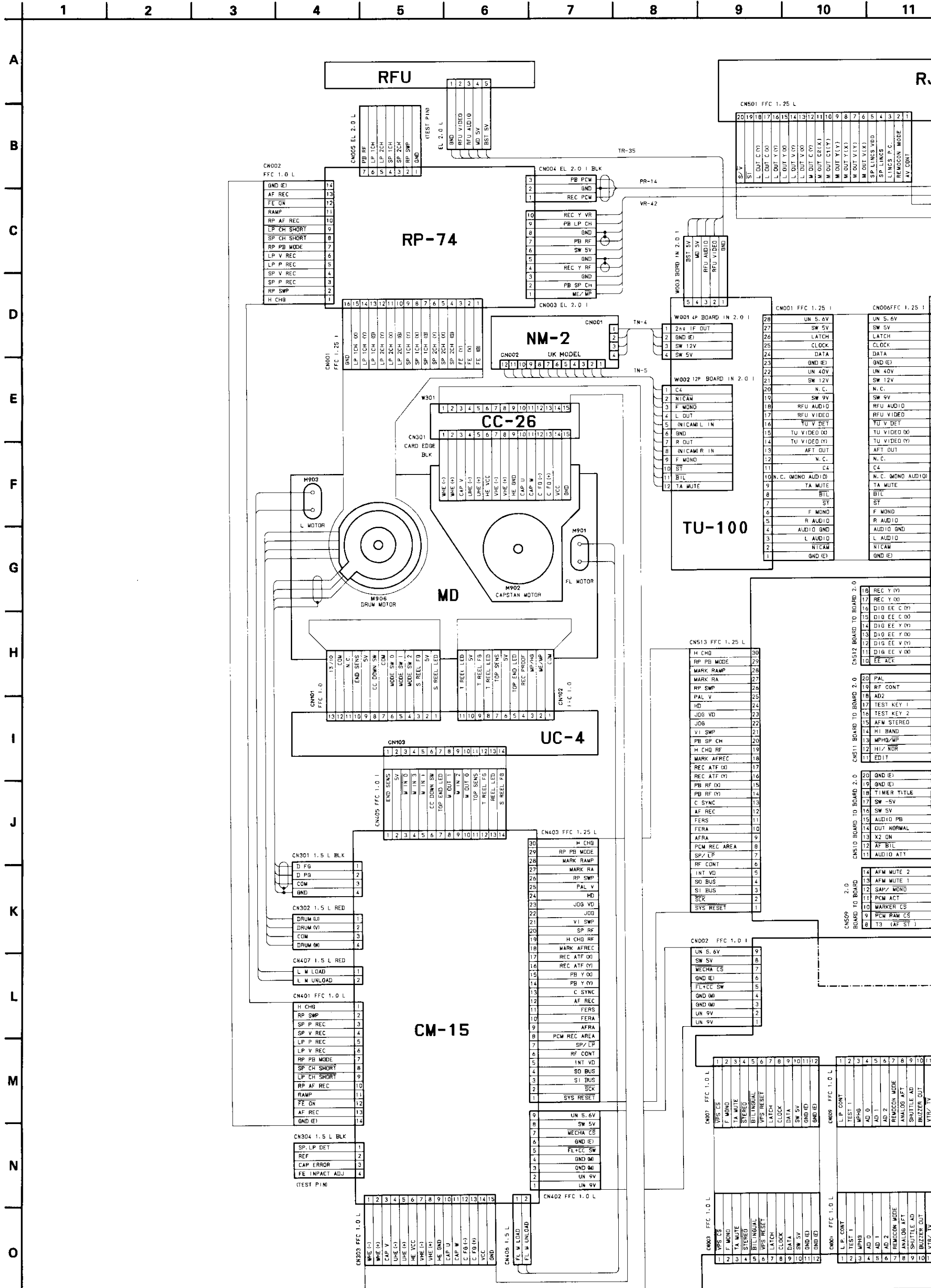
4-16. POWER BLOCK DIAGRAM

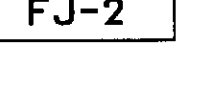
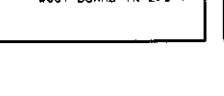
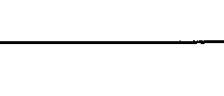
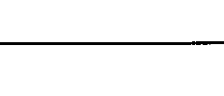
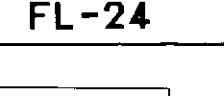
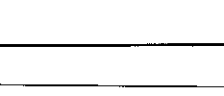
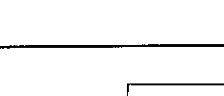
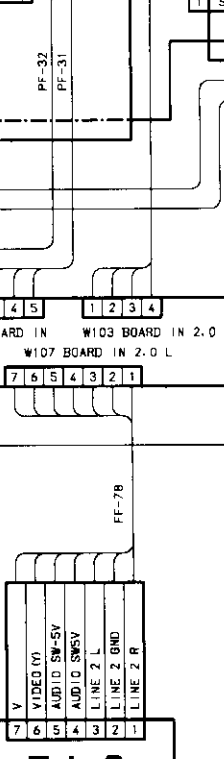
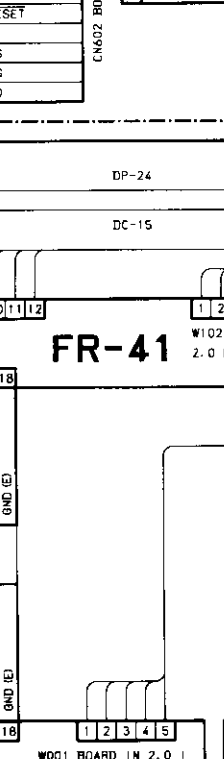
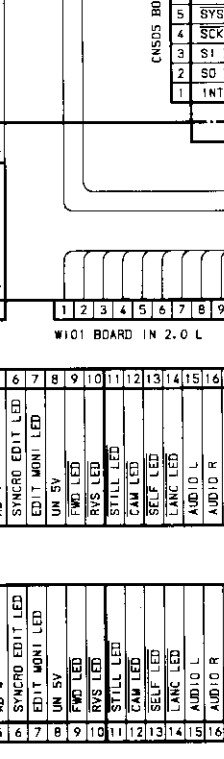
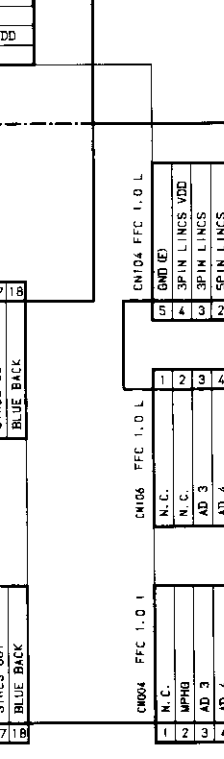
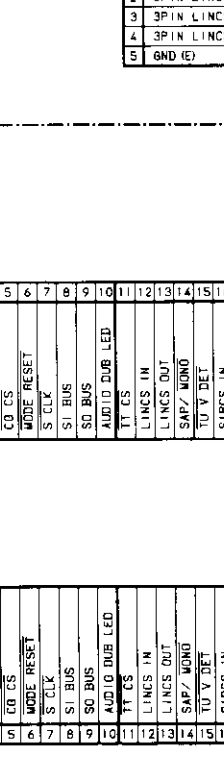
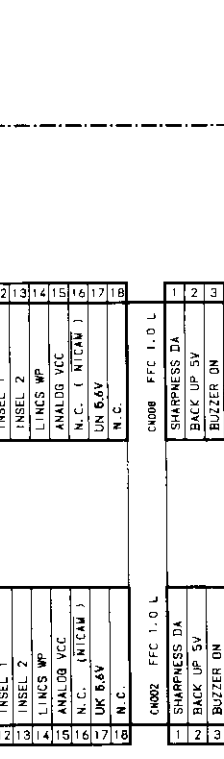
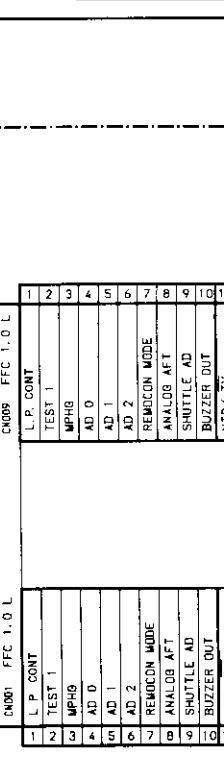
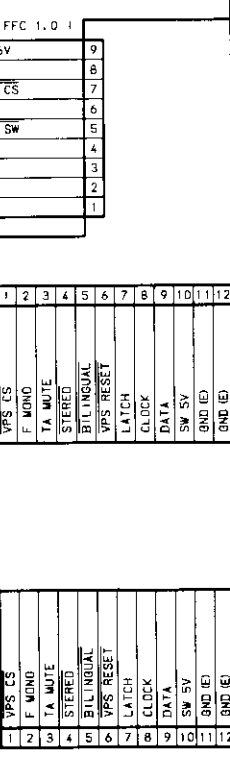
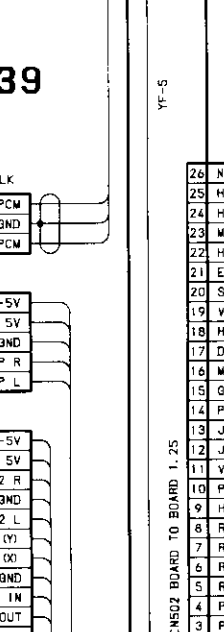
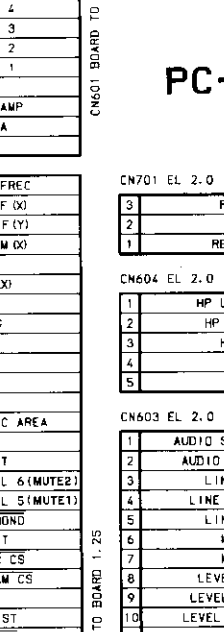
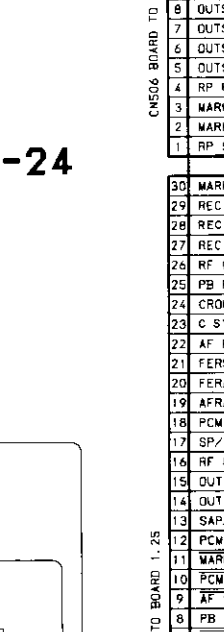
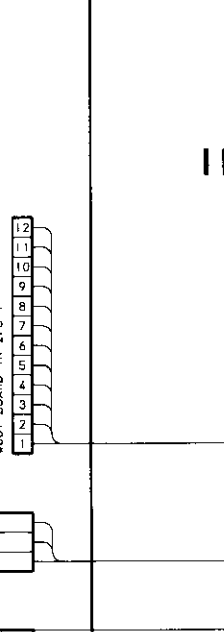
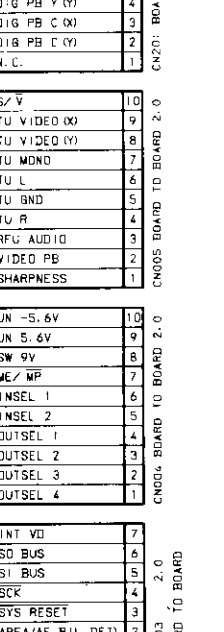
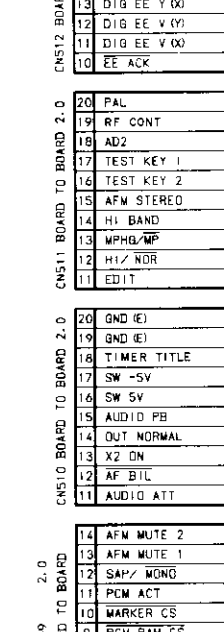
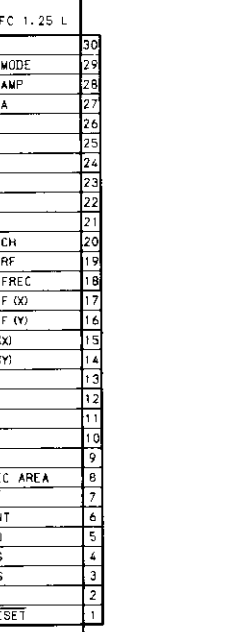
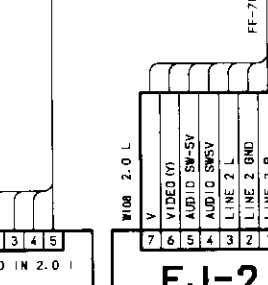
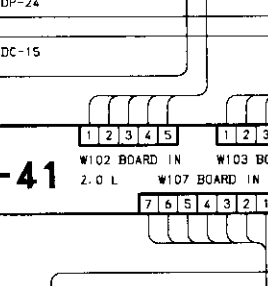
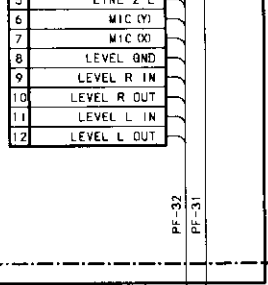
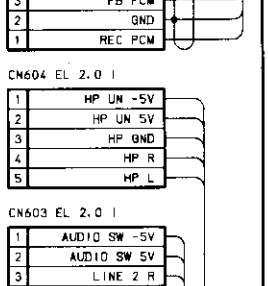
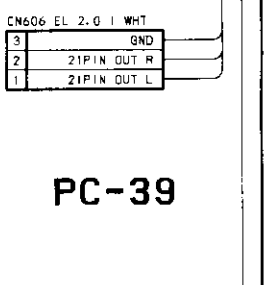
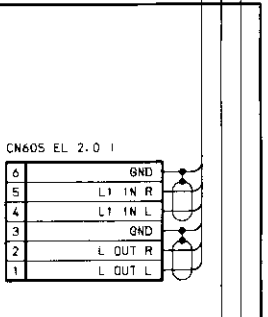
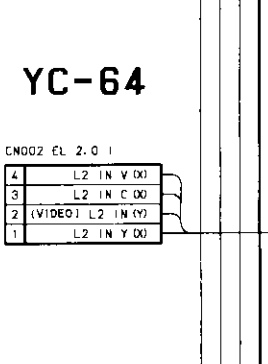
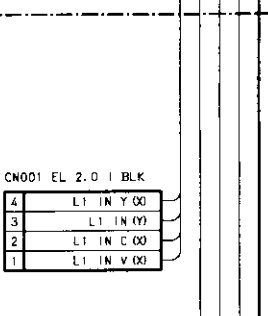
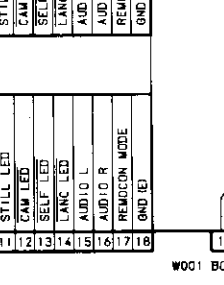
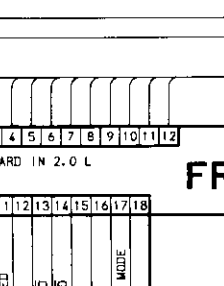
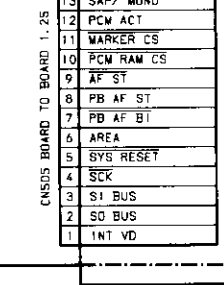
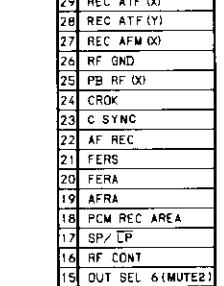
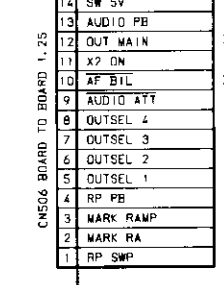
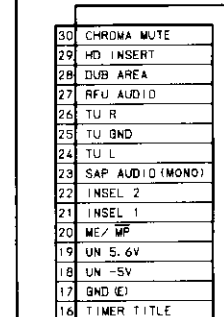
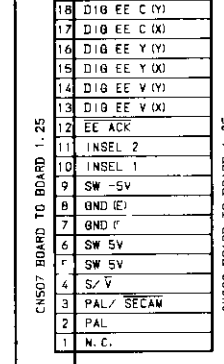
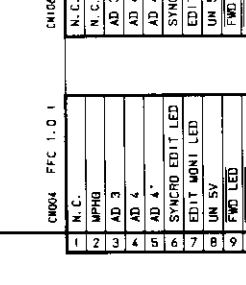
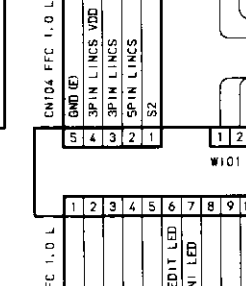
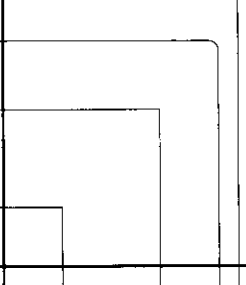
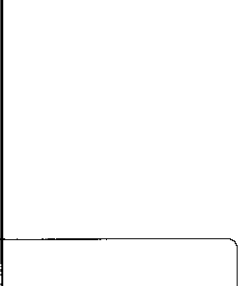
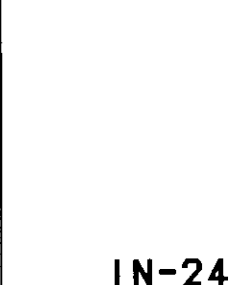
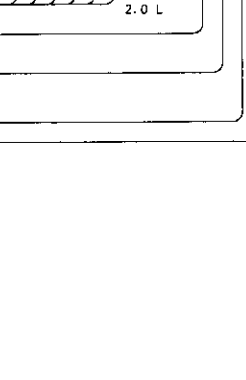
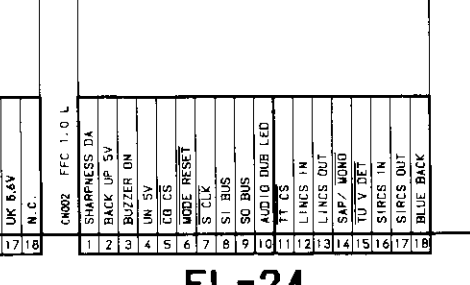
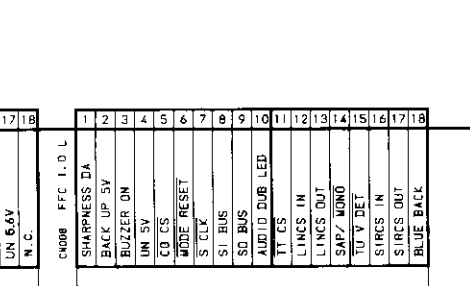
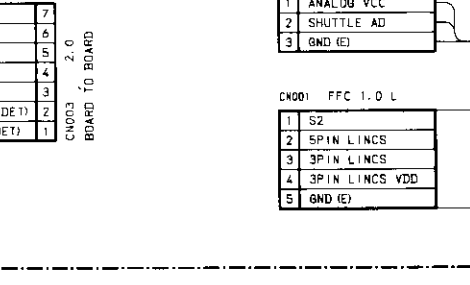
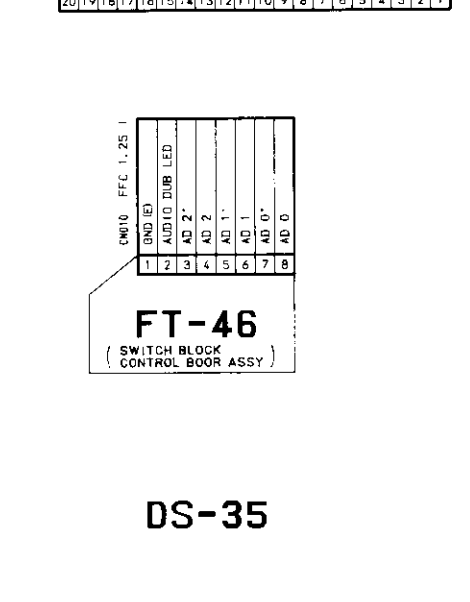
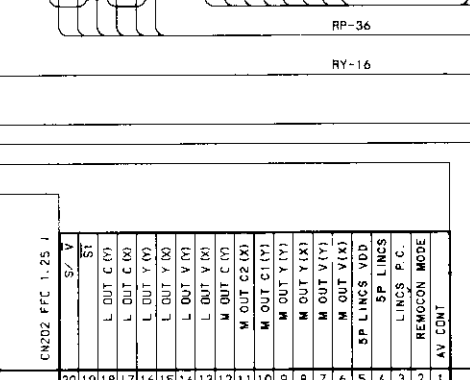
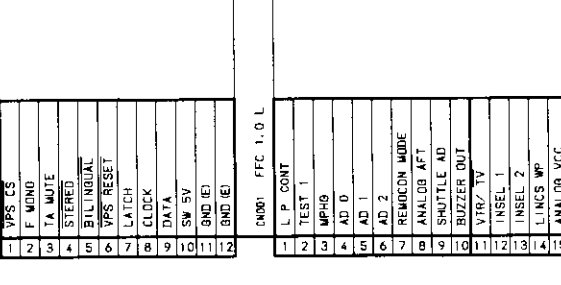
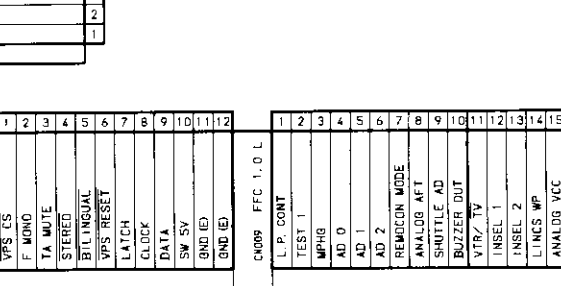
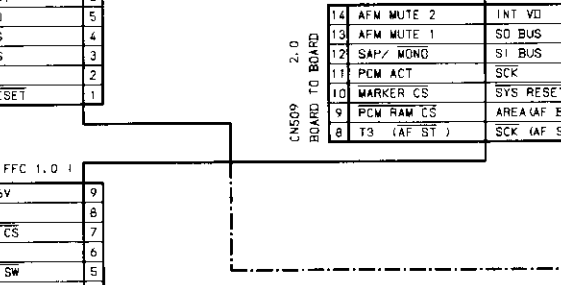
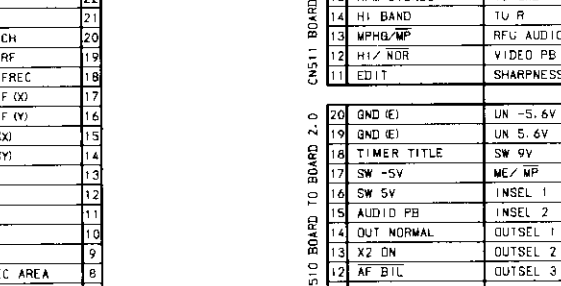
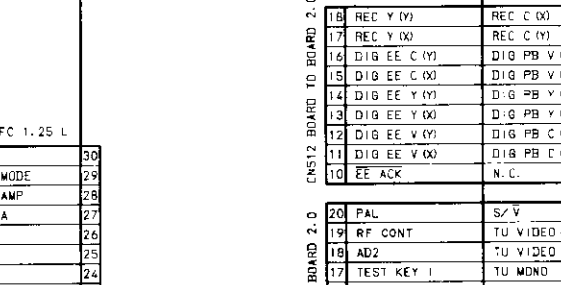
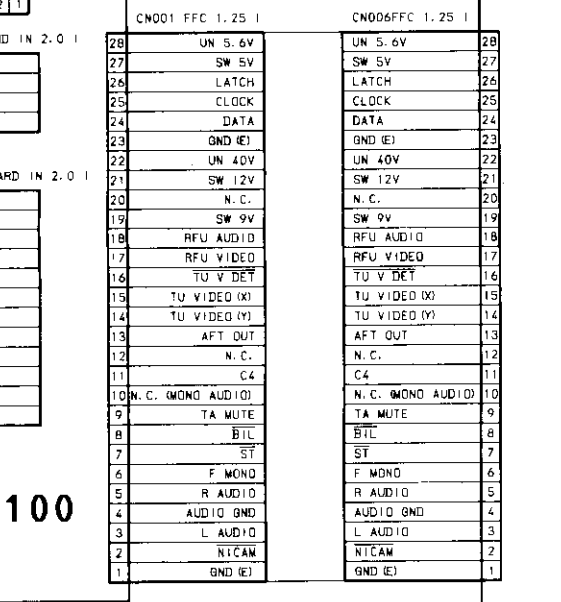
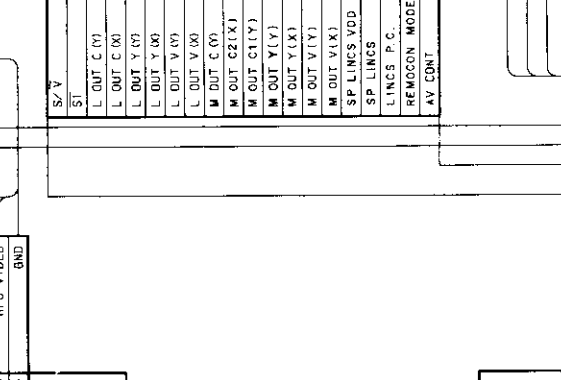
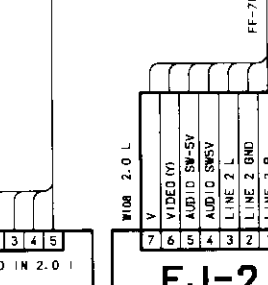
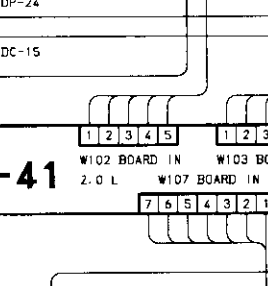
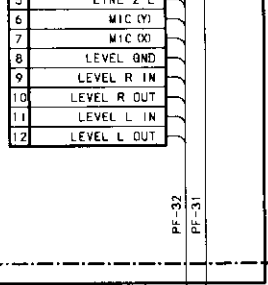
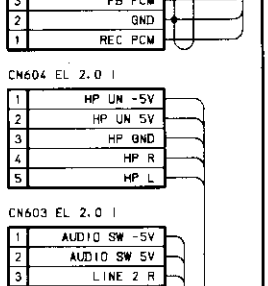
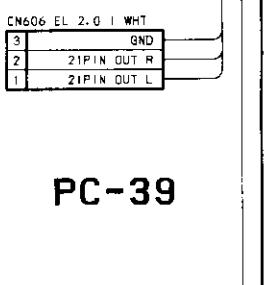
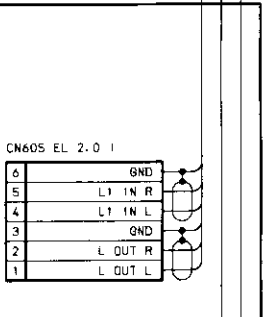
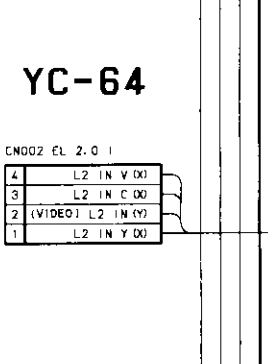
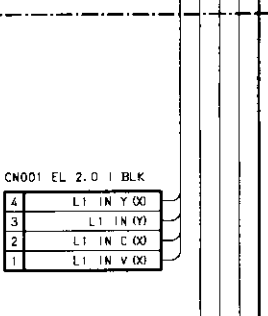
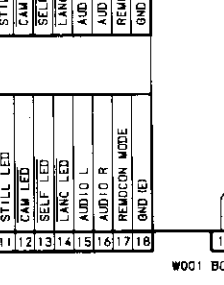
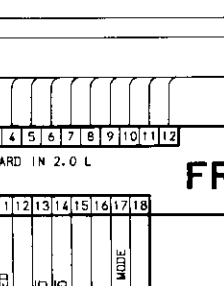
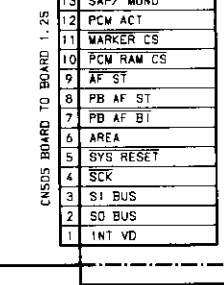
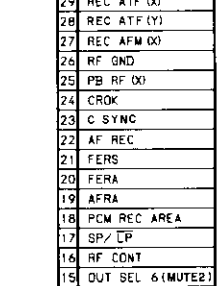
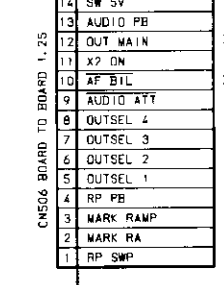
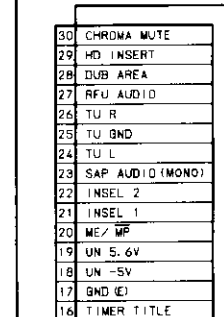
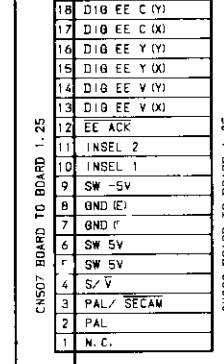
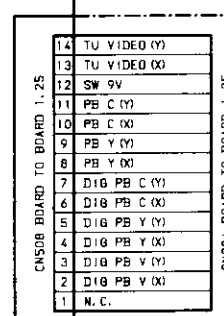
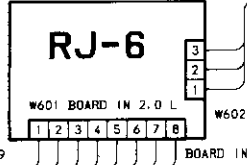
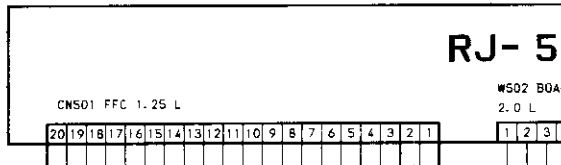


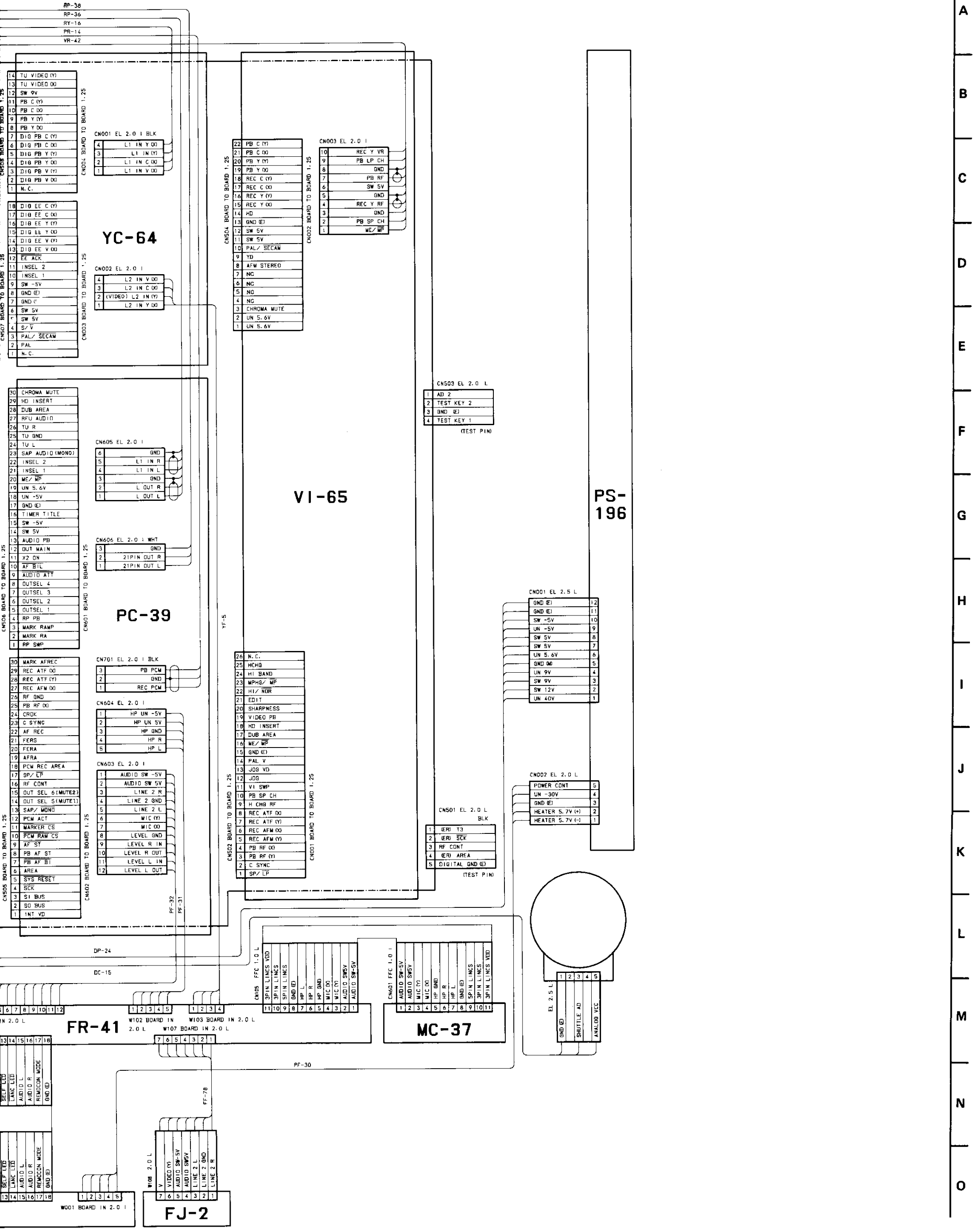
SECTION 5

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

5-1. FRAME SCHEMATIC DIAGRAM



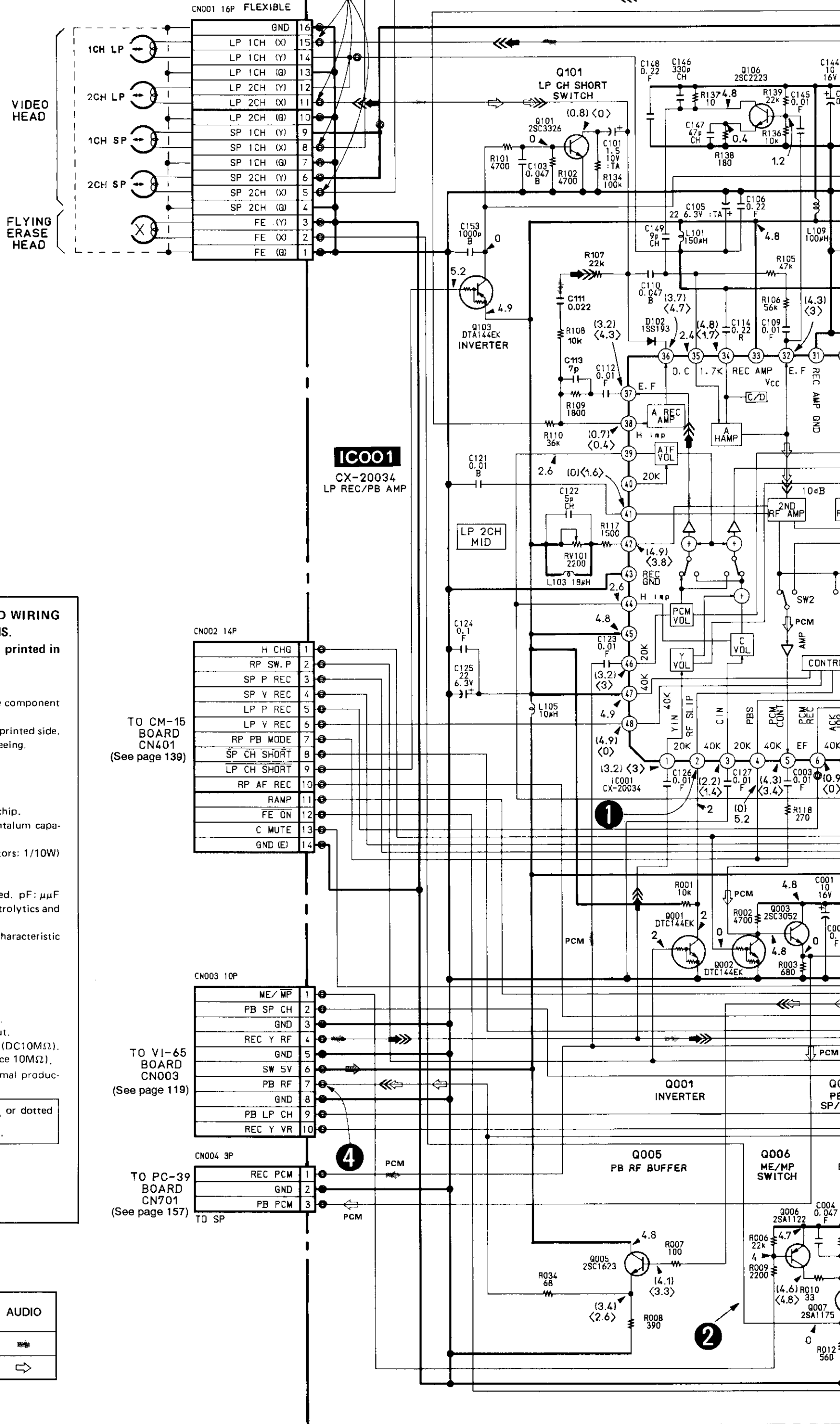




RP-74 (REC/PB AMP) SCHEMATIC DIAGRAM

- Ref. No.: RP-74 Board; 1,000 series -

RP-74 BOARD



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For printed wiring boards:

- — : indicates a lead wire mounted on the component side.
- — : indicates a lead wire mounted on the printed side.
- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.

For schematic diagram:

- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W (Chip resistors: 1/10W) unless otherwise noted.
kΩ: 1000Ω, MΩ: 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF: μμF
50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- : internal component.
- Voltages are dc between measurement points.
- Readings are taken with a color-bar signal input.
- Readings are taken with a digital multimeter (DC10MΩ).
Voltage are taken with aVOM (Input impedance 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

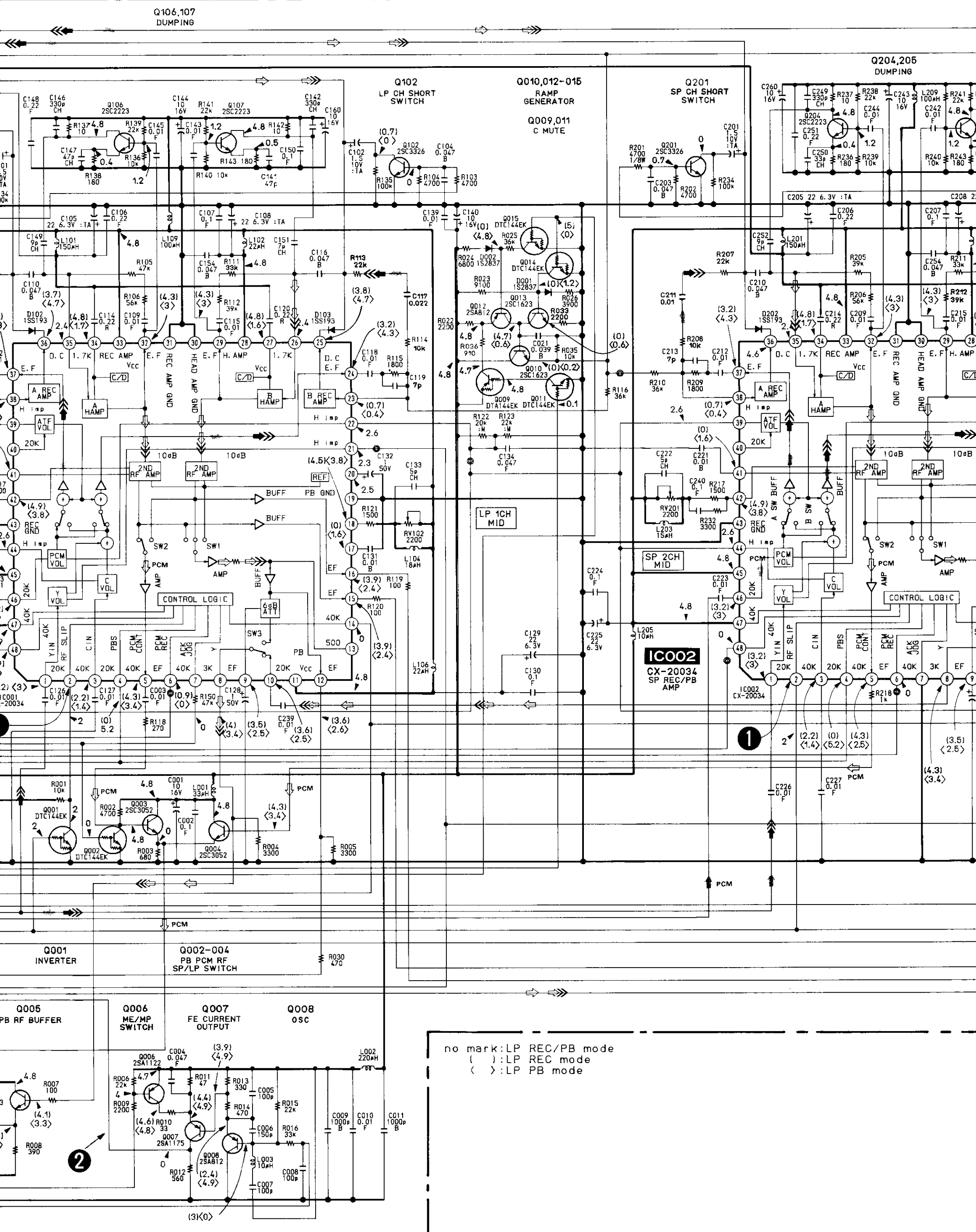
When indicating parts by reference number, please include the board name.

	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC			➡➡➡	➡➡
PB			➡➡➡	➡➡

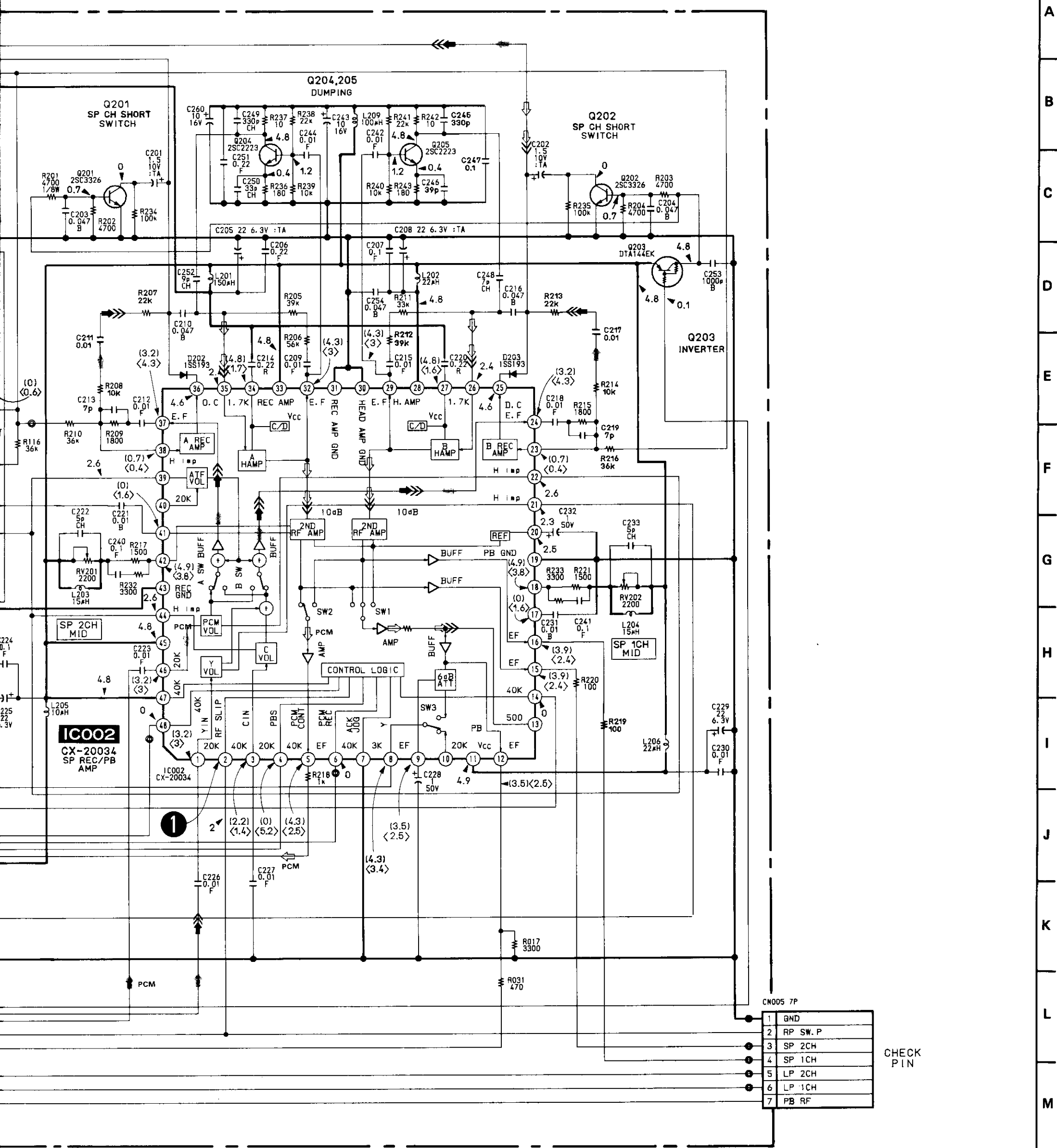
TO CM-15 BOARD CN401 (See page 139)

TO VI-65 BOARD CN003 (See page 119)

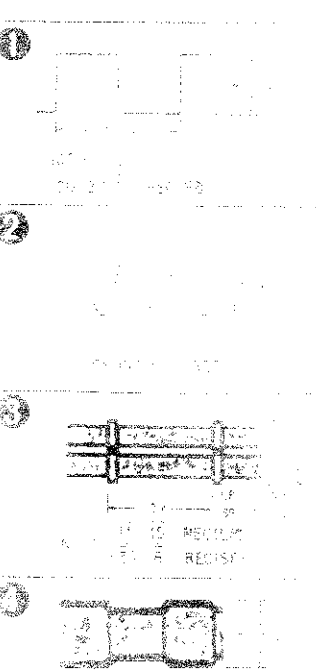
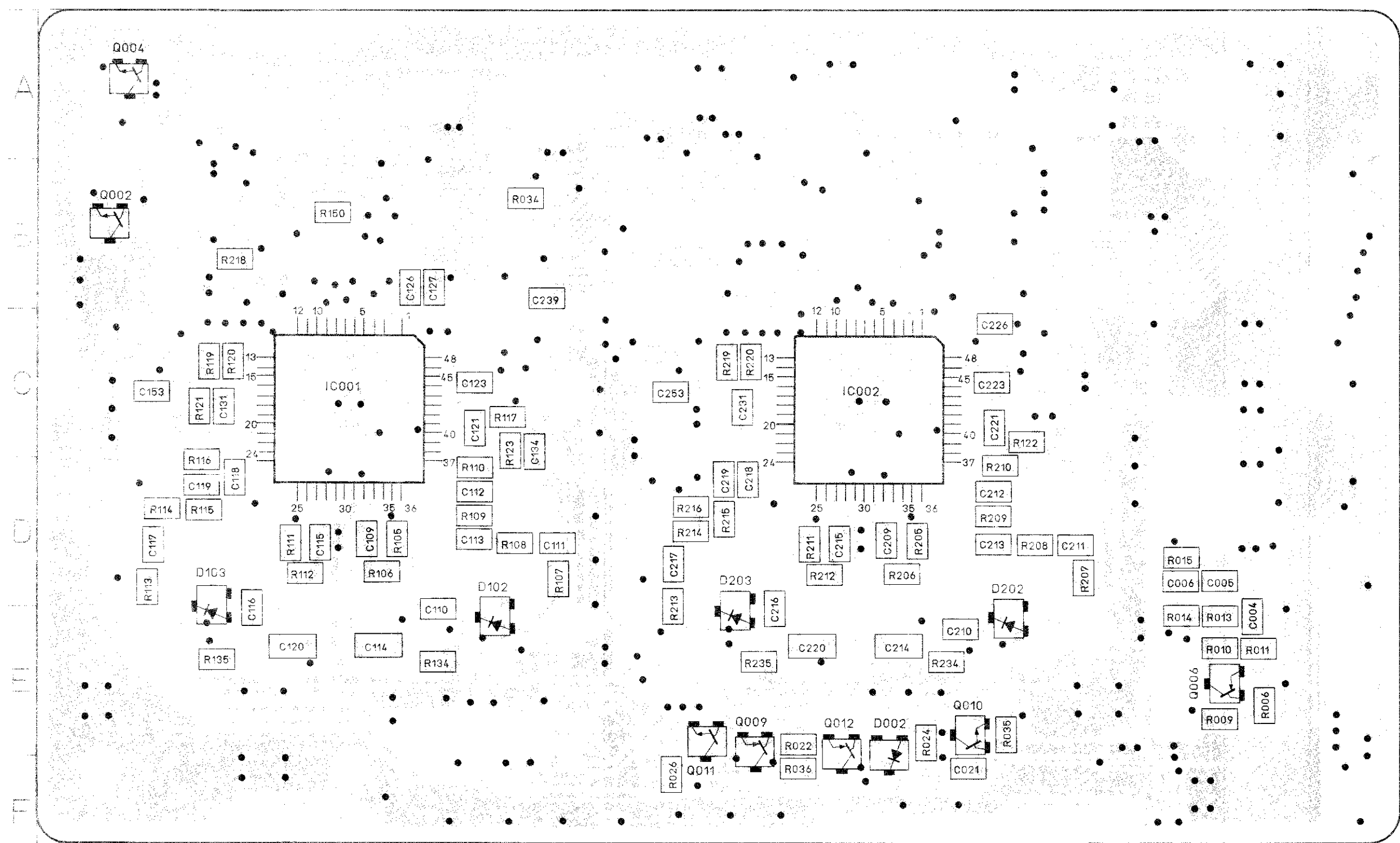
TO PC-39 BOARD CN701 (See page 157)



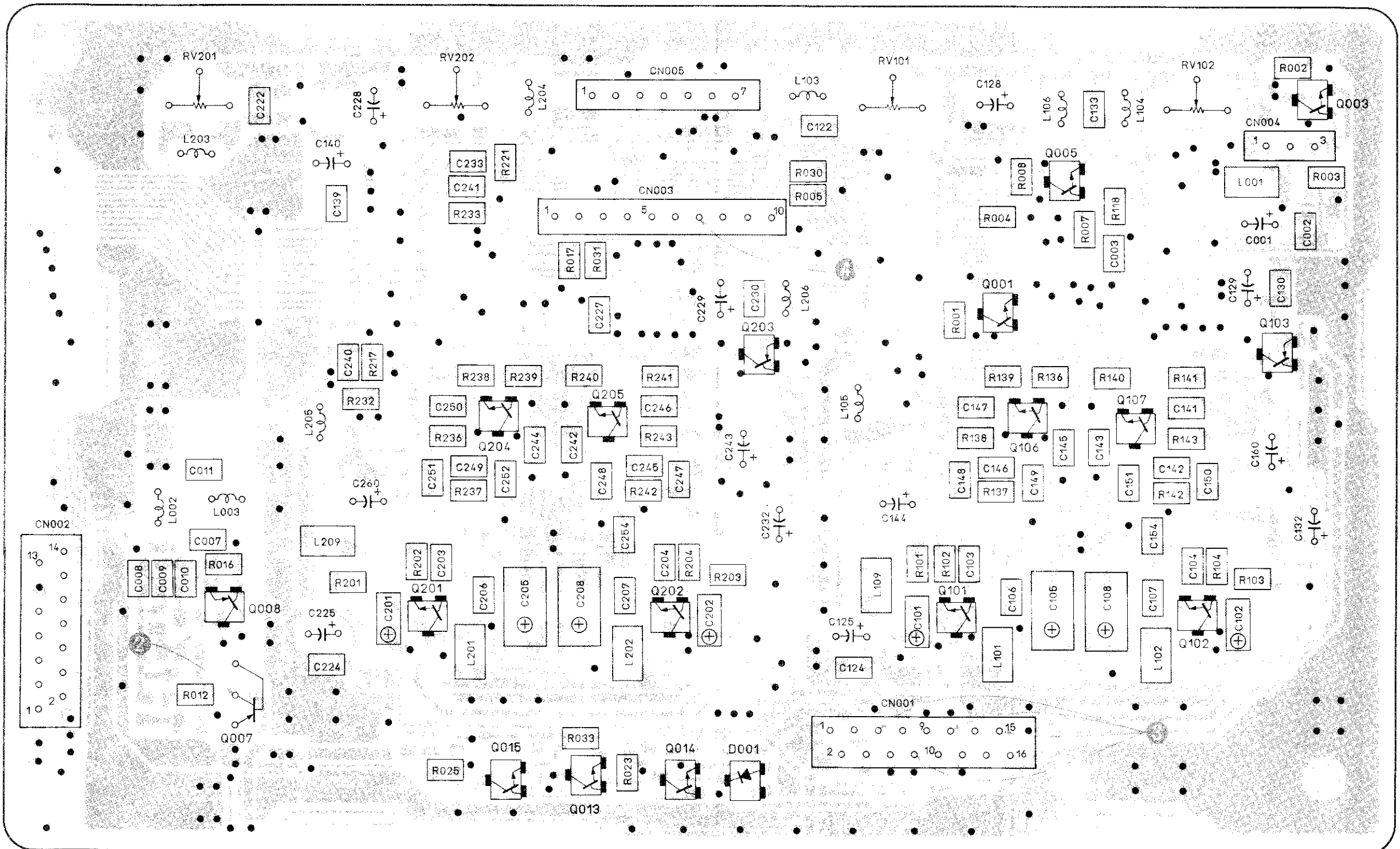
no mark: LP REC/PB mode
 (): LP REC mode
 < >: LP PB mode



RP-74 BOARD (COMPONENT SIDE)



RP-74 BOARD (CONDUCTOR SIDE)

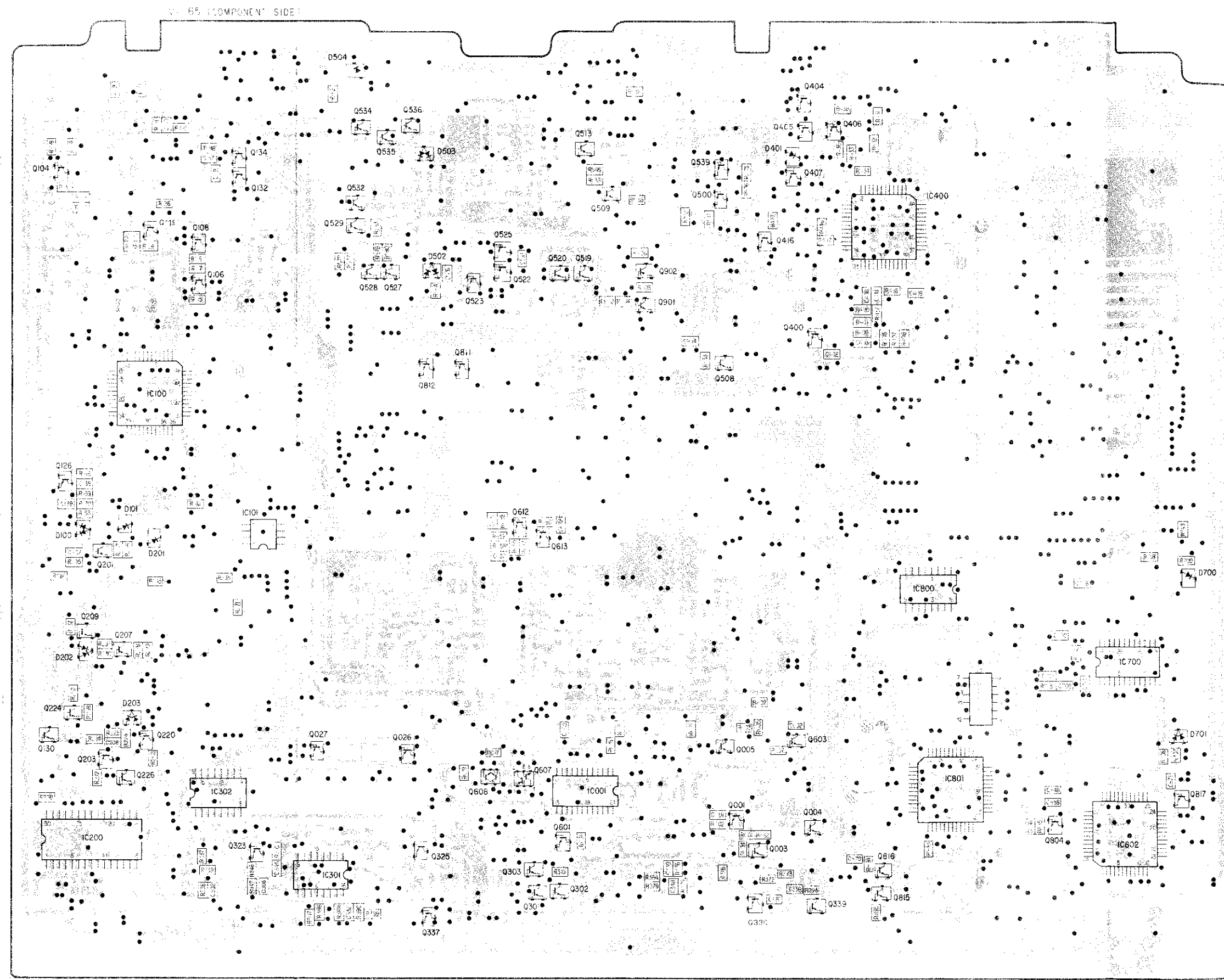


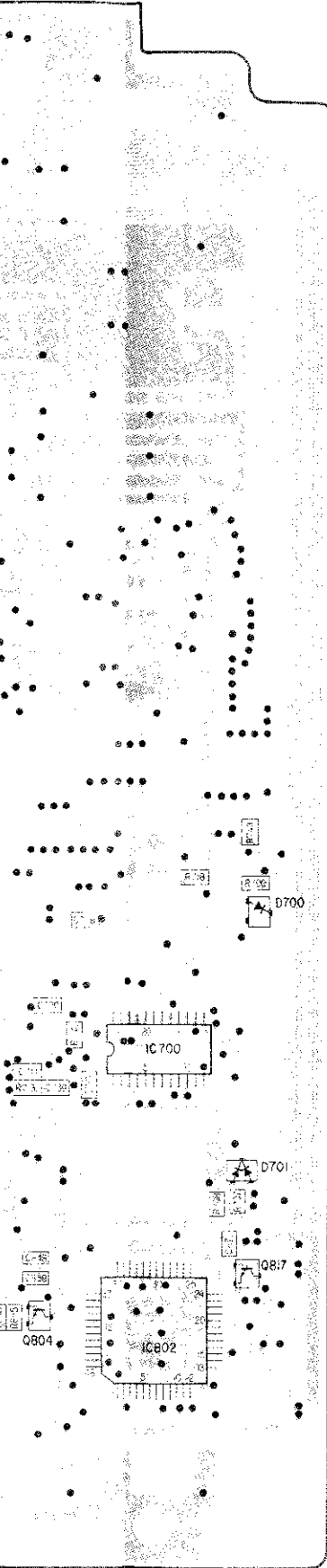
10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20

VI-65 (VIDEO SIGNAL PROCESS) PRINTED WIRING BOARD - Ref. No.: VI-65 Board; 2,000 series -

PC-65 BOARD

D001	F-22	Q106	C-3	Q501	B-29
D002	G-21	Q107	C-26	Q502	C-20
D003	G-21	Q108	C-3	Q503	C-21
D004	F-20	Q109	B-26	Q504	D-21
D005	I-22	Q110	B-26	Q505	D-21
D006	G-20	Q111	C-2	Q506	D-21
D007	H-24	Q112	B-27	Q507	C-21
D008	G-21	Q113	B-28	Q508	D-8
D009	H-21	Q114	C-27	Q509	C-7
D100	F-1	Q116	C-28	Q510	B-22
D101	F-2	Q117	D-27	Q511	B-22
D102	D-28	Q118	D-26	Q512	B-21
D200	F-27	Q119	A-26	Q513	B-7
D201	F-2	Q120	A-26	Q514	C-22
D202	G-1	Q121	E-26	Q515	B-23
D203	H-2	Q122	E-26	Q518	A-21
D300	J-23	Q123	F-26	Q519	C-7
D301	J-23	Q124	F-26	Q520	C-7
D302	J-24	Q125	F-27	Q521	C-23
D303	A-18	Q126	E-1	Q522	C-6
D400	D-19	Q127	F-28	Q523	D-6
D401	B-9	Q128	E-27	Q524	C-22
D402	A-19	Q129	E-27	Q525	C-6
D404	D-18	Q130	H-1	Q526	C-24
D500	C-20	Q131	D-27	Q527	C-5
D501	C-21	Q132	B-3	Q528	C-4
D502	C-5	Q133	B-26	Q529	C-4
D503	B-5	Q134	B-3	Q530	C-25
D504	A-4	Q135	B-27	Q531	C-24
D700	G-14	Q136	B-26	Q532	B-4
D701	H-14	Q140	C-26	Q533	B-24
D702	G-16	Q200	F-28	Q534	B-4
D703	H-16	Q201	F-2	Q535	B-5
D704	J-17	Q202	H-27	Q536	B-5
D800	I-17	Q203	I-1	Q537	A-24
		Q204	I-27	Q538	A-24
		Q205	H-27	Q539	B-8
IC001	I-7	Q206	H-27	Q601	I-7
IC002	H-21	Q207	G-2	Q602	H-20
IC003	H-24	Q208	G-28	Q603	H-8
IC100	E-2	Q209	G-1	Q604	H-19
IC101	F-3	Q210	G-27	Q605	I-19
IC200	I-1	Q211	G-27	Q607	I-6
IC301	J-4	Q212	F-27	Q608	I-6
IC302	I-3	Q213	H-26	Q609	H-23
IC400	C-10	Q214	H-28	Q610	I-23
IC500	B-24	Q215	H-28	Q611	H-24
IC700	H-13	Q220	H-2	Q612	F-6
IC800	G-11	Q221	G-26	Q613	F-6
IC801	I-11	Q222	G-26	Q614	H-23
IC802	J-13	Q224	H-1	Q700	G-17
IC900	A-24	Q225	H-26	Q701	F-15
		Q226	I-2	Q702	G-16
Q001	I-8	Q302	J-6	Q705	E-22
Q002	J-20	Q302	J-7	Q706	J-16
Q003	J-8	Q303	J-6	Q800	G-17
Q004	I-9	Q313	J-23	Q801	G-17
Q005	H-9	Q314	J-22	Q802	I-18
Q006	I-21	Q315	J-22	Q803	J-17
Q007	H-22	Q316	J-22	Q804	I-12
Q008	H-21	Q317	J-22	Q805	I-15
Q009	H-21	Q318	F-27	Q806	D-22
Q011	I-21	Q319	J-26	Q807	D-23
Q012	I-22	Q321	I-26	Q808	D-23
Q014	G-22	Q322	J-26	Q809	D-24
Q015	G-22	Q323	J-3	Q810	D-24
Q016	G-22	Q324	J-26	Q811	D-5
Q017	G-23	Q325	J-5	Q812	D-5
Q018	F-22	Q326	I-24	Q813	J-19
Q019	H-22	Q327	J-24	Q815	J-10
Q020	C-22	Q328	J-20	Q816	J-10
Q021	H-20	Q329	J-20	Q817	I-14
Q022	G-21	Q330	J-9	Q818	I-15
Q023	G-20	Q331	J-20	Q901	D-8
Q024	G-20	Q332	J-20	Q902	C-8
Q025	G-20	Q333	J-21		
Q026	H-5	Q334	J-21		
Q027	H-4	Q335	J-25		
Q029	H-23	Q336	J-24		
Q030	G-24	Q337	J-5		
Q031	G-23	Q338	J-23		
Q032	G-24	Q339	J-10		
Q033	G-24	Q400	D-9		
Q034	G-25	Q401	D-19		
Q035	G-24	Q402	D-18		
Q036	F-24	Q404	A-9		
Q038	G-24	Q405	B-9		
Q039	G-23	Q406	B-10		
Q040	G-21	Q407	B-9		
Q100	B-26	Q416	C-9		
Q101	A-27	Q417	D-18		
Q102	A-27	Q500	B-8		
Q103	A-27				
Q104	B-1				

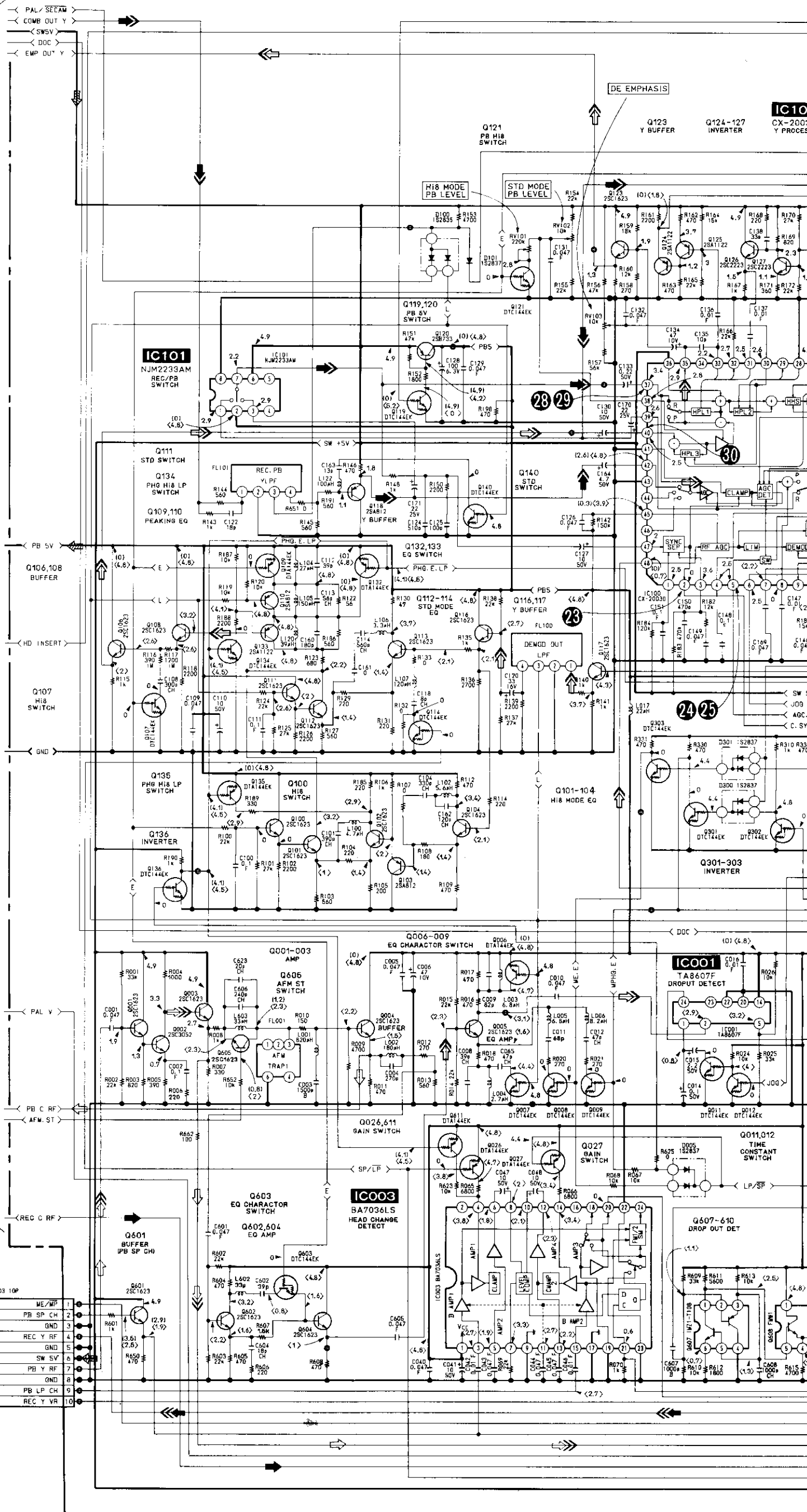




VI-65 (VIDEO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/2)

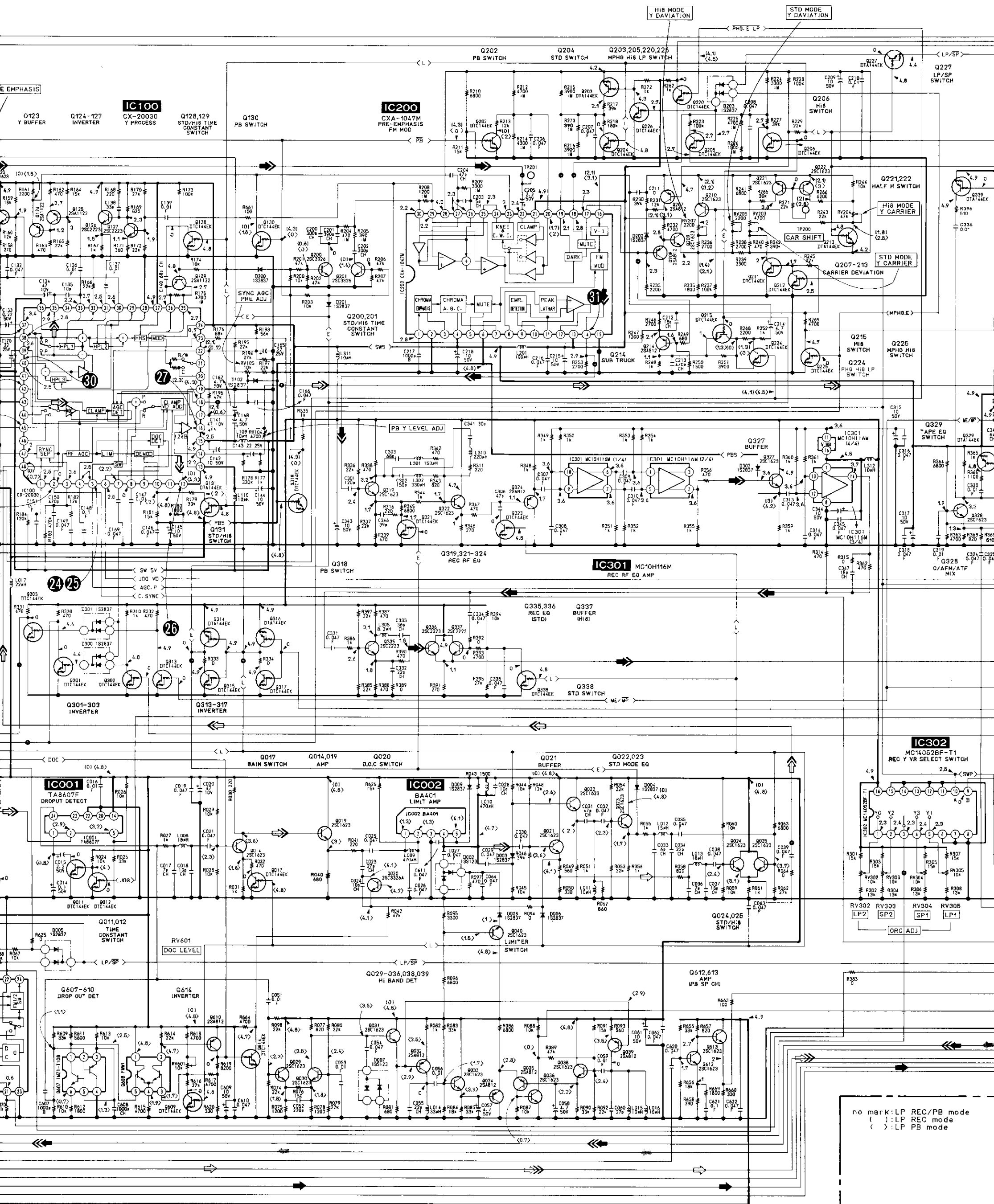
- Ref. No.: VI-65 Board; 2,000 series -

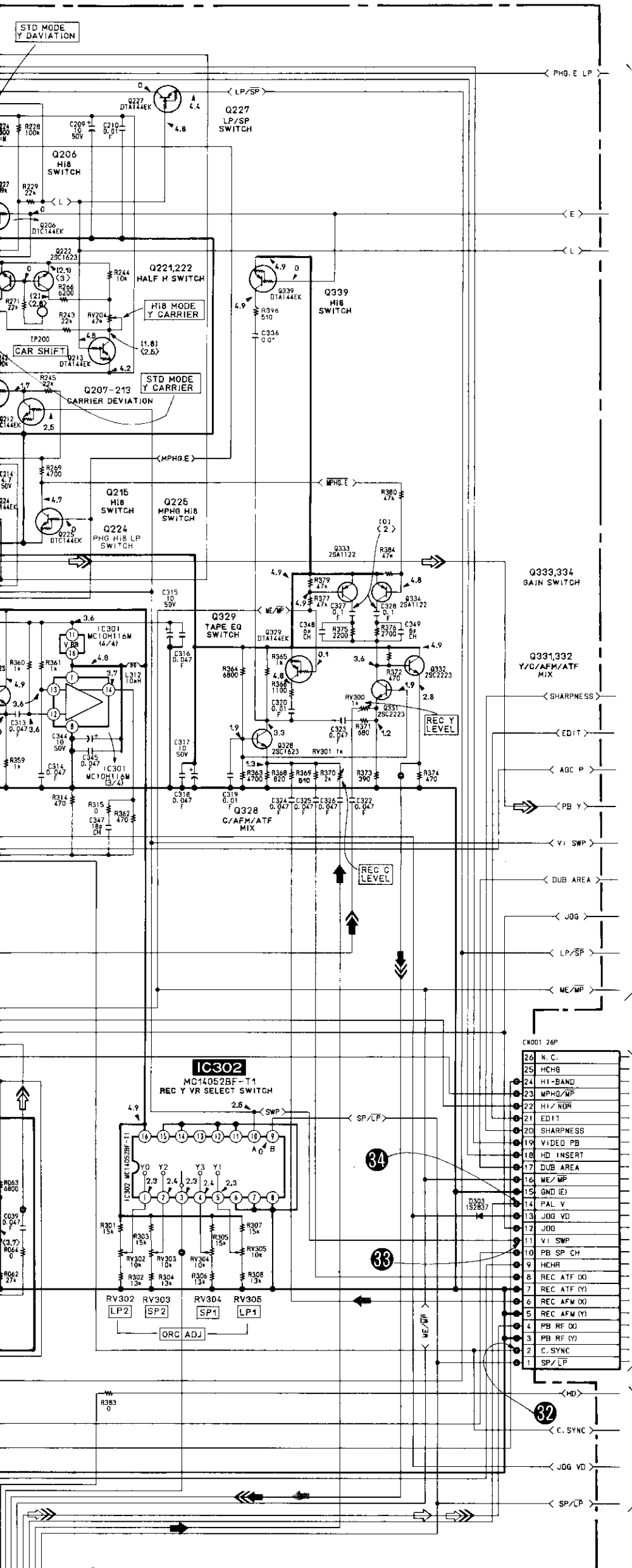
VI-65 BOARD(1/2)



TO VI-65 BOARD (2/2) (See page 125)

TO RP-74 BOARD CN003 (See page 107)



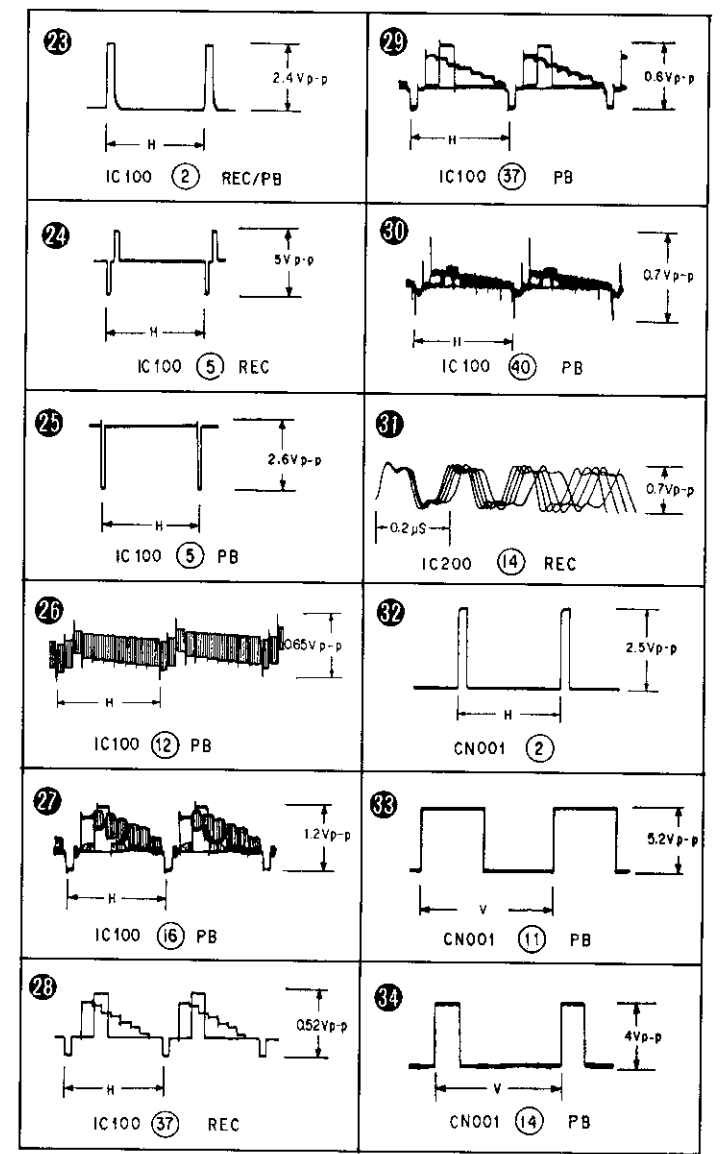


TO VI-65 BOARD (2/2) (See page 125)

TO IN-24 BOARD ICN502 (See page 185)

TO VI-65 BOARD (2/2) (See page 125)

no mark : LP REC/PB mode
() : LP REC mode
() : LP PB mode

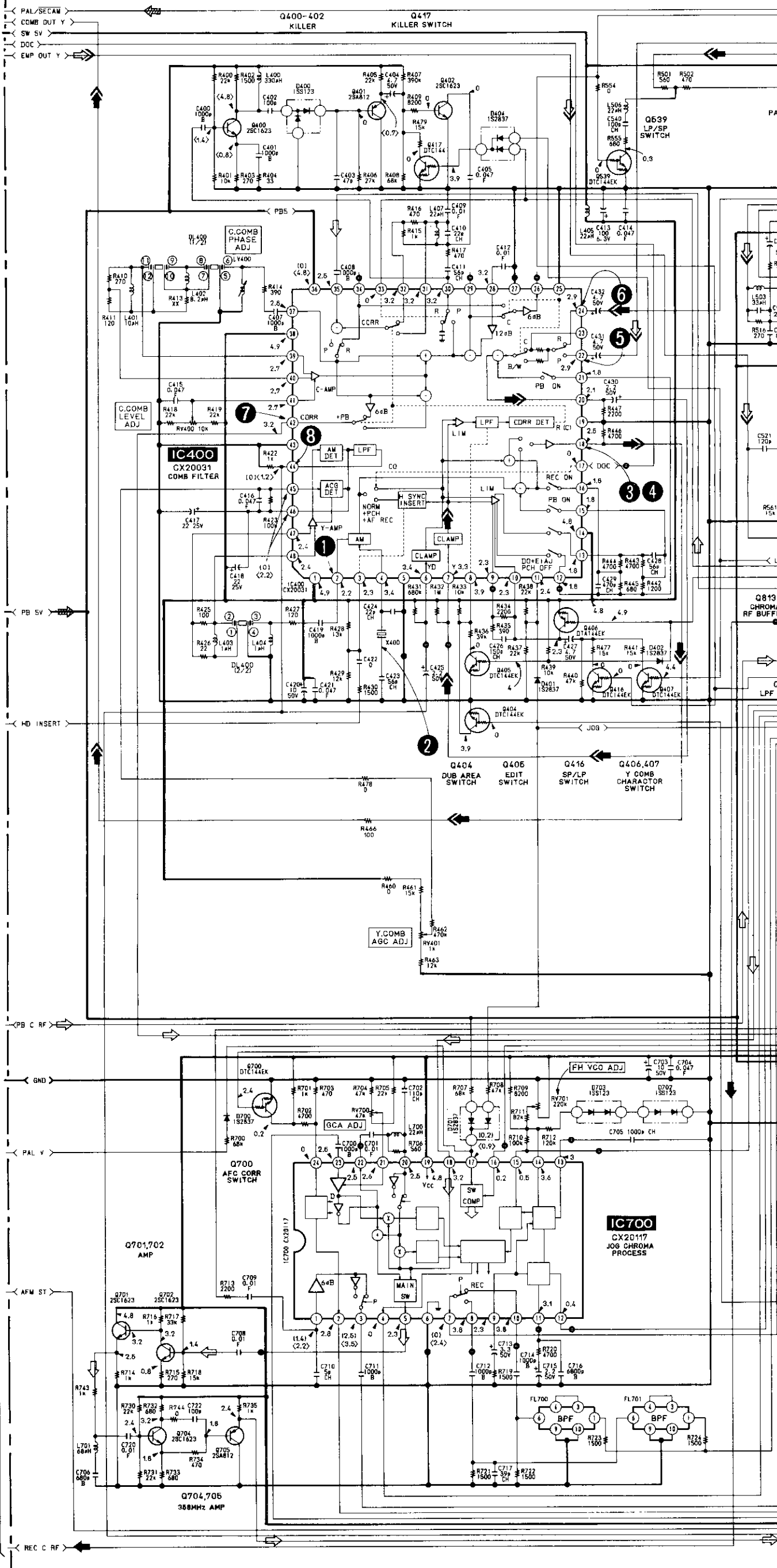


	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC	→	⇒	⇒⇒	→
PB	⇐	⇐⇒	⇐⇒⇒	⇐

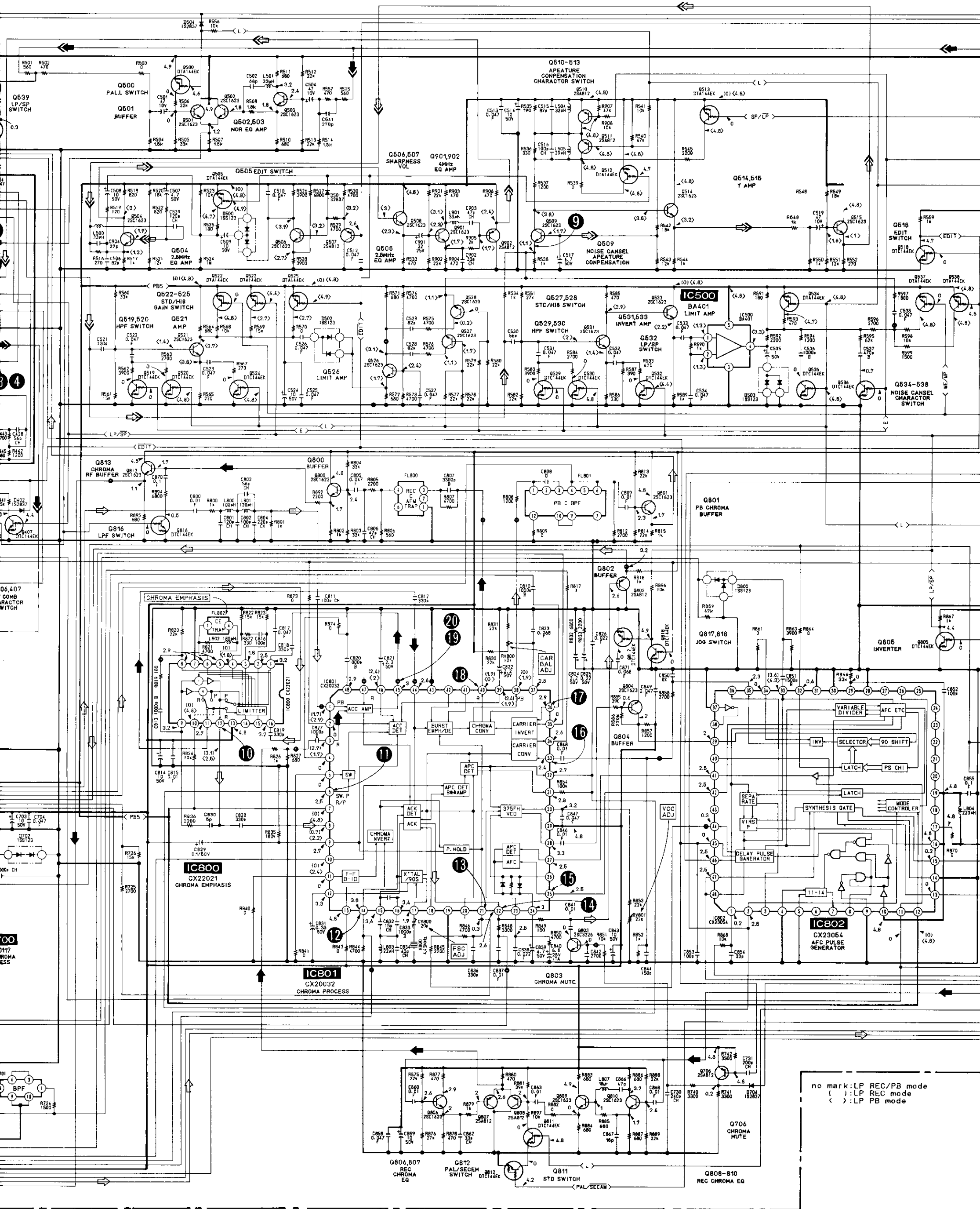
VI-65 (VIDEO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (2/2)

- Ref. No.: VI-65 Board; 2,000 series -

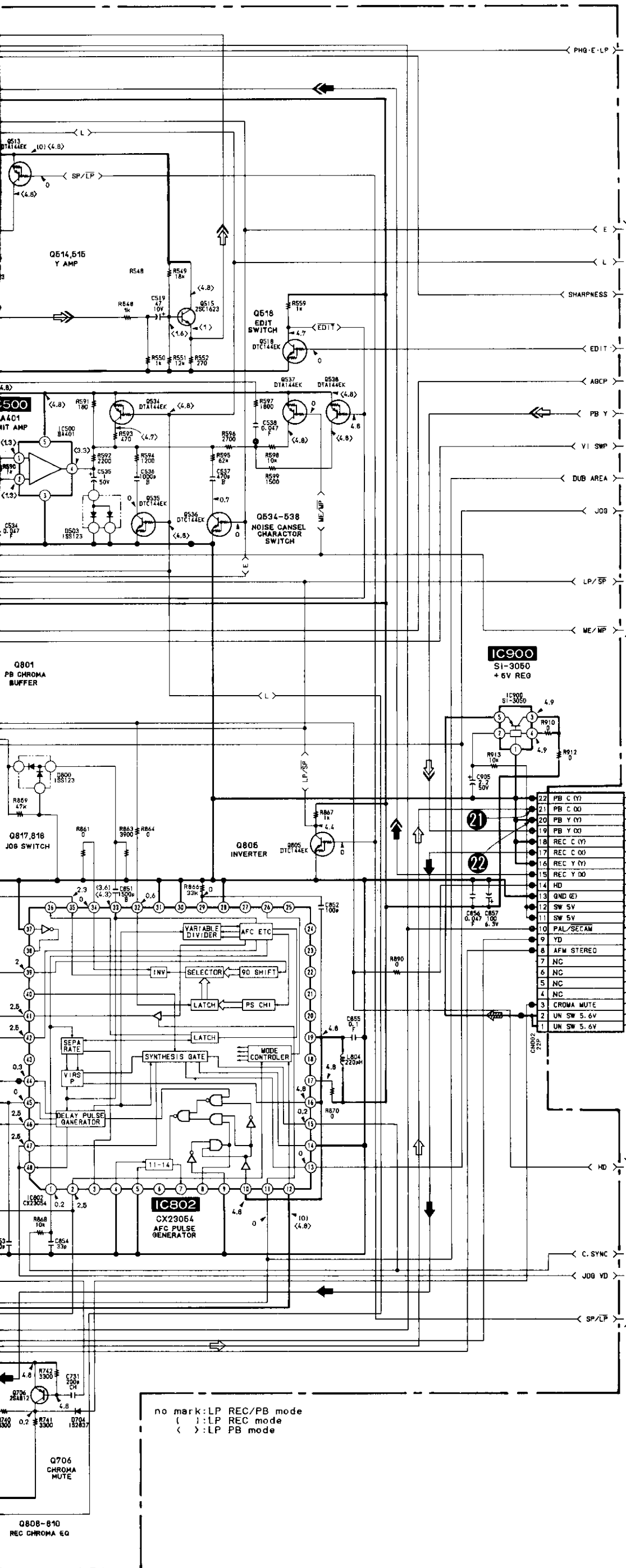
VI-65 BOARD (2/2)



B
TO VI-65
BOARD
11/21
(See page 119)



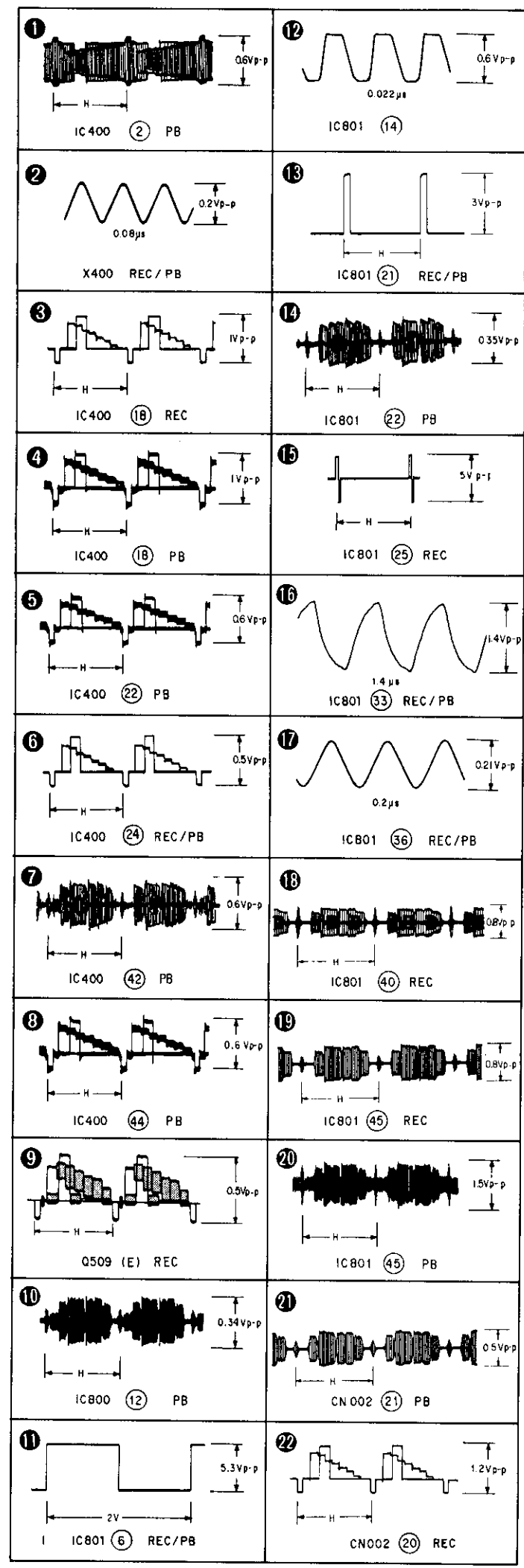
no mark: LP REC/PB mode
 () : LP REC mode
 < > : LP PB mode



TO VI-65 BOARD (1/2) (See page 119)

TO IN-24 BOARD (CN604) (See page 185)

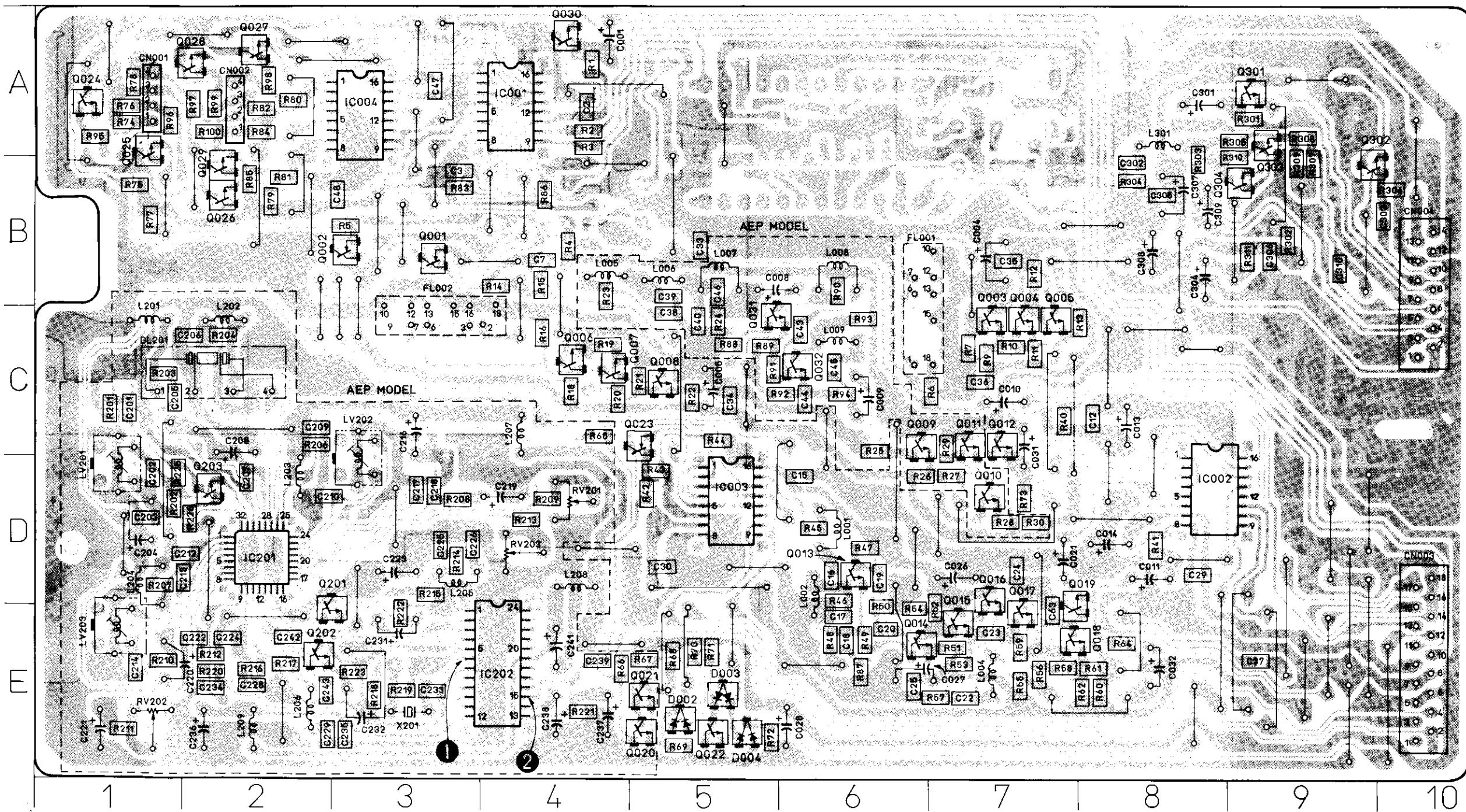
TO VI-65 BOARD (1/2) (See page 119)



	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	⇒	
PB	⇨	⇨	

- D002 E-5
- D003 E-5
- D004 E-5
- IC001 A-4
- IC002 D-8
- IC003 D-5
- IC004 A-3
- IC201 D-2
- IC202 E-4
- Q001 B-3
- Q002 B-3
- Q003 C-7
- Q004 C-7
- Q005 C-7
- Q006 C-4
- Q007 C-4
- Q008 C-5
- Q009 C-6
- Q010 D-7
- Q011 C-7
- Q012 C-7
- Q013 D-6
- Q014 E-6
- Q015 E-7
- Q016 D-7
- Q017 E-7
- Q018 E-8
- Q019 D-8
- Q020 E-5
- Q021 E-5
- Q022 E-5
- Q023 C-5
- Q024 A-1
- Q025 A-1
- Q026 B-2
- Q027 A-2
- Q028 A-2
- Q029 B-2
- Q030 A-4
- Q031 C-5
- Q032 C-6
- Q201 E-2
- Q202 E-2
- Q203 D-2
- Q301 A-1
- Q302 B-9
- Q303 A-1
- Q304 B-9

YC-64 BOARD



11

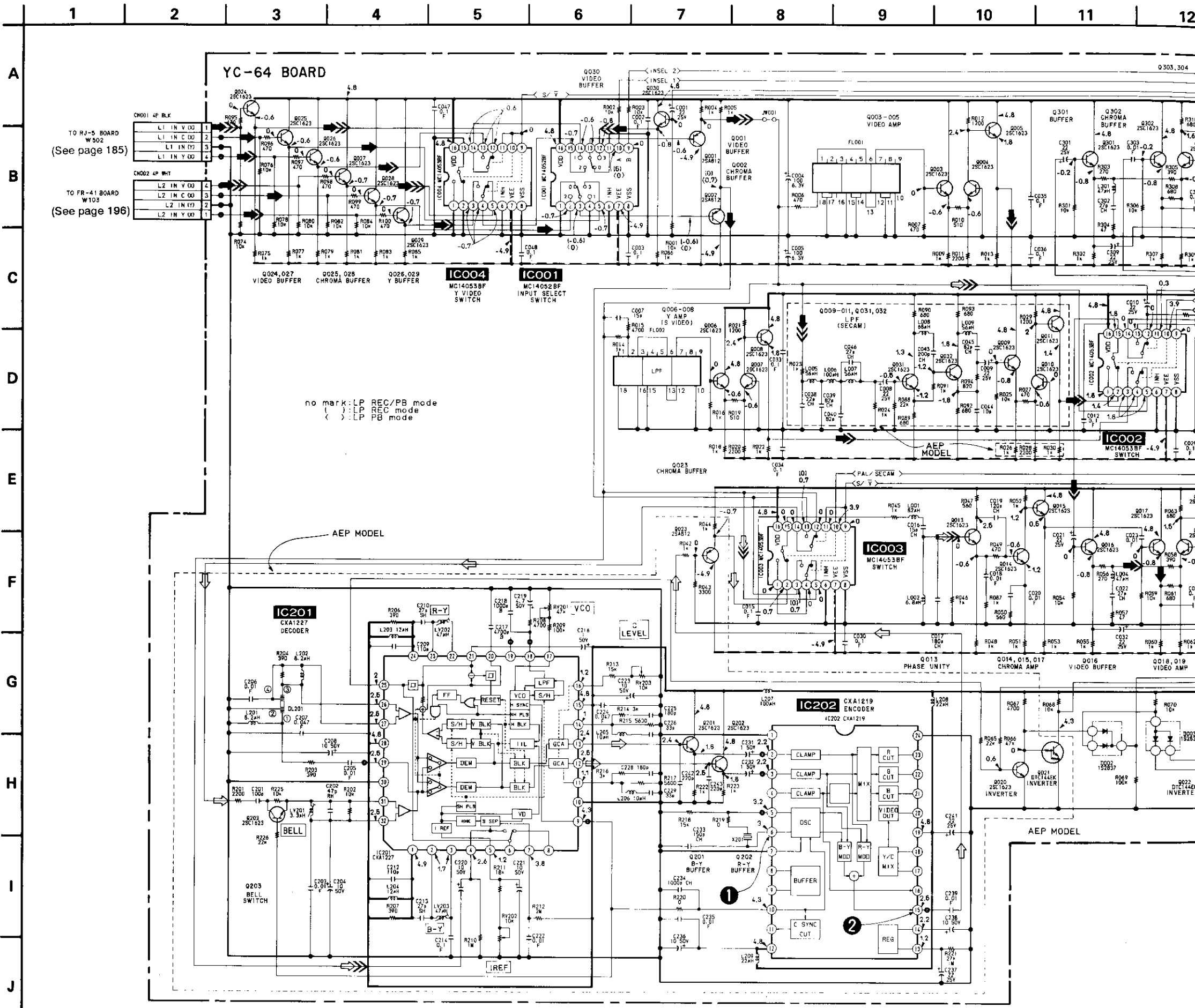
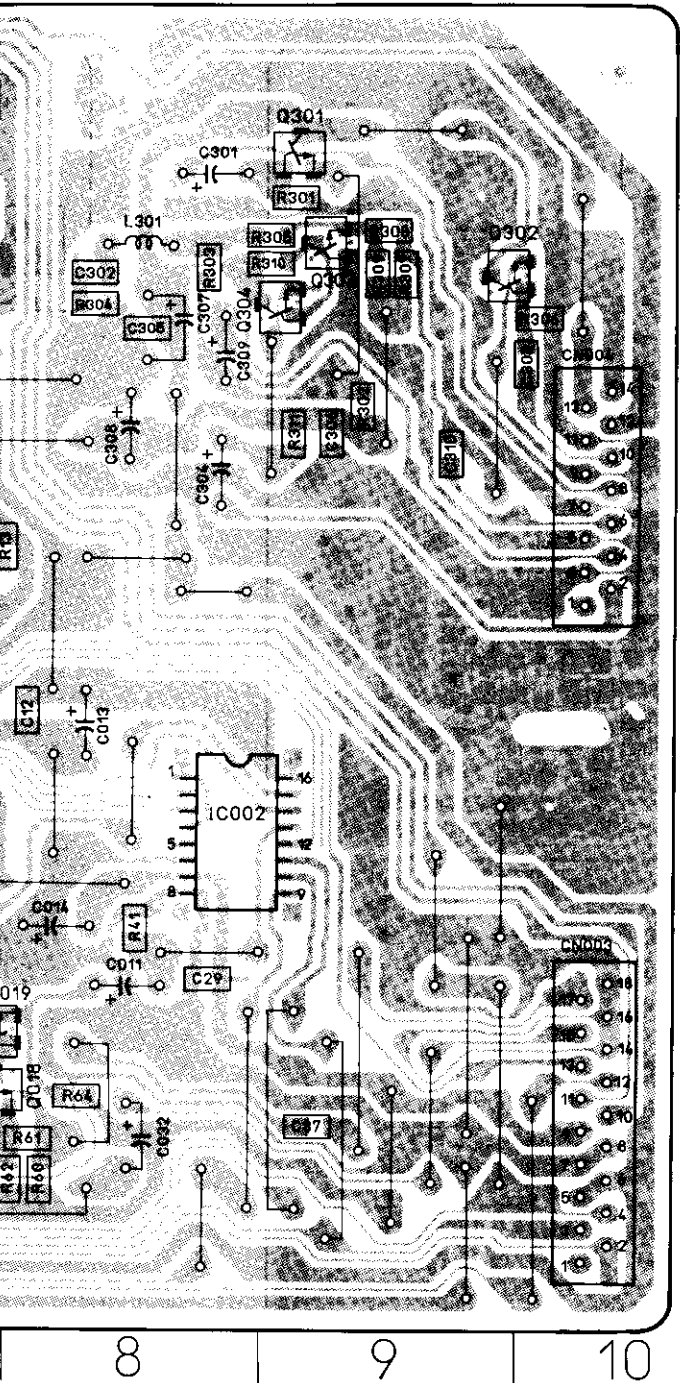
- 1
- A
- B
- C
- D
- E
- F
- G
- H
- I
- J

TO RJ-5 B0 W502 (See page

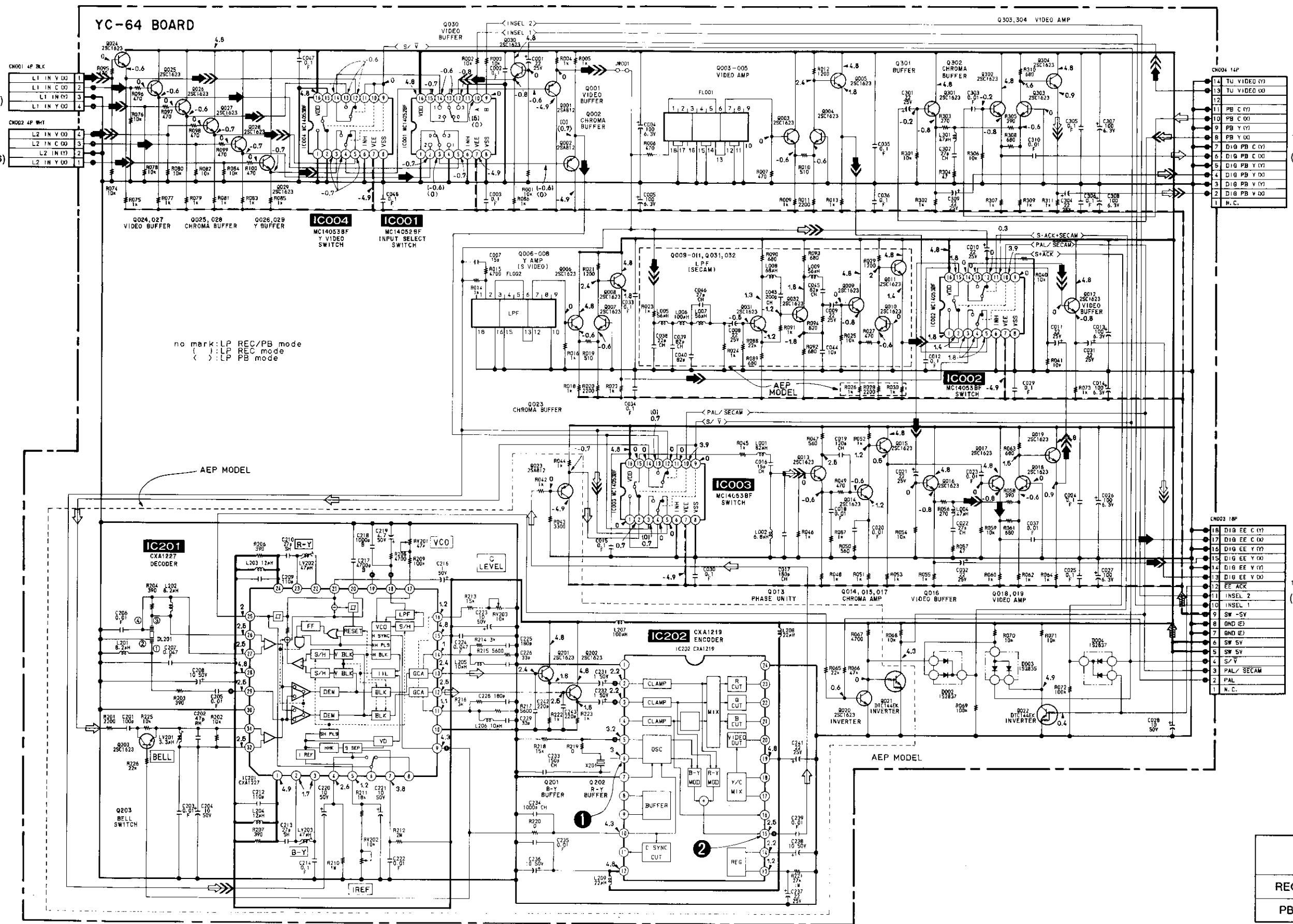
TO FR-41 B0 W103 (See page

YC-64 (Y/CHROMA SIGNAL PROCESS) SCHEMATIC DIAGRAM

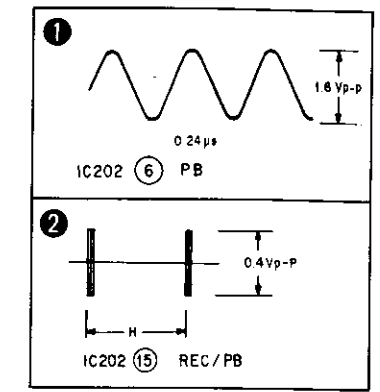
- Ref. No.: YC-64 Board; 3,000 series -



2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



no mark: LP REC/PB mode
() : L mode
() : P mode



TO IN-24 BOARD
CN508
(See page 185)

TO IN-24 BOARD
CN507
(See page 185)

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	⇨	⇨⇨	⇨⇨⇨
PB	⇨	⇨⇨	⇨⇨⇨

CM-15 (SERVO/SYSTEM CONTROL), UC-4, CC-26 (SIGNAL INTERMEDIATION) PRINTED WIRING BOARDS

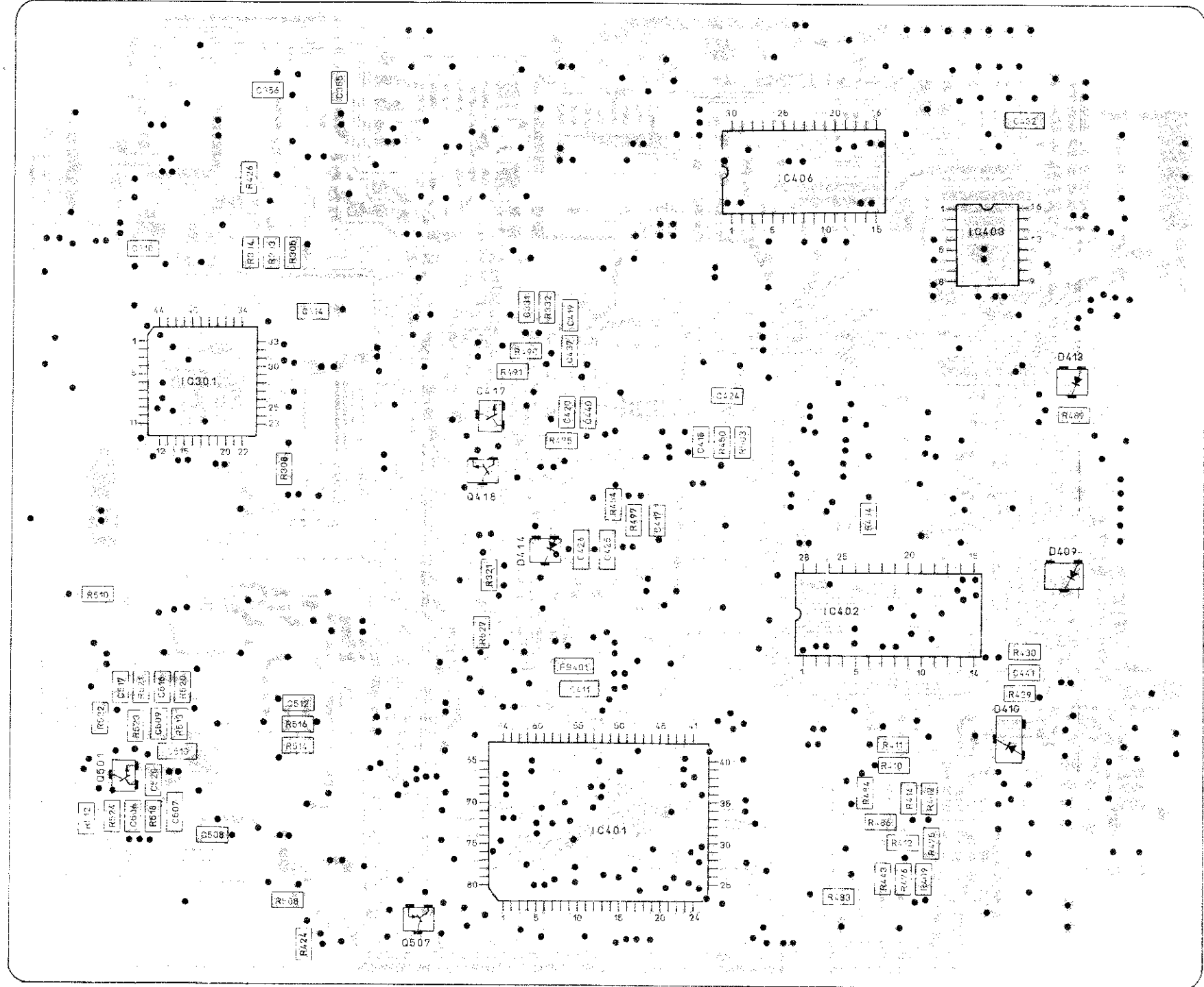
- Ref. No.: CN-15, UC-4, CC-26 Boards; 4,000 series -

- CM-15 BOARD
- D401 G-15
 - D409 E-9
 - D410 F-8
 - D411 D-13
 - D413 C-9
 - D414 E-5
 - D501 E-18
 - D502 F-18
 - D503 E-17

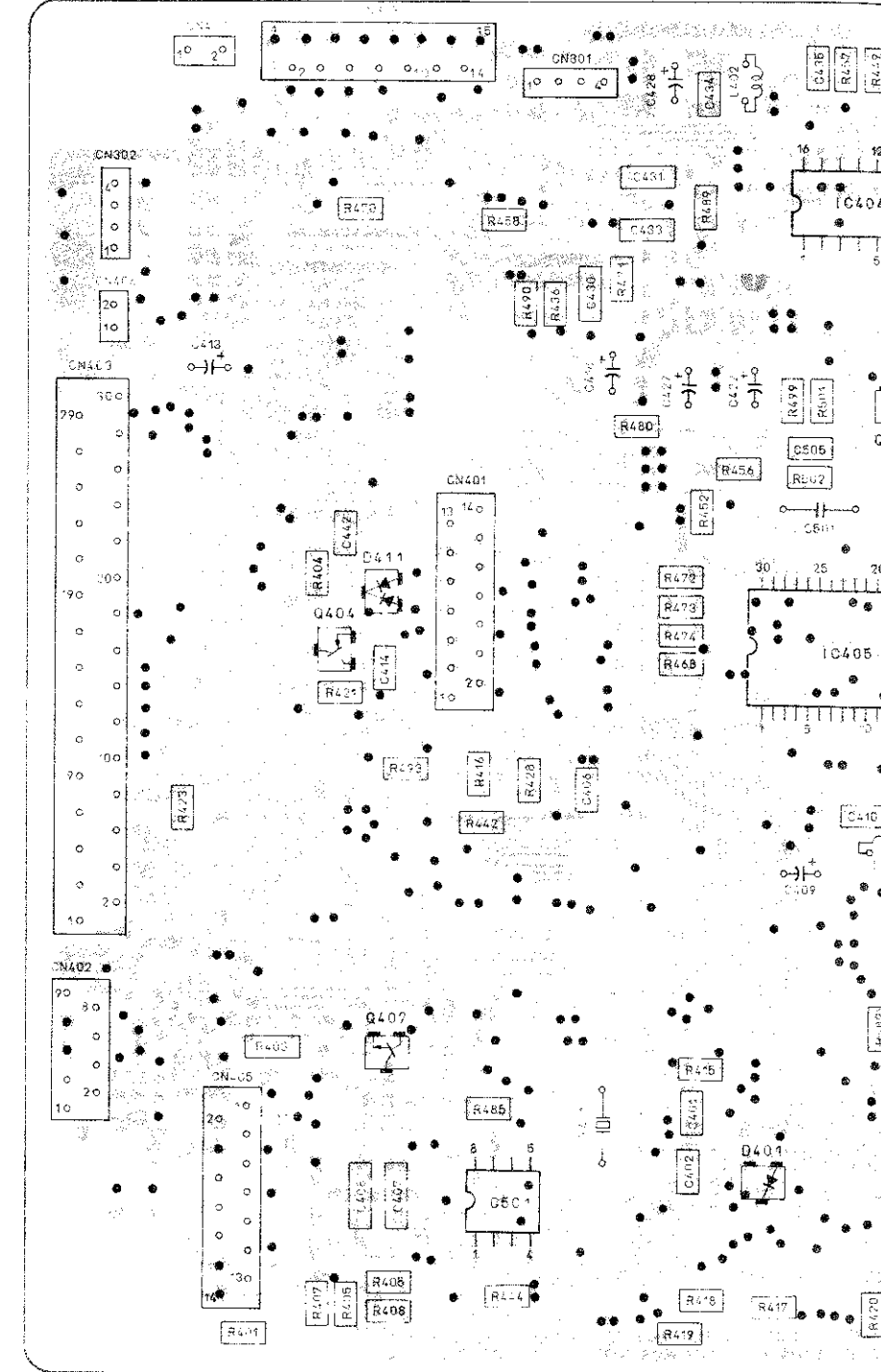
 - IC301 C-2
 - IC302 B-17
 - IC303 A-18
 - IC401 G-5
 - IC402 E-7
 - IC403 B-8
 - IC404 B-15
 - IC405 D-15
 - IC406 B-7
 - IC501 G-13
 - IC502 F-19

 - Q301 C-18
 - Q302 D-17
 - Q303 F-17
 - Q304 C-17
 - Q305 C-17
 - Q306 C-18
 - Q308 A-19
 - Q403 F-16
 - Q404 D-13
 - Q407 F-13
 - Q417 C-4
 - Q418 D-4
 - Q501 F-1
 - Q502 F-18
 - Q503 F-18
 - Q504 E-19
 - Q505 F-19
 - Q506 H-18
 - Q507 H-4
 - Q508 H-16
 - Q509 F-17
 - Q510 F-18

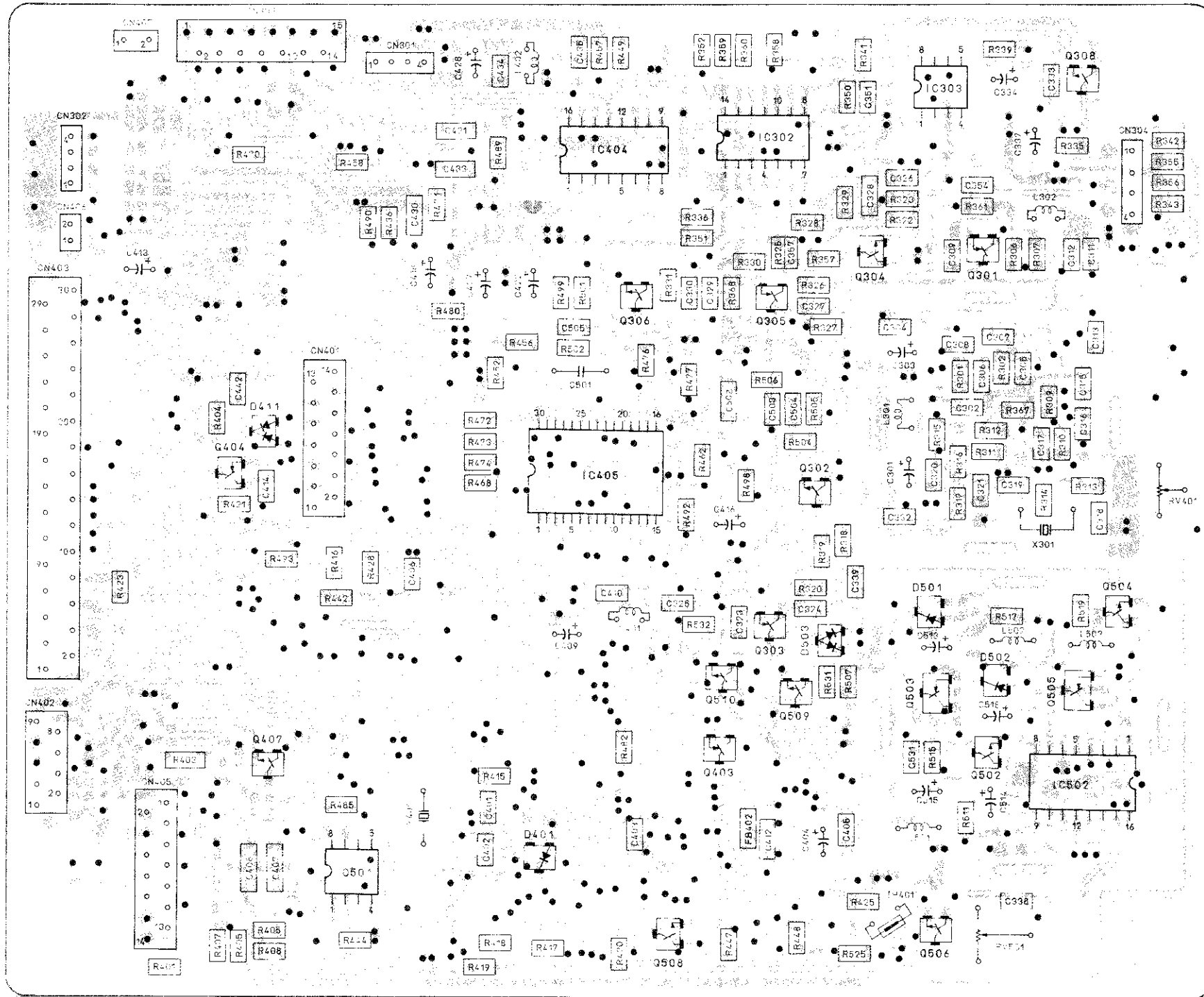
CM-15 BOARD (COMPONENT SIDE)



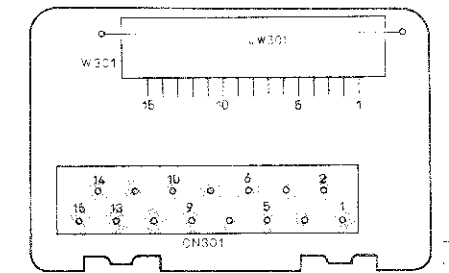
CM-15 BOARD (CONDUCTOR SIDE)



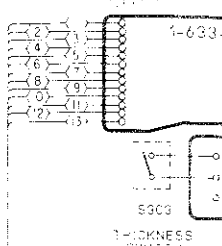
CM-15 BOARD (CONDUCTOR SIDE)



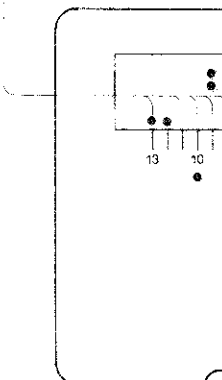
CC-26 BOARD

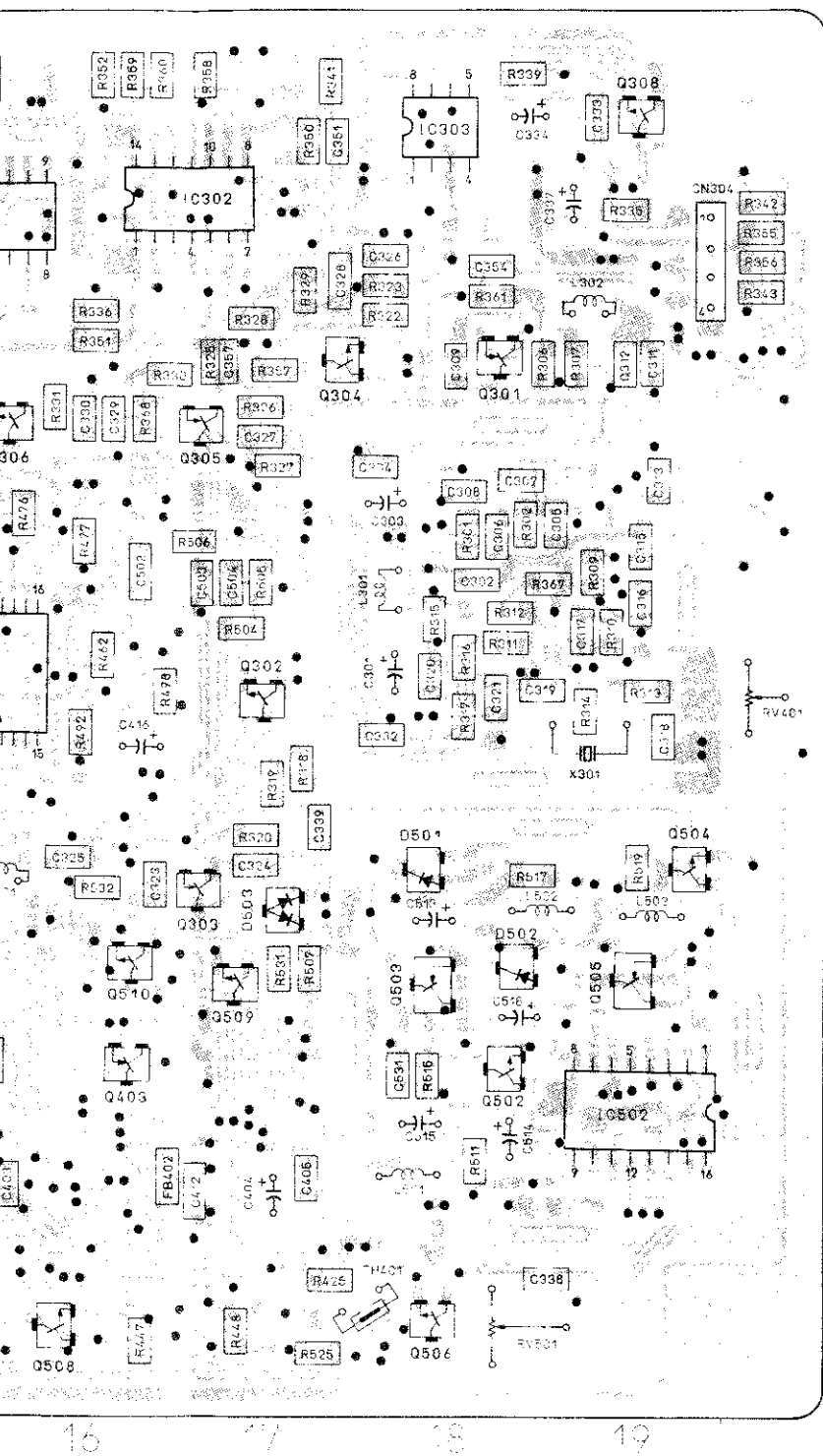


FP-237 BOARD

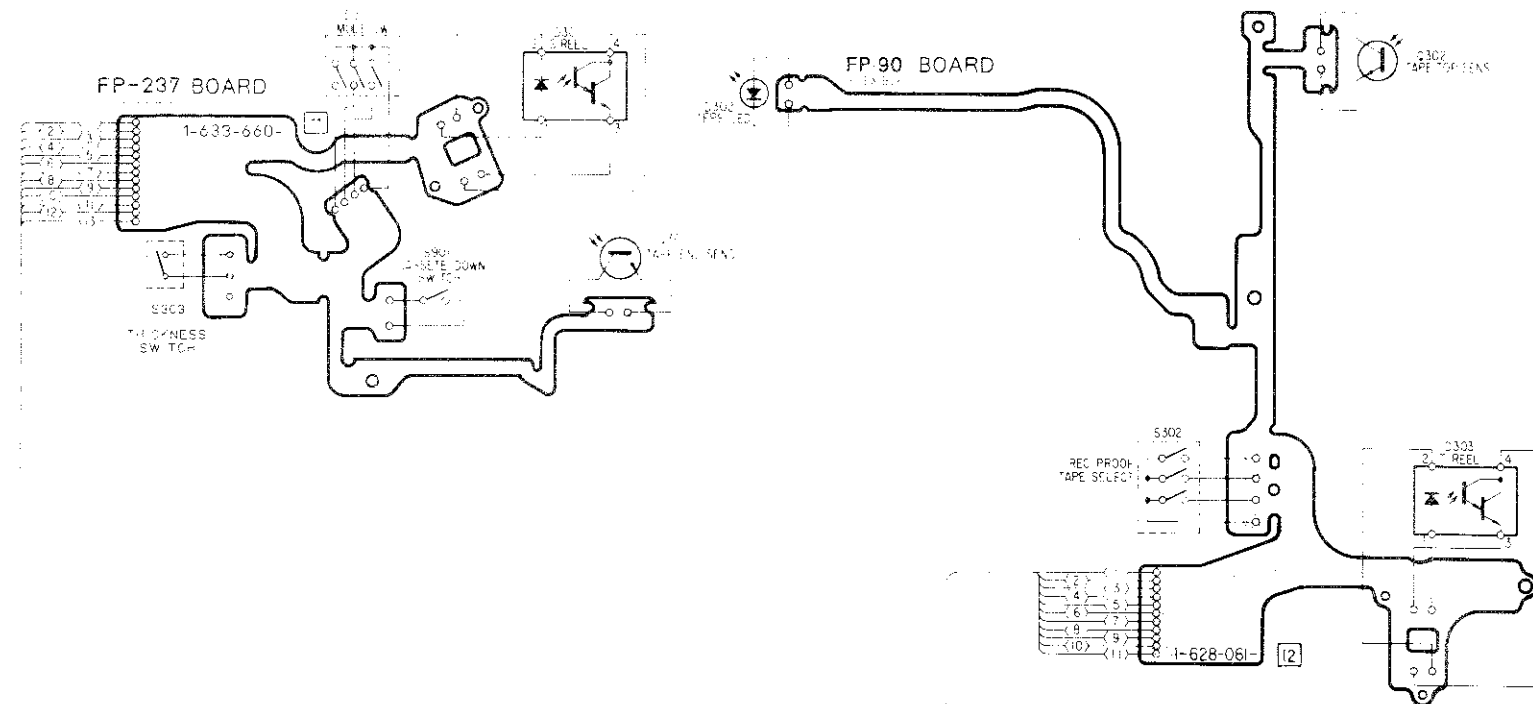
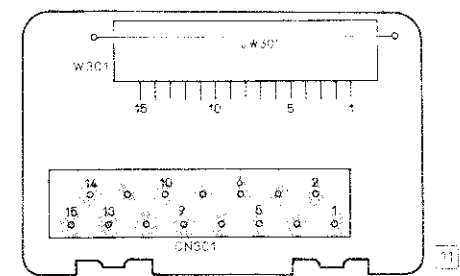


UC-4 BOARD

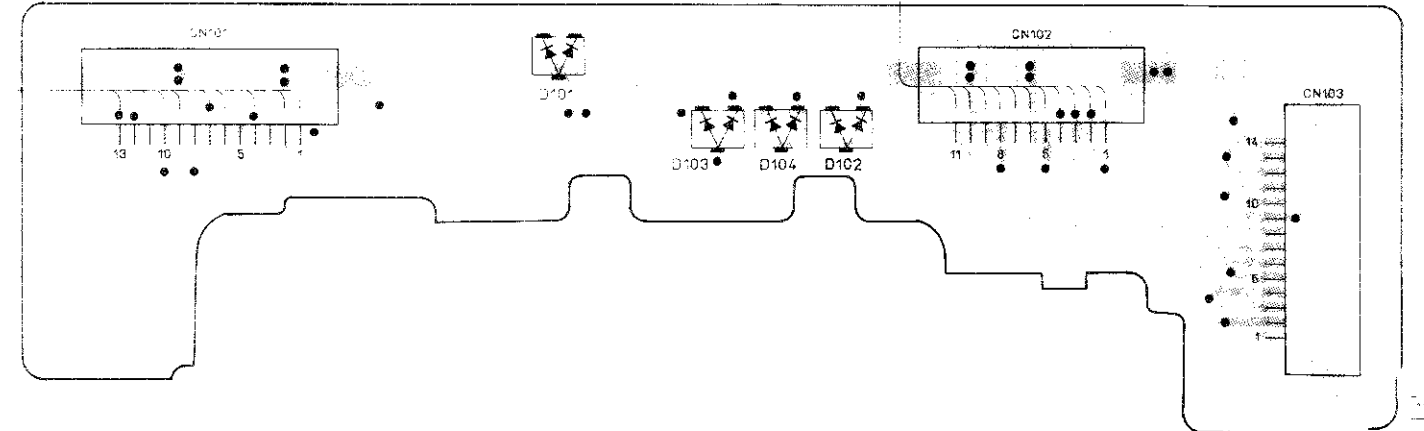




CC-26 BOARD



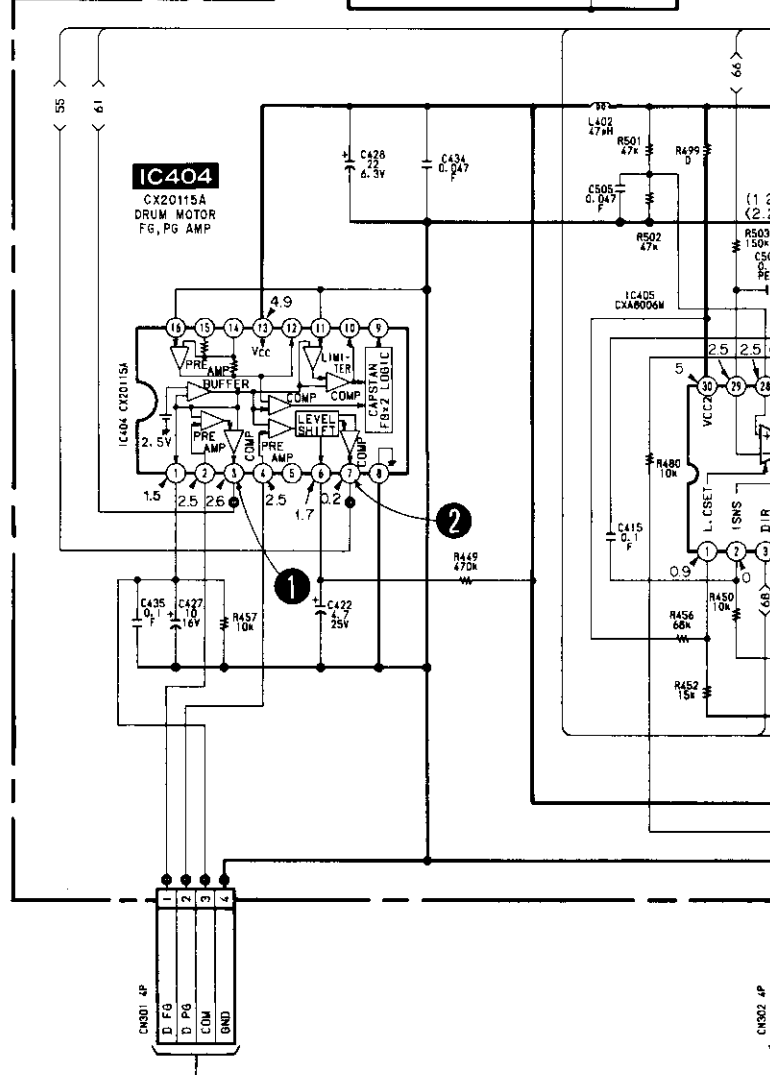
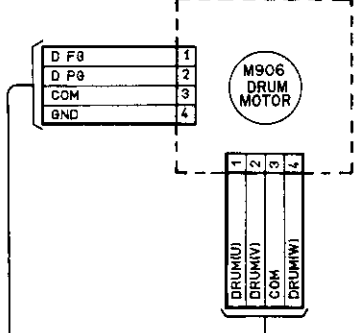
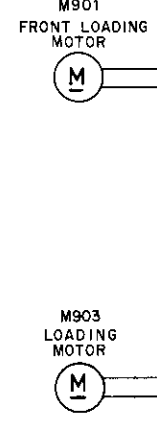
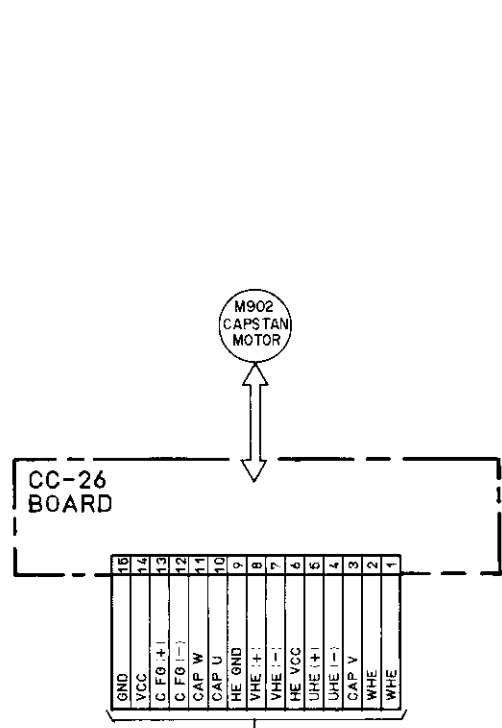
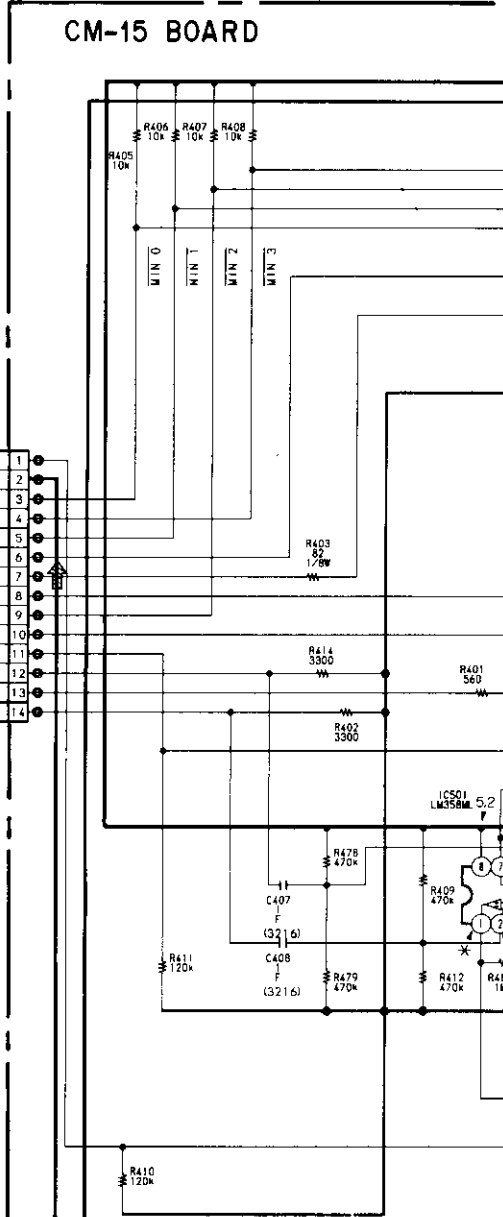
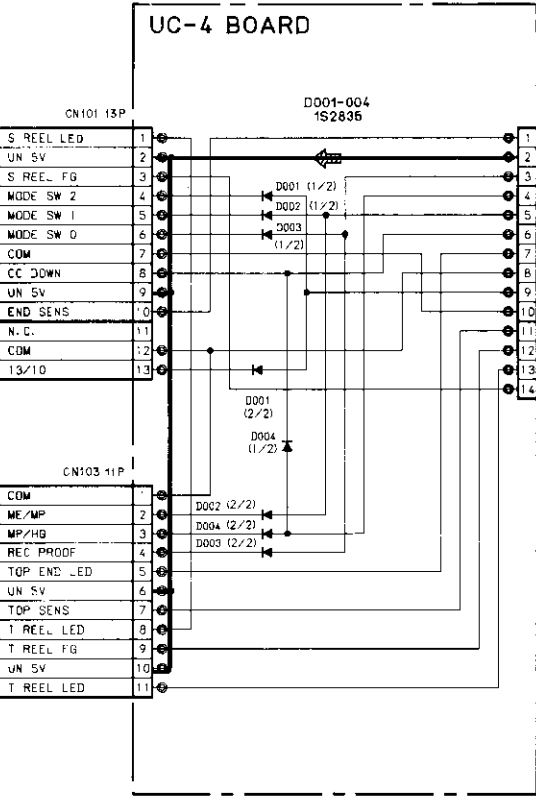
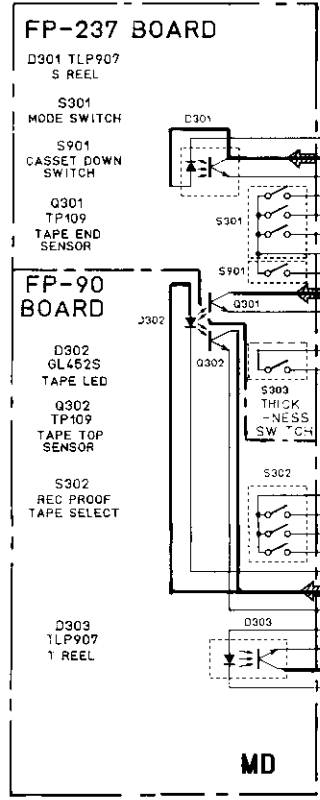
UC-4 BOARD

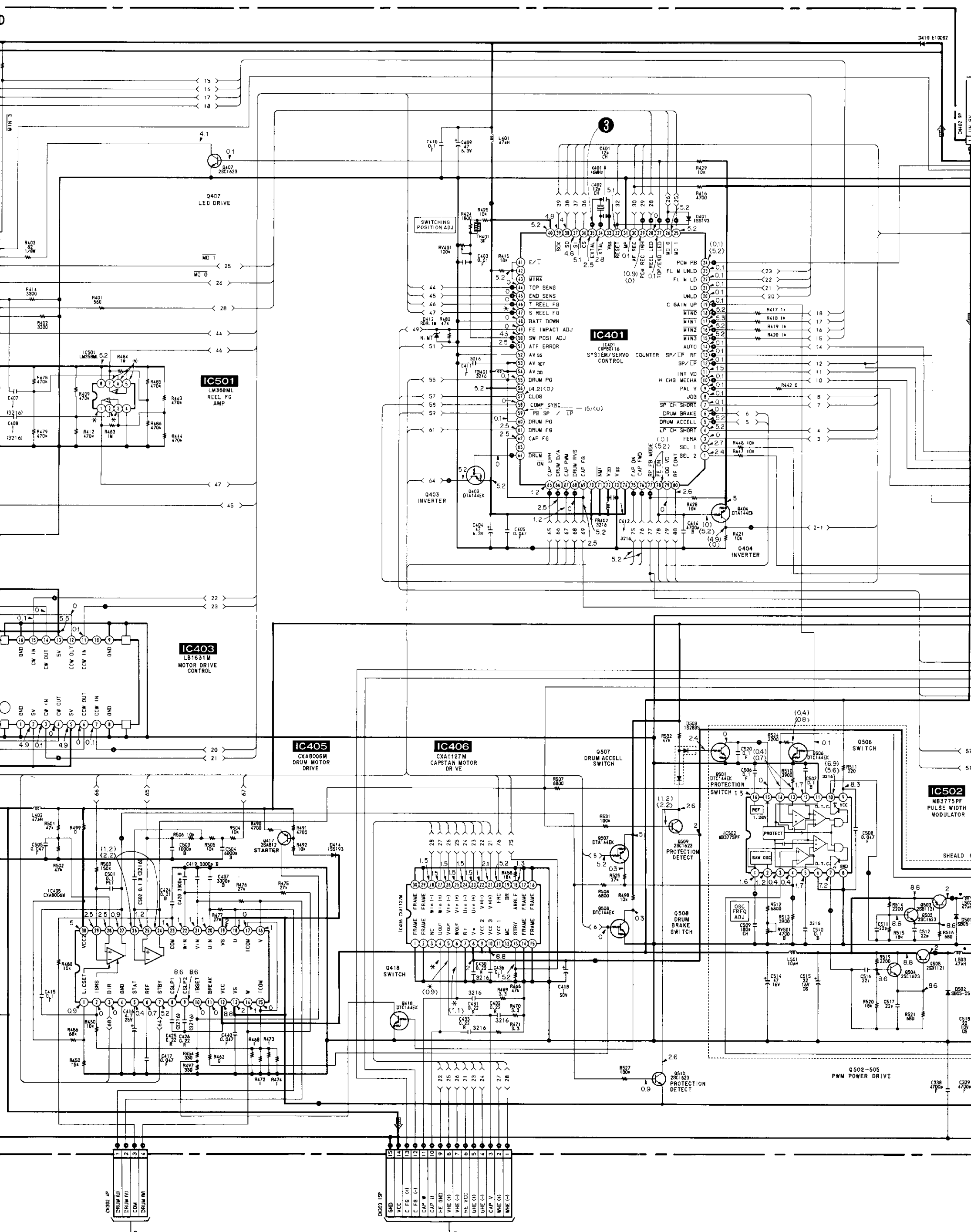


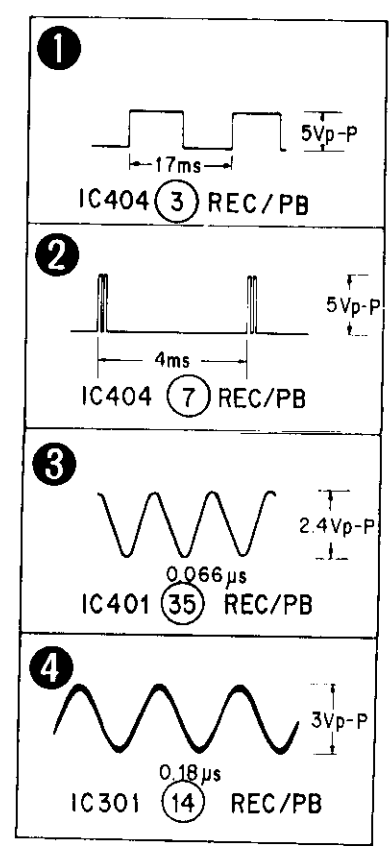
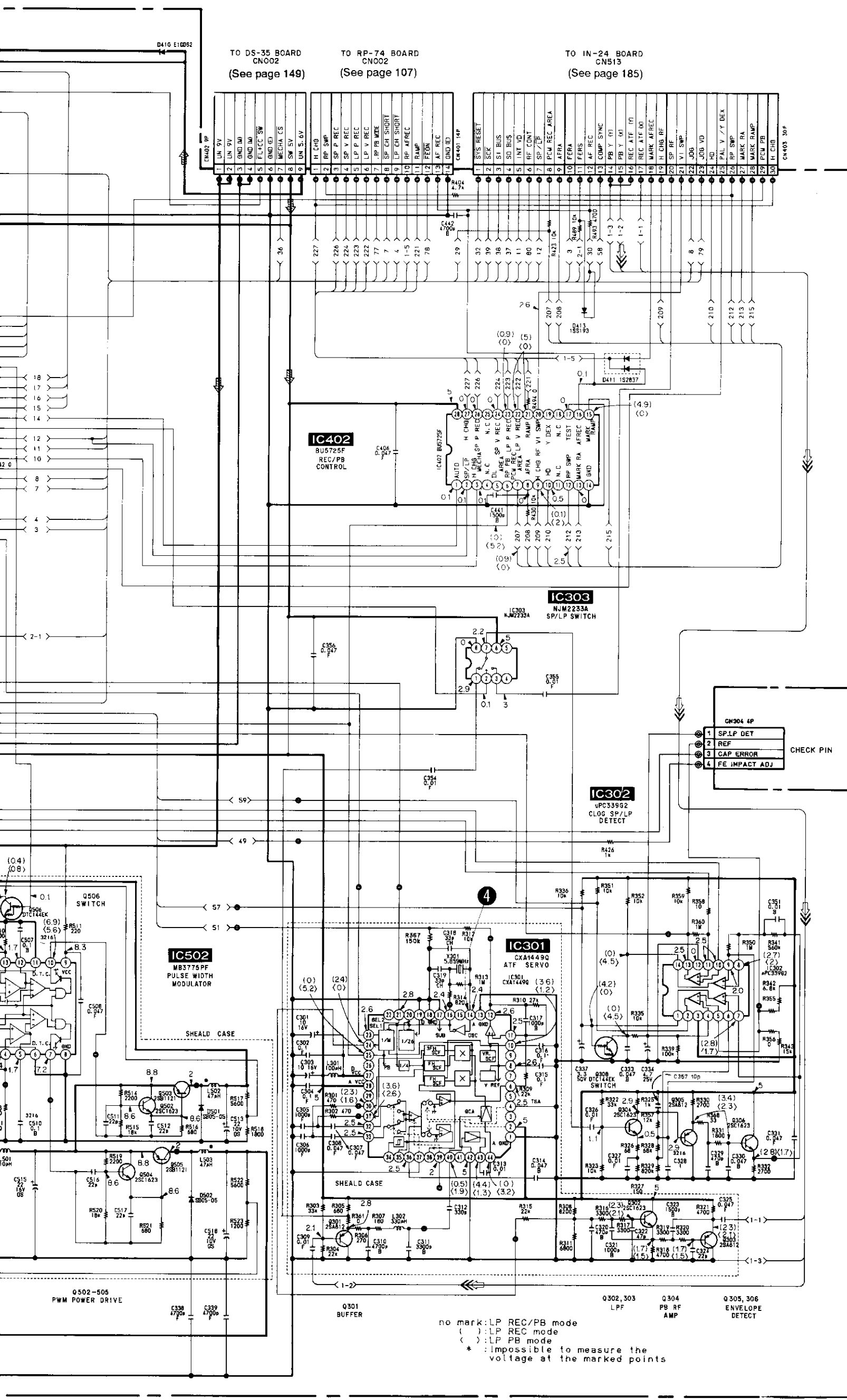
CM-15 (SERVO/SYSTEM CONTROL), UC-4, CC-26 (SIGNAL INTERMEDIATION) SCHEMATIC DIAGRAM

- Ref. No.: CN-15, UC-4, CC-26 Boards; 4,000 series -

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P







CN304 4P
1 SP.LP DET
2 REF
3 CAP ERROR
4 FE IMPACT ADJ
CHECK PIN

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			
PB			⇒⇒

DS-35 (DIGITAL SIGNAL PROCESS) PRINTED WIRING BOARD

- Ref. No : DS-35 Board: 5,000 series

DS-35 BOARD (COMPONENT SIDE)



R205
R206
R207
R208
R209
R210
R211
R212
R213
R214
R215
R216
R217
R218
R219
R220
R221
R222
R223
R224
R225
R226
R227
R228
R229
R230
R231
R232
R233
R234
R235
R236
R237
R238
R239
R240
R241
R242
R243
R244
R245
R246
R247
R248
R249
R250
R251
R252
R253
R254
R255
R256
R257
R258
R259
R260
R261
R262
R263
R264
R265
R266
R267
R268
R269
R270
R271
R272
R273
R274
R275
R276
R277
R278
R279
R280
R281
R282
R283
R284
R285
R286
R287
R288
R289
R290
R291
R292
R293
R294
R295
R296
R297
R298
R299
R300
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R311
R312
R313
R314
R315
R316
R317
R318
R319
R320
R321
R322
R323
R324
R325
R326
R327
R328
R329
R330
R331
R332
R333
R334
R335
R336
R337
R338
R339
R340
R341
R342
R343
R344
R345
R346
R347
R348
R349
R350
R351
R352
R353
R354
R355
R356
R357
R358
R359
R360
R361
R362
R363
R364
R365
R366
R367
R368
R369
R370
R371
R372
R373
R374
R375
R376
R377
R378
R379
R380
R381
R382
R383
R384
R385
R386
R387
R388
R389
R390
R391
R392
R393
R394
R395
R396
R397
R398
R399
R400
R401
R402
R403
R404
R405
R406
R407
R408
R409
R410
R411
R412
R413
R414
R415
R416
R417
R418
R419
R420
R421
R422
R423
R424
R425
R426
R427
R428
R429
R430
R431
R432
R433
R434
R435
R436
R437
R438
R439
R440
R441
R442
R443
R444
R445
R446
R447
R448
R449
R450
R451
R452
R453
R454
R455
R456
R457
R458
R459
R460
R461
R462
R463
R464
R465
R466
R467
R468
R469
R470
R471
R472
R473
R474
R475
R476
R477
R478
R479
R480
R481
R482
R483
R484
R485
R486
R487
R488
R489
R490
R491
R492
R493
R494
R495
R496
R497
R498
R499
R500
R501
R502
R503
R504
R505
R506
R507
R508
R509
R510
R511
R512
R513
R514
R515
R516
R517
R518
R519
R520
R521
R522
R523
R524
R525
R526
R527
R528
R529
R530
R531
R532
R533
R534
R535
R536
R537
R538
R539
R540
R541
R542
R543
R544
R545
R546
R547
R548
R549
R550
R551
R552
R553
R554
R555
R556
R557
R558
R559
R560
R561
R562
R563
R564
R565
R566
R567
R568
R569
R570
R571
R572
R573
R574
R575
R576
R577
R578
R579
R580
R581
R582
R583
R584
R585
R586
R587
R588
R589
R590
R591
R592
R593
R594
R595
R596
R597
R598
R599
R600
R601
R602
R603
R604
R605
R606
R607
R608
R609
R610
R611
R612
R613
R614
R615
R616
R617
R618
R619
R620
R621
R622
R623
R624
R625
R626
R627
R628
R629
R630
R631
R632
R633
R634
R635
R636
R637
R638
R639
R640
R641
R642
R643
R644
R645
R646
R647
R648
R649
R650
R651
R652
R653
R654
R655
R656
R657
R658
R659
R660
R661
R662
R663
R664
R665
R666
R667
R668
R669
R670
R671
R672
R673
R674
R675
R676
R677
R678
R679
R680
R681
R682
R683
R684
R685
R686
R687
R688
R689
R690
R691
R692
R693
R694
R695
R696
R697
R698
R699
R700
R701
R702
R703
R704
R705
R706
R707
R708
R709
R710
R711
R712
R713
R714
R715
R716
R717
R718
R719
R720
R721
R722
R723
R724
R725
R726
R727
R728
R729
R730
R731
R732
R733
R734
R735
R736
R737
R738
R739
R740
R741
R742
R743
R744
R745
R746
R747
R748
R749
R750
R751
R752
R753
R754
R755
R756
R757
R758
R759
R760
R761
R762
R763
R764
R765
R766
R767
R768
R769
R770
R771
R772
R773
R774
R775
R776
R777
R778
R779
R780
R781
R782
R783
R784
R785
R786
R787
R788
R789
R790
R791
R792
R793
R794
R795
R796
R797
R798
R799
R800
R801
R802
R803
R804
R805
R806
R807
R808
R809
R810
R811
R812
R813
R814
R815
R816
R817
R818
R819
R820
R821
R822
R823
R824
R825
R826
R827
R828
R829
R830
R831
R832
R833
R834
R835
R836
R837
R838
R839
R840
R841
R842
R843
R844
R845
R846
R847
R848
R849
R850
R851
R852
R853
R854
R855
R856
R857
R858
R859
R860
R861
R862
R863
R864
R865
R866
R867
R868
R869
R870
R871
R872
R873
R874
R875
R876
R877
R878
R879
R880
R881
R882
R883
R884
R885
R886
R887
R888
R889
R890
R891
R892
R893
R894
R895
R896
R897
R898
R899
R900
R901
R902
R903
R904
R905
R906
R907
R908
R909
R910
R911
R912
R913
R914
R915
R916
R917
R918
R919
R920
R921
R922
R923
R924
R925
R926
R927
R928
R929
R930
R931
R932
R933
R934
R935
R936
R937
R938
R939
R940
R941
R942
R943
R944
R945
R946
R947
R948
R949
R950
R951
R952
R953
R954
R955
R956
R957
R958
R959
R960
R961
R962
R963
R964
R965
R966
R967
R968
R969
R970
R971
R972
R973
R974
R975
R976
R977
R978
R979
R980
R981
R982
R983
R984
R985
R986
R987
R988
R989
R990
R991
R992
R993
R994
R995
R996
R997
R998
R999
R1000



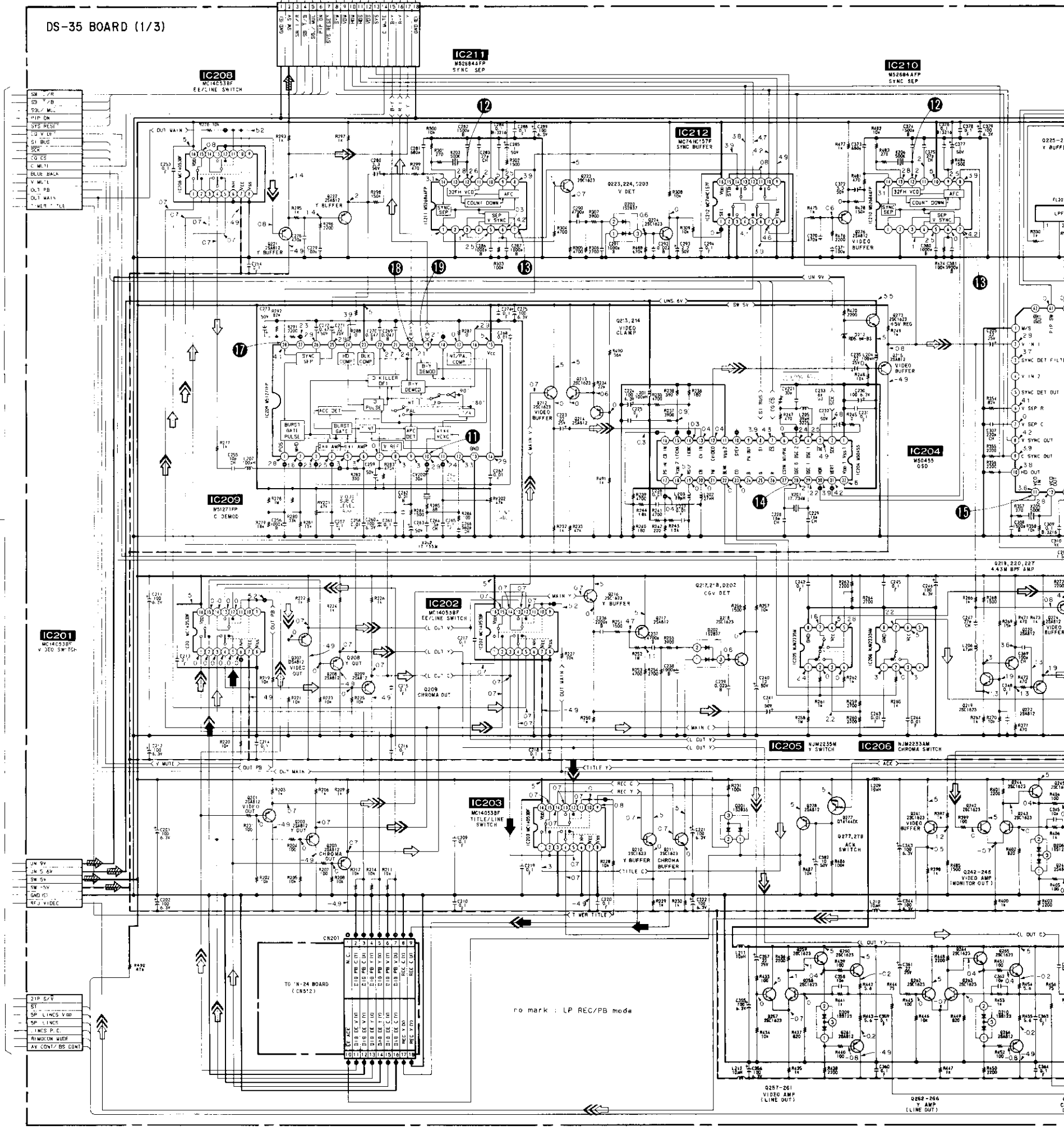
001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026	027	028	029	030	031	032	033	034	035	036	037	038	039	040	041	042	043	044	045	046	047	048	049	050	051	052	053	054	055	056	057	058	059	060	061	062	063	064	065	066	067	068	069	070	071	072	073	074	075	076	077	078	079	080	081	082	083	084	085	086	087	088	089	090	091	092	093	094	095	096	097	098	099	100
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

DS-35 (DIGITAL SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/3), (2/3)

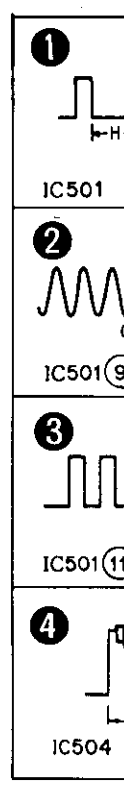
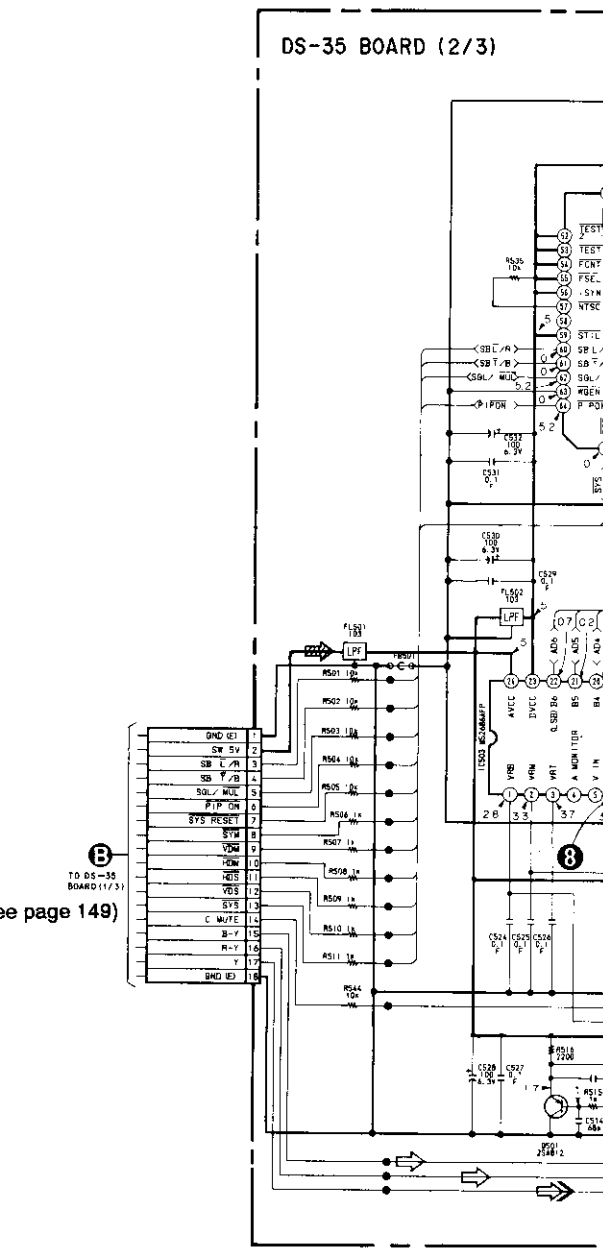
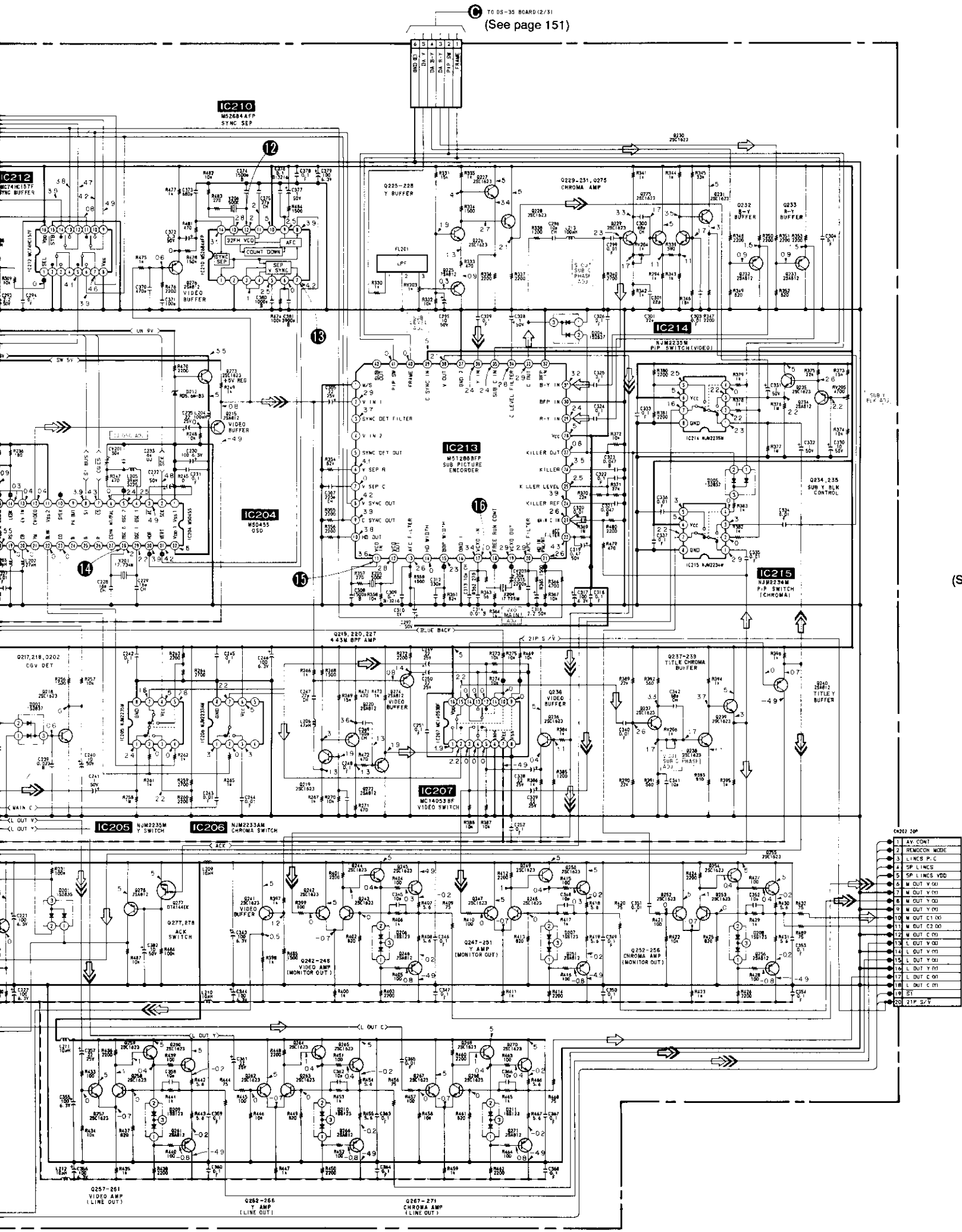
- Ref. No.: DS-35 Board; 5,000 series -

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

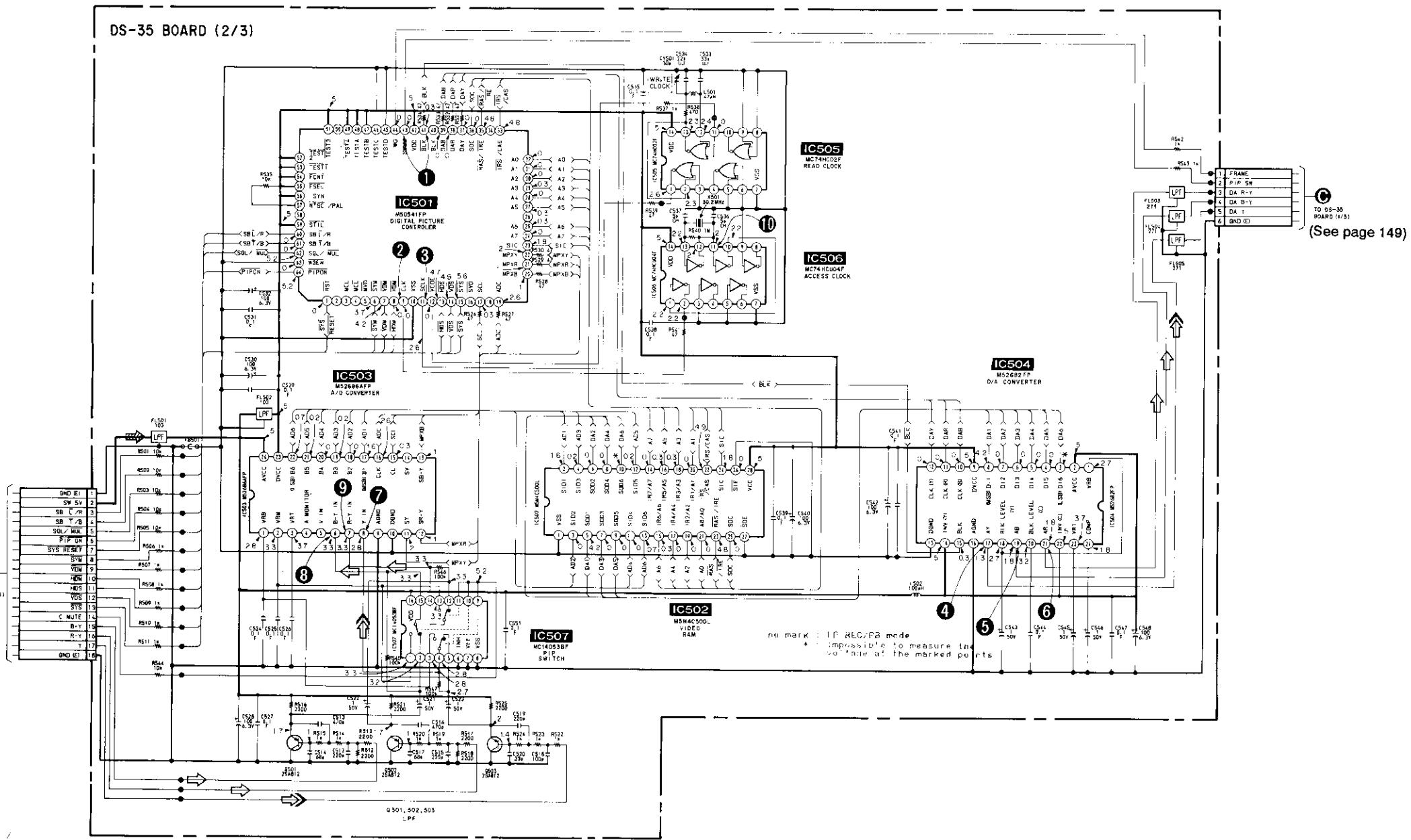
B TO DS-35 BOARD (2/3): (See page 151)



A TO DS-35 BOARD (2/3): (See page 153)

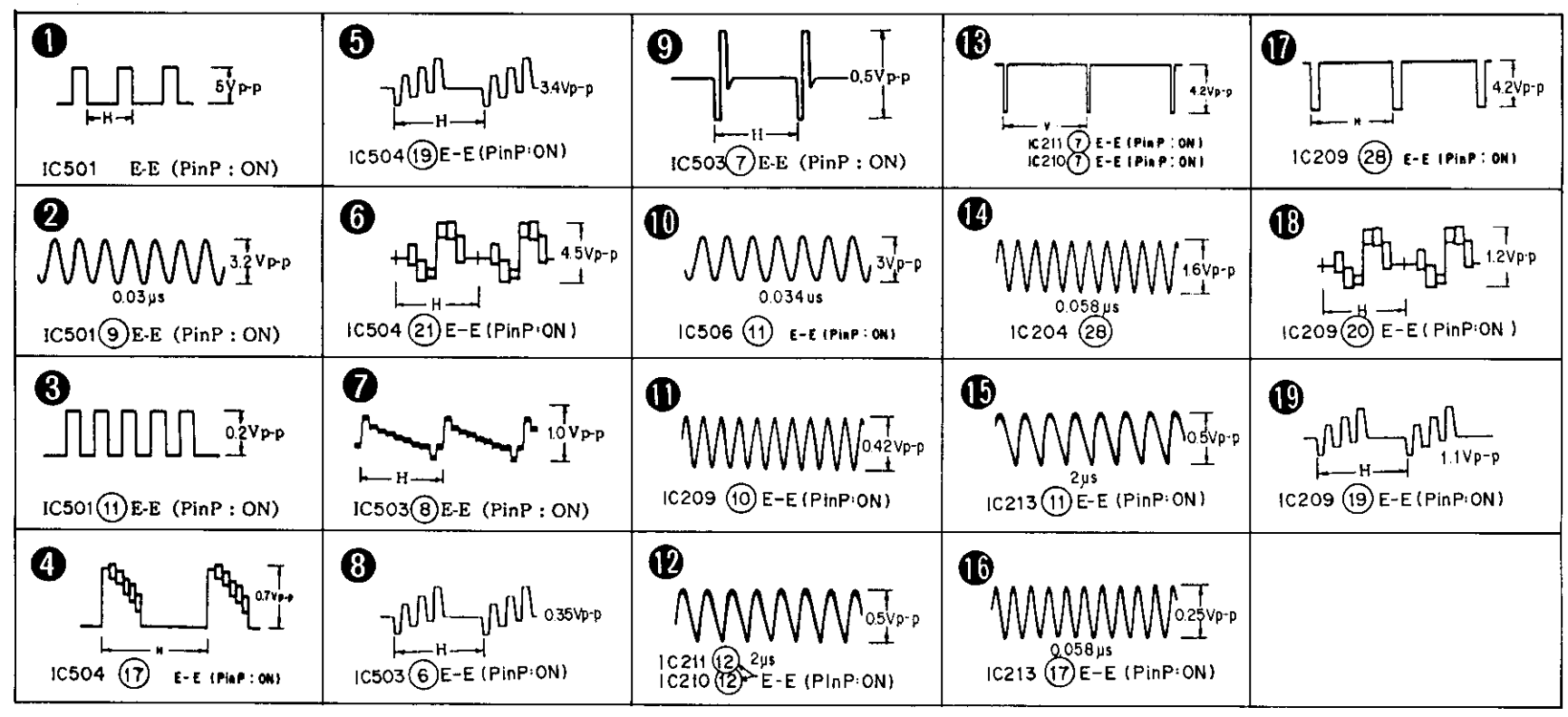


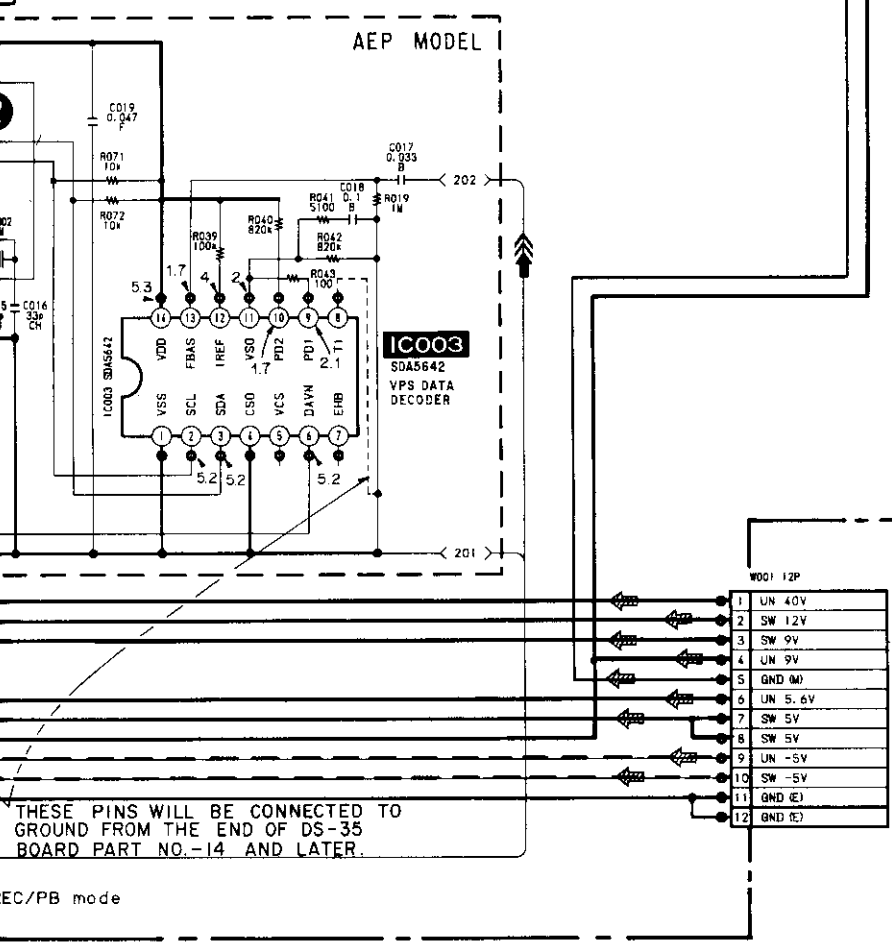
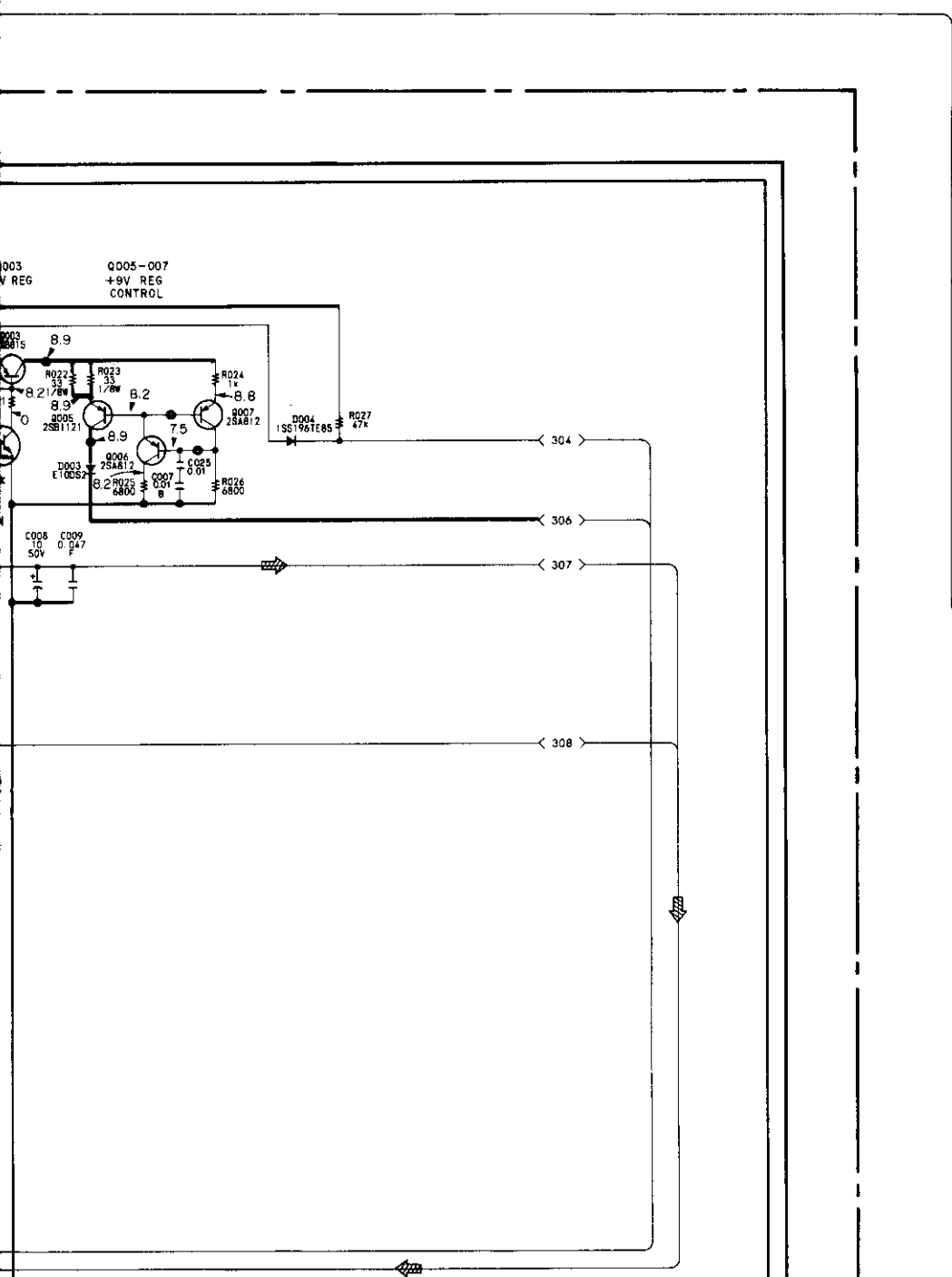
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P



TO DS-35 BOARD (1/3)
(See page 149)

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	⇒	
PB	⇨	⇨	⇨⇨

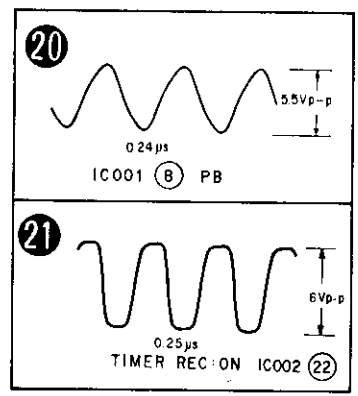
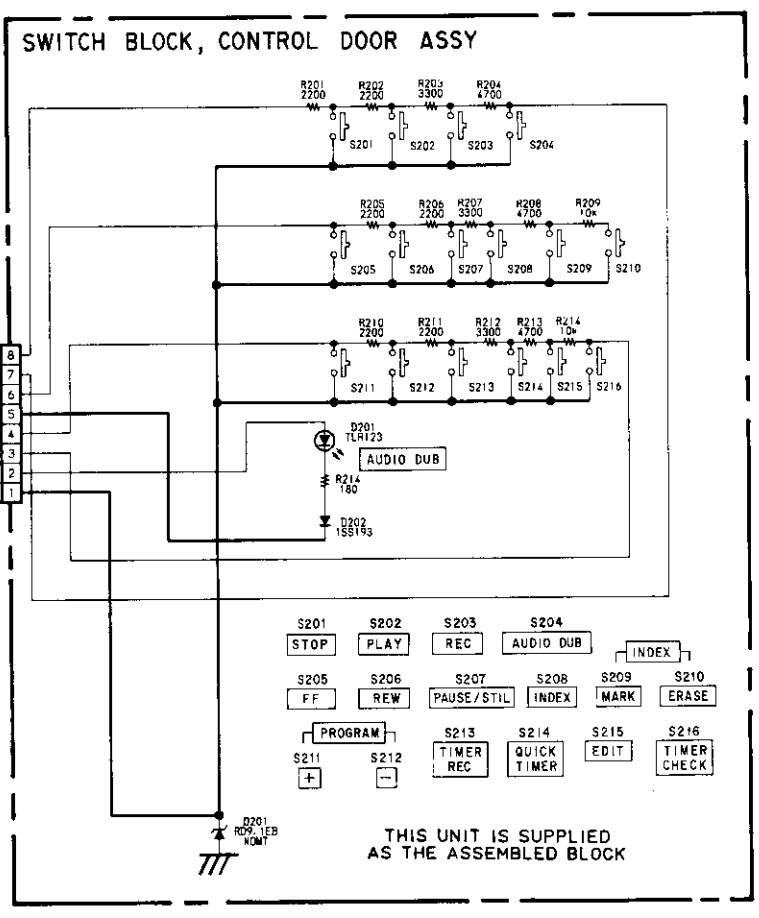




TO PS-196 BOARD
CNO01
(See page 181)

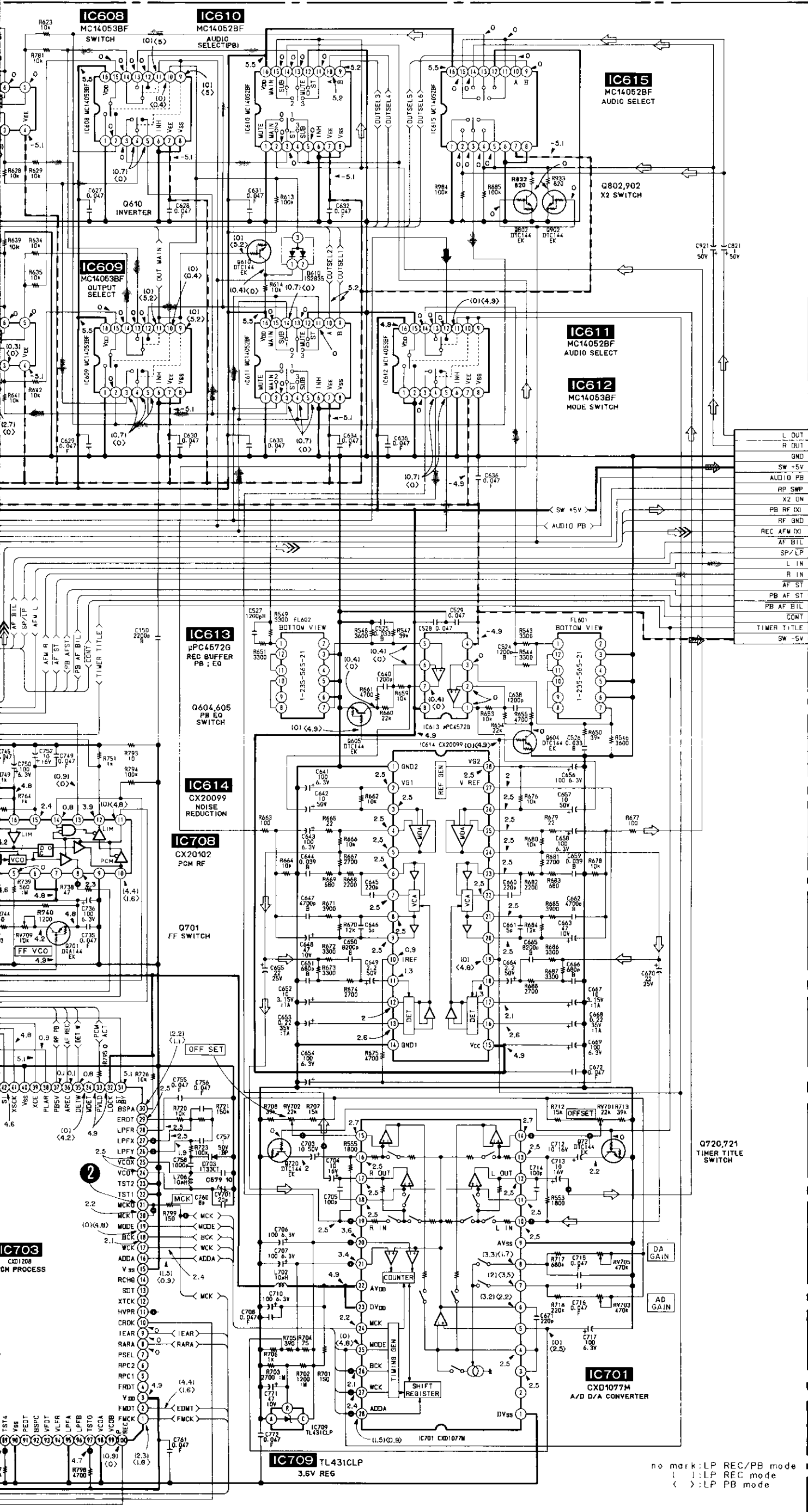
THESE PINS WILL BE CONNECTED TO GROUND FROM THE END OF DS-35 BOARD PART NO.-14 AND LATER.

- 1 UN 40V
- 2 SW 12V
- 3 SW 9V
- 4 UN 9V
- 5 GND 0V
- 6 UN 5.6V
- 7 SW 5V
- 8 SW 5V
- 9 UN -5V
- 10 SW -5V
- 11 GND E1
- 12 GND E2



	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC			➡➡➡	➡
PB			➡➡➡	➡

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P



TO PC-39 BOARD (2/2) (See page 160)

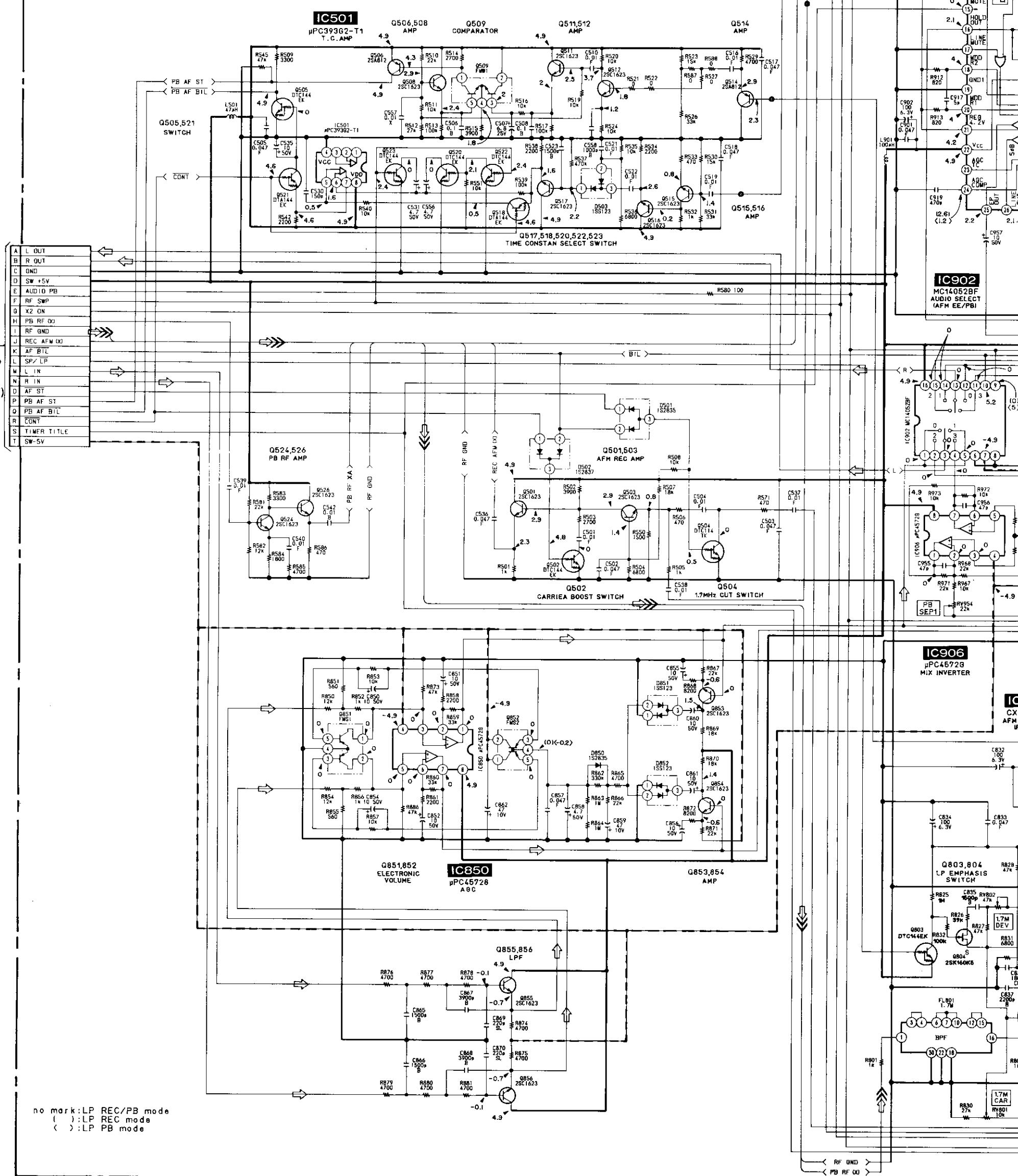
	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC				→
PB			⇨⇨	⇨

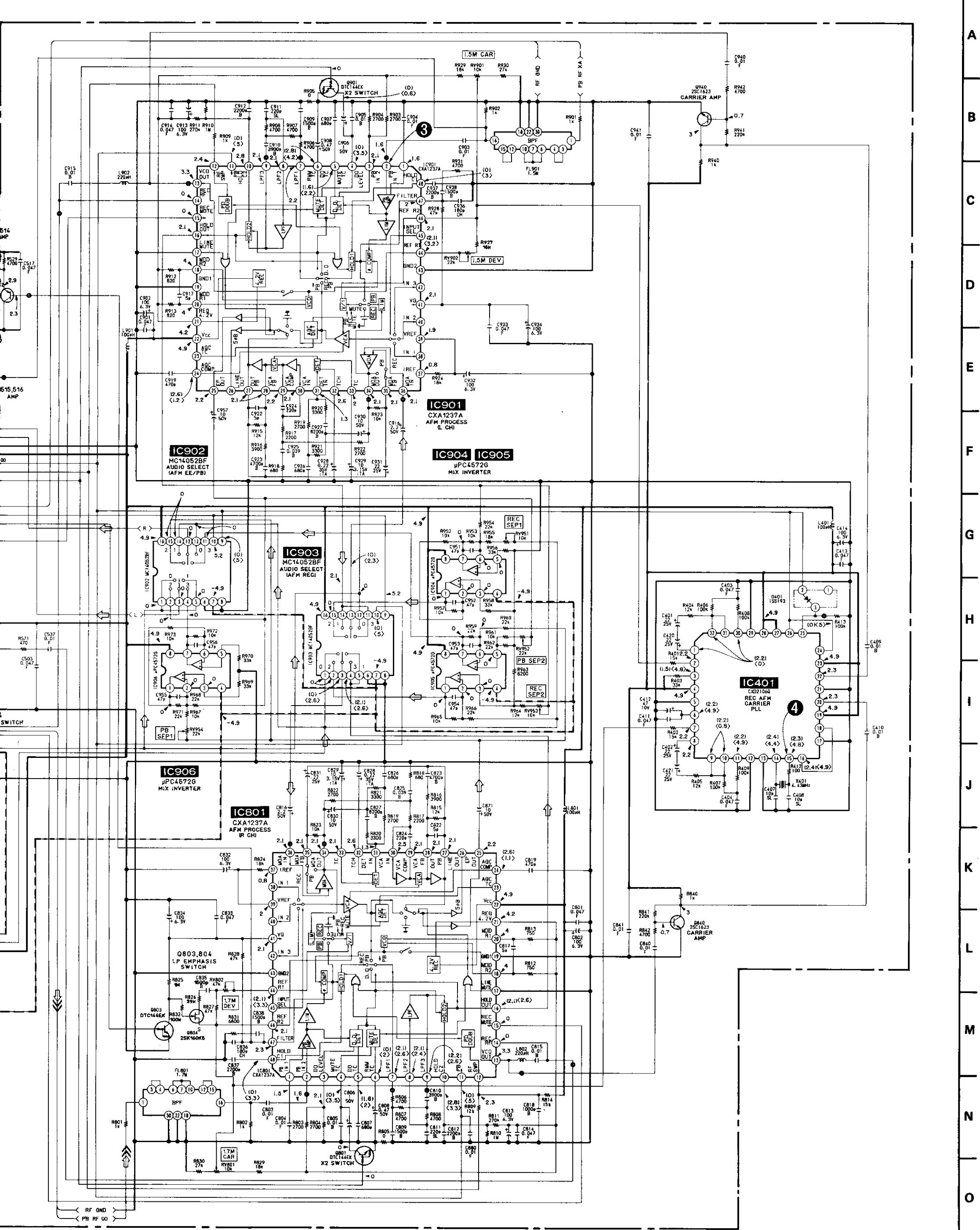
no mark: LP REC/PB mode
(): LP REC mode
(): LP PB mode

PC-39 (AUDIO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (2/2)

- Ref. No.: PC-39 Board; 6,000 series -

PC-39 BOARD (2/2)



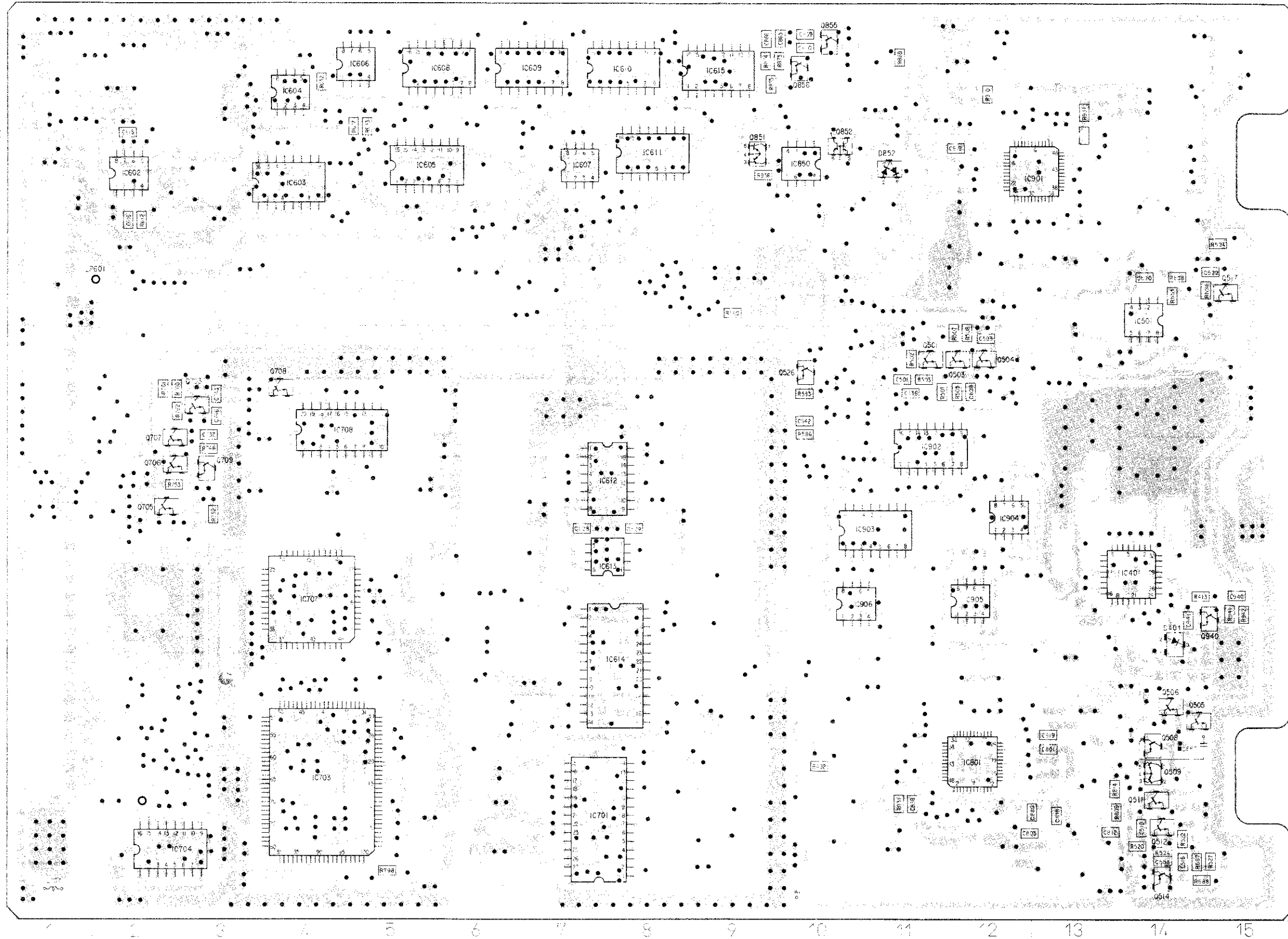


	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC				
PB			➡➡➡	➡

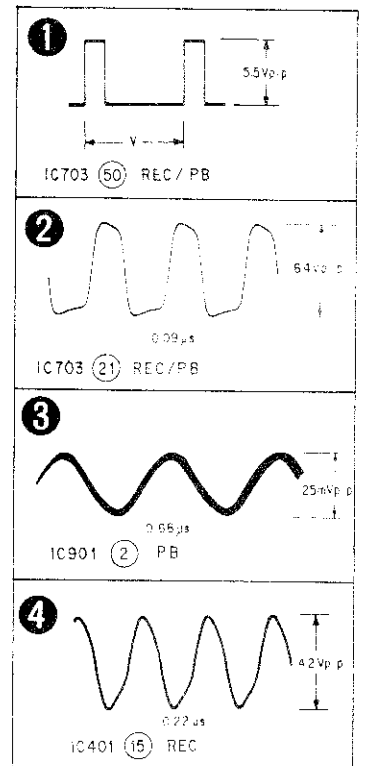
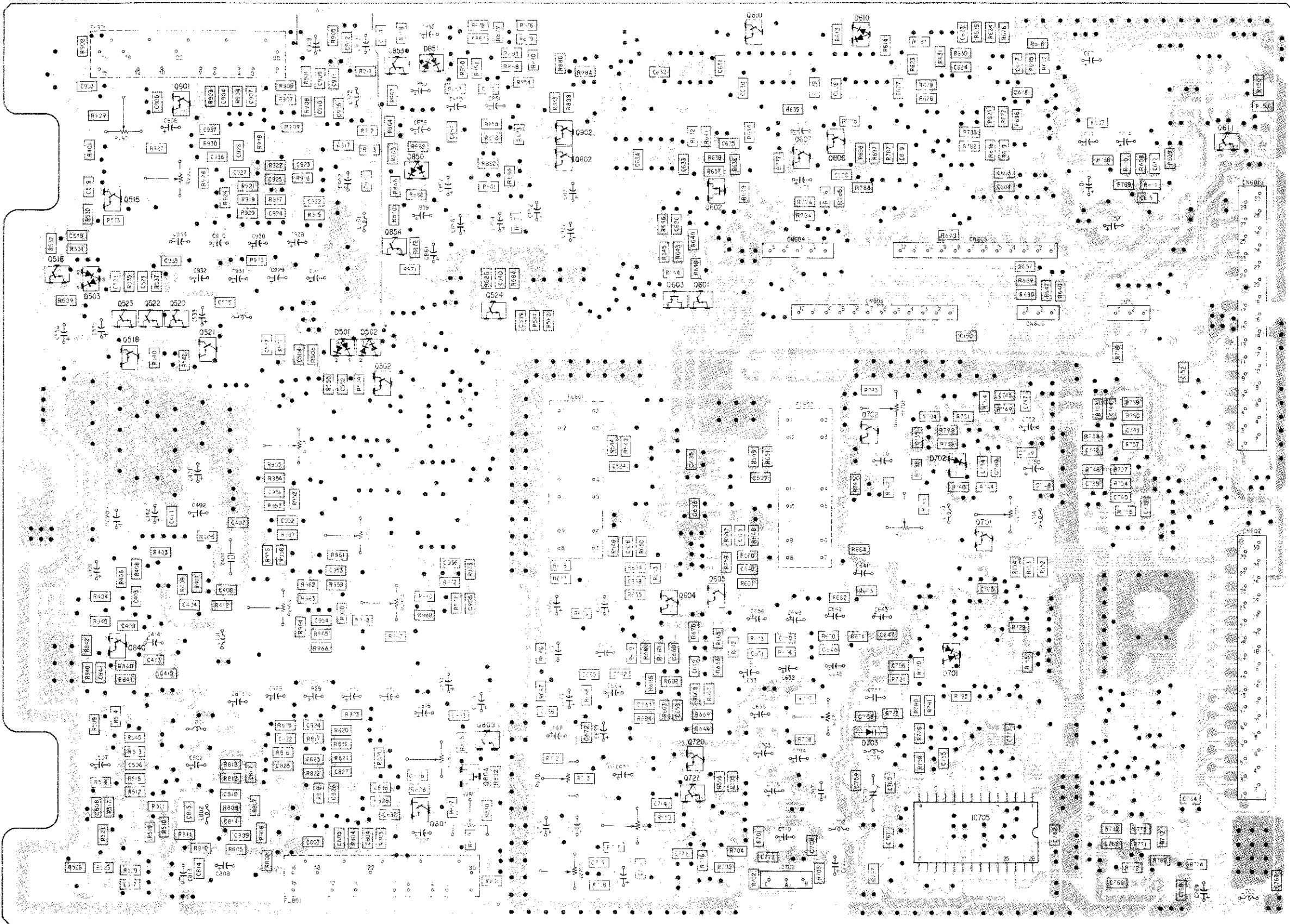
PC-39 BOARD

Q401	H-14	Q506	I-14
Q501	D-20	Q508	I-14
Q502	D-21	Q509	J-14
Q503	D-18	Q511	J-14
D610	A-26	Q512	J-14
D701	H-27	Q514	K-14
D702	F-28	Q515	C-18
D703	I-27	Q516	D-17
D850	B-21	Q517	D-15
D851	A-21	Q518	E-18
D852	B-11	Q520	D-18
		Q521	D-19
IC401	G-14	Q522	D-18
IC501	D-14	Q523	D-18
IC602	C-2	Q524	D-22
IC603	C-4	Q526	F-10
IC604	B-4	Q601	D-25
IC605	B-5	Q602	C-25
IC606	A-5	Q603	D-24
IC607	D-7	Q604	G-24
IC608	A-6	Q605	G-25
IC609	A-7	Q606	B-26
IC610	A-8	Q607	B-26
IC611	B-8	Q610	A-25
IC612	F-8	Q611	B-31
IC613	G-8	Q701	Q-28
IC614	H-8	Q702	E-27
IC615	A-9	Q703	E-3
IC701	J-7	Q705	F-2
IC703	J-4	Q706	F-2
IC704	J-2	Q707	F-2
IC705	J-28	Q708	I-25
IC707	G-4	Q709	E-3
IC708	F-4	Q720	-25
IC709	K-26	Q721	J-24
IC801	I-12	Q801	J-21
IC850	B-10	Q802	B-23
IC901	C-13	Q840	H-18
IC902	F-11	Q851	B-9
IC903	G-11	Q852	B-10
IC904	G-12	Q853	A-21
IC905	H-10	Q854	C-21
IC906	H-10	Q855	A-10
		Q856	A-10
Q501	E-11	Q901	E-18
Q502	E-21	Q902	B-23
Q503	E-12	Q940	H-17
Q504	E-12		
Q505	I-14		

PC-39 BOARD (COMPONENT SIDE)

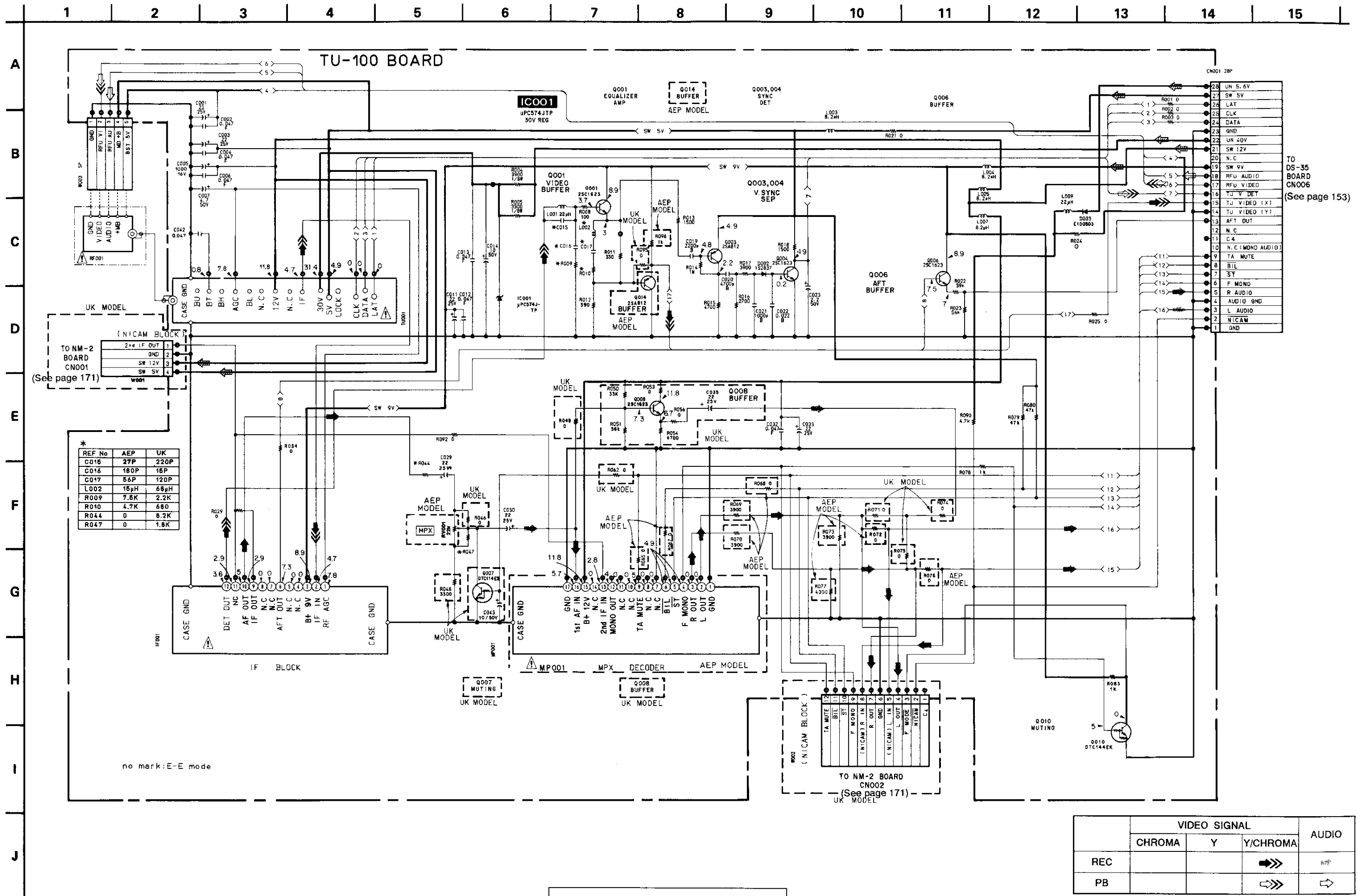


PC-39 BOARD (CONDUCTOR SIDE)



TU-100 (TUNER) SCHEMATIC DIAGRAM

- Ref. No.: TU-100 Board; 7,000 series -

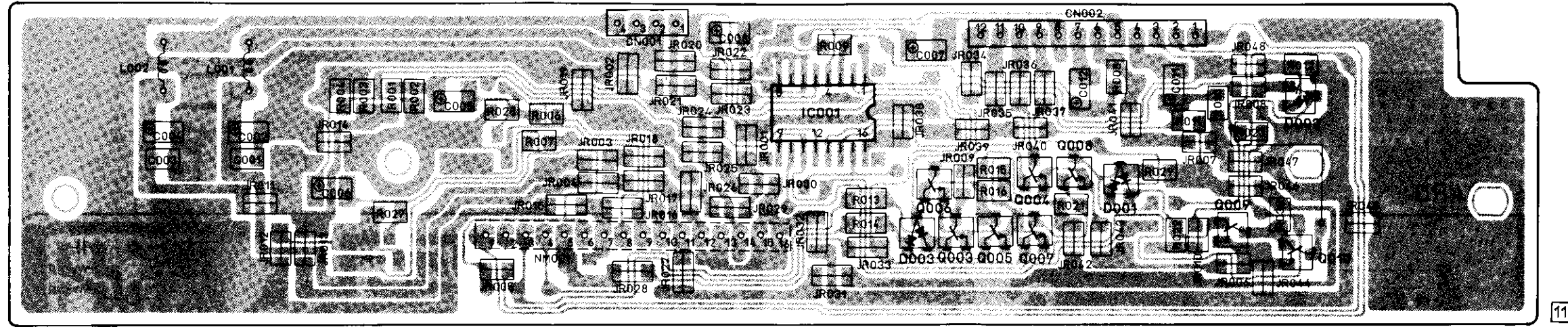


	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC			▶▶▶	▶▶▶
PB			◀◀◀	◀

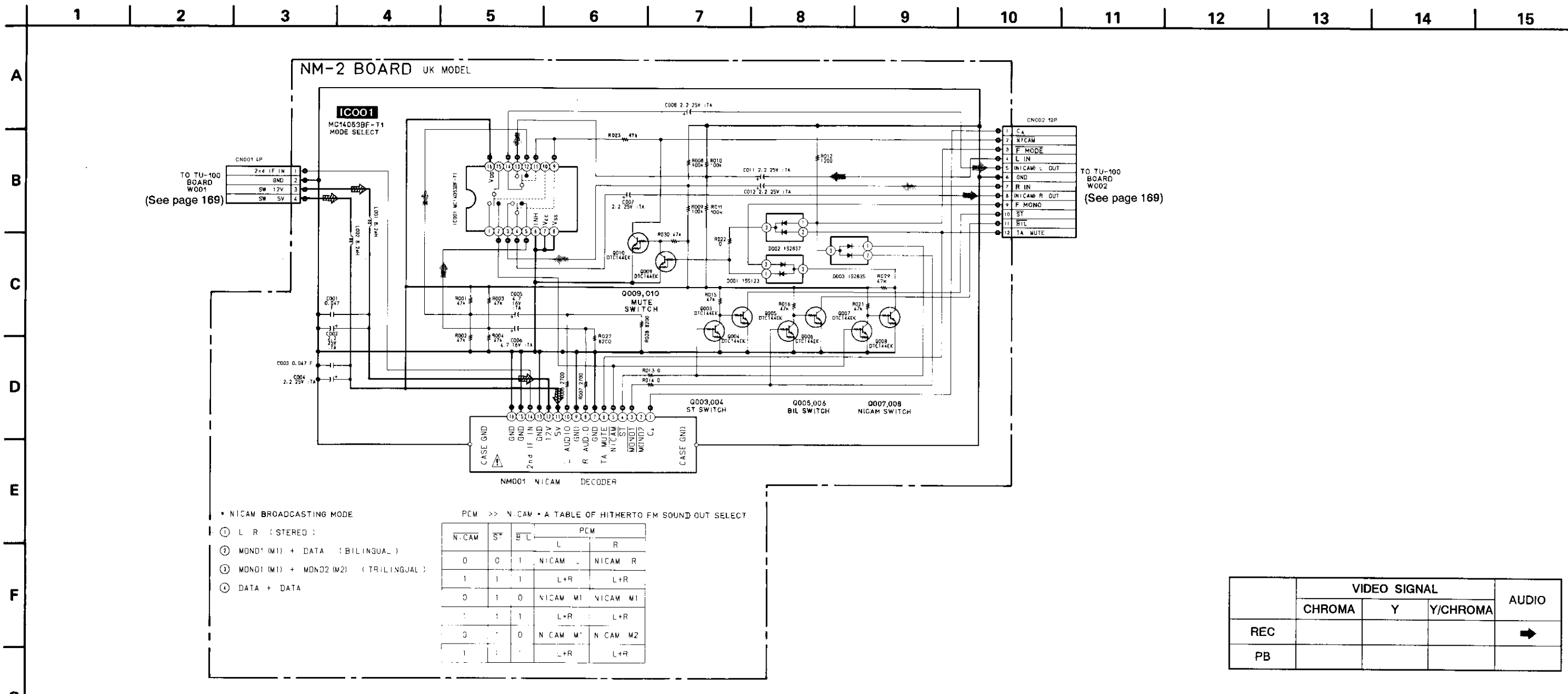
NM-2 (NICAM) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

- Ref. No.: NM-2 Board; 9,000 series -

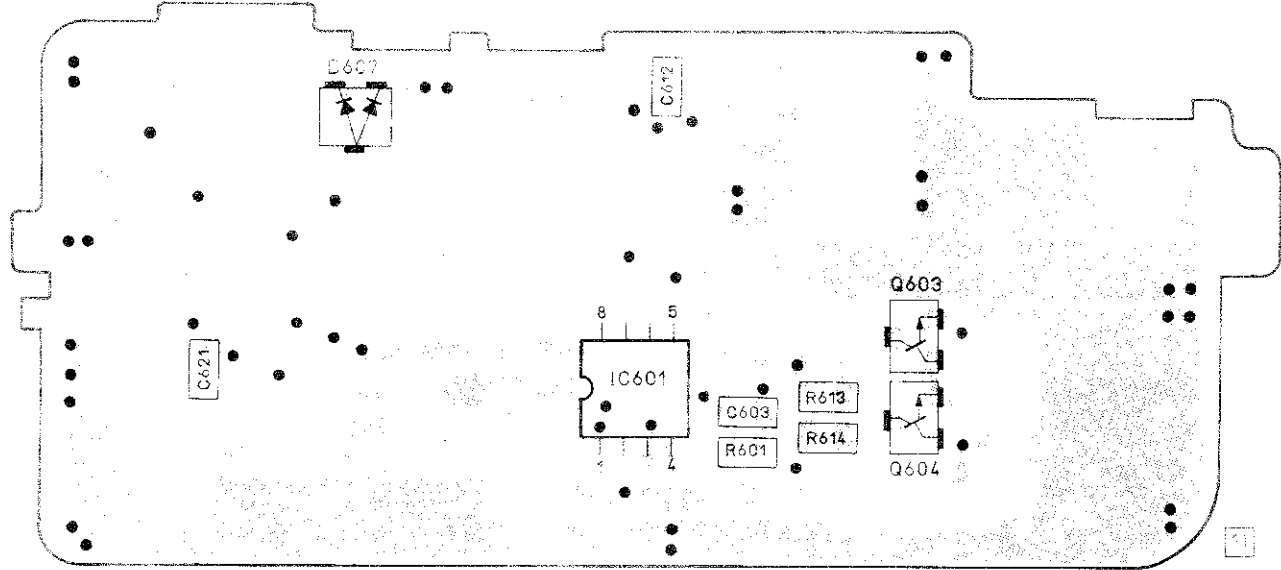
NM-2 BOARD UK MODEL



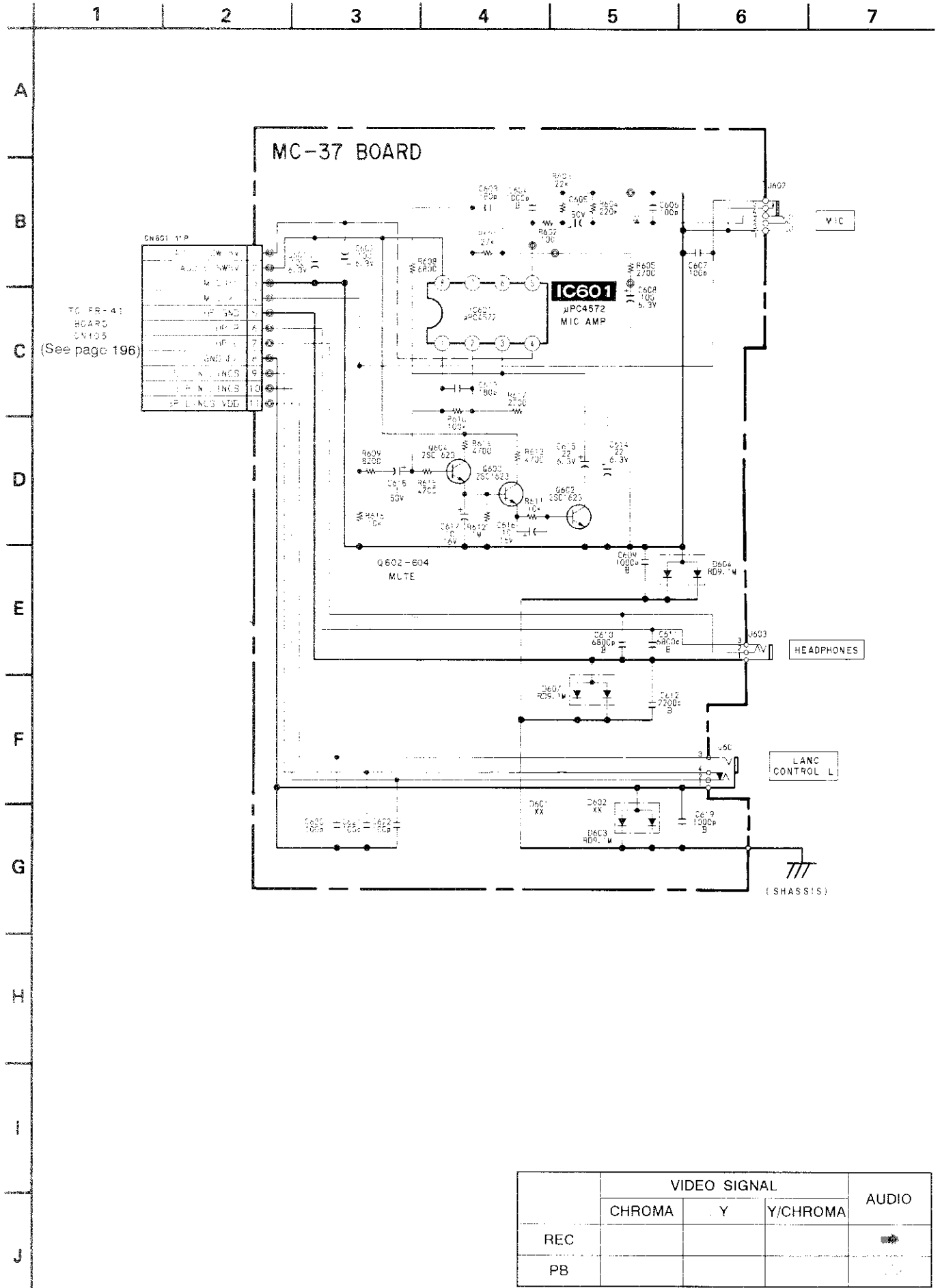
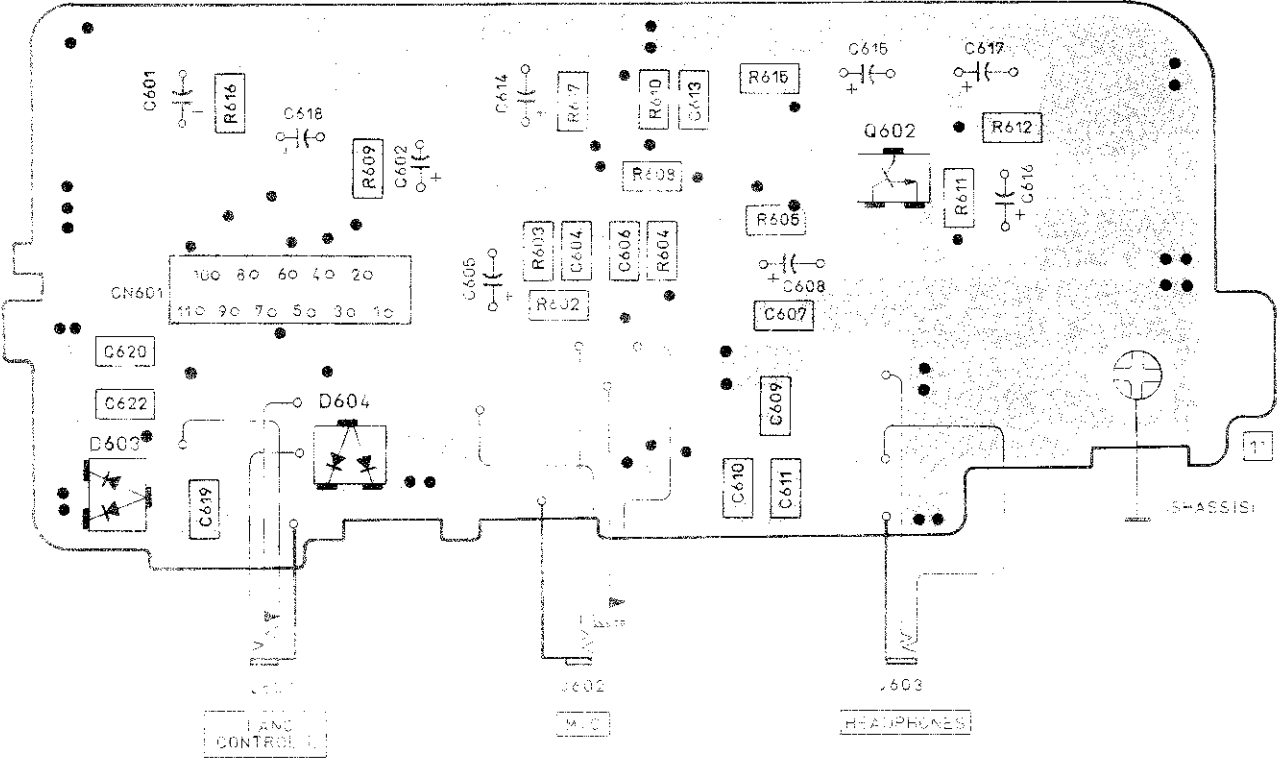
11



MC-37 BOARD (COMPONENT SIDE)



MC-37 BOARD (CONDUCTOR SIDE)



	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC				■
PB				○

FL-24 (FLUORESCENT DISPLAY) PRINTED WIRING BOARD

- Ref. No.: FL-24 Board: 11,000 series -

- Ref. -

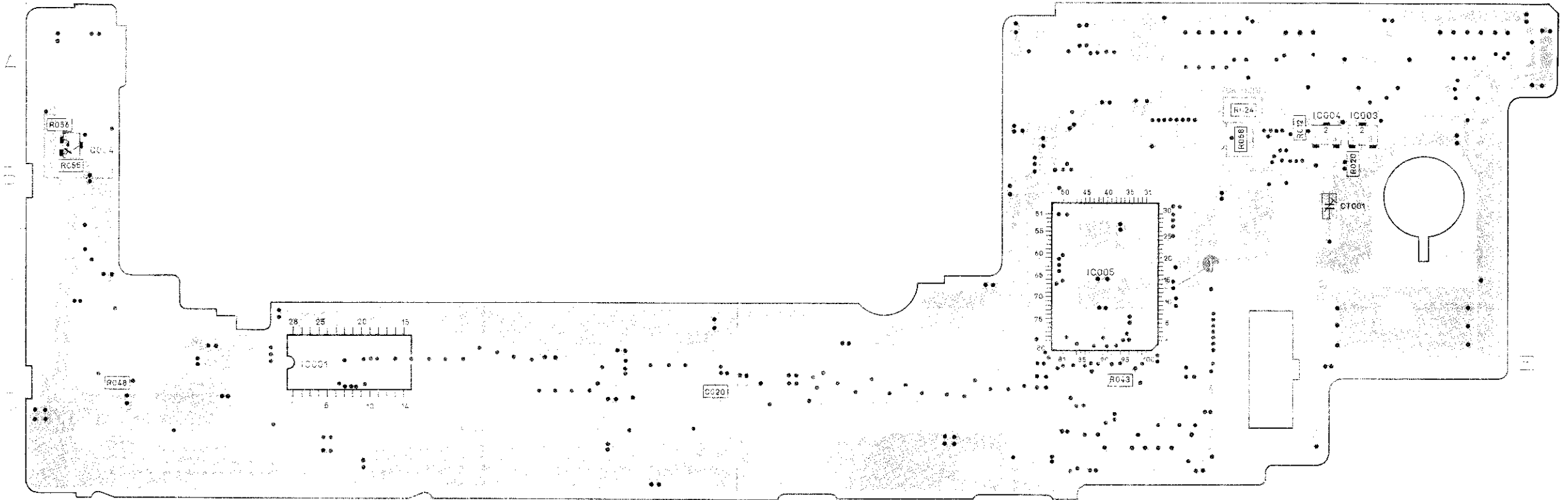
FL-24 BOARD FRONT VIEW

FL-24 BOARD

- D001 I-10
- D002 H-1
- D003 G-1
- D004 I-1
- D005 I-1
- D006 H-12
- D007 G-1
- D008 H-1
- D009 I-11
- D010 H-1
(UK model)

- IC001 D-3
- IC002 G-1
- IC003 B-12
- IC004 B-12
- IC005 C-10
- IC006 F-7

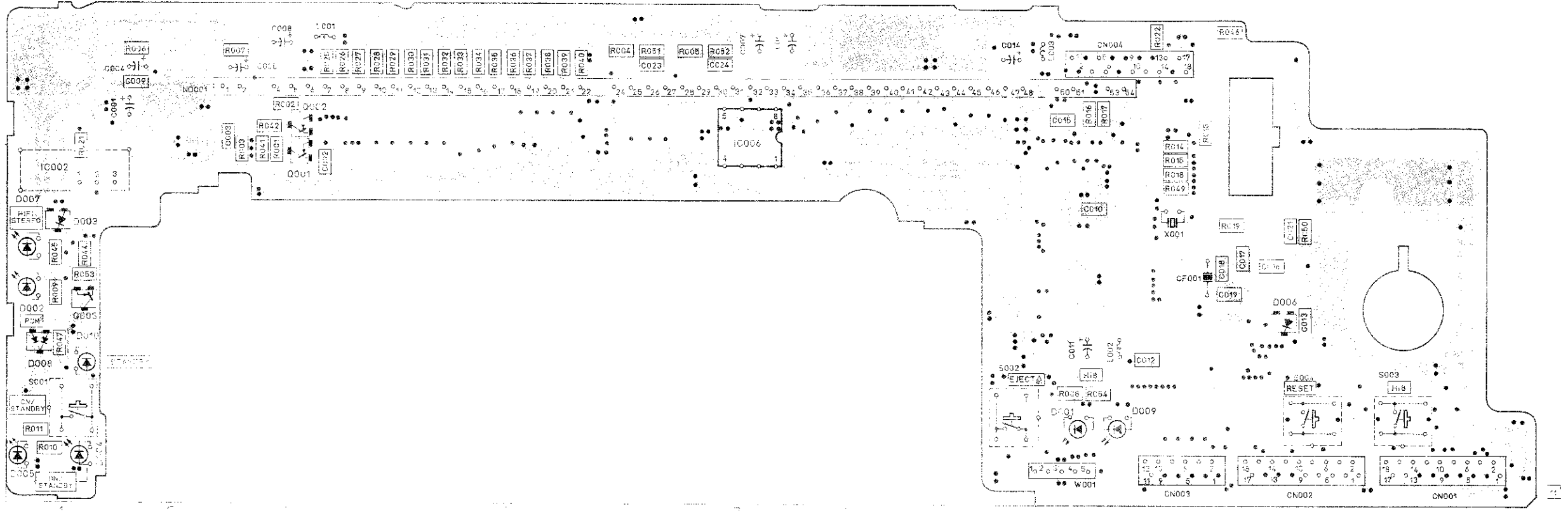
- Q001 G-3
- Q002 F-3
- Q003 H-1
- Q004 B-1
(UK model)



PS-196 BOARD

- D1 A-2
- D2 A-6
- D3 A-8
- D4 A-8
- D5 A-8
- D6 B-6
- D7 A-7
- D8 B-6
- D9 B-9
- D10 B-7
- D11 B-7
- D12 B-10
- D13 B-10
- D14 B-9
- D15 C-9
- D16 B-8
- IC1 B-4
- IC2 C-5
- IC3 B-9
- IC4 A-9
- IC5 B-7
- IC6 C-7
- IC7 A-10
- PH1 C-5
- Q1 C-8
- Q2 A-7
- Q3 C-7
- Q4 B-9
- Q5 A-6

FL-24 BOARD REAR VIEW

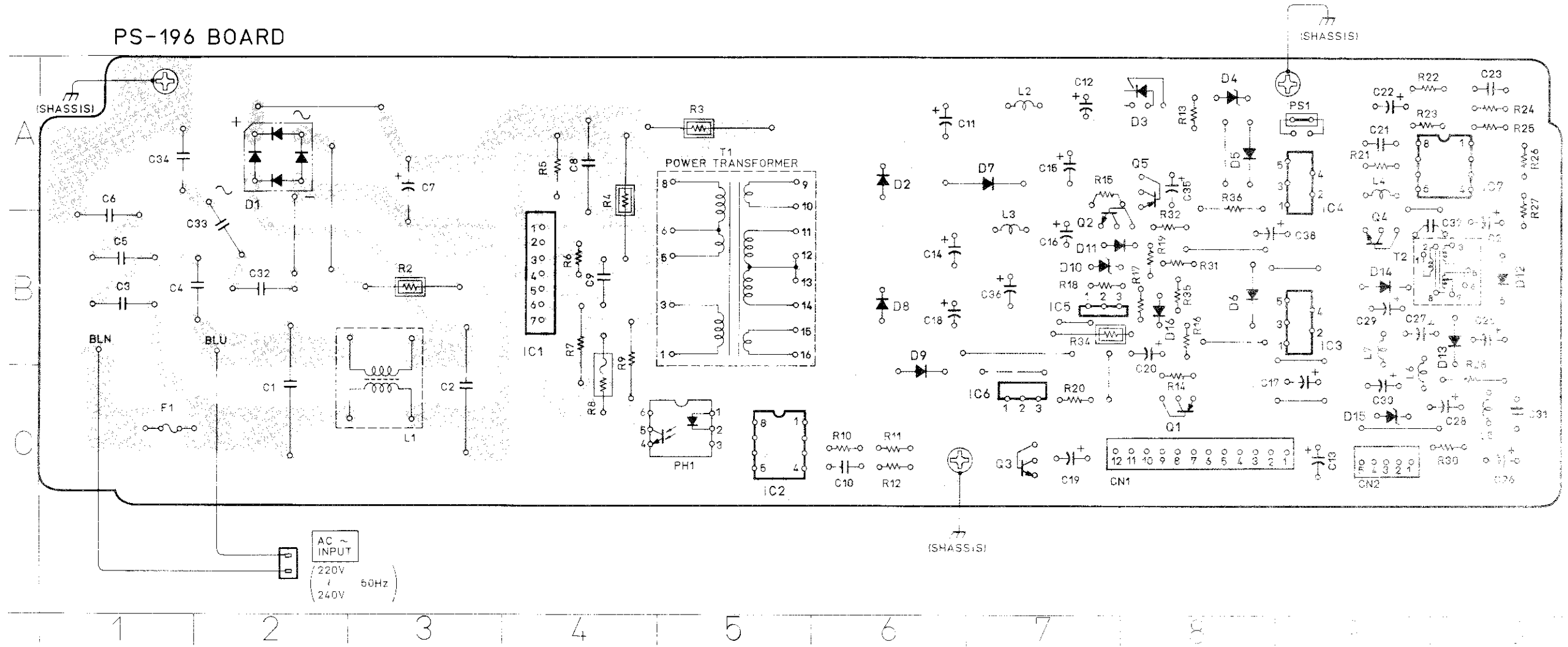


PS-196 (POWER SUPPLY) PRINTED WIRING BOARD

Ref. No.: PS-196 Board; 12,000 series

PS-196 BOARD

- D1 A-2
- D2 A-6
- D3 A-8
- D4 A-8
- D5 A-8
- D6 B-8
- D7 A-7
- D8 B-6
- D9 B-9
- D10 B-7
- D11 B-7
- D12 B-10
- D13 B-10
- D14 B-9
- D15 C-9
- D16 B-8
- IC1 B-4
- IC2 C-5
- IC3 B-9
- IC4 A-9
- IC5 B-7
- IC6 C-7
- IC7 A-10
- PH1 C-5
- O1 C-8
- O2 A-7
- O3 C-7
- O4 B-9
- O5 A-6



FL-24 (FLUORESCENT DISPLAY) SCHEMATIC DIAGRAM

- Ref. No.: FL-24 Board; 11,000 series -

INTERNAL CONNECTION

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	STEREO	EP	VTR	EVERY WEEK	Mo	Tu	We	Fr	Sa	TUNE	
S2	MAIN	a1	a1	Su	a1	a1	Th	a1	a1	AFT	
S3	L	b1	b1	D	b1	b1	M Up	b1	b1	EDIT	
S4	NICAM	c1	c1	H	c1	c1	M Down	c1	c1	CATV	
S5	▷ R	d1	d1		d1	d1	co14	d1	d1		
S6	●	e1	e1	PM	e1	e1	co13	e1	e1	AUTO	
S7	SUB	f1	f1	ON	f1	f1	co11	f1	f1		
S8	R	g1	g1	AM	g1	g1	co12	g1	g1		
S9	▷ M								Y	BS	
S10	▷ L	g2			a2	a2	a2	a2	S	a2	a2
S11	□ R	SP	b2		b2	b2	b2	b2	b1,c2	b2	b2
S12	△ M	VPS	c2	OFF	c2	c2	c2	c2	TUNER	c2	c2
S13	△ L	LP	DEW	PM	d2	d2	d2	d2	LINE	d2	d2
S14	△ L	b2,c2	e2	AM	e2	e2	e2	e2	SIMUL	e2	e2
S15	□ L	INDEX	TIMER		f2	f2	f2	f2		f2	f2
S16	< R	SCAN	REC		g2	g2	g2	g2		g2	g2

PS-196 (P)
- Ref. No. 1

A

B

C

D

E

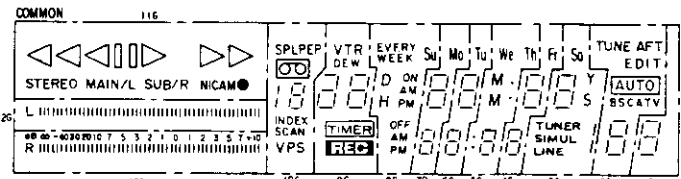
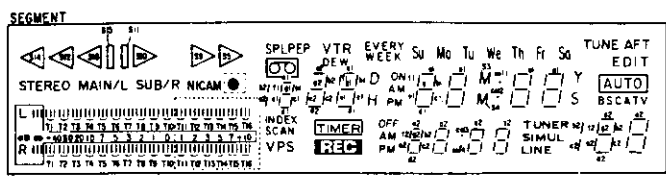
F

G

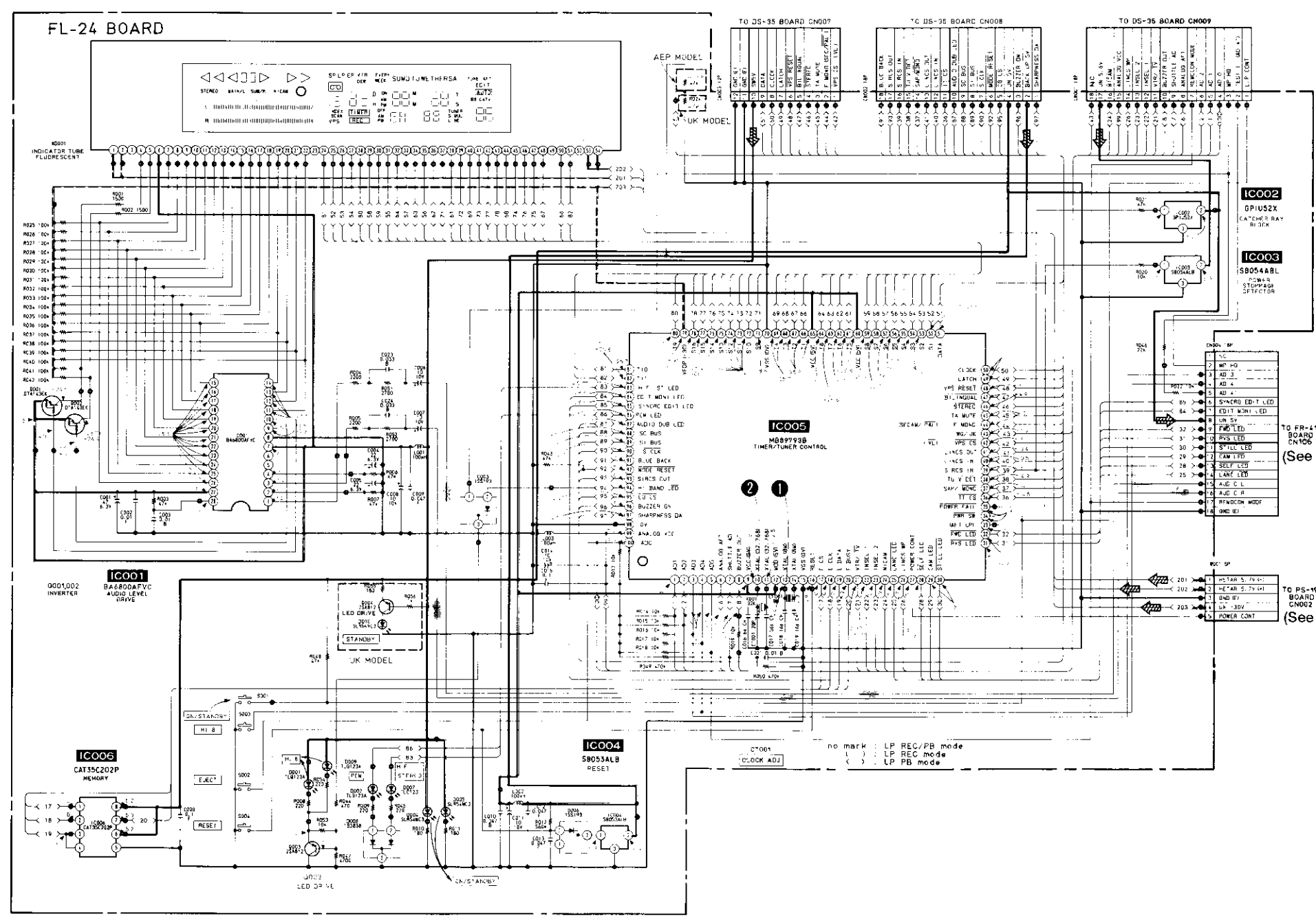
H

I

J



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

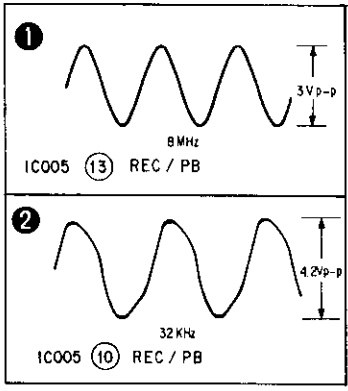


IC002
GPIUS2X
CATCHER RAY
BLOCK

IC003
5B054ABL
STOPPAGE
DETECTOR

TO FR-41
BOARD
CN006
(See page 179)

TO PS-96
BOARD
CN002
(See page 181)

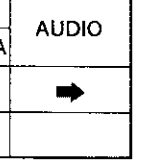
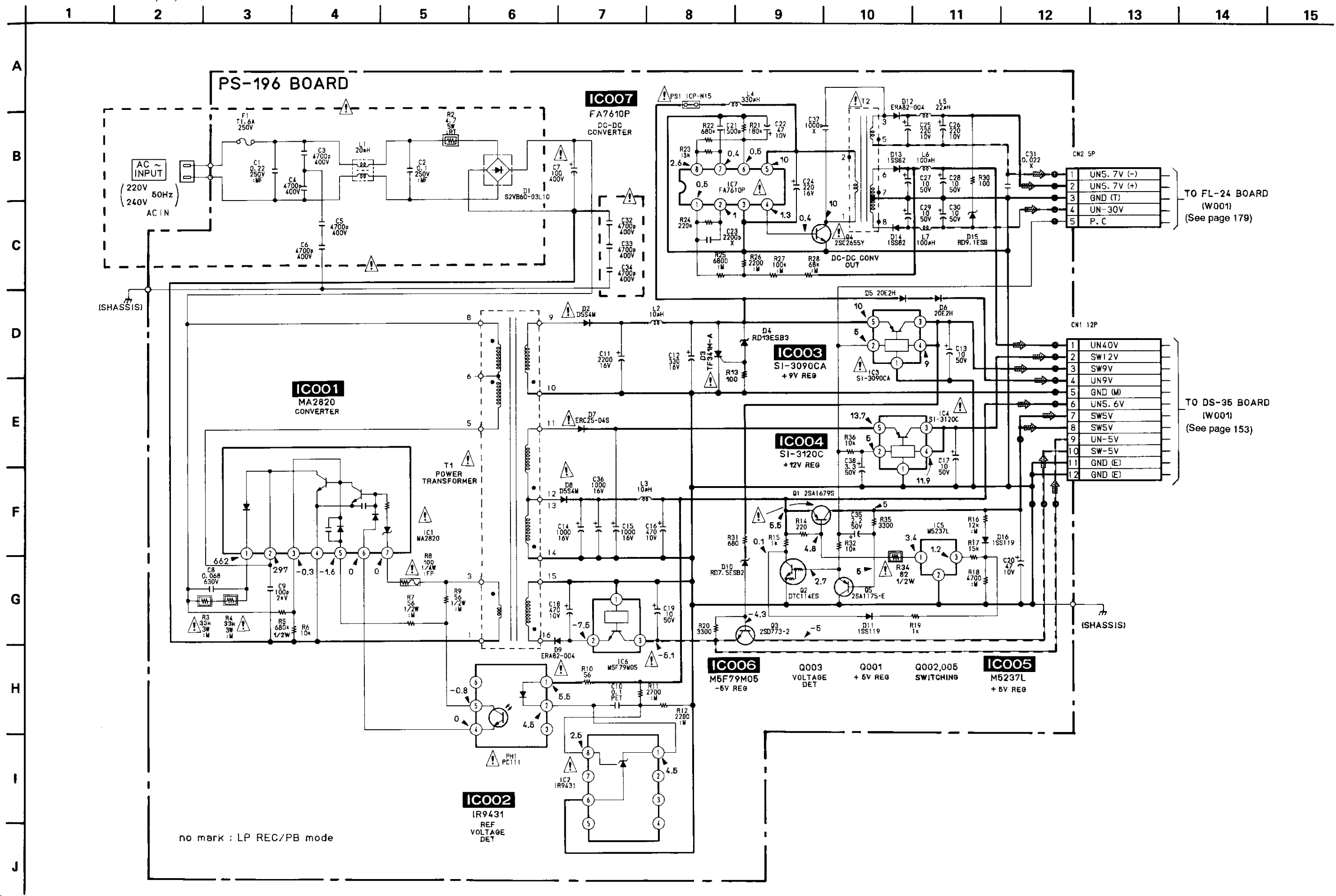


	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC				→
PB				

PS-196 (POWER SUPPLY) SCHEMATIC DIAGRAM

- Ref. No.: PS-196 Board; 12,000 series -

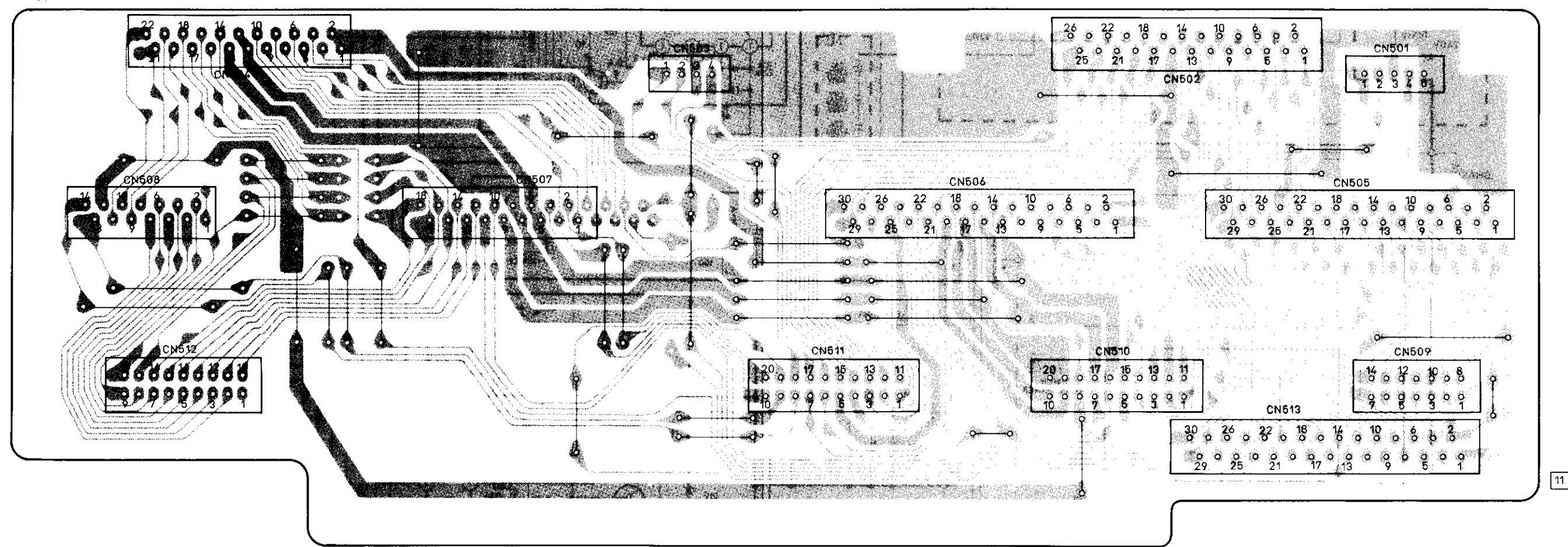
1G
a2
b2
c2
d2
e2
f2
g2
15



IN-24 (SIGNAL INTERMEDIATION) PRINTED WIRING BOARD
- Ref. No.: IN-24 Board; 13,000 series -

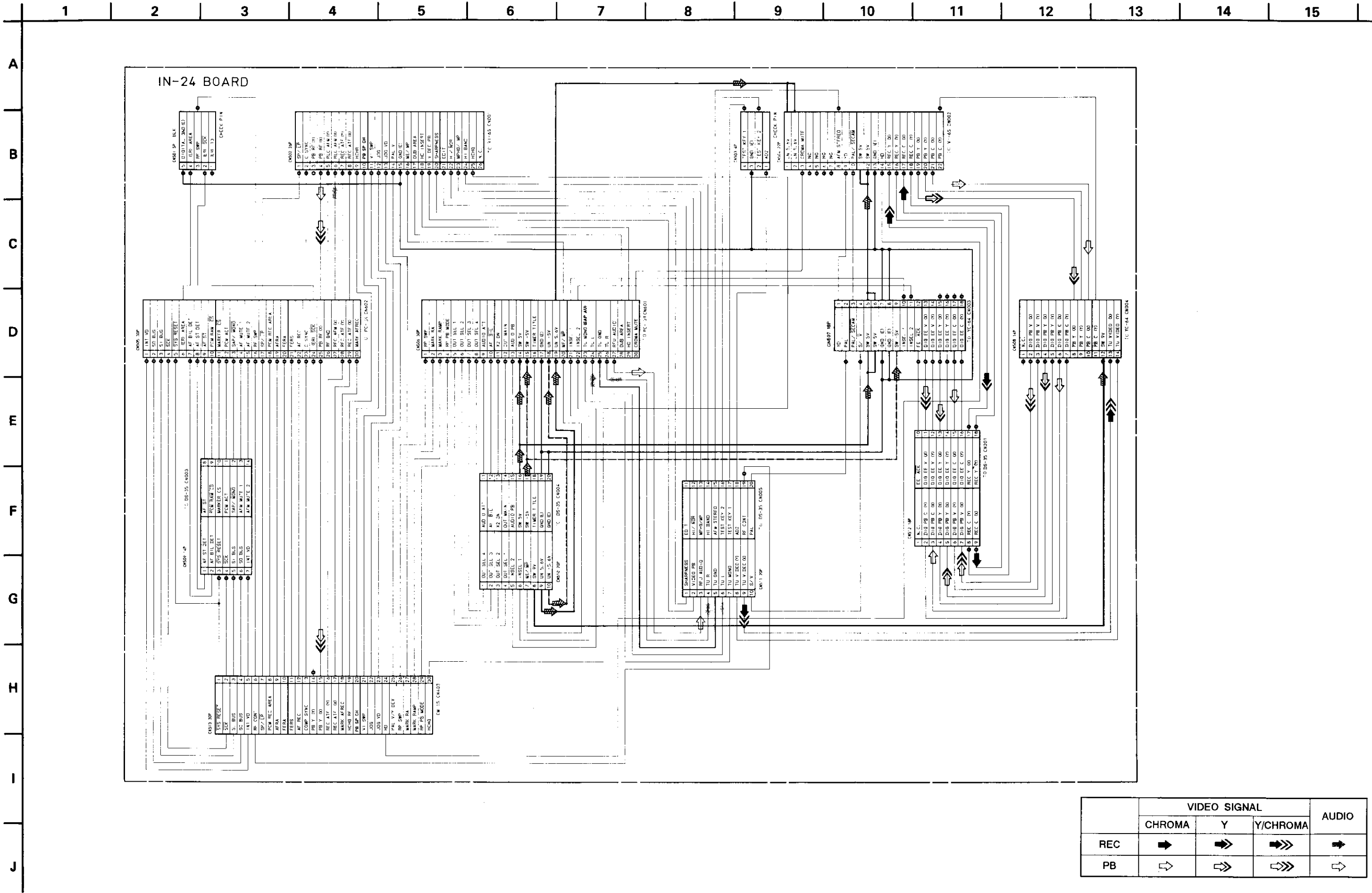
1
A
B
C
D
E
F
G
H
I
J

IN-24 BOARD



IN-24 (SIGNAL INTERMEDIATION) SCHEMATIC DIAGRAM

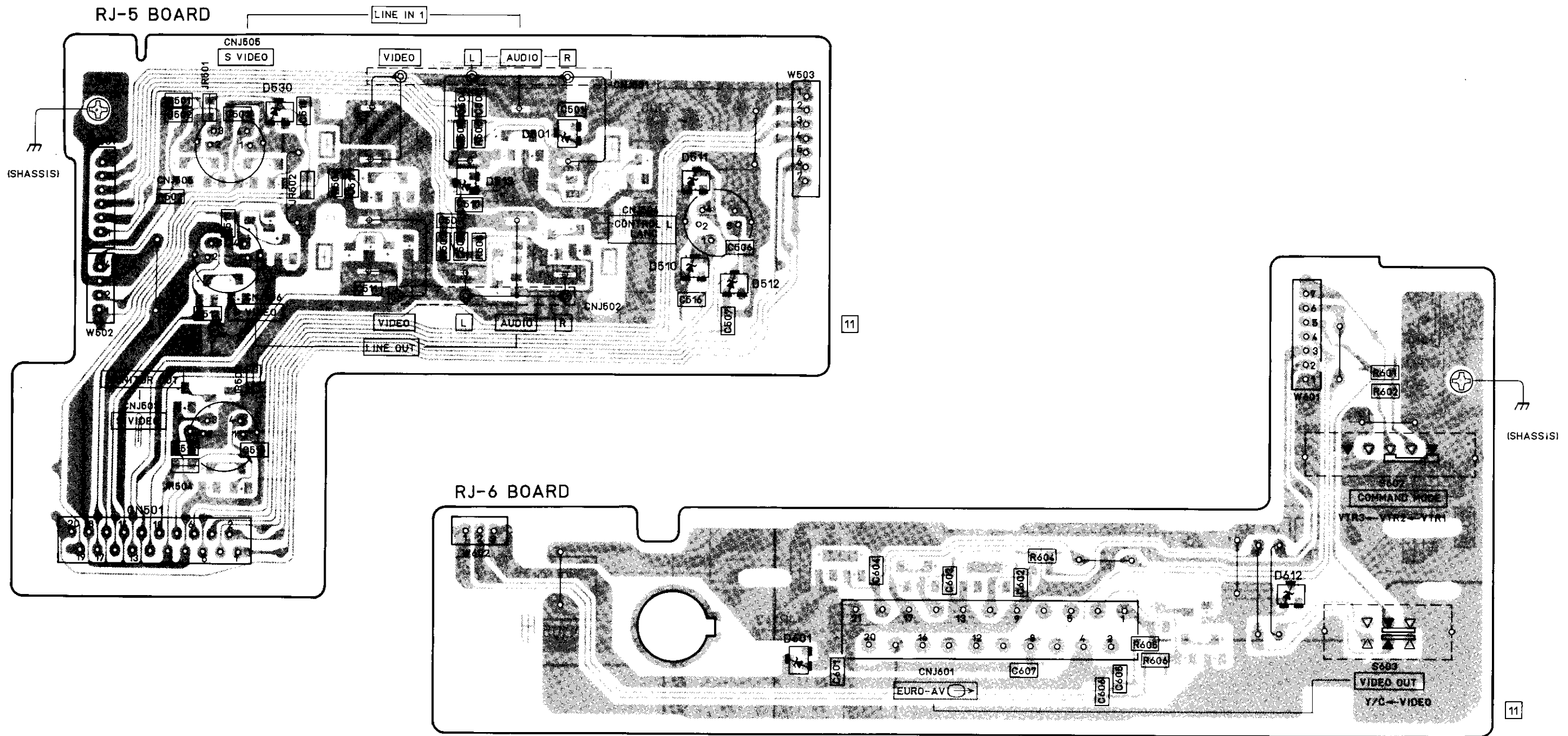
- Ref. No.: IN-24 Board; 13,000 series -



	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC	→	⇒	⇒⇒	→
PB	⇨	⇨⇨	⇨⇨⇨	⇨

RJ-5 (LINE IN 1), RJ-6 (EURO-AV CONNECTOR) PRINTED WIRING BOARDS

- Ref. No.: RJ-5, RJ-6 Boards; 14,000 series -



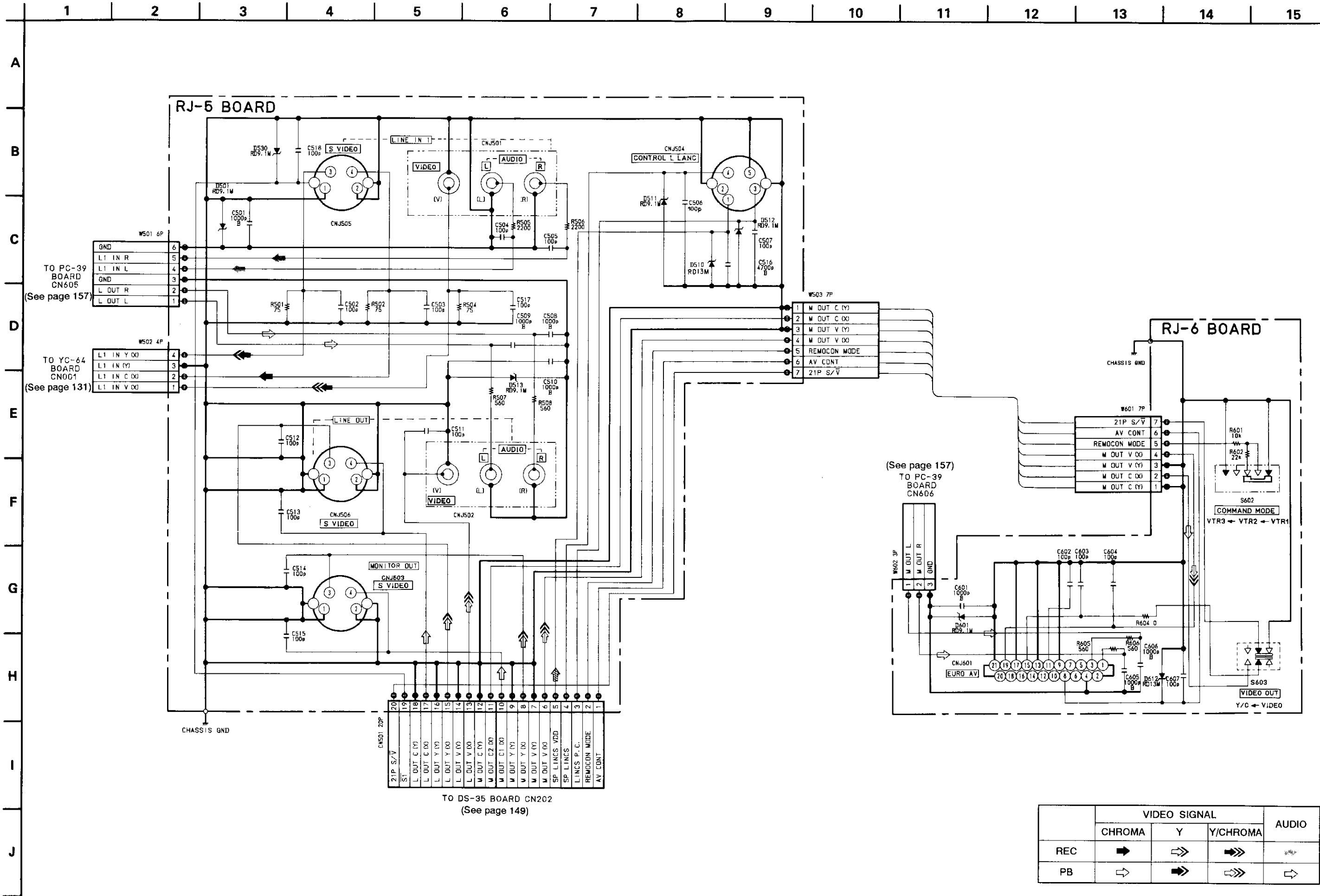
1
A
B
C
D
E
F
G
H
I
J

TO PC-3
BOARD
CN605
(See page 15)

TO YC-6
BOARD
CN001
(See page 13)

RJ-5 (LINE IN 1), RJ-6 (EURO-AV CONNECTOR) SCHEMATIC DIAGRAM

- Ref. No.: RJ-5, RJ-6 Boards; 14,000 series -



	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	
REC	➡	➡➡	➡➡➡	⚡
PB	➡	➡➡	➡➡➡	➡

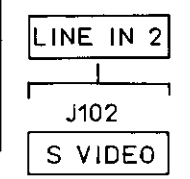
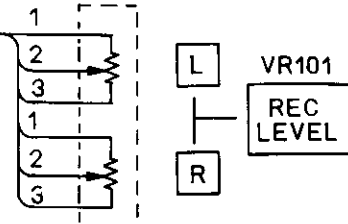
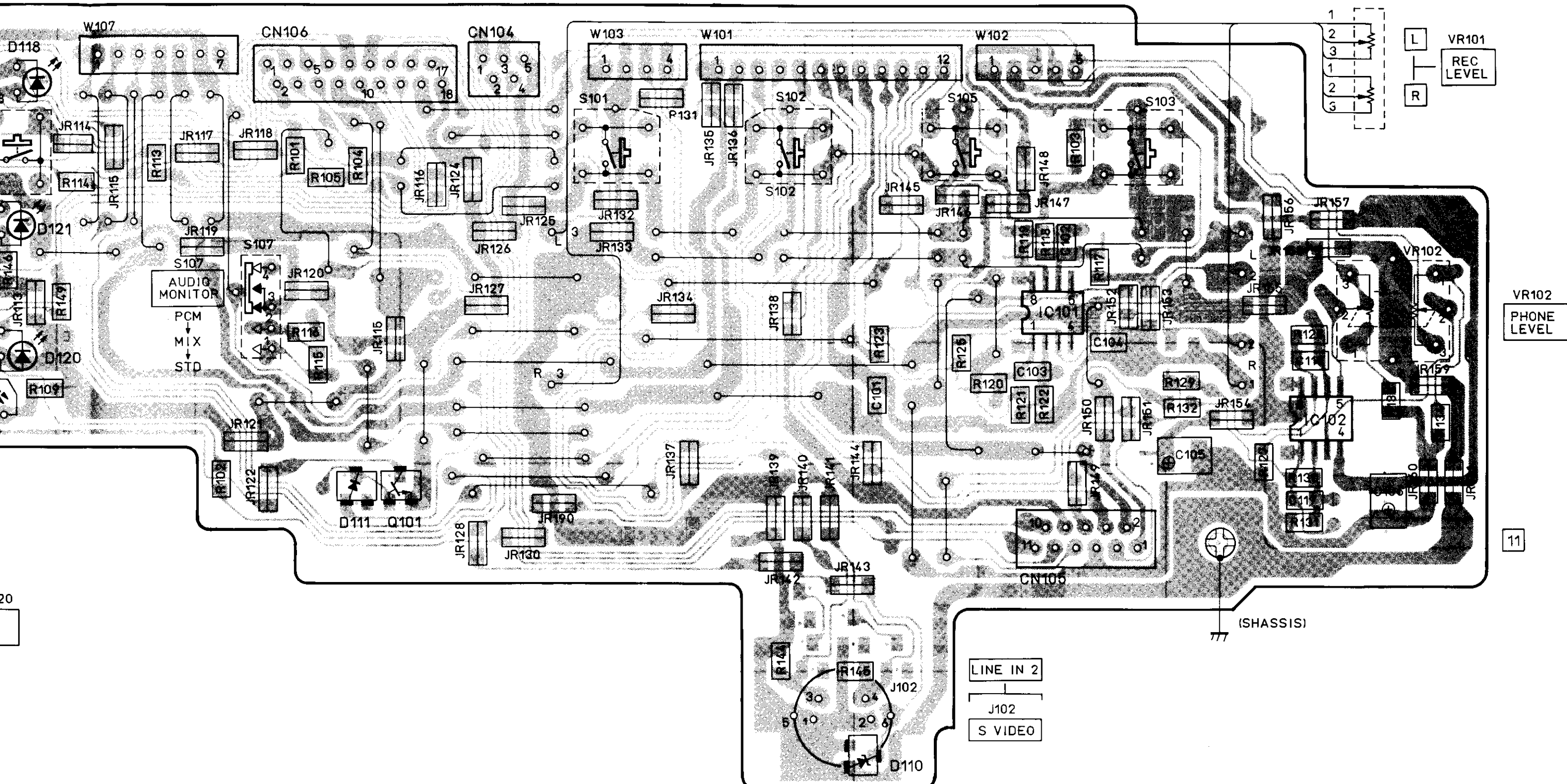
S108,D118
RECORDER

S101
INPUT
SELECT

S102
REC MODE
SP/LP

S105
ANT
TV/VTR

S103
COUNTER
RESET



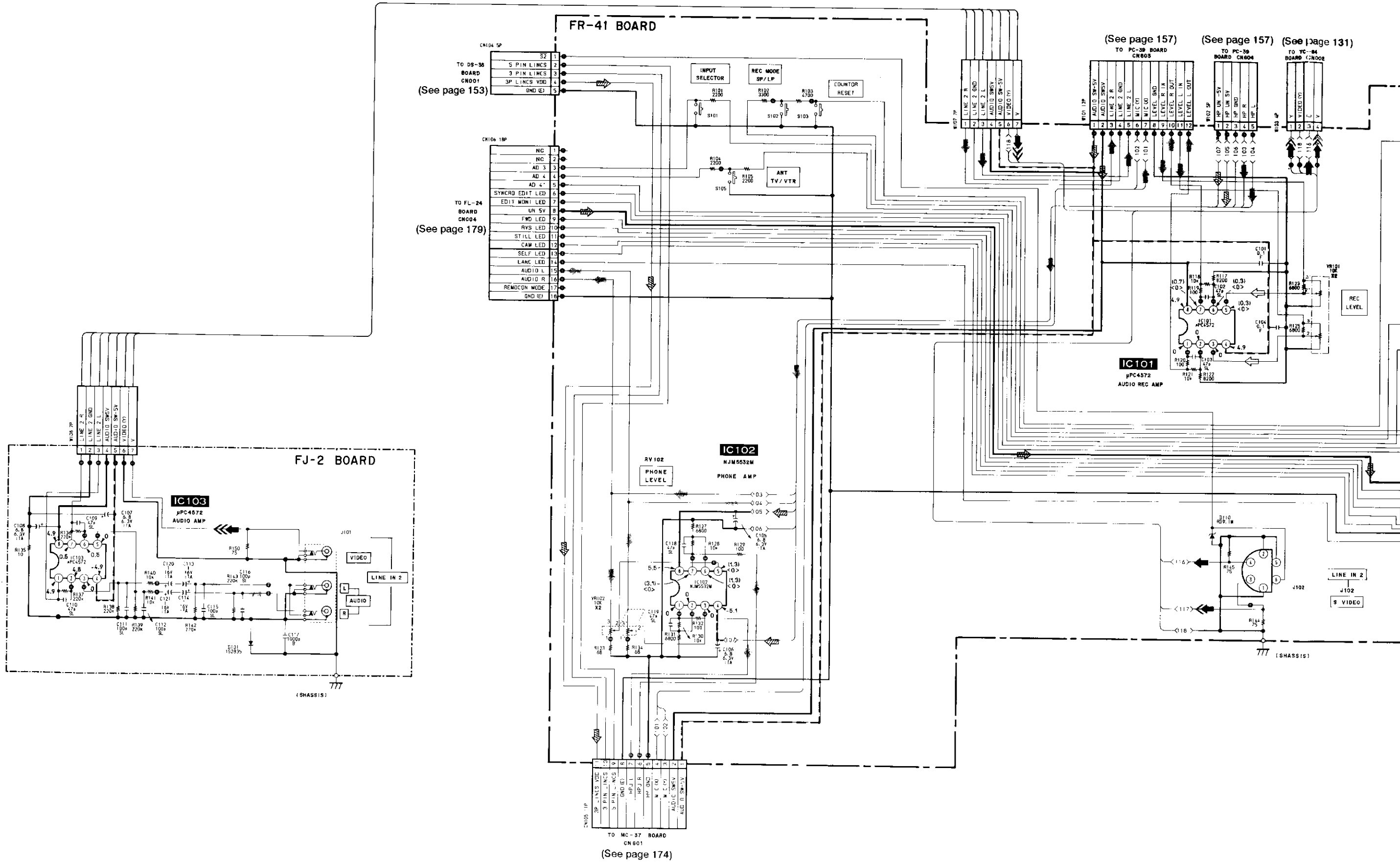
6 7 8 9 10 11 12 13

FR-41 (MODE CONTROL), FJ-2 (LINE IN 2) SCHEMATIC DIAGRAM

- Ref. No.: FR-41, FJ-2 Boards; 15,000 series -

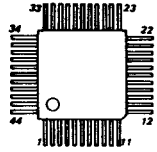
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A
B
C
D
E
F
G
H
I
J

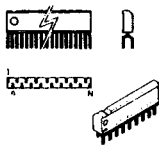


5-3. SEMICONDUCTORS

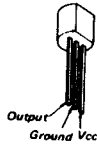
CXA1449Q



M5M4C500L-10



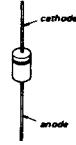
TL431CLP



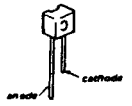
**2SB733-2
2SD773**



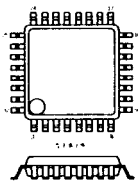
RU-3AM



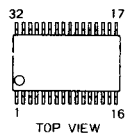
EE-TP109



CX2106Q



M50455-137FP



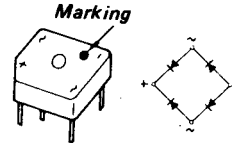
UPC574J



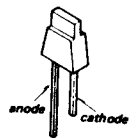
2SC2655



S2VB60-03L10



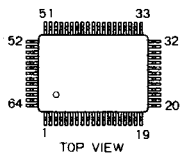
PY5504S-1



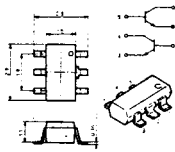
FA7610P



**M50541FP
UPD75116-GF-605-3BE**



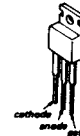
IMZ1



2SK160-K5



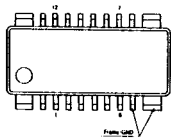
TF341M-A



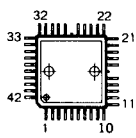
SEL2810A



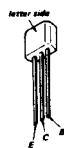
LB1631M



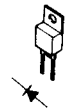
M51285BFP-V



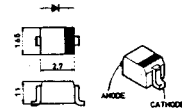
2SA1175TP-HFE



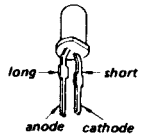
D5S4M



1T33C-01



**SLP281C-50
TLR123
TLY123**



MC14052BF



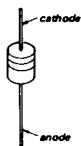
S3050CA



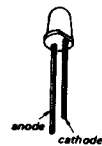
2SA1679S



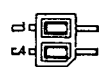
**ERA82-004
RD11ES-B2
RD7.5ES-B2
1SS119**



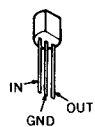
AA3422S



TLP907-0



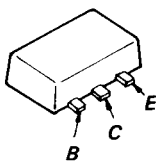
M5F79M05



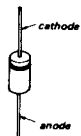
S8053ALB



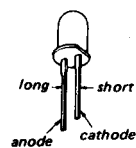
2SB1121



**RD9.1M-B1
1SS83
20E2H**





EBR5534S



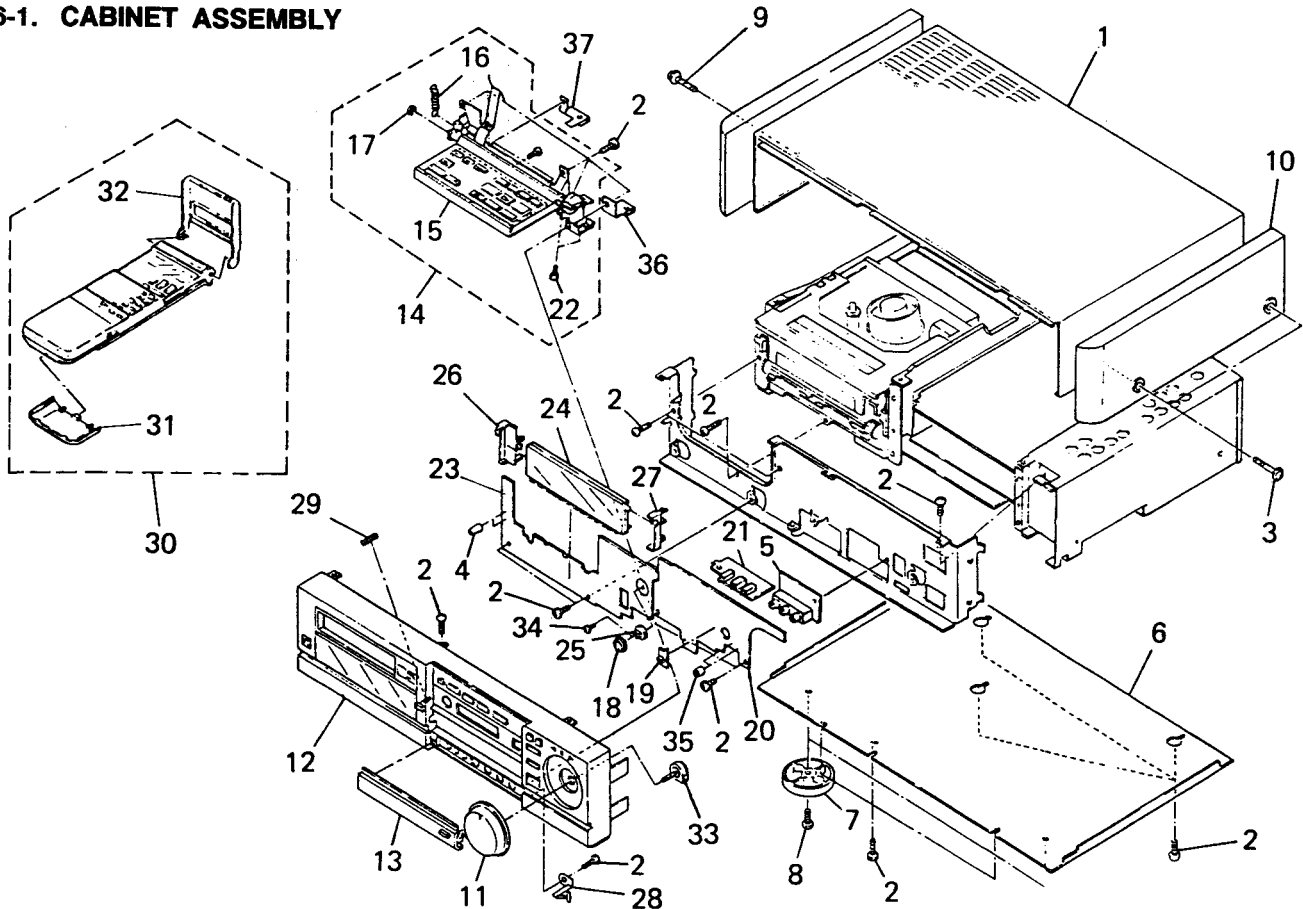
SECTION 6 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.

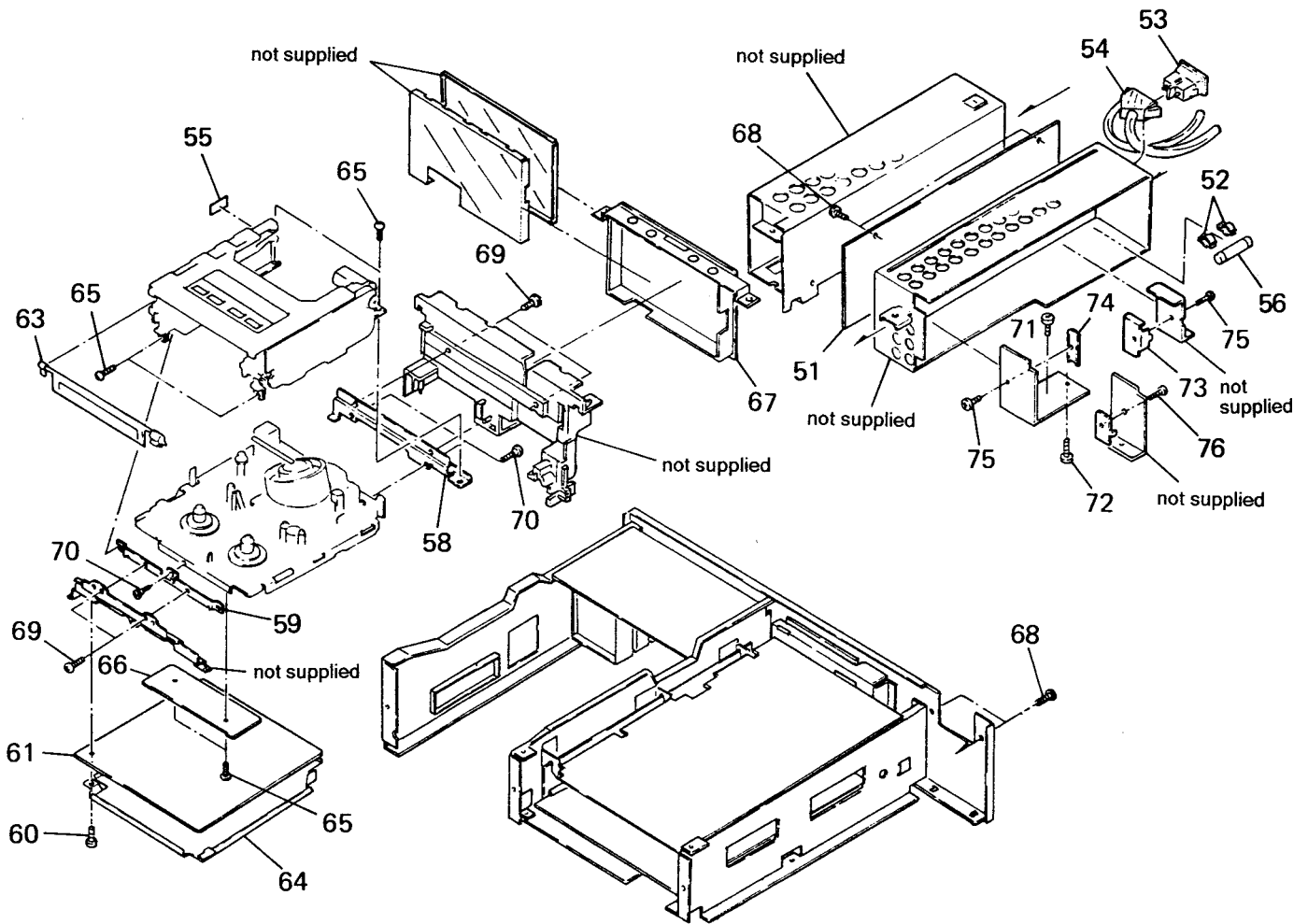
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

6-1. CABINET ASSEMBLY



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-3742-504-1	CASE ASSY, UPPER (AEP)		16	3-571-823-00	SPRING, TENSION	
	X-3742-516-1	CASE ASSY, UPPER (UK)		17	7-624-105-04	STOP RING 2.3, TYPE -E	
2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		18	3-742-501-01	KNOB, HP	
3	3-721-342-11	SCREW (3), SIDE WOOD (AEP)		19	3-742-502-01	KNOB, SLIDE	
	4-886-821-01	SCREW, M3 CASE (UK)		20	*A-7061-812-A	FR-41 (A) BOARD, COMPLETE	
4	*3-697-607-01	HOLDER, (SU), LED		21	*A-7061-813-A	MC-37 BOARD, COMPLETE	
5	*A-7061-890-A	FJ-2 BOARD, COMPLETE		22	7-621-772-30	SCREW +B 2X6	
6	*3-742-559-01	PLATE, BOTTOM		23	*A-7061-811-A	FL-24 BOARD, COMPLETE (AEP)	
7	X-3713-423-1	FOOT ASSY (G) (AEP)			A-7062-055-A	FL-24(C) BOARD, COMPLETE (UK)	
	X-4922-508-1	FOOT ASSY (UK)		24	1-519-507-31	INDICATOR TUBE, FLUORESCENT (ND001)	
	4-922-942-01	FOOT (FELT)		25	3-731-123-01	BASE, VOLUME	
8	3-721-343-01	SCREW, FIXED, M4X7		26	*3-742-524-01	HOLDER (LEFT), INDICATION TUBE	
9	X-3742-505-1	PLATE (L) ASSY, SIDE (AEP)		27	*3-742-548-01	HOLDER (RIGHT), INDICATION TUBE	
10	X-3742-506-1	PLATE (R) ASSY, SIDE (AEP)		28	3-742-513-01	SPRING, LEAF	
11	X-3742-501-1	DIAL BLOCK ASSY (AEP)		29	3-554-017-00	SPRING, COMPRESSION	
	X-3742-514-1	DIAL BLOCK ASSY (UK)		30	A-6768-153-A	COMMANDER ASSY	
12	X-3742-509-1	PANEL ASSY, FRONT (AEP)		31	2-181-766-01	COVER, BATTERY	
	X-3742-517-1	PANEL ASSY, FRONT (UK)		32	2-181-770-11	COVER, TIMER	
13	X-3742-502-1	DOOR ASSY, JACK (AEP)		33	1-238-738-11	RES, VAR, CARBON 10K	
	X-3742-512-1	DOOR ASSY, JACK (UK)		34	7-627-552-38	SCREW, PRECISION +P 1.7X3	
14	A-7091-072-A	DOOR ASSY (AEP)		35	*3-689-521-01	HOLDER, LED, ROUND	
	A-7091-194-A	DOOR ASSY (UK)		36	*3-742-574-01	PLATE (R), GROUND, DOOR	
15	1-466-292-11	SWITCH BLOCK, CONTROL (AEP)		37	*3-742-575-01	PLATE (L), GROUND, DOOR	
	1-466-292-21	SWITCH BLOCK, CONTROL (UK)					

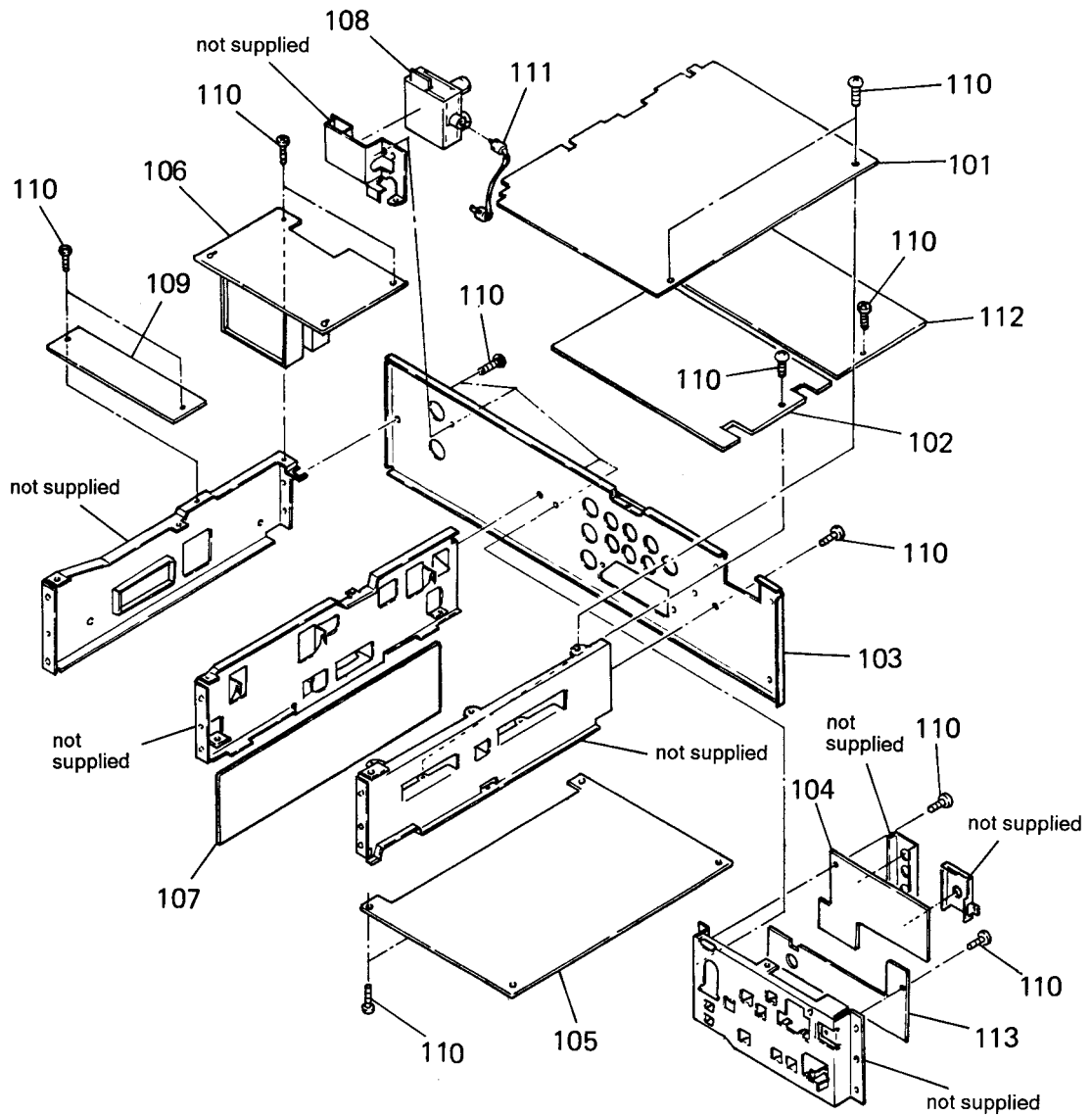
6-2. MAIN CHASSIS ASSEMBLY



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	*A-7061-815-A	PS-196 (A) BOARD, COMPLETE (AEP)		65	3-732-817-01	SCREW (2X4.5), TAPPING	
	*A-7061-898-A	PS-196 (B) BOARD, COMPLETE (UK)		66	*1-633-519-11	UC-4 BOARD	
52	▲.1-533-183-11	HOLDER, FUSE		67	*A-7061-808-A	RP-74 (A) BOARD, COMPLETE	
53	▲.1-540-054-11	INLET, AC		68	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
54	▲.3-742-521-01	COVER, 2P INLET		69	7-627-553-47	PRECISION SCREW +P 2X4 TYPE 3	
55	*3-730-176-11	SHEET, MD		70	3-732-816-01	SCREW, STEP	
56	▲.1-532-259-00	FUSE, TIMER-LAG (1.6A 250V)		71	7-685-647-79	SCREW +BVTP 3X10	
58	*3-732-811-01	BRACKET (REAR)		72	*3-714-460-01	RETAINER, TRANSISTOR	
59	*3-732-810-02	BRACKET (FRONT)		73	3-731-146-01	RETAINER, (B), PS	
60	3-713-790-01	SCREW (M2X6), TAPPING, P3		74	3-731-147-01	RETAINER, (A), PS	
61	*A-7061-807-A	CM-15 (A) BOARD, COMPLETE		75	7-628-253-40	SCREW +PS 2X10	
63	X-3742-507-1	DOOR ASSY, CASSETTE COMPARTMENT		76	7-621-555-60	SCREW +K 2X10	
64	*3-742-576-01	PLATE, SHIELD, MD					

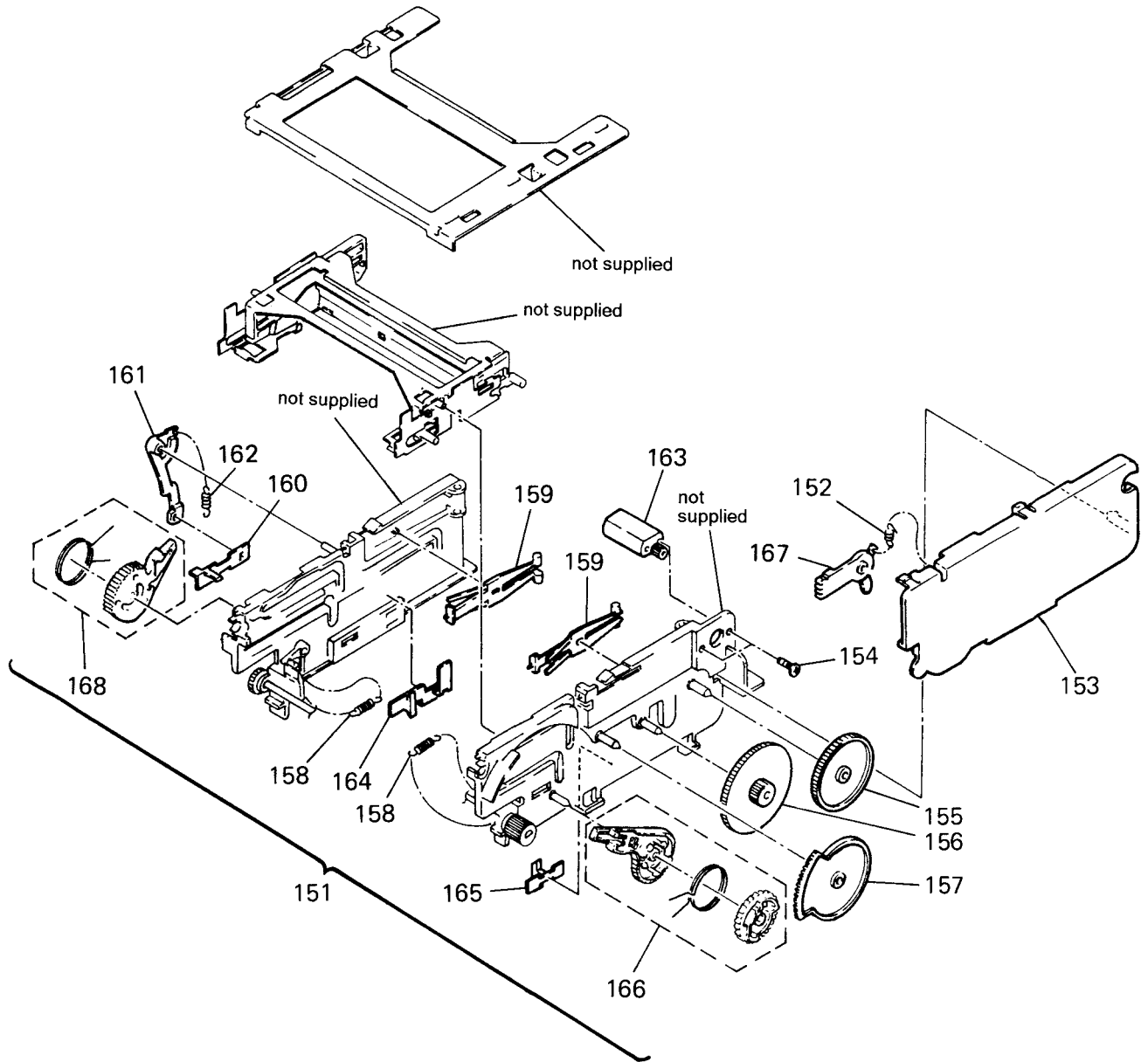
Note: The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

6-3. MAIN BOARD ASSEMBLY



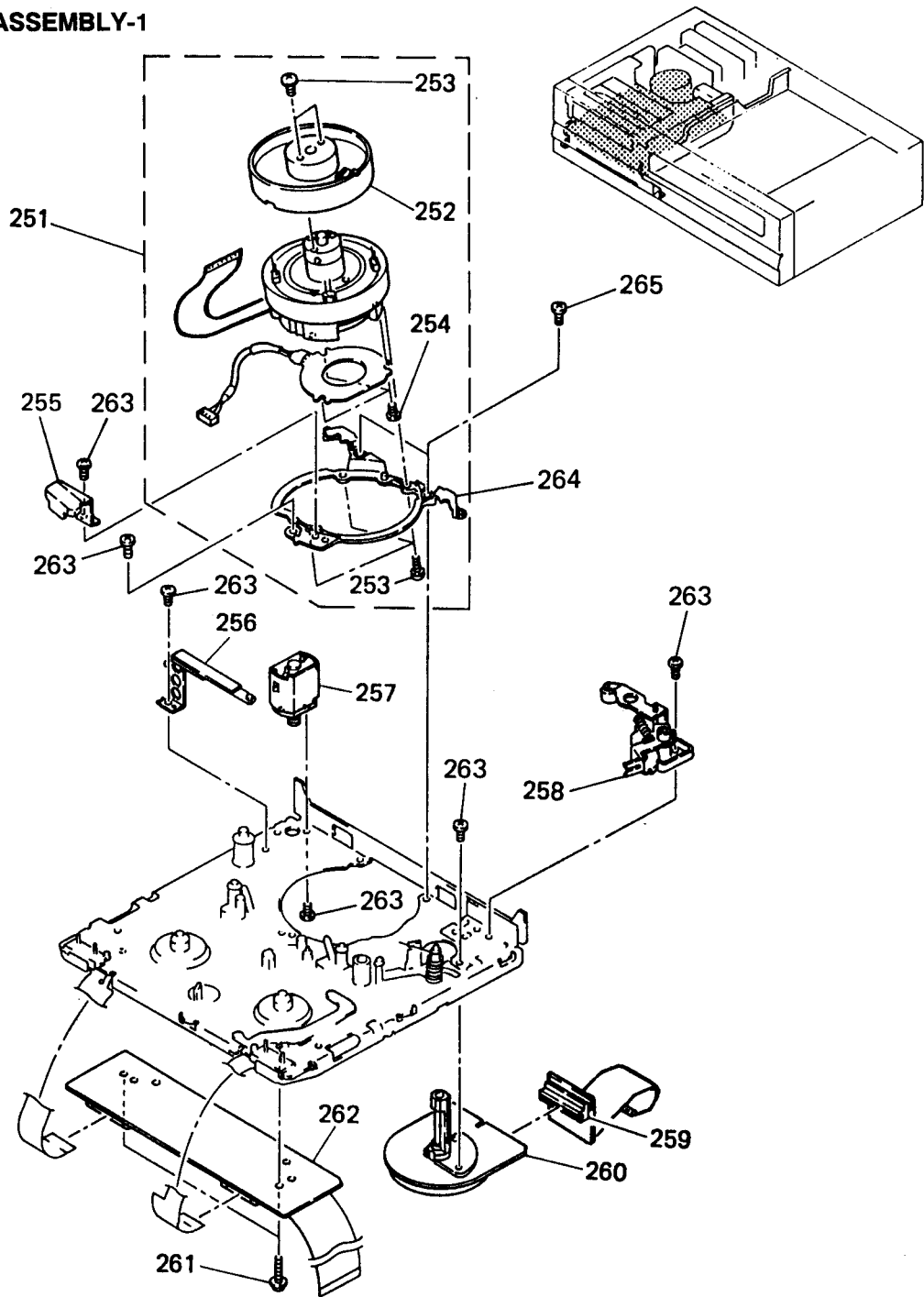
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	*A-7061-810-A	VI-65 (A) BOARD, COMPLETE		108	1-466-199-11	MODULATOR, RF (RFU-2010) (AEP)	
102	*A-7061-940-A	PC-39 (A) BOARD, COMPLETE			1-466-206-11	MODULATOR, RF (RFU-2011) (UK)	
103	3-742-564-01	FRAME, REAR (AEP)		109	*A-7061-899-A	NM-2 (A) BOARD, COMPLETE (UK)	
104	*A-7061-805-A	RJ-5 BOARD, COMPLETE		110	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
105	*A-7061-816-A	DS-35 (A) BOARD, COMPLETE (AEP)		111	1-555-110-00	CABLE, PIN	
	*A-7061-892-A	DS-35 (B) BOARD, COMPLETE (UK)					
106	*A-7061-814-A	TU-100 BOARD, COMPLETE (AEP)		112	*A-7061-896-A	YC-64 (B) BOARD, COMPLETE (UK)	
	*A-7061-897-A	TU-100 (C) BOARD, COMPLETE (UK)			*A-7061-900-A	YC-64 (A) BOARD, COMPLETE (AEP)	
107	*1-633-526-11	IN-24 BOARD		113	*A-7061-806-A	RJ-6 BOARD, COMPLETE	

6-4. CASSETTE COMPARTMENT ASSEMBLY



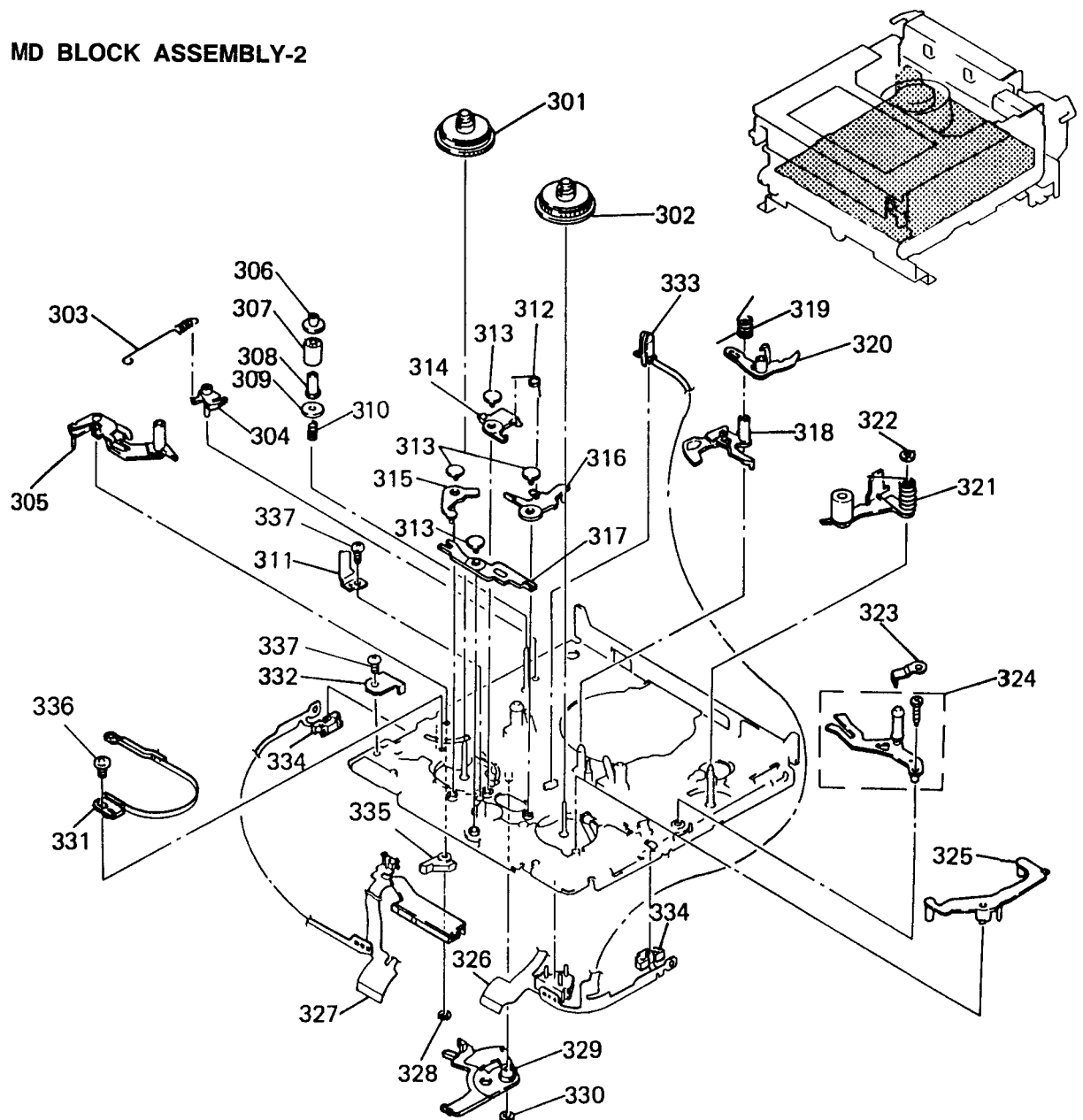
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
151	A-7090-892-A	CASSETTE COMPARTMENT ASSY, FL		160	3-731-189-01	SLIDER, LOCK	
152	3-731-175-02	SPRING, TENSION		161	3-731-188-01	ARM LOCK, DRIVING	
153	3-732-804-03	COVER, GEAR		162	3-731-174-01	SPRING, TENSION	
154	3-730-141-01	SCREW (PSW) (2X4)		163	X-3731-108-1	MOTOR ASSY	
155	3-731-182-01	GEAR (B), DECELERATION		164	X-3726-867-1	PRISM (LEFT) ASSY	
156	3-731-181-01	GEAR (A), DECELERATION		165	X-3726-866-1	PRISM (RIGHT) ASSY	
157	3-731-192-01	GEAR, MIDWAY		166	X-3731-109-2	ARM (RIGHT) ASSY, DRIVING	
158	3-731-176-02	SPRING, TENSION		167	3-731-185-01	LINK, SWITCHING, DOOR	
159	3-731-184-02	HOLDER LOCK		168	X-3731-111-1	ARM (LEFT) ASSY, DRIVING	

6-5. MD BLOCK ASSEMBLY-1



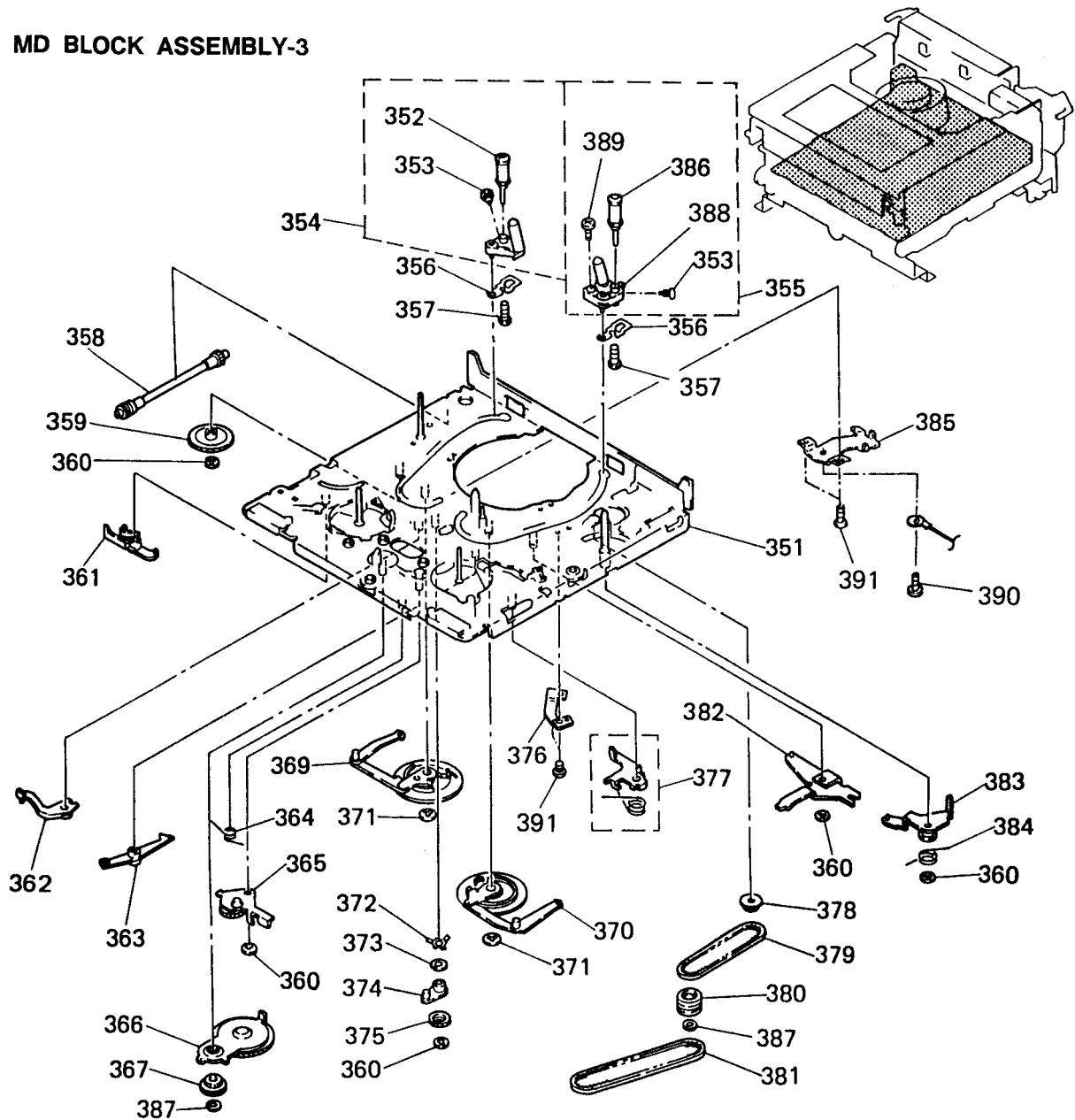
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
251	A-7048-339-A	DRUM ASSY (DGU-58A-R)		259	*1-633-518-11	CC-26 BOARD	
252	A-7049-293-A	DRUM ASSY, UPPER, ROTARY (DGR-58-R)		260	8-835-331-01	MOTOR, DC U-22A	
253	3-686-493-01	SCREW (M2X5), P1		261	3-732-817-01	SCREW (2X4.5), TAPPING	
254	3-686-458-02	SCREW (P1.4X2.5) TAPPING		262	*1-633-519-11	UC-4 BOARD	
255	3-728-868-01	GUARD, GUIDE		263	3-728-998-01	SCREW (M2X3), SPECIAL HEAD	
256	1-535-739-12	TERMINAL, SHAFT EARTH		264	X-3686-474-4	BASE ASSY, DRUM	
257	A-7040-160-A	MOTOR ASSY, THREADING		265	3-736-406-01	SCREW (3) (M2X10)	
258	A-7040-161-B	ROLLER BLOCK ASSY, HC					

6-6. MD BLOCK ASSEMBLY-2



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
301	X-3728-851-1	TABLE ASSY, REEL, S		320	3-728-852-02	ARM, RK STOPPER	
302	X-3728-855-1	TABLE ASSY, REEL, T		321	A-7040-163-B	ARM BLOCK ASSY, PINCH	
303	3-736-414-01	SPRING, TENSION		322	3-669-465-00	WASHER (1.5), STOPPER	
304	3-728-855-03	ARM, ADJUSTMENT		323	3-728-808-01	SPRING, LEAF	
305	X-3728-867-1	ARM ASSY (S), TENSION REGULATOR		324	X-3726-822-1	ARM ASSY, TG7	
306	3-726-884-01	FLANGE, UPPER, TG2		325	3-728-848-01	ARM, LB RELEASE	
307	3-726-883-01	ROLLER, TG2		326	1-628-061-12	FP-90 FLEXIBLE BOARD	
308	3-726-885-01	SLEEVE, TG2		327	1-633-660-11	FP-237 FLEXIBLE BOARD	
309	3-726-882-02	FLANGE, LOWER, TG2		328	3-321-393-11	WASHER, STOPPER	
310	3-726-886-01	SPRING, COMPRESSION		329	X-3728-863-1	LEVER ASSY, SW	
311	3-726-848-01	RETAINER, TL		330	3-726-829-01	WASHER, STOPPER	
312	3-726-866-01	SPRING (ST), TORSION		331	X-3726-809-2	BAND ASSY, TENSION REGULATOR	
313	3-726-858-01	PIN, SHAFT RETAINER		332	3-730-125-01	RETAINER, SW	
314	3-728-849-01	BRAKE, S		333	3-728-837-01	HOLDER, LED	
315	3-726-852-01	BRAKE, LB		334	3-728-869-02	HOLDER, SENSOR	
316	3-728-850-01	BRAKE, T		335	X-3728-857-1	STOPPER ASSY, TENSION REGULATOR	
317	3-726-853-01	LEVER, LB		336	3-728-998-01	SCREW (M2X3), SPECIAL HEAD	
318	3-728-875-01	STOPPER, RK		337	7-627-555-88	SCREW (M1.4X1.8)	
319	3-726-864-01	SPRING (RK), TORSION					

6-7. MD BLOCK ASSEMBLY-3



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
351	*X-3728-801-1	CHASSIS ASSY, MECHANICAL		372	3-726-867-01	SPRING, LEAF	
352	X-3728-808-1	ROLLER ASSY (U) (SUS), GUIDE		373	3-701-436-21	WASHER, POLYETHYLENE	
353	3-726-822-01	SCREW (M1.4X2) (STEP), HEAD		374	3-726-857-02	ARM, UL	
354	A-7040-204-A	COASTER (LEFT) BLOCK ASSY		375	3-726-856-02	GEAR, UL	
355	A-7040-215-A	COASTER (RIGHT) BLOCK ASSY(N1S)		376	*3-726-805-01	REINFORCEMENT (TT)	
	A-7040-220-A	COASTER (RIGHT) BLOCK ASSY-NIP		377	X-3726-808-2	BRAKE ASSY, TS	
356	3-736-485-01	SPRING, LEAF, COSTER		378	X-3726-805-1	GEAR ASSY, JOINT	
357	3-726-830-01	SCREW (M1.4X4) (THREE LOCK)		379	3-728-866-11	BELT (S), TIMING	
358	X-3726-807-1	WORM ASSY		380	X-3726-838-1	PULLEY (UPPER) ASSY, MIDWAY	
359	3-726-826-01	GEAR, WHEEL		381	3-728-865-11	BELT (L), TIMING	
360	3-726-829-01	WASHER, STOPPER		382	X-3728-846-1	LEVER ASSY, LOADING	
361	3-728-842-01	LEVER, EJECT		383	X-3726-824-1	ARM ASSY, PINCH SUB	
362	3-728-851-01	BRAKE, UL		384	3-726-895-01	SPRING	
363	3-726-854-01	ARM, BRAKE RELEASE		385	X-3726-841-1	REINFORCEMENT (SS) ASSY	
364	3-726-865-01	SPRING (LB), TORSION		386	X-3728-810-1	ROLLER ASSY (U)(PLATING), GUIDE	
365	A-7040-130-A	GEAR BLOCK ASSY, LB		387	3-321-393-11	WASHER, STOPPER	
366	X-3726-802-2	GEAR ASSY, RK		388	X-3728-852-1	COASTER (RIGHT) ASSY	
367	X-3726-812-1	GEAR ASSY, RC		389	3-736-473-01	SCREW (M2X0.25) (THREE LOCK)	
369	X-3728-842-1	GEAR (LEFT) ASSY, DRIVE		390	3-703-502-01	SCREW (1.4X1.6)	
370	X-3728-843-1	GEAR (RIGHT) ASSY, DRIVE		391	7-627-555-88	SCREW (M1.4X1.8)	
371	3-669-465-00	WASHER (1.5), STOPPER					

CM-15**RP-74**

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
<u>CRYSTAL</u>				C132	1-124-438-00	ELECT 1MF	20% 50V
X301	1-567-699-11	VIBRATOR, CRYSTAL (5.85MHz)		C133	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
X401	1-577-116-11	VIBRATOR, CRYSTAL (16MHz)		C134	1-163-035-00	CERAMIC CHIP 0.047MF	50V
*****				C139	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*A-7061-808-A RP-74 (A) BOARD, COMPLETE				C140	1-126-157-11	ELECT 10MF	20% 16V
*****				C141	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
<u>CAPACITOR</u>				C142	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C001	1-126-157-11	ELECT 10MF	20% 16V	C143	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C002	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C144	1-126-157-11	ELECT 10MF	20% 16V
C003	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C145	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C004	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C146	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C005	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C147	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C006	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C148	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C007	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C149	1-163-092-00	CERAMIC CHIP 9PF	0.25PF 50V
C008	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C150	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C009	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C151	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C153	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C011	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C154	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V
C021	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V	C160	1-126-157-11	ELECT 10MF	20% 16V
C101	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V	C201	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V
C102	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V	C202	1-135-148-21	TANTAL. CHIP 1.5MF	20% 10V
C103	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C203	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C104	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C204	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C105	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V	C205	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V
C106	1-164-222-11	CERAMIC CHIP 0.22MF	25V	C206	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C107	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C207	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C108	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V	C208	1-135-161-21	TANTAL. CHIP 22MF	20% 6.3V
C109	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C209	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C110	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C210	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C111	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C211	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C112	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C212	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C113	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C213	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C114	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V	C214	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V
C115	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C215	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C116	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C216	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C117	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C217	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C118	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C218	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C119	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C219	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C120	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V	C220	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V
C121	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C221	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C122	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C222	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C123	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C223	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C124	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C224	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C125	1-124-638-11	ELECT 22MF	20% 6.3V	C225	1-124-638-11	ELECT 22MF	20% 6.3V
C126	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C226	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C127	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C227	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C128	1-124-438-00	ELECT 1MF	20% 50V	C228	1-124-438-00	ELECT 1MF	20% 50V
C129	1-124-638-11	ELECT 22MF	20% 6.3V	C229	1-124-638-11	ELECT 22MF	20% 6.3V
C130	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C230	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C131	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C231	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C232	1-124-438-00	ELECT 1MF	20% 50V
				C233	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
				C239	1-164-232-11	CERAMIC CHIP 0.01MF	50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C025	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C125	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C026	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C126	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C027	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C127	1-123-875-11	ELECT 10MF	20% 50V
C028	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C128	1-124-443-00	ELECT 100MF	20% 6.3V
C029	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C129	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C030	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C130	1-123-875-11	ELECT 10MF	20% 50V
C031	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C131	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C032	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C132	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C033	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	C133	1-124-464-11	ELECT 0.22MF	20% 50V
C034	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C134	1-124-446-11	ELECT 47MF	20% 10V
C035	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C135	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C036	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	C136	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C037	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C137	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C038	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C138	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C039	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C139	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C040	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C140	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C041	1-123-875-11	ELECT 10MF	20% 50V	C141	1-124-446-11	ELECT 47MF	20% 10V
C042	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C142	1-123-875-11	ELECT 10MF	20% 50V
C043	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C143	1-126-233-11	ELECT 22MF	20% 25V
C044	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C144	1-123-875-11	ELECT 10MF	20% 50V
C045	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C145	1-123-875-11	ELECT 10MF	20% 50V
C046	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C146	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C047	1-123-875-11	ELECT 10MF	20% 50V	C147	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C048	1-123-875-11	ELECT 10MF	20% 50V	C148	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C051	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C149	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C052	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C150	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C053	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C151	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C054	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C160	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C055	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C161	1-216-295-00	METAL GLAZE 0	5% 1/10W
C056	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C162	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C057	1-124-927-11	ELECT 4.7MF	20% 50V	C163	1-163-096-00	CERAMIC CHIP 13PF	5% 50V
C058	1-124-927-11	ELECT 4.7MF	20% 50V	C164	1-124-927-11	ELECT 4.7MF	20% 50V
C059	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C165	1-126-233-11	ELECT 22MF	20% 25V
C060	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C166	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C061	1-123-875-11	ELECT 10MF	20% 50V	C167	1-124-927-11	ELECT 4.7MF	20% 50V
C062	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C168	1-124-927-11	ELECT 4.7MF	20% 50V
C063	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C169	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C064	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C170	1-126-233-11	ELECT 22MF	20% 25V
C065	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C171	1-126-233-11	ELECT 22MF	20% 25V
C100	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C200	1-163-128-00	CERAMIC CHIP 300PF	5% 50V
C101	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C201	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C104	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C202	1-163-128-00	CERAMIC CHIP 300PF	5% 50V
C108	1-163-128-00	CERAMIC CHIP 300PF	5% 50V	C203	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C109	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C204	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C110	1-123-875-11	ELECT 10MF	20% 50V	C205	1-124-904-71	ELECT 2.2MF	20% 50V
C111	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C206	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C112	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C207	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C113	1-163-111-00	CERAMIC CHIP 56PF	5% 50V	C208	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C114	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	C209	1-123-875-11	ELECT 10MF	20% 50V
C118	1-163-091-00	CERAMIC CHIP 8PF	0.25PF 50V	C210	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C120	1-124-896-71	ELECT 33MF	20% 16V	C211	1-216-295-00	METAL GLAZE 0	5% 1/10W
C122	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C212	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C124	1-163-134-00	CERAMIC CHIP 510PF	5% 50V	C213	1-163-133-00	CERAMIC CHIP 470PF	5% 50V

When indicating parts by reference number, please include the board name.

VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C214	1-124-927-11	ELECT 4.7MF	20% 50V	C411	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C215	1-123-875-11	ELECT 10MF	20% 50V	C412	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C216	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C413	1-124-443-00	ELECT 100MF	20% 6.3V
C217	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C414	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C218	1-123-875-11	ELECT 10MF	20% 50V	C415	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C301	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C416	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C302	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C417	1-126-233-11	ELECT 22MF	20% 25V
C303	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C418	1-126-233-11	ELECT 22MF	20% 25V
C306	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C419	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C307	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C420	1-123-875-11	ELECT 10MF	20% 50V
C308	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C421	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C309	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C422	1-216-295-00	METAL GLAZE 0	5% 1/10W
C310	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C423	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C313	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C424	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C314	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C425	1-124-925-11	ELECT 2.2MF	20% 50V
C315	1-123-875-11	ELECT 10MF	20% 50V	C426	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C316	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C427	1-124-927-11	ELECT 4.7MF	20% 50V
C317	1-123-875-11	ELECT 10MF	20% 50V	C428	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C318	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C429	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C319	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C430	1-124-925-11	ELECT 2.2MF	20% 50V
C320	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C431	1-124-927-11	ELECT 4.7MF	20% 50V
C321	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C432	1-124-927-11	ELECT 4.7MF	20% 50V
C322	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C500	1-163-096-00	CERAMIC CHIP 13PF	5% 50V
C323	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C501	1-124-446-11	ELECT 47MF	20% 10V
C324	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C502	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C325	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C504	1-124-446-11	ELECT 47MF	20% 10V
C326	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C506	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C327	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C507	1-124-927-11	ELECT 4.7MF	20% 50V
C328	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C508	1-123-875-11	ELECT 10MF	20% 50V
C331	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C509	1-123-875-11	ELECT 10MF	20% 50V
C332	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C510	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C333	1-163-106-00	CERAMIC CHIP 36PF	5% 50V	C512	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C334	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C513	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C335	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C514	1-123-875-11	ELECT 10MF	20% 50V
C336	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C515	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C341	1-163-104-00	CERAMIC CHIP 30PF	5% 50V	C516	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C343	1-123-875-11	ELECT 10MF	20% 50V	C517	1-124-927-11	ELECT 4.7MF	20% 50V
C344	1-123-875-11	ELECT 10MF	20% 50V	C519	1-124-446-11	ELECT 47MF	20% 10V
C345	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C521	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C346	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C522	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C347	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C523	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C348	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	C524	1-123-875-11	ELECT 10MF	20% 50V
C349	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	C525	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C400	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C526	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C401	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C527	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C402	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C528	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C403	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C529	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C404	1-124-927-11	ELECT 4.7MF	20% 50V	C530	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C405	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C531	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C407	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C532	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C408	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C533	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C409	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C534	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C410	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C535	1-124-791-11	ELECT 1MF	20% 50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C536	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C812	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C537	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C813	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C538	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C814	1-123-875-11	ELECT 10MF	20% 50V
C539	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C815	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C540	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C816	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C541	1-163-261-00	CERAMIC CHIP 270PF	5% 50V	C817	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C601	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C818	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C602	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C819	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C604	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C820	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C605	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C821	1-124-925-11	ELECT 2.2MF	20% 50V
C606	1-163-126-00	CERAMIC CHIP 240PF	5% 50V	C822	1-124-925-11	ELECT 2.2MF	20% 50V
C607	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C823	1-163-036-00	CERAMIC CHIP 0.068MF	50V
C608	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C824	1-124-925-11	ELECT 2.2MF	20% 50V
C609	1-123-875-11	ELECT 10MF	20% 50V	C825	1-124-464-11	ELECT 0.22MF	20% 50V
C610	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C826	1-163-033-00	CERAMIC CHIP 0.022MF	50V
C611	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C827	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C620	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C828	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C621	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C829	1-124-463-00	ELECT 0.1MF	20% 50V
C622	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C830	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C623	1-163-100-00	CERAMIC CHIP 20PF	5% 50V	C831	1-124-252-00	ELECT 0.33MF	20% 50V
C700	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C832	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C701	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C833	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C702	1-163-118-00	CERAMIC CHIP 110PF	5% 50V	C834	1-163-108-00	CERAMIC CHIP 43PF	5% 50V
C703	1-123-875-11	ELECT 10MF	20% 50V	C836	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C704	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C837	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C705	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C838	1-163-033-00	CERAMIC CHIP 0.022MF	50V
C706	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	C839	1-124-927-11	ELECT 4.7MF	20% 50V
C708	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C840	1-131-358-00	TANTALUM 6.8MF	10% 25V
C709	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C841	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C710	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C842	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
C711	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C843	1-123-875-11	ELECT 10MF	20% 50V
C712	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C844	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C713	1-123-382-00	ELECT 3.3MF	20% 50V	C846	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C714	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C847	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C715	1-124-925-11	ELECT 2.2MF	20% 50V	C848	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C716	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V	C849	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C717	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C851	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C720	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C852	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C722	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C853	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C730	1-163-126-00	CERAMIC CHIP 240PF	5% 50V	C854	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C731	1-163-124-00	CERAMIC CHIP 200PF	5% 50V	C855	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C800	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C856	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C801	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C857	1-124-443-00	ELECT 100MF	20% 6.3V
C802	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C858	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C803	1-163-111-00	CERAMIC CHIP 56PF	5% 50V	C859	1-123-875-11	ELECT 10MF	20% 50V
C804	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C860	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C805	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C863	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C806	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C866	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C807	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C867	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C808	1-216-295-00	METAL GLAZE 0	5% 1/10W	C868	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C809	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C869	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C810	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C870	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C811	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C871	1-163-036-00	CERAMIC CHIP 0.068MF	50V

When indicating parts by reference number, please include the board name.

<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
L110	1-408-970-21	INDUCTOR	10UH	Q018	8-729-901-01	TRANSISTOR	DTC144EK
L120	1-408-977-21	INDUCTOR	39UH	Q019	8-729-100-66	TRANSISTOR	2SC1623
L122	1-407-169-XX	INDUCTOR	100UH	Q020	8-729-202-38	TRANSISTOR	2SC3326N
L201	1-407-169-XX	INDUCTOR	100UH	Q021	8-729-100-66	TRANSISTOR	2SC1623
L301	1-408-984-21	INDUCTOR	150UH	Q022	8-729-100-66	TRANSISTOR	2SC1623
L302	1-408-987-21	INDUCTOR	330UH	Q023	8-729-100-66	TRANSISTOR	2SC1623
L305	1-408-969-21	INDUCTOR	8.2UH	Q024	8-729-100-66	TRANSISTOR	2SC1623
L310	1-408-948-00	INDUCTOR	220UH	Q025	8-729-100-66	TRANSISTOR	2SC1623
L311	1-408-970-21	INDUCTOR	10UH	Q026	8-729-901-06	TRANSISTOR	DTA144EK
L312	1-408-970-21	INDUCTOR	10UH	Q027	8-729-901-06	TRANSISTOR	DTA144EK
L400	1-408-987-21	INDUCTOR	330UH	Q029	8-729-100-66	TRANSISTOR	2SC1623
L401	1-408-970-21	INDUCTOR	10UH	Q030	8-729-100-66	TRANSISTOR	2SC1623
L402	1-408-969-21	INDUCTOR	8.2UH	Q031	8-729-100-66	TRANSISTOR	2SC1623
L403	1-408-958-21	INDUCTOR	1UH	Q032	8-729-216-22	TRANSISTOR	2SA1162
L404	1-408-958-21	INDUCTOR	1UH	Q033	8-729-100-66	TRANSISTOR	2SC1623
L405	1-408-974-21	INDUCTOR	22UH	Q034	8-729-216-22	TRANSISTOR	2SA1162
L407	1-408-974-21	INDUCTOR	22UH	Q035	8-729-216-22	TRANSISTOR	2SA1162
L501	1-408-976-21	INDUCTOR	33UH	Q036	8-729-100-66	TRANSISTOR	2SC1623
L503	1-408-976-21	INDUCTOR	33UH	Q038	8-729-100-66	TRANSISTOR	2SC1623
L504	1-408-976-21	INDUCTOR	33UH	Q039	8-729-216-22	TRANSISTOR	2SA1162
L505	1-408-977-21	INDUCTOR	39UH	Q040	8-729-100-66	TRANSISTOR	2SC1623
L506	1-408-974-21	INDUCTOR	22UH	Q100	8-729-100-66	TRANSISTOR	2SC1623
L601	1-408-976-21	INDUCTOR	33UH	Q101	8-729-100-66	TRANSISTOR	2SC1623
L603	1-408-976-21	INDUCTOR	33UH	Q102	8-729-100-66	TRANSISTOR	2SC1623
L700	1-408-974-21	INDUCTOR	22UH	Q103	8-729-216-22	TRANSISTOR	2SA1162
L701	1-408-980-21	INDUCTOR	68UH	Q104	8-729-100-66	TRANSISTOR	2SC1623
L800	1-407-169-XX	INDUCTOR	100UH	Q106	8-729-100-66	TRANSISTOR	2SC1623
L801	1-408-983-21	INDUCTOR	120UH	Q107	8-729-901-01	TRANSISTOR	DTC144EK
L802	1-408-985-21	INDUCTOR	180UH	Q108	8-729-100-66	TRANSISTOR	2SC1623
L803	1-408-974-21	INDUCTOR	22UH	Q109	8-729-901-06	TRANSISTOR	DTA144EK
L804	1-408-948-00	INDUCTOR	220UH	Q110	8-729-216-22	TRANSISTOR	2SA1162
L807	1-408-973-21	INDUCTOR	18UH	Q111	8-729-100-66	TRANSISTOR	2SC1623
L901	1-408-976-21	INDUCTOR	33UH	Q112	8-729-100-66	TRANSISTOR	2SC1623
		<u>VARIABLE COIL</u>		Q113	8-729-100-66	TRANSISTOR	2SC1623
LV400	1-408-512-00	COIL (VARIABLE)		Q114	8-729-901-01	TRANSISTOR	DTC144EK
		<u>TRANSISTOR</u>		Q116	8-729-100-66	TRANSISTOR	2SC1623
Q001	8-729-100-66	TRANSISTOR	2SC1623	Q117	8-729-100-66	TRANSISTOR	2SC1623
Q002	8-729-620-06	TRANSISTOR	2SC3052EF	Q118	8-729-216-22	TRANSISTOR	2SA1162
Q003	8-729-100-66	TRANSISTOR	2SC1623	Q119	8-729-901-01	TRANSISTOR	DTC144EK
Q004	8-729-100-66	TRANSISTOR	2SC1623	Q120	8-729-113-31	TRANSISTOR	2SB733-2
Q005	8-729-100-66	TRANSISTOR	2SC1623	Q121	8-729-901-01	TRANSISTOR	DTC144EK
Q006	8-729-901-06	TRANSISTOR	DTA144EK	Q122	8-729-901-01	TRANSISTOR	DTC144EK
Q007	8-729-901-01	TRANSISTOR	DTC144EK	Q123	8-729-100-66	TRANSISTOR	2SC1623
Q008	8-729-901-01	TRANSISTOR	DTC144EK	Q124	8-729-216-22	TRANSISTOR	2SA1162
Q009	8-729-901-01	TRANSISTOR	DTC144EK	Q125	8-729-216-22	TRANSISTOR	2SA1162
Q011	8-729-901-01	TRANSISTOR	DTC144EK	Q126	8-729-102-07	TRANSISTOR	2SC2223-F13
Q012	8-729-901-01	TRANSISTOR	DTC144EK	Q127	8-729-102-07	TRANSISTOR	2SC2223-F13
Q014	8-729-100-66	TRANSISTOR	2SC1623	Q128	8-729-901-01	TRANSISTOR	DTC144EK
Q015	8-729-216-22	TRANSISTOR	2SA1162	Q129	8-729-216-22	TRANSISTOR	2SA1162
Q016	8-729-216-22	TRANSISTOR	2SA1162	Q130	8-729-901-01	TRANSISTOR	DTC144EK
Q017	8-729-901-01	TRANSISTOR	DTC144EK	Q131	8-729-901-06	TRANSISTOR	DTA144EK
				Q132	8-729-901-06	TRANSISTOR	DTA144EK
				Q133	8-729-216-22	TRANSISTOR	2SA1162

When indicating parts by reference number, please include the board name.

VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q134	8-729-901-01	TRANSISTOR DTC144EK		Q337	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q135	8-729-901-06	TRANSISTOR DTA144EK		Q338	8-729-901-01	TRANSISTOR DTC144EK	
Q136	8-729-901-01	TRANSISTOR DTC144EK		Q339	8-729-901-06	TRANSISTOR DTA144EK	
Q140	8-729-901-01	TRANSISTOR DTC144EK		Q400	8-729-100-66	TRANSISTOR 2SC1623	
Q200	8-729-202-38	TRANSISTOR 2SC3326N		Q401	8-729-216-22	TRANSISTOR 2SA1162	
Q201	8-729-202-38	TRANSISTOR 2SC3326N		Q402	8-729-100-66	TRANSISTOR 2SC1623	
Q202	8-729-901-01	TRANSISTOR DTC144EK		Q404	8-729-901-01	TRANSISTOR DTC144EK	
Q203	8-729-901-06	TRANSISTOR DTA144EK		Q405	8-729-901-01	TRANSISTOR DTC144EK	
Q204	8-729-901-01	TRANSISTOR DTC144EK		Q406	8-729-901-06	TRANSISTOR DTA144EK	
Q205	8-729-901-01	TRANSISTOR DTC144EK		Q407	8-729-901-01	TRANSISTOR DTC144EK	
Q206	8-729-901-01	TRANSISTOR DTC144EK		Q416	8-729-901-01	TRANSISTOR DTC144EK	
Q207	8-729-216-22	TRANSISTOR 2SA1162		Q417	8-729-901-01	TRANSISTOR DTC144EK	
Q208	8-729-216-22	TRANSISTOR 2SA1162		Q418	8-729-901-01	TRANSISTOR DTC144EK	
Q209	8-729-100-66	TRANSISTOR 2SC1623		Q419	8-729-901-06	TRANSISTOR DTA144EK	
Q210	8-729-100-66	TRANSISTOR 2SC1623		Q500	8-729-901-06	TRANSISTOR DTA144EK	
Q211	8-729-901-01	TRANSISTOR DTC144EK		Q501	8-729-100-66	TRANSISTOR 2SC1623	
Q212	8-729-901-01	TRANSISTOR DTC144EK		Q502	8-729-100-66	TRANSISTOR 2SC1623	
Q213	8-729-901-06	TRANSISTOR DTA144EK		Q503	8-729-100-66	TRANSISTOR 2SC1623	
Q214	8-729-216-22	TRANSISTOR 2SA1162		Q504	8-729-100-66	TRANSISTOR 2SC1623	
Q215	8-729-901-01	TRANSISTOR DTC144EK		Q505	8-729-901-06	TRANSISTOR DTA144EK	
Q220	8-729-901-01	TRANSISTOR DTC144EK		Q506	8-729-100-66	TRANSISTOR 2SC1623	
Q221	8-729-100-66	TRANSISTOR 2SC1623		Q507	8-729-216-22	TRANSISTOR 2SA1162	
Q222	8-729-100-66	TRANSISTOR 2SC1623		Q508	8-729-100-66	TRANSISTOR 2SC1623	
Q224	8-729-901-01	TRANSISTOR DTC144EK		Q509	8-729-100-66	TRANSISTOR 2SC1623	
Q225	8-729-901-01	TRANSISTOR DTC144EK		Q510	8-729-216-22	TRANSISTOR 2SA1162	
Q226	8-729-901-01	TRANSISTOR DTC144EK		Q511	8-729-216-22	TRANSISTOR 2SA1162	
Q227	8-729-901-06	TRANSISTOR DTA144EK		Q512	8-729-901-06	TRANSISTOR DTA144EK	
Q301	8-729-901-01	TRANSISTOR DTC144EK		Q513	8-729-901-06	TRANSISTOR DTA144EK	
Q302	8-729-901-01	TRANSISTOR DTC144EK		Q514	8-729-100-66	TRANSISTOR 2SC1623	
Q303	8-729-901-01	TRANSISTOR DTC144EK		Q515	8-729-100-66	TRANSISTOR 2SC1623	
Q313	8-729-901-01	TRANSISTOR DTC144EK		Q518	8-729-901-01	TRANSISTOR DTC144EK	
Q314	8-729-901-06	TRANSISTOR DTA144EK		Q519	8-729-901-01	TRANSISTOR DTC144EK	
Q315	8-729-901-01	TRANSISTOR DTC144EK		Q520	8-729-901-01	TRANSISTOR DTC144EK	
Q316	8-729-901-06	TRANSISTOR DTA144EK		Q521	8-729-100-66	TRANSISTOR 2SC1623	
Q317	8-729-901-01	TRANSISTOR DTC144EK		Q522	8-729-901-06	TRANSISTOR DTA144EK	
Q318	8-729-901-01	TRANSISTOR DTC144EK		Q523	8-729-901-06	TRANSISTOR DTA144EK	
Q319	8-729-100-66	TRANSISTOR 2SC1623		Q524	8-729-901-01	TRANSISTOR DTC144EK	
Q321	8-729-901-01	TRANSISTOR DTC144EK		Q525	8-729-901-06	TRANSISTOR DTA144EK	
Q322	8-729-100-66	TRANSISTOR 2SC1623		Q526	8-729-100-66	TRANSISTOR 2SC1623	
Q323	8-729-901-01	TRANSISTOR DTC144EK		Q527	8-729-100-66	TRANSISTOR 2SC1623	
Q324	8-729-216-22	TRANSISTOR 2SA1162		Q528	8-729-100-66	TRANSISTOR 2SC1623	
Q325	8-729-901-01	TRANSISTOR DTC144EK		Q529	8-729-901-01	TRANSISTOR DTC144EK	
Q326	8-729-901-01	TRANSISTOR DTC144EK		Q530	8-729-901-01	TRANSISTOR DTC144EK	
Q327	8-729-100-66	TRANSISTOR 2SC1623		Q531	8-729-100-66	TRANSISTOR 2SC1623	
Q328	8-729-100-66	TRANSISTOR 2SC1623		Q532	8-729-901-01	TRANSISTOR DTC144EK	
Q329	8-729-901-06	TRANSISTOR DTA144EK		Q533	8-729-100-66	TRANSISTOR 2SC1623	
Q330	8-729-901-06	TRANSISTOR DTA144EK		Q534	8-729-901-06	TRANSISTOR DTA144EK	
Q331	8-729-102-07	TRANSISTOR 2SC2223-F13		Q535	8-729-901-01	TRANSISTOR DTC144EK	
Q332	8-729-102-07	TRANSISTOR 2SC2223-F13		Q536	8-729-901-01	TRANSISTOR DTC144EK	
Q333	8-729-216-22	TRANSISTOR 2SA1162		Q537	8-729-901-06	TRANSISTOR DTA144EK	
Q334	8-729-216-22	TRANSISTOR 2SA1162		Q538	8-729-901-06	TRANSISTOR DTA144EK	
Q335	8-729-102-07	TRANSISTOR 2SC2223-F13		Q539	8-729-901-01	TRANSISTOR DTC144EK	
Q336	8-729-102-07	TRANSISTOR 2SC2223-F13		Q601	8-729-100-66	TRANSISTOR 2SC1623	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q602	8-729-100-66	TRANSISTOR 2SC1623		R014	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q603	8-729-901-01	TRANSISTOR DTC144EK		R015	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q604	8-729-100-66	TRANSISTOR 2SC1623		R016	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q605	8-729-100-66	TRANSISTOR 2SC1623		R017	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q607	8-729-907-46	TRANSISTOR IMZ1		R018	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q608	8-729-903-10	TRANSISTOR FMW1		R020	1-216-035-00	METAL GLAZE 270 5%	1/10W
Q609	8-729-901-01	TRANSISTOR DTC144EK		R021	1-216-035-00	METAL GLAZE 270 5%	1/10W
Q610	8-729-216-22	TRANSISTOR 2SA1162		R024	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q611	8-729-901-06	TRANSISTOR DTA144EK		R025	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q612	8-729-100-66	TRANSISTOR 2SC1623		R026	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q613	8-729-100-66	TRANSISTOR 2SC1623		R027	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q614	8-729-901-01	TRANSISTOR DTC144EK		R028	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q700	8-729-901-01	TRANSISTOR DTC144EK		R029	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q701	8-729-100-66	TRANSISTOR 2SC1623		R030	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q702	8-729-100-66	TRANSISTOR 2SC1623		R031	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q704	8-729-100-66	TRANSISTOR 2SC1623		R032	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q705	8-729-216-22	TRANSISTOR 2SA1162		R040	1-216-045-00	METAL GLAZE 680 5%	1/10W
Q706	8-729-216-22	TRANSISTOR 2SA1162		R041	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q800	8-729-100-66	TRANSISTOR 2SC1623		R042	1-216-089-00	METAL GLAZE 47K 5%	1/10W
Q801	8-729-100-66	TRANSISTOR 2SC1623		R043	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
Q802	8-729-216-22	TRANSISTOR 2SA1162		R044	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q803	8-729-202-38	TRANSISTOR 2SC3326N		R045	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q804	8-729-100-66	TRANSISTOR 2SC1623		R046	1-216-748-11	METAL GLAZE 39K 5%	1/10W
Q805	8-729-901-01	TRANSISTOR DTC144EK		R048	1-216-075-00	METAL GLAZE 12K 5%	1/10W
Q806	8-729-100-66	TRANSISTOR 2SC1623		R049	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q807	8-729-216-22	TRANSISTOR 2SA1162		R050	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q808	8-729-216-22	TRANSISTOR 2SA1162		R051	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q809	8-729-100-66	TRANSISTOR 2SC1623		R052	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q810	8-729-100-66	TRANSISTOR 2SC1623		R053	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q811	8-729-901-01	TRANSISTOR DTC144EK		R054	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q812	8-729-901-01	TRANSISTOR DTC144EK		R055	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q813	8-729-100-66	TRANSISTOR 2SC1623		R056	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q815	8-729-901-01	TRANSISTOR DTC144EK		R058	1-216-047-00	METAL GLAZE 820 5%	1/10W
Q816	8-729-901-01	TRANSISTOR DTC144EK		R059	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q817	8-729-901-01	TRANSISTOR DTC144EK		R060	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q818	8-729-901-01	TRANSISTOR DTC144EK		R061	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q901	8-729-100-66	TRANSISTOR 2SC1623		R062	1-216-083-00	METAL GLAZE 27K 5%	1/10W
Q902	8-729-216-22	TRANSISTOR 2SA1162		R063	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
RESISTOR				R064	1-216-295-00	METAL GLAZE 0 5%	1/10W
R001	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R065	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R002	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R066	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R003	1-216-047-00	METAL GLAZE 820 5%	1/10W	R067	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R004	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R068	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R005	1-216-039-00	METAL GLAZE 390 5%	1/10W	R069	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R006	1-216-033-00	METAL GLAZE 220 5%	1/10W	R070	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R007	1-216-037-00	METAL GLAZE 330 5%	1/10W	R074	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R008	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R075	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R009	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R076	1-216-029-00	METAL GLAZE 150 5%	1/10W
R010	1-216-029-00	METAL GLAZE 150 5%	1/10W	R077	1-216-047-00	METAL GLAZE 820 5%	1/10W
R011	1-216-041-00	METAL GLAZE 470 5%	1/10W	R078	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R012	1-216-035-00	METAL GLAZE 270 5%	1/10W	R079	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R013	1-216-043-00	METAL GLAZE 560 5%	1/10W	R080	1-216-081-00	METAL GLAZE 22K 5%	1/10W
				R081	1-216-045-00	METAL GLAZE 680 5%	1/10W

When indicating parts by reference number, please include the board name.

VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R082	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R141	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R083	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R142	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R084	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R143	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R085	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R144	1-216-043-00	METAL GLAZE	560 5% 1/10W
R086	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R145	1-216-043-00	METAL GLAZE	560 5% 1/10W
R087	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R146	1-216-041-00	METAL GLAZE	470 5% 1/10W
R088	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R148	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R089	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R150	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R090	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R151	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R091	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R152	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R092	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R153	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R093	1-216-043-00	METAL GLAZE	560 5% 1/10W	R154	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R094	1-216-295-00	METAL GLAZE	0 5% 1/10W	R155	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R095	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R156	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R096	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R157	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R097	1-216-041-00	METAL GLAZE	470 5% 1/10W	R158	1-216-035-00	METAL GLAZE	270 5% 1/10W
R098	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R159	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R100	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R160	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R101	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R161	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R102	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R162	1-216-041-00	METAL GLAZE	470 5% 1/10W
R103	1-216-043-00	METAL GLAZE	560 5% 1/10W	R163	1-216-041-00	METAL GLAZE	470 5% 1/10W
R104	1-216-033-00	METAL GLAZE	220 5% 1/10W	R164	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R105	1-216-032-00	METAL GLAZE	200 5% 1/10W	R165	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R106	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R166	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R107	1-216-295-00	METAL GLAZE	0 5% 1/10W	R167	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R108	1-216-031-00	METAL GLAZE	180 5% 1/10W	R168	1-216-033-00	METAL GLAZE	220 5% 1/10W
R109	1-216-041-00	METAL GLAZE	470 5% 1/10W	R169	1-216-047-00	METAL GLAZE	820 5% 1/10W
R111	1-216-295-00	METAL GLAZE	0 5% 1/10W	R170	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R112	1-216-041-00	METAL GLAZE	470 5% 1/10W	R171	1-216-038-00	METAL GLAZE	360 5% 1/10W
R114	1-216-033-00	METAL GLAZE	220 5% 1/10W	R172	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R115	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R173	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R116	1-218-140-11	METAL GLAZE	390 1% 1/10W	R174	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R117	1-218-150-11	METAL GLAZE	1.2K 1% 1/10W	R175	1-218-132-11	METAL GLAZE	4.7K 1% 1/10W
R118	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R176	1-216-093-00	METAL GLAZE	68K 5% 1/10W
R119	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R177	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R120	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R178	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R122	1-216-019-00	METAL GLAZE	56 5% 1/10W	R179	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R123	1-216-045-00	METAL GLAZE	680 5% 1/10W	R180	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R124	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R181	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R125	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R182	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R126	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R183	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R127	1-216-043-00	METAL GLAZE	560 5% 1/10W	R184	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R129	1-216-033-00	METAL GLAZE	220 5% 1/10W	R185	1-216-033-00	METAL GLAZE	220 5% 1/10W
R130	1-216-017-00	METAL GLAZE	47 5% 1/10W	R186	1-216-043-00	METAL GLAZE	560 5% 1/10W
R131	1-216-033-00	METAL GLAZE	220 5% 1/10W	R187	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R132	1-216-295-00	METAL GLAZE	0 5% 1/10W	R188	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R133	1-216-295-00	METAL GLAZE	0 5% 1/10W	R189	1-216-037-00	METAL GLAZE	330 5% 1/10W
R135	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R190	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R136	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R191	1-216-043-00	METAL GLAZE	560 5% 1/10W
R137	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R193	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R138	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R194	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R139	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R195	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R140	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R196	1-216-089-00	METAL GLAZE	47K 5% 1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R197	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R266	1-216-068-00	METAL GLAZE	6.2K 5% 1/10W
R198	1-216-041-00	METAL GLAZE	470 5% 1/10W	R268	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R200	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R269	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R201	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R271	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R202	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R272	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R203	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R273	1-218-140-11	METAL GLAZE	390 1% 1/10W
R204	1-218-142-11	METAL GLAZE	470 1% 1/10W	R301	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R205	1-218-140-11	METAL GLAZE	390 1% 1/10W	R302	1-216-076-00	METAL GLAZE	13K 5% 1/10W
R206	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R303	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R207	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R304	1-216-076-00	METAL GLAZE	13K 5% 1/10W
R208	1-218-150-11	METAL GLAZE	1.2K 1% 1/10W	R305	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R209	1-216-061-00	METAL GLAZE	3.3K 1% 1/10W	R306	1-216-076-00	METAL GLAZE	13K 5% 1/10W
R210	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R307	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R211	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R308	1-216-076-00	METAL GLAZE	13K 5% 1/10W
R212	1-218-132-11	METAL GLAZE	4.7K 1% 1/10W	R310	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R213	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R311	1-216-033-00	METAL GLAZE	220 5% 1/10W
R214	1-216-328-11	METAL GLAZE	4.3K 1% 1/10W	R314	1-216-041-00	METAL GLAZE	470 5% 1/10W
R215	1-218-155-11	METAL GLAZE	3.9K 1% 1/10W	R315	1-216-295-00	METAL GLAZE	0 5% 1/10W
R216	1-218-155-11	METAL GLAZE	3.9K 1% 1/10W	R316	1-216-033-00	METAL GLAZE	220 5% 1/10W
R217	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R330	1-216-041-00	METAL GLAZE	470 5% 1/10W
R218	1-216-103-00	METAL GLAZE	180K 5% 1/10W	R331	1-216-041-00	METAL GLAZE	470 5% 1/10W
R223	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R332	1-216-041-00	METAL GLAZE	470 5% 1/10W
R224	1-216-061-00	METAL GLAZE	3.3K 1% 1/10W	R333	1-216-295-00	METAL GLAZE	0 5% 1/10W
R225	1-218-132-11	METAL GLAZE	4.7K 1% 1/10W	R334	1-216-295-00	METAL GLAZE	0 5% 1/10W
R226	1-218-152-11	METAL GLAZE	1.5K 1% 1/10W	R335	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R227	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R336	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R228	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R337	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R229	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R338	1-216-041-00	METAL GLAZE	470 5% 1/10W
R230	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R339	1-216-041-00	METAL GLAZE	470 5% 1/10W
R231	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R342	1-216-041-00	METAL GLAZE	470 5% 1/10W
R232	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R343	1-216-047-00	METAL GLAZE	820 5% 1/10W
R233	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R344	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R235	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R345	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R236	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R346	1-216-035-00	METAL GLAZE	270 5% 1/10W
R237	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R347	1-216-041-00	METAL GLAZE	470 5% 1/10W
R238	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R348	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R239	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R349	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R240	1-216-041-00	METAL GLAZE	470 5% 1/10W	R350	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R241	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R351	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R242	1-216-111-00	METAL GLAZE	390K 5% 1/10W	R352	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R243	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R353	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R244	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R354	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R245	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R355	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R246	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R356	1-216-041-00	METAL GLAZE	470 5% 1/10W
R247	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R359	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R248	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R360	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R249	1-216-045-00	METAL GLAZE	680 5% 1/10W	R361	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R250	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R362	1-216-041-00	METAL GLAZE	470 5% 1/10W
R251	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R363	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R252	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R364	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R253	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R365	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R262	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R366	1-216-050-00	METAL GLAZE	1.1K 5% 1/10W
R265	1-216-084-00	METAL GLAZE	30K 5% 1/10W	R368	1-216-047-00	METAL GLAZE	820 5% 1/10W

When indicating parts by reference number, please include the board name.

VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R369	1-216-042-00	METAL GLAZE	510 5% 1/10W	R433	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R370	1-216-056-00	METAL GLAZE	2K 5% 1/10W	R434	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R371	1-216-045-00	METAL GLAZE	680 5% 1/10W	R435	1-216-039-00	METAL GLAZE	390 5% 1/10W
R372	1-216-041-00	METAL GLAZE	470 5% 1/10W	R436	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R373	1-216-039-00	METAL GLAZE	390 5% 1/10W	R437	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R374	1-216-041-00	METAL GLAZE	470 5% 1/10W	R438	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R375	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R439	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R376	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R440	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R377	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R441	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R379	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R442	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R380	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R443	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R383	1-216-295-00	METAL GLAZE	0 5% 1/10W	R444	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R384	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R445	1-216-045-00	METAL GLAZE	680 5% 1/10W
R385	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R446	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R386	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R447	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R387	1-216-041-00	METAL GLAZE	470 5% 1/10W	R460	1-216-295-00	METAL GLAZE	0 5% 1/10W
R388	1-216-041-00	METAL GLAZE	470 5% 1/10W	R461	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R389	1-216-295-00	METAL GLAZE	0 5% 1/10W	R462	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R390	1-216-041-00	METAL GLAZE	470 5% 1/10W	R463	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R391	1-216-035-00	METAL GLAZE	270 5% 1/10W	R466	1-216-025-00	METAL GLAZE	100 5% 1/10W
R392	1-216-295-00	METAL GLAZE	0 5% 1/10W	R477	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R393	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R478	1-216-295-00	METAL GLAZE	0 5% 1/10W
R394	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R479	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R395	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R501	1-216-043-00	METAL GLAZE	560 5% 1/10W
R397	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R502	1-216-041-00	METAL GLAZE	470 5% 1/10W
R400	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R503	1-216-295-00	METAL GLAZE	0 5% 1/10W
R401	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R504	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R402	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R505	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R403	1-216-035-00	METAL GLAZE	270 5% 1/10W	R506	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R404	1-216-013-00	METAL GLAZE	33 5% 1/10W	R507	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R405	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R508	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R406	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R510	1-216-045-00	METAL GLAZE	680 5% 1/10W
R407	1-216-111-00	METAL GLAZE	390K 5% 1/10W	R511	1-216-045-00	METAL GLAZE	680 5% 1/10W
R408	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R512	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R409	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R513	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R410	1-216-035-00	METAL GLAZE	270 5% 1/10W	R514	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R411	1-216-027-00	METAL GLAZE	120 5% 1/10W	R515	1-216-043-00	METAL GLAZE	560 5% 1/10W
R414	1-216-039-00	METAL GLAZE	390 5% 1/10W	R516	1-216-035-00	METAL GLAZE	270 5% 1/10W
R415	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R517	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R416	1-216-041-00	METAL GLAZE	470 5% 1/10W	R518	1-216-047-00	METAL GLAZE	820 5% 1/10W
R417	1-216-041-00	METAL GLAZE	470 5% 1/10W	R519	1-216-027-00	METAL GLAZE	120 5% 1/10W
R418	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R520	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R419	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R521	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R422	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R522	1-216-047-00	METAL GLAZE	820 5% 1/10W
R423	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R523	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R425	1-216-025-00	METAL GLAZE	100 5% 1/10W	R524	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R426	1-216-009-00	METAL GLAZE	22 5% 1/10W	R525	1-216-031-00	METAL GLAZE	180 5% 1/10W
R427	1-216-027-00	METAL GLAZE	120 5% 1/10W	R526	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R428	1-216-076-00	METAL GLAZE	13K 5% 1/10W	R527	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R429	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R528	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R430	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R529	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R431	1-216-117-00	METAL GLAZE	680K 5% 1/10W	R530	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R432	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R533	1-216-041-00	METAL GLAZE	470 5% 1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R534	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R593	1-216-041-00	METAL GLAZE	470 5% 1/10W
R535	1-216-031-00	METAL GLAZE	180 5% 1/10W	R594	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R536	1-216-037-00	METAL GLAZE	330 5% 1/10W	R595	1-216-092-00	METAL GLAZE	62K 5% 1/10W
R537	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R596	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R538	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R597	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R539	1-216-295-00	METAL GLAZE	0 5% 1/10W	R598	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R540	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R599	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R541	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R601	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R542	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R602	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R543	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R603	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R544	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R604	1-216-041-00	METAL GLAZE	470 5% 1/10W
R545	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R605	1-216-041-00	METAL GLAZE	470 5% 1/10W
R548	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R606	1-216-033-00	METAL GLAZE	220 5% 1/10W
R549	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R607	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R550	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R608	1-216-041-00	METAL GLAZE	470 5% 1/10W
R551	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R609	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R552	1-216-035-00	METAL GLAZE	270 5% 1/10W	R610	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R554	1-216-295-00	METAL GLAZE	0 5% 1/10W	R611	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R555	1-216-045-00	METAL GLAZE	680 5% 1/10W	R612	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R556	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R613	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R557	1-216-041-00	METAL GLAZE	470 5% 1/10W	R614	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R559	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R615	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R560	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R616	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R561	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R617	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R562	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R618	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R563	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R619	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R564	1-216-045-00	METAL GLAZE	680 5% 1/10W	R620	1-216-037-00	METAL GLAZE	330 5% 1/10W
R565	1-216-033-00	METAL GLAZE	220 5% 1/10W	R623	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R567	1-216-035-00	METAL GLAZE	270 5% 1/10W	R625	1-216-295-00	METAL GLAZE	0 5% 1/10W
R568	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R626	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R569	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R650	1-216-041-00	METAL GLAZE	470 5% 1/10W
R570	1-216-295-00	METAL GLAZE	0 5% 1/10W	R651	1-216-295-00	METAL GLAZE	0 5% 1/10W
R571	1-216-045-00	METAL GLAZE	680 5% 1/10W	R652	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R572	1-216-045-00	METAL GLAZE	680 5% 1/10W	R655	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R573	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R656	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R574	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R657	1-216-047-00	METAL GLAZE	820 5% 1/10W
R575	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R658	1-216-039-00	METAL GLAZE	390 5% 1/10W
R576	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R659	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R577	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R660	1-216-037-00	METAL GLAZE	330 5% 1/10W
R578	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R661	1-216-025-00	METAL GLAZE	100 5% 1/10W
R579	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R662	1-216-025-00	METAL GLAZE	100 5% 1/10W
R580	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R663	1-216-025-00	METAL GLAZE	100 5% 1/10W
R581	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R664	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R582	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R700	1-216-093-00	METAL GLAZE	68K 5% 1/10W
R583	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R701	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R584	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R702	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R585	1-216-041-00	METAL GLAZE	470 5% 1/10W	R703	1-216-041-00	METAL GLAZE	470 5% 1/10W
R586	1-216-037-00	METAL GLAZE	330 5% 1/10W	R704	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R587	1-216-039-00	METAL GLAZE	390 5% 1/10W	R705	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R589	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R706	1-216-043-00	METAL GLAZE	560 5% 1/10W
R590	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R707	1-216-093-00	METAL GLAZE	68K 5% 1/10W
R591	1-216-031-00	METAL GLAZE	180 5% 1/10W	R708	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R592	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R709	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W

When indicating parts by reference number, please include the board name.

VI-65

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R710	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R831	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R711	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R832	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R712	1-216-099-00	METAL GLAZE 120K 5%	1/10W	R833	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R713	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R835	1-216-103-00	METAL GLAZE 180K 5%	1/10W
R714	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R836	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R715	1-216-035-00	METAL GLAZE 270 5%	1/10W	R840	1-216-295-00	METAL GLAZE 0 5%	1/10W
R716	1-216-045-00	METAL GLAZE 680 5%	1/10W	R841	1-216-295-00	METAL GLAZE 0 5%	1/10W
R717	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R843	1-216-295-00	METAL GLAZE 0 5%	1/10W
R718	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R844	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R719	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R845	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R720	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R846	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R721	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R848	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R722	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R849	1-216-025-00	METAL GLAZE 100 5%	1/10W
R723	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R850	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R724	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R851	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R725	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R852	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R726	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R853	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R730	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R854	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R731	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R855	1-216-039-00	METAL GLAZE 390 5%	1/10W
R732	1-216-045-00	METAL GLAZE 680 5%	1/10W	R856	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R733	1-216-045-00	METAL GLAZE 680 5%	1/10W	R857	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R734	1-216-041-00	METAL GLAZE 470 5%	1/10W	R858	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R735	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R859	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R740	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R861	1-216-295-00	METAL GLAZE 0 5%	1/10W
R741	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R863	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R742	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R864	1-216-295-00	METAL GLAZE 0 5%	1/10W
R743	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R866	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R744	1-216-295-00	METAL GLAZE 0 5%	1/10W	R867	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R800	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R868	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R801	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R870	1-216-295-00	METAL GLAZE 0 5%	1/10W
R802	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R872	1-216-037-00	METAL GLAZE 330 5%	1/10W
R803	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R873	1-216-295-00	METAL GLAZE 0 5%	1/10W
R804	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R874	1-216-295-00	METAL GLAZE 0 5%	1/10W
R805	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R875	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R806	1-216-043-00	METAL GLAZE 560 5%	1/10W	R876	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R807	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R877	1-216-041-00	METAL GLAZE 470 5%	1/10W
R808	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R878	1-216-041-00	METAL GLAZE 470 5%	1/10W
R809	1-216-295-00	METAL GLAZE 0 5%	1/10W	R879	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R812	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R880	1-216-041-00	METAL GLAZE 470 5%	1/10W
R813	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R881	1-216-748-11	METAL GLAZE 39K 5%	1/10W
R814	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R883	1-216-045-00	METAL GLAZE 680 5%	1/10W
R815	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R884	1-216-045-00	METAL GLAZE 680 5%	1/10W
R817	1-216-295-00	METAL GLAZE 0 5%	1/10W	R885	1-216-045-00	METAL GLAZE 680 5%	1/10W
R818	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R886	1-216-045-00	METAL GLAZE 680 5%	1/10W
R819	1-216-025-00	METAL GLAZE 100 5%	1/10W	R887	1-216-045-00	METAL GLAZE 680 5%	1/10W
R820	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R888	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R821	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R889	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R822	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R890	1-216-295-00	METAL GLAZE 0 5%	1/10W
R823	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R892	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R824	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R894	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R826	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R895	1-216-045-00	METAL GLAZE 680 5%	1/10W
R827	1-216-045-00	METAL GLAZE 680 5%	1/10W	R896	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R830	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R897	1-216-073-00	METAL GLAZE 10K 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R901	1-216-081-00	METAL GLAZE 22K 5%	1/10W	*A-7061-811-A	FL-24 BOARD, COMPLETE (AEP MODEL)	*****	
R902	1-216-081-00	METAL GLAZE 22K 5%	1/10W				
R903	1-216-041-00	METAL GLAZE 470 5%	1/10W	*A-7062-055-A	FL-24 (C) BOARD, COMPLETE (UK MODEL)	*****	
R904	1-216-041-00	METAL GLAZE 470 5%	1/10W				
R905	1-216-056-00	METAL GLAZE 2K 5%	1/10W				
R906	1-216-041-00	METAL GLAZE 470 5%	1/10W	*3-697-607-01	HOLDER (SU), LED		
R907	1-216-089-00	METAL GLAZE 47K 5%	1/10W	*3-742-524-01	HOLDER (LEFT), INDICATION TUBE		
R908	1-216-073-00	METAL GLAZE 10K 5%	1/10W	*3-742-548-01	HOLDER (RIGHT), INDICATION TUBE		
R910	1-216-295-00	METAL GLAZE 0 5%	1/10W				
R912	1-216-295-00	METAL GLAZE 0 5%	1/10W				
R913	1-216-073-00	METAL GLAZE 10K 5%	1/10W				
<u>VARIABLE RESISTOR</u>							
RV101	1-228-998-00	RES, ADJ, CARBON 220K		C001	1-126-154-11	ELECT 47MF	20% 6.3V
RV102	1-228-994-00	RES, ADJ, CARBON 10K		C002	1-164-232-11	CERAMIC CHIP 0.01MF	50V
RV103	1-228-994-00	RES, ADJ, CARBON 10K		C003	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
RV104	1-228-993-00	RES, ADJ, CARBON 4.7K		C004	1-126-153-11	ELECT 22MF	20% 6.3V
RV105	1-228-994-00	RES, ADJ, CARBON 10K		C005	1-126-153-11	ELECT 22MF	20% 6.3V
RV202	1-228-991-00	RES, ADJ, CARBON 2.2K		C006	1-126-157-11	ELECT 10MF	20% 10V
RV203	1-228-993-00	RES, ADJ, CARBON 4.7K		C007	1-126-157-11	ELECT 10MF	20% 10V
RV204	1-228-996-00	RES, ADJ, CARBON 47K		C008	1-126-157-11	ELECT 10MF	20% 10V
RV205	1-228-991-00	RES, ADJ, CARBON 2.2K		C009	1-163-035-00	CERAMIC CHIP 0.047MF	50V
RV300	1-228-990-00	RES, ADJ, CARBON 1K		C010	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
RV301	1-228-990-00	RES, ADJ, CARBON 1K		C011	1-126-157-11	ELECT 10MF	20% 10V
RV302	1-228-994-00	RES, ADJ, CARBON 10K		C012	1-163-035-00	CERAMIC CHIP 0.047MF	50V
RV303	1-228-994-00	RES, ADJ, CARBON 10K		C013	1-163-035-00	CERAMIC CHIP 0.047MF	50V
RV304	1-228-994-00	RES, ADJ, CARBON 10K		C014	1-126-157-11	ELECT 10MF	20% 10V
RV305	1-228-994-00	RES, ADJ, CARBON 10K		C015	1-163-038-00	CERAMIC CHIP 0.1MF	25V
RV400	1-228-994-00	RES, ADJ, CARBON 10K		C016	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V
RV401	1-228-994-00	RES, ADJ, CARBON 10K		C017	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
RV601	1-228-994-00	RES, ADJ, CARBON 10K		C018	1-163-098-00	CERAMIC CHIP 16PF	5% 50V
RV700	1-228-996-00	RES, ADJ, CARBON 47K		C019	1-163-098-00	CERAMIC CHIP 16PF	5% 50V
RV701	1-228-998-00	RES, ADJ, CARBON 220K		C020	1-163-038-00	CERAMIC CHIP 0.1MF	25V
RV800	1-228-994-00	RES, ADJ, CARBON 10K		C021	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
RV801	1-228-995-00	RES, ADJ, CARBON 22K		C023	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
<u>CRYSTAL</u>				C024	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
X400	1-567-442-11	VIBRATOR, CRYSTAL (13.3MHz)		<u>FILTER</u>			
X800	1-567-504-11	OSCILLATOR, CRYSTAL (4.43MHz)		CF001	1-567-132-00	VIBLATOR, CERAMIC	
*****				<u>CONNECTOR</u>			
				CN001	1-575-365-11	CONNECTOR, FPC/FFC 18P	
				CN002	1-575-365-11	CONNECTOR, FPC/FFC 18P	
				CN003	1-575-363-11	CONNECTOR, FPC/FFC 12P	
				CN004	1-575-365-11	CONNECTOR, FPC/FFC 18P	
				CN004	1-575-386-11	CABLE, FLAT (1.0MM PITCH) 18P	
				<u>TRIMMER</u>			
				CT001	1-141-311-11	CAP, VAR, TRIMMER (CHIP)	
				<u>DIODE</u>			
				D001	8-719-920-05	DIODE SLP281C-50	
				D002	8-719-920-05	DIODE SLP281C-50	
				D003	8-719-400-18	DIODE MA152WK	
				D004	8-719-955-04	DIODE PY5504S-1	
				D005	8-719-955-04	DIODE PY5504S-1	

When indicating parts by reference number, please include the board name.

FL-24

FR-41

Ref.No	Part No.	Description	Remark
D006	8-719-400-18	DIODE MA152WK	
D007	8-719-918-96	DIODE AA3422S	
D008	8-719-400-18	DIODE MA152WK	
D009	8-719-920-05	DIODE SLP281C-50	
D010	8-719-921-01	DIODE EBR5534S (UK MODEL)	
<u>IC</u>			
IC001	8-759-942-05	IC BA6800AFVC	
IC002	1-466-131-11	CATCHER RAY BLOCK (GP1U52X)	
IC003	8-759-937-56	IC S-8054ALB-LM-S	
IC004	8-759-941-78	IC S-8053ALB	
IC005	8-759-989-50	IC MB89793B-GDX401	
IC006	8-759-748-54	IC CAT35C202P	
<u>COIL</u>			
L001	1-407-169-XX	INDUCTOR 100UH	
L002	1-407-169-XX	INDUCTOR 100UH	
L003	1-407-169-XX	INDUCTOR 100UH	
<u>INDICATOR TUBE</u>			
ND001	1-519-507-31	INDICATOR TUBE, FLUORESCENT	
<u>TRANSISTOR</u>			
Q001	8-729-901-47	TRANSISTOR DTA143EK	
Q002	8-729-901-47	TRANSISTOR DTA143EK	
Q003	8-729-216-22	TRANSISTOR 2SA1162	
Q004	8-729-216-22	TRANSISTOR 2SA1162 (UK MODEL)	
<u>RESISTOR</u>			
R001	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R002	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R003	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R004	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R005	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R006	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R007	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R008	1-216-033-00	METAL GLAZE 220 5%	1/10W
R009	1-216-033-00	METAL GLAZE 220 5%	1/10W
R010	1-216-031-00	METAL GLAZE 180 5%	1/10W
R011	1-216-031-00	METAL GLAZE 180 5%	1/10W
R012	1-216-115-00	METAL GLAZE 560K 5%	1/10W
R013	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R014	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R015	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R016	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R017	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R018	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R019	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R020	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R021	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R022	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R024	1-216-089-00	METAL GLAZE 47K 5%	1/10W (UK MODEL)
R025	1-216-097-00	METAL GLAZE 100K 5%	1/10W

Ref.No	Part No.	Description	Remark
R026	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R027	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R028	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R029	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R030	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R031	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R032	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R033	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R034	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R035	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R036	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R037	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R038	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R039	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R040	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R041	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R042	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R043	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R044	1-216-041-00	METAL GLAZE 470 5%	1/10W
R045	1-216-033-00	METAL GLAZE 220 5%	1/10W
R046	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R047	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R048	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R049	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R050	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R051	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R052	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R053	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R054	1-216-033-00	METAL GLAZE 220 5%	1/10W
R055	1-216-031-00	METAL GLAZE 180 5%	1/10W (UK MODEL)
R056	1-216-049-00	METAL GLAZE 1K 5%	1/10W (UK MODEL)
R058	1-216-089-00	METAL GLAZE 47K 5%	1/10W (AEP MODEL)
<u>SWITCH</u>			
S001	1-554-174-00	SWITCH, KEY BOARD (ON/STANDBY)	
S002	1-554-174-00	SWITCH, KEY BOARD (EJECT)	
S003	1-554-174-00	SWITCH, KEY BOARD (Hi 8)	
S004	1-554-174-00	SWITCH, KEY BOARD (RESET)	
<u>CRYSTAL</u>			
X001	1-567-098-00	VIBRATOR, CRYSTAL (32.768kHz)	

		*A-7061-812-A	FR-41 (A) BOARD, COMPLETE

		*3-689-521-01	HOLDER, LED, ROUND
		*3-697-607-01	HOLDER (SU), LED
		3-731-123-01	BASE, VOLUME
		7-627-552-38	SCREW, PRECISION +P 1.7X3
<u>CAPACITOR</u>			
C101	1-163-038-00	CERAMIC CHIP 0.1MF	25V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C102	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR125	1-216-295-00	METAL GLAZE	0 5% 1/10W
C103	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR126	1-216-296-00	METAL GLAZE	0 5% 1/8W
C104	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JR127	1-216-295-00	METAL GLAZE	0 5% 1/10W
C105	1-135-156-21	TANTAL. CHIP 6.8MF	20% 6.3V	JR128	1-216-295-00	METAL GLAZE	0 5% 1/10W
C106	1-135-156-21	TANTAL. CHIP 6.8MF	20% 6.3V	JR129	1-216-296-00	METAL GLAZE	0 5% 1/8W
C118	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR130	1-216-296-00	METAL GLAZE	0 5% 1/8W
C119	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	JR131	1-216-296-00	METAL GLAZE	0 5% 1/8W
<u>CONNECTOR</u>				JR132	1-216-296-00	METAL GLAZE	0 5% 1/8W
CN104	1-575-360-11	CONNECTOR, FPC/FFC 5P		JR133	1-216-296-00	METAL GLAZE	0 5% 1/8W
CN105	1-575-362-11	CONNECTOR, FPC/FFC 11P		JR134	1-216-296-00	METAL GLAZE	0 5% 1/8W
CN105	1-575-385-11	CABLE, FLAT (1.0MM PITCH) 11P		JR135	1-216-295-00	METAL GLAZE	0 5% 1/10W
CN106	1-575-365-11	CONNECTOR, FPC/FFC 18P		JR136	1-216-295-00	METAL GLAZE	0 5% 1/10W
<u>DIODE</u>				JR137	1-216-296-00	METAL GLAZE	0 5% 1/8W
D110	8-719-106-45	DIODE RD9.1M-B3		JR138	1-216-295-00	METAL GLAZE	0 5% 1/10W
D111	8-719-400-18	DIODE MA152WK		JR139	1-216-296-00	METAL GLAZE	0 5% 1/8W
D112	8-719-400-18	DIODE MA152WK		JR140	1-216-296-00	METAL GLAZE	0 5% 1/8W
D113	8-719-301-49	DIODE SEL2810A		JR141	1-216-296-00	METAL GLAZE	0 5% 1/8W
D114	8-719-301-49	DIODE SEL2810A		JR142	1-216-296-00	METAL GLAZE	0 5% 1/8W
D115	8-719-920-05	DIODE SLP281C-50		JR143	1-216-296-00	METAL GLAZE	0 5% 1/8W
D116	8-719-920-05	DIODE SLP281C-50		JR144	1-216-295-00	METAL GLAZE	0 5% 1/10W
D117	8-719-812-32	DIODE TLY123		JR145	1-216-296-00	METAL GLAZE	0 5% 1/8W
D118	8-719-920-05	DIODE SLP281C-50		JR146	1-216-295-00	METAL GLAZE	0 5% 1/10W
D119	8-719-920-05	DIODE SLP281C-50		JR147	1-216-296-00	METAL GLAZE	0 5% 1/8W
D120	8-719-812-31	DIODE TLR123		JR148	1-216-295-00	METAL GLAZE	0 5% 1/10W
D121	8-719-301-49	DIODE SEL2810A		JR149	1-216-295-00	METAL GLAZE	0 5% 1/10W
<u>IC</u>				JR150	1-216-296-00	METAL GLAZE	0 5% 1/8W
IC101	8-759-111-56	IC UPC4572G2		JR151	1-216-295-00	METAL GLAZE	0 5% 1/10W
IC102	8-759-982-04	IC RC5532M		JR152	1-216-295-00	METAL GLAZE	0 5% 1/10W
<u>JACK</u>				JR153	1-216-296-00	METAL GLAZE	0 5% 1/8W
J102	1-566-850-31	CONNECTOR, (S) TERMINAL 4P (LINE IN 2-S VIDEO)		JR154	1-216-296-00	METAL GLAZE	0 5% 1/8W
<u>JUMPER RESISTOR</u>				JR155	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR110	1-216-295-00	METAL GLAZE	0 5% 1/10W	JR156	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR111	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR157	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR112	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR158	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR113	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR159	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR114	1-216-295-00	METAL GLAZE	0 5% 1/10W	JR160	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR115	1-216-296-00	METAL GLAZE	0 5% 1/8W	JR161	1-216-296-00	METAL GLAZE	0 5% 1/8W
JR116	1-216-295-00	METAL GLAZE	0 5% 1/10W	<u>TRANSISTOR</u>			
JR117	1-216-296-00	METAL GLAZE	0 5% 1/8W	Q101	8-729-901-01	TRANSISTOR DTC144EK	
JR118	1-216-296-00	METAL GLAZE	0 5% 1/8W	Q102	8-729-901-01	TRANSISTOR DTC144EK	
JR119	1-216-296-00	METAL GLAZE	0 5% 1/8W	<u>RESISTOR</u>			
JR120	1-216-295-00	METAL GLAZE	0 5% 1/10W	R101	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JR121	1-216-296-00	METAL GLAZE	0 5% 1/8W	R102	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
JR122	1-216-296-00	METAL GLAZE	0 5% 1/8W	R103	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JR123	1-216-296-00	METAL GLAZE	0 5% 1/8W	R104	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JR124	1-216-296-00	METAL GLAZE	0 5% 1/8W	R105	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R106	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
				R107	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R108	1-216-037-00	METAL GLAZE	330 5% 1/10W
				R109	1-216-037-00	METAL GLAZE	330 5% 1/10W
				R110	1-216-037-00	METAL GLAZE	330 5% 1/10W

When indicating part by reference number, please include the board name.

FR-41**MC-37**

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R111	1-216-037-00	METAL GLAZE	330 5% 1/10W	C605	1-126-160-11	ELECT 1MF	20% 50V
R112	1-216-037-00	METAL GLAZE	330 5% 1/10W	C606	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R113	1-216-037-00	METAL GLAZE	330 5% 1/10W	C607	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R114	1-216-037-00	METAL GLAZE	330 5% 1/10W	C608	1-124-225-00	ELECT 100MF	20% 6.3V
R115	1-216-081-00	METAL GLAZE	22K 5% 1/10W	C609	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
R116	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C610	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
R117	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	C611	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
R118	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C612	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R119	1-216-025-00	METAL GLAZE	100 5% 1/10W	C613	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
R120	1-216-025-00	METAL GLAZE	100 5% 1/10W	C614	1-126-153-11	ELECT 22MF	20% 6.3V
R121	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C615	1-126-153-11	ELECT 22MF	20% 6.3V
R122	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	C616	1-126-157-11	ELECT 10MF	20% 16V
R123	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	C617	1-126-157-11	ELECT 10MF	20% 16V
R125	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	C618	1-126-160-11	ELECT 1MF	20% 50V
R127	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	C619	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
R128	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C620	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R129	1-216-025-00	METAL GLAZE	100 5% 1/10W	C621	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R130	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C622	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R131	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	<u>CONNECTOR</u>			
R132	1-216-025-00	METAL GLAZE	100 5% 1/10W	CN601	1-575-367-11	CONNECTOR, FPC/FFC 11P	
R133	1-216-021-00	METAL GLAZE	68 5% 1/10W	<u>DIODE</u>			
R134	1-216-021-00	METAL GLAZE	68 5% 1/10W	D603	8-719-106-45	DIODE RD9.1M-B3	
R144	1-216-022-00	METAL GLAZE	75 5% 1/10W	D604	8-719-106-45	DIODE RD9.1M-B3	
R145	1-216-022-00	METAL GLAZE	75 5% 1/10W	D607	8-719-106-45	DIODE RD9.1M-B3	
R146	1-216-037-00	METAL GLAZE	330 5% 1/10W	<u>IC</u>			
R148	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	IC601	8-759-111-56	IC UPC4572G2	
R149	1-216-037-00	METAL GLAZE	330 5% 1/10W	<u>JACK</u>			
<u>SWITCH</u>				J601	1-565-276-31	JACK, ULTRA SMALL 1P (LINGS)	
S101	1-554-174-00	SWITCH, KEY BOARD (INPUT SELECT)		J602	1-563-282-11	JACK, SMALL TYPE (MIC)	
S102	1-554-174-00	SWITCH, KEY BOARD (REC MODE LP/SP)		J603	1-562-917-11	JACK (SMALL TYPE) (HEADPHONES)	
S103	1-554-174-00	SWITCH, KEY BOARD (COUNTER RESET)		<u>TRANSISTOR</u>			
S105	1-554-174-00	SWITCH, KEY BOARD (ANT TV/VTR)		Q602	8-729-100-66	TRANSISTOR 2SC1623	
S106	1-554-174-00	SWITCH, KEY BOARD (AUTO EDIT)		Q603	8-729-100-66	TRANSISTOR 2SC1623	
S107	1-570-854-11	SWITCH, SLIDE (AUDIO MONITOR)		Q604	8-729-100-66	TRANSISTOR 2SC1623	
S108	1-554-174-00	SWITCH, KEY BOARD (RECORDER)		<u>RESISTOR</u>			
S109	1-554-174-00	SWITCH, KEY BOARD (PLAYER)		R601	1-216-083-00	METAL GLAZE 27K 5%	1/10W
S110	1-554-174-00	SWITCH, KEY BOARD (EDIT MONITOR)		R602	1-216-025-00	METAL GLAZE 100 5%	1/10W
S111	1-554-174-00	SWITCH, KEY BOARD (SYNCRO EDIT)		R603	1-216-081-00	METAL GLAZE 22K 5%	1/10W
<u>VARIABLE RESISTOR</u>				R604	1-216-105-00	METAL GLAZE 220K 5%	1/10W
VR101	1-237-877-11	RES, VAR, SLIDE 10K/10K (REC LEVEL)		R605	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
VR102	1-238-374-11	RES, VAR, CARBON 10K/10K (PHONE LEVEL)		R608	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
*****				R609	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
*A-7061-813-A MC-37 BOARD, COMPLETE				R610	1-216-097-00	METAL GLAZE 100K 5%	1/10W
*****				R611	1-216-073-00	METAL GLAZE 10K 5%	1/10W
<u>CAPACITOR</u>				R612	1-216-121-00	METAL GLAZE 1M 5%	1/10W
C601	1-124-225-00	ELECT 100MF	20% 6.3V	R613	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
C602	1-124-225-00	ELECT 100MF	20% 6.3V				
C603	1-163-123-00	CERAMIC CHIP 180PF	5% 50V				
C604	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V				

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R614	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W				
R615	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W				
R616	1-216-073-00	METAL GLAZE 10K 5%	1/10W				
R617	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W				

*A-7061-814-A	TU-100 BOARD, COMPLETE (AEP MODEL)						

*A-7061-897-A	TU-100 (C) BOARD, COMPLETE (UK MODEL)						

<u>CAPACITOR</u>							
C001	1-126-233-11	ELECT 22MF	20% 25V	JR001	1-216-295-00	METAL GLAZE 0 5%	1/10W
C002	1-163-035-00	CERAMIC CHIP 0.047MF	50V	JR002	1-216-295-00	METAL GLAZE 0 5%	1/10W
C003	1-126-233-11	ELECT 22MF	20% 25V	JR003	1-216-295-00	METAL GLAZE 0 5%	1/10W
C004	1-163-035-00	CERAMIC CHIP 0.047MF	50V	JR004	1-216-295-00	METAL GLAZE 0 5%	1/10W
C005	1-124-360-00	ELECT 1000MF	20% 16V	JR005	1-216-295-00	METAL GLAZE 0 5%	1/10W
C006	1-163-035-00	CERAMIC CHIP 0.047MF	50V	JR006	1-216-295-00	METAL GLAZE 0 5%	1/10W
C007	1-124-927-11	ELECT 4.7MF	20% 50V	JR008	1-216-295-00	METAL GLAZE 0 5%	1/10W
C011	1-126-233-11	ELECT 22MF	20% 25V	JR011	1-216-295-00	METAL GLAZE 0 5%	1/10W
C012	1-163-035-00	CERAMIC CHIP 0.047MF	50V	JR012	1-216-295-00	METAL GLAZE 0 5%	1/10W
C013	1-163-035-00	CERAMIC CHIP 0.047MF	50V	JR013	1-216-296-00	METAL GLAZE 0 5%	1/8W
C014	1-123-875-11	ELECT 10MF	20% 50V	JR014	1-216-296-00	METAL GLAZE 0 5%	1/8W
C015	1-163-101-00	CERAMIC CHIP 220PF	5% 50V (UK MODEL)	JR015	1-216-296-00	METAL GLAZE 0 5%	1/8W
C015	1-163-103-00	CERAMIC CHIP 27PF	5% 50V (AEP MODEL)	JR016	1-216-296-00	METAL GLAZE 0 5%	1/8W
C016	1-163-097-00	CERAMIC CHIP 15PF	5% 50V (UK MODEL)	JR017	1-216-296-00	METAL GLAZE 0 5%	1/8W
C016	1-163-123-00	CERAMIC CHIP 180PF	5% 50V (AEP MODEL)	JR018	1-216-296-00	METAL GLAZE 0 5%	1/8W
C017	1-163-111-00	CERAMIC CHIP 56PF	5% 50V (AEP MODEL)	JR019	1-216-296-00	METAL GLAZE 0 5%	1/8W
C017	1-163-119-00	CERAMIC CHIP 120PF	5% 50V (UK MODEL)	JR020	1-216-296-00	METAL GLAZE 0 5%	1/8W
C019	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	JR021	1-216-296-00	METAL GLAZE 0 5%	1/8W
C020	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	JR023	1-216-296-00	METAL GLAZE 0 5%	1/8W
C021	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	JR025	1-216-296-00	METAL GLAZE 0 5%	1/8W
C022	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	JR027	1-216-296-00	METAL GLAZE 0 5%	1/8W
C023	1-124-925-11	ELECT 2.2MF	20% 50V	JR032	1-216-296-00	METAL GLAZE 0 5%	1/8W
C029	1-126-233-11	ELECT 22MF	20% 25V	JR033	1-216-296-00	METAL GLAZE 0 5%	1/8W
C030	1-126-233-11	ELECT 22MF	20% 25V	JR034	1-216-296-00	METAL GLAZE 0 5%	1/8W
C032	1-163-035-00	CERAMIC CHIP 0.047MF	50V	JR035	1-216-296-00	METAL GLAZE 0 5%	1/8W
C033	1-126-233-11	ELECT 22MF	20% 25V	JR036	1-216-296-00	METAL GLAZE 0 5%	1/8W
C035	1-126-233-11	ELECT 22MF	20% 25V (UK MODEL)	JR038	1-216-296-00	METAL GLAZE 0 5%	1/8W
C042	1-136-161-00	MYLAR 0.047MF	10% 50V	JR039	1-216-296-00	METAL GLAZE 0 5%	1/8W
C043	1-123-875-11	ELECT 10MF	20% 50V (UK MODEL)	JR040	1-216-296-00	METAL GLAZE 0 5%	1/8W
<u>CONNECTOR</u>							
CN001	1-563-605-11	CONNECTOR, FLEXIBLE 28P					
CN001	1-575-454-11	WIRE, FLAT TYPE (28 CORE)					
<u>DIODE</u>							
D002	8-719-400-18	DIODE MA152WK					
D003	8-719-200-36	DIODE E10QS04					
<u>IC</u>							
IC001	8-759-157-40	IC UPC574J					
<u>IF BLOCK</u>							
IF001A	1-466-166-11	IF BLOCK (IFX-395C) (UK MODEL)					
IF001A	1-466-167-11	IF BLOCK (IFX-389C) (AEP MODEL)					
<u>JUMPER RESISTOR</u>							
JR001	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR002	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR003	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR004	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR005	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR006	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR008	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR011	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR012	1-216-295-00	METAL GLAZE 0 5%	1/10W				
JR013	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR014	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR015	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR016	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR017	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR018	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR019	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR020	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR021	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR023	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR025	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR027	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR032	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR033	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR034	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR035	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR036	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR038	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR039	1-216-296-00	METAL GLAZE 0 5%	1/8W				
JR040	1-216-296-00	METAL GLAZE 0 5%	1/8W				
<u>COIL</u>							
L001	1-408-413-00	INDUCTOR 22UH					
L002	1-408-411-00	INDUCTOR 15UH (AEP MODEL)					
L002	1-408-419-00	INDUCTOR 68UH (UK MODEL)					
L003	1-408-408-00	INDUCTOR 8.2UH					
L004	1-408-408-00	INDUCTOR 8.2UH					
L005	1-408-408-00	INDUCTOR 8.2UH					
L007	1-408-408-00	INDUCTOR 8.2UH					
L009	1-408-413-00	INDUCTOR 22UH					
<u>DECORDER BLOCK</u>							
MPO01A	1-466-144-11	DECORDER BLOCK (MPL-389) (AEP MODEL)					
<u>TRANSISTOR</u>							
Q001	8-729-100-66	TRANSISTOR 2SC1623					
Q003	8-729-216-22	TRANSISTOR 2SA1162					
Q004	8-729-100-66	TRANSISTOR 2SC1623					

When indicating parts by reference number, please include the board name.

Note: The components identified by mark **A** or dotted line with mark **A** are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q006	8-729-100-66	TRANSISTOR 2SC1623		R074	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)	
Q007	8-729-900-53	TRANSISTOR DTC114EK (UK MODEL)		R075	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)	
Q008	8-729-100-66	TRANSISTOR 2SC1623 (UK MODEL)		R076	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)	
Q010	8-729-901-01	TRANSISTOR DTC144EK		R077	1-216-064-00	METAL GLAZE 4.3K 5% 1/10W (AEP MODEL)	
Q014	8-729-216-22	TRANSISTOR 2SA1162 (AEP MODEL)		R078	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
<u>RESISTOR</u>				R079	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R001	1-216-295-00	METAL GLAZE 0 5% 1/10W		R080	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R002	1-216-295-00	METAL GLAZE 0 5% 1/10W		R083	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R003	1-216-295-00	METAL GLAZE 0 5% 1/10W		R090	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R004	1-216-212-00	METAL GLAZE 3.9K 5% 1/8W		R092	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R005	1-216-210-00	METAL GLAZE 3.3K 5% 1/8W		R095	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)	
R008	1-216-025-00	METAL GLAZE 100 5% 1/10W		R096	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
R009	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (UK MODEL)		<u>VARIABLE RESISTOR</u>			
R009	1-216-070-00	METAL GLAZE 7.5K 5% 1/10W (AEP MODEL)		RV001	1-228-995-00	RES, ADJ, CARBON 22K (AEP MODEL)	
R010	1-216-045-00	METAL GLAZE 680 5% 1/10W (UK MODEL)		<u>TUNER</u>			
R010	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (AEP MODEL)		TU001A	1-465-260-31	TUNER, ET (BTP-2C401) (AEP MODEL)	
R011	1-216-037-00	METAL GLAZE 330 5% 1/10W		TU001A	1-465-262-31	TUNER, ET (BTP-2U601) (UK MODEL)	
R012	1-216-039-00	METAL GLAZE 390 5% 1/10W		*****			
R013	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		*A-7061-815-A	PS-196 (A) BOARD, COMPLETE (AEP MODEL)		
R014	1-216-121-00	METAL GLAZE 1M 5% 1/10W		*****			
R015	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		*A-7061-898-A	PS-196 (B) BOARD, COMPLETE (UK MODEL)		
R016	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W		*****			
R017	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W		1-533-183-11	HOLDER, FUSE		
R018	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		*3-714-460-01	RETAINER, TRANSISTOR		
R021	1-216-295-00	METAL GLAZE 0 5% 1/10W		3-731-146-01	RETAINER (B), PS		
R022	1-216-748-11	METAL GLAZE 39K 5% 1/10W		3-731-147-01	RETAINER (A), PS		
R023	1-216-091-00	METAL GLAZE 56K 5% 1/10W		7-621-555-60	SCREW +K 2X10		
R024	1-216-295-00	METAL GLAZE 0 5% 1/10W		7-628-253-40	SCREW +PS 2X10		
R025	1-216-295-00	METAL GLAZE 0 5% 1/10W		7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3		
R029	1-216-295-00	METAL GLAZE 0 5% 1/10W		<u>CAPACITOR</u>			
R034	1-216-295-00	METAL GLAZE 0 5% 1/10W		C001	1-136-185-00	FILM 0.22MF 20% 250V	
R044	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W (UK MODEL)		C002	1-136-472-11	FILM 0.1MF 20% 250V	
R044	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C003	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R046	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C004	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R047	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W (UK MODEL)		C005	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R047	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C006	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R048	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W (UK MODEL)		C007	1-126-538-11	ELECT 100MF 20% 400V	
R049	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C008	1-136-208-11	FILM 0.068MF 10% 630V	
R050	1-216-085-00	METAL GLAZE 33K 5% 1/10W (UK MODEL)		C009	1-162-558-11	CERAMIC 100PF 10% 2KV	
R051	1-216-091-00	METAL GLAZE 56K 5% 1/10W (UK MODEL)		C010	1-130-495-00	MYLAR 0.1MF 5% 50V	
R053	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C011	1-126-589-11	ELECT 2200MF 20% 16V	
R054	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (UK MODEL)		C012	1-126-587-11	ELECT 330MF 20% 16V	
R056	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C013	1-123-875-11	ELECT 10MF 20% 50V	
R062	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)		C014	1-126-588-11	ELECT 1000MF 20% 16V	
R065	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C015	1-126-588-11	ELECT 1000MF 20% 16V	
R067	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C016	1-126-586-11	ELECT 470MF 20% 10V	
R068	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)		C017	1-123-875-11	ELECT 10MF 20% 50V	
R069	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W (AEP MODEL)					
R070	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W (AEP MODEL)					
R071	1-216-295-00	METAL GLAZE 0 5% 1/10W (UK MODEL)					
R072	1-216-295-00	METAL GLAZE 0 5% 1/10W (AEP MODEL)					
R073	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W (AEP MODEL)					

When indicating parts by reference number, please include the board name.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C018	1-126-586-11	ELECT	470MF 20%	10V	IC005	8-759-632-07	IC M5237L
C019	1-123-875-11	ELECT	10MF 20%	50V	IC006	8-759-982-52	IC RC79M05F
C020	1-124-446-11	ELECT	47MF 20%	10V	IC007	8-759-990-33	IC FA7610P
C021	1-130-473-00	MYLAR	0.0015MF 5%	50V	<u>COIL</u>		
C022	1-124-446-11	ELECT	47MF 20%	10V	L001	1-424-121-11	TRANSFORMER, LINE FILTER
C023	1-161-043-00	CERAMIC	0.0022MF 10%	25V	L002	1-421-918-11	COIL, CHOKE 10UH
C024	1-124-570-11	ELECT	220MF 20%	16V	L003	1-421-918-11	COIL, CHOKE 10UH
C025	1-126-335-11	ELECT	220MF 20%	10V	L004	1-410-794-11	INDUCTOR 330UH
C026	1-126-335-11	ELECT	220MF 20%	10V	L005	1-410-667-31	INDUCTOR 22UH
C027	1-123-875-11	ELECT	10MF 20%	50V	L006	1-410-645-31	INDUCTOR 100UH
C028	1-123-875-11	ELECT	10MF 20%	50V	L007	1-410-645-31	INDUCTOR 100UH
C029	1-123-875-11	ELECT	10MF 20%	50V	<u>PHOTO TRANSISTOR</u>		
C030	1-123-875-11	ELECT	10MF 20%	50V	PH001	8-719-939-00	PC111S
C031	1-161-055-00	CERAMIC	0.022MF 10%	25V	<u>IC LINK</u>		
C032	1-162-578-51	CERAMIC	0.0047MF 20%	400V	PS001	1-532-679-00	LINK, IC
C033	1-162-578-51	CERAMIC	0.0047MF 20%	400V	<u>TRANSISTOR</u>		
C034	1-162-578-12	CERAMIC	0.0047MF 20%	400V	Q001	8-729-921-41	TRANSISTOR 2SA1679S
C035	1-123-381-00	ELECT	2.2MF 20%	50V	Q002	8-729-900-80	TRANSISTOR DTC114ES
C036	1-126-588-11	ELECT	1000MF 20%	16V	Q003	8-729-177-32	TRANSISTOR 2SD773
C037	1-161-039-00	CERAMIC	0.001MF 10%	50V	Q004	8-729-265-52	TRANSISTOR 2SC2655
C038	1-123-382-00	ELECT	3.3MF 20%	50V	Q005	8-729-119-76	TRANSISTOR 2SA1175HFE
<u>CONNECTOR</u>				<u>RESISTOR</u>			
CN001	*1-564-037-11	PIN, CONNECTOR 12P		R002	1-217-294-00	WIREWOUND 4.7 10% 5W	F
CN002	1-506-484-11	PIN, CONNECTOR 5P		R003	1-215-926-00	METAL OXIDE 33K 5% 3W	F
<u>DIODE</u>				R004	1-215-926-00	METAL OXIDE 33K 5% 3W	F
D001	8-719-510-31	DIODE S2VB60-03L10		R005	1-260-041-00	CARBON 680K 5% 1/2W	
D002	8-719-500-70	DIODE D5S4M		R006	1-249-429-11	CARBON 10K 5% 1/4W	
D003	8-719-304-50	THYRISTOR TF341M-A		R007	1-214-834-00	METAL 56 1% 1/2W	
D004	8-719-110-22	DIODE RD11ES-B2		R008	1-212-881-11	FUSIBLE 100 5% 1/4W	F
D005	8-719-200-62	DIODE 20E2H		R009	1-214-834-00	METAL 56 1% 1/2W	
D006	8-719-200-62	DIODE 20E2H		R010	1-249-402-11	CARBON 56 5% 1/4W	
D007	8-719-300-33	DIODE RU-3AM		R011	1-215-431-00	METAL 2.7K 1% 1/6W	
D008	8-719-500-70	DIODE D5S4M		R012	1-215-429-00	METAL 2.2K 1% 1/6W	
D009	8-719-913-44	DIODE ERA82-004		R013	1-249-405-11	CARBON 100 5% 1/4W	
D010	8-719-110-03	DIODE RD7.5ES-B2		R014	1-249-409-11	CARBON 220 5% 1/4W	
D011	8-719-911-19	DIODE 1SS119		R015	1-249-417-11	CARBON 1K 5% 1/4W	
D012	8-719-913-44	DIODE ERA82-004		R016	1-215-447-00	METAL 12K 1% 1/6W	
D013	8-719-901-83	DIODE 1SS83		R017	1-249-431-11	CARBON 15K 5% 1/4W	
D014	8-719-901-83	DIODE 1SS83		R018	1-215-437-00	METAL 4.7K 1% 1/6W	
D015	8-719-110-22	DIODE RD11ES-B2		R019	1-249-417-11	CARBON 1K 5% 1/4W	
D016	8-719-911-19	DIODE 1SS119		R020	1-249-423-11	CARBON 3.3K 5% 1/4W	
<u>FUSE</u>				R021	1-247-885-00	CARBON 180K 5% 1/4W	
F001	1-532-259-00	FUSE, TIME-LAG (1.6A/250V)		R022	1-247-899-11	CARBON 680K 5% 1/4W	
<u>IC</u>				R023	1-249-436-11	CARBON 39K 5% 1/4W	
IC001	8-759-979-49	IC MA2820		R024	1-247-887-00	CARBON 220K 5% 1/4W	
IC002	8-759-927-49	IC IR9431		R025	1-215-441-00	METAL 6.8K 1% 1/6W	
IC003	8-749-920-58	IC SI-3090CA		R026	1-215-429-00	METAL 2.2K 1% 1/6W	
IC004	8-749-921-21	IC SI-3120C					

When indicating parts by reference number, please include the board name.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R027	1-215-469-00	METAL 100K 1% 1/6W		C213	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R028	1-214-773-00	METAL 68K 1% 1/4W		C214	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R029	1-249-411-11	CARBON 330 5% 1/4W		C215	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R030	1-249-405-11	CARBON 100 5% 1/4W		C216	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R031	1-249-415-11	CARBON 680 5% 1/4W		C217	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R032	1-249-429-11	CARBON 10K 5% 1/4W		C218	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R034	△.1-247-738-11	CARBON 82 5% 1/2W	F	C219	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R035	1-249-423-11	CARBON 3.3K 5% 1/4W		C220	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R036	1-247-725-11	CARBON 10K 5% 1/4W		C221	1-124-443-00	ELECT 100MF	20% 6.3V
				C222	1-124-443-00	ELECT 100MF	20% 6.3V
<u>TRANSFORMER</u>							
T001	△.1-449-924-11	TRANSFORMER, RCC CONVERTER		C223	1-126-233-11	ELECT 22MF	20% 25V
T002	△.1-449-914-11	TRANSFORMER, CONVERTER		C224	1-124-443-00	ELECT 100MF	20% 6.3V
*****				C225	1-163-038-00	CERAMIC CHIP 0.1MF	25V
	*A-7061-816-A	DS-35 (A) BOARD, COMPLETE (AEP MODEL)		C226	1-164-232-11	CERAMIC CHIP 0.01MF	50V
		*****		C227	1-164-232-11	CERAMIC CHIP 0.01MF	50V
	*A-7061-892-A	DS-35 (B) BOARD, COMPLETE (UK MODEL)		C228	1-163-098-00	CERAMIC CHIP 16PF	5% 50V
		*****		C229	1-163-098-00	CERAMIC CHIP 16PF	5% 50V
				C230	1-124-443-00	ELECT 100MF	20% 6.3V
				C231	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C232	1-124-791-11	ELECT 1MF	20% 50V
				C233	1-163-089-00	CERAMIC CHIP 6PF	0.25PF 50V
				C235	1-126-233-11	ELECT 22MF	20% 25V
BZ001	1-529-070-11	BUZZER		C236	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
				C237	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
				C238	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
				C239	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
				C240	1-123-875-11	ELECT 10MF	20% 50V
C001	1-125-486-11	DOUBLE LAYER 0.22F	5.5V	C241	1-124-791-11	ELECT 1MF	20% 50V
C002	1-124-446-11	ELECT 47MF	20% 10V	C242	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C003	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C243	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C004	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C244	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C005	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C245	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C006	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C246	1-124-443-00	ELECT 100MF	20% 6.3V
C007	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C247	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C008	1-123-875-11	ELECT 10MF	20% 50V	C248	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C009	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C249	1-126-233-11	ELECT 22MF	20% 25V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C250	1-126-233-11	ELECT 22MF	20% 25V
C012	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	C251	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C013	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	C252	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C014	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	C253	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C015	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	C254	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C016	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	C255	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C017	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V (AEP MODEL)	C256	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C018	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V (AEP MODEL)	C257	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C019	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	C258	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C021	1-123-875-11	ELECT 10MF	20% 50V	C259	1-124-791-11	ELECT 1MF	20% 50V
C024	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C260	1-124-443-00	ELECT 100MF	20% 6.3V
C025	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C261	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C026	1-124-471-00	ELECT 1000MF	20% 6.3V	C262	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C201	1-124-443-00	ELECT 100MF	20% 6.3V	C263	1-124-791-11	ELECT 1MF	20% 50V
C202	1-124-443-00	ELECT 100MF	20% 6.3V	C264	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C209	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C265	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C210	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C266	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C211	1-124-443-00	ELECT 100MF	20% 6.3V				
C212	1-124-443-00	ELECT 100MF	20% 6.3V				

When indicating parts by reference number, please include the board name.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C267	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C328	1-124-791-11	ELECT 1MF	20% 50V
C268	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C329	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C269	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C330	1-123-875-11	ELECT 10MF	20% 50V
C270	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C331	1-124-791-11	ELECT 1MF	20% 50V
C271	1-126-233-11	ELECT 22MF	20% 25V	C332	1-124-791-11	ELECT 1MF	20% 50V
C272	1-124-902-00	ELECT 0.47MF	20% 50V	C333	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C273	1-124-791-11	ELECT 1MF	20% 50V	C334	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C274	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C335	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C275	1-124-443-00	ELECT 100MF	20% 6.3V	C336	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C278	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C337	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C279	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C338	1-126-233-11	ELECT 22MF	20% 25V
C280	1-123-382-00	ELECT 3.3MF	20% 50V	C339	1-126-233-11	ELECT 22MF	20% 25V
C281	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C340	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C282	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C341	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C283	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C342	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C284	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C343	1-124-443-00	ELECT 100MF	20% 6.3V
C285	1-124-791-11	ELECT 1MF	20% 50V	C344	1-124-443-00	ELECT 100MF	20% 6.3V
C286	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C345	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C287	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C346	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C288	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C347	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C289	1-124-443-00	ELECT 100MF	20% 6.3V	C348	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C290	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C349	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C291	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C350	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C292	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C351	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C293	1-124-925-11	ELECT 2.2MF	20% 50V	C352	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C294	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C353	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C295	1-123-875-11	ELECT 10MF	20% 50V	C354	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C296	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C355	1-124-443-00	ELECT 100MF	20% 6.3V
C297	1-124-791-11	ELECT 1MF	20% 50V	C356	1-124-443-00	ELECT 100MF	20% 6.3V
C299	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C357	1-126-233-11	ELECT 22MF	20% 25V
C300	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C358	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C301	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C359	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C303	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C360	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C304	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C361	1-126-233-11	ELECT 22MF	20% 25V
C305	1-126-233-11	ELECT 22MF	20% 25V	C362	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C307	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C363	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C308	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C364	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C309	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C365	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C312	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C366	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C313	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C367	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C314	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C368	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C315	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C369	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C316	1-124-925-11	ELECT 2.2MF	20% 50V	C370	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C317	1-124-443-00	ELECT 100MF	20% 6.3V	C371	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C318	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C372	1-123-382-00	ELECT 3.3MF	20% 50V
C319	1-124-902-00	ELECT 0.47MF	20% 50V	C373	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C320	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C374	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C321	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C375	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C322	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C376	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C323	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C377	1-124-791-11	ELECT 1MF	20% 50V
C324	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C378	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C325	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C379	1-124-443-00	ELECT 100MF	20% 6.3V
C326	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C380	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V

When indicating parts by reference number, please include the board name.

DS-35

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C381	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V	CN007	1-575-387-11	CABLE, FLAT (1.0MM PITCH) 12P	
C382	1-123-875-11	ELECT 10MF	20% 50V	CN008	1-575-365-11	CONNECTOR, FPC/FFC 18P	
C512	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN008	1-575-390-11	CABLE, FLAT (1.0MM PITCH) 18P	
C513	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	CN009	1-575-365-11	CONNECTOR, FPC/FFC 18P	
C514	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	CN009	1-575-390-11	CABLE, FLAT (1.0MM PITCH) 18P	
C515	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN010	1-569-264-11	CONNECTOR, FPC (ZIF TYPE) 8P	
C516	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	CN012	1-506-468-11	PIN, CONNECTOR 3P	
C517	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	CN201	1-568-099-11	SOCKET, CONNECTOR 18P	
C518	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CN202	1-563-597-11	CONNECTOR, FLEXIBLE 20P	
C519	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN202	1-575-456-11	WIRE, FLAT TYPE (20 CORE)	
C520	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	<u>TRIMMER</u>			
C521	1-124-438-00	ELECT 1MF	20% 50V	CV201	1-141-245-00	TRIMMER, CERAMIC	
C522	1-124-438-00	ELECT 1MF	20% 50V	CV202	1-141-245-00	TRIMMER, CERAMIC	
C523	1-124-438-00	ELECT 1MF	20% 50V	CV203	1-141-245-00	TRIMMER, CERAMIC	
C524	1-163-038-00	CERAMIC CHIP 0.1MF	25V	CV501	1-141-245-00	TRIMMER, CERAMIC	
C525	1-163-038-00	CERAMIC CHIP 0.1MF	25V	<u>DIODE</u>			
C526	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D001	8-719-200-27	DIODE E10DS2 (AEP MODEL)	
C527	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D001	8-719-202-36	DIODE E10QS03 (UK MODEL)	
C528	1-126-177-11	ELECT 100MF	20% 6.3V	D002	8-719-200-27	DIODE E10DS2 (AEP MODEL)	
C529	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D002	8-719-202-36	DIODE E10QS03 (UK MODEL)	
C530	1-126-177-11	ELECT 100MF	20% 6.3V	D003	8-719-200-27	DIODE E10DS2 (AEP MODEL)	
C531	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D003	8-719-200-27	DIODE E10DS2 (UK MODEL)	
C532	1-126-177-11	ELECT 100MF	20% 6.3V	D004	8-719-801-41	DIODE 1SS196	
C533	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	D007	8-719-400-18	DIODE MA152WK	
C534	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	D201	8-719-104-34	DIODE 1S2836	
C535	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D202	8-719-400-18	DIODE MA152WK	
C536	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	D203	8-719-400-18	DIODE MA152WK	
C537	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	D204	8-719-400-18	DIODE MA152WK	
C538	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D205	8-719-400-18	DIODE MA152WK	
C539	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D206	8-719-800-76	DIODE 1SS226	
C540	1-126-177-11	ELECT 100MF	20% 6.3V	D207	8-719-800-76	DIODE 1SS226	
C541	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D208	8-719-800-76	DIODE 1SS226	
C542	1-126-177-11	ELECT 100MF	20% 6.3V	D209	8-719-800-76	DIODE 1SS226	
C543	1-124-438-00	ELECT 1MF	20% 50V	D210	8-719-800-76	DIODE 1SS226	
C544	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D211	8-719-800-76	DIODE 1SS226	
C545	1-124-438-00	ELECT 1MF	20% 50V	D212	8-719-105-92	DIODE RD5.6MB3	
C546	1-124-438-00	ELECT 1MF	20% 50V	<u>FERRITE BEAD INDUCTOR</u>			
C547	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FB501	1-410-397-21	FERRITE BEAD INDUCTOR	
C548	1-126-177-11	ELECT 100MF	20% 6.3V	<u>FILTER</u>			
C551	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL201	1-236-054-11	FILTER, LC (LOW PASS)	
<u>FILTER</u>				FL501	1-236-071-11	ENCAPSULATED COMPONENT	
CF001	1-567-192-11	OSCILLATOR, CERAMIC (4MHz)		FL502	1-236-071-11	ENCAPSULATED COMPONENT	
CF002	1-567-192-11	OSCILLATOR, CERAMIC (4MHz) (AEP MODEL)		FL503	1-236-129-11	ENCAPSULATED COMPONENT	
<u>CONNECTOR</u>				FL504	1-236-129-11	ENCAPSULATED COMPONENT	
CN001	1-575-360-11	CONNECTOR, FPC/FFC 5P		FL505	1-236-129-11	ENCAPSULATED COMPONENT	
CN001	1-575-391-11	CABLE, FLAT (1.0MM PITCH) 5P		<u>IC</u>			
CN002	1-575-366-11	CONNECTOR, FPC/FFC 9P		IC001	8-759-149-18	IC UPD75116-GF-605-3BE	
CN004	1-569-239-11	SOCKET, CONNECTOR 20P		IC002	8-759-147-30	IC UPD75004GB-VSX182	
CN005	1-569-239-11	SOCKET, CONNECTOR 20P					
CN006	1-563-605-11	CONNECTOR, FLEXIBLE 28P					
CN007	1-575-363-11	CONNECTOR, FPC/FFC 12P					

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
IC003	8-759-030-60	IC SDA5642		Q016	8-729-901-04	TRANSISTOR DTA114EK	
IC004	8-759-932-54	IC BU4066BF		Q017	8-729-901-01	TRANSISTOR DTC144EK	
IC005	8-759-990-07	IC TL1596CNS		Q201	8-729-216-22	TRANSISTOR 2SA1162	
IC201	8-759-009-07	IC MC14053BF		Q202	8-729-216-22	TRANSISTOR 2SA1162	
IC202	8-759-009-07	IC MC14053BF		Q203	8-729-216-22	TRANSISTOR 2SA1162	
IC203	8-759-009-07	IC MC14053BF		Q207	8-729-216-22	TRANSISTOR 2SA1162	
IC204	8-759-633-63	IC M50455-137FP		Q208	8-729-216-22	TRANSISTOR 2SA1162	
IC205	8-759-710-29	IC NJM2235M		Q209	8-729-216-22	TRANSISTOR 2SA1162	
IC206	8-759-710-09	IC NJM2233AM		Q210	8-729-100-66	TRANSISTOR 2SC1623	
IC207	8-759-009-07	IC MC14053BF		Q211	8-729-100-66	TRANSISTOR 2SC1623	
IC208	8-759-009-07	IC MC14053BF		Q212	8-729-100-66	TRANSISTOR 2SC1623	
IC209	8-759-603-54	IC M51271FP		Q213	8-729-100-66	TRANSISTOR 2SC1623	
IC210	8-759-631-10	IC M52684AFP		Q214	8-729-216-22	TRANSISTOR 2SA1162	
IC211	8-759-631-10	IC M52684AFP		Q215	8-729-216-22	TRANSISTOR 2SA1162	
IC212	8-759-007-69	IC MC74HC157F		Q216	8-729-100-66	TRANSISTOR 2SC1623	
IC213	8-759-633-XX	IC M51285BFP-V		Q217	8-729-216-22	TRANSISTOR 2SA1162	
IC214	8-759-710-29	IC NJM2235M		Q218	8-729-100-66	TRANSISTOR 2SC1623	
IC215	8-759-710-07	IC NJM2234M		Q219	8-729-100-66	TRANSISTOR 2SC1623	
IC501	8-759-631-06	IC M50541FP		Q220	8-729-216-22	TRANSISTOR 2SA1162	
IC502	8-759-605-15	IC MSM4C500L		Q221	8-729-216-22	TRANSISTOR 2SA1162	
IC503	8-759-633-04	IC M52686AFP		Q222	8-729-216-22	TRANSISTOR 2SA1162	
IC504	8-759-633-96	IC M52682FP		Q223	8-729-100-66	TRANSISTOR 2SC1623	
IC505	8-759-925-72	IC SN74HC02NS		Q224	8-729-100-66	TRANSISTOR 2SC1623	
IC506	8-759-233-64	IC TC74HCU04AF		Q225	8-729-216-22	TRANSISTOR 2SA1162	
IC507	8-759-009-07	IC MC14053BF		Q226	8-729-100-66	TRANSISTOR 2SC1623	
<u>COIL</u>				Q227	8-729-100-66	TRANSISTOR 2SC1623	
L001	1-407-169-XX	INDUCTOR	100UH	Q228	8-729-100-66	TRANSISTOR 2SC1623	
L002	1-407-169-XX	INDUCTOR	100UH	Q229	8-729-100-66	TRANSISTOR 2SC1623	
L201	1-407-169-XX	INDUCTOR	100UH	Q230	8-729-100-66	TRANSISTOR 2SC1623	
L202	1-408-975-21	INDUCTOR	27UH	Q231	8-729-100-66	TRANSISTOR 2SC1623	
L203	1-408-977-21	INDUCTOR	39UH	Q232	8-729-216-22	TRANSISTOR 2SA1162	
L204	1-407-169-XX	INDUCTOR	100UH	Q233	8-729-216-22	TRANSISTOR 2SA1162	
L205	1-412-143-11	MICRO INDUCTOR	(39UH)	Q234	8-729-216-22	TRANSISTOR 2SA1162	
L206	1-408-978-21	INDUCTOR	47UH	Q235	8-729-100-66	TRANSISTOR 2SC1623	
L207	1-407-169-XX	INDUCTOR	100UH	Q236	8-729-100-66	TRANSISTOR 2SC1623	
L209	1-408-970-21	INDUCTOR	10UH	Q237	8-729-100-66	TRANSISTOR 2SC1623	
L210	1-408-970-21	INDUCTOR	10UH	Q238	8-729-100-66	TRANSISTOR 2SC1623	
L211	1-408-970-21	INDUCTOR	10UH	Q239	8-729-100-66	TRANSISTOR 2SC1623	
L212	1-408-970-21	INDUCTOR	10UH	Q240	8-729-216-22	TRANSISTOR 2SA1162	
L213	1-407-169-XX	INDUCTOR	100UH	Q241	8-729-100-66	TRANSISTOR 2SC1623	
L501	1-408-978-21	INDUCTOR	47UH	Q242	8-729-100-66	TRANSISTOR 2SC1623	
L502	1-407-169-XX	INDUCTOR	100UH	Q243	8-729-100-66	TRANSISTOR 2SC1623	
<u>TRANSISTOR</u>				Q244	8-729-100-66	TRANSISTOR 2SC1623	
Q001	8-729-901-04	TRANSISTOR DTA114EK		Q245	8-729-100-66	TRANSISTOR 2SC1623	
Q002	8-729-901-04	TRANSISTOR DTA114EK		Q246	8-729-216-22	TRANSISTOR 2SA1162	
Q003	8-729-807-87	TRANSISTOR 2SB1295-UL6		Q247	8-729-100-66	TRANSISTOR 2SC1623	
Q004	8-729-901-01	TRANSISTOR DTC144EK		Q248	8-729-100-66	TRANSISTOR 2SC1623	
Q005	8-729-805-25	TRANSISTOR 2SB1121		Q249	8-729-100-66	TRANSISTOR 2SC1623	
Q006	8-729-216-22	TRANSISTOR 2SA1162		Q250	8-729-100-66	TRANSISTOR 2SC1623	
Q007	8-729-216-22	TRANSISTOR 2SA1162		Q251	8-729-216-22	TRANSISTOR 2SA1162	
Q015	8-729-901-00	TRANSISTOR DTC124EK		Q252	8-729-100-66	TRANSISTOR 2SC1623	
				Q253	8-729-100-66	TRANSISTOR 2SC1623	
				Q254	8-729-100-66	TRANSISTOR 2SC1623	

When indicating parts by reference number, please include the board name.

DS-35

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q255	8-729-100-66	TRANSISTOR 2SC1623		R027	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
Q256	8-729-216-22	TRANSISTOR 2SA1162		R037	1-216-089-00	METAL GLAZE 47K 5% 1/10W (AEP MODEL)	
Q257	8-729-100-66	TRANSISTOR 2SC1623		R038	1-216-089-00	METAL GLAZE 47K 5% 1/10W (AEP MODEL)	
Q258	8-729-100-66	TRANSISTOR 2SC1623		R039	1-216-097-00	METAL GLAZE 100K 5% 1/10W (AEP MODEL)	
Q259	8-729-100-66	TRANSISTOR 2SC1623		R040	1-216-119-00	METAL GLAZE 820K 5% 1/10W (AEP MODEL)	
Q260	8-729-100-66	TRANSISTOR 2SC1623		R041	1-216-066-00	METAL GLAZE 5.1K 5% 1/10W (AEP MODEL)	
Q261	8-729-216-22	TRANSISTOR 2SA1162		R042	1-216-119-00	METAL GLAZE 820K 5% 1/10W (AEP MODEL)	
Q262	8-729-100-66	TRANSISTOR 2SC1623		R043	1-216-025-00	METAL GLAZE 100 5% 1/10W (AEP MODEL)	
Q263	8-729-100-66	TRANSISTOR 2SC1623		R044	1-216-017-00	METAL GLAZE 47 5% 1/10W	
Q264	8-729-100-66	TRANSISTOR 2SC1623		R045	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q265	8-729-100-66	TRANSISTOR 2SC1623		R046	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q266	8-729-216-22	TRANSISTOR 2SA1162		R050	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q267	8-729-100-66	TRANSISTOR 2SC1623		R052	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q268	8-729-100-66	TRANSISTOR 2SC1623		R053	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q269	8-729-100-66	TRANSISTOR 2SC1623		R056	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q270	8-729-100-66	TRANSISTOR 2SC1623		R058	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q271	8-729-216-22	TRANSISTOR 2SA1162		R059	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q272	8-729-216-22	TRANSISTOR 2SA1162		R060	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q273	8-729-100-66	TRANSISTOR 2SC1623		R061	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
Q274	8-729-216-22	TRANSISTOR 2SA1162		R062	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q275	8-729-100-66	TRANSISTOR 2SC1623		R063	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q276	8-729-216-22	TRANSISTOR 2SA1162		R064	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q277	8-729-901-06	TRANSISTOR DTA144EK		R065	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q278	8-729-216-22	TRANSISTOR 2SA1162		R067	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
Q501	8-729-216-22	TRANSISTOR 2SA1162		R068	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
Q502	8-729-216-22	TRANSISTOR 2SA1162		R069	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q503	8-729-216-22	TRANSISTOR 2SA1162		R071	1-216-073-00	METAL GLAZE 10K 5% 1/10W (AEP MODEL)	
		<u>RESISTOR</u>		R072	1-216-073-00	METAL GLAZE 10K 5% 1/10W (AEP MODEL)	
R003	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R074	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R004	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R075	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R005	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R076	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R006	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R201	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R007	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R202	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R008	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R203	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R009	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R204	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R010	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R205	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R011	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R206	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R012	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R207	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R013	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R208	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R014	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R209	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R015	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R211	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R016	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R214	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R017	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R217	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R018	1-216-596-11	METAL GLAZE 2.7K 1% 1/10W		R219	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R019	1-216-121-00	METAL GLAZE 1M 5% 1/10W (AEP MODEL)		R220	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R020	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R221	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R021	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R222	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R022	1-216-162-00	METAL GLAZE 33 5% 1/8W		R223	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R023	1-216-162-00	METAL GLAZE 33 5% 1/8W		R224	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R024	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R225	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R025	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		R226	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R026	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		R227	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R228	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R229	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R283	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R230	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R284	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R231	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R285	1-216-021-00	METAL GLAZE 68 5%	1/10W
R232	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R286	1-216-025-00	METAL GLAZE 100 5%	1/10W
R233	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R287	1-216-295-00	METAL GLAZE 0 5%	1/10W
R234	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R288	1-216-295-00	METAL GLAZE 0 5%	1/10W
R235	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R291	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R236	1-216-031-00	METAL GLAZE 180 5%	1/10W	R292	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R237	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R293	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R238	1-216-039-00	METAL GLAZE 390 5%	1/10W	R294	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R239	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R295	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R240	1-216-031-00	METAL GLAZE 180 5%	1/10W	R296	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R241	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R297	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R242	1-216-033-00	METAL GLAZE 220 5%	1/10W	R298	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R243	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R299	1-216-041-00	METAL GLAZE 470 5%	1/10W
R244	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R300	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R245	1-216-295-00	METAL GLAZE 0 5%	1/10W	R301	1-216-035-00	METAL GLAZE 270 5%	1/10W
R247	1-216-041-00	METAL GLAZE 470 5%	1/10W	R302	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R248	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R303	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R249	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R304	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R250	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R305	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R251	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R306	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R252	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R307	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R253	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R308	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R254	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R309	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R255	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R330	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R256	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R331	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R257	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R332	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R258	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R333	1-216-041-00	METAL GLAZE 470 5%	1/10W
R259	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R334	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R260	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R335	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R261	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R336	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R262	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R337	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R263	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R338	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R264	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R339	1-216-039-00	METAL GLAZE 390 5%	1/10W
R265	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R340	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R266	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R341	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R267	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R342	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R268	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R343	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R269	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R344	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R270	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R345	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R271	1-216-041-00	METAL GLAZE 470 5%	1/10W	R346	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R272	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R347	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R273	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R348	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R274	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R349	1-216-047-00	METAL GLAZE 820 5%	1/10W
R275	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R350	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R276	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R351	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R277	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R352	1-216-047-00	METAL GLAZE 820 5%	1/10W
R278	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R353	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R279	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R354	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R280	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R355	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R281	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R356	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R282	1-216-037-00	METAL GLAZE 330 5%	1/10W	R357	1-216-035-00	METAL GLAZE 270 5%	1/10W

When indicating parts by reference number, please include the board name.

DS-35

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R358	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R413	1-216-047-00	METAL GLAZE 820 5%	1/10W
R359	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R414	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R361	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R415	1-216-025-00	METAL GLAZE 100 5%	1/10W
R362	1-216-035-00	METAL GLAZE 270 5%	1/10W	R416	1-216-025-00	METAL GLAZE 100 5%	1/10W
R363	1-216-019-00	METAL GLAZE 56 5%	1/10W	R417	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R364	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R418	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R365	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R419	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R366	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R420	1-216-022-00	METAL GLAZE 75 5%	1/10W
R367	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R421	1-216-025-00	METAL GLAZE 100 5%	1/10W
R369	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R422	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R370	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R423	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R371	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R424	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R372	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R425	1-216-047-00	METAL GLAZE 820 5%	1/10W
R373	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R426	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R374	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R427	1-216-025-00	METAL GLAZE 100 5%	1/10W
R375	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R428	1-216-025-00	METAL GLAZE 100 5%	1/10W
R376	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R429	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R377	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R430	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R378	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R431	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R379	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R432	1-216-022-00	METAL GLAZE 75 5%	1/10W
R380	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R433	1-216-025-00	METAL GLAZE 100 5%	1/10W
R381	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R434	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R382	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R435	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R383	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R436	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R384	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R437	1-216-047-00	METAL GLAZE 820 5%	1/10W
R385	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R438	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R386	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R439	1-216-025-00	METAL GLAZE 100 5%	1/10W
R387	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R440	1-216-025-00	METAL GLAZE 100 5%	1/10W
R388	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R441	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R389	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R442	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R390	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R443	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R391	1-216-043-00	METAL GLAZE 560 5%	1/10W	R444	1-216-022-00	METAL GLAZE 75 5%	1/10W
R392	1-216-043-00	METAL GLAZE 560 5%	1/10W	R445	1-216-025-00	METAL GLAZE 100 5%	1/10W
R393	1-216-048-00	METAL GLAZE 910 5%	1/10W	R446	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R394	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R447	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R395	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R448	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R396	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R449	1-216-047-00	METAL GLAZE 820 5%	1/10W
R397	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R450	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R398	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R451	1-216-025-00	METAL GLAZE 100 5%	1/10W
R399	1-216-025-00	METAL GLAZE 100 5%	1/10W	R452	1-216-025-00	METAL GLAZE 100 5%	1/10W
R400	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R453	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R401	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R454	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R402	1-216-047-00	METAL GLAZE 820 5%	1/10W	R455	1-216-309-00	METAL GLAZE 5.6 5%	1/10W
R403	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R456	1-216-022-00	METAL GLAZE 75 5%	1/10W
R404	1-216-025-00	METAL GLAZE 100 5%	1/10W	R457	1-216-025-00	METAL GLAZE 100 5%	1/10W
R405	1-216-025-00	METAL GLAZE 100 5%	1/10W	R458	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R406	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R459	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R407	1-216-309-00	METAL GLAZE 5.6 5%	1/10W	R460	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R408	1-216-309-00	METAL GLAZE 5.6 5%	1/10W	R461	1-216-047-00	METAL GLAZE 820 5%	1/10W
R409	1-216-022-00	METAL GLAZE 75 5%	1/10W	R462	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R410	1-216-025-00	METAL GLAZE 100 5%	1/10W	R463	1-216-025-00	METAL GLAZE 100 5%	1/10W
R411	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R464	1-216-025-00	METAL GLAZE 100 5%	1/10W
R412	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R465	1-216-049-00	METAL GLAZE 1K 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R466	1-216-309-00	METAL GLAZE	5.6 5% 1/10W	R527	1-216-017-00	METAL GLAZE	47 5% 1/10W
R467	1-216-309-00	METAL GLAZE	5.6 5% 1/10W	R528	1-216-017-00	METAL GLAZE	47 5% 1/10W
R468	1-216-022-00	METAL GLAZE	75 5% 1/10W	R529	1-216-017-00	METAL GLAZE	47 5% 1/10W
R469	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R530	1-216-017-00	METAL GLAZE	47 5% 1/10W
R470	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R531	1-216-017-00	METAL GLAZE	47 5% 1/10W
R471	1-216-041-00	METAL GLAZE	470 5% 1/10W	R532	1-216-017-00	METAL GLAZE	47 5% 1/10W
R472	1-216-041-00	METAL GLAZE	470 5% 1/10W	R533	1-216-017-00	METAL GLAZE	47 5% 1/10W
R473	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R534	1-216-017-00	METAL GLAZE	47 5% 1/10W
R474	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R535	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R475	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R537	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R476	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R538	1-216-041-00	METAL GLAZE	470 5% 1/10W
R477	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R539	1-216-017-00	METAL GLAZE	47 5% 1/10W
R478	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R540	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R479	1-216-041-00	METAL GLAZE	470 5% 1/10W	R541	1-216-017-00	METAL GLAZE	47 5% 1/10W
R480	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R542	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R481	1-216-041-00	METAL GLAZE	470 5% 1/10W	R543	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R482	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R544	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R483	1-216-035-00	METAL GLAZE	270 5% 1/10W	R545	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R484	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R546	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R485	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R547	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R486	1-216-097-00	METAL GLAZE	100K 5% 1/10W	<u>VARIABLE RESISTOR</u>			
R487	1-216-073-00	METAL GLAZE	10K 5% 1/10W	RV201	1-228-996-00	RES, ADJ, CARBON	47K
R488	1-216-113-00	METAL GLAZE	470K 5% 1/10W	RV202	1-228-996-00	RES, ADJ, CARBON	47K
R489	1-216-022-00	METAL GLAZE	75 5% 1/10W	RV203	1-228-990-00	RES, ADJ, CARBON	1K
R490	1-216-091-00	METAL GLAZE	56K 5% 1/10W	RV204	1-228-990-00	RES, ADJ, CARBON	1K
R491	1-216-049-00	METAL GLAZE	1K 5% 1/10W	RV205	1-228-993-00	RES, ADJ, CARBON	4.7K
R492	1-216-089-00	METAL GLAZE	47K 5% 1/10W	RV206	1-228-990-00	RES, ADJ, CARBON	1K
R501	1-216-073-00	METAL GLAZE	10K 5% 1/10W	<u>CRYSTAL</u>			
R502	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X201	1-577-289-11	VIBRATOR, CRYSTAL	(17.7MHz)
R503	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X202	1-567-733-11	VIBRATOR, CRYSTAL	(17.7MHz)
R504	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X203	1-577-165-11	VIBLATOR, CERAMIC	(500kHz)
R505	1-216-073-00	METAL GLAZE	10K 5% 1/10W	X204	1-567-733-11	VIBRATOR, CRYSTAL	(17.7MHz)
R506	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X205	1-577-165-11	VIBLATOR, CERAMIC	(500kHz)
R507	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X206	1-577-165-11	VIBLATOR, CERAMIC	(500kHz)
R508	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X501	1-577-164-11	VIBLATOR, CERAMIC	(30.2MHz)
R509	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*****			
R510	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*1-633-526-11	IN-24 BOARD	*****	
R511	1-216-049-00	METAL GLAZE	1K 5% 1/10W	<u>CONNECTOR</u>			
R512	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN501	*1-506-484-11	PIN, CONNECTOR	5P
R513	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN502	1-568-096-11	CONNECTOR (PLUG)	26P
R514	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN503	1-506-483-21	PIN, CONNECTOR	4P
R515	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN504	1-568-094-11	CONNECTOR (PLUG)	22P
R516	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN505	*1-568-098-11	CONNECTOR (PLUG)	30P
R517	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN506	*1-568-098-11	CONNECTOR (PLUG)	30P
R518	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN507	1-568-092-11	CONNECTOR (PLUG)	18P
R519	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN508	1-568-090-11	CONNECTOR (PLUG)	14P
R520	1-216-049-00	METAL GLAZE	1K 5% 1/10W	CN509	*1-564-988-11	PIN, CONNECTOR	14P
R521	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	CN510	*1-566-668-11	PIN, CONNECTOR	20P
R522	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R523	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R524	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R525	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R526	1-216-017-00	METAL GLAZE	47 5% 1/10W				

When indicating parts by reference number, please include the board name.

IN-24**FJ-2****YC-64**

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
CN511	*1-566-668-11	PIN, CONNECTOR 20P		*A-7061-896-A	YC-64 (B) BOARD, COMPLETE (UK MODEL)	*****	
CN512	*1-566-667-11	PIN, CONNECTOR 18P					
CN513	*1-563-633-11	CONNECTOR, FLEXIBLE 30P		*A-7061-900-A	YC-64 (A) BOARD, COMPLETE (AEP MODEL)	*****	

	*A-7061-890-A	FJ-2 BOARD, COMPLETE		<u>CAPACITOR</u>			

<u>CAPACITOR</u>							
C107	1-135-156-21	TANTAL. CHIP 6.8MF	20%	6.3V	C001	1-126-233-11	ELECT 22MF 20% 25V
C108	1-135-156-21	TANTAL. CHIP 6.8MF	20%	6.3V	C002	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C109	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C003	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C110	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C004	1-124-443-00	ELECT 100MF 20% 6.3V
C111	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C005	1-124-443-00	ELECT 100MF 20% 6.3V
C112	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C007	1-163-097-00	CERAMIC CHIP 15PF 5% 50V
C113	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	C008	1-126-233-11	ELECT 22MF 20% 25V (AEP MODEL)
C114	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	C009	1-126-233-11	ELECT 22MF 20% 25V (AEP MODEL)
C115	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C010	1-126-233-11	ELECT 22MF 20% 25V
C116	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C011	1-126-233-11	ELECT 22MF 20% 25V
C117	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C012	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C120	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	C013	1-124-443-00	ELECT 100MF 20% 6.3V
C121	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	C014	1-124-443-00	ELECT 100MF 20% 6.3V
<u>DIODE</u>							
D101	8-719-104-34	DIODE 1S2836			C015	1-163-038-00	CERAMIC CHIP 0.1MF 25V
<u>IC</u>							
IC103	8-759-111-56	IC UPC4572G2			C016	1-163-097-00	CERAMIC CHIP 15PF 5% 50V
<u>JACK</u>							
J101	1-565-735-21	JACK, PIN 3P (LINE IN 2)			C017	1-163-123-00	CERAMIC CHIP 180PF 5% 50V
<u>JUMPER RESISTOR</u>							
JR101	1-216-295-00	METAL GLAZE 0 5% 1/10W			C018	1-164-232-11	CERAMIC CHIP 0.01MF 50V
JR102	1-216-296-00	METAL GLAZE 0 5% 1/8W			C019	1-163-119-00	CERAMIC CHIP 120PF 5% 50V
JR103	1-216-296-00	METAL GLAZE 0 5% 1/8W			C020	1-164-232-11	CERAMIC CHIP 0.01MF 50V
JR104	1-216-295-00	METAL GLAZE 0 5% 1/10W			C021	1-126-233-11	ELECT 22MF 20% 25V
<u>RESISTOR</u>							
R135	1-216-001-00	METAL GLAZE 10 5% 1/10W			C022	1-163-103-00	CERAMIC CHIP 27PF 5% 50V
R136	1-216-105-00	METAL GLAZE 220K 5% 1/10W			C023	1-164-232-11	CERAMIC CHIP 0.01MF 50V
R137	1-216-105-00	METAL GLAZE 220K 5% 1/10W			C024	1-163-038-00	CERAMIC CHIP 0.1MF 25V
R138	1-216-105-00	METAL GLAZE 220K 5% 1/10W			C025	1-163-038-00	CERAMIC CHIP 0.1MF 25V
R139	1-216-105-00	METAL GLAZE 220K 5% 1/10W			C026	1-124-443-00	ELECT 100MF 20% 6.3V
R140	1-216-073-00	METAL GLAZE 10K 5% 1/10W			C027	1-124-443-00	ELECT 100MF 20% 6.3V
R141	1-216-073-00	METAL GLAZE 10K 5% 1/10W			C028	1-123-875-11	ELECT 10MF 20% 50V
R142	1-216-105-00	METAL GLAZE 220K 5% 1/10W			C029	1-163-038-00	CERAMIC CHIP 0.1MF 25V
R143	1-216-105-00	METAL GLAZE 220K 5% 1/10W			C030	1-163-038-00	CERAMIC CHIP 0.1MF 25V
R150	1-216-022-00	METAL GLAZE 75 5% 1/10W			C031	1-126-233-11	ELECT 22MF 20% 25V

					C032	1-126-233-11	ELECT 22MF 20% 25V
					C033	1-163-038-00	CERAMIC CHIP 0.1MF 25V
					C034	1-163-038-00	CERAMIC CHIP 0.1MF 25V
					C035	1-163-038-00	CERAMIC CHIP 0.1MF 25V
					C036	1-163-038-00	CERAMIC CHIP 0.1MF 25V
					C037	1-164-232-11	CERAMIC CHIP 0.01MF 50V
					C038	1-163-101-00	CERAMIC CHIP 22PF 5% 50V (AEP MODEL)
					C039	1-163-115-00	CERAMIC CHIP 82PF 5% 50V (AEP MODEL)
					C040	1-163-115-00	CERAMIC CHIP 82PF 5% 50V (AEP MODEL)
					C043	1-163-124-00	CERAMIC CHIP 200PF 5% 50V (AEP MODEL)
					C044	1-163-093-00	CERAMIC CHIP 10PF 5% 50V (AEP MODEL)
					C045	1-163-115-00	CERAMIC CHIP 82PF 5% 50V (AEP MODEL)
					C046	1-163-103-00	CERAMIC CHIP 27PF 5% 50V (AEP MODEL)
					C047	1-163-038-00	CERAMIC CHIP 0.1MF 25V
					C048	1-163-038-00	CERAMIC CHIP 0.1MF 25V
					C201	1-163-117-00	CERAMIC CHIP 100PF 5% 50V (AEP MODEL)

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C202	1-163-133-00	CERAMIC CHIP 47PF	5% 50V (AEP MODEL)			<u>DIODE</u>	
C203	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)				
C204	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	D002	8-719-400-18	DIODE MA152WK	
C205	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	D003	8-719-104-34	DIODE 1S2836	
C206	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	D004	8-719-400-18	DIODE MA152WK	
C207	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)			<u>DELAY LINE</u>	
C208	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	DL201	1-415-313-00	DELAY LINE (1H) (AEP MODEL)	
C209	1-163-118-00	CERAMIC CHIP 110PF	5% 50V (AEP MODEL)			<u>FILTER</u>	
C210	1-163-103-00	CERAMIC CHIP 27PF	5% 50V (AEP MODEL)	FL001	1-409-470-11	FILTER, TRAP	
C212	1-163-118-00	CERAMIC CHIP 110PF	5% 50V (AEP MODEL)	FL002	1-415-719-11	DELAY LINE	
C213	1-163-103-00	CERAMIC CHIP 27PF	5% 50V (AEP MODEL)			<u>IC</u>	
C214	1-163-038-00	CERAMIC CHIP 0.1MF	25V (AEP MODEL)	IC001	8-759-009-06	IC MC14052BF	
C216	1-124-791-11	ELECT 1MF	20% 50V (AEP MODEL)	IC002	8-759-009-07	IC MC14053BF	
C217	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V (AEP MODEL)	IC003	8-759-009-07	IC MC14053BF	
C218	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V (AEP MODEL)	IC004	8-759-009-07	IC MC14053BF	
C219	1-124-927-11	ELECT 4.7MF	20% 50V (AEP MODEL)	IC201	8-752-035-00	IC CXA1227Q (AEP MODEL)	
C220	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	IC202	8-752-034-04	IC CXA1219M (AEP MODEL)	
C221	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)			<u>COIL</u>	
C222	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	L001	1-408-420-00	INDUCTOR 82UH	
C223	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L002	1-408-407-00	INDUCTOR 6.8UH	
C224	1-163-035-00	CERAMIC CHIP 0.047MF	50V (AEP MODEL)	L004	1-408-417-00	INDUCTOR 47UH	
C225	1-163-123-00	CERAMIC CHIP 180PF	5% 50V (AEP MODEL)	L005	1-408-418-00	INDUCTOR 56UH (AEP MODEL)	
C226	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	L006	1-408-421-00	INDUCTOR 100UH (AEP MODEL)	
C228	1-163-123-00	CERAMIC CHIP 180PF	5% 50V (AEP MODEL)	L007	1-408-418-00	INDUCTOR 56UH (AEP MODEL)	
C229	1-163-105-00	CERAMIC CHIP 33PF	5% 50V (AEP MODEL)	L008	1-408-419-00	INDUCTOR 68UH (AEP MODEL)	
C231	1-124-791-11	ELECT 1MF	20% 50V (AEP MODEL)	L009	1-408-418-00	INDUCTOR 56UH (AEP MODEL)	
C232	1-124-791-11	ELECT 1MF	20% 50V (AEP MODEL)	L201	1-408-408-00	INDUCTOR 8.2UH (AEP MODEL)	
C233	1-163-121-00	CERAMIC CHIP 150PF	5% 50V (AEP MODEL)	L202	1-408-408-00	INDUCTOR 8.2UH (AEP MODEL)	
C234	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V (AEP MODEL)	L203	1-408-410-00	INDUCTOR 12UH (AEP MODEL)	
C235	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	L204	1-408-410-00	INDUCTOR 12UH (AEP MODEL)	
C236	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L205	1-408-409-00	INDUCTOR 10UH (AEP MODEL)	
C237	1-126-233-11	ELECT 22MF	20% 25V (AEP MODEL)	L206	1-408-409-00	INDUCTOR 10UH (AEP MODEL)	
C238	1-123-875-11	ELECT 10MF	20% 50V (AEP MODEL)	L207	1-408-421-00	INDUCTOR 100UH (AEP MODEL)	
C239	1-164-232-11	CERAMIC CHIP 0.01MF	50V (AEP MODEL)	L208	1-408-413-00	INDUCTOR 22UH (AEP MODEL)	
C241	1-126-233-11	ELECT 22MF	20% 25V (AEP MODEL)	L209	1-408-413-00	INDUCTOR 22UH (AEP MODEL)	
C242	1-163-125-00	CERAMIC CHIP 220PF	5% 50V (AEP MODEL)	L301	1-408-417-00	INDUCTOR 47UH	
C243	1-163-125-00	CERAMIC CHIP 220PF	5% 50V (AEP MODEL)			<u>VARIABLE COIL</u>	
C301	1-126-233-11	ELECT 22MF	20% 25V	LV201	1-408-530-00	COIL, VARIABLE (AEP MODEL)	
C302	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	LV202	1-408-532-00	COIL, VARIABLE (AEP MODEL)	
C303	1-164-232-11	CERAMIC CHIP 0.01MF	50V	LV203	1-408-532-00	COIL, VARIABLE (AEP MODEL)	
C304	1-126-233-11	ELECT 22MF	20% 25V			<u>TRANSISTOR</u>	
C305	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q001	8-729-216-22	TRANSISTOR 2SA1162	
C306	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q002	8-729-216-22	TRANSISTOR 2SA1162	
C307	1-124-443-00	ELECT 100MF	20% 6.3V	Q003	8-729-100-66	TRANSISTOR 2SC1623	
C308	1-124-443-00	ELECT 100MF	20% 6.3V	Q004	8-729-100-66	TRANSISTOR 2SC1623	
C309	1-126-233-11	ELECT 22MF	20% 25V	Q005	8-729-100-66	TRANSISTOR 2SC1623	
C310	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
		<u>CONNECTOR</u>					
CN001	1-506-469-11	PIN, CONNECTOR 4P					
CN002	1-506-469-11	PIN, CONNECTOR 4P					
CN003	1-568-078-11	CONNECTOR (RECEPTALE) 18P					
CN004	1-568-076-11	CONNECTOR (RECEPTALE) 14P					

When indicating parts by reference number, please include the board name.

YC-64

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q006	8-729-100-66	TRANSISTOR 2SC1623		R020	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q007	8-729-100-66	TRANSISTOR 2SC1623		R021	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q008	8-729-100-66	TRANSISTOR 2SC1623		R022	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q009	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R023	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q010	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R024	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q011	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R025	1-216-073-00	METAL GLAZE 10K 5% 1/10W (AEP MODEL)	
Q012	8-729-100-66	TRANSISTOR 2SC1623		R026	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q013	8-729-100-66	TRANSISTOR 2SC1623		R027	1-216-041-00	METAL GLAZE 470 5% 1/10W (AEP MODEL)	
Q014	8-729-100-66	TRANSISTOR 2SC1623		R028	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (AEP MODEL)	
Q015	8-729-100-66	TRANSISTOR 2SC1623		R029	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W (AEP MODEL)	
Q016	8-729-100-66	TRANSISTOR 2SC1623		R030	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q017	8-729-100-66	TRANSISTOR 2SC1623		R040	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q018	8-729-100-66	TRANSISTOR 2SC1623		R041	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q019	8-729-100-66	TRANSISTOR 2SC1623		R042	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q020	8-729-100-62	TRANSISTOR 2SC1623 (AEP MODEL)		R043	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W (AEP MODEL)	
Q021	8-729-901-01	TRANSISTOR DTC144EK (AEP MODEL)		R044	1-216-049-00	METAL GLAZE 1K 5% 1/10W (AEP MODEL)	
Q022	8-729-901-01	TRANSISTOR DTC144EK		R045	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q023	8-729-216-22	TRANSISTOR 2SA1162 (AEP MODEL)		R046	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q024	8-729-100-66	TRANSISTOR 2SC1623		R047	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q025	8-729-100-66	TRANSISTOR 2SC1623		R048	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q026	8-729-100-66	TRANSISTOR 2SC1623		R049	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q027	8-729-100-66	TRANSISTOR 2SC1623		R050	1-216-043-00	METAL GLAZE 560 5% 1/10W	
Q028	8-729-100-66	TRANSISTOR 2SC1623		R051	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q029	8-729-100-66	TRANSISTOR 2SC1623		R052	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q030	8-729-100-66	TRANSISTOR 2SC1623		R053	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q031	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R054	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q032	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R055	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q201	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R056	1-216-035-00	METAL GLAZE 270 5% 1/10W	
Q202	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R057	1-216-017-00	METAL GLAZE 47 5% 1/10W	
Q203	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R058	1-216-039-00	METAL GLAZE 390 5% 1/10W	
Q301	8-729-100-66	TRANSISTOR 2SC1623		R059	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q302	8-729-100-66	TRANSISTOR 2SC1623		R060	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q303	8-729-100-66	TRANSISTOR 2SC1623		R061	1-216-045-00	METAL GLAZE 680 5% 1/10W	
Q304	8-729-100-66	TRANSISTOR 2SC1623		R062	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R063	1-216-045-00	METAL GLAZE 680 5% 1/10W	
		RESISTOR		R064	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R001	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R065	1-216-081-00	METAL GLAZE 22K 5% 1/10W (AEP MODEL)	
R002	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R066	1-216-089-00	METAL GLAZE 47K 5% 1/10W (AEP MODEL)	
R003	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R067	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (AEP MODEL)	
R004	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R068	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R005	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R069	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R006	1-216-041-00	METAL GLAZE 470 5% 1/10W		R070	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R007	1-216-041-00	METAL GLAZE 470 5% 1/10W		R071	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R009	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R072	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R010	1-216-042-00	METAL GLAZE 510 5% 1/10W		R073	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R011	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		R074	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R012	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W		R075	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R013	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R076	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R014	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R077	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R015	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R078	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R016	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R079	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R018	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R080	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R019	1-216-042-00	METAL GLAZE 510 5% 1/10W		R081	1-216-049-00	METAL GLAZE 1K 5% 1/10W	

When indicating parts by reference number, please include the board name.

PC-39

Ref.No	Part No.	Description		Remark	Ref.No	Part No.	Description		Remark
C529	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C650	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V
C530	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	C651	1-163-007-11	CERAMIC CHIP 680PF	10%	50V
C531	1-124-927-11	ELECT 4.7MF	20%	50V	C652	1-131-389-91	TANTALUM 10MF	10%	3.15V
C535	1-123-875-11	ELECT 10MF	20%	50V	C653	1-131-343-00	TANTALUM 0.22MF	10%	35V
C536	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C654	1-124-443-00	ELECT 100MF	20%	6.3V
C537	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C655	1-126-233-11	ELECT 22MF	20%	25V
C538	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C656	1-124-443-00	ELECT 100MF	20%	6.3V
C539	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C657	1-123-875-11	ELECT 10MF	20%	50V
C540	1-164-232-11	CERAMIC CHIP 0.01MF		50V	C658	1-124-443-00	ELECT 100MF	20%	6.3V
C542	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C659	1-162-587-11	CERAMIC CHIP 0.039MF	10%	25V
C556	1-124-927-11	ELECT 4.7MF	20%	50V	C660	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C557	1-161-051-00	CERAMIC 0.01MF	10%	25V	C661	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C558	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C662	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C601	1-126-176-11	ELECT 220MF	20%	6.3V	C663	1-124-446-11	ELECT 47MF	20%	10V
C602	1-126-176-11	ELECT 220MF	20%	6.3V	C664	1-124-925-11	ELECT 2.2MF	20%	50V
C603	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C665	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V
C604	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C666	1-163-007-11	CERAMIC CHIP 680PF	10%	50V
C611	1-124-791-11	ELECT 1MF	20%	50V	C667	1-131-389-91	TANTALUM 10MF	10%	3.15V
C612	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C668	1-131-343-00	TANTALUM 0.22MF	10%	35V
C613	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C669	1-124-443-00	ELECT 100MF	20%	6.3V
C614	1-124-791-11	ELECT 1MF	20%	50V	C670	1-126-233-11	ELECT 22MF	20%	25V
C615	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C671	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C616	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C672	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C617	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C673	1-123-875-11	ELECT 10MF	20%	50V
C618	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C674	1-123-875-11	ELECT 10MF	20%	50V
C619	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C703	1-123-875-11	ELECT 10MF	20%	50V
C620	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C704	1-126-157-11	ELECT 10MF	20%	16V
C621	1-126-176-11	ELECT 220MF	20%	6.3V	C705	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C623	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C706	1-124-443-00	ELECT 100MF	20%	6.3V
C624	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C707	1-124-443-00	ELECT 100MF	20%	6.3V
C625	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C708	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C626	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	C710	1-124-443-00	ELECT 100MF	20%	6.3V
C627	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C712	1-126-157-11	ELECT 10MF	20%	16V
C628	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C713	1-126-157-11	ELECT 10MF	20%	16V
C629	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C714	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C630	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C715	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C631	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C716	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C632	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C717	1-124-443-00	ELECT 100MF	20%	6.3V
C633	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C731	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C634	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C734	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C635	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C735	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C636	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C736	1-124-443-00	ELECT 100MF	20%	6.3V
C638	1-163-010-11	CERAMIC CHIP 0.0012MF	10%	50V	C737	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C640	1-163-010-11	CERAMIC CHIP 0.0012MF	10%	50V	C739	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C641	1-124-443-00	ELECT 100MF	20%	6.3V	C740	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C642	1-123-875-11	ELECT 10MF	20%	50V	C741	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C643	1-124-443-00	ELECT 100MF	20%	6.3V	C742	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C644	1-162-587-11	CERAMIC CHIP 0.039MF	10%	25V	C743	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C645	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C744	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C646	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	C745	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C647	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	C746	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C648	1-124-446-11	ELECT 47MF	20%	10V	C747	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C649	1-124-925-11	ELECT 2.2MF	20%	50V	C748	1-163-035-00	CERAMIC CHIP 0.047MF		50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C749	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C834	1-124-443-00	ELECT 100MF	20% 6.3V
C750	1-126-177-11	ELECT 100MF	20% 6.3V	C836	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C752	1-126-157-11	ELECT 10MF	20% 16V	C837	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C755	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C838	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C756	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C840	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C757	1-124-499-11	ELECT 1MF	20% 50V	C841	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C758	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C850	1-123-875-11	ELECT 10MF	20% 50V
C759	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C851	1-123-875-11	ELECT 10MF	20% 50V
C760	1-163-091-00	CERAMIC CHIP 8PF	0.25PF 50V	C852	1-123-875-11	ELECT 10MF	20% 50V
C761	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C854	1-123-875-11	ELECT 10MF	20% 50V
C762	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C855	1-123-875-11	ELECT 10MF	20% 50V
C763	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C856	1-123-875-11	ELECT 10MF	20% 50V
C764	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C857	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C765	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C858	1-124-927-11	ELECT 4.7MF	20% 50V
C766	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C859	1-124-446-11	ELECT 47MF	20% 10V
C767	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C860	1-123-875-11	ELECT 10MF	20% 50V
C768	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C861	1-123-875-11	ELECT 10MF	20% 50V
C769	1-124-443-00	ELECT 100MF	20% 6.3V	C862	1-124-446-11	ELECT 47MF	20% 10V
C771	1-124-446-11	ELECT 47MF	20% 10V	C865	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C772	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C866	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C773	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C867	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V
C775	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C868	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V
C801	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C869	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C802	1-124-443-00	ELECT 100MF	20% 6.3V	C870	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C803	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C871	1-123-875-11	ELECT 10MF	20% 50V
C804	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C880	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C805	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C901	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C806	1-124-791-11	ELECT 1MF	20% 50V	C902	1-124-443-00	ELECT 100MF	20% 6.3V
C807	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C903	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C808	1-124-902-71	ELECT 0.47MF	20% 50V	C904	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C809	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C905	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C810	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V	C906	1-124-791-11	ELECT 1MF	20% 50V
C811	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C907	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C812	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C908	1-124-902-00	ELECT 0.47MF	20% 50V
C813	1-124-443-00	ELECT 100MF	20% 6.3V	C909	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C814	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C910	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V
C815	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C911	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C816	1-124-925-11	ELECT 2.2MF	20% 50V	C912	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C817	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C913	1-124-443-00	ELECT 100MF	20% 6.3V
C819	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C914	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C821	1-124-791-11	ELECT 1MF	20% 50V	C915	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C822	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V	C916	1-124-925-11	ELECT 2.2MF	20% 50V
C823	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C917	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C824	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C919	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C825	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V	C921	1-124-791-11	ELECT 1MF	20% 50V
C826	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C922	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
C827	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V	C923	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C828	1-131-343-00	TANTALUM 0.22MF	10% 35V	C924	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C829	1-131-389-91	TANTALUM 10MF	10% 3.15V	C925	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V
C830	1-123-875-11	ELECT 10MF	20% 50V	C926	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C831	1-126-233-11	ELECT 22MF	20% 25V	C927	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V
C832	1-124-443-00	ELECT 100MF	20% 6.3V	C928	1-131-343-00	TANTALUM 0.22MF	10% 35V
C833	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C929	1-131-389-91	TANTALUM 10MF	10% 3.15V

When indicating parts by reference number, please include the board name.

PC-39

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C930	1-123-875-11	ELECT 10MF	20%	50V	IC602	8-759-111-56	IC UPC4572G2
C931	1-126-233-11	ELECT 22MF	20%	25V	IC603	8-759-009-07	IC MC14053BF
C932	1-124-443-00	ELECT 100MF	20%	6.3V	IC604	8-759-111-56	IC UPC4572G2
C933	1-163-035-00	CERAMIC CHIP 0.047MF		50V	IC605	8-759-009-06	IC MC14052BF
C934	1-124-443-00	ELECT 100MF	20%	6.3V	IC606	8-759-111-56	IC UPC4572G2
C936	1-163-123-00	CERAMIC CHIP 180PF	5%	50V	IC607	8-759-111-56	IC UPC4572G2
C937	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	IC608	8-759-009-07	IC MC14053BF
C938	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V	IC609	8-759-009-07	IC MC14053BF
C940	1-164-232-11	CERAMIC CHIP 0.01MF		50V	IC610	8-759-009-06	IC MC14052BF
C941	1-164-232-11	CERAMIC CHIP 0.01MF		50V	IC611	8-759-009-06	IC MC14052BF
C951	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC612	8-759-009-07	IC MC14053BF
C952	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC613	8-759-111-56	IC UPC4572G2
C953	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC614	8-752-009-90	IC CX20099
C954	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC615	8-759-009-06	IC MC14052BF
C955	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC701	8-752-322-57	IC CXD1077M
C956	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC703	8-752-332-46	IC CXD1208Q
C957	1-123-875-11	ELECT 10MF	20%	50V	IC704	8-759-009-51	IC MC14538BF
<u>CONNECTOR</u>				IC705	8-759-945-09	IC MB8464-12LLPF	
CN601	1-568-084-11	CONNECTOR (RECEPTALE) 30P		IC705	8-759-979-96	IC MB8464A-15LLPF	
CN602	1-568-084-11	CONNECTOR (RECEPTALE) 30P		IC707	8-759-990-94	IC MB606199	
CN603	1-506-477-11	PIN, CONNECTOR 12P		IC708	8-752-010-20	IC CX20102	
CN604	1-506-470-11	PIN, CONNECTOR 5P		IC709	8-759-908-15	IC TL431CLP	
CN605	1-506-471-11	PIN, CONNECTOR 6P		IC801	8-752-033-01	IC CXA1237AR	
CN606	1-506-468-11	PIN, CONNECTOR 3P		IC850	8-759-111-56	IC UPC4572G2	
CN701	1-506-468-11	PIN, CONNECTOR 3P		IC901	8-752-033-01	IC CXA1237AR	
<u>TRIMMER</u>				IC902	8-759-009-06	IC MC14052BF	
CV701	1-141-227-00	CAP, CERAMIC TRIMMER		IC903	8-759-009-06	IC MC14052BF	
<u>DIODE</u>				IC904	8-759-111-56	IC UPC4572G2	
D401	8-719-400-18	DIODE MA152WK		IC905	8-759-111-56	IC UPC4572G2	
D501	8-719-104-34	DIODE 1S2836		IC906	8-759-111-56	IC UPC4572G2	
D502	8-719-400-18	DIODE MA152WK		<u>COIL</u>			
D503	8-719-800-76	DIODE 1SS226		L401	1-407-169-XX	INDUCTOR 100UH	
D610	8-719-104-34	DIODE 1S2836		L501	1-408-978-21	INDUCTOR 47UH	
D701	8-719-400-18	DIODE MA152WK		L702	1-408-970-21	INDUCTOR 10UH	
D702	8-719-400-18	DIODE MA152WK		L704	1-407-169-XX	INDUCTOR 100UH	
D703	8-713-300-88	DIODE 1T33C-01		L705	1-407-169-XX	INDUCTOR 100UH	
D850	8-719-104-34	DIODE 1S2836		L706	1-408-970-21	INDUCTOR 10UH	
D851	8-719-800-76	DIODE 1SS226		L707	1-408-970-21	INDUCTOR 10UH	
D852	8-719-800-76	DIODE 1SS226		L801	1-407-169-XX	INDUCTOR 100UH	
<u>FILTER</u>				L802	1-408-948-00	INDUCTOR 220UH	
FL601	1-235-565-21	FILTER, LOW PASS		L901	1-407-169-XX	INDUCTOR 100UH	
FL602	1-235-565-21	FILTER, LOW PASS		L902	1-408-948-00	INDUCTOR 220UH	
FL801	1-236-551-11	BPF		<u>TRANSISTOR</u>			
FL901	1-236-550-11	BPF		Q501	8-729-100-66	TRANSISTOR 2SC1623	
<u>IC</u>				Q502	8-729-901-01	TRANSISTOR DTC144EK	
IC401	8-752-334-42	IC CXD2106Q		Q503	8-729-100-66	TRANSISTOR 2SC1623	
IC501	8-759-100-93	IC UPC393G2		Q504	8-729-902-XX	TRANSISTOR DTC114TK	
				Q505	8-729-901-01	TRANSISTOR DTC144EK	
				Q506	8-729-216-22	TRANSISTOR 2SA1162	
				Q508	8-729-100-66	TRANSISTOR 2SC1623	
				Q509	8-729-903-10	TRANSISTOR FMW1	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q510	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R155	1-216-295-00	METAL GLAZE 0 5%	1/10W
Q511	8-729-100-66	TRANSISTOR 2SC1623		R401	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q512	8-729-100-66	TRANSISTOR 2SC1623		R402	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q513	8-729-100-66	TRANSISTOR 2SC1623 (AEP MODEL)		R403	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q514	8-729-216-22	TRANSISTOR 2SA1162		R404	1-216-075-00	METAL GLAZE 12K 5%	1/10W
Q515	8-729-100-66	TRANSISTOR 2SC1623		R405	1-216-075-00	METAL GLAZE 12K 5%	1/10W
Q516	8-729-100-66	TRANSISTOR 2SC1623		R406	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q517	8-729-100-66	TRANSISTOR 2SC1623		R407	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q518	8-729-901-06	TRANSISTOR DTA144EK		R408	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q520	8-729-901-01	TRANSISTOR DTC144EK		R409	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q521	8-729-901-06	TRANSISTOR DTA144EK		R412	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q522	8-729-901-01	TRANSISTOR DTC144EK		R413	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q523	8-729-901-01	TRANSISTOR DTC144EK		R501	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q524	8-729-100-66	TRANSISTOR 2SC1623		R502	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
Q526	8-729-100-66	TRANSISTOR 2SC1623		R503	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
Q601	8-729-901-06	TRANSISTOR DTA144EK		R504	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
Q602	8-729-116-05	TRANSISTOR 2SK160-K5		R505	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q603	8-729-116-05	TRANSISTOR 2SK160-K5		R506	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q604	8-729-901-01	TRANSISTOR DTC144EK		R507	1-216-079-00	METAL GLAZE 18K 5%	1/10W
Q605	8-729-901-01	TRANSISTOR DTC144EK		R508	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q606	8-729-216-22	TRANSISTOR 2SA1162		R509	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q607	8-729-216-22	TRANSISTOR 2SA1162		R510	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q610	8-729-901-01	TRANSISTOR DTC144EK		R511	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q611	8-729-100-66	TRANSISTOR 2SC1623		R512	1-216-083-00	METAL GLAZE 27K 5%	1/10W
Q701	8-729-901-06	TRANSISTOR DTA144EK		R513	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q702	8-729-901-01	TRANSISTOR DTC144EK		R514	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
Q703	8-729-100-66	TRANSISTOR 2SC1623		R515	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
Q705	8-729-100-66	TRANSISTOR 2SC1623		R516	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q706	8-729-100-66	TRANSISTOR 2SC1623		R517	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q707	8-729-100-66	TRANSISTOR 2SC1623		R519	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q708	8-729-901-06	TRANSISTOR DTA144EK		R520	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q709	8-729-100-66	TRANSISTOR 2SC1623		R521	1-216-295-00	METAL GLAZE 0 5%	1/10W
Q720	8-729-901-01	TRANSISTOR DTC144EK		R522	1-216-295-00	METAL GLAZE 0 5%	1/10W
Q721	8-729-901-01	TRANSISTOR DTC144EK		R523	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q801	8-729-901-01	TRANSISTOR DTC144EK		R524	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q802	8-729-901-01	TRANSISTOR DTC144EK		R526	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q840	8-729-100-66	TRANSISTOR 2SC1623		R527	1-216-295-00	METAL GLAZE 0 5%	1/10W
Q851	8-729-902-96	TRANSISTOR FMS1		R529	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q852	8-729-904-04	TRANSISTOR FMS2		R530	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q853	8-729-100-66	TRANSISTOR 2SC1623		R531	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q854	8-729-100-66	TRANSISTOR 2SC1623		R532	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q855	8-729-100-66	TRANSISTOR 2SC1623		R533	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q856	8-729-100-66	TRANSISTOR 2SC1623		R534	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
Q901	8-729-901-01	TRANSISTOR DTC144EK		R535	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q902	8-729-901-01	TRANSISTOR DTC144EK		R536	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
Q940	8-729-100-66	TRANSISTOR 2SC1623		R537	1-216-113-00	METAL GLAZE 470K 5%	1/10W
		<u>RESISTOR</u>		R538	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R150	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R539	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R151	1-216-025-00	METAL GLAZE 100 5%	1/10W	R540	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R152	1-216-295-00	METAL GLAZE 0 5%	1/10W	R542	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R153	1-216-295-00	METAL GLAZE 0 5%	1/10W	R543	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R154	1-216-295-00	METAL GLAZE 0 5%	1/10W	R544	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
				R545	1-216-089-00	METAL GLAZE 47K 5%	1/10W

When indicating parts by reference number, please include the board name.

PC-39

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R546	1-216-062-00	METAL GLAZE	3.6K 5% 1/10W	R644	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R547	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R645	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R548	1-216-062-00	METAL GLAZE	3.6K 5% 1/10W	R646	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R549	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R647	1-216-033-00	METAL GLAZE	220 5% 1/10W
R550	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R648	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R551	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R649	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R553	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R650	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R555	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R651	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R571	1-216-041-00	METAL GLAZE	470 5% 1/10W	R653	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R580	1-216-025-00	METAL GLAZE	100 5% 1/10W	R654	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R581	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R655	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R582	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R659	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R583	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R660	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R584	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R661	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R585	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R662	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R586	1-216-041-00	METAL GLAZE	470 5% 1/10W	R663	1-216-025-00	METAL GLAZE	100 5% 1/10W
R587	1-216-295-00	METAL GLAZE	0 5% 1/10W	R664	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R588	1-216-295-00	METAL GLAZE	0 5% 1/10W	R665	1-216-009-00	METAL GLAZE	22 5% 1/10W
R607	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R666	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R608	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R667	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R609	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R668	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R610	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R669	1-216-045-00	METAL GLAZE	680 5% 1/10W
R611	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R670	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R612	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R671	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R613	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R672	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R614	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R673	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R616	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R674	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R617	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R675	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R618	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R676	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R619	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R677	1-216-025-00	METAL GLAZE	100 5% 1/10W
R621	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R678	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R622	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R679	1-216-009-00	METAL GLAZE	22 5% 1/10W
R623	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R680	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R624	1-216-025-00	METAL GLAZE	100 5% 1/10W	R681	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R625	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R682	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R626	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R683	1-216-045-00	METAL GLAZE	680 5% 1/10W
R627	1-216-033-00	METAL GLAZE	220 5% 1/10W	R684	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R628	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R685	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R629	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R686	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R630	1-216-025-00	METAL GLAZE	100 5% 1/10W	R687	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R631	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R688	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R632	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R689	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R633	1-216-033-00	METAL GLAZE	220 5% 1/10W	R690	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R634	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R691	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R635	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R693	1-216-001-00	METAL GLAZE	10 5% 1/10W
R636	1-216-025-00	METAL GLAZE	100 5% 1/10W	R695	1-216-025-00	METAL GLAZE	100 5% 1/10W
R637	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R696	1-216-025-00	METAL GLAZE	100 5% 1/10W
R638	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R697	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R639	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R698	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R640	1-216-033-00	METAL GLAZE	220 5% 1/10W	R701	1-216-029-00	METAL GLAZE	150 5% 1/10W
R641	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R702	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W
R642	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R703	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W
R643	1-216-025-00	METAL GLAZE	100 5% 1/10W	R704	1-216-022-00	METAL GLAZE	75 5% 1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R705	1-216-039-00	METAL GLAZE	390 5% 1/10W	R783	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R706	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R784	1-216-025-00	METAL GLAZE	100 5% 1/10W
R707	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R785	1-216-025-00	METAL GLAZE	100 5% 1/10W
R708	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R787	1-216-295-00	METAL GLAZE	0 5% 1/10W
R712	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R788	1-216-295-00	METAL GLAZE	0 5% 1/10W
R713	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R789	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R717	1-216-117-00	METAL GLAZE	680K 5% 1/10W	R790	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R718	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R791	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R720	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R792	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R721	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R793	1-216-001-00	METAL GLAZE	10 5% 1/10W
R723	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R794	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R724	1-216-295-00	METAL GLAZE	0 5% 1/10W	R795	1-216-295-00	METAL GLAZE	0 5% 1/10W
R726	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R797	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R727	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R798	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R729	1-216-295-00	METAL GLAZE	0 5% 1/10W	R799	1-216-029-00	METAL GLAZE	150 5% 1/10W
R732	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R801	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R738	1-216-017-00	METAL GLAZE	47 5% 1/10W	R802	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R739	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R803	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R740	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R804	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R741	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R805	1-216-295-00	METAL GLAZE	0 5% 1/10W
R742	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R806	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R743	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R807	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R744	1-216-295-00	METAL GLAZE	0 5% 1/10W	R808	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R745	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R809	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R746	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R810	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R748	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R811	1-216-107-00	METAL GLAZE	270K 5% 1/10W
R749	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R812	1-216-046-00	METAL GLAZE	750 5% 1/10W
R750	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R813	1-216-046-00	METAL GLAZE	750 5% 1/10W
R751	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R814	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R752	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R815	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R753	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R816	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R754	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R817	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R755	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R818	1-216-045-00	METAL GLAZE	680 5% 1/10W
R756	1-216-025-00	METAL GLAZE	100 5% 1/10W	R819	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R757	1-216-037-00	METAL GLAZE	330 5% 1/10W	R820	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R758	1-216-029-00	METAL GLAZE	150 5% 1/10W	R821	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R759	1-216-045-00	METAL GLAZE	680 5% 1/10W	R822	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R760	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R823	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R761	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R824	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R762	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R827	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R763	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R828	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R764	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R829	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R768	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R830	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R769	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R831	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R771	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R833	1-216-047-00	METAL GLAZE	820 5% 1/10W
R772	1-216-295-00	METAL GLAZE	0 5% 1/10W	R840	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R774	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R841	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R775	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R842	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R776	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R850	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R777	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R851	1-216-043-00	METAL GLAZE	560 5% 1/10W
R780	1-216-045-00	METAL GLAZE	680 5% 1/10W	R852	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R781	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R853	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R782	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R854	1-216-075-00	METAL GLAZE	12K 5% 1/10W

When indicating parts by reference number, please include the board name.

UC-4

CC-26

FP-237

FP-90

NM-2

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
	*1-633-519-11	UC-4 BOARD *****					
		<u>CONNECTOR</u>				<u>TRANSISTOR</u>	
CN101	1-566-529-11	CONNECTOR, FPC (ZIF) 13P		Q302	8-729-906-48	EE-TP109	
CN102	1-566-527-21	CONNECTOR, FPC (ZIF) 11P				<u>SWITCH</u>	
CN103	1-566-530-21	CONNECTOR, FPC (ZIF) 14P		S302	1-572-298-21	SWITCH, PUSH(3 KEY)REC PROOF TAPE SELECT	
CN103	1-575-392-11	CABLE, FLAT (1.0MM PITCH) 14P				*****	
		<u>DIODE</u>				*A-7061-899-A	NM-2 (A) BOARD, COMPLETE (UK MODEL) *****
D101	8-719-104-34	DIODE 1S2836				<u>CAPACITOR</u>	
D102	8-719-104-34	DIODE 1S2836		C001	1-163-035-00	CERAMIC CHIP 0.047MF	50V
D103	8-719-104-34	DIODE 1S2836		C002	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
D104	8-719-104-34	DIODE 1S2836		C003	1-163-035-00	CERAMIC CHIP 0.047MF	50V
		*****		C004	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
	*1-633-518-11	CC-26 BOARD *****		C005	1-135-155-21	TANTAL CHIP 4.7MF	10% 16V
		<u>CONNECTOR</u>		C006	1-135-155-21	TANTAL CHIP 4.7MF	10% 16V
CN301	*1-562-880-21	CONNECTOR, CARD EDGE 15P		C007	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
		<u>CONNECTOR</u>		C008	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
W301	1-575-393-11	CABLE, FLAT (1.0MM PITCH) 15P		C011	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
		*****		C012	1-135-153-21	TANTAL CHIP 2.2MF	10% 25V
	1-633-660-11	FP-237 FLEXIBLE BOARD *****				<u>CONNECTOR</u>	
	3-728-869-02	HOLDER, SENSOR		CN001	1-506-469-11	PIN, CONNECTOR 4P	
		<u>DIODE</u>		CN002	1-506-477-11	PIN, CONNECTOR 12P	
D301	8-719-820-44	PHOTO COUPLER TLP907-0				<u>DIODE</u>	
		<u>TRANSISTOR</u>		D001	8-719-800-76	DIODE 1S5126	
Q301	8-729-906-48	EE-TP109		D002	8-719-400-18	DIODE MA152WK	
		<u>SWITCH</u>		D003	8-719-104-34	DIODE 1S2836	
S301	1-572-173-11	SWITCH, SLIDE (ENCODER) MODE				<u>IC</u>	
S303	1-570-869-21	SWITCH, PUSH (2 KEY) THICKNESS		IC001	8-759-009-07	IC MC14053BF	
S901	1-571-099-11	SWITCH (CASSETTE DOWN)				<u>JUMPER RESISTOR</u>	
		*****		JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	1-628-061-12	FP-90 FLEXIBLE BOARD *****		JR002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	3-728-837-01	HOLDER, LED		JR003	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	3-728-869-02	HOLDER, SENSOR		JR004	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		<u>DIODE</u>		JR005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D302	8-719-940-81	DIODE GL452S		JR006	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D303	8-719-820-44	PHOTO COUPLER TLP907-0		JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR009	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR010	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR011	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR012	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR013	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR014	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR015	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR016	1-216-296-00	METAL GLAZE 0 5% 1/8W	

When indicating parts by reference number, please include the board name.

NM-2

Ref.No	Part No.	Description			
JR017	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR018	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR019	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR020	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR021	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR022	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR023	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR024	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR025	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR026	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR027	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR028	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR029	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR030	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR031	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR032	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR033	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR034	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR035	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR036	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR037	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR038	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR039	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR040	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR041	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR042	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR043	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR044	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR045	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR046	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR047	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR048	1-216-296-00	METAL GLAZE	0	5%	1/8W
<u>COIL</u>					
L001	1-408-408-00	INDUCTOR	8.2UH		
L002	△.1-408-408-00	INDUCTOR	8.2UH		
<u>CASE BLOCK</u>					
NM001	*A-6771-194-A	CASE BLOCK ASSY, NA			
<u>TRANSISTOR</u>					
Q003	8-729-901-01	TRANSISTOR DTC144EK			
Q004	8-729-901-01	TRANSISTOR DTC144EK			
Q005	8-729-901-01	TRANSISTOR DTC144EK			
Q006	8-729-901-01	TRANSISTOR DTC144EK			
Q007	8-729-901-01	TRANSISTOR DTC144EK			
Q008	8-729-901-01	TRANSISTOR DTC144EK			
Q009	8-729-901-01	TRANSISTOR DTC144EK			
Q010	8-729-901-01	TRANSISTOR DTC144EK			
<u>RESISTOR</u>					
R001	1-216-089-00	METAL GLAZE	47K	5%	1/10W

Remark	Ref.No	Part No.	Description			Remark
	R002	1-216-089-00	METAL GLAZE	47K	5%	1/10W
	R003	1-216-089-00	METAL GLAZE	47K	5%	1/10W
	R004	1-216-089-00	METAL GLAZE	47K	5%	1/10W
	R006	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R007	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R008	1-216-097-00	METAL GLAZE	100K	5%	1/10W
	R009	1-216-097-00	METAL GLAZE	100K	5%	1/10W
	R010	1-216-097-00	METAL GLAZE	100K	5%	1/10W
	R011	1-216-097-00	METAL GLAZE	100K	5%	1/10W
	R012	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
	R013	1-216-296-00	METAL GLAZE	0	5%	1/8W
	R014	1-216-296-00	METAL GLAZE	0	5%	1/8W
	R015	1-216-089-00	METAL GLAZE	47K	5%	1/10W
	R016	1-216-089-00	METAL GLAZE	47K	5%	1/10W
	R019	1-216-295-00	METAL GLAZE	0	5%	1/10W
	R021	1-216-089-00	METAL GLAZE	47K	5%	1/10W
	R022	1-216-295-00	METAL GLAZE	0	5%	1/10W
	R023	1-216-295-00	METAL GLAZE	0	5%	1/10W
	R025	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
	R027	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
	R028	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
	R029	1-216-089-00	METAL GLAZE	47K	5%	1/10W

MISCELLANEOUS

A-7049-293-A	DRUM ASSY, ROTARY UPPER (DGU-58A)
△.1-466-199-11	MODULATOR, RF (RFU-2010) (AEP MODEL)
1-466-206-11	MODULATOR, RF (RFU-2011) (UK MODEL)
△.1-540-054-11	INLET, AC
1-575-387-11	CABLE, FLAT (1.0MM PITCH) 12P
1-575-390-11	CABLE, FLAT (1.0MM PITCH) 18P
1-575-391-11	CABLE, FLAT (1.0MM PITCH) 5P
1-575-456-11	WIRE, FLAT TYPE (20 CORE)
M901	X-3731-108-1 MOTOR ASSY
M902	8-835-331-01 MOTOR, DC U-22A
M903	A-7040-160-A MOTOR ASSY, THREADING
M906	A-7048-339-A DRUM ASSY (DGU-58A-R)

When indicating parts by reference number, please include the board name.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

ACCESSORIES AND PACKING MATERIALS

<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
A-6768-153-A	COMMANDER ASSY (RMT-451)	
1-551-086-31	CORD, CONNECTION	
1-551-513-00	CORD ASSY, COAXIAL	
1-551-734-11	CORD, CONNECTION (RK-74H)	
△.1-558-032-11	CORD, POWER (UK MODEL)	
1-559-533-11	CORD, CONNECTION	
1-574-056-11	CORD, POWER (AEP MODEL)	
1-574-316-11	CORD, CONNECTION	
*1-575-335-21	CORD, CONNECTION	
*3-677-503-00	SHEET, PROTECTION	
*3-742-569-01	INDIVIDUAL CARTON	
*3-742-570-01	CASE, UPPER	
*3-742-571-01	CUSHION (LOWER)	
*3-742-572-02	CUSHION (UPPER)	
3-751-158-41	MANUAL, INSTRUCTION (English)	
3-751-158-51	MANUAL, INSTRUCTION (AEP MODEL) (French, Germans, Spanish)	
3-751-158-61	MANUAL, INSTRUCTION (AEP MODEL) (Dutch, Swedish, Italian)	
8-883-112-29	V8 6CLHSP	

HARDWARE LIST

STOP RING

7-624-105-04 STOP RING 2.3, TYPE -E

PRECISION SCREW

7-627-555-88 PRECISION SCREW +P 1.4X1.8
 7-627-553-37 PRECISION SCREW +P 2X3 TYPE 3
 7-627-553-47 PRECISION SCREW +P 2X4 TYPE 3

SCREW

7-621-772-30 SCREW +B 2X6
 7-685-103-19 SCREW +P 2X5 TYPE2 NON-SLIT
 7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3

When indicating parts by reference number, please include the board name.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

SECTION 8 MECHANICAL ADJUSTMENTS

For mechanical adjustments, refer to the separate "8mm Video Mechanical Adjustments III (U mechanism)"

8-1. Tape pass adjustment

(Track shift)

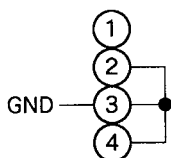
Based on four types of pilot signals, the 8mm video system controls the tape transport speed instantaneously and uses ATF (Automatic Track Finding) to attain high-precision tracking. This makes a tracking adjustment control knob unnecessary. Accurate tracing has also been realized.

However, the ATF system has caused a problem in adjusting the tape pass system. The tape pass cannot be adjusted completely because the ATF automatically compensates even if the head's tracing fluctuates slightly.

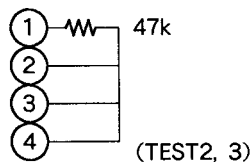
Therefore, to do fine tracking adjustment, first switch to the track shift mode. Since the ATF is forced to operate and the tracking amount (approx. $\frac{1}{4}$) shifts to a constant amount, fine tracking adjustment can be easily done. A track shift jig is unnecessary.

8-1-1. Setting the track shift mode

- 1) ① With the front panel assembly:
Connect Pins ②, ③, and ④ of CN503.



- ② Without the front panel assembly:
First connect 47 kΩ resistor to Pin ① of CN503 and to Pins ②, ③ and ④ of CN503.



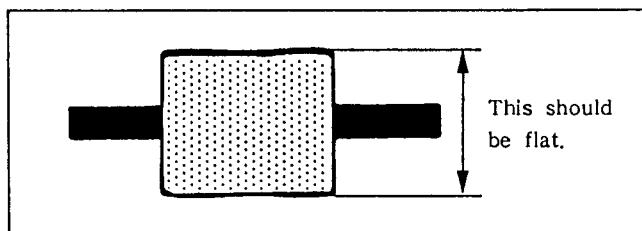
- 2) Switch to the test mode.

Note: It is possible to select SP/LP manually in the test mode.

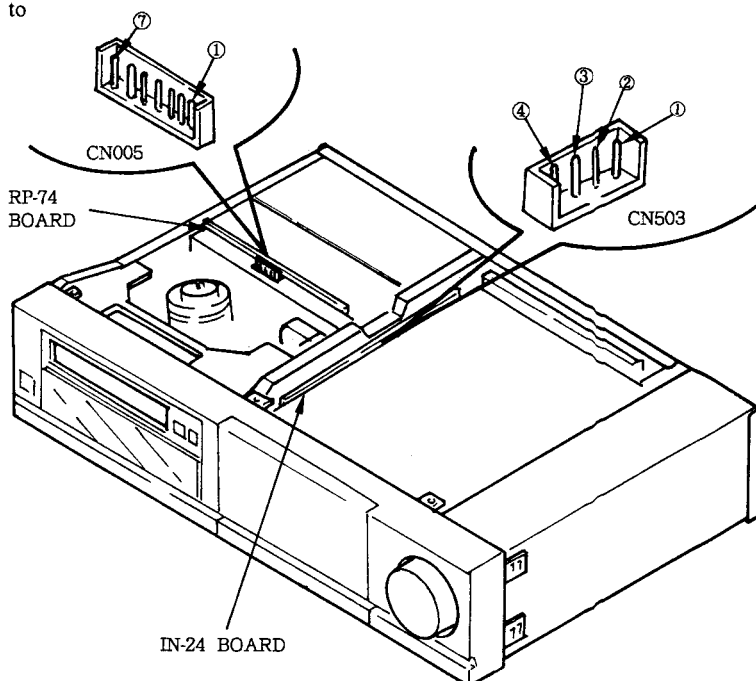
When the set becomes to LP mode, select SP mode by SP/LP switch.

8-1-2. Preparation for adjustment

- 1) Clean the tape transport surfaces (tape guide, drum, capstan, and pinch roller).
- 2) Connection to an oscilloscope and waveform output.
1ch: The drum head's RF signal output CN005 pin ⑦ (PB RF OUT)
Output method: Connect the external trigger output CN005 pin ② (RF SW. P) to CN005 pin ① (GND).
- 3) Playback the tracking alignment tape (WR-IN) (J-5).
- 4) Check if the entry and exit sides of the oscilloscope's RF waveform are flat.
If they are not flat, make the adjustment by following the separately published U mechanical series mechanical adjustment manual.



- 5) After the adjustment is Remove the from the IN -24 board's CN503.



SECTION 9

ELECTRICAL ADJUSTMENTS

During adjustment, refer to the relevant parts arrangement diagrams beginning on Page 279.

The following measuring equipment is used for electrical adjustments.

[Equipment to be used]

- 1) Monitor TV
- 2) Dual trace oscilloscope having band of over 10 MHz, incorporating delay mode. (Use 10:1 probe unless otherwise specified)
- 3) Frequency counter
- 4) Pattern generator
(Equipped with video output terminal: refer to 8-1-1. Connection of Equipment)
- 5) Digital voltmeter
- 6) Audio generator
- 7) Audio level meter
- 8) Audio distortion meter
- 9) Audio attenuator
- 10) Audio multiplex signal generator
- 11) Alignment tapes
- 12) Vectorscope

Tracking adjustment (WR5-1CP) Parts Code: 8-967-995-07
 Video frequency response adjustment (WS5-7CE) Parts Code: 8-967-995-18

Normal mode operation checking

For SP (WR5-5CSP) Parts Code: 8-967-995-46
 or (WR5-4CSP) Parts Code: 8-967-995-47
 For LP (WR5-4CL) Parts Code: 8-967-995-56

Hi8 mode operation checking (ME Tape)

For SP (WR5-8NCE) Parts Code: 8-967-995-48
 For LP (WR5-8NCE) Parts Code: 8-967-995-57

AFM Stereo operation checking

For SP (WRS-9CS) Parts Code: 8-967-995-28

9-1. PREPARATIONS

9-1-1. Connection of Equipment

Adjustment is performed by connection of the measuring equipment shown in Fig. 8-1., according to the input terminal indications (S VIDEO or VIDEO). The input terminal is indicated by () in the signal column. Either input terminal can be used when there is no indication. The S VIDEO IN terminal has priority. When adjusting using the VIDEO IN terminal input, remove the connector from the S VIDEO IN terminal.

- Notes:**
- 1) If adjustment is performed by VIDEO input when S VIDEO input is indicated, the product specifications for this unit may not be satisfied. Be sure to follow the indications.
 - 2) When performing adjustment using a VCR equipped with an S video output terminal as the signal source, the performance of this unit may be affected by that VCR. Try to use a pattern generator with a Y/C separation output terminal if possible.

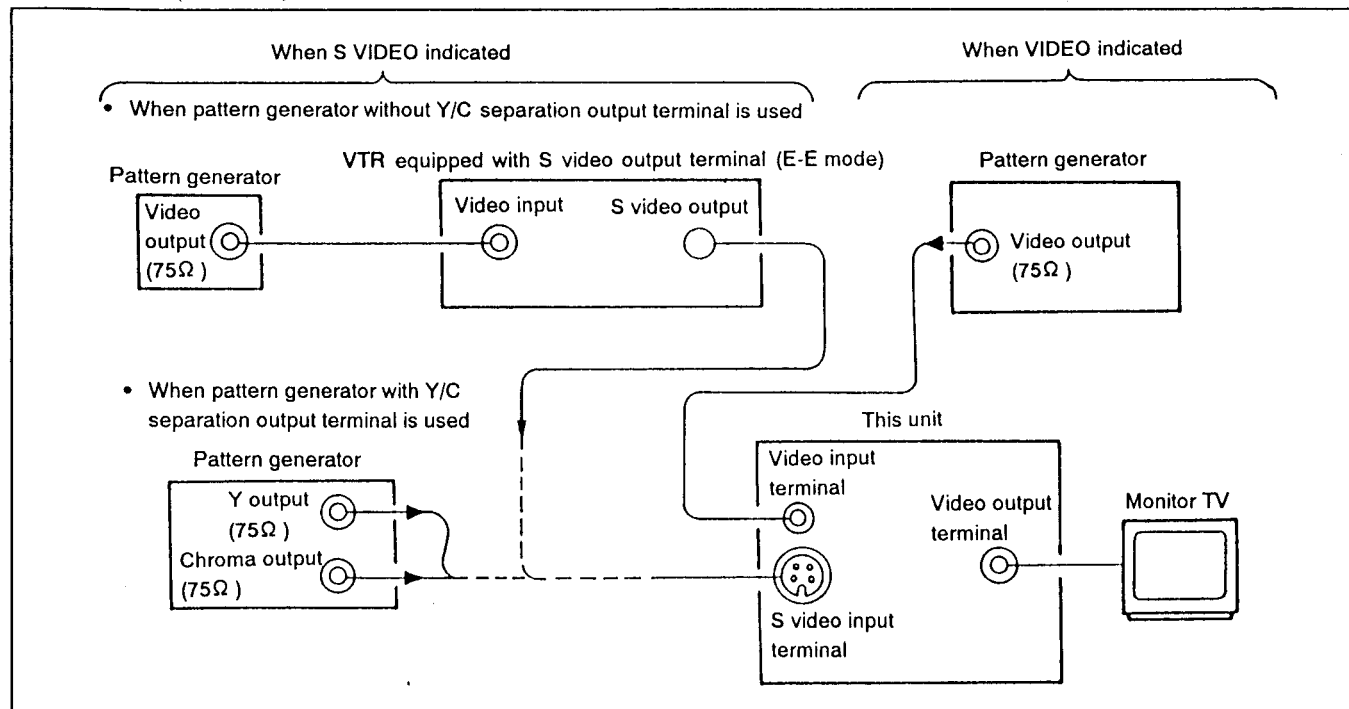


Fig. 9-1.

9-1-2. Confirmation of Input Signal

As adjustment is made using a video signal obtained from a pattern generator as the adjustment signal, it is necessary to confirm that the video output signal is within the required specifications.

1. S VIDEO Input

Connect an oscilloscope to the Y signal terminal of the S video input terminal (CNJ505 on RJ-5 board) and confirm that the sync signal of the Y signal is approximately 0.3 Vp-p and the amplitude of the video section is approximately 0.7 Vp-p. (When using a VCR equipped with an S video output terminal, confirm that there is no residual chroma signal or burst signal.) Next, connect the oscilloscope to the chroma signal terminal of the S video input terminals and confirm that the burst signal amplitude of the chroma signal is approximately 0.3 Vp-p and flat, and that the amplitude ratio of the burst signal to the chroma signal is 0.30:0.66. The Y and chroma signals used for adjustment are shown in Fig. 9-2.

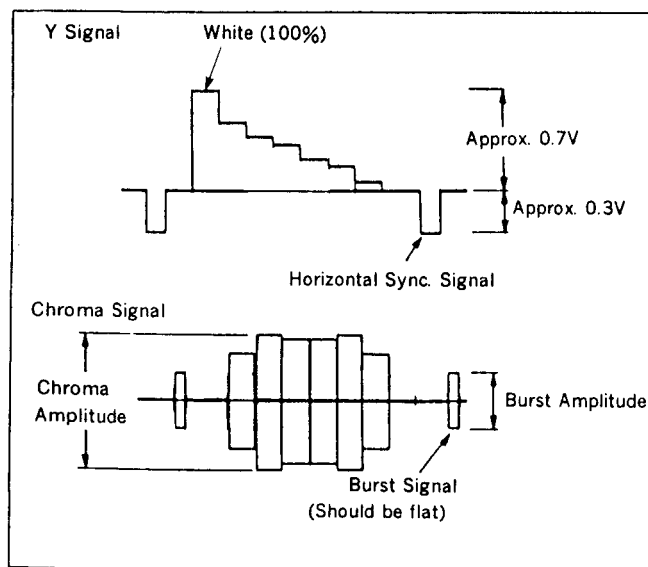


Fig. 9-2. Pattern Generator Color Bar Signals

2. VIDEO Input

Connect an oscilloscope to the video input terminal (CNJ505 on RJ-5 board) and confirm that the amplitude of the sync signal of the video signal is approximately 0.3V and the amplitude of the video section is approximately 0.7V. Confirm that the burst signal amplitude is approximately 0.3V and flat, and that the level ratio of the burst signal and red signal is 0.30:0.66. The video signal (color bars) used for adjustment are shown in Fig. 9-3.

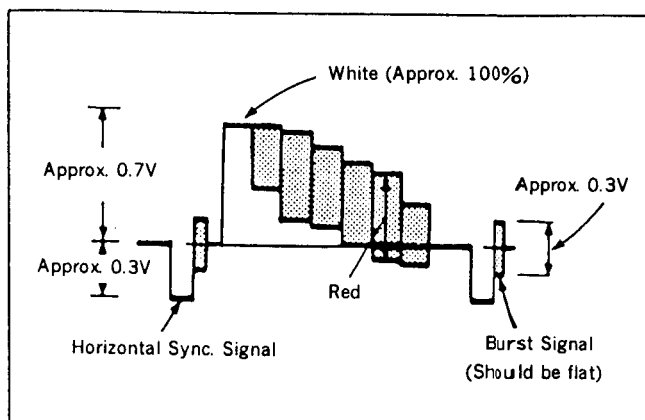


Fig. 9-3. Pattern Generator Color Bar Signal

[Alignment tapes]

The alignment tapes shown in the table below are available. Use the tape indicated in the signal column of each adjustment section.

When a specific name is not given for use of an operation checking tape, any of the operation checking tapes can be used.

Name	Recording Mode	Tape Type	Tape Speed	Contents		Use
				Video Area	PCM Area	
Tracking WR5-1CP	STD	MP	SP	CH2: Signal for 1 MHz tape path adjustment Marker (CH1: 9 MHz) for switching position adjustment		Tape path adjustment Switching position adjustment
Video frequency response WR5-7CE	Hi8	ME	SP	RF sweep 0 to 15 MHz Markers 2, 4.5, 7, 8.5, 10 MHz		Frequency response adjustment
Operation checking WR5-4CSP or WR5-5CSP	STD	MP	SP	<ul style="list-style-type: none"> Video signals Color bars 4 minutes Monoscope 4 minutes Audio signal (AFM) 400 Hz, 60% modulation 	<ul style="list-style-type: none"> Audio signals (PCM) Monoscope section 20 Hz 20 seconds 400 Hz 20 seconds 14 kHz 20 seconds Color bar section 1 kHz 4 minutes 	Operation checking
WR5-8CSE	Hi8	ME	SP			
WR5-4CL	STD	MP	LP	<ul style="list-style-type: none"> Video signals Color bars 4 minutes Monoscope 4 minutes Audio signal (AFM) 400 Hz, 60% modulation 	Audio signals (PCM) 400 Hz 8 minutes	
WR5-8CLE	Hi8	ME	LP			
WR5-9CS	STD	MP	SP	<ul style="list-style-type: none"> Video signals Color bars 4 minutes Monoscope 4 minutes Audio signal (AFM) Lch: 400Hz L+R (1.5 MHz ± 60 kHz) Rch: 1 kHz L-R (1.7 MHz ± 30 kHz) 	Audio signals (PCM) 400 Hz 8 minutes	

Note: Recording modes
 STD Conventional mode
 Hi8 High band mode

Tape Types
 MP Metal particle tape
 ME Metal evaporated tape

The 100% color bar signal recorded on the alignment tape is shown in Fig. 9-4.

Note: Measured at VIDEO OUT terminal (terminated at 75Ω)

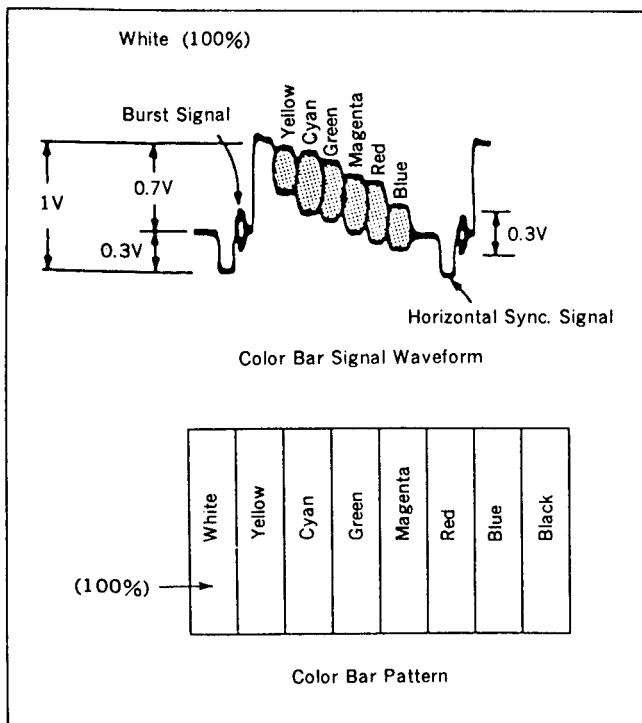


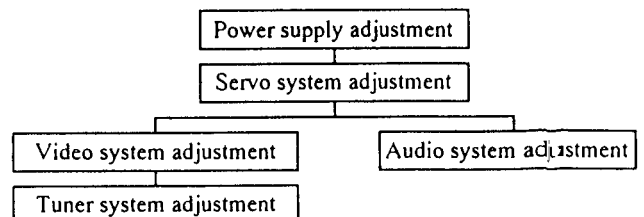
Fig. 9-4. Color bar signal on alignment tape

[I/O level and Impedance]

- Video input Pin jack
Input signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
- Video output Pin jack
Output signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
- S video input (4-pin mini DIN)
Luminance signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
Color signal: 0.3 Vp-p, 75 Ω , unbalanced
- S video output (4-pin mini DIN)
Luminance signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
Color signal: 0.3 Vp-p, 75 Ω , unbalanced
- Audio input Pin jack
Input level: -7.5 dBs (0 dBs=0.775 Vrms)
- Audio output Pin jack
Rated output: -7.5 dBs (with 47 kΩ load)
Output impedance: Less than 1 kΩ

[Adjustment order]

Perform adjustment in the following order.



9-2. POWER SUPPLY BLOCK ADJUSTMENT

9-2-1. Voltage Check (PS-196 Boards)

Mode	E-E
Measuring Instrument	Digital multimeter
UNSW 5.6 V Check	
Measurement Point	Pin ⑥ of CN001
Specified Value	5.6 ± 0.2 V
UNSW - 5 V Check	
Measurement Point	Pin ⑨ of CN001
Specified Value	-5 ± 0.2 V
UNSW 9 V Check	
Measurement Point	Pin ④ of CN001
Specified Value	9 ± 0.5 V
UNSW 40 V Check	
Measurement Point	Pin ① of CN001
Specified Value	40 ± 2 V
UNSW - 30 V Check	
Measurement Point	Pin ④ of CN002
Specified Value	-30 ± 3 V
UNSW 5.7 V Check	
Measurement Point	Pin ② of CN002
Specified Value	5.7 ± 0.6 V
SW 5 V Check	
Measurement Point	Pin ⑧ of CN001
Specified Value	5 ± 0.2 V
SW - 5 V Check	
Measurement Point	Pin ⑩ of CN001
Specified Value	-5 ± 0.3 V
SW 9 V Check	
Measurement Point	Pin ③ of CN001
Specified Value	9 ± 0.2 V
SW 12 V Check	
Measurement Point	Pin ② of CN001
Specified Value	12 ± 0.5 V

Checking method:

- 1) Confirm that each voltage is at the specified level.

PS-196 BOARD (COMPONENT SIDE)

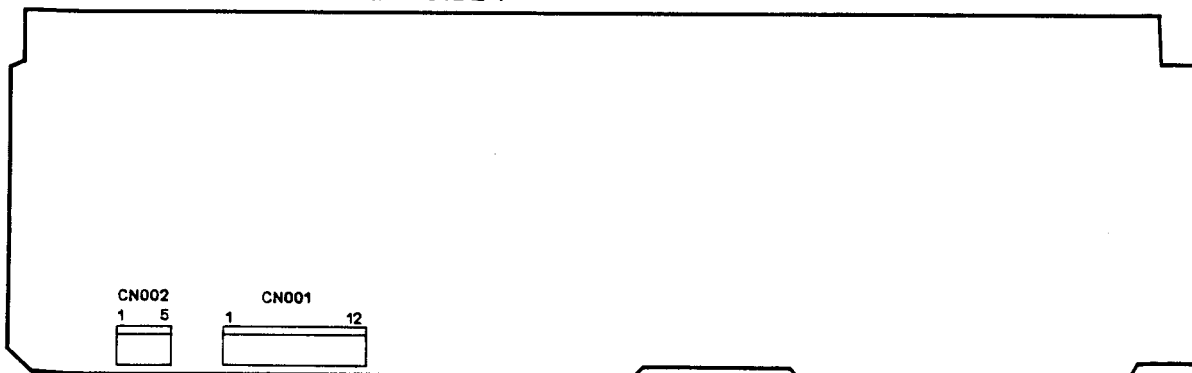


Fig. 9-5.

9-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

9-3-1. Timer Clock Adjustment (FL-24 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ⑧ of IC005
Measuring Instrument	Interval counter
Adjustment Element	CT001
Specified Value	0.125 ± 0.0000005 sec

[Adjustment Method]

- 1) Pass a 9-state binary counter through pin ⑧ of IC005, to divide the 4096Hz frequency nine times and transform to 8Hz. Measure the cycle.
- 2) Adjust CT001 so that an 8Hz cycle equals 0.125 ± 0.0000005 seconds.

Note : Do not adjust CT001 except when replacing microcomputers.

9 Stage Binary Counter Reference

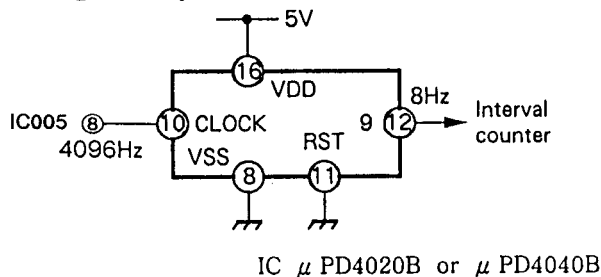


Fig. 9-6.

9-4. SERVO SYSTEM ADJUSTMENT

9-4-1. PWM Oscillation Frequency (CM-15 Board)

Mode	REC
Signal	Arbitrary
Measurement Point	Pin ⑦ of IC502
Measuring Instrument	Frequency counter
Adjustment Element	RV501
Specified Value	476.56 ± 5 kHz

Adjustment Method:

- 1) Adjust to 476.56 ± 5 kHz with RV501.

9-4-2. Switching position Adjustment (CM-15 Board)

Mode	Playback
Signal	Alignment tape: tracking adjustment (WR5-ICP)
Measurement Point	CH1: Pin ③ (RF CH2) of CN005 on RP-74 board CH2: Pin ② (RF SW PLS) of CN005 on RP-74 board
Measuring Instrument	Oscilloscope
Adjustment Element	RV401
Specified Value	$0 \pm 5 \mu s$

Connection:

- 1) TEST 1 mode (Pin ③ and Pin ④ with a jumper wire of CN503 on IN-24 board).

Adjustment method:

- 1) Adjust with RV401 so that the marker of the RF CH 2 waveform is lined up with the falling edge of the RF SWP waveform.

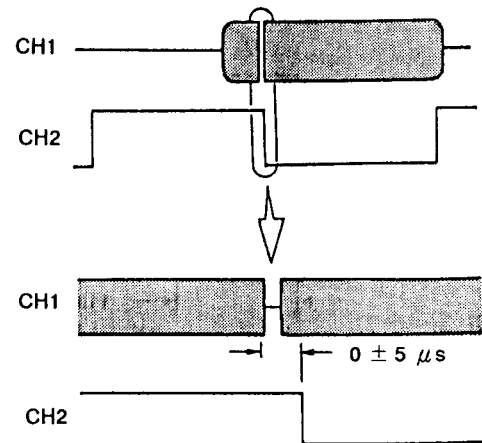


Fig. 9-7. Switching position adjustment

9-5. VIDEO ADJUSTMENT

As a rule, adjustment of the video system is made in the following order.

The color video signal supplied from the pattern generator is used as the video input signal for adjustment of the video system in the recording mode. Confirm that the sync signal and color burst signal satisfy the specifications designated in the adjustment setup shown in Fig. 8-3.

[Adjustment Method]

- 1) Playback Frequency Characteristics Adjustment
- 2) Flying Erase Check
- 3) FSC fo Adjustment
- 4) ORC SP (LP) Adjustment
- 5) Y/C Separation Comb-type Filter Adjustment
- 6) Y Comb-type Filter Adjustment
- 7) SYNC AGC Adjustment
- 8) PB Emphasis out Level Adjustment
- 9) Deemphasis Adjustment
- 10) STD Mode PB Y Level Adjustment
- 11) Hi8 Mode PB Y Level Adjustment
- 12) STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
- 13) Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
- 14) 378 fH VCO Adjustment
- 15) Chroma Emphasis fo Adjustment
- 16) Carrier Balance Adjustment
- 17) fo VCO Adjustment
- 18) GCA Gain Adjustment
- 19) REC Y Level Adjustment
- 20) REC C Level Adjustment
- 21) D. O. C. Level Adjustment

9-5-1. Playback Frequency Characteristics Adjustment (RP-74 Board)

1. SP Playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [].

Mode	Playback
Signal	Alignment tape: Frequency characteristics adjustment (WR5-7CE)
Measurement Point	Pin ④ of CN005 [Pin ③ of CN005] External trigger: Pin ② (RF SWP) of CN005 Trigger slope: - [+]
Measuring Instrument	Oscilloscope
Adjustment Element	RV202 [RV201]
Specified Value	8.5 MHz level is 66% of 4.5 MHz level

Connection:

- 1) TEST 2 mode (Pin ② and Pin ③ with a jumper wire of CN503 on IN-24 board).

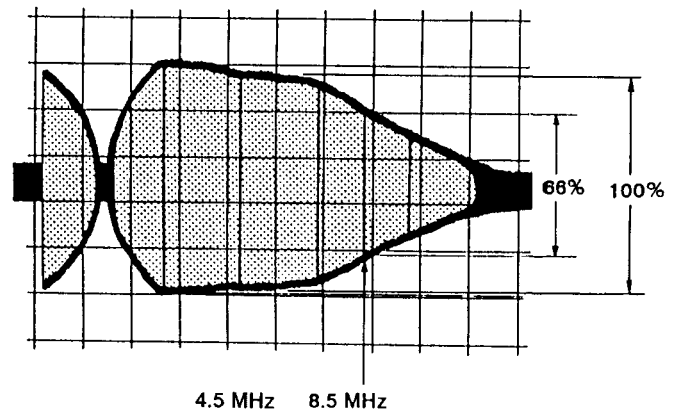


Fig. 9-8.

2. LP playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [].

Mode	Playback
Signal	Alignment tape: Frequency characteristics adjustment (WR5-7CE)
Measurement Point	Pin ⑥ of CN005 [Pin ⑤ of CN005] External trigger: Pin ② (RF SWP) of CN005 Trigger slope: - [+]
Measuring Instrument	Oscilloscope
Adjustment Element	RV102 [RV101]
Specified Value	8.5 MHz level is 66% of 4.5 MHz level

Connection:

- 1) TEST 2 mode.

9-5-2. Flying Erase Check (RP-74 Board)

Mode	REC
Signal	Arbitrary
Measurement Point	Pin ② of CN001
Frequency Check	
Measuring Instrument	Frequency counter
Measuring	7.6 ± 0.5 MHz
Output Level Check	
Instrument	Oscilloscope
Specified Value	Approx. 8 Vp-p

- Notes:**
- 1) Use MP-type tape.
 - 2) Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least $1\text{ M}\Omega$) and low capacitance (less than 10 pF).

Adjustment method:

- 1) Confirm the frequency and output level are 7.6 ± 0.5 MHz and approximately 8.0 Vp-p respectively.



(7.6 ± 0.5 MHz)

Fig. 9-9.

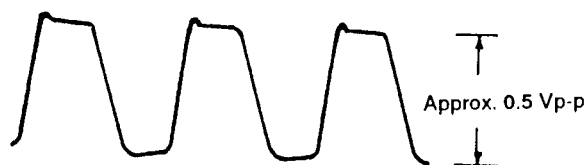
9-5-3. FSC fo Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: operation checking (WR5-4CSP or WR5-5CSP)
Measurement Point	Pin ⑩ of IC801
Measuring Instrument	Frequency counter
Adjustment Element	CV800
Specified Value	4433619 ± 50 Hz

Note: Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least $1\text{ M}\Omega$) and low capacitance (less than 10 pF).

Adjustment method:

- 1) Adjust to 4433619 ± 50 Hz using CV800.



(4433619 ± 50 Hz)

Fig. 9-10.

9-5-4. (a) ORC SP Mode adjustment (VI-65 Board)

The adjusting element for CH2 mode is shown within [].

Mode	REC Pause (MP type Tape)
Signal	WHITE Signal 50%
Measurement Point	Pin ④ of CN005 [Pin ③ of CN005] on RP-74 Board
Measuring Instrument	Oscilloscope
Adjustment Element	RV304 [RV303]
Specified Value	Maximize Envelope

Connection:

- 1) TEST 2 mode.

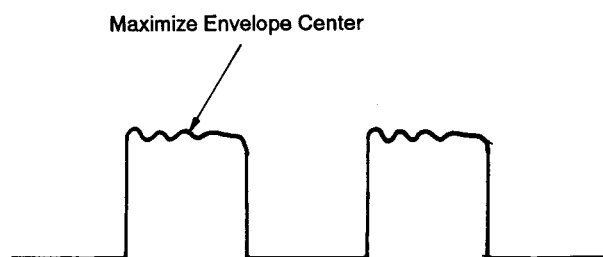


Fig. 9-11.

9-5-4. (b) ORC LP Mode adjustment (VI-65 Board)

The adjusting element for CH2 mode is shown within [].

Mode	REC Pause (MP type Tape)
Signal	WHITE Signal 50%
Measurement Point	Pin ⑥ of CN005 [Pin ⑤ of CN005] on RP-74 Board
Measuring Instrument	Oscilloscope
Adjustment Element	RV305 [RV302]
Specified Value	Maximize Envelope

Connection:

- 1) TEST 2 mode.

9-5-5. Y/C Separation Comb-type Filter Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars (Pin ③ of IC400) 1 Vp-p
Measurement Point	Pin ② of IC400
Measuring Instrument	Oscilloscope
Adjustment Element	LV400 and RV400
Specified Value	Minimum chroma component (less than 50 m Vp-p)

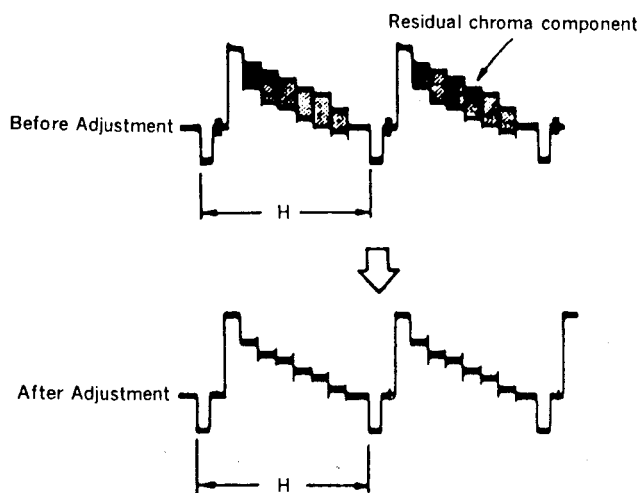


Fig. 9-12.

9-5-6. Y Comb-type Filter Adjustment (VI-65 Board)

Mode	E-E (LP mode)
Signal	Color bars
Measurement Point	Pin ② of IC400
Measuring Instrument	Oscilloscope (1: 1 probe used)
Adjustment Element	RV401
Specified Value	Set amplitude to minimum

Note: Be sure to perform adjustment in LP mode.

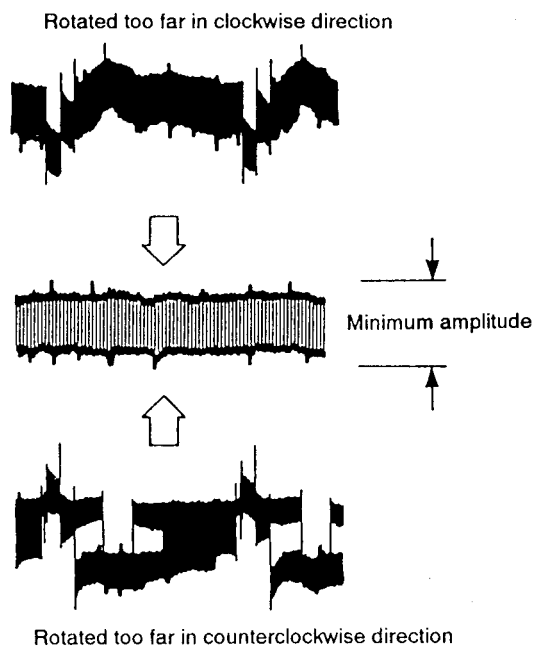


Fig. 9-13.

9-5-7. SYNC AGC Adjustment (VI-65 Board)

Mode	E-E
Signal	Color bars
Measurement Point	C205 ⊕
Measuring Instrument	Oscilloscope
Adjustment Element	RV105
Specified Value	0.50 ± 0.025 Vp-p

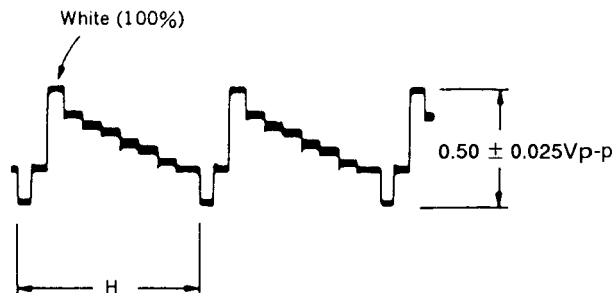


Fig. 9-14.

9-5-8. PB Emphasis out Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-5CSP or WR5-4CSP) Color bar section
Measurement Point	Q123 ⑩
Measuring Instrument	Oscilloscope
Adjustment Element	RV102
Specified Value	$0.50 \pm 0.02 V_{p-p}$

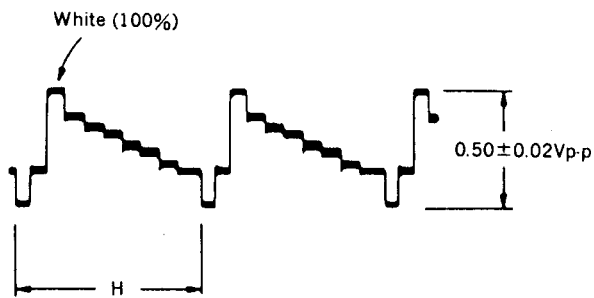


Fig. 9-15.

9-5-10. STD Mode PB Y Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-4NSP or WR5-4NSP) Color bar section
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV104
Specified Value	$1.00 \pm 0.05 V_{p-p}$

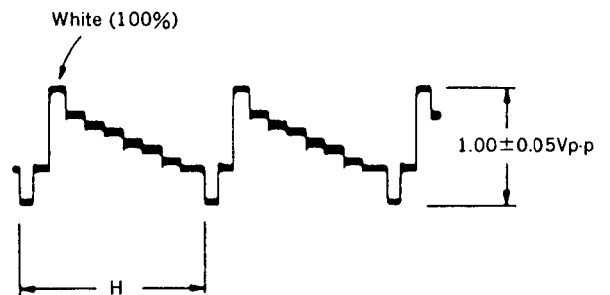


Fig. 9-17.

9-5-9. Deemphasis Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-4CSP or WR5-4CSP) Color bar section
Measurement Point	Q123 ⑩
Measuring Instrument	Oscilloscope
Adjustment Element	RV103
Specified Value	100% white level is flat

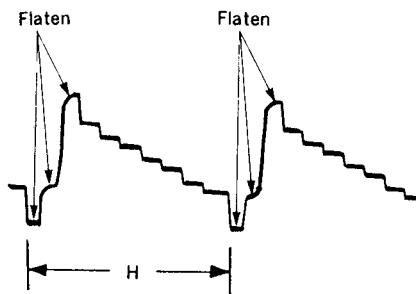


Fig. 9-16.

9-5-11. Hi8 Mode PB Y Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-8NSE) Color bar section
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV101
Specified Value	1.00 ± 0.05 Vp-p

- Note:** 1) Set the picture quality adjustment knob to the center click position.
2) Be sure to perform "9-5-10. STD Mode PB Y Level Adjustment" before this adjustment.

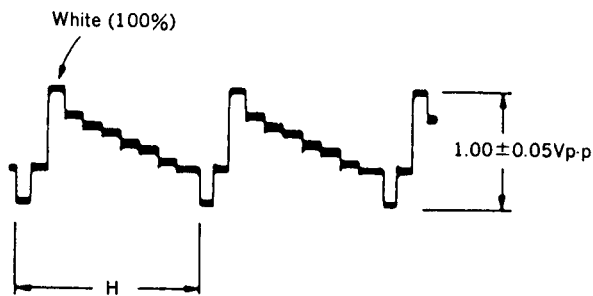


Fig. 9-18.

9-5-12. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

Note: After adjustment, perform "9-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".

1. STD mode Y FM carrier frequency adjustment (VI-65 board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ④ (REC RF) of CN003
Measuring Instrument	Frequency counter
Adjustment Element	RV203
Specified Value	4.38 ± 0.03 MHz

Adjustment method:

- 1) Insert an MP-type cassette tape.
- 2) Adjust to 4.38 ± 0.03 MHz using RV203.
- 3) Perform "2. STD Mode Y FM Deviation Adjustment".



4.38 ± 0.03 MHz

Fig. 9-19.

2. STD mode Y FM deviation adjustment (VI-57 board)

Mode	REC and playback
Signal	Color bars
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV205
Specified Value	Playback level is 1.00 ± 0.05 Vp-p

Note: Perform this adjustment after confirming that "9-5-10. STD Mode PB Y Level Adjustment", and "9-5-12. 1. STD Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:

- 1) Insert an MP type cassette tape.
- 2) Record the color bar signal.
- 3) Playback the recorded signal.
- 4) Check the playback output level.
Specified value: 1.00 ± 0.05 Vp-p
- 5) If the specified value is not satisfied, rotate RV205 as described below and repeat steps 1) through 3).

	Rotational direction for RV205
Smaller than specified value	Counterclockwise direction (⤿)
Larger than specified value	Clockwise direction (⤻)

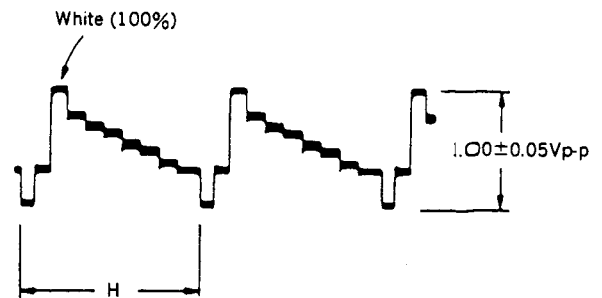


Fig. 9-20.

9-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

- Notes:** 1) Perform this adjustment after “9-5-11. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment”.
- 2) Before adjustment, confirm that the Hi8 switch (S003 on FL-24 board) is set to the AUTO position, and that the connector is attached to the S video terminal (CNJ505 on RJ-5 board) of the line input (even when there is no signal).

1. Hi8 mode Y FM carrier frequency adjustment (VI-65 board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ④ of CN003
Measuring Instrument	Frequency counter
Adjustment Element	RV204
Specified Value	5.98 ± 0.03 MHz

Adjustment method:

- 1) Insert an ME-type cassette tape.
- 2) Adjust to 5.98 ± 0.03 MHz using RV204.
- 3) Perform “2. Hi8 Mode Y FM Deviation Adjustment”.



5.98 ± 0.03 MHz

Fig. 9-21.

2. Hi8 mode Y FM deviation adjustment (VI-65 board)

Mode	REC and playback
Signal	Color bars
Measurement Point	Pin ⑩ of CN002
Measuring Instrument	Oscilloscope
Adjustment Element	RV202
Specified Value	Playback level is 1.00 ± 0.05 Vp-p

Note: Perform this adjustment after confirming that “9-5-11. PB Y Level Adjustment”, and “9-5-13. 1. Hi8 Mode Y FM Carrier Frequency Adjustment” have been completed.

Adjustment method:

- 1) Insert an ME-type cassette tape.
- 2) Record the color bar signal.
- 3) Playback the recorded signal.
- 4) Check the playback output level.
Specified value: 1.00 ± 0.05 Vp-p
- 5) If the specified value is not satisfied, rotate RV202 as described below and repeat steps 1) through 3).

	Rotational direction for RV202
Larger than specified value	Counterclockwise direction (○)
Smaller than specified value	Clockwise direction (○)

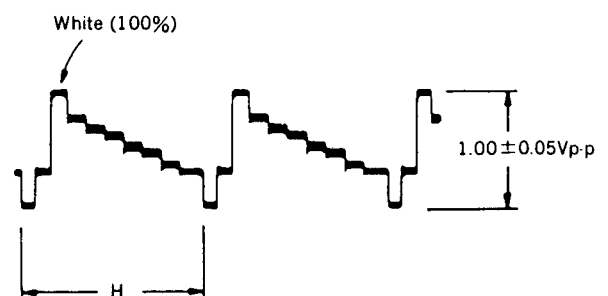


Fig. 9-22.

9-5-14. 378fH VCO Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars
Measurement Point	Pin ② of IC801
Measuring Instrument	Digital voltmeter
Adjustment Element	RV801
Specified Value	3.00 ± 0.05 Vdc

Adjustment method:

- 1) Adjust to 3.00 ± 0.05 Vdc using RV801

9-5-15. Chroma Emphasis f₀ Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars
Measurement Point	Pin ④ of IC801
Measuring Instrument	Oscilloscope
Adjustment Element	FL801
Specified Value	Minimum chroma component

Preparations:

- 1) Connect the following two locations using 10 kΩ resistors.
 - Pin ⑦ of IC801 – Pin ④ of IC 801 (GND)
 - Pin ⑦ of IC801 – Pin ② of IC 801 (SW 5 V)

Adjustment method:

- 1) Adjust FL802 for minimum chroma component.
- 2) Remove the 10 kΩ resistors after adjustment.

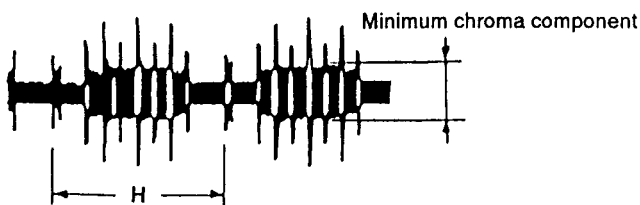


Fig. 9-23.

9-5-16. Carrier Balance Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars
Measurement Point	Pin ③ of IC801
Measuring Instrument	Oscilloscope
Adjustment Element	RV800
Specified Value	Minimum 5.17 MHz component

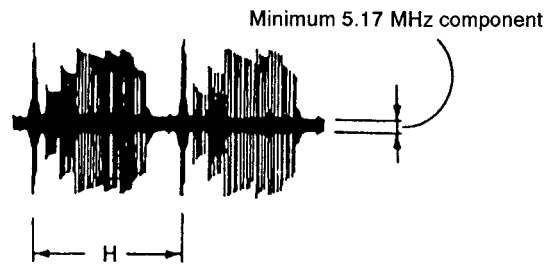


Fig. 9-24.

9-5-17. f₀ VCO Adjustment (VI-65 Board)

Mode	E-E
Signal	Colour bars (VIDEO)
Measurement Point	Pin ⑮ of IC700
Measuring Instrument	Frequency counter
Adjustment Element	RV701
Specified Value	15,625 ± 50 Hz

Connection:

- 1) Connect the IC700 pins ⑮ and ⑥ (GND) with a jumper wire.

Adjustment method:

- 1) Adjust to 15,625 ± 50 Hz with RV701.



Fig. 9-25.

9-5-18. GCA Gain Adjustment (VI-65 Board)

Mode	Playback and STILL, CUE, REVIEW
Signal	Alignment tape for operation checking (WR5-5CSP or WR5-3CSP) Color bar portion
Measurement point	IC700 pin ⑤
Measuring instrument	Oscilloscope
Adjustment element	RV700
Specified value	$b = (a - 20) \pm 15mV_{p-p}$

[Adjustment Method]

- 1) Playback, and measure the burst level. (this level is ㉑)
- 2) Set to the STILL, CUE and REVIEW mode, and measure the burst level once more. (this level is ㉒)
- 3) With RV701 adjust the burst level of the STILL, CUE and REVIEW mode to ㉒ = (㉑ - 20) ± 15mV_{p-p}.

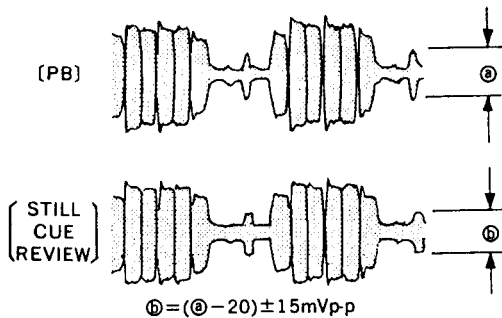


Fig. 9-26.

9-5-19. REC Y Level Adjustment (VI-65 Board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ④ of CN003
Measuring Instrument	Oscilloscope
Adjustment Element	RV300
Specified Value	$0.60 \pm 0.02 V_{p-p}$

Note: 1) Use MP-type tape.

Adjustment method:

- 1) Adjust to $0.60 \pm 0.02 V_{p-p}$ using RV300.

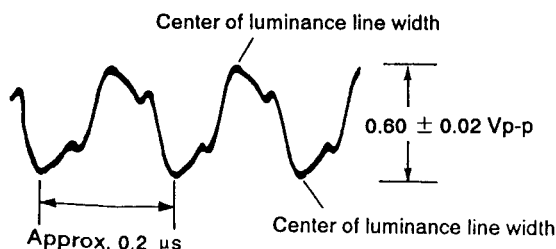


Fig. 9-27.

9-5-20. REC C Level Adjustment (VI-65 Board)

Mode	E-E (Tape: MP) Hi8 mode
Signal	Colour bars
Measurement Point	Collector of Q328
Measuring Instrument	Oscilloscope
Adjustment Element	RV301
Specified Value	$0.20 \pm 0.01 V_{p-p}$

Note: 1) Use MP-type tape.

Preparations:

- 1) Use jumper wires to make the following three connections.
 - Pin ⑥ of CN001(REC AFM) - GND
 - Pin ⑧ of CN001(REC ATF) - GND

Adjustment method:

- 1) Adjust to $0.20 \pm 0.01 V_{p-p}$ using RV301.

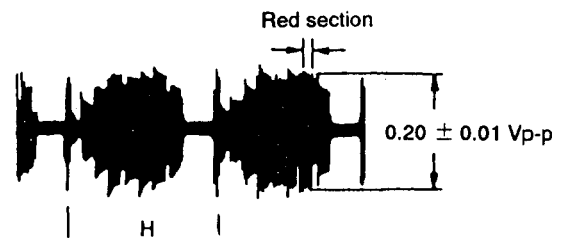


Fig. 9-28.

9-5-21. D. O. C. Level Adjustment (VI-65 Board)

Mode	Playback
Signal	Self-recording and playback of Hi8 in MPHG tape, and colour bars in LP mode.
Measurement Point	Pin ③ of Q608
Measuring Instrument	Digital voltmeter
Adjustment Element	RV601
Specified Value	$1.76 \pm 0.01 V$

9-6. SECAM-PAL CONVERSION SYSTEM ADJUSTMENT (AEP model only)

- Make this adjustment aligning the PAL video system.
- For this adjustment, use the equipment listed below.

[Equipment Required]

- (1) PAL Colour Monitor TV
- (2) Oscilloscope, Dual-trace, Bandwidth... more than 10MHz with delay mode
- (3) SECAM colour-bar generator
- (4) PAL vector scope
- (5) Frequency counter
- (6) Digital voltmeter

Setting up during adjustment

Video signals output by a pattern generator are used as adjustment signals when making the electrical adjustments, and these video output signals should be within the required standard. Connect an oscilloscope to CNJ501 (VIDEO IN) on the RJ-5 Board. Check that the amplitudes of video signal SYNC signals, picture portions, and line ID signals are flat at approximately 0.3, 0.7, and 0.3V, respectively. Fig. 9-29. shows video signals (colour bars) used in making the electrical adjustment.

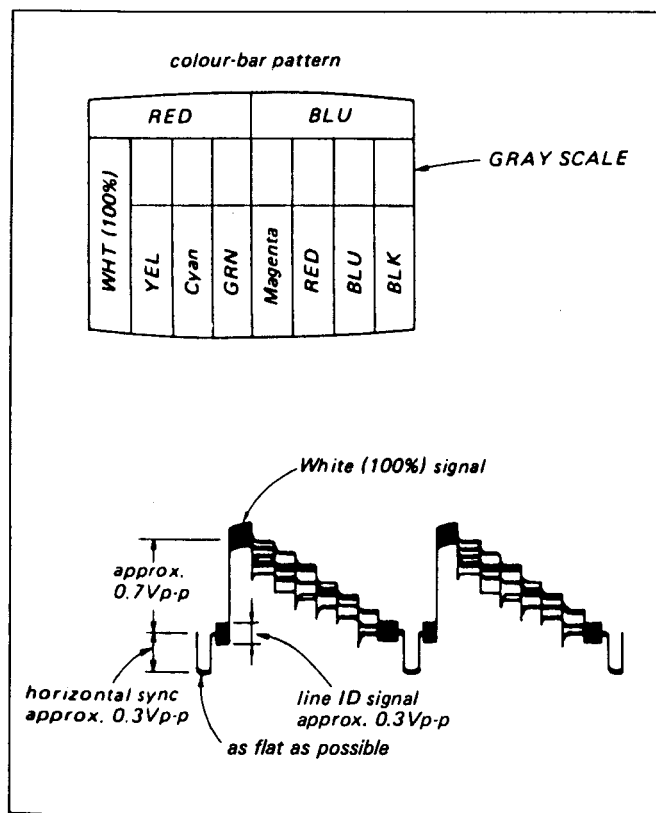


Fig. 9-29.

9-6-1. f_H VCO Adjustment (YC-64 Board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ⑨ of IC201
Measuring Instrument	Frequency counter
Adjustment Element	RV201
Specified Value	15,625 ± 0.01 kHz

[Connection]

Connect between pin ⑱ of IC201 and pin ⑲ of IC201 with a jumper wire.

[Adjustment method]

- 1) Adjust with RV201 so that it becomes 15.625 ± 0.01 kHz.

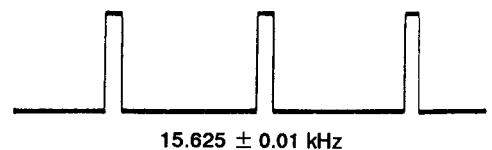


Fig. 9-30.

9-6-2. I REF Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ⑨ of IC201 Pin ① of CN001
Measuring Instrument	Oscilloscope
Adjustment Element	RV202
Specified Value	tr = 4.5 ± 0.1 μs

[Adjustment method]

- 1) IC201 (⑱-⑲ OPEN)

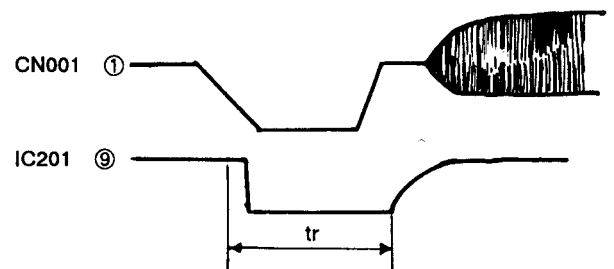


Fig. 9-31.

9-6-3. Bell Filter Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ⑳ of IC201
Measuring Instrument	Oscilloscope
Adjustment Element	LV201
Specified Value	The level variation of the chroma signal amplitude is $0 \pm 10\%$

Note: When performing (Adjustment method 1) be sure to use 1:1 probe as the signal level of IC201 pin ⑳ is extremely small. In addition, when the adjustment is impossible because of the signal level is too small to read, perform (Adjustment method 2).

[Adjustment method 1]

- 1) Adjust LV201 until the waveform is flat.

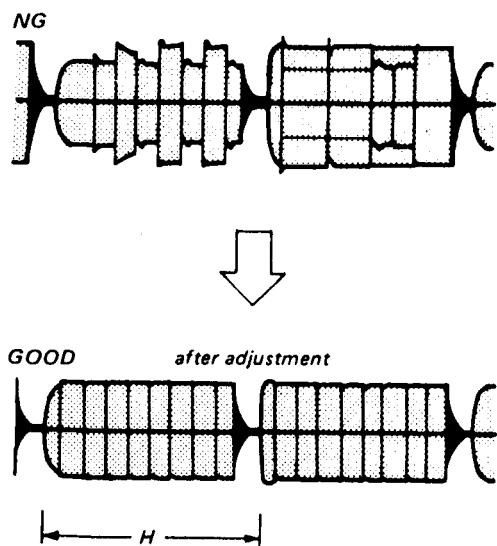


Fig. 9-32.

[Adjustment method 2]

- 1) Set the picture level of the monitor TV to maximum.
- 2) Adjust by turning LV201 so that the borders of the respective colour-bars (especially red and blue) become vivid and stop LV201 at the position where the beat (red and magenta sections) becomes small.

9-6-4. Colour Level Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ③ of IC202
Measuring Instrument	Oscilloscope
Adjustment Element	RV203
Specified Value	0.75 ± 0.05 Vp-p

Note: IC201 (⑲-⑳) SHORT

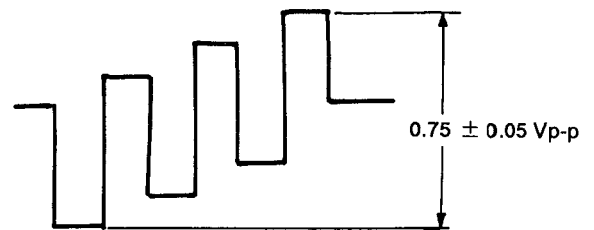


Fig. 9-33.

9-6-5. R-Y fo Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ② of IC202
Measuring Instrument	Oscilloscope
Adjustment Element	LV202
Specified Value	Less than 0.05 V

[Adjustment method]

- 1) IC201 (⑲-⑳) SHORT

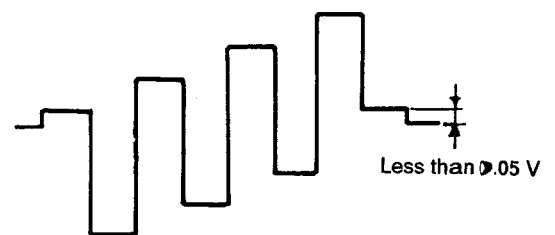


Fig. 9-34.

9-6-6. B-Y fo Adjustment (YC-64 Board)

Mode	E-E
Signal	SECAM colour-bar
Measurement Point	Pin ③ of IC202
Measuring Instrument	Oscilloscope
Adjustment Element	LV203
Specified Value	Less than 0.05 V

[Adjustment method]

- 1) IC201 (⑱ - ⑳) SHORT

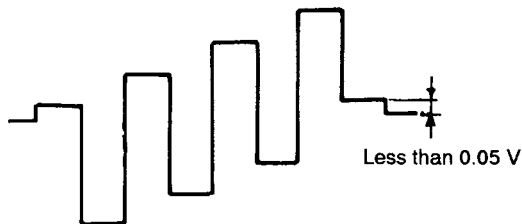


Fig. 9-35.

9-7. DIGITAL ADJUSTMENTS

[Adjustment Sequence]

- 9-7-1. Decoder-oscillated Free Run Frequency Adjustment
- 9-7-2. Encoder-oscillated Free Run Frequency Adjustment
- 9-7-3. TINT Adjustment
- 9-7-4. V OUT SUB Color Level Adjustment
- 9-7-5. V OUT SUB C Hue Adjustment
- 9-7-6. Write Clock Adjustment
- 9-7-7. S OUT SUB C Hue Adjustment
- 9-7-8. SUB Y Level Adjustment
- 9-7-9. Color Level Adjustment
- 9-7-10. CG OSC Adjustment

9-7-1. Decoder-oscillated Free Run Frequency Adjustment (DS-35 Board)

Mode	E-E
Signal	Monoscope
Measurement Point	IC209 pin ⑩
Measuring Instrument	Frequency counter
Adjustment Element	CV202
Specified Value	4,433,619 ± 25Hz

[Connection]

- 1) Connect IC209(R121 side) and GND with a jumper wire.

Note : Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) of high input impedance (10M Ω or more) and low capacity (10pF or less).

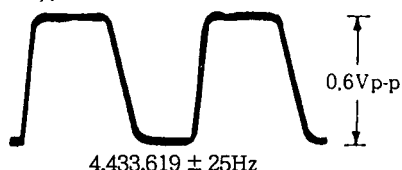


Fig. 9-36.

9-7-2. Encoder-oscillated Free Run Frequency Adjustment (DS-35 Board)

Mode	E-E
Signal	Alignment tape SP monoscope
Measurement Point	IC213 pin ⑩
Measuring Instrument	Frequency counter
Adjustment Element	CV203
Specified Value	17,734,473 ± 100Hz

[Connection]

- 1) Connect IC213 pin ⑩ and VCC with a jumper wire.

Note : Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) of high input impedance (10M Ω or more) and low capacity (10pF or less).

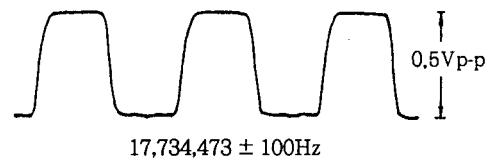


Fig. 9-37.

9-7-3. (a) TINT Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	Q501 ⑥
Measurement equipment	Oscilloscope
Adjustment element	RV202
Specified value	A = B

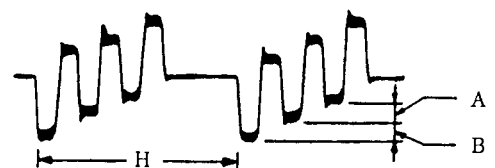


Fig. 9-38.

9-7-3. (b) TINT Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	RJ-6 board (EURO-AV)
Measurement equipment	Vectorscope
Adjustment element	RV202
Specified value	Adjust the vector phase of the small image so that the double waveforms become one clear waveform.

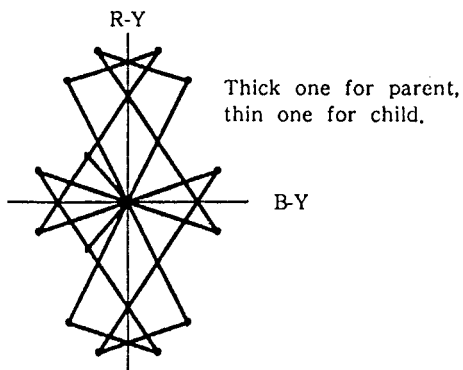


Fig. 9-39.

9-7-4. (a) V OUT SUB Colour Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	100% Chroma
Measurement Point	Pin ⑥ of CN202
Measuring Instrument	Oscilloscope
Adjustment Element	RV201
Specified Value	$700 \pm 50\text{mV}_{p-p}$

[Adjustment Method]

- 1) Adjust to $700 \pm 50\text{mV}_{p-p}$ Using RV201 (Child screens)

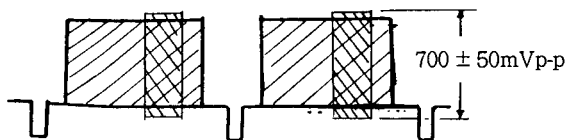


Fig. 9-40.

9-7-4. (b) V OUT SUB Colour Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	RJ-6 board (EURO-AV OUT)
Measurement equipment	Vectorscope
Adjustment element	RV201
Specified value	The phases of the parent and child screens should be the same.

[Adjustment Method]

- 1) With RV201 match the phases of the parent and child screens.

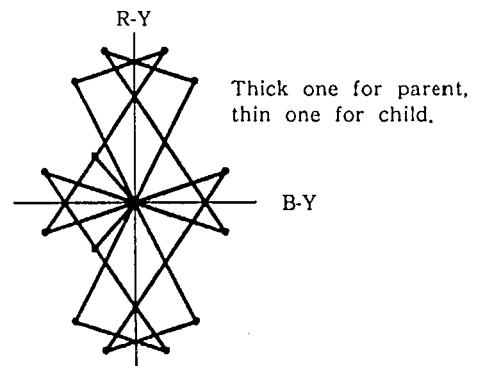


Fig. 9-41.

9-7-5. V OUT SUB C Hue Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement point	RJ-6 board (EURO-AV OUT)
Measurement equipment	Vectorscope
Adjustment element	RV206
Specified value	Hue of parent screen = that of child screen

[Adjustment Method]

- 1) With RV206 match the phases of the parent and child screens.

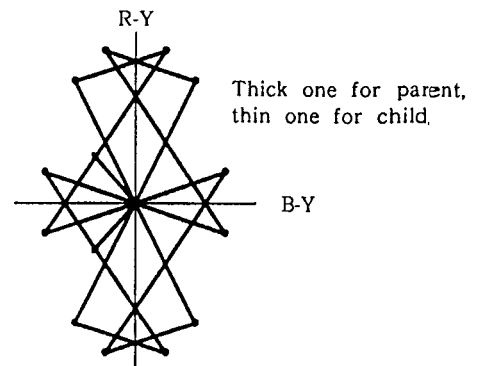


Fig. 9-42.

9-7-6. Write Clock Adjustment (DS-35 Board)

Mode	E-E
Signal	Colour bar
Measurement Point	IC505 pin ①
Measuring Instrument	Frequency counter
Adjustment Element	CV501
Specified Value	$5.00 \pm 0.01\text{MHz}$

[Connection]

- 1) Connect the IC505 pin ① and GND with a jumper wire.

Note : Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) of high input impedance ($10\text{M}\Omega$ or more) and low capacity (10pF or less).

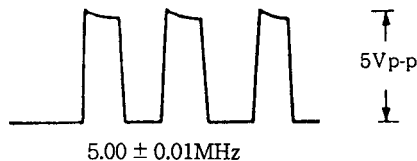


Fig. 9-43.

9-7-7. S OUT SUB C Hue Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar
Measurement Point	S VIDEO OUT
Measuring Instrument	Vectorscope
Adjustment Element	RV204
Specified Value	Hue of parent screen = that of child screen

[Adjustment Method]

- 1) With RV204 match the phases of the parent and child screens.

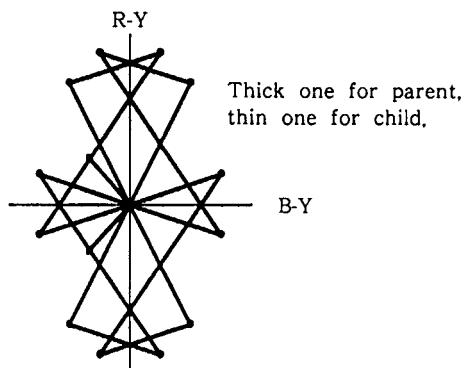


Fig. 9-44.

9-7-8. SUB Y Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar (PAL)
Measurement Point	Pin ⑥ of CN202
Measuring Instrument	Oscilloscope
Adjustment Element	RV203
Specified Value	Less than 0.05V

- 1) Pin ⑩ of IC213 OPEN.



Fig. 9-45.

9-7-9. Color Level Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar (PAL)
Measurement Point	Pin ⑧ of CN202
Measuring Instrument	Oscilloscope
Adjustment Element	RV205
Specified Value	Less than 0.05V

- 1) Pin ⑩ of IC213 OPEN.



Fig. 9-46.

9-7-10. CG OSC Adjustment (DS-35 Board)

Mode	E-E (P in P)
Signal	Colour bar (PAL)
Measurement Point	Pin ⑤ of CN204
Measuring Instrument	Oscilloscope
Adjustment Element	CV201
Specified Value	$6.86 \pm 0.01\text{MHz}$

- 1) Pin ⑩ of IC204 - Pin ⑩ of IC204 short.

9-8. AUDIO SYSTEM ADJUSTMENT

- Perform adjustment using the color bar signal as the video signal input.

[Connection of measuring instruments for audio]

In addition to the measuring instruments for the video system, the measuring instruments shown in the figure below are used for the audio system.

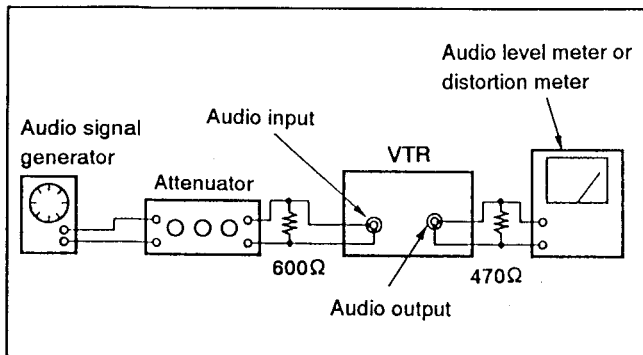


Fig. 9-47.

[Adjustment procedure]

- 1) PCM Master Clock Oscillation Frequency Adjustment
- 2) REC PCM Level Check
- 3) PCM Playback VCO Free Oscillation Frequency Adjustment
- 4) PCM Playback Level Adjustment
- 5) E-E Output Level Check
- 6) PCM Offset Adjustment
- 7) PCM Recording Level Adjustment
- 8) Overall Frequency Characteristics Check
- 9) Overall Distortion Check
- 10) Overall Noise Level Check

9-8-1. PCM Audio System Adjustment

Unless indicated otherwise, set the VTR switches and controls to the following positions for adjustment.

Input select switch	LINE
Audio monitor switch (PCM/mix/normal)	PCM
REC LEVEL control	5

Note: The adjusting element for the R channel is indicated in [5].

1. PCM master clock oscillation frequency adjustment (PC-39 board)

Mode	REC
Signal	No signal
Measurement Point	Pin ② of IC703
Measuring Instrument	Frequency counter
Adjustment Element	CV701
Specified Value	11.50 ± 0.05 MHz

Adjustment method:

- 1) Connect (Pin ② of IC703) and Pin ⑦ jumper wire.
 - Pin ⑦ of IC703 – GND SHRT
 - Pin ② IC703 – SW 5 V PULL UP by 560 Ω
- 2) Adjust to 11.50 ± 0.05 MHz using CV701.
- 3) Remove the jumper wire.



Fig. 9-48.

2. REC PCM level check (PC-39 board)

Mode	REC
Signal	No signal
Measurement Point	Pin ① of CN701
Measuring Instrument	Oscilloscope
Specified Value	Approx. 0.4 Vp-p

Checking method:

- 1) Confirm that the REC PCM level is approximately 0.4 Vp-p.

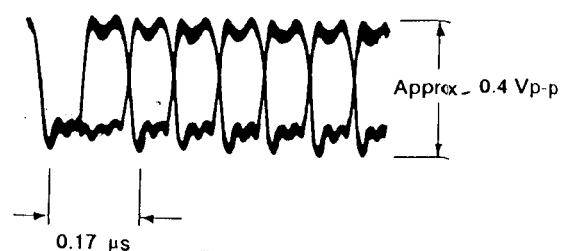


Fig. 9-49.

3. PCM playback VCO free oscillation frequency adjustment (PC-39 board)

Mode	Playback, FF index search, and REW index search
Signal	Any tape
Measurement Point	Pin ⑧ of IC708
Measuring Instrument	Frequency counter
Adjustment Element	RV707 (playback) RV709 (FF index search) RV708 (REW index search)
Specified Value	11.50 ± 0.05 MHz (playback) 10.24 ± 0.05 MHz (FF index search) 12.75 ± 0.05 MHz (REW index search)

Connections:

- 1) Connect (Pin ① of IC708) and Pin ⑭ (SW 5 V) of CN601 using a jumper wire.
- 2) Remove CN701 on the PC-39 board.

Adjustment method:

- 1) Set to the playback mode.
- 2) Adjust to 11.50 ± 0.05 MHz using RV707.
- 3) Set to the FF index search mode.
- 4) Adjust to 10.24 ± 0.05 MHz using RV709.
- 5) Set to the REW index search mode.
- 6) Adjust to 12.75 ± 0.05 MHz using RV708.



Fig. 9-50.

4. PCM playback level adjustment (PC-39 board)

Mode	Playback
Signal	Alignment tape: Operation checking (WR5-3CSP or WR4-9CSP) 400 Hz section
Measurement Point	Audio output L and R
Measuring Instrument	Audio level meter
Adjustment Element	RV705
Specified Value	-7.5 ± 0.5 dBs

Adjustment method:

- 1) Adjust to -7.5 ± 0.5 dBs using RV705.

5. E-E output level check

Mode	E-E
Signal	400 Hz, -7.5 dBs: audio input L [R]
Measurement Point	Audio output L [R]
Measuring Instrument	Audio level meter
Specified Value	-7.5 ± 3 dBs

Checking method:

- 1) Set the REC LEVEL control to the 5 position.
- 2) Confirm that -7.5 dB is indicated on the REC LEVEL meter.
- 3) Confirm that the audio output L [R] level is -7.5 ± 3 dBs

6. PCM offset adjustment (PC-39 board)

Mode	Self-recording and playback (SP mode)
Signal	400 Hz + 3 dBs
Measurement Point	Pin ⑬ [Pin ③] of IC612
Measuring Instrument	Oscilloscope
Adjustment Element	RV701 [RV702]
Specified Value	Even clipping above and below waveform

Adjustment method:

- 1) Perform self-recording and playback, then confirm that there is even clipping above and below the waveform.
- 2) If the amount of clipping is not even, rotate RV701 [RV702] as shown below, and confirm 1) again.

	Rotational direction for RV701 [RV702] as seen from parts side
When amount of upper clipping is smaller	Counterclockwise direction (⤿)
When amount of upper clipping is greater	Clockwise direction (⤻)

Note: Adjust RCH and LCH alternately as they will affect each other.

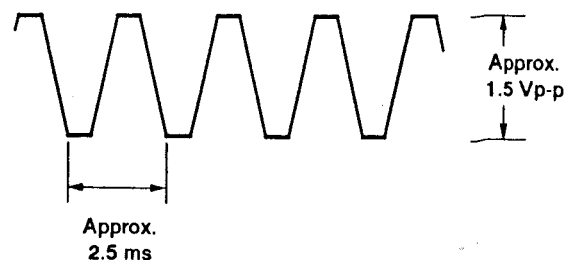


Fig. 9-51.

7. PCM recording level adjustment (PC-39 board)

Mode	Self-recording and playback
Signal	400 Hz, -7.5 dBs: audio input (L and R)
Measurement Point	Audio output
Measuring Instrument	Audio level meter
Adjustment Element	RV703
Specified Value	-7.5 ± 0.5 dBs

Note: Confirm that "PCM Playback Level Adjustment" has been completed.

Adjustment method:

- 1) Set to the E-E mode.
- 2) Adjust the REC LEVEL control so that the audio output level is -7.5 dBs. (Both left and right channels)
- 3) Record the signal.
- 4) Playback the recorded section.
- 5) Confirm that the audio output L level is -7.5 ± 0.5 dB.
- 6) If the specified value is not satisfied, adjust with RV703 and repeat steps 1) through 5).

8. Overall frequency characteristics check

Mode	Self-recording and playback
Measurement Point	Ⓐ 400 Hz, -7.5 dBs Ⓑ 20 Hz, -7.5 dBs Ⓒ 14 kHz, -7.5 dBs :Audio input L [R]
Measuring Instrument	Audio output L [R]
Adjustment Element	Audio level meter
Specified Value	Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 3 dB and the 14 kHz playback output level is 0 ⁺² / ₋₃ dB.

Checking method:

- 1) Adjust the REC LEVEL control so that the audio output L [R] level is -7.5 dBs.
- 2) Record signals Ⓐ through Ⓒ in order.
- 3) Playback the recorded section.
- 4) Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 3 dB and the 14 kHz playback output level is 0 ⁺²/₋₃ dB.

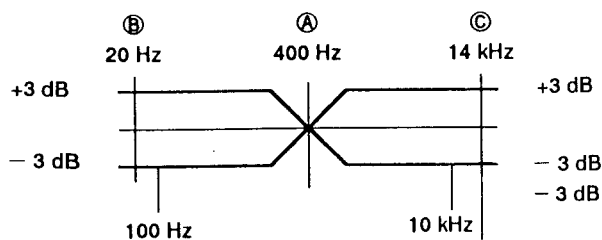


Fig. 9-52.

9. Overall distortion check

Mode	Self-recording and playback
Signal	400 Hz, -7.5 dBs: Audio input L [R]
Measurement Point	Audio output L [R]
Measuring Instrument	Distortion meter
Specified Value	Less than 0.35%

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the distortion is less than 0.35%.

10. Overall noise level check

Mode	Self-recording and playback
Signal	No signal (Shorting plug inserted into both audio input L and R terminals)
Measurement Point	Audio output L [R]
Measuring Instrument	Audio level meter
Specified Value	Less than -82.0 dBs *2

Checking method:

- 1) Record the signal.
 - 2) Playback the recorded section.
 - 3) Confirm that the noise level is less than -82.0 dBs. *2
- *2: Value when IHF-A hearing compensation filter is used.

9-8-2. AFM Audio System Adjustment

[Adjustment Procedure]

- 1) AFM carrier frequency adjustment
- 2) AFM deviation adjustment
- 3) AFM matrix (L - R) adjustment
- 4) AFM matrix (L+R) adjustment
- 5) E-E output level check
- 6) Overall level characteristics check
- 7) Overall frequency characteristics check
- 8) Overall distortion check
- 9) Overall noise level check

**1-1. AFM carrier frequency adjustment (1.5 MHz)
(PC-39 board)**

Mode	REC (SP mode)
Signal	No signal
Measurement Point	Pin ⑬ of IC901
Measuring Instrument	Frequency counter and oscilloscope
Adjustment Element	RV901
Specified Value	1500 ± 3 kHz

Connect the IC401 pin ⑮ and Vcc (+5 V) with a 10 kΩ

Adjustment method:

- 1) Adjust to 1500 ± 3 kHz using RV901.



Fig. 9-53.

**1-2. AFM carrier frequency adjustment (1.7 MHz)
(PC-39 board)**

Mode	REC (SP mode)
Signal	No signal
Measurement Point	Pin ⑬ of IC801
Measuring Instrument	Frequency counter and oscilloscope
Adjustment Element	RV801
Specified Value	1700 ± 3 kHz

Connect the IC401 pin ⑮ and Vcc (+5 V) with a 10 kΩ

Adjustment method:

- 1) Adjust to 1700 ± 3 kHz using RV801.



Fig. 9-54.

**2-1. AFM deviation adjustment (1.5 MHz)
(PC-39 board)**

Mode	Playback
Signal	Alignment tape: WR5-9CS Operation checking (AFM Bilingual Tape)
Measurement Point	Audio output L
Measuring Instrument	Audio level meter
Adjustment Element	RV902
Specified Value	- 7.5 ± 0.5 dBs

Adjustment method:

- 1) Adjust to - 7.5 ± 0.5 dBs using RV902.

**2-2. AFM deviation adjustment (1.7 MHz)
(PC-39 board)**

Mode	Playback
Signal	Alignment tape: WR5-9CS Operation checking (AFM Bilingual Tape)
Measurement Point	Audio output L
Measuring Instrument	Audio level meter
Adjustment Element	RV802
Specified Value	- 7.5 ± 0.5 dBs

Adjustment method:

- 1) Adjust to - 7.5 ± 0.5 dBs using RV802.

3-1. AFM matrix (L - R) adjustment (PC-39 board)

Mode	REC
Signal	400 Hz, - 7.5 dBs L, R Common phase signal
Measurement Point	IC801 ⑬ pin
Measuring Instrument	Audio level meter
Adjustment Element	RV953
Specified Value	Less than - 60 dBs

3-2. AFM matrix (L - R) adjustment (PC-39 board)

Mode	Playback
Signal	Playback WR5-9CS the 400 Hz, - 7.5 dBs L, R common phase signal
Measurement Point	IC905 ⑦ pin
Measuring Instrument	Audio level meter
Adjustment Element	RV952
Specified Value	Less than - 35 dBs

4-1. AFM matrix (L+R) adjustment (PC-39 board)

Mode	REC
Signal	400 Hz, - 7.5 dBs L, R Uni-phase signal
Measurement Point	IC901 ⑬ pin
Measuring Instrument	Audio level meter
Adjustment Element	RV951
Specified Value	Less than - 60 dBs

4-2. AFM matrix (L+R) adjustment (PC-39 board)

Mode	Playback
Signal	Playback WR5-9CS the 400 Hz, -7.5 dBs L, R anti-phase signal
Measurement Point	IC906 ① pin
Measuring Instrument	Audio level meter
Adjustment Element	RV954
Specified Value	Less than -35 dBs

5. E-E output level check

Mode	E-E
Signal	400 Hz, -7.5 dBs: Audio input (Both L and R channels)
Measurement Point	Audio output L [R]
Measuring Instrument	Audio level meter
Specified Value	-7.5 ± 3 dBs

Checking method:

- 1) Confirm that the audio output L [R] level is -7.5 ± 3 dBs.

6. Overall level characteristics check

Mode	Recording (SP mode)
Signal	400 Hz, -7.5 dBs: Audio input (Both L and R channels)
Measurement Point	Audio output L or R
Measuring Instrument	Audio level meter
Specified Value	7.5 ± 3 dBs

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the audio output level is -7.5 ± 3 dBs.

7. Overall frequency characteristics check

Mode	Self-recording and playback
Signal	① 400 Hz, -20 dBs ② 30 Hz, -20 dBs ③ 14 kHz, -20 dBs : Audio input (Both L and R channels)
Measurement Point	Audio output L or R
Measuring Instrument	Audio level meter
Specified Value	Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB.

Checking method:

- 1) Record signals ① through ③ in order.
- 2) Playback the recorded section.
- 3) Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB.

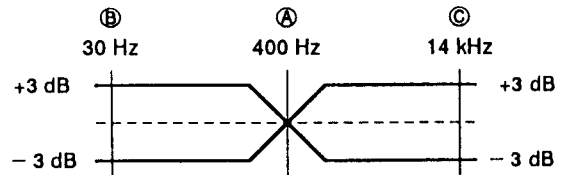


Fig. 9-55. AFM overall frequency response

8. Overall distortion check

The specified value for LP mode is shown in [].

Mode	Self-recording and playback
Signal	400 Hz, -7.5 dBs: Audio input (Both L and R channels)
Measurement Point	Audio output L or R
Measuring Instrument	Distortion meter
Specified Value	Less than 0.5% [1.0%] *1

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the distortion is less than 0.5% [1.0%].*1
*1: Value when the filter for distortion measurement is used (Fig. 8-52). Distortion should be less than 1.0% [2.0%] when the filter is not used.

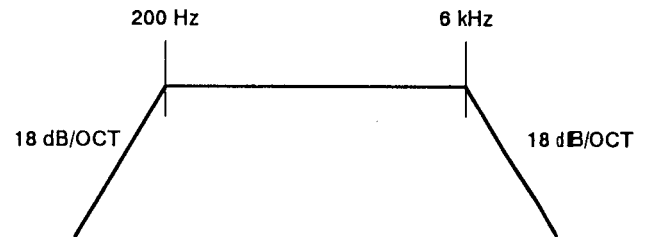


Fig. 9-56. Filter for distortion measurement

9. Overall noise level check

Mode	Self-recording and playback
Signal	No signal (Shorting plug inserted into both audio input L and R terminals)
Measurement Point	Audio output L or R
Measuring Instrument	Audio level meter
Specified Value	Less than -62 dBs *2

Checking method:

- 1) Record the signal.
 - 2) Playback the recorded section.
 - 3) Confirm that the noise level is less than -62 dBs.*2
- *2: Value when IHF-A hearing compensation filter is used.

9-9. TUNER SYSTEM ADJUSTMENT

9-9-1. RF AGC Adjustment (IF001 Unit/TU-100 Board)

Signal	Broadcast TV signal
Adjustment element	VR of IF001 unit

[Adjustment Method]

- 1) Adjust the monitor TV to a maximum contrast.
- 2) Turn the VR to make snow noise visible.
- 3) Turn the VR in an opposite direction and set it to the point where the snow noise disappears.
- 4) Receive each channel and confirm that there are no beat picture corruption snow noises due to cross modulation.

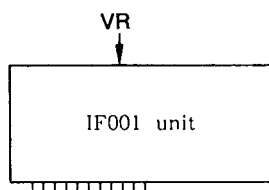


Fig. 8-28.

9-9-2. Receive Separation (MPX) Adjustment (TU-100 Board)

Signal	Stereo Lch : 400 Hz, 100% modulation (AERIAL IN of RF) Rch : No modulation
Connection point	Audio line output: L and R channels
Measurement equipment	Oscilloscope
Adjustment element	RV001

[Setting of The Switch]

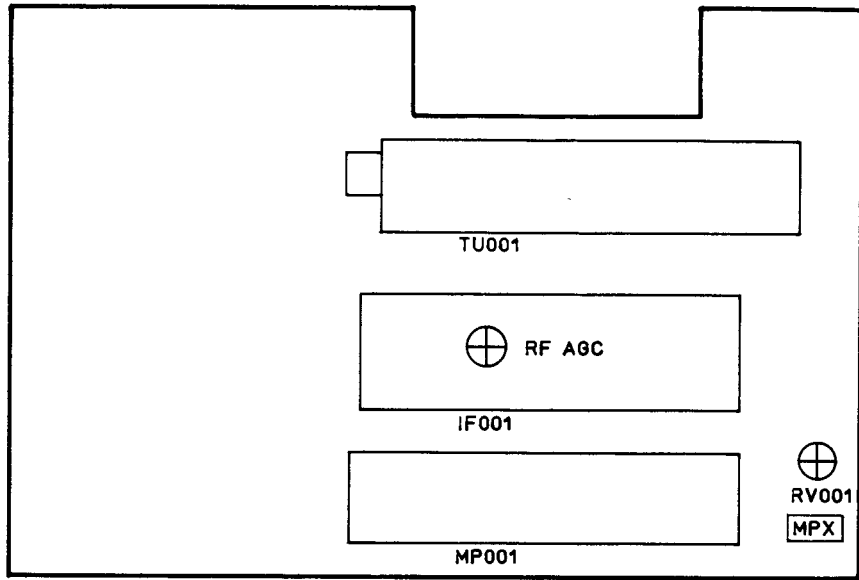
- RV101-L (FR-4 board) ... Center click
RV101-R (FR-4 board) ... Center click

[Adjustment Method]

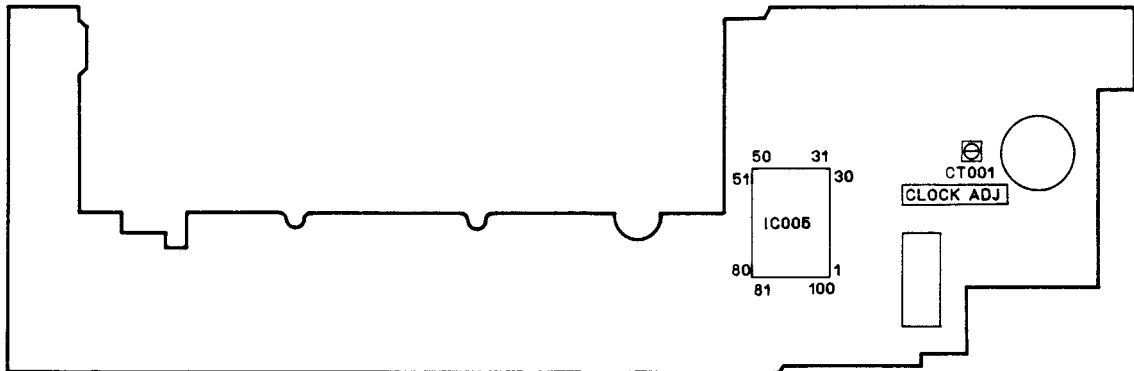
- 1) Set the sound multiplex signal generator in the Stereo mode, and set only Lch to 400Hz, 100% modulation.
- 2) Connect the oscilloscope to the Rch of Audio Line Output.
- 3) Adjust RV001 to minimize Rch output.
When this is done, do not fully turn RV001.
(The "STEREO" indicator must be illuminated).

9-10. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

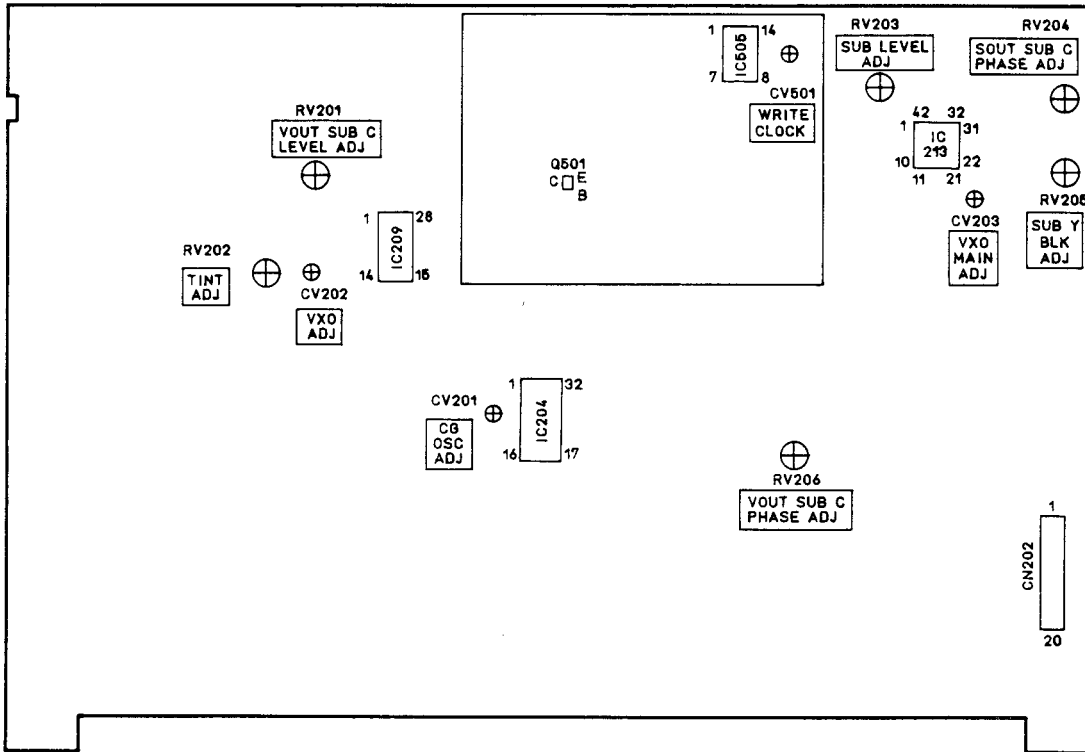
TU-100 BOARD (COMPONENT SIDE)



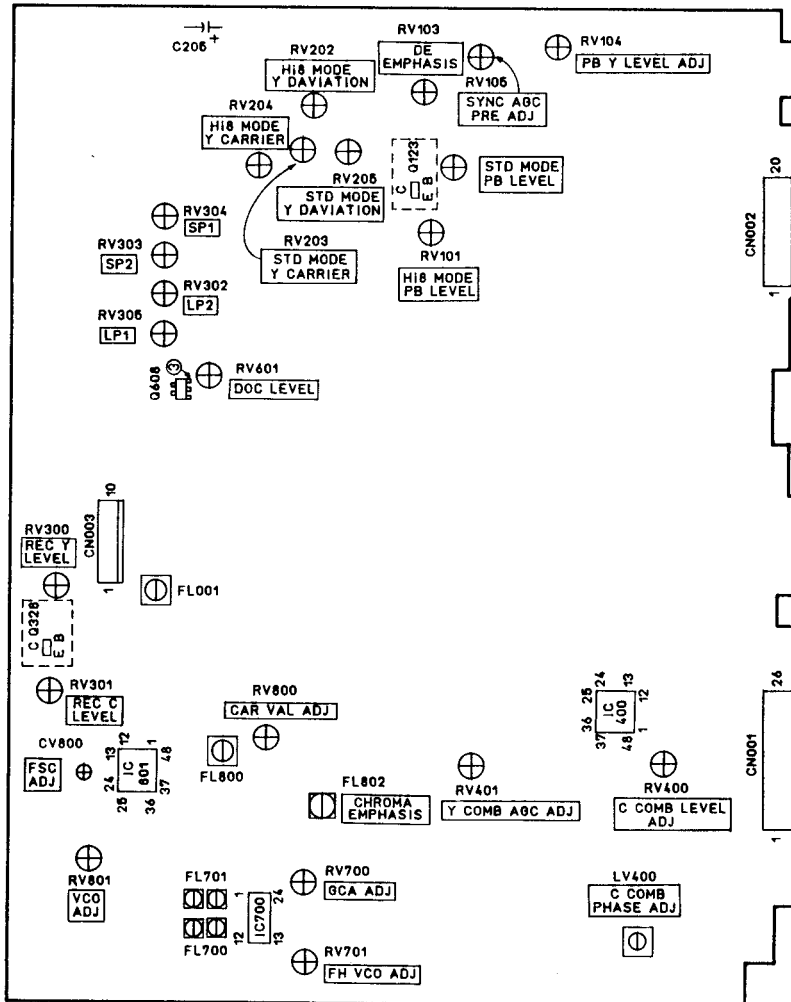
FL-24 BOARD (COMPONENT SIDE)



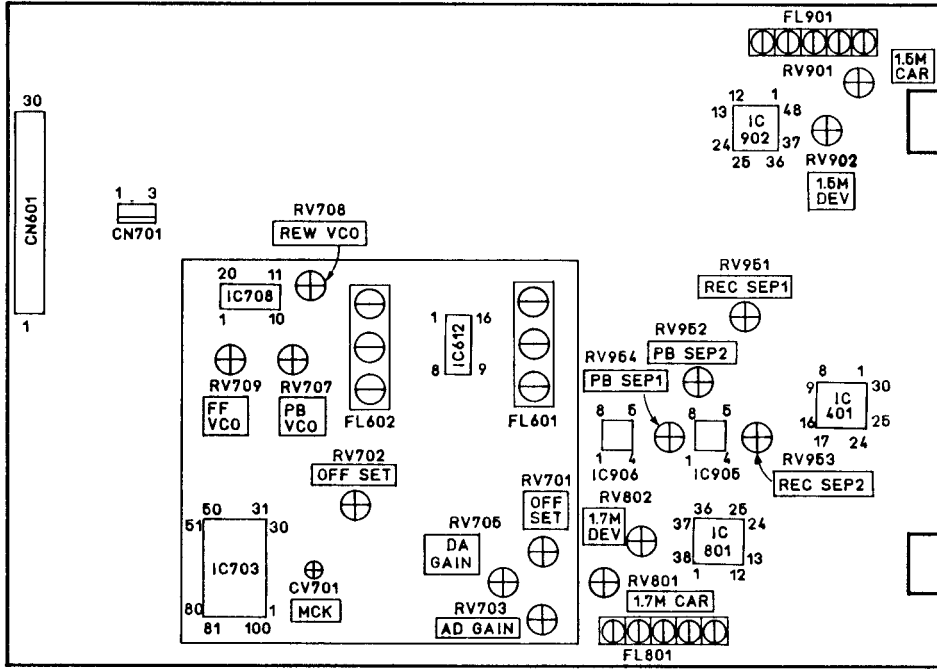
DS-35 BOARD (COMPONENT SIDE)



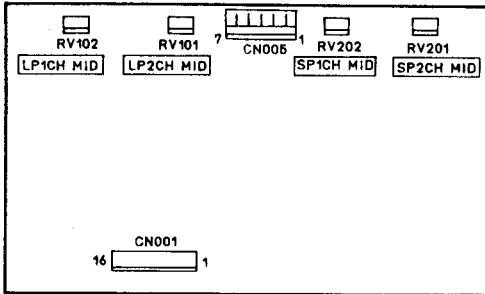
VI-65 BOARD (COMPONENT SIDE)



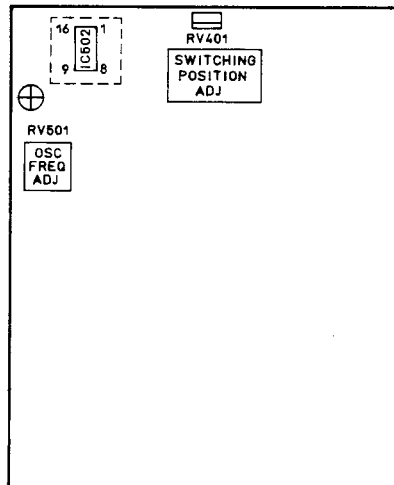
PC-39 BOARD (COMPONENT SIDE)



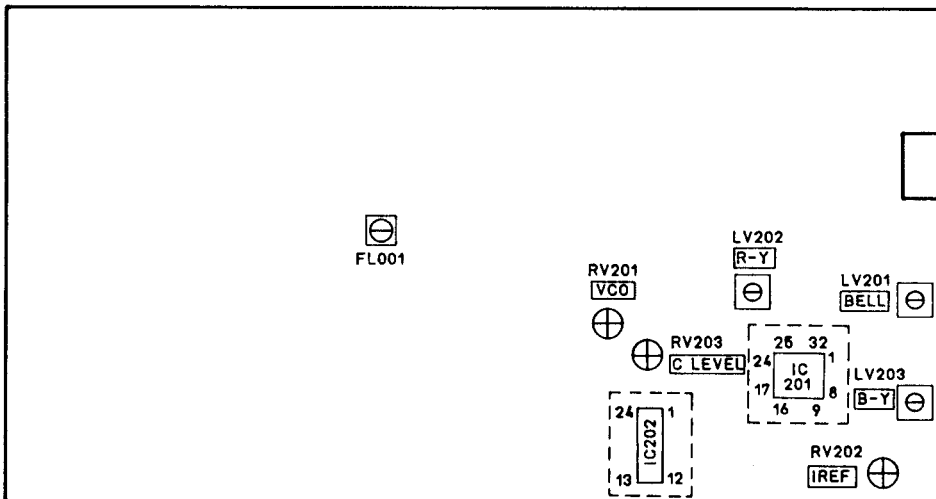
RP-74 BOARD (COMPONENT SIDE)



CM-15 BOARD (COMPONENT SIDE)



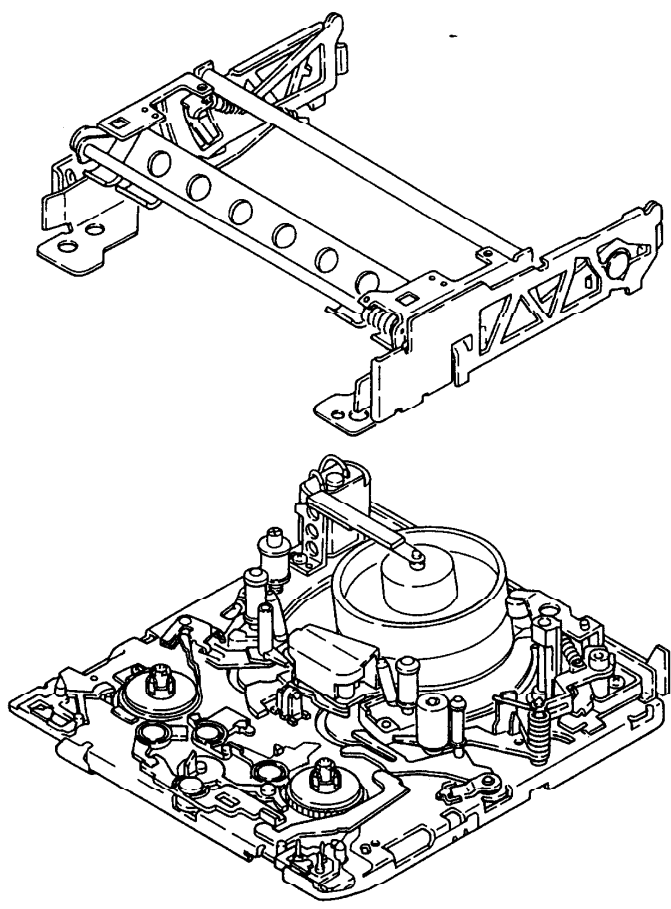
YC-64 BOARD (COMPONENT SIDE)



U MECHANISM

Video 8

Please use in conjunction with the SERVICE MANUAL.



8 MECHANISM DECK
SONY®

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	PREPARATIONS FOR MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT		4.	TAPE PATH ADJUSTMENT	
1-1.	Operation without Cassette Compartment Assembly and Tape	3	4-1.	Track Shift Mode Setting	28
1-1-1.	How to Trigger the Loading Operation	3	4-2.	Preparations for Adjustment	29
1-1-2.	Setting the Playback Mode	3	4-3.	Tracking Adjustment	30
1-1-3.	Eject Operation	3	4-4.	Tracking Fine Adjustment	30
1-2.	The Mode Selector	4	4-5.	No.2 Guide (TG-2) Adjustment	30
1-2-1.	Name of Each Part (external)	4	4-5-1.	No.2 Guide (TG-2) Height Presetting	30
1-2-2.	Connections	4	4-5-2.	No.2 Guide (TG-2) Adjustment	31
1-2-3.	Handling	4	4-6.	No.7 Guide (TG-7) Adjustment	31
			4-7.	Cue and REV Waveform Check	31
			4-8.	Check After Adjustment	32
			4-8-1.	Tracking Check	32
2.	PERIODICAL CHECK AND MAINTENANCE		4-8-2.	Rising Check	32
2-1.	Rotary Drum Assembly Cleaning	5	4-8-3.	Tape Path Check	32
2-2.	Tape Path Cleaning	5			
2-3.	Drive System Cleaning	5			
2-4.	Periodical Check Items	6			
2-5.	Servicing Tools	7			
3.	MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT				
3-1.	HC Roller Assembly	8			
3-2.	Guide Guard Assembly	8			
3-3.	DC Motor (Capstan Motor) Assembly	9			
3-4.	S Brake, T Brake	10			
3-5.	LB Brake, Axle Holding Pins	11			
3-6.	LB Release Arm	12			
3-7.	RK Stopper, RK Stopper Arms	12			
3-8.	Pinch Arm Assembly, TG-7 Assembly	13			
3-9.	TG-2 Assembly	14			
3-10.	S Reel Table Assembly, T Reel Table Assembly	15			
3-11.	Tension Regulator Band Assembly, Tension Regulator Arm Assembly	16			
3-12.	Tension Regulator FWD Position Preset	17			
3-13.	Drum Assembly, Dew Sensor	18			
3-14.	Eject Lever, Switch Lever Assembly, Pinch Roller Sub Arm Assembly	19			
3-15.	Timing Belt (L), RC Gear Assembly, Loading Lever Assembly, Timing Belt (S), Connecting Gear Assembly	20			
3-16.	Idler Pulley, TS Brake Assembly, LB Gear Assembly, RK Gear Assembly	21			
3-17.	UL Gear, UL Brake, UL Arm, LB Plate Spring	22			
3-18.	Coaster (Right) Assembly, Drive Gear (Right) Assembly	23			
3-19.	Coaster (Left) Assembly, Drive Gear (Left) Assembly	24			
3-20.	Loading Motor, Brake Release Arm, Wheel Gear, Worm Assembly	25			
3-21.	Rotary Upper Drum Replacement	26			
3-22.	FWD Back Tension	27			
3-23.	Reel Torque Check	27			

1. PREPARATIONS FOR MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT

Note: For removal of the cabinet, the boards, the cassette compartment, etc., refer to the service guides.

1-1. OPERATION WITHOUT CASSETTE COMPARTMENT ASSEMBLY AND TAPE

Note: The unit will not work if exposed to a strong light.

1-1-1. How to Trigger the Loading Operation (See Fig. 1-1.)

- 1) Supply power to the unit after removing the cabinet, the camera block, the cassette compartment assembly, etc., as indicated in the service guides. (This will enable operation of the mechanical deck.)
- 2) Cover the LED assembly with an opaque cap, etc. ①.
- 3) Attach a piece of tape to the RECOG switch ② so that the pin is held down.
- 4) Push the EJECT lever ③ in the direction of the arrow ④.

1-1-2. Setting the Playback Mode (See Fig. 1-1.)

- 1) Follow the procedures in section 1-1-1. above.
- 2) Put the rubber band ④ around the S and T reels.
- 3) Press the PLAY switch of unit, then push the tension regulator arm assembly ⑤ in the direction of the arrow ⑥ when the T reel starts to rotate (the tension regulator band will be released, and the S reel will start rotating).
- 4) To stop operation, press the STOP switch.

1-1-3. Eject Operation (See Fig. 1-1.)

- 1) To eject, turn the EJECT switch on.

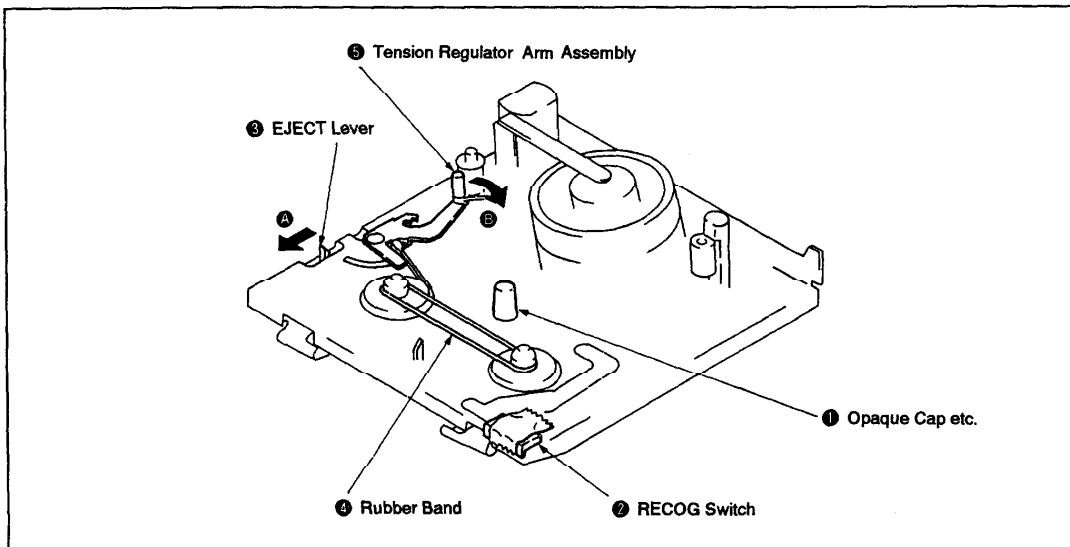


Fig. 1-1.

1-2. THE MODE SELECTOR

1-2-1. Name of Each Part (external) (See Fig. 1-2.)

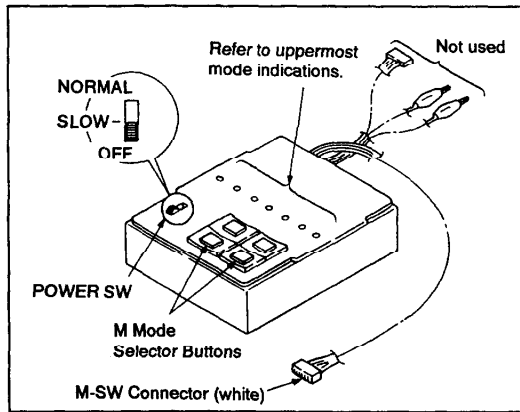


Fig. 1-2.

1-2-2. Connections (See Fig. 1-3.)

- 1) Mount the MODE SELECTOR III panel (Ref. No. J-9) ① onto the mode selector.
- 2) Attach the conversion connector (Ref. No. J-8) ③ of MODE SELECTOR III to the 6-pin connector (white) ② of the mode selector M-SW.
- 3) Remove the FP-89 flexible board ⑤ from the flexible connector ④.
- 4) Attach the FP-89 flexible board ⑤ to the flexible connector ⑥ of the MODE SELECTOR III conversion connector ③, then attach the 2-pin connector (white) ⑧ of the loading motor to the 2-pin connector (white) ⑦.

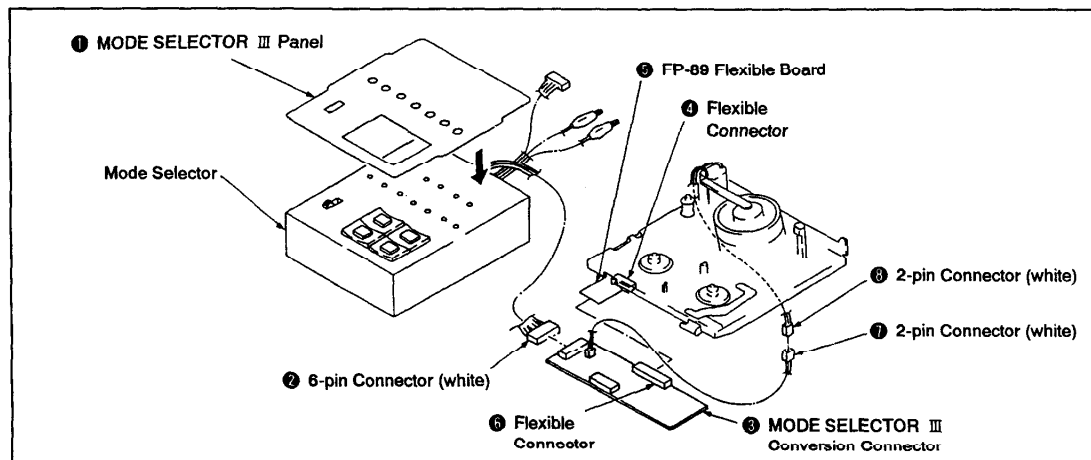


Fig. 1-3.

1-2-3. Handling (See Figs. 1-2. and 1-4.)

- Use only the M mode selector buttons.
- Refer to mode indications on the uppermost part of the MODE SELECTOR III panel.
- If the right M mode selector button is kept pressed, the lit indication will change in the order of EJECT → (IA) → UL → (IB) → STOP → (IC) → FWD.
- To change modes in the reverse direction (from FWD to EJECT), press the left selector button.

Note: For this U mechanism, the uppermost indicators on the MODE SELECTOR III panel are used. The IA, IB and IC indications light up during mode changes.

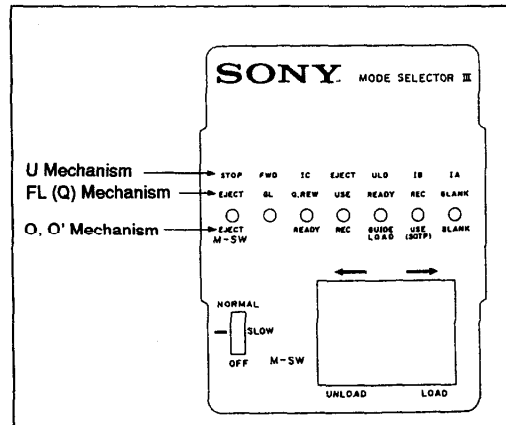


Fig. 1-4.

2. PERIODICAL CHECK AND MAINTENANCE (See Fig. 2-1.)

The following periodical check and maintenance procedures are necessary to ensure proper operation and to protect the tapes as well as the unit, and the following maintenance procedures must be always carried out after repairing regardless of how long the unit has been used.

2-1. ROTARY DRUM ASSEMBLY CLEANING

- 1) While pressing a piece of chamois leather (Ref. No. J-2) moistened in cleaning fluid (Ref. No. J-1) lightly against the rotary drum, turn the rotary upper drum slowly counter-clockwise with your fingers.

Note: Do not drive the drum with the motor, and do not turn it clockwise.

Do not move the chamois leather vertically against the head tip; this can damage the head tip. Strictly follow the cleaning instructions above.

2-2. TAPE PATH CLEANING

- 1) Set the cassette compartment assembly to the eject state, or remove it. Then clean the tape path (guides No. 1 to 7, capstan shaft, pinch rollers) with a piece of chamois leather moistened in cleaning fluid (See Fig. 2-1).

2-3. DRIVE SYSTEM CLEANING

- 1) Clean the drive system (timing belt, reel table surface) with a piece of cloth moistened in cleaning fluid.

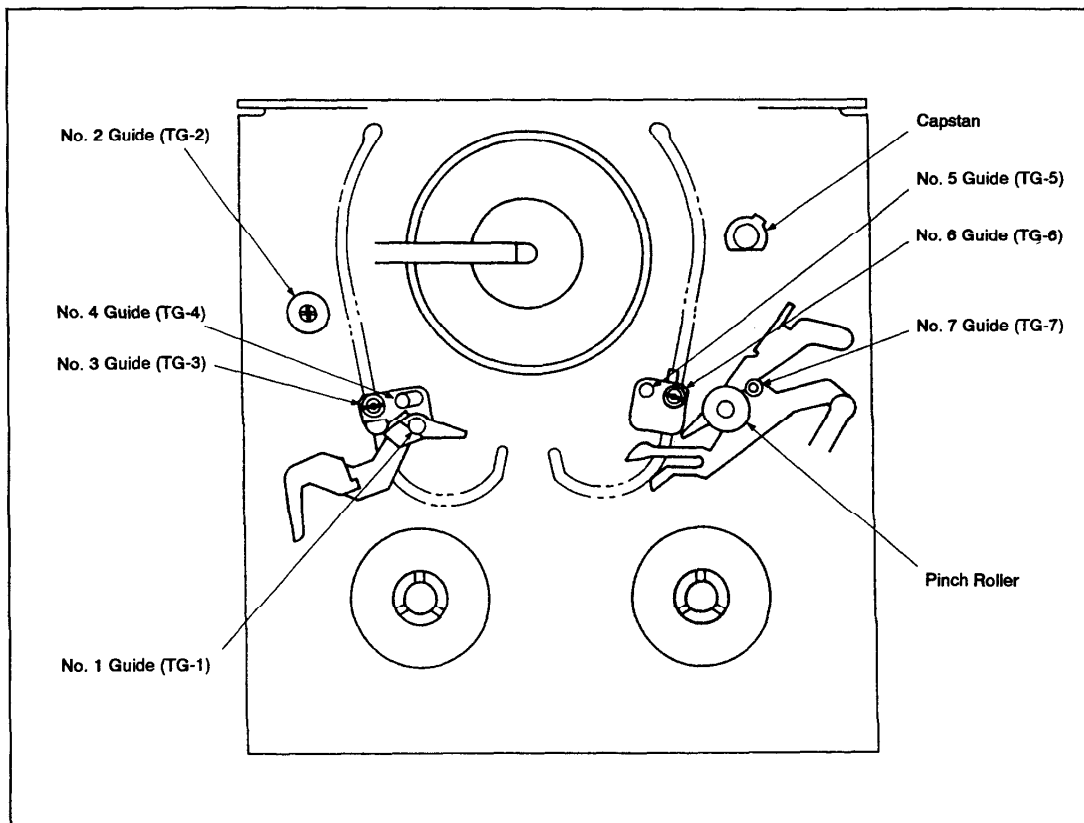


Fig. 2-1.

2-4. PERIODICAL CHECK ITEMS

○Cleaning ◎Lubrication ☆Check

Maintenance and Check Item		Operation time (H)										Remarks
		500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	
Cleaning and Demagnetizing	Tape path surfaces Cleaning	○	○	○	○	○	○	○	○	○	○	Do not oil.
	Rotary drum assembly cleaning and demagnetizing	○	○	○	○	○	○	○	○	○	○	Do not oil.
Drive System	Relay belt (short)	-	☆	-	☆	-	☆	-	☆	-	☆	3-728-866-01
	Relay belt (long)	-	☆	-	☆	-	☆	-	☆	-	☆	3-728-865-01
	Capstan shaft	-	◎	-	◎	-	◎	-	◎	-	◎	Take care that no oil gets on tape path surfaces.
	Idler pulley axle	-	◎	-	◎	-	◎	-	◎	-	◎	
	Loading motor	-	☆	-	☆	-	☆	-	☆	-	☆	1-541-612-11
Performance Check	Abnormal noise	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	-	☆	-	☆	-	☆	-	☆	-	☆	
	Brake system	-	☆	-	☆	-	☆	-	☆	-	☆	
	FWD, RVS torque measurement	-	☆	-	☆	-	☆	-	☆	-	☆	

Notes: When overhauling the unit, perform parts replacement referring to the table above.

Regarding Oil:

- Always use the specified oil (using oil of different viscosity, etc. can cause troubles of several kinds).
Specified oil: Part No. 7-661-018-01
(Mitsubishi Diamond Oil Hydrofluid EP56)
- Be sure that no dirt is mixed in the oil to be used on axle bearings. Use of dirty oil can result in bearing wear and burning.
- By "one drop of oil" is meant the quantity of oil adhering to the end of a 2mm-diameter rod as shown in Fig. 2-2.

On grease:

- Use the specified grease.
Grease: Part No. 7-662-010-08
(Sony grease SGL-701)

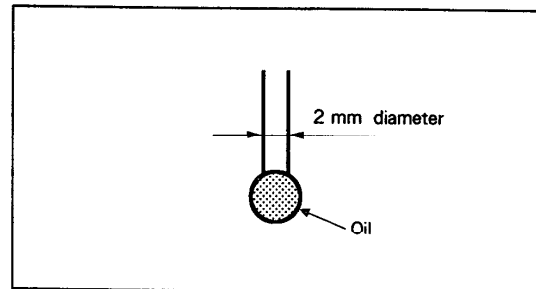
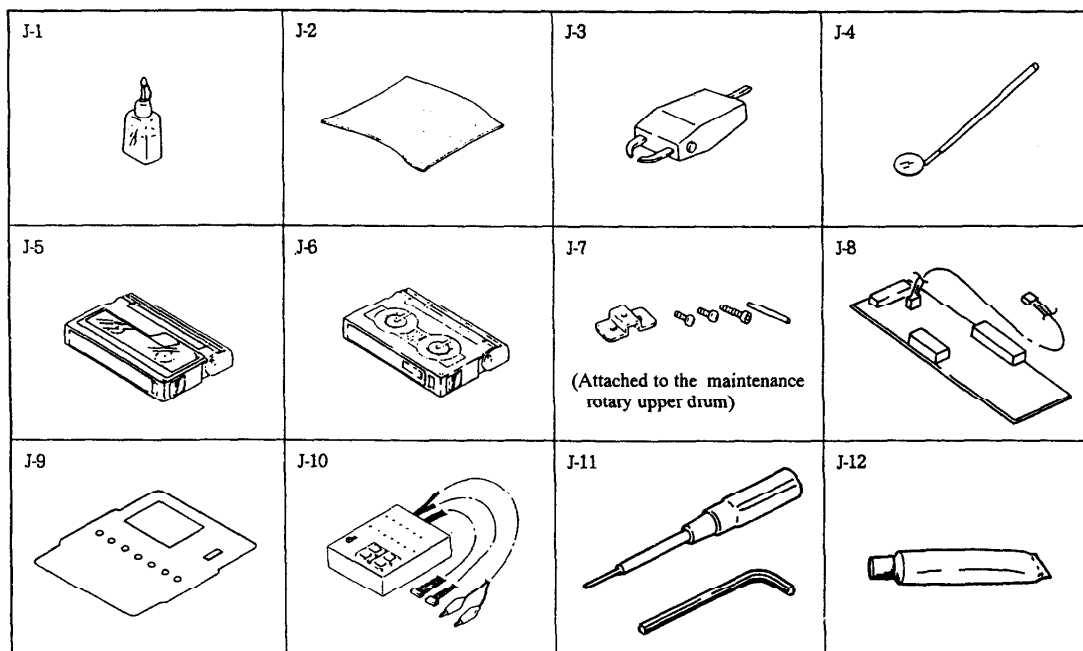


Fig. 2-2.

2-5. SERVICING TOOLS

Ref. No.	Name	Part Code	Marking	Application, etc.
J-1	Cleaning fluid	Y-2031-001-0	—	
J-2	Chamois cloth	2-034-697-00	—	
J-3	Head demagnetizer	Commercially available	—	
J-4	Dental mirror Spare mirror	J-6080-029-A J-6080-030-1	SL-5052	Tape path
J-5	Alignment tape NTSC (WR5-1N) PAL (WR5-1C)	8-967-995-01 8-967-995-06		Tape path
J-6	FWD/RVS takeup torque cassette	J-6080-624-A	GD-2086	
J-7	Rotary drum jig	(Attached to the maintenance rotary upper drum)		
J-8	Mode selector III conversion connector	J-6082-021-A		General
J-9	Mode selector III panel	J-6082-023-A		General
J-10	Mode selector	J-6080-825-A		General
J-11	Hexagonal wrench detection (0.89 mm) or L wrench (0.89 mm)	7-700-766-01 7-700-736-06		Tape path
J-12	Sony grease (SGL-701)	7-662-010-08		

Other devices: Oscilloscope
Analog tester (20 k Ω)



3. MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT

- Notes:**
- Use the mode selector (Ref. No. J-10) for procedures in this chapter.
 - Modes within a frame are those set by pressing the buttons of the mode selector.

3-1. HC ROLLER ASSEMBLY

1. Removal (See Fig. 3-1.)

- 1) Remove the screw ①, then remove the HC roller assembly ②.

2. Installation (See Fig. 3-1.)

- 1) Align the two dowels ③ attached to the HC roller assembly ② with the two holes ④ in the mechanism chassis.
- 2) Secure the HC roller assembly ② with the screw ①.

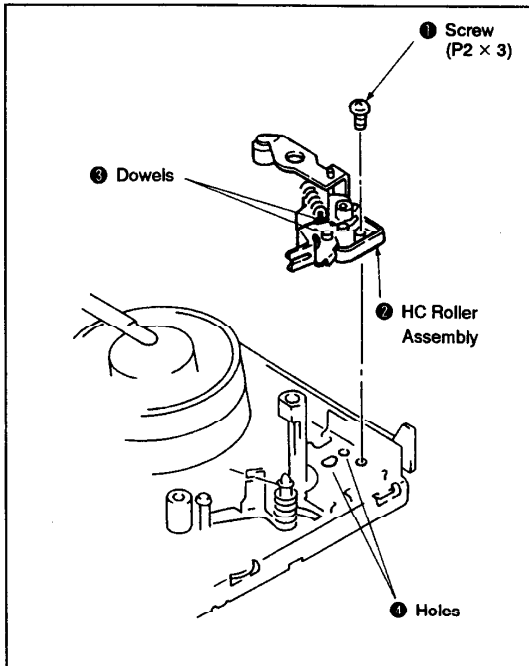


Fig. 3-1.

3-2. GUIDE GUARD ASSEMBLY

1. Removal (See Fig. 3-2.)

- 1) Remove the screw ①, then remove the guide guard assembly ②.

2. Installation (See Fig. 3-2.)

- 1) Align the dowel ③ attached to the guide guard assembly ② with the hole ④.
- 2) Secure the guide guard assembly ② with the screw ①.

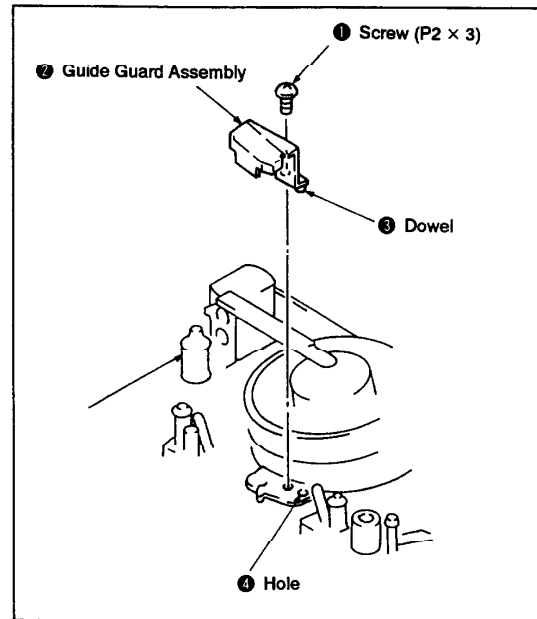


Fig. 3-2.

3-3. DC MOTOR (CAPSTAN MOTOR) ASSEMBLY

1. Removal (See Fig. 3-3.)

- 1) Set the **ULD** mode.
- 2) Turn the stopper ❶ in the direction of the arrow ❸ as far as it will go.
- 3) Remove the two screws ❷, then remove the DC motor ❸.

2. Installation (See Fig. 3-3.)

- 1) Align the two screwed dowels ❹ with the two holes ❺, then engage the toothed part ❻ with the connecting gear ❼.
- 2) Secure the DC motor assembly ❸ with the two screws ❷.
- 3) Turn the stopper ❶ in the direction of the arrow ❸ as far as it will go.

- Note:**
- When engaging the gears, take care not to damage their teeth.
 - Do not leave any clearance between the DC motor ❸ and the chassis.
 - Do not touch the capstan motor axle*, the oil seal* and the rotor*.

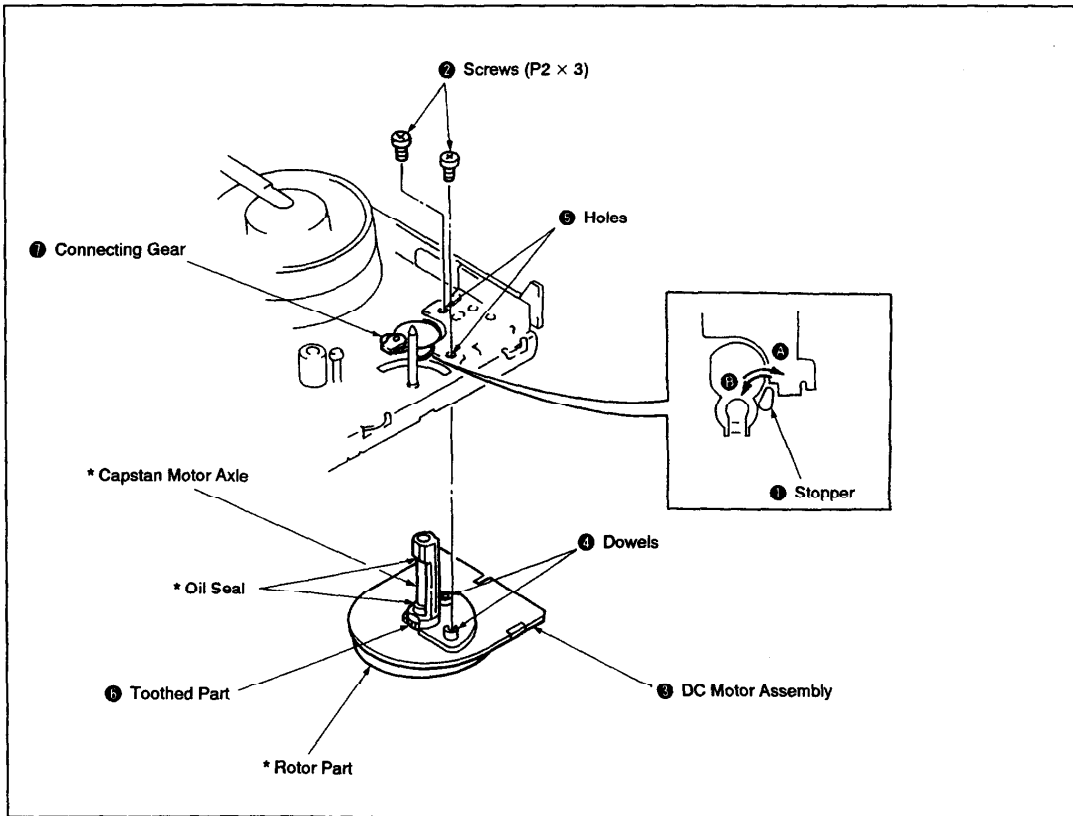


Fig. 3-3.

3-4. S BRAKE, T BRAKE

1. Removal (See Fig. 3-4.)

- 1) Remove the torsion coil spring (ST) ①.
- 2) Remove the axle holding pin ②, then remove the T brake ③.
- 3) Remove the axle holding pin ④, then remove the S brake ⑤.

2. Installation (See Fig. 3-4.)

- 1) While fitting the toothed part ⑥ into the notch ⑦, mount the S brake ⑤.
- 2) Insert the axle holding pin ②.
- 3) Insert the axle ⑧ to the S reel side of the brake release arm ④ so that the A part comes closer to the drum than part B, and mount the T brake ③.
- 4) Insert the axle holding pin ④.
- 5) Insert the torsion coil spring (ST) ① below the claw ⑩ of the axle ⑩, then hook it to two claws ⑪.

Note: Confirm that the claws of axle holding pins ② and ④ are not broken before assembling.

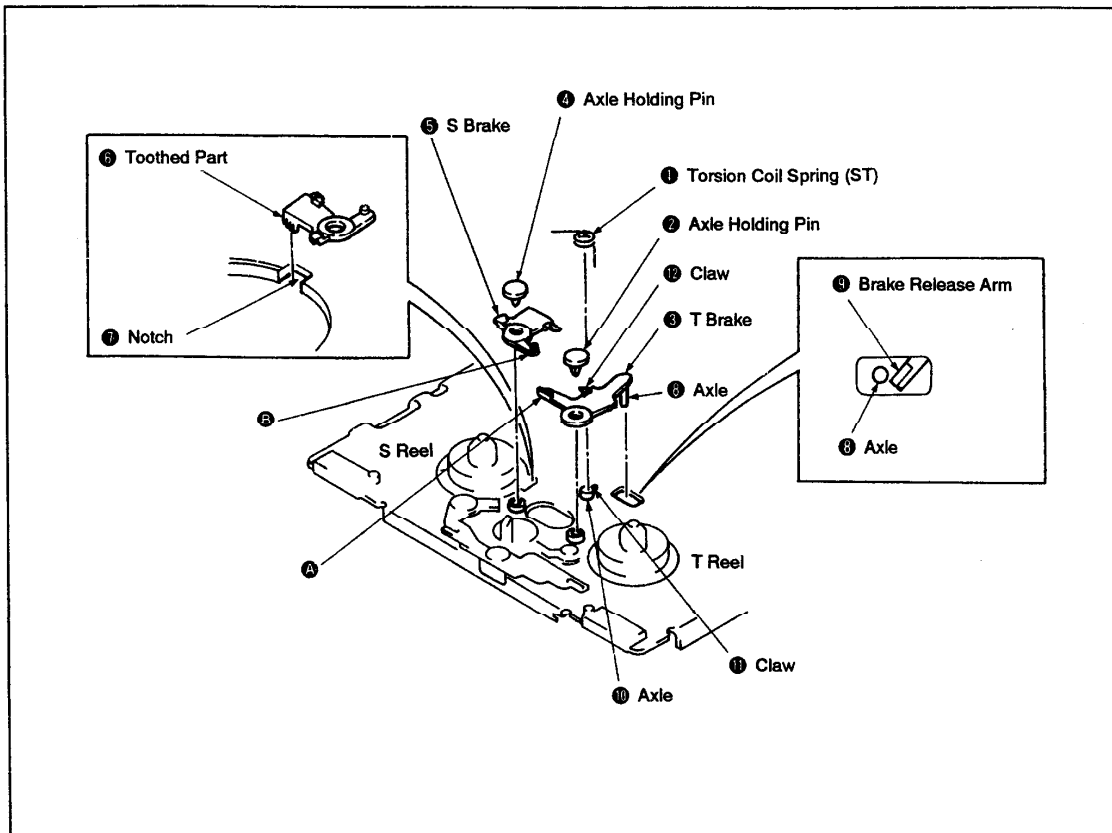


Fig. 3-4.

3-5. LB BRAKE, AXLE HOLDING PINS

1. Removal (See Fig. 3-5.)

- 1) Remove the screw ①, then remove the TL holding plate ②.
- 2) Remove the axle holding pin ③, then remove the LB brake ④.
- 3) Remove the axle holding pin ⑤, then remove the LB lever ⑥.

2. Installation (See Fig. 3-5.)

- 1) Mount the LB lever ⑥ matching it to pin ⑦ of the LB gear, then secure it with the axle holding pin ⑤.
- 2) Insert the pin ③ into the notch ⑧ of the LB lever ⑥, then mount the LB brake ④ while inserting the toothed part ⑩ into the notch ⑧.
- 3) Insert the axle holding pin ③.
- 4) Align the dowel ⑨ with the hole ⑪, then mount the TL holding plate and secure it with the screw ①.

Note: Confirm that the claws of axle holding pins ③ and ⑤ are not broken before assembling.

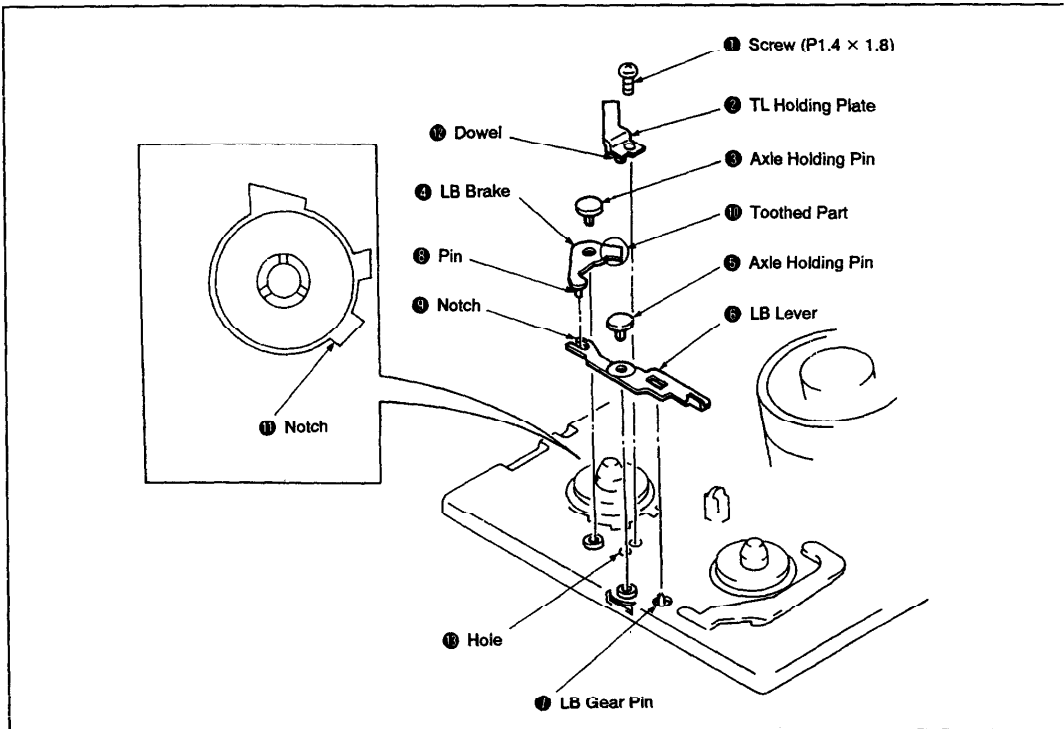


Fig. 3-5.

3-6. LB RELEASE ARM

1. Removal (See Fig. 3-6.)

- 1) While pushing the claw ① in the direction of the arrow, remove the LB release arm ②.

2. Installation (See Fig. 3-6.)

- 1) Fit the LB release arm ② to the axle ③, insert protrusions ④, ⑤, ⑥, ⑦ into the three holes ⑧, then secure with the claw ①.

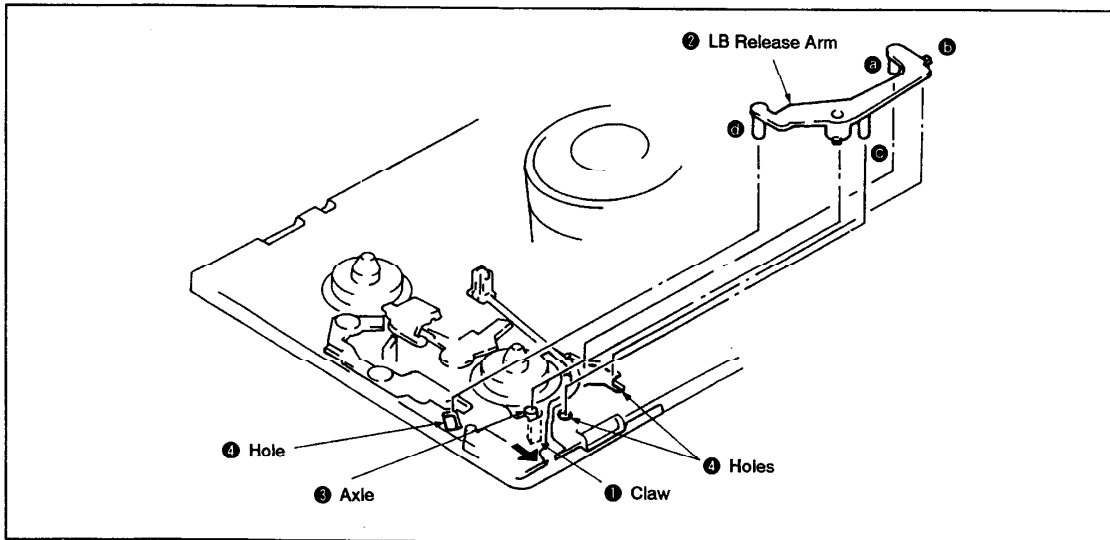


Fig. 3-6.

3-7. RK STOPPER, RK STOPPER ARMS

1. Removal (See Fig. 3-7.)

- 1) Remove the torsion coil spring (RK) ①.
- 2) Open the chassis claw ②, then remove the RK stopper arm ③.
- 3) Remove the RK stopper ④.

2. Installation (See Fig. 3-7.)

- 1) Mount the RK stopper ④ onto the axle ⑤.
- 2) Mount the RK stopper arm ③ onto the axle ⑥, insert Pin ⑩ into hole ⑪, then hook the claw ② of the chassis to the hole ⑦.
- 3) Insert the torsion coil spring (RK) ① into the axle ⑤, then hook it to claws ⑧ and ⑨.

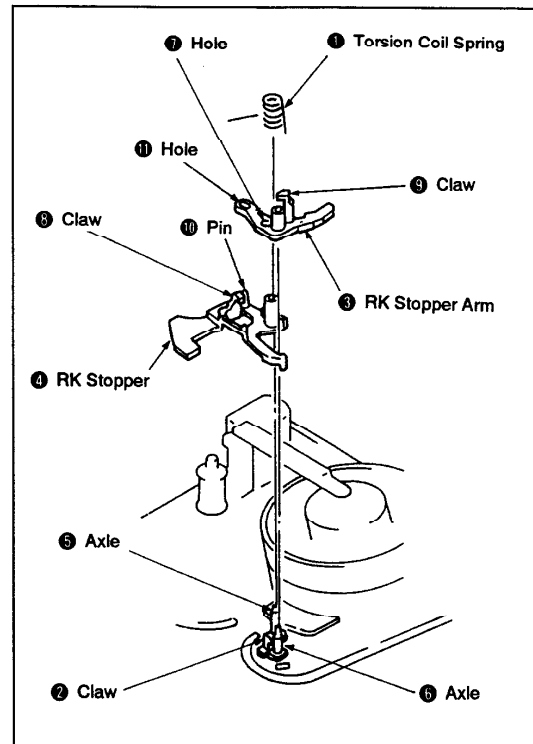


Fig. 3-7.

3-8. PINCH ARM ASSEMBLY, TG-7 ASSEMBLY

1. Removal (See Fig. 3-8.)

- 1) Set the [B] mode.
- 2) Remove the stopper washer ①, then remove the pinch arm assembly ②.
- 3) Bend the claw ④ inside hole ③ in the direction of the arrow using a thin screwdriver or the like, then remove the TG-7 plate spring ⑤.
- 4) Remove the TG-7 arm assembly ⑥.

2. Installation (See Fig. 3-8.)

- 1) Grease the inner surfaces of hole ⑦ (See Fig. A).
- 2) Insert the axle ④ of the TG-7 arm assembly ⑥ into the hole ⑦.
- 3) Grease the shaded section ② (See Fig. A).
- 4) Insert the TG-7 plate spring ⑤ into the hole ③, then secure it with the claw ④.
- 5) Apply half a drop of oil to the axle ④ (See Fig. B).
- 6) Fit the pinch arm assembly ② to the axle ④ and insert the pinch roller sub arm assembly tab ⑩ into the ⑪ part.
- 7) Install the stopper washer ①.

- Note:**
- Take care not to grease the screw ① of the TG-7 arm assembly ⑥ (See Fig. A).
 - When fitting the pinch arm assembly ② to the axle ④, make sure that it does not touch the TG-7 guide ⑫ or the rubber roller ⑬.
 - After assembling, be sure to perform tape path adjustment as described in section 4.

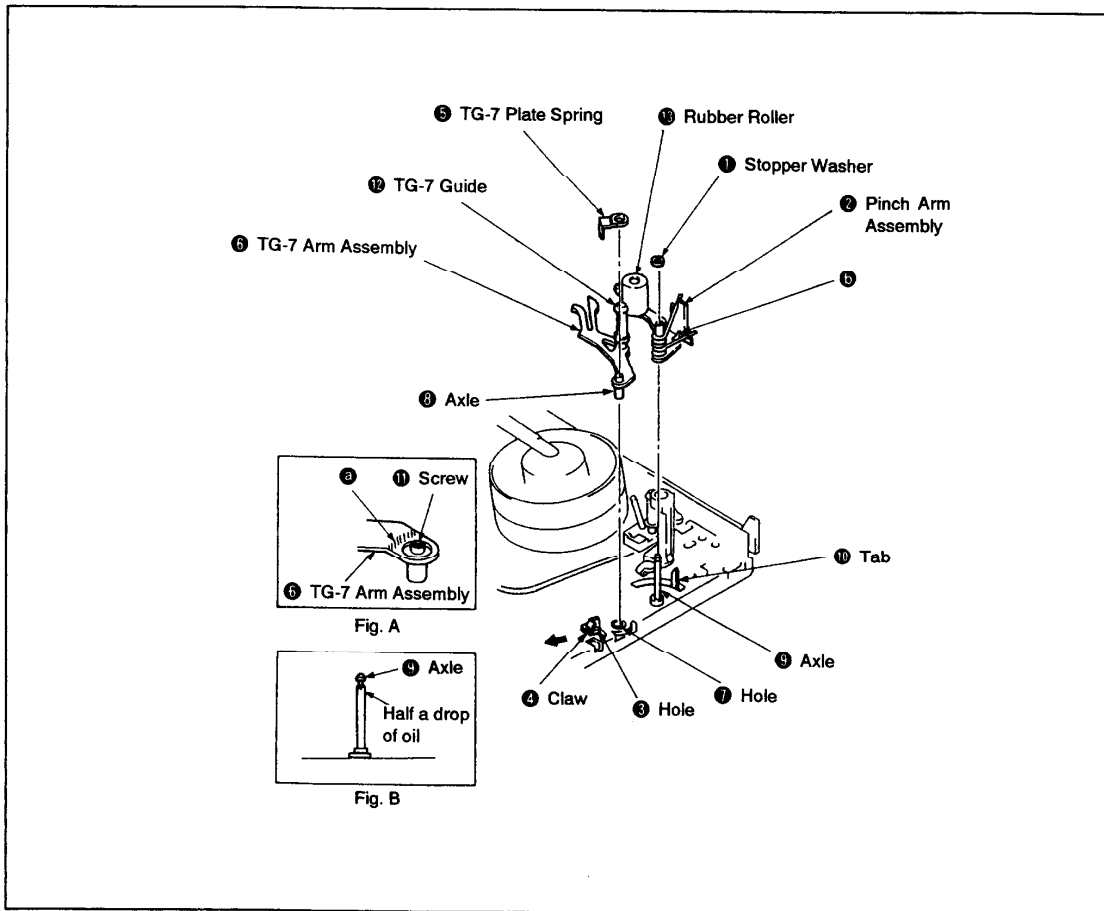


Fig. 3-8.

3-9. TG-2 ASSEMBLY

1. Removal (See Fig. 3-9.)

- 1) Remove the TG-2 upper flange assembly ①.
- 2) Remove the TG-2 roller ②, the TG-2 sleeve ③, the TG-2 lower flange ④ and the compression spring ⑤.

2. Installation (See Fig. 3-9.)

- 1) Mount the compression spring ⑤, the TG-2 lower flange ④, the TG-2 sleeve ③ and the TG-2 roller ② to the axle.
- 2) Secure the TG-2 upper flange ① to the axle by rotating it 4 to 6 turns.

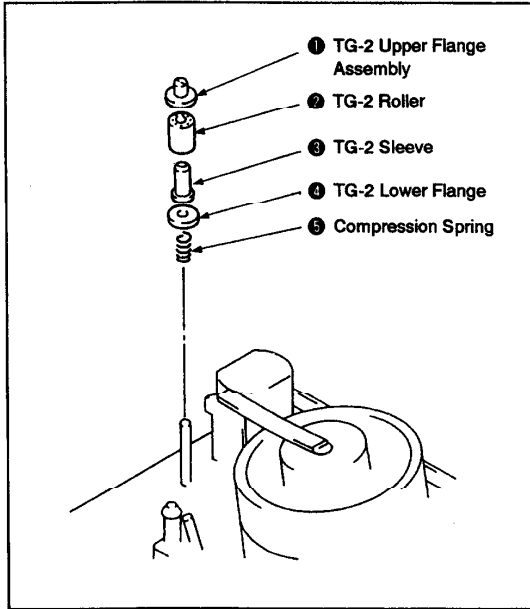


Fig. 3-9.

3. TG-2 Height Preset (see Fig. 3-10.)

- 1) Adjust height from the mechanism chassis upper surface to the TG-2 upper flange ① upper surface to 18.6 mm by turning the TG-2 upper flange ①.

Note: After adjustment, be sure to perform tape path adjustment as described in section 4.

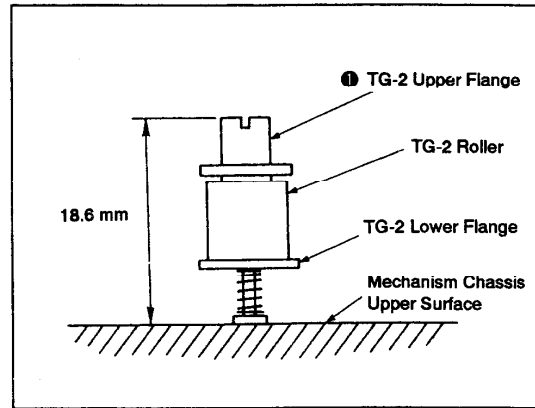


Fig. 3-10.

3-10. S REEL TABLE ASSEMBLY, T REEL TABLE ASSEMBLY

1. Removal (See Fig. 3-11.)

- 1) Remove the S brake and T brake as described in section 3-4.
- 2) Remove the TL holding plate as described in section 3-5.
- 3) Remove the tension regulator band assembly as described in section 3-11.
- 4) Remove the S reel table assembly ①.
- 5) Turn the stopper ② approx. 90° in the direction of the arrow ③.
- 6) While sliding the LB release arm ④ in the direction of the arrow ⑤, remove the T reel table assembly ⑥.

2. Installation (See Fig. 3-11.)

- 1) Apply half a drop of oil to the axle ⑦ (See Fig. A).
- 2) Move the RK gear ⑧ in the direction of the arrow ⑨ and the TS brake ⑦ in the direction of the arrow ⑩, putting them out of the way.
- 3) While sliding the LB release arm ④ in the direction of the arrow ⑤, mount the T reel table assembly ⑥ onto the axle ⑦, then turn the stopper ② in the direction of the arrow ③ as far as it will go.
- 4) Apply half a drop of oil to the axle ⑧ (See Fig. B).
- 5) Move the RK gear ⑧ in the direction of the arrow ⑨, the UL brake ⑧ in the direction of the arrow ⑩ and the LB brake ⑩ in the direction of the arrow ⑪, putting them out of the way.
- 6) Mount the S reel table ① onto the axle ⑧.
- 7) Mount the tension regulator band assembly as described in section 3-11.
- 8) Mount the TL holding plate as described in section 3-5.
- 9) Mount the S brake and T brake assemblies as described in section 3-4.

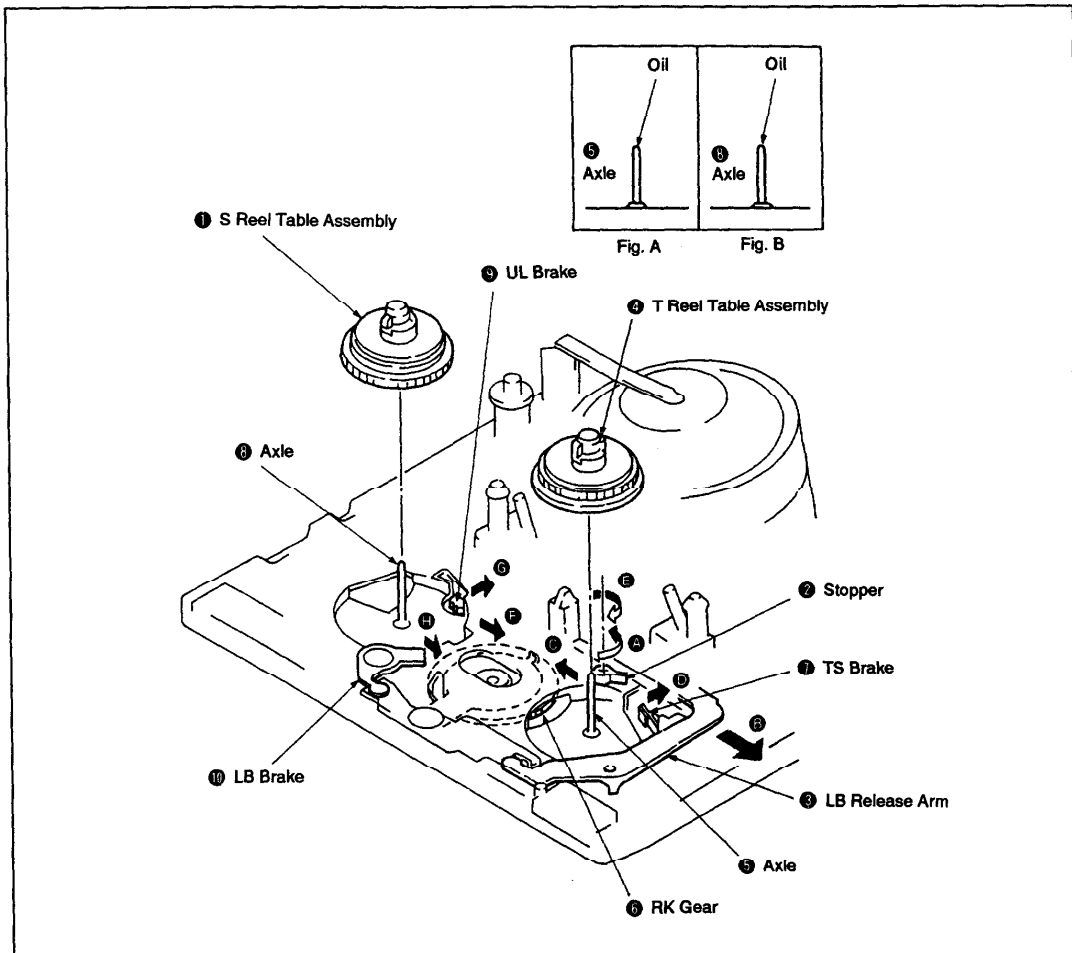


Fig. 3-11.

3-11. TENSION REGULATOR BAND ASSEMBLY, TENSION REGULATOR ARM ASSEMBLY

1. Removal (See Fig. 3-12.)

- 1) Remove the TL holding plate as described in section 3-5.
- 2) Remove the screw ①.
- 3) Using a thin screwdriver or the like, remove the tension regulator band assembly ④ from the axle ③ of tension regulator arm assembly ②.
- 4) Remove the tension spring ⑤.
- 5) Remove the stopper washer ⑥ from the back of the mechanism chassis, then remove the tension regulator arm assembly ②.
- 6) Open the claw ⑦, then remove the adjust arm ⑧.

Note: When removing the tension regulator band assembly ④, take care not to twist or bend it, and not to touch the felt surface ⑨.

2. Installation (See Fig. 3-12.)

- 1) Engage the adjust arm ⑧ in the position shown in Fig. A, then close the claw ⑦.
- 2) Apply half a drop of oil to the hole ⑩.
- 3) Mount the tension regulator arm assembly ②, then insert it into the slot ⑪ so that the ② part comes to the arrow A side of the switch lever assembly (See Fig. B).

- 4) While holding the tension regulator arm assembly ② from the mechanism chassis front, secure it with the stopper washer ⑥ from the back.
- 5) Hook the R hook of the tension spring ⑤ to the adjust arm ⑧ as shown in the figure, then hook the opposite end to the tension regulator arm assembly ②.
- 6) Mount the tension regulator band assembly ④ onto the axle ③ of tension regulator arm assembly ②, and place it so that the felt surface ⑨ comes against the shaded portion of the S reel table assembly ⑬.
- 7) Mount the tension regulator plate ⑭ of the tension regulator band assembly ④ so that it is aligned with the dowel ⑫ of the mechanism chassis, then secure it temporarily with the screw ①.
- 8) Mount the TL holding plate as described in section 3-5.
- 9) Adjust tension regulator FWD position as described in section 3-12.
- 10) Perform adjust arm adjustment as described in section 3-22.

Note: When mounting the tension regulator band assembly ④, take care not to twist or bend it, and not to touch the felt surface ⑨.

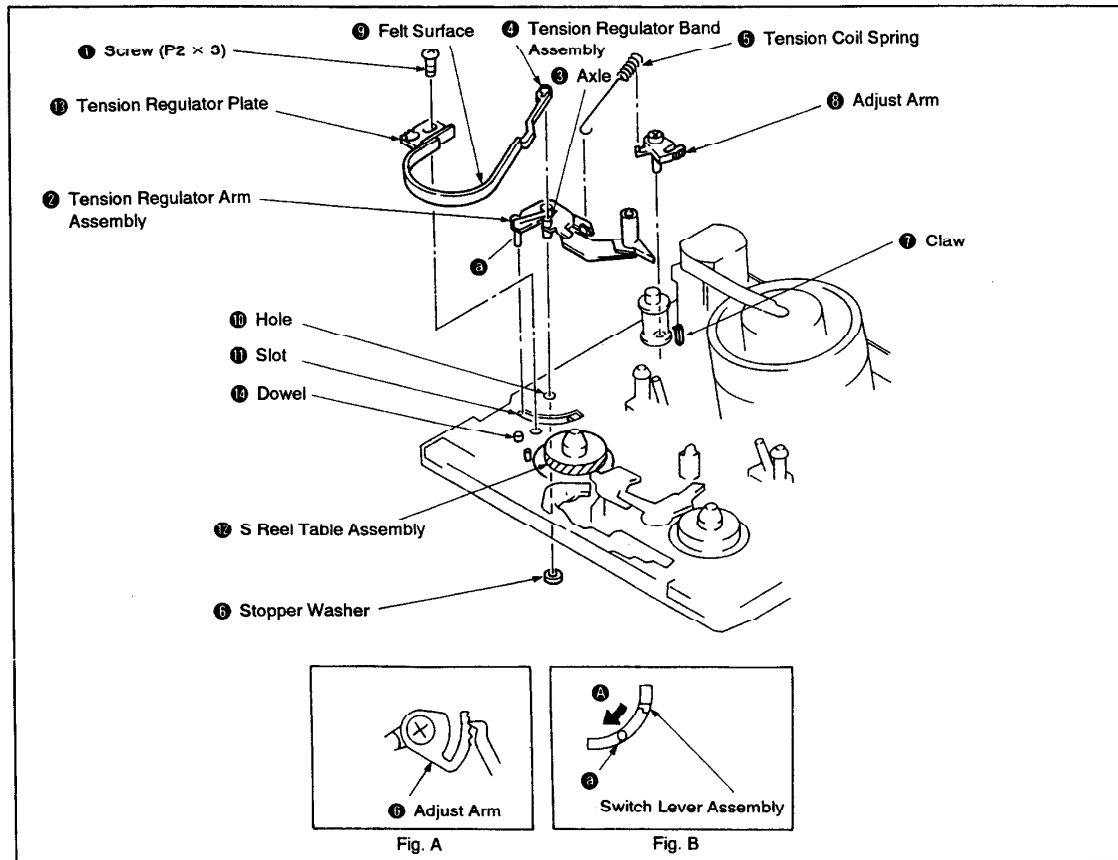


Fig. 3-12.

3-12. TENSION REGULATOR FWD POSITION PRESET (See Fig. 3-13.)

- 1) Load a cassette tape and set the **[FWD]** mode.
- 2) Confirm whether the distance between **①** part of the tension regulator arm and the groove **②** of the chassis is 1.1 ± 0.3 mm. If this distance is not within the specified range, remove the cassette tape and perform the following adjustment.
- 3) Loosen the fixing screw **④** of the tension regulator band assembly **③**.
- 4) Slide the tension regulator plate **⑤** in the direction of the arrow **A** if the measured distance is over the specified range, and in the direction of the arrow **B** if it is under that range. Then, fix it with the screw **④**.
- 5) Repeat steps 1) and 2) and confirm that the distance is within the specified range.

Note: Use a cassette with the tape advanced halfway.

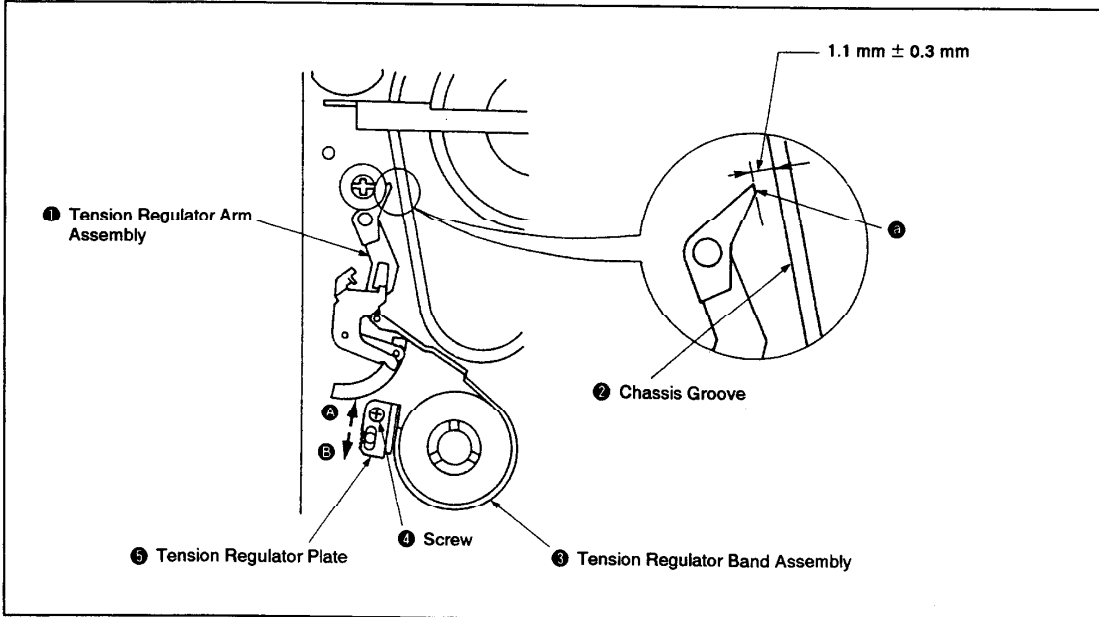


Fig. 3-13.

3-13. DRUM ASSEMBLY, DEW SENSOR

1. Removal (See Fig. 3-14.)

- 1) Set the **EJECT** mode.
- 2) Remove the flexible board ① and the two connectors ②.
- 3) Remove the guide guard assembly as described in section 3-2.
- 4) Remove the screw ③, then remove the axle ground terminal ④.
- 5) Remove the three screws ⑤, then remove the drum assembly ⑥ from the mechanism chassis.
- 6) Remove the connector ⑩.
- 7) Remove the screw ⑦, then remove the dew sensor ⑧.

Note:

- When removing the drum assembly ⑥ from the mechanism chassis, take care not to cut the flexible board ① or the harness.
- Take care not to touch the head tip ⑨.

2. Installation (See Fig. 3-14.)

- 1) Insert part ④ of the dew sensor ⑧ into the notch ⑪ of the mechanism chassis, then secure it with the screw ⑦.
- 2) Mount the connector ⑩.
- 3) Clamp the harness ⑬ of the dew sensor ⑧ with the reinforcing the claw ⑭ of the plate SS assembly (See Fig. A).
- 4) Insert the connector ② and the flexible board ① into the hole ⑫ of the mechanism chassis, align the drum assembly ⑥ with the two dowels ⑮ and secure it with the three screws ⑤.
- 5) Align the axle ground terminal ④ with the two dowels ⑮ of the mechanism chassis and secure it with the screw ③.
- 6) Mount the guide guard assembly as described in section 3-2.
- 7) Mount the two connectors ② and the flexible board ①.

Note:

- Take care not to cut the flexible board ① or the harness ⑬.
- Take care not to touch the head tip ⑨.
- After assembling, be sure to perform Tape Path Adjustment following instructions in section 4.

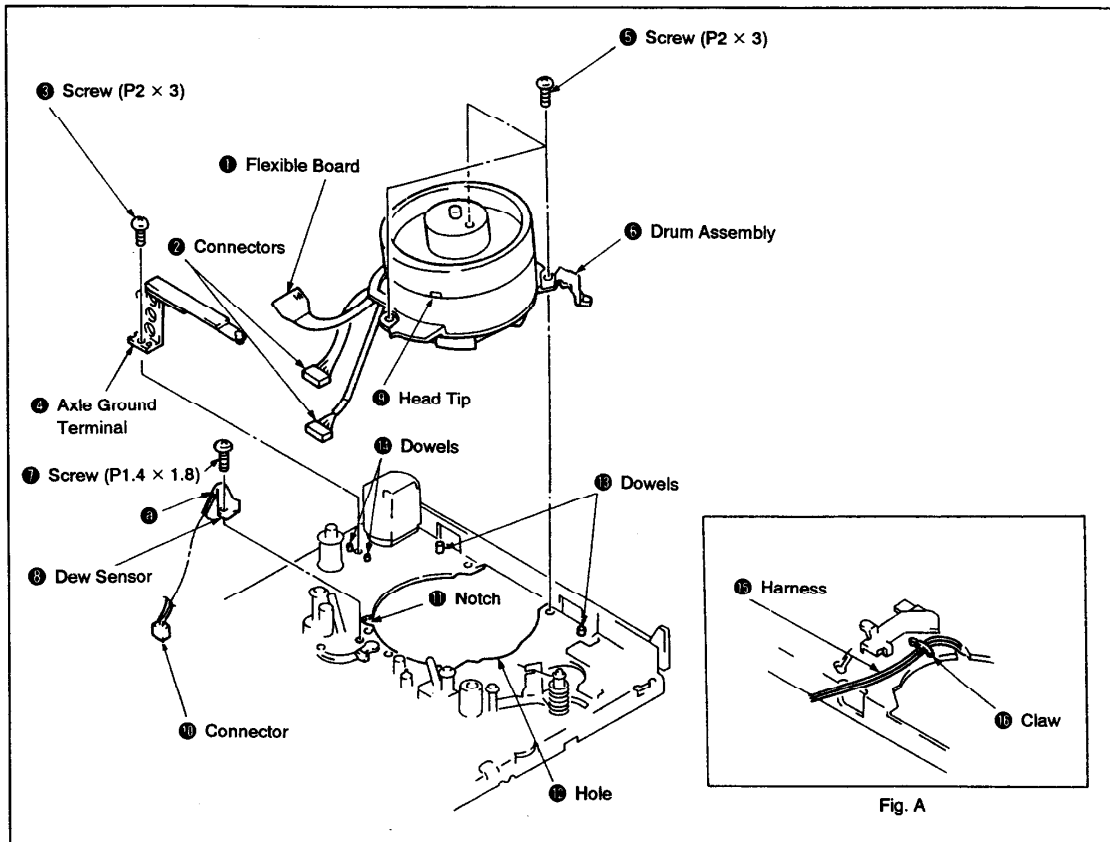


Fig. 3-14.

3-14. EJECT LEVER, SWITCH LEVER ASSEMBLY, PINCH ROLLER SUB ARM ASSEMBLY

1. Removal (See Fig. 3-15.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Set the **STOP** mode.
- 3) Remove the claw ①, then remove the eject lever ②.
- 4) Remove the stopper washer ③, then remove the switch lever assembly ④.
- 5) Remove the pinch roller load spring ⑤.
- 6) Remove the stopper washer ⑥, then remove the pinch roller sub arm assembly ⑦.

2. Installation (See Fig. 3-15.)

- 1) Grease the axle ⑧ (See Fig. A).
- 2) Assemble by inserting ② part of the pinch roller sub arm assembly ⑦ into the slot ⑨, then insert the pin ⑩ into the loading lever assembly notch ⑪.
- 3) Secure with the stopper washer ⑥.

- 4) Mount the pinch roller load spring ⑤ by catching its ⑬ end between the claw ⑦ and the chassis side and its ⑭ end to the claw ⑦.
- 5) Apply half a drop of oil to the axle ⑩ (See Fig. B).
- 6) Align the groove ⑫ of the switch lever assembly ④ with the mode detector switch protrusion ⑮, mount it on the axle ⑩, then insert the pin ⑩ into the drive gear (left) assembly ⑯ outer groove.
- 7) Secure with the stopper washer ③.
- 8) Mount the eject lever ② and close the claw ①.
- 9) Mount the DC motor (capstan motor) as described in section 3-3.

Note: When mounting the switch lever assembly ④ onto the axle ⑩ with the tension regulator arm assembly installed, set the pin ⑩ to the arrow ⑰ side of the switch lever assembly ④.

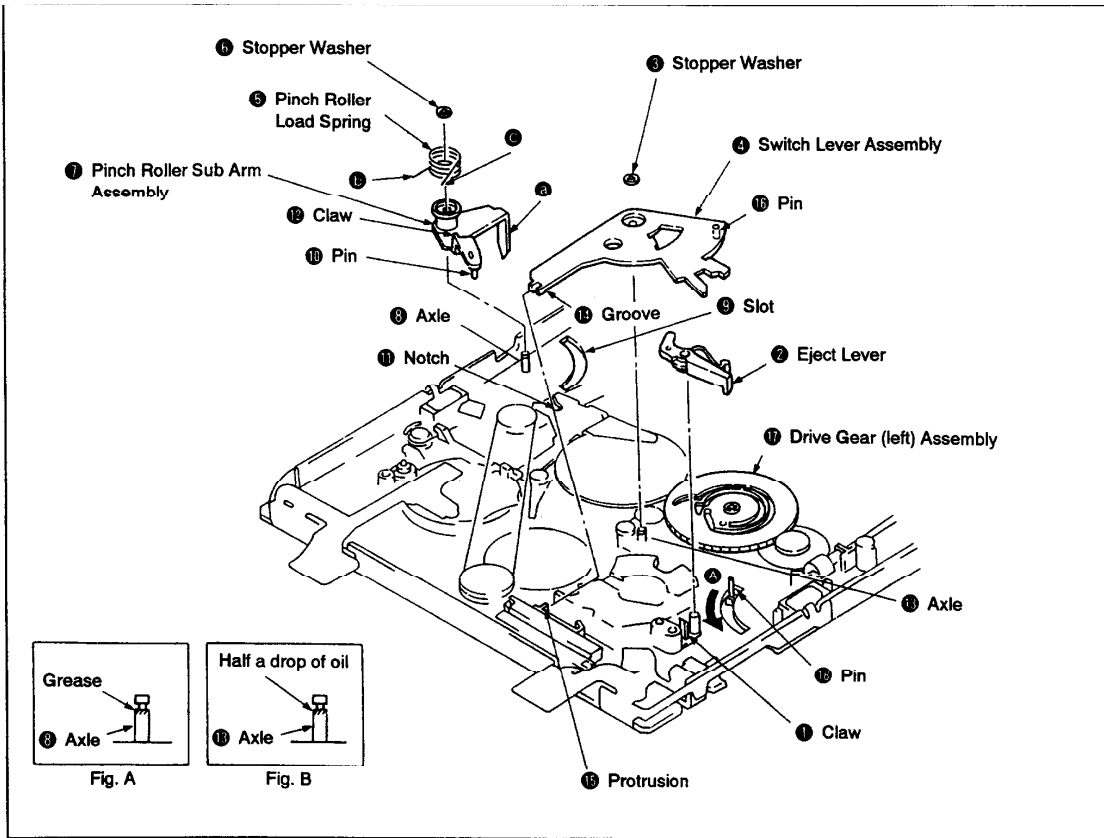


Fig. 3-15.

3-15. TIMING BELT (L) , RC GEAR ASSEMBLY, LOADING LEVER ASSEMBLY, TIMING BELT (S), CONNECTING GEAR ASSEMBLY

1. Removal (See Fig. 3-16.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the pinch roller sub arm assembly as described in section 3-14.
- 3) Set the **STOP** mode.
- 4) Remove the stopper washer ①, then remove the RC gear assembly ② from the axle ④ with the timing belt (L) ③ attached.
- 5) Remove the timing belt (L) ③ from the idler pulley assembly ⑤.
- 6) Remove the stopper washer ⑥ and remove the loading lever assembly ⑦ while pushing the claw ⑧ in the direction of the arrow A.
- 7) Turn the stopper ⑨ approx. 90° in the direction of the arrow B.
- 8) Remove the connecting gear assembly ⑩ from the axle ⑪ with the timing belt (S) ⑫ attached.
- 9) Remove the timing belt (S) ⑫ from the idler pulley assembly ⑤.

Note: When removing the connecting gear ⑩, take care not touch the flange section ⑬.

2. Installation (See Fig. 3-16.)

- 1) Apply half a drop of oil to the axle ⑬ (See Fig. F).
- 2) Hook one end of the timing belt (S) ⑫ onto the connecting gear assembly ⑩ and the other end onto gear ⑭ of the idler pulley assembly ⑤. (Refer to the figure.)
- 3) Mount the connecting gear assembly ⑩ with the timing belt (S) ⑫ attached to the axle ⑪.
- 4) Turn the stopper ⑨ in the direction of the arrow B as far as it will go.
- 5) Apply half a drop of oil to the axle ⑫ (See Fig. A).
- 6) Fit the loading lever assembly ⑦ to the axle ⑫, secure the ⑮ part with the claw ⑧ and place the pin ⑯ into the groove of the drive gear (right) assembly ⑰.
- 7) Install the stopper washer ①.
- 8) Place the timing belt (L) ③ around the gears of the RC gear assembly ② indicated in Fig. B, and its opposite side around the gear ⑱ of the idler pulley assembly ⑤. (See Fig. E.)
- 9) Mount the RC gear assembly ② onto the axle ④ with the timing belt (L) ③ attached, and engage it with the gear of the RK gear assembly ⑬.
- 10) Install the stopper washer ①.
- 11) Grease parts of the loading lever assembly ⑦ indicated in Fig. C.
- 12) Mount the pinch roller sub arm assembly as described in section 3-14.
- 13) Mount the DC motor (capstan motor) as described in section 3-3.



Fig. 3-16.

3-16. IDLER PULLEY, TS BRAKE ASSEMBLY, LB GEAR ASSEMBLY, RK GEAR ASSEMBLY

1. Removal (See Fig. 3-17.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the switch lever assembly as described in section 3-14.
- 3) Remove the timing belt (L), the RC gear assembly, the loading lever assembly, the timing belt (S) and the connecting gear assembly described in section 3-15.
- 4) Set the **STOP** mode.
- 5) Remove the stopper washer ①, then remove the idler pulley ②.
- 6) Open the claw ③, then remove the TS brake assembly ④.
- 7) Remove the torsion coil spring (LB) ⑤.
- 8) Remove the stopper washer ⑥, then remove the LB gear assembly ⑦.
- 9) Remove the RK gear assembly ⑧.

Note: When removing the idler pulley ②, take care not to touch the flange section ②. (See Fig. C.)

2. Installation (See Fig. 3-17.)

- 1) Apply half a drop of oil to the axle ⑨ (See Fig. A).
- 2) Mount the RK gear assembly ⑧ onto the axle ⑨, keeping it in horizontal position.
- 3) Apply half a drop of oil to the axle ⑩ (See Fig. B).
- 4) Mount the LB gear assembly ⑦ onto the axle ⑩ and secure it with the stopper washer ⑥.
- 5) Insert the torsion coil spring (LB) ⑤ into the axle ⑪, then hook it to the mechanism chassis notch ⑫ and to the tab ⑬.
- 6) Mount the TS brake assembly ④ and close the claw ③.
- 7) Apply half a drop of oil to the axle ⑬ (See Fig. D).
- 8) Mount the idler pulley ② onto the axle ⑬, then secure it with the stopper washer ①.
- 9) Mount the timing belt (L), the RC gear assembly, the loading lever assembly, the timing belt (S) and the connecting gear assembly as described in section 3-15.
- 10) Mount the switch lever assembly as described in section 3-14.
- 11) Mount the DC motor (capstan motor) as described in section 3-3.

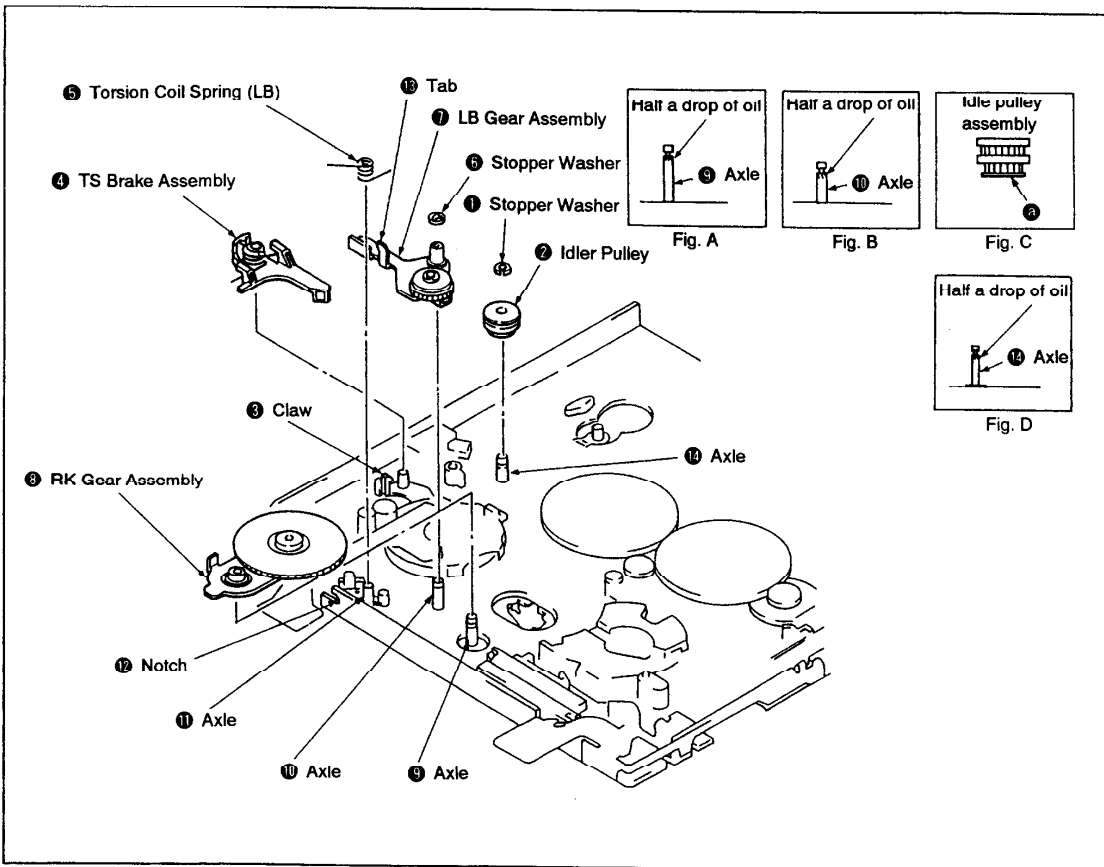


Fig. 3-17.

3-17. UL GEAR, UL BRAKE, UL ARM, LB PLATE SPRING

1. Removal (See Fig. 3-18.)

- 1) Remove the switch lever assembly as described in section 3-14.
- 2) Remove the stopper washer ①, then remove the UL gear ②.
- 3) Remove the UL arm ③, the 1.6 mm-diameter poly washer ④ and the LB plate spring ⑤.
- 4) Remove the UL brake ⑥.

2. Installation (See Fig. 3-18.)

- 1) Mount the UL brake ⑥.
- 2) Apply half a drop of oil to the axle ⑦ (See Fig. A).
- 3) Mount the LB plate spring ⑤ to the axle ⑦ as shown in Fig. B, then install the 1.6mm-diameter poly washer ④.
- 4) Mount the UL arm ③ to the axle ⑦ so that the protrusion ⑧ comes into the groove ⑨ of the UL brake ⑥.
- 5) Mount the UL gear ② to the axle ⑦ and engage it with the gear of the drive gear (left) assembly ⑩.
- 6) Install the stopper washer ①.
- 7) Mount the switch lever assembly as described in section 3-14.

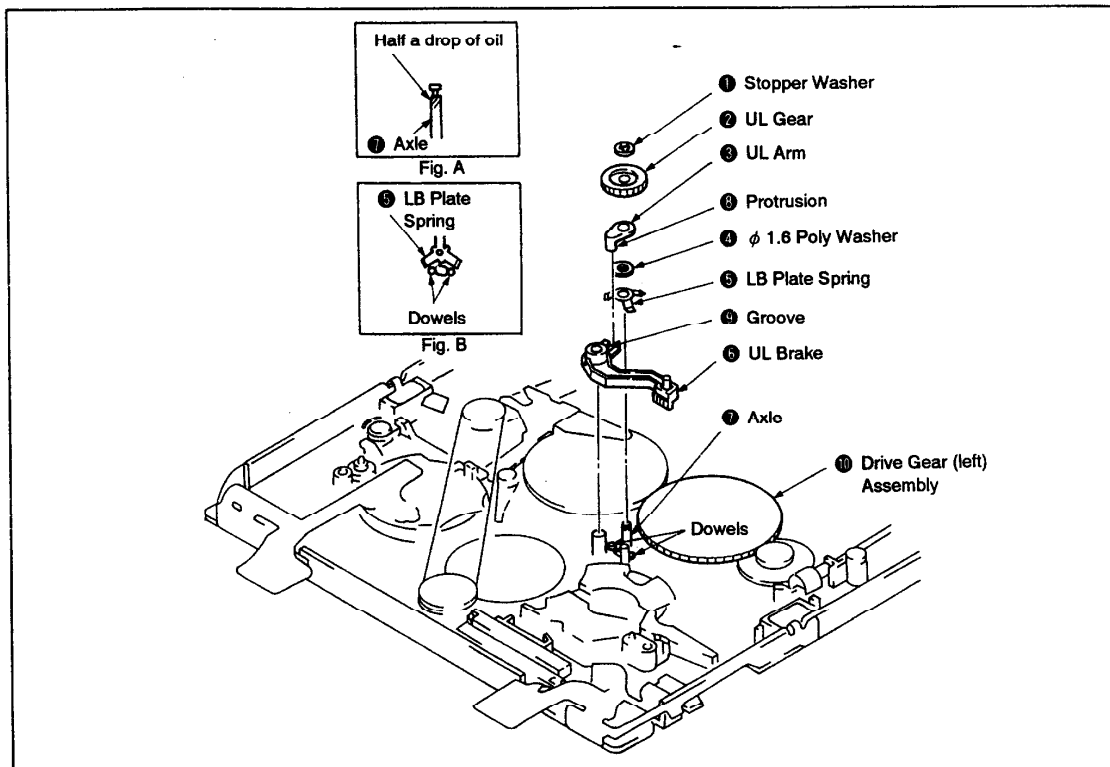


Fig. 3-18.

3-18. COASTER (RIGHT) ASSEMBLY, DRIVE GEAR (RIGHT) ASSEMBLY

1. Removal (See Fig. 3-19.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the drum unit as described in section 3-13.
- 3) Remove the switch lever assembly as described in section 3-14.
- 4) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 5) Set the **STOP** mode.
- 6) Remove the screw ①, then remove the coaster plate spring ② and the coaster (right) assembly ③.
- 7) Remove the two screws ④, then remove the reinforcing plate TT ⑤.
- 8) Remove the stopper washer 1.5 ⑥, then remove the drive gear (right) assembly ⑦.

2. Installation (See Fig. 3-19.)

- 1) Grease the points of the mechanism chassis shown in Fig A.
- 2) Apply half a drop of oil to the axle ⑨ (See Fig. F).
- 3) Grease pin ⑩, axle ⑪ and dowel ⑫ of the coaster (right) assembly ③ (See Fig. D).
- 4) Mount by aligning the pin ⑩ and the axle ⑪ with the slot ⑬ of the mechanism chassis.
- 5) Move the brake release arm ⑭ in the direction of the arrow ⑮ to put it out of the way.

- 6) Mount the drive gear (right) assembly ⑦ to the axle ⑧, and engage it with the drive gear (left) assembly ① as shown in Fig. B.
- 7) Align the ② part with the ① part, and the hole ⑬ with the pin ⑩ of the coaster (right) assembly ③.
- 8) Install the stopper washer 1.5 ⑥.
- 9) Mount by aligning the coaster plate spring ② with the axle ⑪ of the coaster (right) assembly ③ and pin ⑩, then secure with the screw ①.
- 10) Mount the reinforcing plate TT ⑤ aligning it with the dowel ⑫, then tighten the two screws ④ in the indicated order.
- 11) Grease the points indicated in Figs. C and E.
- 12) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 13) Mount the switch lever assembly as described in section 3-14.
- 14) Mount the drum unit as described in section 3-13.
- 15) Mount the DC motor (capstan motor) as described in section 3-3.

- Note:**
- Screw ① should be tightened with a tightening torque of approx. 500g*cm. If tightened too much, the coaster (right) assembly ③ and the coaster plate spring ② will be deformed.
 - After installing, be sure to perform tape path adjustment as described in section 4.

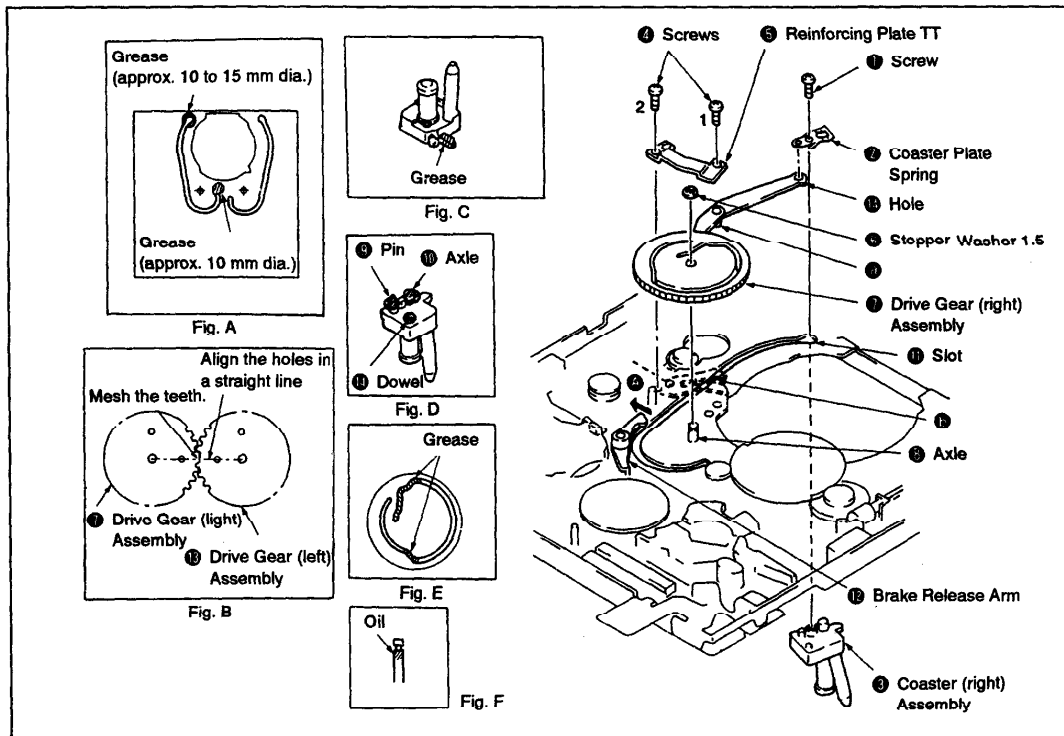


Fig. 3-19.

3-19. COASTER (LEFT) ASSEMBLY, DRIVE GEAR (LEFT) ASSEMBLY

1. Removal (See Fig. 3-20.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the drum assembly as described in section 3-13.
- 3) Remove the switch lever assembly and the pinch roller sub-arm assembly as described in section 3-14.
- 4) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 5) Remove the coaster (right) assembly and the drive gear (right) assembly as described in section 3-18.
- 6) Remove the screw ①, then remove the coaster plate spring ② and the coaster (left) assembly ③.
- 7) Remove the two screws ④, then remove the reinforcing plate SS assembly ⑤.
- 8) Remove the stopper washer 1.5 ⑥, then remove the drive gear (left) assembly ⑦.

2. Installation (See Fig. 3-20.)

- 1) Grease the points of the mechanism chassis shown in Fig. A.
- 2) Apply half a drop of oil to the axle ⑩ (See Fig. E).
- 3) Grease pin ④, axle ⑩ and dowel ⑨ of the coaster (left) assembly ③ (See Fig. B).
- 4) Mount by aligning the pin ④ and the axle ⑩ with the slot ⑪ of the mechanism chassis.
- 5) Fit the drive gear (left) assembly ⑦ to the axle ⑩, and mount so that the gear engages with the wheel gear ⑫ and the UL gear ⑬.

- 6) Align the ⑧ part with the slot ⑪, and the hole ⑭ with the pin ④ of the coaster (left) assembly ③.
- 7) Install the stopper washer 1.5 ⑥.
- 8) Mount by aligning the coaster plate spring ② with the axle ⑩ and pin ④ of the coaster (left) assembly ③, then secure with the screw ①.
- 9) Mount the reinforcing plate SS assembly ⑤ aligning it with the dowel ⑨, then tighten the two screws ④ in the indicated order.
- 10) Grease points indicated in Figs. C and D.
- 11) Mount the coaster (right) assembly and the drive gear (right) assembly as described in section 3-18.
- 12) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 13) Mount the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
- 14) Mount the drum assembly as described in section 3-13.
- 15) Mount the DC motor (capstan motor) as described in section 3-3.

- Note:**
- Screw ① should be tightened with a tightening torque of approx. 500g·cm. If tightened too much, the coaster (right) assembly ③ and the coaster plate spring ② will be deformed.
 - After installing, be sure to perform tape path adjustment as described in section 4.

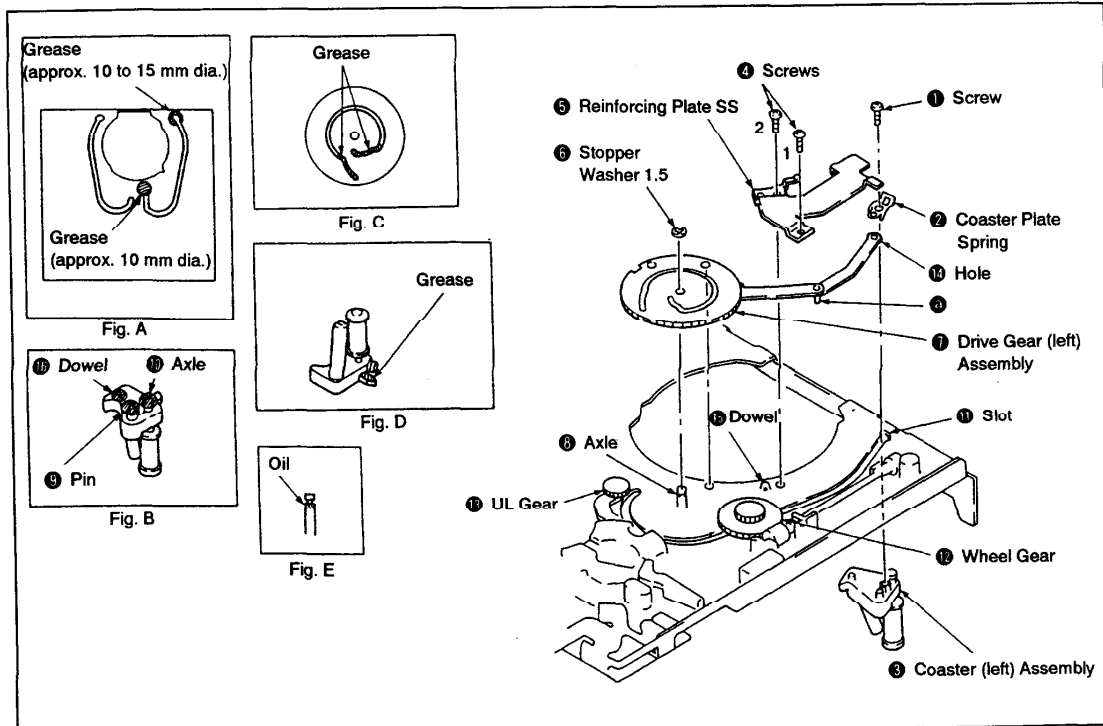


Fig. 3-20.

3-20. LOADING MOTOR, BRAKE RELEASE ARM, WHEEL GEAR, WORM ASSEMBLY

1. Removal (See Fig. 3-21.)

- 1) Remove the DC motor (capstan motor) as described in section 3-3.
- 2) Remove the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
- 3) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 4) Remove the drive gear (right) assembly as described in section 3-18.
- 5) Remove the drive gear (left) assembly as described in section 3-19.
- 6) Remove the two screws ①, then remove the loading motor assembly ②.
- 7) Remove the brake release arm ③.
- 8) Remove the stopper washer ④, then remove the wheel gear ⑤.
- 9) Remove the worm assembly ⑥ from the six claws ⑦.

2. Installation (See Fig. 3-21.)

- 1) Mount the worm assembly ⑥, matching it to the six claws ⑦.
- 2) Grease the shaded parts of the worm assembly ⑥ (five places) (see Fig A).
- 3) Apply half a drop of oil to the axle ⑧ (See Fig. B).
- 4) Fit the wheel gear ⑤ to the axle ⑧ and engage it with the gear of the worm assembly ⑥.
- 5) Mount the brake release arm ③.
- 6) Grease the whole perimeter of the gear of the loading motor assembly ②.
- 7) Align the loading motor assembly ② with the mechanism chassis and secure it with the two screws ①.
- 8) Mount the drive gear (left) assembly as described in section 3-19.
- 9) Mount the drive gear (right) assembly as described in section 3-18.
- 10) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
- 11) Mount the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
- 12) Mount the DC motor (capstan motor) as described in section 3-3.

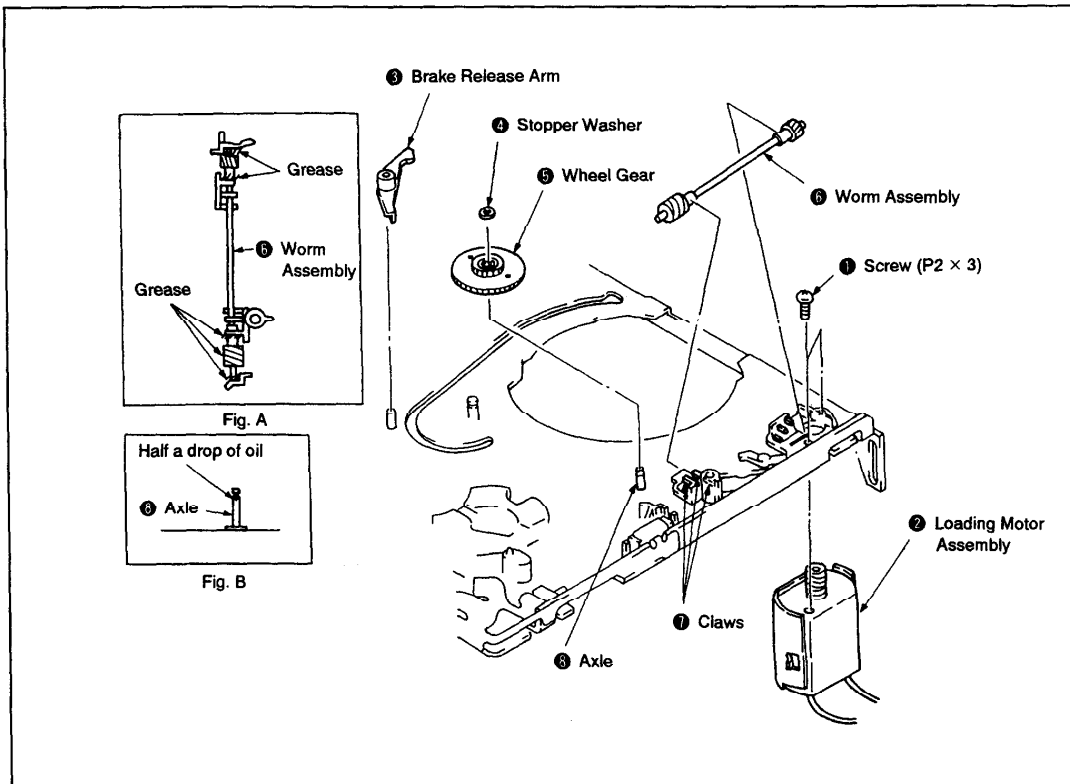


Fig. 3-21.

3-21. ROTARY UPPER DRUM REPLACEMENT

1. Removal

- If possible, make a recording before removal.
- 1) Detach the six solderings ④, then use a pair of tweezers or the like to confirm that the terminals passing through the board holes from below can move freely.
- 2) Remove the two screws ① (See Fig. 3-22).
- 3) Mount the jig ② (Ref. No. J-7) with the two supplied screws ③, then screw the attached hexagon socket screws ⑤ to the jig ②. The rotary upper drum ⑥ will move upward and come off (See Fig. 3-23).

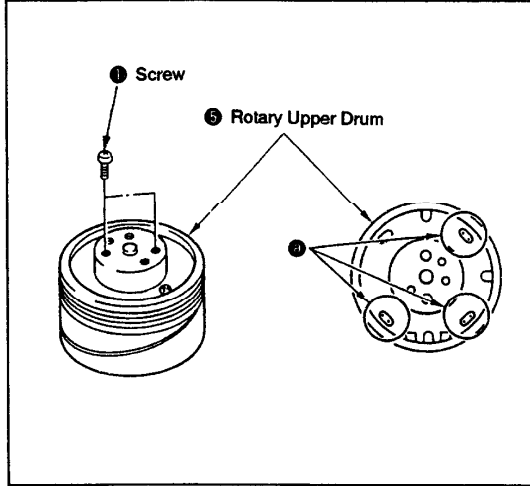


Fig. 3-22.

2. Installation

- 1) Wipe clean the flange surface and the rotary upper drum ⑤ surface that makes contact with it, and confirm that they are free from dirt and scratches.
 - 2) Insert the jig ⑦ (Ref. No. J-7) into the drum positioning hole, then set the rotary upper drum ⑤ by passing the jig through its positioning hole ⑥.
- Note:** Confirm that the terminals ⑧ protrude slightly from the rotary upper drum board holes (See Fig. 3-24).
- 3) Remove the jig ⑦ and push down the rotary upper drum ⑤ gently by hand. If it does not go all the way down, secure it temporarily by tightening the two hexagon socket screws ① alternately.
 - 4) Insert the jig ⑦ into the positioning hole ⑥ again and confirm that it goes in smoothly. If it does not, loosen the two screws ①, repeat step 3 of the Removal paragraph and restart the setting procedure.
 - 5) Tighten the screws ①.
 - 6) Solder the terminals ⑧ (④ in Fig. 3-22).

Note: Take care that no solder flows below the board.

Note: After installing, be sure to perform tape path adjustment as described in section 4.

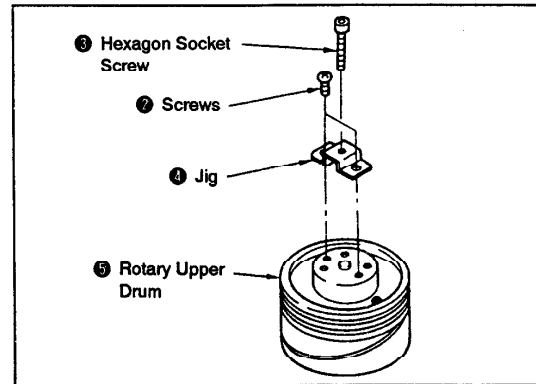


Fig. 3-23.

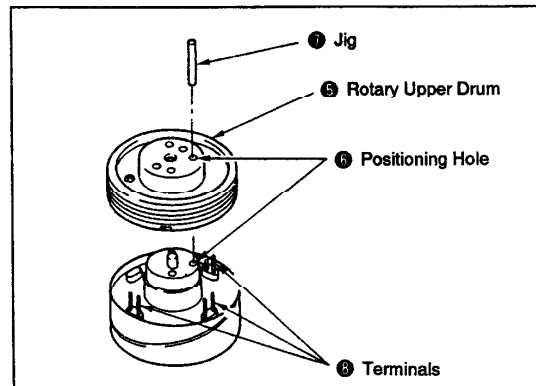


Fig. 3-24.

3-22. FWD BACK TENSION (See Fig. 3-25.)

- 1) Set the torque cassette (Ref. No. J-6).
- 2) Set the FWD mode and confirm that S reel table torque value is within 9 to 13 g*cm.
- 3) If the torque value does not meet the specification, adjust the adjust arm ①.

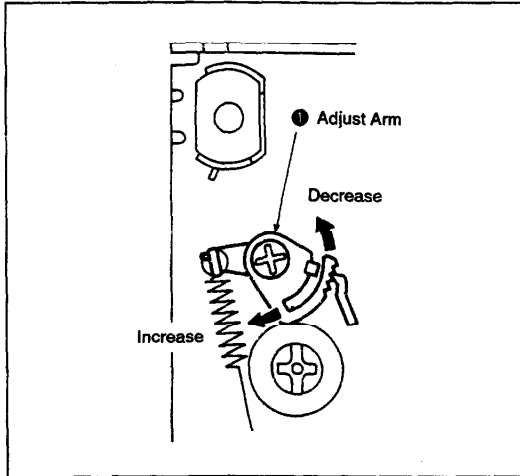


Fig. 3-25.

3-23. REEL TORQUE CHECK

- 1) Set the torque cassette.
- 2) Set the FWD mode and confirm that T reel table torque value is within 7 to 15 g*cm.
- 3) Set the REV mode and confirm that S reel table torque value is within 29 ± 6 g*cm.
- 4) Set the REV mode and confirm that T reel table torque value is within 13 to 25 g*cm.
- 5) If a torque value does not meet the specifications above, replace the corresponding reel table.

4. TAPE PATH ADJUSTMENT

[The Track Shift Mode]

In the 8 mm video system, instantaneous tape speed control is performed using four kinds of pilot signals, and high-precision tracking is achieved through the ATF (Automatic Track Finding) system. This makes a tracking control knob unnecessary and allows for precise tracing.

On the other hand, however, tape path adjustment presents some difficulties when the ATF system is used. Namely, since the ATF system will automatically compensate to some degree for head tracing errors, thorough adjustment is not possible.

This can be solved by setting the track shift mode for tracking fine adjustment. ATF will be compulsorily activated, shifting the tracking amount by a fixed amount (approx. 1/4) and thus making tracking fine adjustment easy. Furthermore, no track shift jigs are required.

4-1. TRACK SHIFT MODE SETTING

[Setting Procedure]

- Connect the TEST A and TEST B terminals to the COM terminal.

Example:

NTSC GV-8

PAL GV-8E

Connect Pins ① and pin ③ of CN017 on the

{ SV-34 board (GV-8) } to pin ② of it. (See Fig. 4-1)

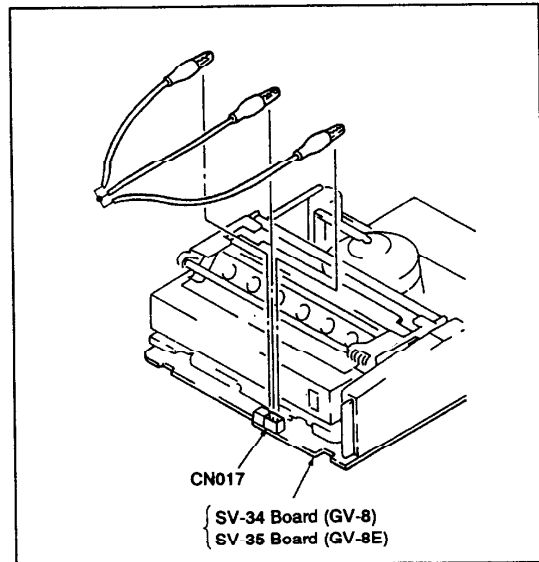


Fig. 4-1.

[Note on Adjustment of No.7 Guide (TG-7)]

The height adjustment screw for No.7 guide (TG-7) is located at some distance from the guide (refer to Fig. 4-2).

Therefore, when performing section 4-6. No.7 Guide (TG-7) Adjustment it is convenient to use the alignment tape for tracking (Ref. No. J-5), modified as follows, and perform adjustment in playback mode.

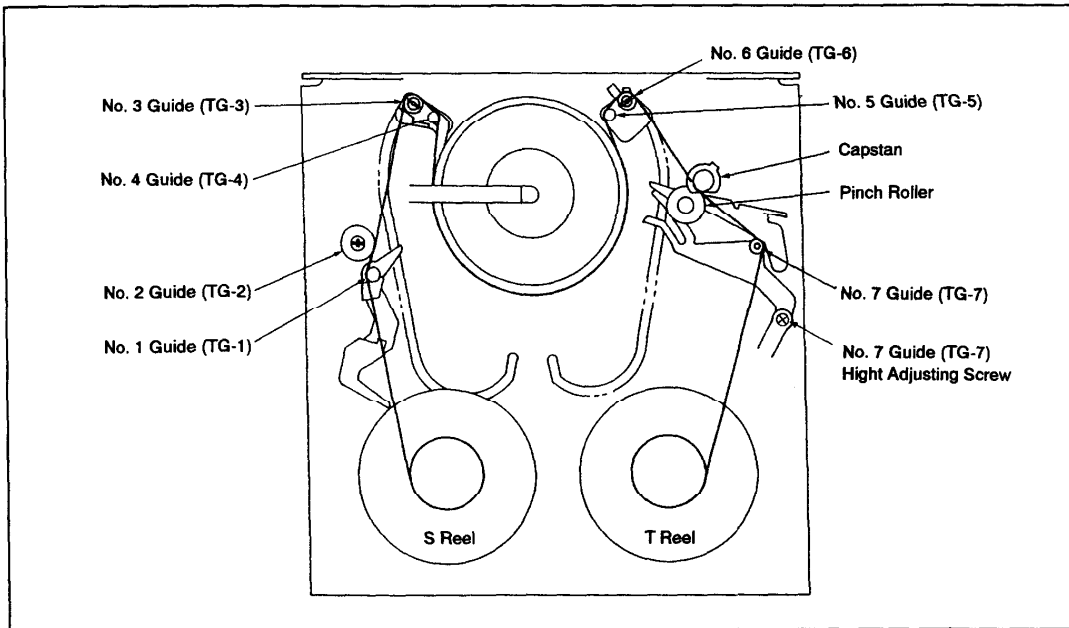
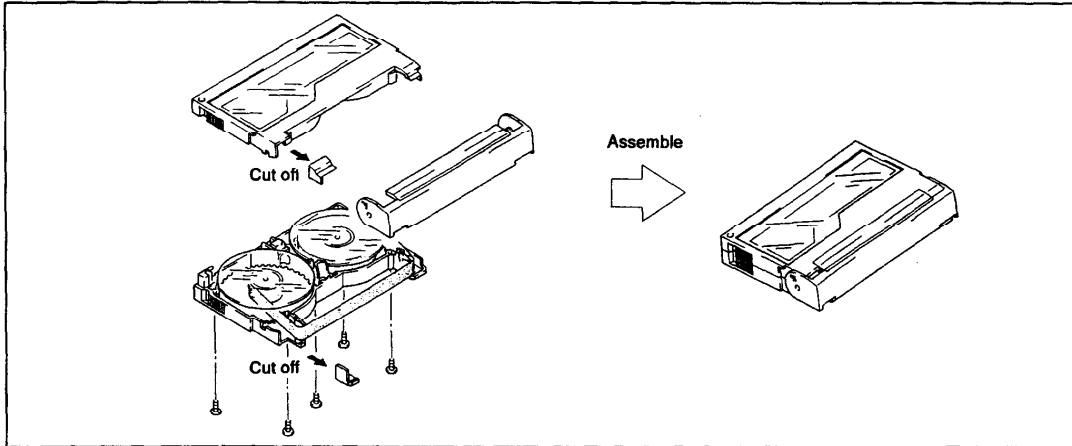


Fig. 4-2.

4-2. PREPARATIONS FOR ADJUSTMENT

- 1) Clean tape path surfaces (tape guides, drum, capstan shaft, pinch roller) (See Fig. 4-2).
- 2) Connection of oscilloscope and output method of waveform.
CH 1: RF signal output of the drum head (V RF OUT)

Method for signal output:

Short-circuit the external trigger output (RF SW. P) and GND.

Example:

NTSC GV-8

PAI. GV-8E

CH 1: Pin ③ (V RF OUT) of CN018 on the

{ SV-34 board (GV-8)

{ SV-35 board (GV-8E)

Method for signal output:

Short-circuit pin ① (GND) and pin ② (RF SW.P)

of CN018 on the

{ SV-34 board (GV-8)

{ SV-35 board (GV-8E)

- 3) Play back the alignment tape for tracking adjustment (Ref. No. J-5).
- 4) Confirm that both the entrance and exit side RF waveforms of the oscilloscope are flat (See Fig. 4-4). If they are not, adjust as follows.

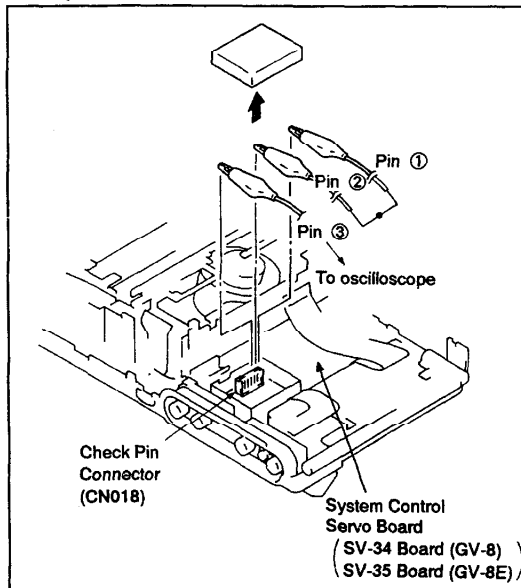


Fig. 4-3.

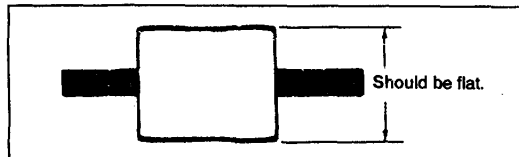


Fig. 4-4.

4-3. TRACKING ADJUSTMENT (See Fig. 4-5.)

- 1) Play back the alignment tape for tracking adjustment.
- 2) Pass a hexagonal wrench, screwdriver (Ref. No. J-11) or the like through the hole ①, loosen the lock screw ② a little, then make the entrance side waveform flat by turning the No. 3 guide (TG-3) ③.
- 3) Pass a hexagonal wrench, screwdriver or the like through the hole ④, loosen the lock screw ⑤ a little, then make the exit side waveform flat by turning the No. 6 guide (TG-6) ⑥.

Note: Take care not to loosen lock screws too much, since guides come loose easily.

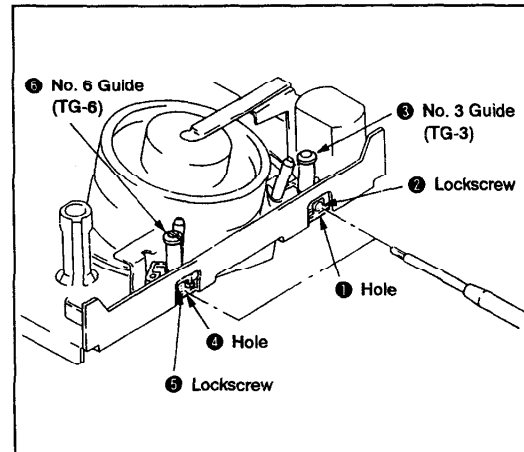


Fig. 4-5.

4-4. TRACKING FINE ADJUSTMENT
(See Figs. 4-5. and 4-6.)

- 1) Play back the alignment tape for tracking adjustment and set the track shift mode.
- 2) Confirm whether the waveform is flat. If it is not, turn the No. 3 (TG-3) and No. 6 (TG-6) guides so that it becomes flat.
- 3) Fix the No. 3 guide ③ by tightening its lock screw ②. Then confirm that the entrance side waveform has not changed.
- 4) Fix the No. 6 guide ⑥ by tightening its lock screw ⑤. Then confirm that the exit side waveform has not changed.

Note: The set screws ② and ⑤ should be tightened with a tightening torque of approx. 200g·cm ± 10%.
If tightened too much, there is danger of damaging the thread.

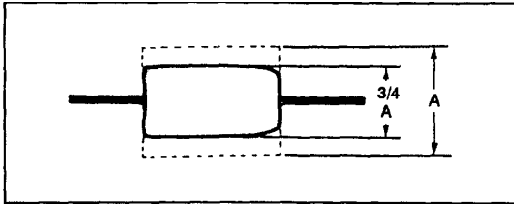


Fig. 4-6.

4-5. No. 2 GUIDE (TG-2) ADJUSTMENT

When the No. 2 guide has been turned or replaced, perform height presetting before this adjustment.

4-5-1. No. 2 Guide (TG-2) Height Presetting
(See Fig. 4-7.)

- 1) Adjust the height from the mechanism chassis upper surface to the TG-2 upper flange ① upper surface to 18.6 mm by rotating the TG-2 upper flange ①.

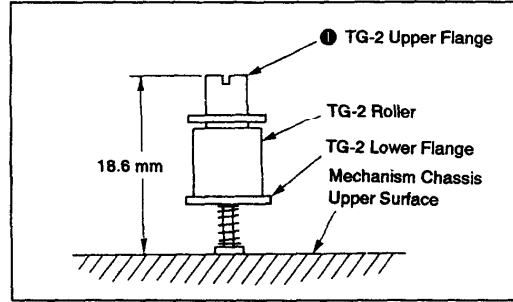


Fig. 4-7.

[Reference]

This U mechanism is equipped with four adjustable guides (TG-2, 3, 6 and 7). To raise or lower the respective guide rotate the corresponding adjustment screw as shown below.

Guide	Guide adjustment	Rotating direction of adjustment screw
TG-2, 3, 6	Raise	Counterclockwise
	Lower	Clockwise
TG-7	Raise	Counterclockwise
	Lower	Clockwise

4-5-2. No. 2 Guide (TG-2) Adjustment (See Figs. 4-8. and 4-9.)

- 1) Play back a thin tape like the P6-120MP, etc. and set the REV mode.
 - 2) Confirm that the tape is not bent at the lower flange ② of the No. 2 guide (TG-2) ① (See Fig. 4-8). If it is, turn the upper flange ③ of the No. 2 guide (TG-2) ① clockwise with a screwdriver, lowering it until the tape is straightened.
 - 3) Play back the alignment tape for tracking adjustment.
 - 4) Perform tracking adjustment and tracking fine adjustment as described in sections 4-3. and 4-4.
 - 5) In the track shift mode, CUE/REV the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds.
 - 6) If the waveform is not normal (See Fig. 4-9), turn the upper flange ③ of the No. 2 guide (TG-2) ① 90° counter-clockwise and repeat step 5.
- Repeat steps 5 and 6 until a normal waveform is obtained. Then, confirm that the tracking waveform has not changed. If it has, perform fine adjustment of entrance side tracking and repeat step 5.

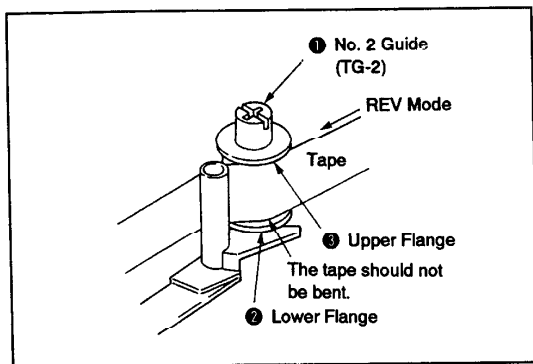


Fig. 4-8.

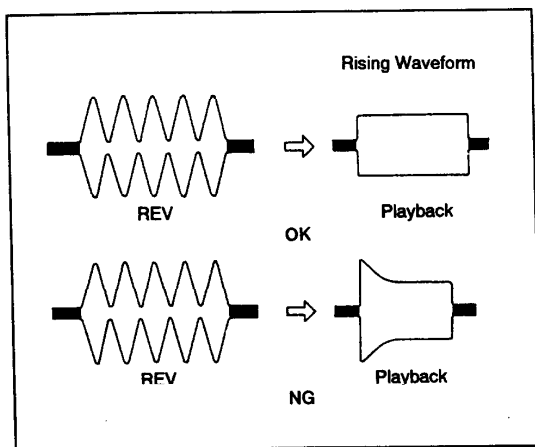


Fig. 4-9.

4-6. No. 7 GUIDE (TG-7) ADJUSTMENT (See Fig. 4-10.)

- 1) Play back the alignment tape for tracking adjustment and set the REV mode.
- 2) Confirm that the tape is not bent between the No. 6 guide (TG-6) ① and the capstan ②. If it is, turn the height adjusting screw ④ of the No. 7 guide (TG-7) ③ until the tape is straightened.
- 3) Set the playback mode again and confirm that the tape is not bent between the capstan ② and the height adjusting screw ④ of the No. 7 guide (specification: 0.5 mm or less). If the tape is bent beyond the specification, turn the No. 7 guide (TG-7) ③ until bending is within the specification (0.5 mm). If in the REV mode tape bending between the No. 6 guide (TG-6) ① and the capstan ② is 0.3 mm or less, adjustment can be considered completed.

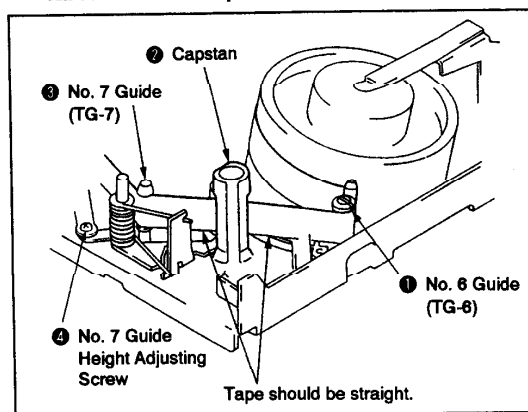


Fig. 4-10.

4-7. CUE AND REV WAVEFORM CHECK
(See Fig. 4-11.)

- 1) Play back the alignment tape for tracking adjustment and set the REV mode. Confirm that waveform peaks maintain a constant pitch of 5 seconds or more (See Fig. 4-11). In case pitch is not constant, perform section 4-4. Tracking Fine Adjustment and section 4-6. No. 7 Guide Adjustment.
- 2) Set the CUE mode. Confirm that waveform peaks still maintain a constant pitch of 5 seconds or more (See Fig. 4-11). Otherwise, perform section 4-4. Tracking Fine Adjustment.

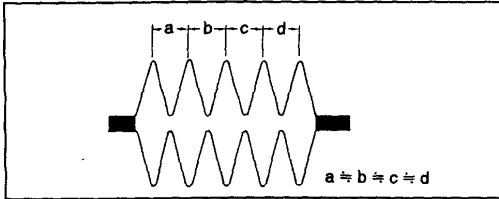


Fig. 4-11.

4-8. CHECK AFTER ADJUSTMENT

4-8-1. Tracking Check

- 1) Confirm that the amplitude of RF waveform is reduced to approx. 3/4 when the track shift mode is set (See Fig. 4-12).
- 2) Then, confirm that the minimum amplitude value (EMIN) is 65% of the maximum value (EMAX) or larger (See Fig. 4-13).
- 3) Confirm that no large fluctuations occur on the waveform (See Fig. 4-14).

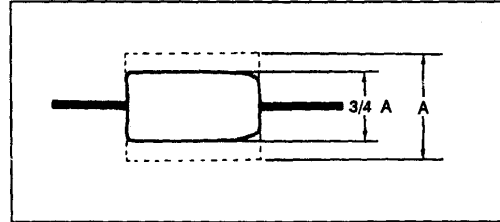


Fig. 4-12.

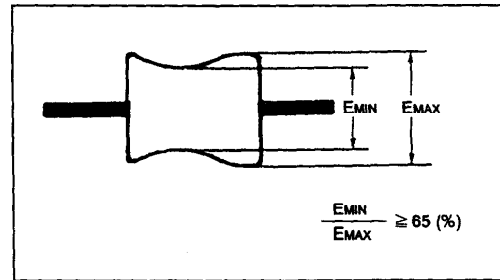


Fig. 4-13.

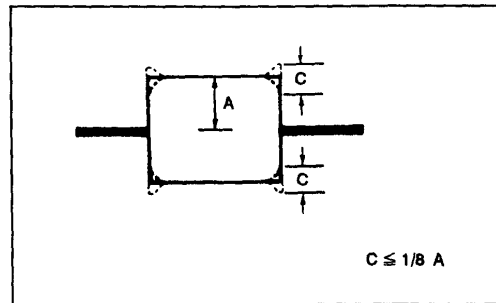


Fig. 4-14.

4-8-2. Rising Check (See Fig. 4-15.)

- 1) Play back the alignment tape for tracking adjustment.
- 2) Cancel the track shift mode.
- 3) Eject the tape, then load it again.
- 4) Set the playback mode and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller (See Fig. 4-15).
- 5) CUE/REV and FF/REW the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller.
- 6) Repeat steps 3) to 5) once more.

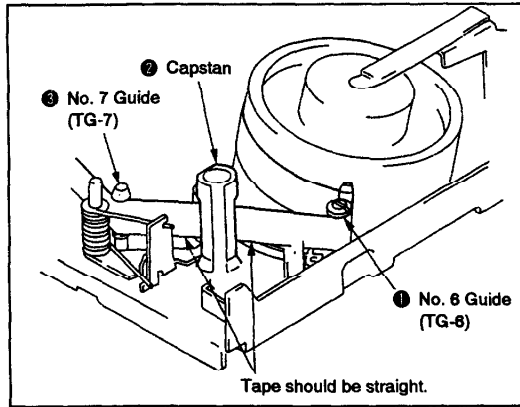


Fig. 4-15.

4-8-3. Tape Path Check (See Fig. 4-16.)

- 1) Play back a thin tape like the P6-120MP (NTSC) or P5-90MP (PAL), etc. and confirm that no tape rising occurs, and that curling is less than 0.3 mm, at the lower flange of the No. 2 guide, the upper flange of the No. 3 guide, the upper flange of the No. 6 guide and the No. 7 guide upper and lower flanges.
- 2) Confirm that no tape rising occurs and that curling is less than 0.3 mm at the flanges of all guide when pressing the FF button in the playback mode to set the CUE mode, or the REV button to set the REV mode.

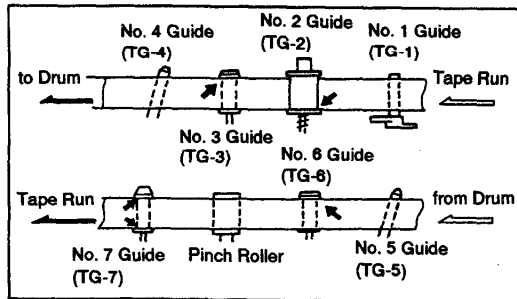


Fig. 4-16.