EV-S3000
RMT-V120

SERVICE MANUAL

US Model
Canadian Model

Remote commander is available as a unit, See page 195 for repair parts.

video Hi8

U' MECHANISM

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

SPECIFICATIONS

System

Video recording system
Rotary two-head helical scanning FM system
Audio recording
Standard: Rotary head, FM system (2 channels)
PCM: PCM system (2 channels)
Video signal NTSC color, EIA standards
Usable cassette 8mm video format cassettes
Tape speed SP: approx. 1.43cm/sec.
LP: approx. 0.72cm/sec.
Maximum recording time
SP: 2 hours 30 minutes
LP: 5 hours
(with Sony P6-150)
SP: 2 hours
LP: 4 hours
(with Sony E6-120)
Fast-forward and rewind time
Approx. 4 minutes (with Sony P6-120 cassette)
Tuner section
Channel coverage
VHF channels 2 to 13
UHF channels 14 to 69
Cable TV channels 1 to 125
VHF/UHF output signal
Channel 3 or 4 (selectable)
75 ohms, unbalanced
VHF/UHF input signal
75 ohms, F-type connector for VHF/UHF IN and VHF/UHF OUT

PCM

Sampling frequency	31.5KHz
Audio frequency	20Hz to 15 KHz
Dynamic range	90dB (in playback)
Wow and flutter	Less than 0.005 % RMS

Inputs and outputs

Video input LINE 1/2 VIDEO (phono jack)
(1 each)
Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
Video output LINE OUT/MONITOR OUT VIDEO
(phono jack)
(1 each)
Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative

—continued on next page—

MICROFILM

Hi 8 VIDEO CASSETTE RECORDER

SONY

S VIDEO input LINE IN 1/2 S VIDEO
(4-pin, mini-DIN)
(1 each)
Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
Chrominance signal: 0.286 Vp-p, 75 ohms, unbalanced

S VIDEO output LINE OUT/MONITOR OUT S VIDEO
(4-pin, mini-DIN)
Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
Chrominance signal: 0.286 Vp-p, 75 ohms, unbalanced

Audio input LINE 1/2 AUDIO (phono jack)
(2 each)
Input level: –7.5 dBs
Input impedance: more than 47 kilohms

Audio output LINE OUT/MONITOR OUT AUDIO
(phono jack)
(2 each)
Standard impedance: –7.5 dBs at load impedance 47 kilohms
Output impedance: less than 10 kilohms

CONTROL S IN Minijack

CONTROL L 5-pin DIN (rear panel)
(Minijack) (front panel)

Timer

Clock Quartz lock

Timer indication 12-hour digital indication

Timer setting Only for recording

6 events/1 month max.

General

Power requirements 120 V AC, 60 Hz

Power consumption 30W(max.)

Operating temperature 5°C to 40°C (41°F to 104°F)

Storage temperature –20°C to 60°C (–4°F to +140°F)

Dimensions Approx. 470 x 101 x 330 mm (w/h/d)
Approx. 18 x 4 x 13 inch

Weight Approx. 6.1 Kg (13 lb 8 oz)

Remote Commander RMT-V120

Remote control system Infrared control

Commande mode Selectable VTR 1, 2 or3

Power requirements 3V DC
2 size AA batteries
(IEC designation R6)

Design and specifications subject to change without notice.

Supplied accessories

- Remote Commander RMT-V120 (1)
- Size AA (R6) batteries (2)
- External antenna connector (1)
- 75-ohm coaxial cable with F-type connectors (1)
- Audio/video connecting cable (3 phono to 3 phono) (1)
- S VIDEO connecting cable (1)
- LANC cable (1)

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 line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Check the B+ voltage to see it is at the values specified.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

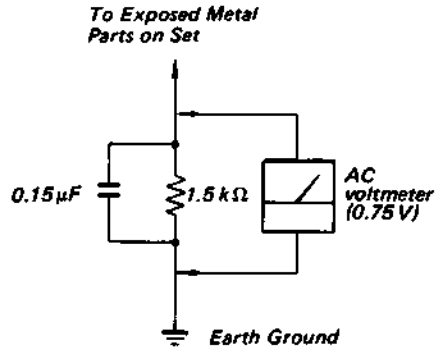


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

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

SECTION 1
SERVICE NOTE

1-1. REMOVAL OF CASSETTE AT FAILURE WITH CASSETTE INSERTED

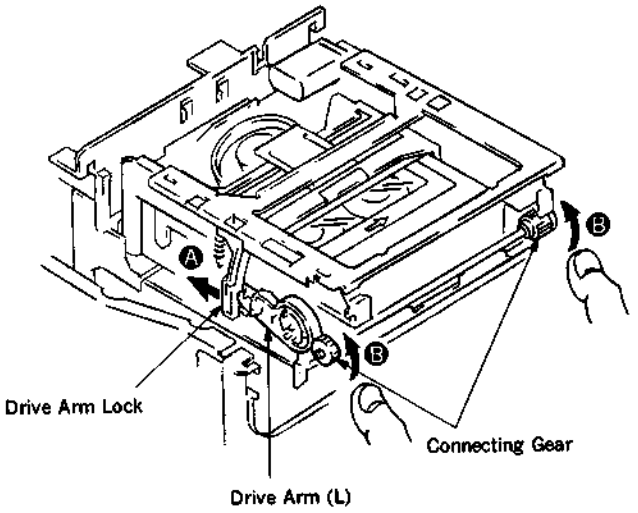
Ⓐ If tape is wounded on the drum and it cannot be removed: Rotate the capstan motor wheel in either direction and rotate the S or R reel to house the tape. Then, perform Procedure Ⓑ.

Ⓑ If tape is housed in the cassette half and cannot be removed:

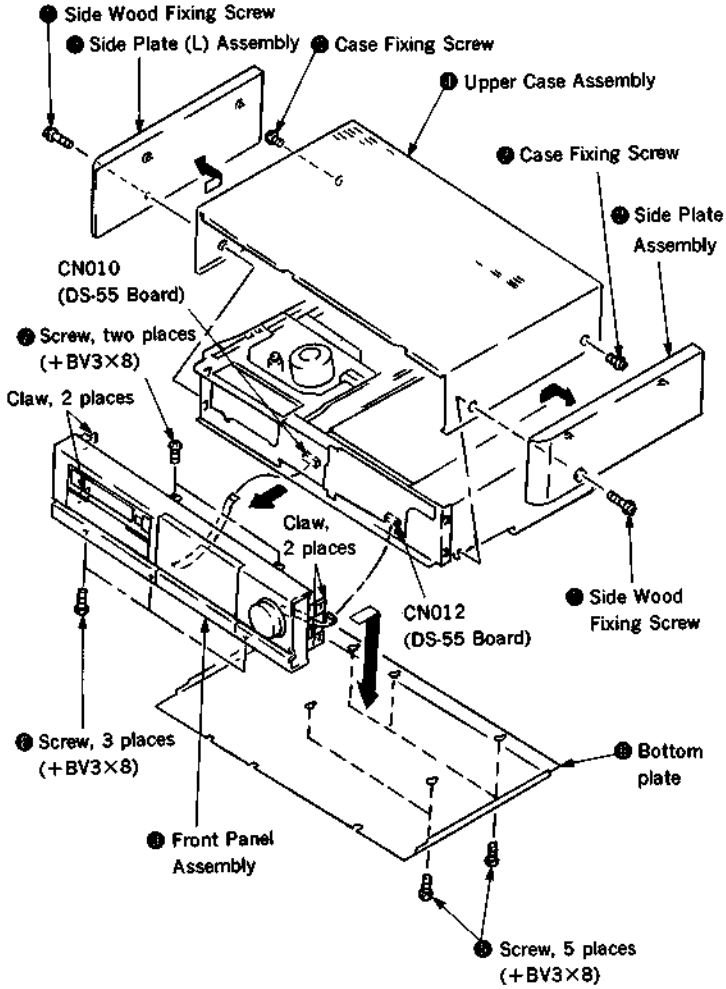
① Remove the MD block. (For removal, refer to Section 3-8.)

② Release the drive arm lock from the drive arm (L) located between the L frame and the left side of the cassette controller in the arrow direction Ⓐ.

③ Rotate the connecting gear in the arrow direction Ⓑ with both the thumbs.



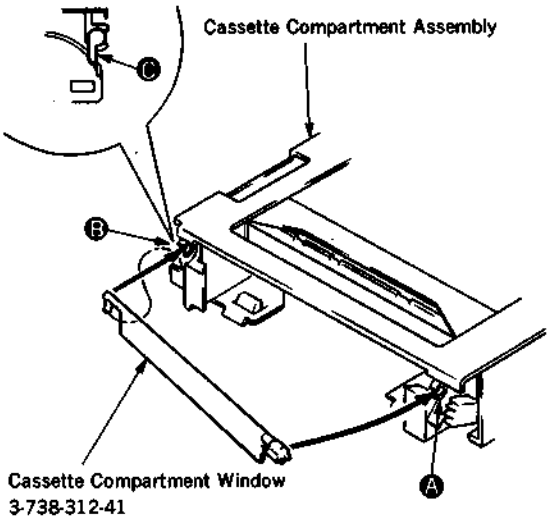
1-2. REPLACEMENT OF EXTERNAL PARTS



1-3. REPLACEMENT OF CASSETTE DOOR ASSEMBLY

1) Remove the front panel.

2) First undo Ⓐ portion toward you and then undo Ⓑ.



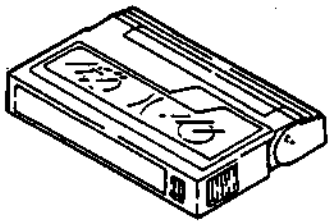
3) When installing, as shown above, first put in Ⓑ portion by setting the claw Ⓒ. Then, put in Ⓐ portion and install so that the door hangs almost vertically.

1-4. CLEANING OF VIDEO HEAD AND RUN SYSTEM

Method 1

〔Cleaning Method with Cleaning Tape〕

- A cleaning cassette should be used. (When using, the attached manual for the cleaning cassette should be thoroughly read.)



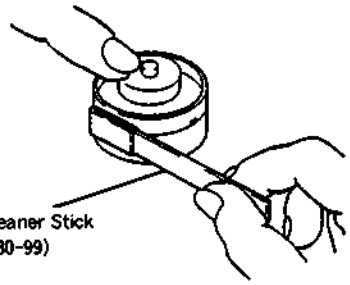
Method 2

〔Cleaning Method with Cleaning Liquid〕

①Remove the upper case of the video deck.

②Apply cleaning liquid to a head cleaner stick.

③As shown in the right figure, press the head cleaner stick lightly. Turn the rubber of the rotary upper drum gradually and clean the video deck.



〔Cleaning Method for Run System〕

①Apply cleaning liquid to a head cleaner stick.

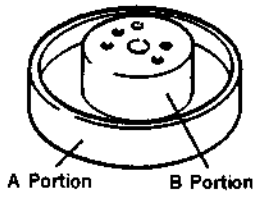
②Clean the guides which tape touches directly and the pinch roller with the head cleaner.

1-5. REPLACEMENT OF UPPER ROTARY DRUM

Method 3

Caution

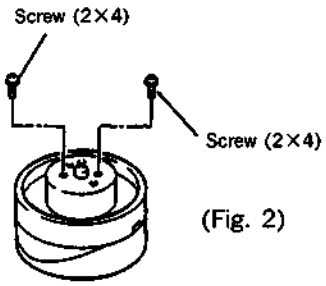
- Particular care must be taken when handling the video head and the terminals
- When handling the rotary upper drum, do not touch the side (A portion) and hold the top (B portion) (See Fig. 1)



(Fig. 1)

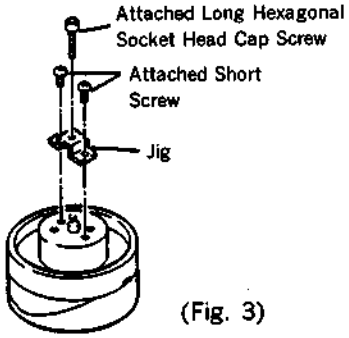
Removal of Rotary Upper Drum

①Remove two screws (2×4) (See Fig. 2).



(Fig. 2)

②Fix the jig (supplied with the spare rotary upper drum) with the two attached short screws. Then, put the attached long screw into the jig until the rotary upper drum may be removed (See Fig. 3).

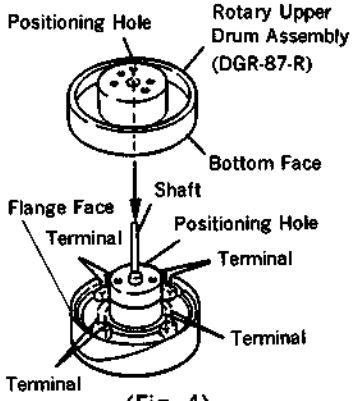


(Fig. 3)

Installation of New Rotary Upper drum

①Clean the flange face and the bottom face of the new rotary upper drum (See Fig. 4).

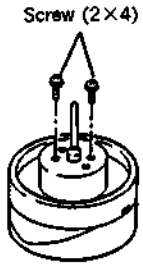
②Insert the shaft attached to the jig into the positioning hole in the lower drum. Then, put the shaft through the positioning hole in the new rotary upper drum and set the drum lightly.



(Fig. 4)

③With the shaft inserted into the positioning hole, push into the upper drum lightly with a hand. If the drum is not allowed to be bottomed, alternately tighten two screws (2×4) gradually and install the drum (See Fig. 5)

④Pull out the shaft inserted. If the shaft is not allowed to be withdrawn smoothly, go back to Step ② and redo the procedure.



(Fig. 5)

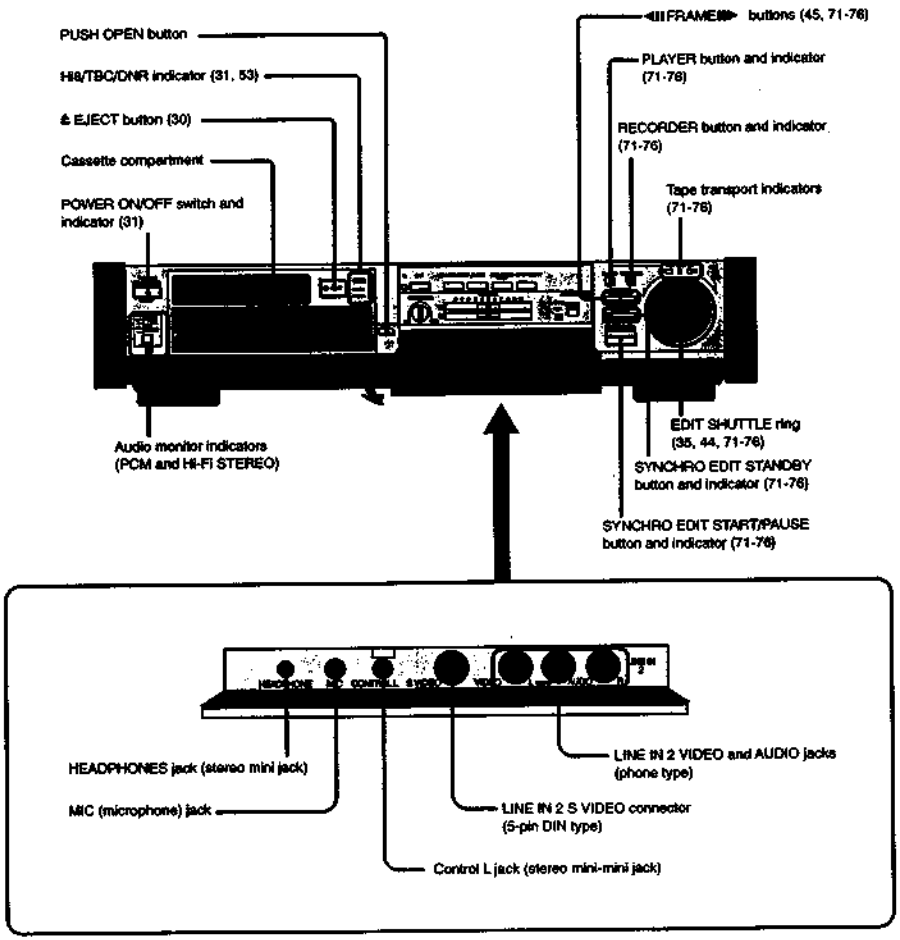
⑤Once the drum has been replaced, clean the video head and the run system with a head cleaner stick (See "Cleaning Method 2 for Video Head and Run System).

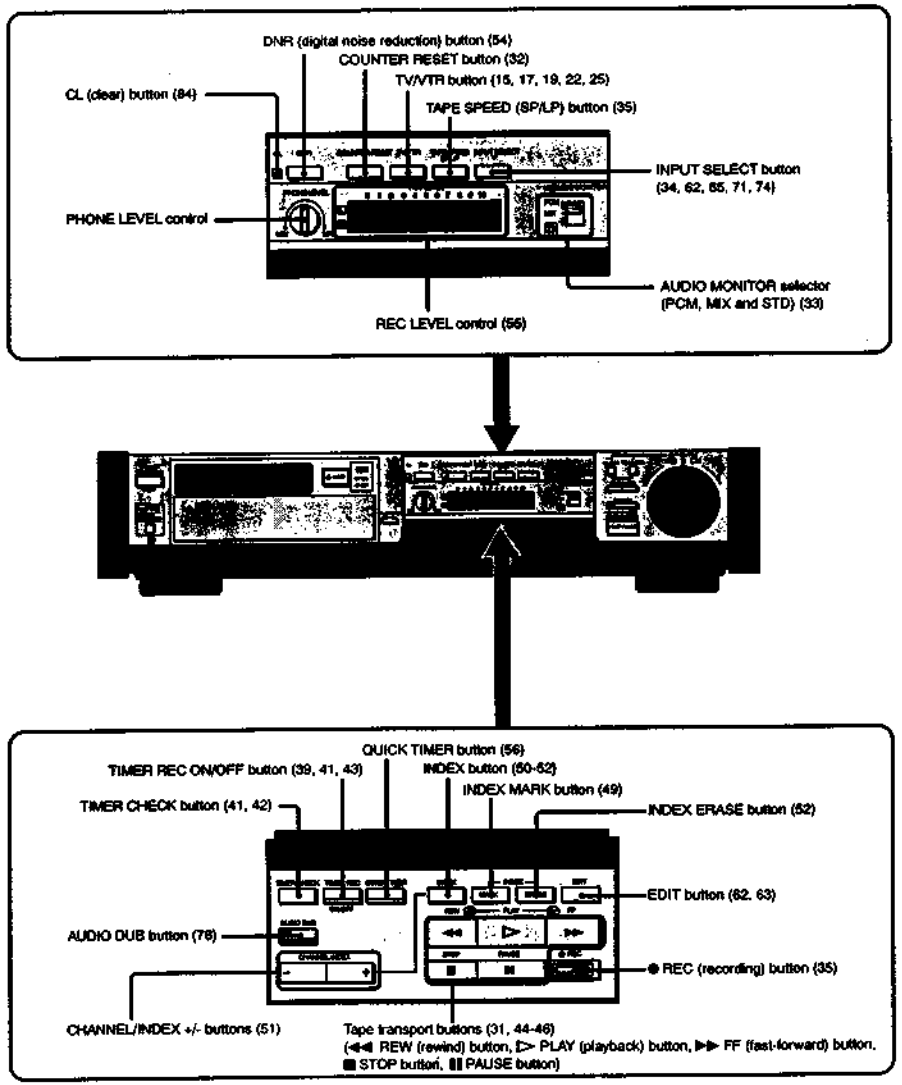
This section is extracted from instruction manual.

Identifying the Parts and Controls

Front Panel

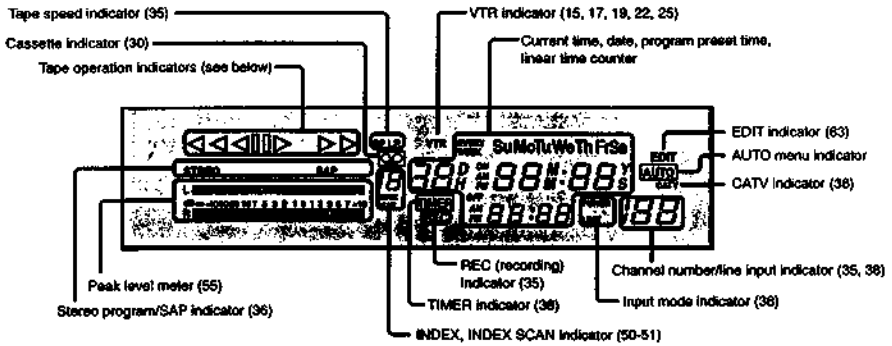
The function of each control is explained on the page indicated in parentheses ( ).





Display Window

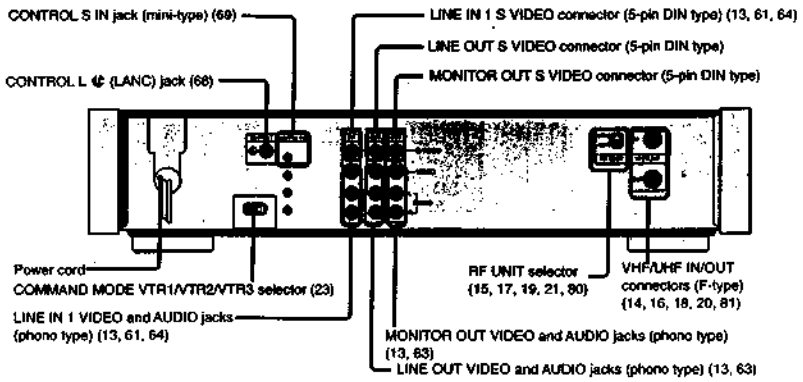
Each indication is explained on the page indicated in parentheses ( ).



REC	Recording		Slow playback, frame playback (reverse)		Picture search, locked picture search (forward)
REC II	Recording pause		Play pause (forward)		Picture search, locked picture search (reverse)
	Playback, double speed playback (forward)		Play pause (reverse)		Auto play (REW-PLAY)
	Playback, double speed playback (reverse)		Fast forward	AUTO	
	Slow playback, frame playback (forward)		Rewind		

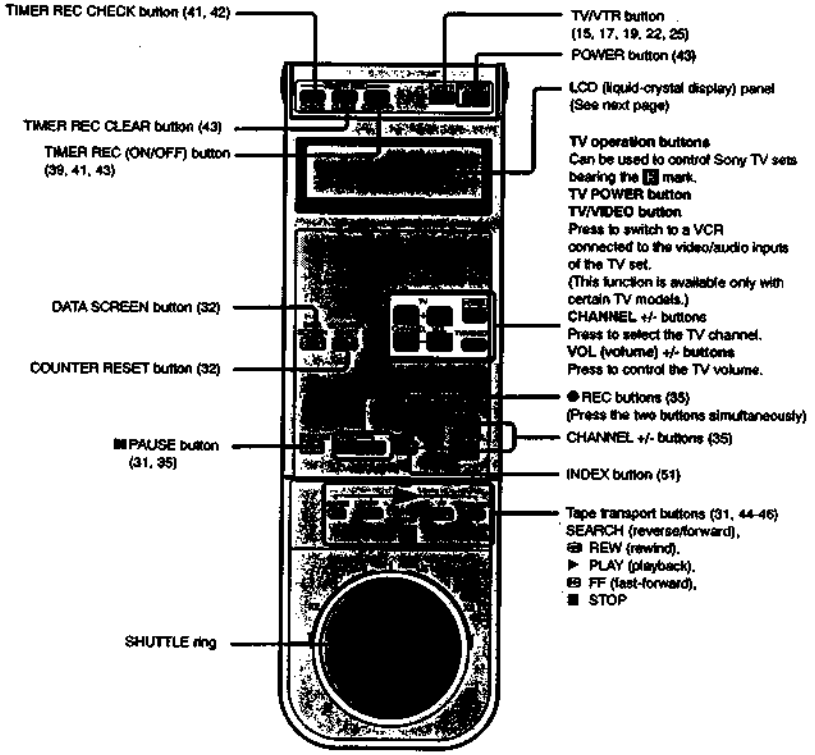
Rear Panel

The function of each control is explained on the page indicated in parentheses ( ).



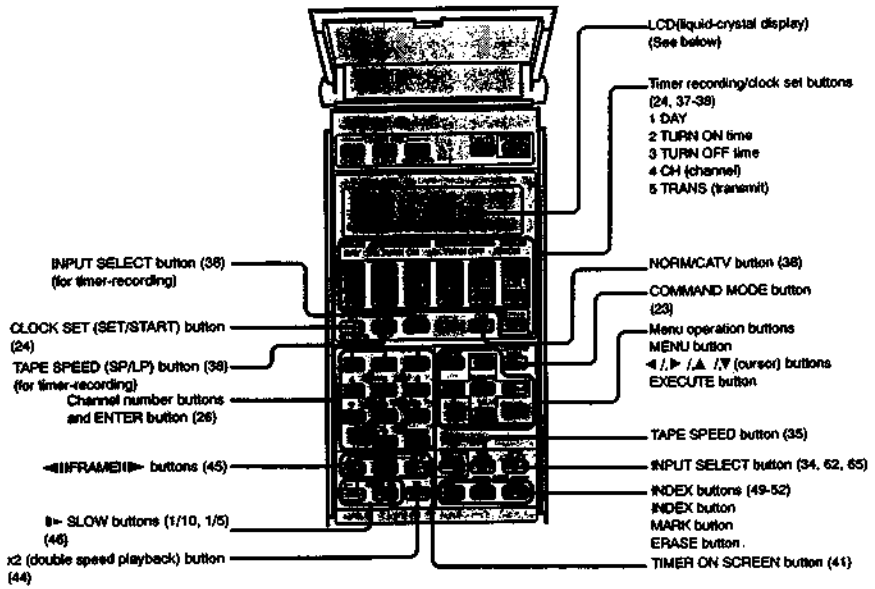
Remote Commander (Cover Closed)

The function of each control is explained on the page indicated in parentheses ( ).



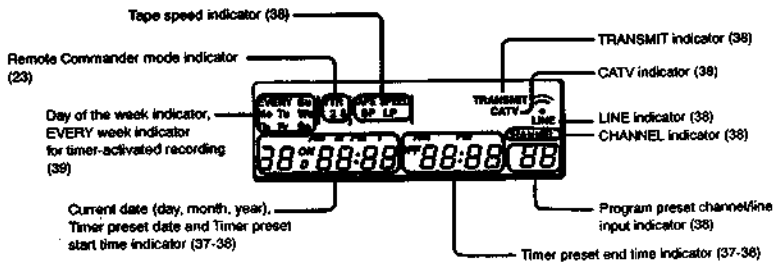
Remote Commander (Cover Opened)

The function of each control is explained on the page indicated in parentheses ( ).



LCD (Liquid-crystal display)

Each indication is explained on the page indicated in parentheses ( ).



Hookups and Getting Started

Before you can use your VCR for the first time, you need to connect it to your TV and set it up to receive programs for viewing and recording. This section explains how to hook up, set up, and operate your VCR so that you can start enjoying it right away. There are, however, many types of TVs available and many different ways in which your TV can be hooked up. As a result, this manual describes several ways your VCR can be connected.

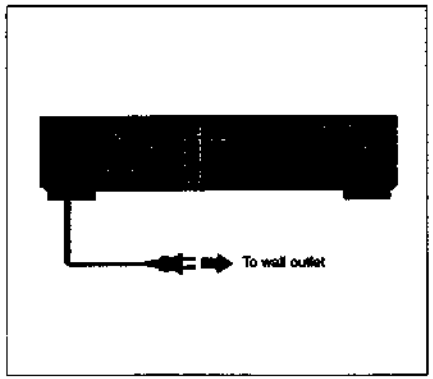
To hook up your VCR so that it works best for you, first scan through this section to find the diagram that best illustrates the way your TV is presently connected (antenna or cable/cable box). And then use the accompanying diagrams and procedures to complete your VCR's connections.

When	See
Your TV has audio/video (A/V) inputs	**Hookup 1** Audio/Video Hookup (page 13)
Your TV doesn't have audio/video (A/V) inputs	**Hookup 2** Antenna Hookup (page 14)
You have cable, and record only unscrambled channels	**Hookup 3** Simple Cable Hookup (page 16)
You have cable, and record scrambled and unscrambled channels	**Hookup 4** Alternate Cable Hookup (page 18)
You have cable, and use A/B switch	**Hookup 5** Advanced Cable Hookup (page 20)

After you've completed the connections, follow the instructions for setup. (During setup, if you need more details of the procedures described, page numbers are provided where you can find complete, step-by-step instructions.) After you've completed the setup, you're ready to use your VCR. Follow the instructions provided in "To watch TV," "To Watch the VCR," "To Record a program using the timer," for your specific hookup. (Again, if you need step-by-step instructions, page numbers are provided where you can find these instructions.)

Before making the connections, check the following points:

- Turn off the power to the VCR and TV.
- Do not connect the AC power cord until all of the connections are completed.



- Make connections firmly. Loose connections may cause picture distortion.
- If your TV doesn't match any of the examples provided, consult your nearest Sony dealer or qualified technician.

Caution
Connections between the VCR VHF/UHF OUT connector and the antenna terminals of a TV receiver should be made only as shown in the instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of RF devices. Never connect the output of the recorder to an antenna or make simultaneous (parallel) antenna and recorder connections at the antenna terminals of your receiver.

NOTE TO CATV SYSTEM INSTALLER IN THE U.S.A.
This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Caution
Do not place the VCR near a TV. The playback picture may become distorted.

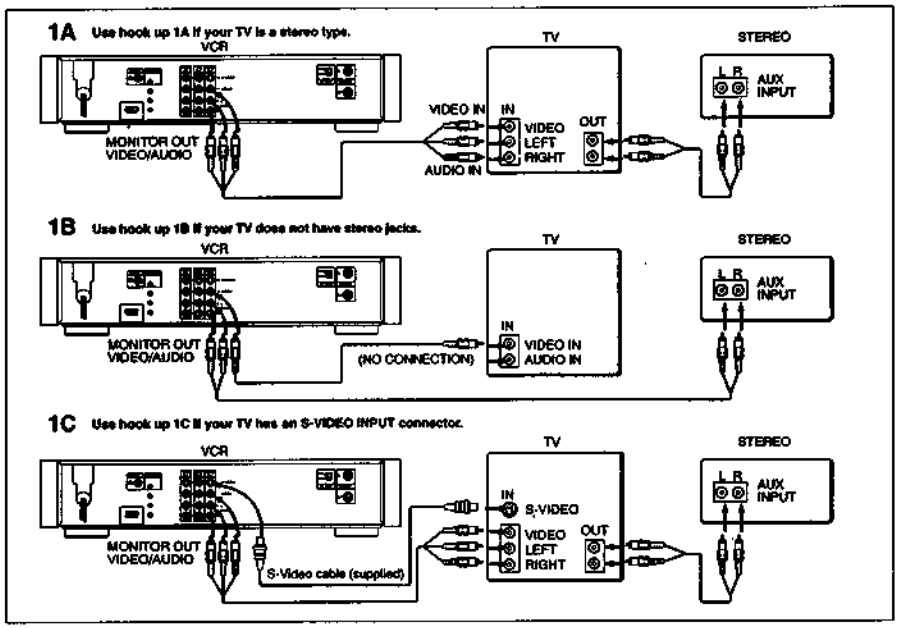
Hookup 1

Audio/Video (A/V) Hookup

If your TV has audio/video (A/V) input jacks, you will get a better picture and sound if you hook up your VCR using these connections. In addition, for a true "home theater" experience, you should connect the audio outputs of your VCR or TV to your stereo system. If your TV doesn't have A/V inputs, see the following pages for antenna or cable hookup.

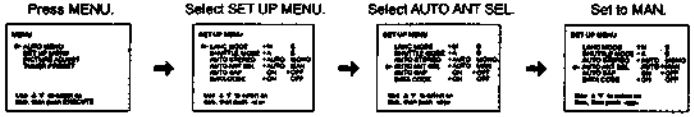
If you only wish to play back movies, you're finished after you've made these connections. If you want to record programs off the air or off your cable TV system, please make the A/V hookup on this page first, then proceed to the following pages for antenna or cable hookup

Note:
- When you use the LINE OUT jacks instead of the MONITOR OUT jacks, you can't perform setup operation.



After you've hooked up your TV using the A/V connections, use the following procedure to set up and use the VCR with your TV.

A/V Setup and Operation
Set the AUTO ANT SEL setting to MAN.



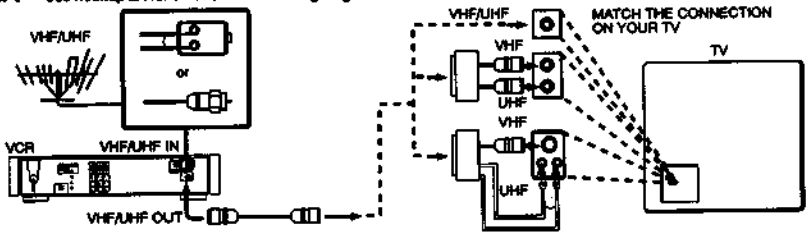
Details are on page 28.

Hookup 2

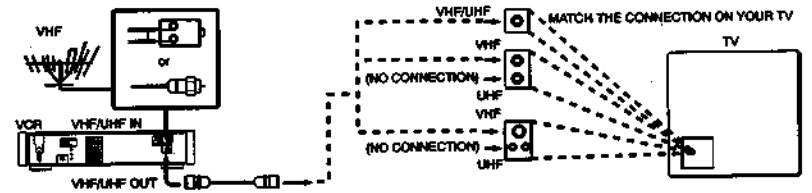
Antenna Hookup

Make the following connections if you're using an antenna (not a cable TV).

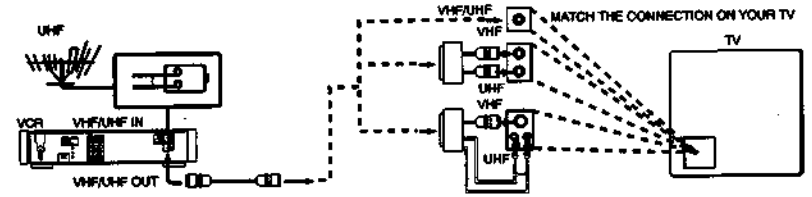
2A Use hookup 2A for a VHF/UHF antenna (you get Ch 2-13 and Ch 14 or higher).



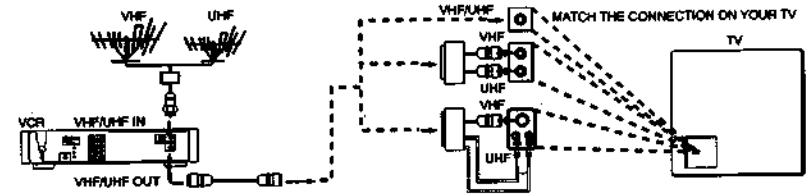
2B Use hookup 2B for VHF only (you get Ch 2-13 only).



2C Use hookup 2C for UHF only (you get Ch 14 or higher).



2D Use hookup 2D if you're using separate VHF and UHF antennas.



Details are on pages 81 and 82.

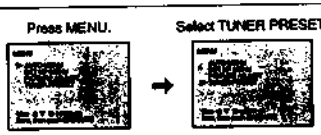
VCR Setup (Antenna)

1 Set the RF UNIT on the VCR's rear panel to 3CH or 4CH.
If you made A/V connections, skip this adjustment.

Set to whichever channel is not used in your area. If both are used, pick either channel.

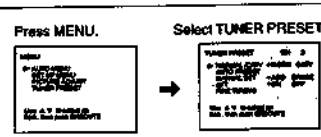
Details are on page 80.

2 Set NORMAL/CATV to NORM.



Details are on page 25.

3 Preprogram the channels into the VCR.



Details are on page 25.

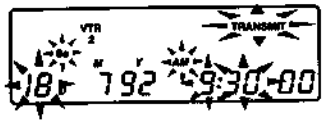
Clock Setting

1 Open the cover of the Remote Commander.

2 Press CLOCK SET.

3 Press DAY to set the date, month and year.

4 Press H (hour) and M (minute) under the TURN OFF section to set the hour and minute.



5 Transmit the setting to the VCR with TRANS, and close the cover.

Details are on page 24.

To Watch TV

1 Turn your VCR off, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
2 Tune TV normally.

To Watch the VCR

1 Tune the TV to Ch. 3 or 4, whichever you set on the back of the VCR (If you made the A/V connections on page 13, set your TV to the A/V input instead.
2 Insert a cassette and press ▷ PLAY.
3 If there's no picture on your TV, press the VCR's TV/VTR button until the VTR indicator appears in the VCR's display.

Details are on page 31.

To Record a Program Using the Timer

1 Insert a cassette.
2 Open the cover of the Remote Commander.
3 Press DAY, TURN ON, TURN OFF and CH to set date, start time, end time and channel number.
4 Transmit your programmed timer data with TRANS.

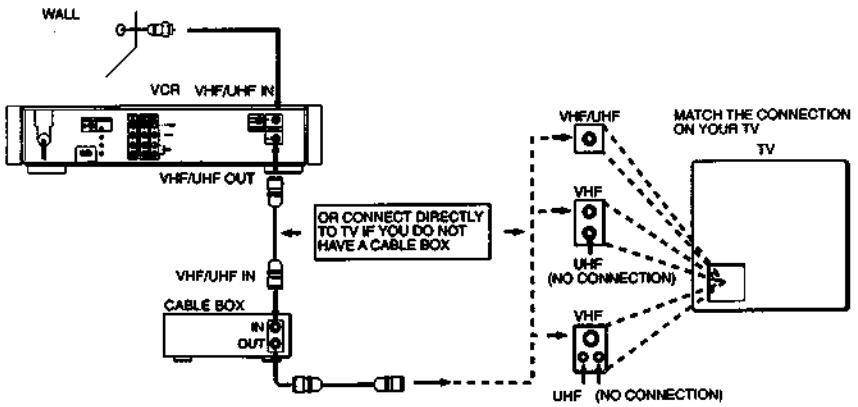
Details are on pages 37 and 38.

Hookup 3

Simple Cable Hookup

Recommended Use:
Since this is the simplest hookup, we recommend that you try this hookup first.
If you cannot record the channels you want, you'll need to change your hookup to one of the choices on the following pages, or contact your cable company for assistance.

Background
This VCR can record virtually any unscrambled cable channel. Some cable systems "scramble" specific channels, usually premium or pay-per-view channels. You will not be able to record scrambled channels with this hookup.



What You Can and Can't Do With This Hookup

What You Can Do
- Record any unscrambled channel directly, without using a cable box.

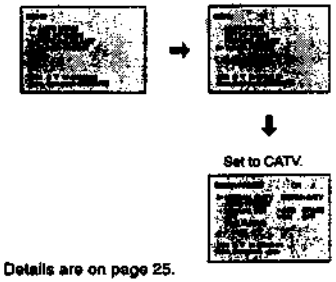
What You Can't Do
- Record scrambled channels that require a cable box.

VCR Setup (Simple Cable)

1 Set the RF UNIT on the VCR's rear panel to 3 CH or 4 CH.
If you made A/V connections, skip this adjustment.

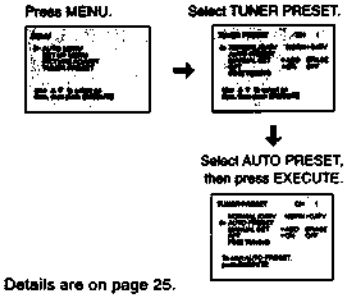
Set to whichever channel is not used in your area. If both are used, pick either channel.
Details are on page 80.

2 Set NORMAL/CATV to CATV.



Details are on page 25.

3 Preprogram the channels into the VCR.



Details are on page 25.

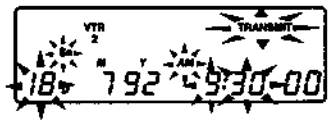
Clock Setting

1 Open the cover of the Remote Commander.

2 Press CLOCK SET.

3 Press DAY to set the date, month and year.

4 Press H (hour) and M (minute) under the TURN OFF section to set the hour and minute.



5 Transmit the setting to the VCR with TRANS, and close the cover.

Details are on page 24.

To Watch TV

1 Turn your VCR off, or press VCR's TV/VTR button until the VTR indicator in the display window goes off.

2 Select the channel with your cable box (if you have one), or directly tune with your TV (if you don't).

To Watch the VCR

1a If you didn't use the A/V input:
- Turn on the cable box.
- Select Ch 3 or 4 on the cable box (whichever you set on the back of the VCR).
- Select the output channel of the cable box (usually 2, 3 or 4) on your TV.

1b If you made the A/V connections on page 13: Set your TV to the A/V input.

2 Insert a cassette and press ▷ PLAY.

Details are on pages 31.

To Record a Program Using the Timer

1 Insert a cassette.

2 Open the cover of the Remote Commander.

3 Press DAY, TURN ON, TURN OFF and CH to set date, start time, end time and channel number.

4 Transmit your programmed timer data with TRANS.

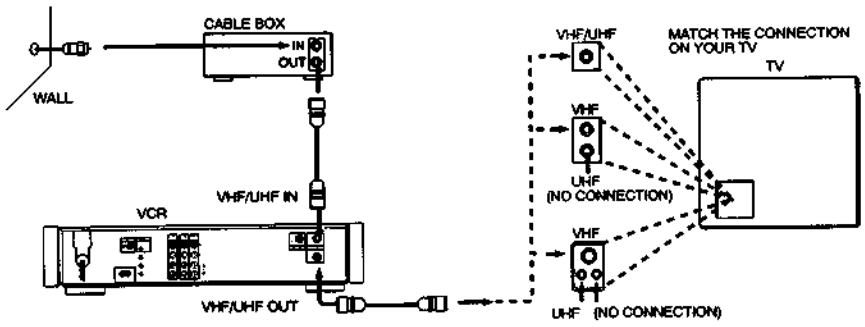
Details are on pages 37 and 38.

Hookup 4

Alternate Cable Hookup

Recommended Use:
This hookup will allow you to record either scrambled or unscrambled channels, however, you will have to set the channel on the cable box for each program you want to record. If your cable system scrambles all or most channels, you must use this hookup. If your cable system only scrambles a few channels, you may prefer Hookup 3 or 5 (on pages 16 and 20, respectively).
Please note that Hookup 3 will not allow you to record scrambled channels.
Hookup 5 will allow you to record either scrambled or unscrambled channels, but will require that you purchase a few extra parts at your local electronics store.

Background
This VCR can record virtually any unscrambled cable channel. Some cable systems "scramble" specific channels, usually premium or pay-per-view channels. Although this hookup will also allow you to record these scrambled channels, you must use the cable box rather than the VCR to select channels.



What You Can and Can't Do With This Hookup

What You Can Do
- Record any channel by selecting the channel on the cable box.

What You Can't Do
- Record with the cable box turned off.
- Record by selecting channels directly from the VCR.
- Record one channel while watching another channel.

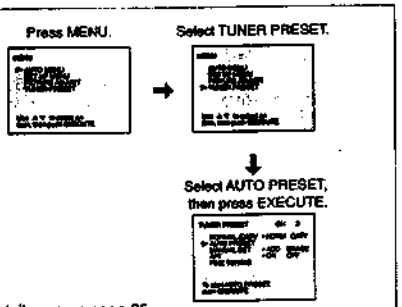
VCR Setup (Alternate Cable)

1 Set the RF UNIT on the VCR's rear panel to 3 CH or 4 CH.
If you made A/V connections, skip this adjustment.

Set to whichever channel is not used in your area.
If both are used, pick either channel.
Details are on page 80.

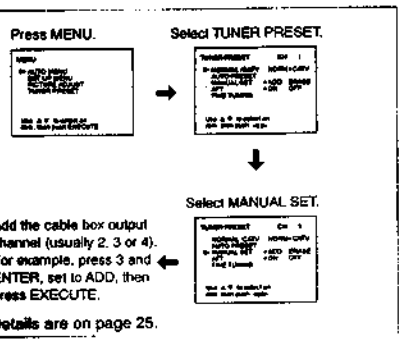
2 Switch on your cable box.

3 Preprogram the channels into the VCR.



Details are on page 25.

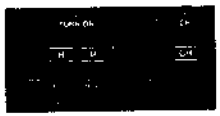
4 Add the cable box output channel (usually 2, 3 or 4).



Details are on page 25.

Clock Setting

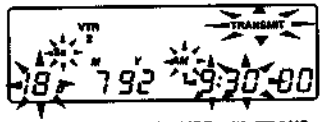
1 Open the cover of the Remote Commander.



2 Press CLOCK SET.

3 Press DAY to set the date, month and year.

4 Press H (hour) and M (minute) under the TURN OFF section to set the hour and minute.



5 Transmit the setting to the VCR with TRANS, and close the cover.

Details are on page 24.

To Watch TV

1 Turn your VCR off, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
2 Switch on your cable box.
3 Tune the TV to the cable box output channel (usually 2, 3, or 4).
4 Select the channel that you want to watch with your cable box.

To Watch the VCR

1 Tune the TV to Ch 3 or Ch 4, (or to A/V input if you made A/V connections).
2 Insert a cassette and press ▷ PLAY.

Details are on page 31.

To Record a Program Using the Timer

1 Insert a cassette.
2 Switch on the cable box.
3 Select channel you wish to record on the cable box.
4 Open the cover of the Remote Commander.
5 Press DAY, TURN ON, TURN OFF and CH to set date, start time, end time and channel number. The channel number must be the same as the cable box output channel.
6 Transmit your programmed timer data with TRANS.
7 Leave the cable box ON.

Details are on pages 37 and 38.

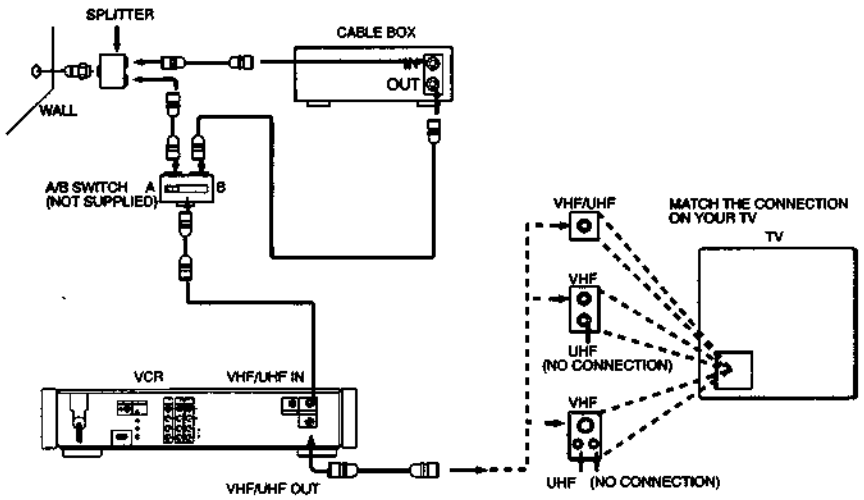
Hookup 5

Advanced Cable Hookup

Recommended Use:
By using the A/B switch, this hookup allows you to record most channels directly from the VCR (position "A"). You only use position "B" and the cable box if you want to record a "scrambled" channel. This gives you the most convenient operation of the VCR.

Background
This VCR can record virtually any unscrambled cable channel. Some cable systems "scramble" specific channels, usually premium or pay-per-view channels. This hookup will allow you to record unscrambled channels by selecting "A" on the A/B switch, and tuning the channel directly on your VCR. To record "scrambled channels, select "B" on the A/B switch, and select the channel using the cable box. If your cable system scrambles all or most channels, you must use the alternate cable hookup (**Hookup 4**) on page 18.

● **Only one cable is supplied with your VCR. Prepare additional cables for connection.**



What You Can and Can't Do With This Hookup

What You Can Do
- Record unscrambled channels directly with the A/B switch in the "A" position.
- Record scrambled channels through the cable box with the A/B switch in the "B" position.

What You Can't Do
- Record scrambled channels directly without the cable box.
- Watch a different channel while you are recording a scrambled channel.
- Record scrambled channels through the cable box with the A/B switch in the "A" position.

VCR Setup (Advanced Cable)

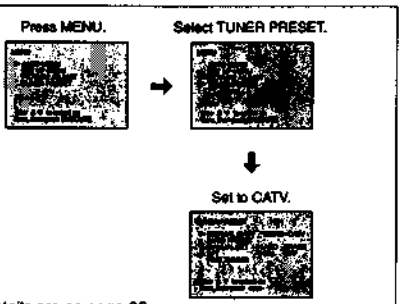
1 Set the RF UNIT on the VCR's rear panel to 3CH or 4CH.
If you made A/V connections, skip this adjustment.

Set to whichever channel is not used in your area. If both are used, pick either channel.

Details are on page 80.

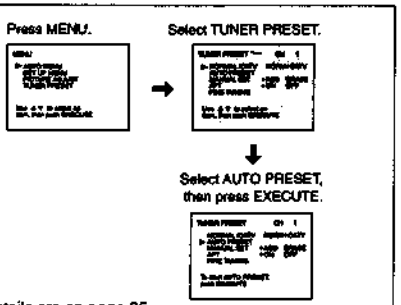
2 Set the A/B switch to "A".

3 Set NORMAL/CATV to CATV.



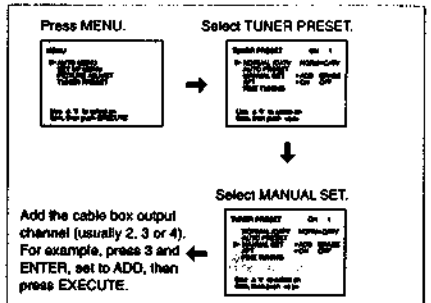
Details are on page 25.

4 Preprogram the channels into the VCR.



Details are on page 25.

5 Add the cable box output channel (usually 2, 3, or 4).



Details are on page 26.

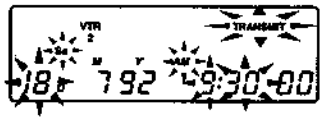
Clock Setting

1 Open the cover of the Remote Commander.

2 Press CLOCK SET.

3 Press DAY to set the date, month and year.

4 Press H (hour) and M (minute) under the TURN OFF section to set the hour and minute.



5 Transmit the setting to the VCR with TRANS, and close the cover.

Details are on page 24.

To Watch TV

1 Turn your VCR off, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
2 Set the A/B switch to "B".
3 Switch on your cable box.
4 Tune the TV to the cable box output channel (usually 2, 3, or 4).
5 Select the channel you want to watch with your cable box.
6 After watching the TV, please remember to return the A/B switch and cable box channel to the correct position.

To Watch the VCR

1 Tune the TV to Ch 3 or 4, (or to A/V input if you made A/V connections).
2 Insert a cassette and press ▷ PLAY.

Details are on page 31.

To Record a Program Using the Timer

● **Unscrambled Channels**

1 Insert a cassette.
2 Switch the A/B switch to "A".
3 Open the cover of the Remote Commander.
4 Press DAY, TURN ON , TURN OFF and CH to set date, start time, end time and channel number.
5 Transmit your programmed timer data with TRANS.
6 Leave the A/B switch in "A".

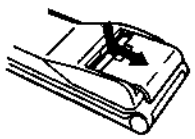
● **Scrambled Channels**

1 Insert a cassette.
2 Switch the A/B switch to "B".
3 Switch on your cable box.
4 Select the channel you want to record on the cable box.
5 Open the cover of the Remote Commander.
6 Press DAY, TURN ON, TURN OFF and CH to set date, start time, end time and channel number. The channel number must be the same as the cable box output channel.
7 Transmit your programmed timer data with TRANS.
8 Leave the A/B switch in "B".

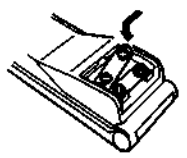
Details are on pages 37 and 38.

Preparing the Remote Commander

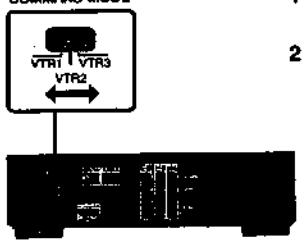
1



2



COMMAND MODE



Note:
When you insert the batteries into the Remote Commander, the indication "VTR 2" appears in the LCD panel. That tells you that the command mode setting of the Remote Commander is set to "VTR 2".

Inserting Batteries

1 Open the lid.
2 Insert two size AA (IEC designation R6) batteries with the polarity lined up correctly.
3 Close the lid.

Notes on the handling of batteries

- With normal use, the batteries should last for approximately six months.
- If you do not use the Remote Commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery together with an old one. Do not use different types of batteries.

Setting the Command Mode

You can select three different positions for Command Mode setting.

1 Set the COMMAND MODE VTR 1/2/3 selector on the rear panel of the VCR to VTR 2.
2 Press the COMMAND MODE button on the Remote Commander to display VTR 2 in the LCD panel. When you insert the batteries into the Remote Commander, the indication "VTR 2" appears.

Controlling Other Sony Video Equipment

1 Press the Remote Commander COMMAND MODE button to display VTR 1 or VTR 3, a position other than the one you selected for this VCR.
2 Set the COMMAND MODE selector of any other video equipment to the same position you selected in step 1.

If other Sony video equipment does not have a COMMAND MODE selector, you can control such equipment using the following settings:

Infrared remote controlled Sony Betamax VCRs: VTR 1
(Some of them may not be controlled in this mode.)
Sony 8mm format VCRs: VTR 2
Sony VHS format VCRs: VTR 3

Setting the Time and Date

You can set the time and date between years 1992 and 2007.
After setting the year, month, date and time, transmit them to the VCR.

Before you begin

- Use the + side of the clock set buttons to increase the digit.
- Use the – side of the clock set buttons to decrease the digit.
- You do not have to set the day of the week.
  The day of the week is automatically set after the date is set.

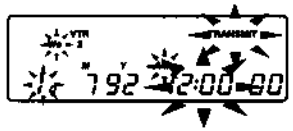
Example of Time and Date Setting

Example: To set to 9:30 am, July 4, 1992

1 Open the cover of the Remote Commander.

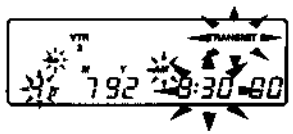
2 Press CLOCK SET.

3 Press D (DAY) until "M7 Y92" appears.
The day is advanced slowly up to 30 (31) days ahead and then the month is advanced.
When the number of your desired month appears, release your finger from the button.



4 Press D (DAY) until "4D" appears.
The day of the week is set automatically.

5 Press the H (hour) and M (minute) buttons under the TURN OFF section to set 9:30 A.M.



6 Point the Remote Commander at the VCR and press TRANS.
A beep sound confirms that the date and clock setting has been correctly transmitted to the VCR and stored in the VCR as well.
The clock on the VCR will start counting.

7 Check the display window on the VCR and close the cover.

If "– : – –" lights up in the display window of the VCR

If the power is interrupted for more than one hour, "– : – –" lights up in the display when the power is restored. You will have to reset the date and clock again.

If a short beep sounds repeatedly

The VCR is in timer recording or quick-timer recording mode and the setting cannot be transmitted.

If the batteries are replaced

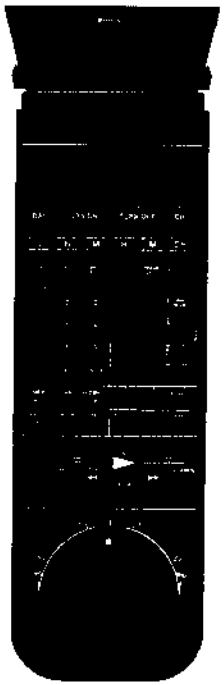
Reset the clock correctly.

If the clock on the Remote Commander is correct but the VCR's clock is incorrect

- Open the cover of the Remote Commander and press CLOCK SET.
- Point the Remote Commander to the VCR and press TRANS.

The present time is correctly transmitted in hours, minutes and seconds.

Presetting the Active Channels



This VCR is capable of receiving VHF channels 2 to 13, UHF channels 14 to 69 and CATV channels 1 to 125. These channels can be preset using the Remote Commander and the TUNER PRESET display. First, we recommend that you preset the active channels in your area using the automatic preset mode. Then, if there are any unwanted channels, disable them manually. If you have already decided which channels you wish to preset on the VCR, set them directly using the channel number buttons.

Before you begin

Before presetting channels, check the following points:

- Turn on the VCR and the TV.
- If you have connected the TV and the VCR using the VHF/UHF OUT on the VCR only, make sure that the TV is set to the correct channel (Ch 3 or Ch 4) for the VCR.
- Press TV/VTR to display the VTR indicator in the display window on the VCR.
- Press INPUT SELECT so that the TUNER indicator and the channel number appear in the display window on the VCR.
- Use ▲ and ▼ to move the cursor (▶).
- Use ◀ and ▶ to select the items.
- To quit setting in the middle of the procedures, press MENU.

Presetting All Receivable Channels Automatically

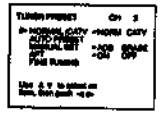
1 Press MENU.
The main MENU appears.

2 Press ▲ or ▼ to move the cursor (▶) to TUNER PRESET.

3 Press EXECUTE.
The TUNER PRESET menu is displayed.

4 Press ▲ or ▼ to move the cursor to NORMAL/CATV.

5 Press ◀ or ▶ to select NORM or CATV.
NORM presets the VHF and UHF channels; CATV presets your cable TV channels. The lowest channel number 2 for NORM, and 1 for CATV, will appear on the screen.



6 Press ▲ or ▼ to move the cursor to AUTO PRESET.

7 Press EXECUTE.

Receivable channels are preset in numerical sequence.

When no more channels can be found, the presetting stops and the picture of the lowest numbered channel is displayed on the TV screen.

Presetting Desired Channels or Disabling Unwanted Channels

After automatic presetting is completed, you can disable and/or add channels.

Before you begin

- Use ▲ and ▼ to move the cursor (▶).
- Use◀ and ▶ to select the items.
- To quit setting in the middle of procedures, press MENU.

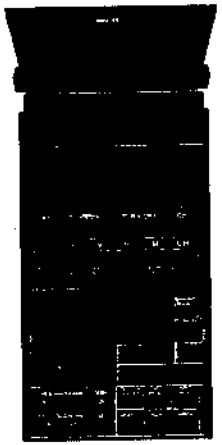
1 Follow steps 1 through 3 in "Presetting All Receivable Channels Automatically" on page 25.

2 Press CHANNEL +/– on the VCR, or press channel number buttons (0 through 9) on the Remote Commander and ENTER to select the channel.

3 To disable channels, press ▲ or ▼ to select ERASE.
To add channels, press ◀ or ▶ to select ADD.

4 Press EXECUTE.

When you press CHANNEL +/–, the disabled channels are removed and the added channels are displayed.



The FINE TUNING indicator

The FINE TUNING indicator shows the operable fine-tuning range and stops at the optimal point of reception. When the VCR's tuner is receiving an optimal broadcast signal, the indicator stops at the center position or one space right or left of the center position. However, even when a broadcast is received in an optimal condition, the indicator may not be at the position described.

Fine-Tuning

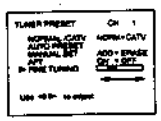
Normally, the Auto Fine Tuning (AFT) setting on the TUNER PRESET menu is set to ON, and the AFT function fine-tunes the picture. If the picture of a channel is not acceptable, fine-tune it manually.

1 Referring to steps 1 through 3 in "Presetting All Receivable Channels Automatically" on page 25, display the TUNER PRESET menu.

2 Press ▲ or ▼ to move the cursor to FINE TUNING.
The fine tuning indicator is displayed.

3 Press ◀ or ▶ to get a clearer picture.
The AFT ON/OFF automatically switches to OFF.

4 If you cannot get a better picture, press ▲ to move the cursor to AFT and select ON. Then, press EXECUTE.



Notes

Pay cable TV systems use scrambled or encoded signals and require special converters (decoders) in addition to the normal cable connection.

Cable TV Channel Assignment

Cable TV systems use letters or numerals to designate the channels. To tune-in a CATV channel, refer to the chart below which shows the CATV channel numbers on this VCR and the corresponding CATV channel. Note that the channel number assignment shown in the chart may not correspond to the channel number used by your local cable company. Check with your local cable TV company for more information on the available channels.

VCR	1	*2	...	13	14	15	16	17
Corresponding CATV channel	A-8	2	...	13	A	B	C	D	E

19	20	21	22	23	24	25	26	27	28	29	30	31
F	G	H	I	J	K	L	M	N	O	P	Q	R

32	33	34	35	36	37	...	94	95	96	97	98	99
S	T	U	V	W	W+1	...	W+58	A-5	A-4	A-3	A-2	A-1

100	...	125
W+59	...	W+84

The VCR is designed to correspond to the standard cable system. However, cable TV services may vary from area to area. Your local cable TV company may adopt either the HRC*1 or IRC*2 cable system. Even in these cases, this VTR is capable of receiving either of these cable systems in the best condition.

***1 HRC (Harmonic Related Carriers)**

All channels except for 5 and 6 are 1250 KHz lower than the standard cable system. Channels 5 and 6 are 750 KHz higher than the standard cable system.

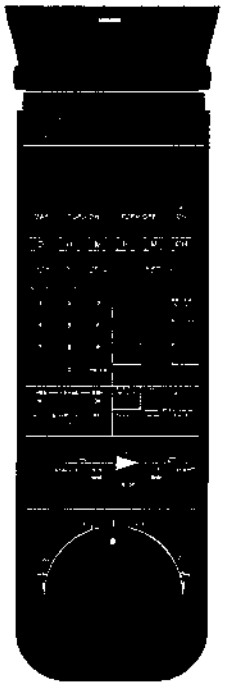
***2 IRC (Incremental Related Carriers)**

All channels except for 5 and 6 are the same as the standard cable system. Channels 5 and 6 are 2000 KHz higher than the standard cable system.

FINE TUNING indicator for receiving HRC or IRC cable systems

Even when the signals are received in optimal condition, the FINE TUNING indicator will not stay at the center position for channels higher or lower than the standard cable system due to the difference in the frequency.

Using the SET UP MENU



Before using the VCR, set options in the SET UP MENU display to your preferred position.

Before you begin

- Use ▲ and ▼ to move the cursor (▶).
- Use ◀ and ▶ to select the items.
- To quit setting in the middle of the procedures, press MENU.

1 Press MENU.
The main MENU appears.

2 Press ▲ or ▼ to move the cursor (▶) to SET UP MENU.

3 Press EXECUTE.
The SET UP MENU appears.

4 Press ▲ or ▼ to move the cursor (▶) to the desired menu choice. (see "Menu Choices" below.)
Next, press ◀ or ▶ to move the dot (•) to select your desired mode setting.

5 Press EXECUTE to return to the original screen.
The settings are stored unless the power plug is disconnected.

Menu Choices

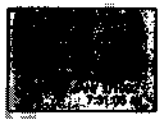
LANC MODE
If you control another VCR using the synchronized editing function of this VCR, set to M.
Set to S in a case except above-mentioned. (For details, see page 70.)

SHUTTLE MODE
- When you perform synchronized editing on a playback VCR without the reverse slow playback function, such as CCD-TR series and EV-S550, set to A .
- When you perform synchronized editing on a playback VCR with the reverse slow playback function such as CCD-V701/V801 and EV-S900, set to B. (For details, see page 70.)

AUTO STEREO
If a stereo program's reception is poor, set to MONO. The program is recorded in monaural but the sound quality may improve. (For details, see page 36.)

What is the data code?

The data code is information of the record year, month, date and time (hour/minutes/seconds) registered on the tape during recording. It may be registered on an 8mm video camera such as CCD-V801. When a tape of this kind is played back on this VCR with the DATA CODE option set to ON, information is displayed on the TV screen as follows. However, information may not be displayed correctly in variable speed playback mode such as play pause.



AUTO ANT SEL (Automatic Antenna Selector)
- If your TV is connected only to VHF/UHF OUT on the VCR inputs, set to AUTO.

  When playing back a cassette, the picture is automatically displayed on the screen simply by selecting the channel for the VCR on the TV. To watch TV programs selected on the TV, press TV/VTR to turn off the VTR indicator in the display window.
- If your TV is connected to both VHF/UHF OUT and MONITOR OUT on the VCR, set to MAN.

  When playing back a cassette, select the input for the VCR on the TV.
  To watch the TV programs selected on the TV, select the tuner input.

AUTO SAP
When you want to record a SAP sound on the standard track, select ON. Every time there is a SAP (Second Audio Program) broadcast, SAP sound is recorded.

When you do not want to record a SAP sound during receiving a SAP broadcast, select OFF. For details, see page 36.

DATA CODE
If you want to display data code (date/time) information on the TV screen when you play back a tape recorded on a VCR which can register data codes, select ON.

If you do not want to display them, select OFF.

Playback

This section shows you how to play back a video cassette.

Caution

Be careful not to allow children to stick their fingers into the cassette loading slot. This may cause injury.

Inserting a Video Cassette

1 Insert a video cassette.

2 Gently press the center of the front side of the cassette until the mechanism draws it into the compartment.
When the cassette has been loaded, the cassette indicator ⌧ lights in the display window and the VCR turns on automatically.

Ejecting the Cassette

Press ⏏ EJECT on the VCR. You can eject the cassette when the power is off. When you press ⏏ EJECT, the power is turned on. After ejecting the cassette, the power automatically shuts off.

Note
You cannot eject a cassette during recording or recording pause mode.

Cassette Care

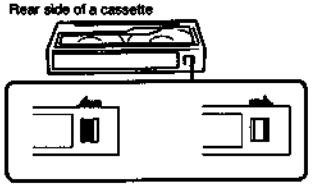
Notes

- Always insert the cassette in the correct position.
- Never insert anything in the small holes on the rear of the cassette.
- 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 VCR for about 15 seconds at the beginning of a cassette before recording.
- When the VCR is not in use, remove the cassette.
- Stick the cassette label in the designated area.
- Securely stick the label not to let it peel off.

Maximum recording time of a cassette

Cassette used	Recording/Playback Time	
	SP mode	LP mode
P6-15	15min	30min
E6/P6-20	20min	40min
E6/P6-30	30min	1h
P6-45	45min	1h 30min
E6/P6-60	1h	2h
P6-90	1h 30min	3h
E6/P6-120	2h	4h
P6-135	2h 15min	4h 30min
P6-150	2h 30min	5h

Rear side of a cassette



Protecting your cassette against accidental erasure
To prevent accidental erasure, slide out the tab on the cassette so that the red color is visible.

To re-record on the cassette, slide the tab back.

Never unplug the power cord during tape transportation

This may cause the tape to be jammed in the VCR. When you need to unplug the power cord, be sure to remove the cassette or turn off the power of the VCR.

Playing Back a Cassette

The VCR automatically detects the type of video system in which the tape was recorded (Hi8 or standard video system, for details see page 54) and plays back the tape accordingly. When a tape recorded in Hi8 video system is played back, the Hi8 indicator on the VCR lights up.

1 Insert a cassette.
The VCR turns on automatically.

2 Turn on the TV.
If your TV is connected to both the VHF/UHF OUT and MONITOR OUT (or LINE OUT) on the VCR, select the input for the VCR.
If your TV is connected only to the VHF/UHF OUT on the VCR, select the channel for the VCR (Ch 3 or Ch 4).

3 Press ▷ PLAY.

To stop playback
Press ■ STOP.

To stop playback for a moment.
Press ⏸ PAUSE.
Press ⏸ PAUSE again or press ▷ PLAY to resume playback.

To advance the tape rapidly
Press ■ STOP, then ▶▶ FF.

To rewind the tape.
Press ■ STOP, then ◀◀ REW.

To view the picture during fast forward mode or rewind mode
You can view the picture momentarily while the VCR is in the fast forward or rewind mode.

Keep pressing ▶▶ during fast forward, and keep pressing ◀◀ during rewind. Release the button to return to fast forward or rewind.

To eject the cassette
Press ⏏ EJECT on the VCR.

Pressing ⏏ EJECT when the VCR is turned off will turn the unit on, eject the cassette and then turn it off again.

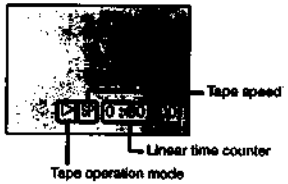
When the tape reaches the end during playback
The VCR automatically rewinds the tape to the beginning and the power remains on.

To turn the VCR on or off
Press POWER.

—21—

The Data Screen

To turn off or call up the data screen on the TV screen, press DATA SCREEN on the Remote Commander.



When the data screen does not appear on the TV screen
Check to see that the MONITOR OUT jacks are connected to the line input jacks of the TV. If you connect your TV to the LINE OUT jacks, the DATA SCREEN doesn't appear.

Indexing Tape Contents

Before recording or playback, press **COUNTER RESET** on the VCR to reset the counter to zero. The counter installed in the VCR is called a "linear time counter", which tells you how much the tape has run in terms of time. By noting the setting, you can find that point later by referring to the counter. Use the label on a cassette to list the programs and their counter readings. Since the counter is not so accurate, use it only for reference.

Playing Back Externally-Recorded Tapes

When playing back a cassette recorded on another VCR, the tracking condition is automatically adjusted. You can also adjust the sharpness using the PICTURE ADJUST menu (for details, refer to "Adjusting the Picture Quality" on page 53.

Notes on counter reading

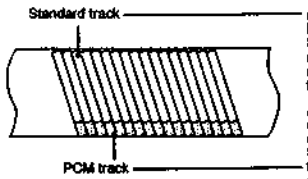
- The counter does not work on the portions on which no recording has been made.
- After a cassette is ejected, the counter reading is retained. When a cassette is inserted in the VCR, the counter reading automatically returns to "0H00M00S".

Selecting the Monitor Sound

You can select the sound you want to hear with the AUDIO MONITOR selector when you play back the following cassettes:

- when second audio program (SAP) is recorded
- when audio/narration is added (audio dubbed cassettes)

The sound you want to hear is recorded on the standard track or on the PCM track on a tape (See the diagram below). To select the sound, change the position of the AUDIO MONITOR selector on the VCR.



Video/audio signals of the TV program and the main or SAP sound of a SAP broadcast are recorded.
Sound can either be in monaural (when sounds for left and right channels are the same) or in stereo (separate sound for left and right channels).

Audio signals from the connected equipment or from the tuner of this VCR are recorded in digital PCM sound.
Sound can either be in monaural (when sounds for left and right channels are the same)or in stereo (separate sound for left and right channels).
Only the main sound signals are recorded. Audio-dubbed sound is also recorded here.

When no sound is heard during playback or the PCM indicator blinks

When a tape which has been recorded on a video camera recorder or a VCR without the PCM function is played back on this unit, the sound may not be heard or be heard only intermittently.
In such a case, select STD on the AUDIO MONITOR selector. The PCM indicator may continue to blink but the sound is heard normally.

When a TV without VIDEO/ AUDIO input is connected

To monitor the playback sound in stereo mode, connect a stereo system additionally.

When no recording is made on the PCM track

If you select PCM or MIX position, the sound recorded on the standard track is heard.

When a cassette is recorded on VCR without PCM function

If you select the PCM position, the sound recorded on the standard track is heard.

When second audio program (SAP) is recorded:

AUDIO MONITOR selector		Track to be played back
SAP* sound	STD	Standard
Main sound	PCM	PCM
both	MIX	Standard/PCM

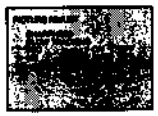
* SAP sound is recorded in monaural. For recording SAP sound, see page 36.

When audio/narration is added (audio dubbed cassettes):

To monitor	Position of the AUDIO MONITOR selector	Track to be played back
Dubbed sound	PCM	PCM
Original sound	STD	Standard
both	MIX	Standard/PCM

Recording

You can record in the Hi8 video system or the standard 8mm video system. The VCR detects the type of video tape (Hi8 video tape or standard 8mm video tape) on which you want to record, and the VCR starts recording accordingly.
So, normally set the Hi8 setting on PICTURE ADJUST menu to AUTO. However, if you intend to play back on another standard 8mm video recorder, set the Hi8 setting to OFF on the PICTURE ADJUST menu (for details, see "Selecting Recording System" on page 54).



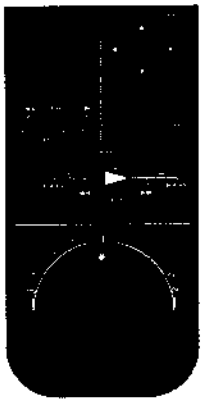
Type of video tape and video system in which a tape is recorded

Video tape used	Hi8 setting on PICTURE ADJUST menu	Video system
Hi8 video tape	AUTO	Hi8 video system
	OFF	Standard 8mm system
Standard 8mm video tape	AUTO	Standard 8mm system
	OFF	Standard 8mm system

Before you begin

Before you begin, check the following points:

- Make sure that the connections have been made correctly (see pages 13 - 20.)
- Check the input mode indicator in the display window of the VCR.



Notes

When the cassette reaches the end

The cassette rewinds to the beginning and the power remains on.

If the tape is ejected when the REC buttons are pressed

The tab on the cassette is slid out. Slide the tab in or use a new cassette.

Recording TV Programs

1 Insert a cassette.
The VCR turns on automatically (Auto power on).

2 Turn on the TV.

3 If your TV is connected to both the VHF/UHF OUT and MONITOR OUT (or LINE OUT) on the VCR, select the input for the VCR.
If your TV is connected only to the VHF/UHF OUT on the VCR, select the channel for the VCR (Ch 3 or Ch 4).

4 If your TV is connected only to the VHF/UHF OUT, then press TV/VTR so that the VTR indicator lights up. Skip this step if your VCR is connected to both the VHF/UHF and MONITOR OUT (or LINE OUT).

5 Press INPUT SELECT to light TUNER in the display window of the VCR. Select the channel to be recorded with CHANNEL +/– or channel number buttons.

6 Select SP or LP with TAPE SPEED (SP/LP).
To select the best recording tape speed, see "Maximum recording time of a cassette" on page 30.

7 Press the two ● REC buttons on the Remote Commander at the same time, or the REC button on the VCR.
The REC recording indicator lights up in the display window of the VCR.

To stop recording
Press ■ STOP.

To pause recording
Press II PAUSE. To resume recording, press II PAUSE. When the recording pause mode lasts for approximately 7 minutes, the VCR enters stop mode.

Pausing

Technique 1
You can stop recording an unwanted scene and resume recording smoothly.

1 Press II PAUSE when an unwanted scene appears.
Recording will stop and the VCR enters recording pause mode.

2 Press II PAUSE at the desired point to release pause mode.
Recording resumes from the point set in step 1.

Technique 2
When an unwanted scene has already started recording, you can rewind the cassette to the desired point, have the VCR standby in recording pause mode, and resume recording at the desired scene.

1 Press II PAUSE to set the VCR to recording pause mode.

2 Turn the EDIT SHUTTLE ring on the VCR to the left to search for the point from which you wish to continue recording.

3 Release the EDIT SHUTTLE ring on the VCR at the desired point.
After an instant in still mode, the VCR automatically enters recording pause mode.

4 Press II PAUSE.
Recording resumes.

Recording with the TV Off

Turn off the power of the TV or monitor.
There will be no interference with the recording.

Watching One TV Program While Recording Another

1 Press TV/VTR so that the VTR indicator goes off.

2 Select the channel you want to watch on the TV.

VTR indicator	Picture on the TV screen
Lit	Channel selected by the VCR or the playback picture of the VCR
Unlit	Channel selected by the TV

Recording Multi-channel TV Sound Broadcasts

To record a stereo broadcast:

When a stereo broadcast program is received, the STEREO indicator appears in the display window of the VCR. The stereo program is automatically recorded in stereo. If the reception of a stereo program is poor, set AUTO STEREO to MONO on the SET UP MENU. (See page 28.) The sound is heard in monaural but the noise is reduced.

To record SAP (Second Audio Program) broadcast:

Normally, set AUTO SAP to ON in the SET UP MENU. SAP sound is recorded on the standard track in monaural if there is a SAP broadcast. When the VCR receives a SAP broadcast, the SAP indicator lights up in the display window of the VCR.

When you do not want to record a SAP sound while receiving a SAP broadcast, select OFF of the AUTO SAP setting in the SET UP MENU. Only the main sound is recorded on the standard track.

To monitor the SAP sound during recording, set the AUDIO MONITOR selector to STD.

Note

When the TV is connected only to the VHF/UHF OUT on the VCR, you cannot hear the program in stereo.

Timer-Activated Recording

The timer recording function lets you preset your VCR to record up to six programs within a one-month period. Perform this procedure on the Remote Commander and transmit the preset data to the VCR.

Before you begin

- Make sure that the time and date clock is set correctly (see "Setting the Time and Date" on page 24.)
- Check to see that the cassette is long enough to record all the programs.
- Make sure that the safety tab of the cassette has not been slid out. If you insert a cassette with the safety tab visible in red (closed) and try to set the timer, the cassette automatically ejects from the VCR.

Setting the Timer

Example:

Here is how to record a program broadcast on channel 26 from 9:00 pm to 10:55 pm on Friday, July 10 in LP mode.

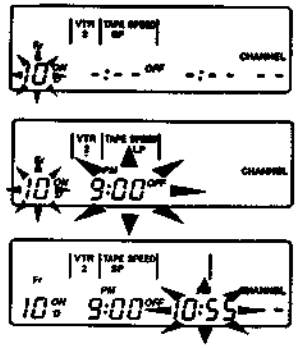
1 Open the cover of the Remote Commander.
The Remote Commander enters timer preset mode.
Note:
Never close the cover until you finish transmitting the program data to the VCR.

2 Press D (DAY) until 10 appears.
The day of the week (Friday) is automatically set.

3 Press H under the TURN ON section until 9 PM appears.

4 Press M under the TURN ON section until 00 appears.

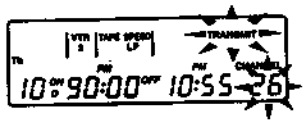
5 Press H and M under the TURN OFF section until 10 PM 55 appears.



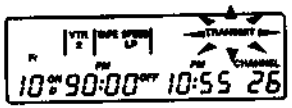
(Continued)

6 Set the recording speed, SP or LP, with TAPE SPEED (SP/LP).

7 Press CH (CHANNEL) until 26 appears. (If you wish to record a cable TV program, display CATV in the LCD panel with NORM/CATV, then select the desired channel.)
The "TRANSMIT" indicator blinks to indicate that all of the items are entered.



8 Point the Remote Commander to the VCR and press TRANS. Press TRANS within five minutes after you have entered all the items.
A beep sound will tell you that the preset data have been transmitted to the VCR, and the VCR enters recording standby mode. The TIMER REC indicator lights up in the display window of the VCR.

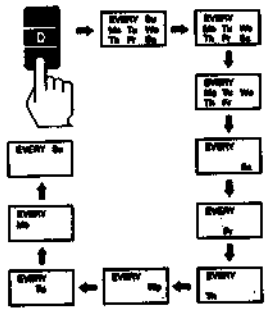


To set another program, repeat steps 2 to 8.

9 Close the cover of the Remote Commander so that the present time appears on the LCD panel.
The VCR turns on automatically and starts recording at the preset time, then turns off after the recording ends.

To stop timer-recording
To stop timer-recording while a program is being recorded, press TIMER REC (ON/OFF).

To record video sources from LINE IN 1 or 2 jacks
Press INPUT SELECT in step 7 to change the input indication in the LCD panel from CHANNEL to L1 or L2. Select LINE 1 or LINE 2 according to the input jack used.



If power interruption occurs during timer recording.
recording will stop and your VCR will turn off. If power is restored within one hour, and it's before the recording end time, recording will start again from that point. If the interruption lasts for more than one hour, any presettings will be erased and you'll need to reset the time and date for your programs. Note that the tape counter will return to "0H00M00S".

Daily/Weekly Recording

You can preset your VCR for daily or weekly recording.

Daily recording records the same program every day of the week while weekly recording records the same program on the same day, every week.

In step 2 of the "Setting the Timer" section (page 37), press the – side of the D button to change the indication on the LCD panel to one of the choices. (See the diagram at left.) When you set and transmit your preset data to the VCR, the corresponding indicator lights in the display window of the VCR.

The Timer Recording Standby Mode

When you return the VCR to the timer recording standby mode, you can record any previously preset programs. The VCR turns on automatically to record the first preset program. When it finishes recording, the power automatically shuts off. To stop recording while a program is being recorded, press TIMER REC (ON/OFF).

Buttons Operable During Timer Recording

TIMER REC (ON/OFF)	To stop recording.
COUNTER RESET	(See "Indexing Tape Contents" page 32.)
TV/VTR	(See "Watching One TV Program while Recording Another", page 36.)
DATA SCREEN	(See "The Data Screen", page 32.)
TIMER REC CHECK	(See "Changing or Cancelling the Timer Settings", page 42.)
TIMER ON SCREEN	(See "Checking the Timer Settings", page 41.)

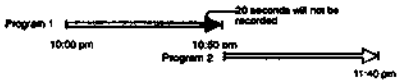
Overlapping Timer Recordings

Case 1
If you preset two programs to record at the same time...

The program listed first on the PROGRAM LIST display has priority over the other programs. The timer settings for lower priority programs will be deleted from the PROGRAM LIST display when recording begins for the first program.

Case 2
If you set program 2 to record at the same time you set program 1 to finish recording....

The last 20 seconds of program 1 will not be recorded.



Case 3
If you set program 2 to record before program 1 has finished recording...

Program 2 will begin recording before program 1 has finished.

Notes

- If your set a program to record only one time, that setting is erased from the PROGRAM LIST display when the recording has finished.
- To check the timer settings during timer recording, press TIMER ON SCREEN.

Checking the Timer Settings

Here's how to display your timer settings to confirm the programs you wish to record.

1 Press TIMER REC (ON/OFF) to release timer recording standby mode.
The TIMER REC (recording) indicator turns off in the display window of the VCR.

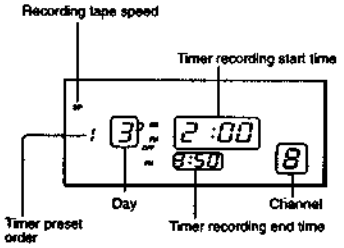
2 Press POWER to turn on the VCR.

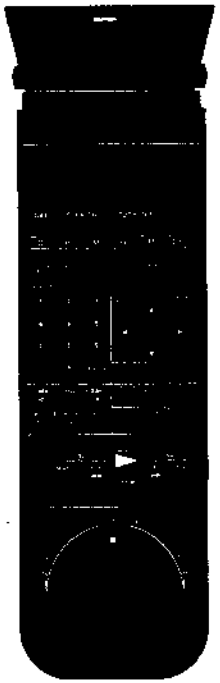
3 Turn on the TV.
If your TV is connected to LINE OUT, you cannot display on-screen information.

4 Press TIMER ON SCREEN.
The PROGRAM LIST appears on the TV screen for your checking.

5 Press TIMER REC (ON/OFF) to return to timer recording standby mode.
The TIMER REC (recording) indicator turns on in the display window of the VCR.

To check the timer setting without using the PROGRAM LIST display
Press TIMER REC CHECK.
Each time the button is pressed, timer preset data will appear in the display window of the VCR in the preset order. You do not have to release timer recording standby mode.





Changing or Cancelling the Timer Settings

Here's how to change or cancel any timer settings on the PROGRAM LIST display.

1 Display the PROGRAM LIST display on the TV screen.
Follow steps 1 through 4 of the "Checking the Timer Settings" (page 41) section.

2 Press TIMER REC CHECK to display the cursor (▶).

3 Press TIMER REC CHECK to move the cursor (▶) to the setting you want to change or cancel.

4 **To change the setting,**
Re-enter all the items and transmit it to the VTR. (See "Setting the Timer" on page 37.) The VCR returns to timer recording standby.

To cancel the setting,
Press TIMER REC CLEAR.

To change timer settings without using the PROGRAM LIST display

1 Press TIMER REC CHECK repeatedly until the program you want to clear appears in the display of the VCR.

2 Change the setting and press TRANS to transmit it to the VCR.

To cancel the timer settings without using the PROGRAM LIST display
You can erase the setting you do not want while referring to the display window on the VCR.

1 Press TIMER REC ON/OFF.
The TIMER REC (recording) turns off in the display window of the VCR.

2 Turn on the power of the VCR.

3 Press TIMER REC CHECK repeatedly until the program you want to cancel appears in the display window.

4 Press TIMER REC CLEAR.
The timer setting of the selected program is cancelled.

Using the VCR Before Timer Recording Starts

If you want to use your VCR while it's in timer recording standby mode, you must first turn off the TIMER REC (recording) indicator in the display window of the VCR.

1 Press TIMER REC ON/OFF.
The TIMER REC (recording) in the display window turns off and the VCR leaves the timer recording standby mode.

2 Press POWER.
The VCR is ready to use.

3 After using the VCR, press TIMER REC (ON/OFF).
The VCR returns to the timer recording standby mode.

Variable Speed Playback

The following section explains the advanced playback functions available on your VCR. No sound is heard during these operations.

Still Picture

During playback, press ⏸ PAUSE to hold the picture in one place.

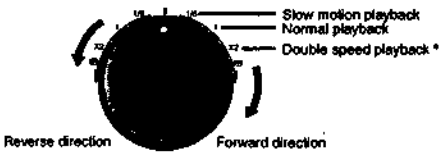
To resume normal playback, press either ▶ PLAY or ⏸ PAUSE.

If you leave your VCR in pause mode, normal playback resumes after approximately 7 minutes.

SHUTTLE Ring Operation

Using the SHUTTLE ring on the Remote Commander during playback or playback pause, you can play back cassettes at a variety of speeds, in the forward direction or reverse direction.

Turn the SHUTTLE ring clockwise to advance the tape in the forward direction.
Turn the SHUTTLE ring counterclockwise to advance the tape in the reverse direction.
The playback speed depends on how far you turn the SHUTTLE ring. When you release the SHUTTLE ring, the VCR returns to playback pause mode.



* This operation is also available with the x2 button on the Remote Commander.

Picture Search (During Playback)

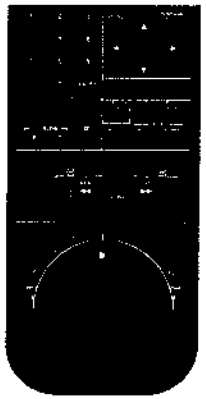
Press ▶▶ FF or ◀◀ REW during playback.

When you release your finger from the button, normal playback will resume.

Note

During variable speed playback, streaks may appear on the picture, the picture may flicker and the color may not be reproduced properly depending on the speed or the direction. This is not a malfunction.

Example: Reverse double speed playback



Note

It takes about two or three seconds to reverse the direction in slow motion playback or frame-by-frame picture.

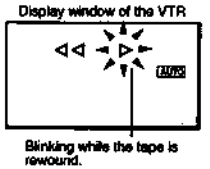
Locked Picture Search

This operation works only on the Remote Commander.

Press SEARCH on the Remote Commander during playback or playback pause. For the reverse direction, press the left SEARCH button. For the forward direction, press the right SEARCH button.

Press ▶ PLAY to return to normal playback.

Auto Play



You can start playback automatically after rewinding a cassette.

This operation works only on the VCR.

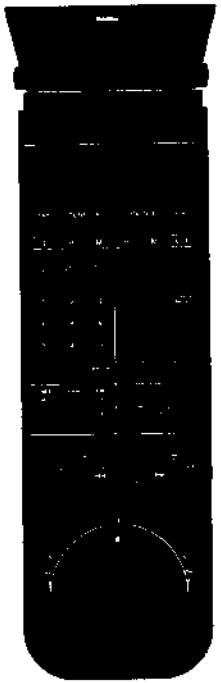
Press ▶ PLAY while holding ◀◀.

Playback starts automatically after the tape is rewound to the beginning.
The "▷" indication blinks while the tape is being rewound.

Frame-by-Frame Picture

During playback pause, press FRAME to enter still mode, then press > to advance the picture one frame or < to reverse the picture one frame.

Each time you press the button, the picture moves one frame. To resume normal playback, press ▶ PLAY.



Slow Motion Playback

This operation works only on the Remote Commander.

Press II► SLOW 1/10 (1/10 of normal speed) or 1/5 (1/5 of normal speed) during playback.

To play back in slow motion in the reverse direction
Press <.

To resume the forward direction
Press >.

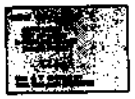
To return to normal playback
Press ► PLAY.

If you leave the VCR in slow motion mode for more than one minute, the VCR will automatically return to normal playback to protect the tape against damage.

If snow or streaks appear during slow motion playback
Adjust the picture on the PICTURE ADJUST menu.

This adjustment only works during slow motion playback.

1 Press MENU to call up the main MENU.



2 Press ▲ or ▼ to move the cursor to PICTURE ADJUST.

3 Press EXECUTE.
The PICTURE ADJUST menu appears.

4 Press ▲ or ▼ to move the cursor (►) to SLOW TRACKING.

5 Press ◄ or ► to move the ■ mark on the tracking bar so that the picture will be shown on the screen more clearly.

6 Press EXECUTE.
The PICTURE ADJUST menu disappears.

Notes

- If the tracking bar is shifted too much, noise in the picture becomes too unstable to adjust. In this case, reset the tracking to the center position.
- If you adjust the tracking bar during reverse slow motion playback, the picture may shake or the color may not be reproduced properly or the color may disappear from the screen.

Assigning a Desired Operation — AUTO MENU

You can get the VCR to perform certain functions in sequence automatically. The AUTO MENU guides you to your desired sequential operations. You can choose from the six AUTO MENU choices.

You cannot perform these operations while a cassette is not inserted or when the tape is being transported.

Before you begin

- Use ▲ and ▼ to move the cursor.
- Use ◄ and ► to select items.
- To quit setting in the middle of the procedures, press MENU.

AUTO MENU Setting

1 Press MENU.
The main MENU appears.

2 Press ▲ or ▼ to move the cursor (►) to AUTO MENU.

3 Press EXECUTE.
The display changes to "AUTO MENU" display.

4 Press ▲ or ▼ to select the desired menu choice.
For menu choices, see the next page.

5 Press EXECUTE to return to the original screen.

Menu choices

PLAY-REW-POWER OFF
Plays back the tape, rewinds the tape when it reaches the end, and turns the power off.

GO TO ZERO-STOP
Searches for the counter zero point and stops.

GO TO ZERO-PLAY
Searches for the counter zero point and starts playback.

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

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

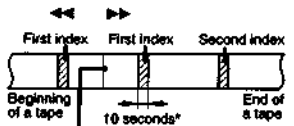
REW-TIMER REC
Rewinds the tape to the beginning and puts the VCR in timer recording standby mode when the timer is preset.

Index Function

Notes

- When marking index signals, leave an interval of at least 2 minutes between them so that the VCR can detect the signals correctly.
- You cannot mark an index signal in the following cases:
  - On a cassette with a safety tab slid out (red mark visible)
  - On an unrecorded portion of a tape
  - Immediately before a point on the cassette where the cassette speed (SP or LP) changes.

You can find specific locations easily using the markings (index points) recorded on a cassette. This function is called Index Function.
You can mark an index anywhere on a cassette, so that you can easily find the specific point later on. Index works as a divider between scenes, and is not numbered. So, when you specify the index mark later, you have to specify the relative position from the current position. (The first index, the second index....from the current position.)
You can mark and erase index signals during playback, while during recording you cannot erase them.



* When the cassette speed is SP.

Marking Index Signals

Where you mark an index, the INDEX indicator flashes in the VCR's display window and the INDEX MARK indicator appears on your TV screen.

Automatic Index Mark
An index signal is automatically recorded at the beginning of a scene when you start recording.

Manual Index Mark
When recording or playing a cassette, you can manually mark an index signal by pressing INDEX MARK.

A black streak appears at the bottom of the screen.

When you mark an index signal during playback, the recorded sound may not be clear or may not be heard.

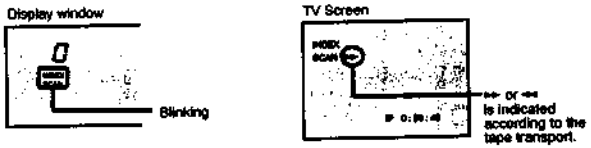
Playing Back from the Index Point — Index Scan

Here's how to find and play a program you've marked with an index signal:

1 Insert an indexed cassette into your VCR.

2 Press INDEX once.
The INDEX and SCAN indicators flash alternately in the display window and the INDEX SCAN indicator appears on the TV screen.

3 Press ◀◀ to find the previous program or ▶▶ to find the next program.
The index scan locates the next index signal and plays about 10 seconds of tape prior to the signal. The VCR then rewinds or advances to the next index signal. Every time the VCR finds an index signal, playback begins.



4 When you find the program you want, press ▷ PLAY during 10 second preview.
Playback starts from that point.

To stop index scan underway
Press ▶ PLAY or ■ STOP.

Locating an index — Index Search

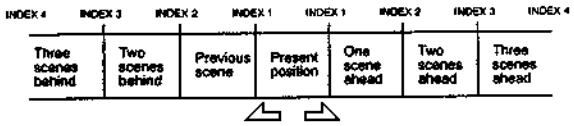
Locate an index by indicating how many index signals ahead or behind that program is from the cassette's current position.
You can specify index number up to 19.

Here's how:

1 Press DATA SCREEN to display the data screen.

2 Press INDEX twice continuously.

3 Press CHANNEL/INDEX +/– to display the desired number.
If you press INDEX again, you can increase the number.
For example, the scene you want to view is located 3 scenes ahead the present position, display "INDEX SEARCH 3". If the scene is located three scenes behind the present position, display "INDEX SEARCH 4".



4 Press ▶▶ FF to find an upcoming index signal or ◀◀ REW to find a prior index signal.
The cassette advances or rewinds to find the signal.
Each time an index signal is detected, the index number increases or decreases. When the index number reaches 0, it means you've located the specified scene and your VCR will begin to play.

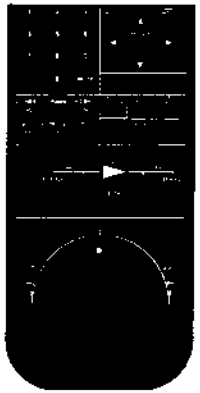
Erasing Index Signals

To remove any unwanted index signals, follow these steps:

1 Press INDEX once during playback or stop mode.
When the data screen is on the TV screen, "INDEX SCAN STANDBY" appears.

2 Press ▶▶ FF to find the next scene or ◀◀ REW to find the previous scene.
Each time an index is detected, the VCR plays back the indexed scene for approximately 10 seconds. It then rewinds or advances to the next index signal. This 10 second preview lets you decide whether you've located the index mark you want to erase.

3 Press INDEX ERASE during 10 second preview.
"INDEX ERASE" is displayed on the TV screen. The tape automatically rewinds to a position before that index, then the index is erased. During erasing, a black streak appears at the bottom of the screen. After erasing is complete, the next index is located.



Notes

- At the beginning of the tape, you cannot erase an index signal.
- Index recorded in the prerecorded 8mm cassettes cannot be erased.
- Some index signals marked on other camcorders or VCRs cannot be erased on this unit. Also, it may not be possible to erase index signals marked on this unit on other camcorders or VCRs.
  It is recommended to erase index signals on the same equipment on which the index signals were marked in order to perform index erasing correctly.

Adjusting the Picture Quality — Sharpness/TBC/DNR

What is TBC?

Abbreviation of Time Base Corrector. This feature electrically stabilizes the playback signals by removing roll in the playback picture caused by irregularity in drum rotation and tape movement. Time base correction reduces deterioration of picture quality when transmitting or copying playback signals.

What is DNR?

DNR is the abbreviation of Digital Noise Reduction.

This feature makes prior and successive video signals into a composite signal and reduces noise in the picture using the field memory.

Your VCR is equipped with the "SHARPNESS", "TBC" and "DNR" adjustment functions which allow you to enjoy a clear, finely picture. This adjustment is only effective during playback.
For picture adjustment during slow motion playback, see page 46.
Selecting recording system (Hi8 video system or standard video system) is also important for high-quality picture. For selecting recording system, see page 54.

Perform the following adjustments according to the picture condition.

- **To make a picture softer or sharper**
  —> Use the SHARPNESS adjustment (see the procedure below)
- **To stabilize the picture**
  —> Set to ON of the TBC option in the PICTURE ADJUST menu
- **To reduce noise in the picture**
  —> Use the DNR (Digital Noise Reduction) adjustment (see page 54.)

Before you begin

- Use ▲ and ▼ to move the cursor.
- Use ◀ and ▶ to select items.

Sharpness Adjustment

1 Press MENU.
The main MENU display appears on the TV screen.

2 Press ▲ or ▼ to move the cursor (▶) to PICTURE ADJUST.

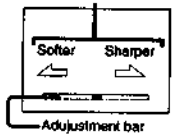
3 Press EXECUTE.
The PICTURE ADJUST menu appears on the TV screen.

4 Press ▲ or ▼ to select "SHARPNESS".

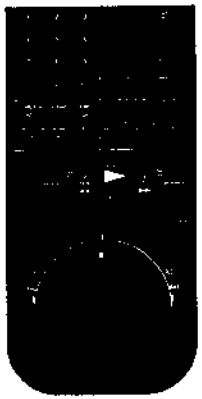
5 Press ◀ or ▶ to adjust the picture to your preference.

6 Press EXECUTE.
The PICTURE ADJUST menu disappears from the TV screen and the original screen returns.

These indications do not appear on the screen.



Adjustment bar



DNR Adjustment

When a cassette is inserted into the VCR, the VCR starts playback in DNR standard mode and the DNR indicator lights up on the front panel. If a cassette more deteriorated in quality is played back, press DNR on the VCR. Each time the DNR button is pressed, the DNR function works as follows:

DNR level	DNR indicator on the front panel	Screen display*	When you need this adjustment?
Maximum	Illuminated	DNR MAX	When you wish to play back a deteriorated cassette or decrease noise in the picture.
Standard	Illuminated	DNR STD	Normally use this level.
Minimum	Not illuminated	—	When you want to obtain a more detail-enhanced picture.

*The screen display turns off automatically.

Selecting Recording System

You can record a cassette in either Hi8 video system or 8mm standard video system. You cannot perform Hi8 recording with a cassette other than a Hi8 tape. (See "Type of video tape and video system in which a tape is recorded" on page 34, and "Hi8 (High Eight) Video System" on page 79.)
When the Hi8 indicator lights up on the front panel of the VCR, you can record in the Hi8 video system. If you intend to play back on a standard 8mm VCR, do the following steps to select Hi8 OFF.

1 Call up the PICTURE ADJUST menu.
Follow steps 1 through 3 on page 53.

2 Press ▲ or ▼ to move the cursor (▶) to Hi8.
The Hi8 indicator lights up.

3 Press ◀ or ▶ to set the dot (•) to AUTO or OFF.
AUTO --- The VCR automatically detects the type of cassette to be used (Hi8 video tape or standard video tape) and recording is done accordingly (in the Hi8 video system or 8mm standard video system).
OFF --- When you intend to play back the Hi8 cassette on a standard 8mm video recorder.

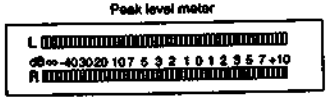
4 Press EXECUTE.
The PICTURE ADJUST menu disappears from the TV screen.

PCM Audio Recording

You can record PCM audio sound from the built-in tuner or from a connected audio equipment, such as a stereo system.
You can adjust the PCM sound by the REC LEVEL control located inside the front panel flap. Hi-Fi sound is automatically adjusted and does not work together with the REC LEVEL control adjustment.
To record with the built-in tuner, set this control to position 5 (optimum level position).
To record with an external audio equipment, adjust the recording level with the REC LEVEL control. Monitor the sound to be recorded and set the REC LEVEL control to the desired position while observing the peak level meter change in the display window of the VCR.

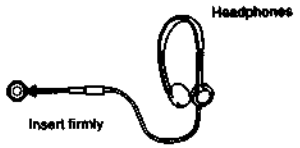
REC LEVEL control

Peak level meter

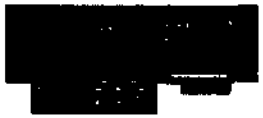


Appropriate recording level
From records ---------- the peak level meter lights at +10 when a maximum volume sound is input.
From CDs or DATs ------- the peak level occasionally lights at the +10.

When using a microphone or headphones
- Select the LINE IN 1 or LINE IN 2 input when you use a microphone.
- The microphone input is monaural and mixed with the line input signal.
- Do not use a plug-in power microphone.
- Insert the headphones firmly.



Quick-Timer Recording



This function is convenient for recording programs without going through the entire timer setting procedure. Note, however, that it provides only an approximate setting for the program you wish to record.

Before you begin

- Make sure that the clock has been set correctly.
- Check to see if the TIMER REC indicator does not light in the display window of the VCR.

Operation

If you're currently recording, skip to step 7.

1 Insert a cassette into your VCR.

2 Press INPUT SELECT to light the TUNER in the display window.

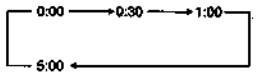
3 Select the desired recording speed (SP or LP) by pressing TAPE SPEED inside the front panel.

4 Press QUICK TIMER on the VCR.
If you insert a cassette with the safety tab slid out, your VCR will eject the cassette.

5 Select the channel you wish to record using CHANNEL/INDEX +/–.
The channel can be changed while the channel indicator is blinking (for about 30 seconds).

6 Press QUICK TIMER again to start recording.

7 Select the recording duration by pressing QUICK TIMER to change the duration indicator in the display window.
Each time you press QUICK TIMER, the recording duration increases by 30 minutes (up to 5 hours).



Once recording has finished, your VCR will turn off automatically.
During quick-timer recording, the recording time can be changed by pressing the QUICK TIMER button. During recording, the time displayed will count down in the units of one minute.

To stop quick-timer recording:
To stop quick-timer recording while a program is being recorded, press TIMER REC ON/OFF.

- **If your cassette ends during quick-timer recording**
  Recording stops and the VCR turns off. The cassette will not rewind automatically.
- **If a power interruption occurs during quick-timer recording**
  Recording will stop and your VCR will turn off. If the interruption lasts less than one hour and the power is restored before the recording end time, recording will start again from that point.

Buttons Operable During Quick-Timer Recording

TIMER REC (ON/OFF)	To stop quick-timer recording.
QUICK TIMER	To change recording duration.
COUNTER RESET	To reset the counter to zero.
INDEX MARK	To record an index signal.
TV/VTR	To watch the picture broadcast on another channel (TV).

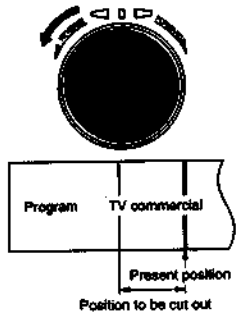
Cutting out the Unwanted Scenes — SHUTTLE EDIT

During Recording

If you wish to cut out scenes such as TV commercials, you can pause recording and play back the tape in the reverse direction until the beginning of an unwanted scene is reached. Then, record over it. This function only works on the VCR. During timer-activated recording, you cannot use this function.

1 Press ⏸ PAUSE during recording.
The VCR enters recording pause mode.

2 Turn the EDIT SHUTTLE ring on the VCR counterclockwise to rewind the tape until the unwanted scene appears.



Turn the ring slightly. During rewinding, the screen changes to the playback picture, but sound is not switched. When you release the ring, the VCR enters playback pause mode.
For searching for more specific points, press ◀⏸ FRAME or FRAME ⏸▶ within 3 seconds after you released the ring. (After 3 seconds, the VCR returns to recording pause mode.)

3 Press ⏸ PAUSE when an unwanted scene appears on the screen.
Recording starts.

During Playback

You can re-record onto an unwanted portion of a pre-recorded cassette. Use the EDIT SHUTTLE ring on the VCR or the SHUTTLE ring on the Remote Commander.

1 Press ⏸ PAUSE at the end of the unwanted scene during playback.
The VCR enters playback pause mode.

2 Press COUNTER RESET to set the linear counter to "0H00M00S".

3 Turn the ring until the beginning of the unwanted scene appears on the screen.
When you release the ring, the VCR enters playback pause mode. Use ◀⏸ FRAME ⏸▶ to rewind or advance the picture frame by frame for searching more specific points.

4 Press ● REC.
The VCR enters recording pause mode.

5 Select a new program for re-recording.
Select the channel or change the input by pressing CHANNEL/INDEX +/– or INPUT SELECT.

6 Press ⏸ PAUSE when the scene to be recorded begins to appear on the screen.
Recording begins.

7 Press ■ STOP when the linear counter shows "0H00M00S"

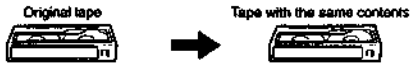
Note

The picture may be distorted a moment at the cut-out point (recording end point).

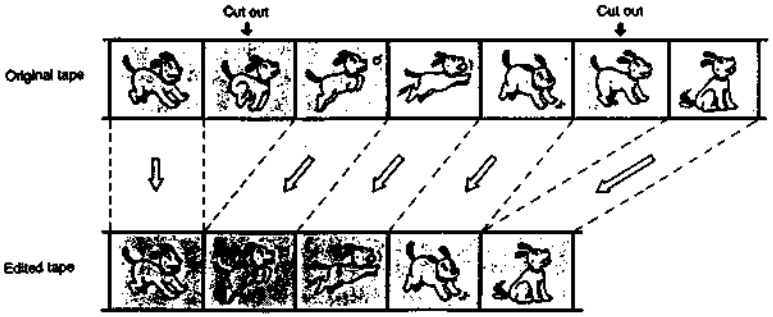
Overview of the Editing Functions

Using an additional VCR, you can record programs from one VCR to the other. The followings are the tape editing functions available on the VCR.

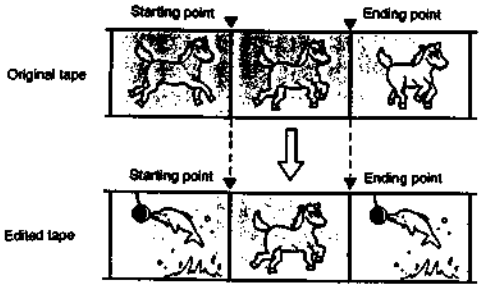
• To make a new tape with the entirely same contents
—> See "Tape Dubbing" on page 61.



• To edit out unwanted scenes
—> See "Assemble Editing" on page 64.



• To insert another scene into a tape
—> See "Insert Editing" on page 64.



• To edit tapes using the synchronized editing function
—> See "Synchronized Editing" on page 67.

You can also use the synchronized editing function to perform assemble editing and insert editing if your another VCR has a control L connector. Using this function controls both the playback VCR and the recording VCR simultaneously.

• To add narration and background music to previously recorded tape
—> See "Adding Audio or Narration (Audio Dubbing)" on page 77.

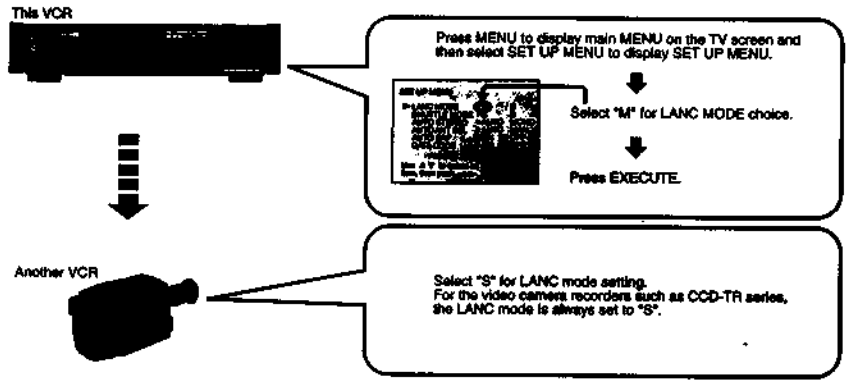
Synchronized Editing

If your another VCR has control L or S connector, you can take advantage of a feature called "Synchronized Editing" that controls both VCRs (recording VCR and playback VCR), and releases the pause when the SYNCHRO EDIT START/PAUSE button is pressed. To use this function, you must connect the control cable (LANC cable) in addition to the connections of the audio and video cables. There are two types of control cables: control L (REMOTE) cable and control S cable according to the type of connectors of the VCRs.
After you have made connections on page 66, you must set the LANC MODE and SHUTTLE MODE. For details, see page 70.

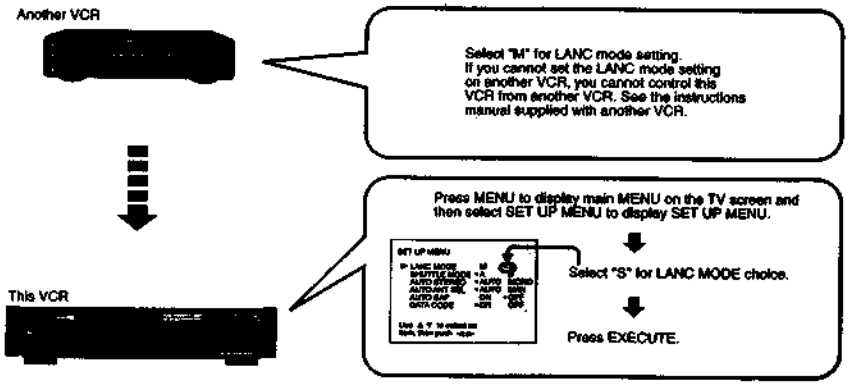
How to Decide the LANC MODE

When you perform synchronized editing with the control L jack, remember to set the LANC MODE as described below: This setting is very important, since it decides which VCR controls which.
For details, refer to page 70.

When you want to control another VCR from this VCR

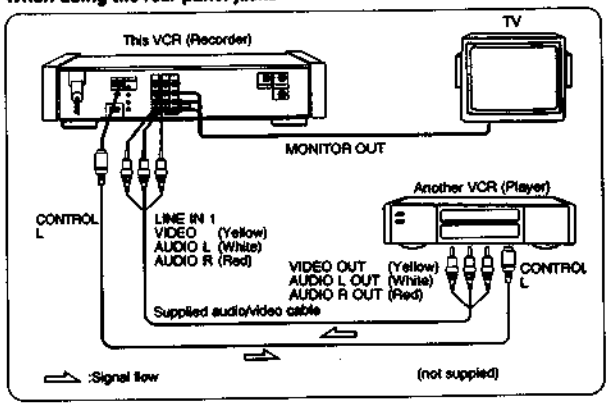


When you want to control this VCR from another VCR

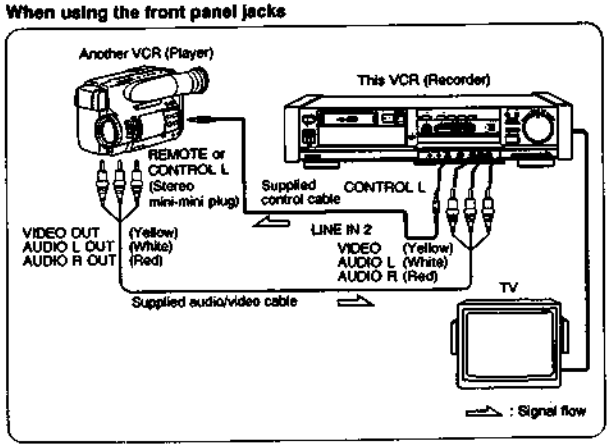


Connecting Video Equipment with the LANC connector

When using the rear panel jacks



When using the front panel jacks



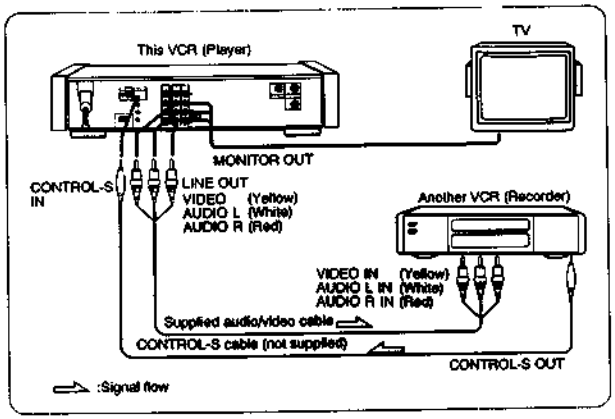
About the ⇵ (LANC)
LANC stands for Local Application Control System.
The LANC connector is used for controlling the tape transport of video equipment and peripherals connected to it. This connector has the same function as the connectors indicated as CONTROL L or REMOTE.

Notes

- When connecting the VCRs, do not connect both LINE IN and LINE OUT jacks on your VCRs simultaneously. Doing so may cause a humming noise.
- If your playback VCR is a monaural unit, connect the white plug to LINE IN 2 AUDIO L on this VCR. This lets you record the sound of the playback VCR on both channels of this VCR. Do not connect any plug to LINE IN 2 AUDIO R.
- If another VCR has both the LANC connector and the CONTROL S connector, use the LANC connector. Do not make the LANC and CONTROL S connections simultaneously.
- When connecting with a video camera recorder such as CCD-V801, you can take advantage of more precise synchronized editing function.

Connecting Video Equipment with the CONTROL S connector

You can use this connection only on the rear panel.
You cannot control another VCR from this VCR, using this connection.



When using the CONTROL S cable

Set the commander mode of this VCR and another video equipment to the same position.
If another video equipment has the synchronized function, use the SYNCHRO EDIT button on another equipment.
Comparing to the synchronized editing using the LANC connector, the synchronized editing using the CONTROL S connector only enables you to pause both VCRs and release the pause mode of both VCRs.

LANC MODE and SHUTTLE MODE Settings

After you have made the control L cable connection, you must perform the LANC MODE and SHUTTLE MODE setting. Use the SET UP MENU for both settings. For how to call up the SET UP MENU and set items, see page 28. The followings are how to select each option in the SET UP MENU.

1 Press MENU to display the SET UP MENU.

2 Set LANC MODE.

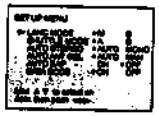
M: to control another VCR with this VCR.

S: to control this VCR with another VCR or Editing Controller.

3 Set SHUTTLE MODE.

A: used when another VCR does not have a reverse slow motion playback. (For example, CCD-TR series and EV-S550)

B: used when another VCR has reverse slow motion playback. (For example, CCD-V701/V601 and EV-S900)



4 Press EXECUTE to return to the original screen.

Synchronized Assemble Editing

You can display both the pictures of the playback VCR and recording VCR alternately on the TV screen. This allows you to perform editing while previewing editing scenes.

Before you begin

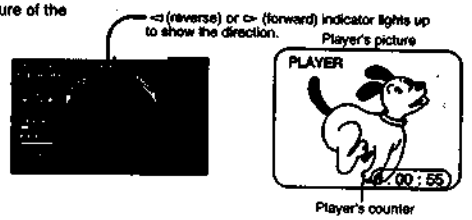
- Press the TAPE SPEED button to select the tape speed (SP or LP).
- Press the INPUT SELECT buttons to select LINE IN 1 or LINE IN 2. (When connected to the rear panel, select LINE IN 1. When connected to the front panel, select LINE IN 2). L1 or L2 appears in the display window of the VCR.
- Check the LANC MODE and SHUTTLE MODE settings (see page 70).

---

1 Insert a recorded cassette into another VCR and insert a cassette for recording into this VCR.

---

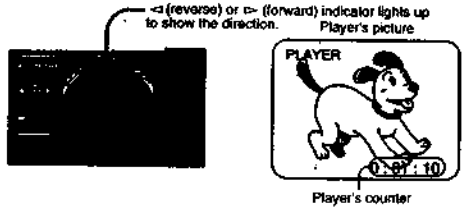
2 Press SYNCHRO EDIT STANDBY.
This VCR (recorder) will enter recording pause mode, another VCR (player) enters playback pause mode. The PLAYER indicator on the front panel of this VCR lights up and the picture of the playback VCR is displayed on the screen.



---

3 Locate the starting point where you want to begin editing, using the EDIT SHUTTLE ring and the FRAME buttons.

On the VCR



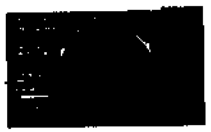
One press on FRAME ▮▮ ▶ advances one frame while one press on ◀ ▮▮ reverses one frame.
For the VCR on which you have set SHUTTLE MODE "A" (see page 70), a frame advance in the reverse direction, reverse slow motion playback, reverse normal speed and reverse double speed playback may not be possible. In this case, rewind the tape a little from the scene where you want to begin editing and search for the starting point by playing back the tape at normal speed or forward slow motion or forward frame advance.

(Continued)

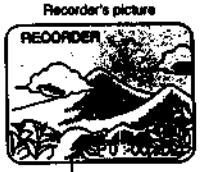
☞ When you have decided the starting point, switch to the "recorder side"

4 Press RECORDER.
The RECORDER indicator lights up and the picture of the recording VCR appears on the TV screen.


On the VCR



Recorder's picture



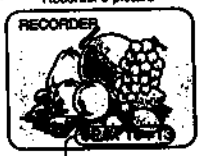
Recorder's counter

5 Locate the recording starting point with the EDIT SHUTTLE ring or the FRAME buttons on the VCR.


On the VCR

◁ (reverse) or ▷ (forward) indicator lights up to show the direction.

Recorder's picture



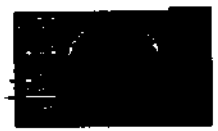
Recorder's counter

One press on FRAME ▮▶ advances one frame while one press on ◀▮ reverse one frame.

☞ If you want to select another playback picture after the recording starting point is determined, change over to the playback VCR by pressing the PLAYER button.

6 Press SYNCHRO EDIT START/PAUSE.
The pause mode of the playback VCR and the recording VCR are released.


On the VCR



Player's picture (during recording)

Recorder's counter

7 Press SYNCHRO EDIT START/PAUSE at the scene where you want to stop recording.
The playback VCR and the recording VCR enter pause mode.


On the VCR

Player's picture


Player's counter

To edit another scene
Repeat steps 3 through 7.

To stop editing
Press SYNCHRO EDIT STANDBY.

Notes:

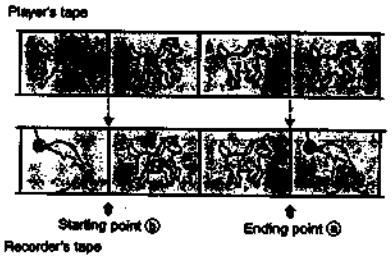
- If you continue to press FRAME buttons, the VCR plays back the cassette at a speed of 1/30 or normal playback.
- While the RECORDER indicator is on, pressing the RECORDER button a second time will stop the playback VCR and the recording VCR.
- While the PLAYER indicator is on, pressing the PLAYER button a second time will stop the playback VCR and the recording VCR.
- It takes about two or three seconds to reverse the direction in frame-by-frame picture.

Synchronized Insert Editing

You can display both the pictures of the playback VCR and recording VCR alternately on the TV screen. This allows you to perform editing while previewing editing scenes.

Before you begin

- Select the tape speed according to the tape speed of the recorded cassette.
- Press the INPUT SELECT button to select LINE IN 1 or LINE IN 2.
  (When connected to the rear panel, select LINE IN 1. When connected to the front panel, select LINE IN 2).
  L1 or L2 appears in the display window of the VCR.
- Check the LANC MODE and SHUTTLE MODE settings (see page 70).

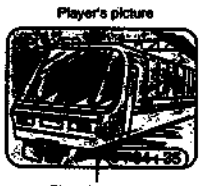


Operation

1 Insert a recorded cassette into another VCR and a cassette for recording into this VCR.

2 Press SYNCHRO EDIT STANDBY.
This VCR (recorder) enters recording pause mode and the other VCR (player) enters playback pause.
The PLAYER indicator of this VCR lights up and the player's picture is displayed on the TV screen.

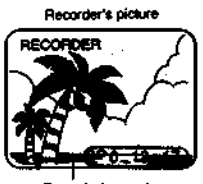

On the VCR



➪ Switch to the recorder side.

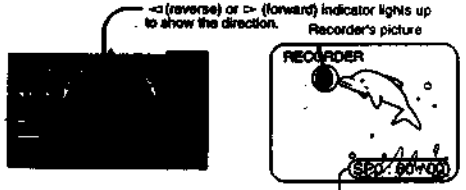
3 Press RECORDER.
The RECORDER indicator lights up and the recorder's picture is displayed on the TV screen.
This VCR enters playback pause mode.


On the VCR



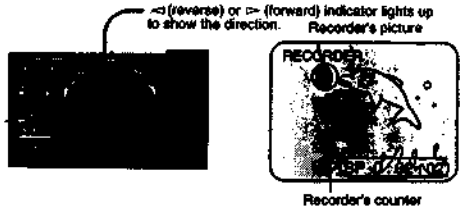
4 Locate the editing end point (point ⓐ) with the EDIT SHUTTLE ring and the FRAME buttons on this VCR, and press COUNTER RESET.


On the VCR



5 Rewind the tape to the editing starting point (point ⓑ) with the EDIT SHUTTLE ring on this VCR. If you want to locate more precisely, use the FRAME buttons.

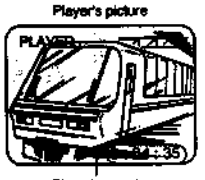

On the VCR



➪ Switch to the player side after you have located the editing starting point (point ⓑ).

6 Press PLAYER.
The PLAYER indicator lights up and the player's picture is displayed on the TV screen.


On the VCR

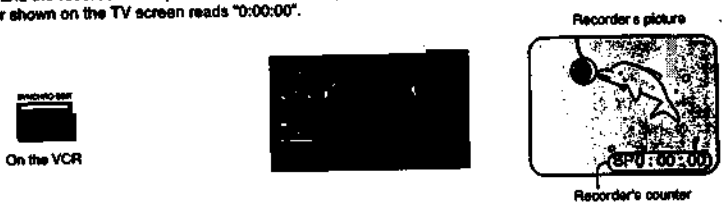


(Continued)

7 Locate the beginning of the scene to be inserted with the EDIT SHUTTLE ring and the FRAME buttons on this VCR.

One press on FRAME II ▶ advances one frame while one press on ◀ II reverses one frame.
For the VCR on which you have set SHUTTLE MODE "A" (see page 70), a frame advance in the reverse direction, reverse slow motion playback, reverse normal speed and reverse double speed playback may not be possible. In this case, rewind the tape a little from the scene where you want to begin editing and search for the starting point by playing back the tape at normal speed or forward slow motion or forward frame advance.

8 Press SYNCHRO EDIT START/PAUSE.
The pause mode of the player and the recorder is released. Both the player and the recorder enter pause mode immediately after the counter shown on the TV screen reads "0:00:00".



To edit another scene
Repeat steps 3 through 8.

To stop editing
Press SYNCHRO EDIT STANDBY.

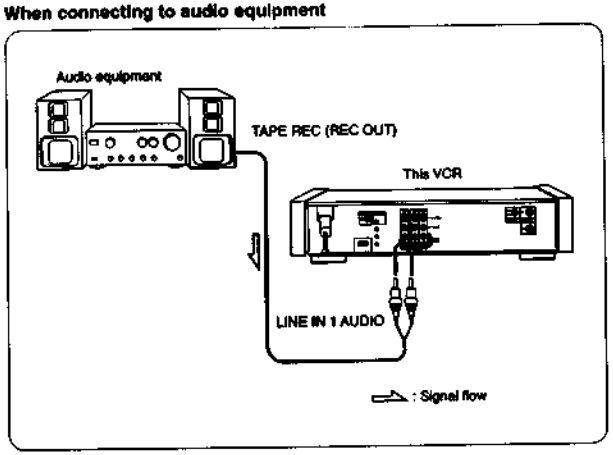
To edit without the counter function
When you've located the beginning of the scene to be inserted, press SYNCHRO EDIT/START PAUSE to release the pause.

Adding Audio or Narration (Audio Dubbing)

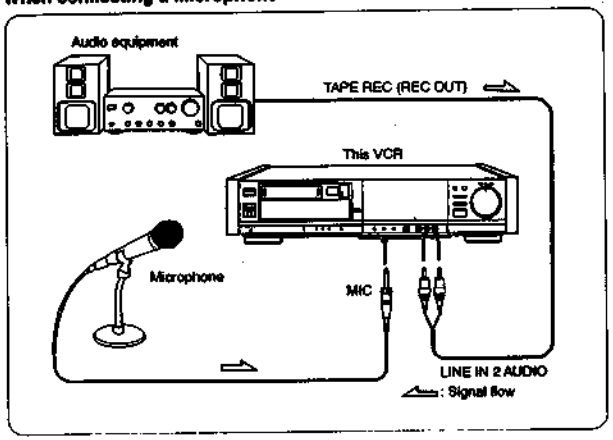
You can additionally record narration or background music on the PCM track on the tape while the picture and sound previously recorded on the standard track are left unchanged.
The sound coming from the microphone is recorded in monaural.
If you want to connect an audio equipment, use the audio in jacks.
If you want to connect a microphone, use the MIC jack on the front.

Connections

When connecting to audio equipment



When connecting a microphone



Tips for audio dubbing

- When you want the sound to fade in, slide the REC LEVEL control from the 0 (zero) position to the normal position gradually. To fade out, slide the REC LEVEL control from the normal position to the 0 (zero) position. (This only works for line input audio sources.)
- The sound from the LINE IN 1 AUDIO jacks on the rear panel or LINE IN 2 AUDIO jacks on the front panel and the MIC jacks can be mixed.
- Adjust the REC REVEL control so that the sound already recorded on the standard track and the sound to be newly added on the PCM track are balanced.

Before you begin

- Press the INPUT SELECT buttons to select LINE IN 1 or LINE IN 2.
  (When connected to the rear panel, select LINE IN 1. When connected to the front panel, select LINE IN 2).
  L1 or L2 appears in the display window of the VCR.
- Adjust the REC LEVEL control to an appropriate level while observing the peak level meter.
- To monitor the audio-dubbed sound, set the AUDIO MONITOR selector to PCM. During audio dubbing, the sound recorded on the standard track is not heard.

Operation

1 Insert a cassette.

2 Play back the cassette and determine the point where you want to begin audio dubbing. Press ⏸ PAUSE to pause playback.

3 Press AUDIO DUB.

4 Play back the audio source and adjust the REC LEVEL control.

5 Press ⏸ PAUSE to release pause mode.
The picture is played back and the sound is recorded.

To stop audio dubbing
Press ■ STOP.

To dub sounds from the tuner of this VCR
Press the INPUT SELECT button to select the "TUNER" indication. The other operations are the same as the above.

Notes:

- The dubbed sound cannot be played back on a VCR without PCM recording or playback functions.
- The pre-recorded sound on the PCM track will be erased by dubbing.
- Do not use a plug-in power microphone.
- During PCM audio dubbing, black streaks appear at the bottom of the screen and in the center of the screen. These streaks will not be recorded on the tape.

- The picture may shake or the color may become black and white depending on your TV.

Technical Information

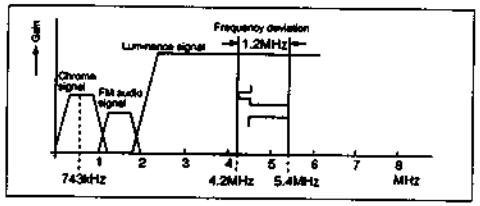
Hi8 (High Eight) Video System

The 8mm video system employs a metal powder tape. This means the video recorder is capable of recording a large amount of information and enhances picture quality. The Hi8 video system was developed utilizing the advantages of the 8mm video system. (See the diagrams below.) The main characteristics of the Hi8 video system are as follows:

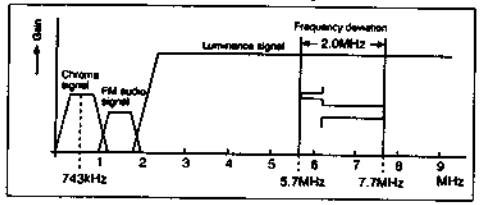
Characteristics of Hi8 System

- **Super high quality picture**
  The information capacity is a key element for picture improvement. It can be increased by shifting up the FM carrier frequency range. In the Hi8 video system, the FM carrier frequency range of the luminance signal is shifted up to 5.7-7.7 MHz. This is higher than the 4.2-5.4 MHz range of the standard 8mm video system. Consequently, the horizontal resolution is improved to 400 lines.

Frequency allocation of the standard 8mm video system



Frequency allocation of the Hi8 video system



- **Use of high grade tape to match the Hi8 video system**
  Metal tape for the Hi8 video system is ideal because it has large magnetic energy which permits high-density recording. The Hi8 VCR uses such high-grade tapes for the Hi8 video system, covering a wide frequency range, to achieve a high-quality video signal for recording/playback.
- **S-VIDEO (separate luminance/chroma signal) input/output connectors**
  Conventionally, the video signal exchanged between TV set and video equipment or among several video equipment is called a composite video signal, in which luminance (Y) signal and chroma (C) signal are mixed. In this system the composite video signal is liable to produce interference, resulting in picture quality loss. To avoid this picture quality loss, an S-VIDEO connector can transmit and receive the video signal separated into the luminance signal and the chroma signal. With the separated video signal flicker and color blur in the picture are minimized and sharpness is enhanced to such an extent that hair and fine stripes are clearly visible. The S-VIDEO connector also assures an excellent editing quality with minimum picture quality loss.
- **Tape speed**
  The Hi8 video system uses the same tape speed as the standard 8mm video system. An E6-120 (or P6-120) allows four hours of recording and playback in LP mode.

Recording and Playback in the Hi8 Video System

To take advantage of the EV-S3000 Hi8 video system, you must use Hi8 video tapes for recording and playback.

You can use the EV-S3000 to record and playback standard 8mm video tapes, if Hi8 quality is not necessary. (The Video 8 and standard 8mm systems are often referred to as "normal" mode.)

The EV-S3000 automatically detects the type of video system (standard 8mm or Hi8) in which the tape was recorded and plays the tape back accordingly.

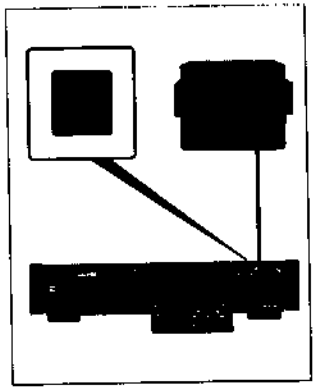
To make the most out of the Hi8 video system, select "Hi8 AUTO" on the PICTURE ADJUST menu. In this way, the EV-S3000 records in the Hi8 video system (see "Selecting Recording System" on page 54).

Compatibility with conventional video recorder decks

Tapes recorded using the Hi8 video system cannot be played back on conventional 8mm video equipment (standard 8mm video system).

General Setup Information

Setting the RF UNIT



If you connect a TV or color monitor equipped with A/V input jacks, skip this adjustment.

Why this setting is necessary:
You must set the RF UNIT selector at the rear of the VCR properly so that your TV can receive the correct signal from the VCR. Set the selector to 3 CH (Ch 3) or 4 CH (Ch 4), whichever is not active in your area.

1 **Set the RF UNIT at the rear of the VCR to 3 CH or 4 CH, whichever is not used in your area.**

2 **Press POWER.**
The power indicator lights up on the front panel.

3 **Press TV/VTR.**
The VTR indicator lights up in the display window.

4 **Check that the TUNER indicator appears in the display window, then select an active channel in your area by pressing CHANNEL/INDEX +/–.**

5 **Turn on your TV and set it to the channel you selected in step 1.**
Your TV is now tuned to the VCR. Whenever you use the VCR, set the TV to the preselected channel.

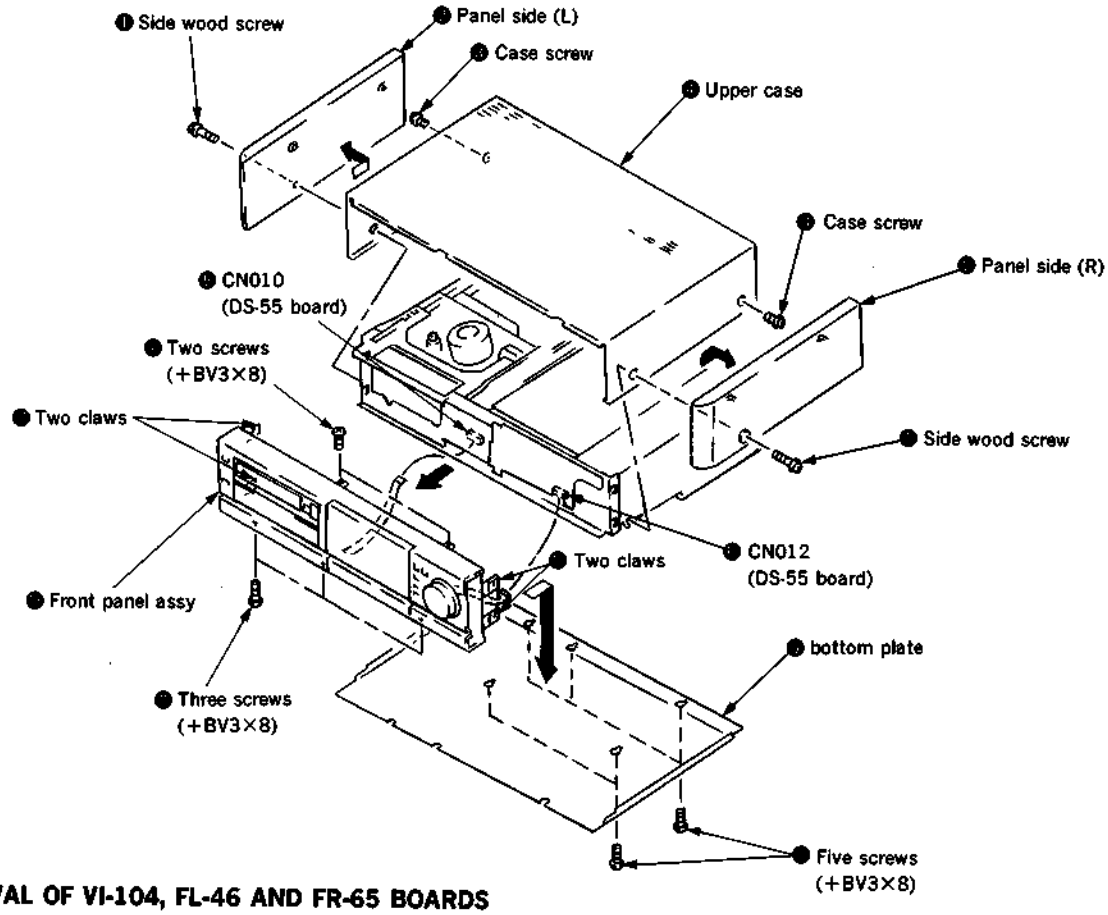
Note:
- For details on adjusting TV channels, see your TV instruction manual.

On-Screen Help Messages

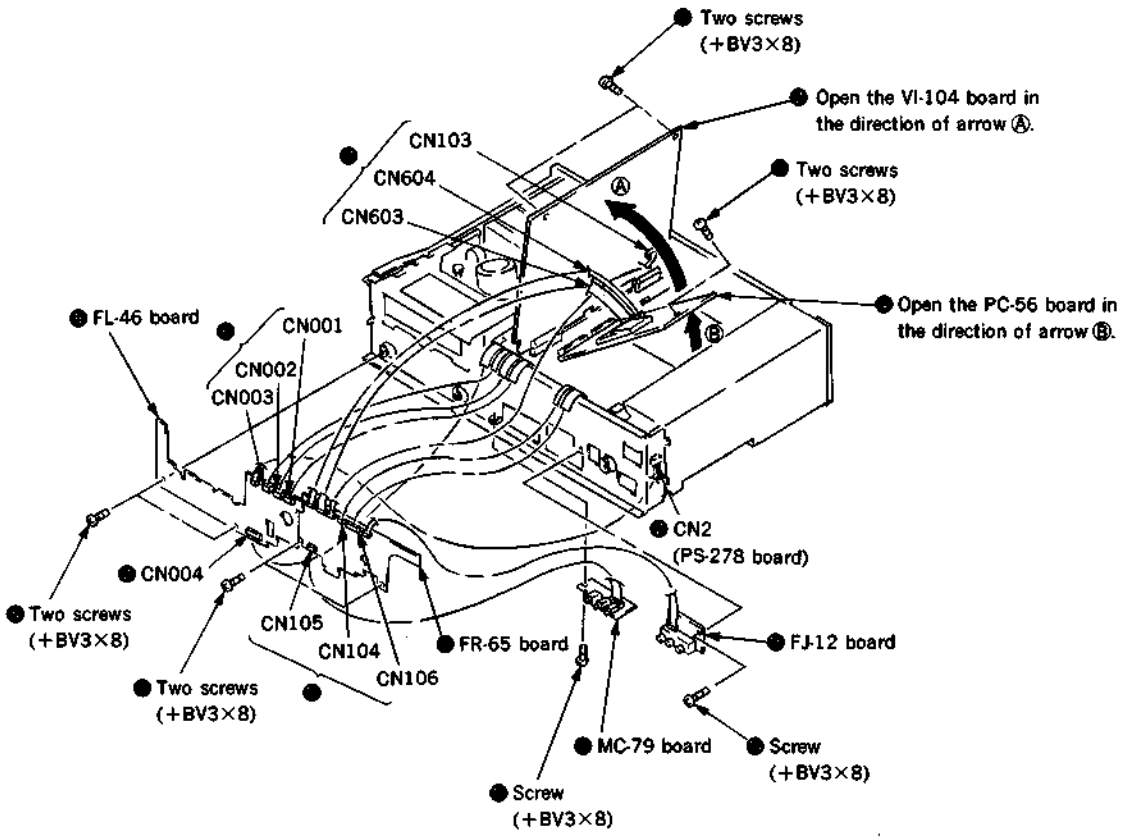
Please put in a cassette	The tape is rewound
Please stop the tape	This function cannot be changed
Please push INPUT SELECT	No timer recording has been set
Please transmit the data to the VCR again	Please connect PLAYBACK VCR with LANC cable, then set the PLAYBACK VCR LANC MODE to "S"
Please set the clock	There is no cassette in the PLAYBACK VCR. Please put in a cassette
Timer program is full	Please stop the PLAYBACK VCR
Tab on the cassette is locked	The tape in the PLAYBACK VCR is at the end
Please rewind or put in a new cassette	Please turn off the power switch then turn on again
No timer recording has been set	It is not possible to execute SYNCHRO EDIT
VCR is recording	Please check NORMAL/CATV

SECTION 3
DISASSEMBLY

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



3-2. REMOVAL OF VI-104, FL-46 AND FR-65 BOARDS



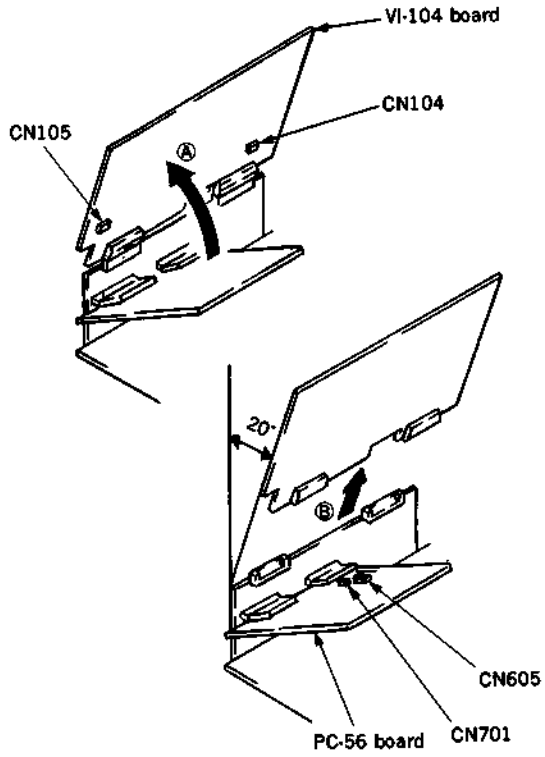
3-3. REMOVAL OF VI-104 AND PC-56 BOARDS

3-3-1. Removal of VI-104 Board

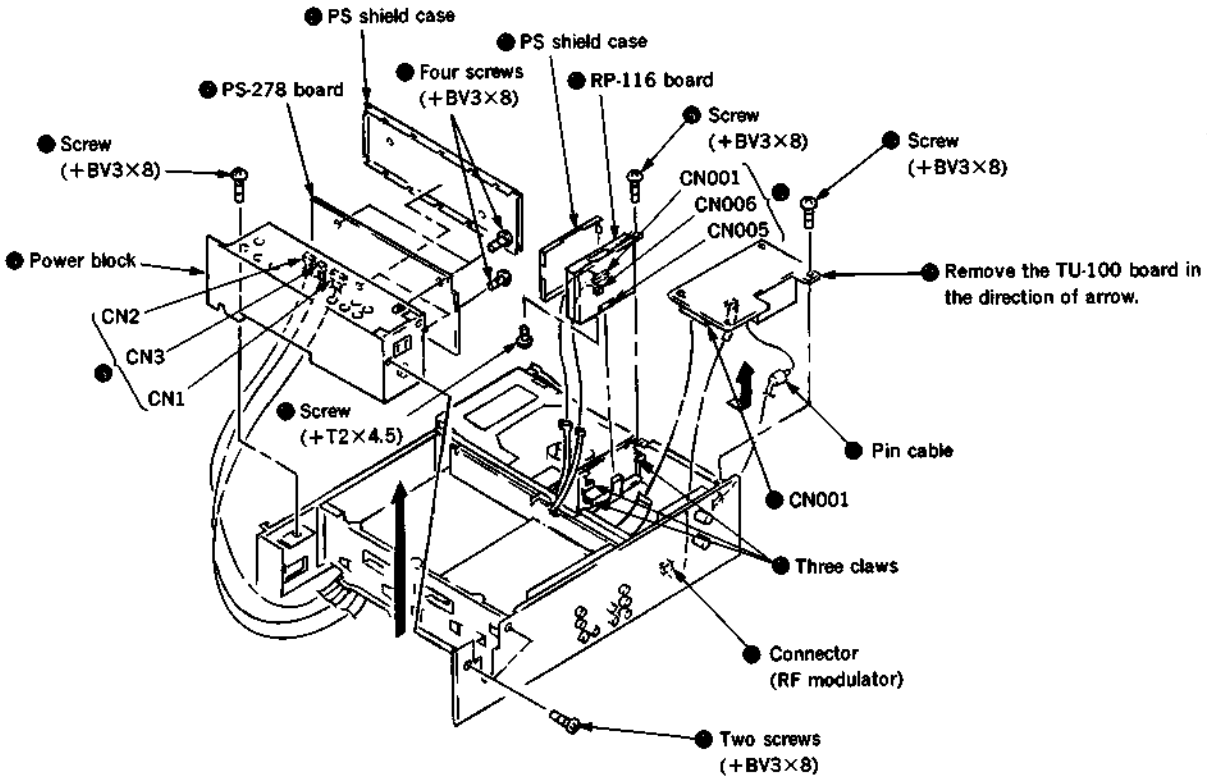
1) Open the VI-104 board in the direction of arrow Ⓐ.
2) Remove the connector (CN104 and CN105).
3) Open the VI-104 board for 20° angle.
4) Remove the VI-104 board in the direction of arrow Ⓑ.

3-3-2. Removal of PC-56 Board

1) Remove the connector (CN605 and CN701).
2) Open the PC-56 board for 20° angle.
3) Remove the PC-56 board in the direction of arrow Ⓑ.

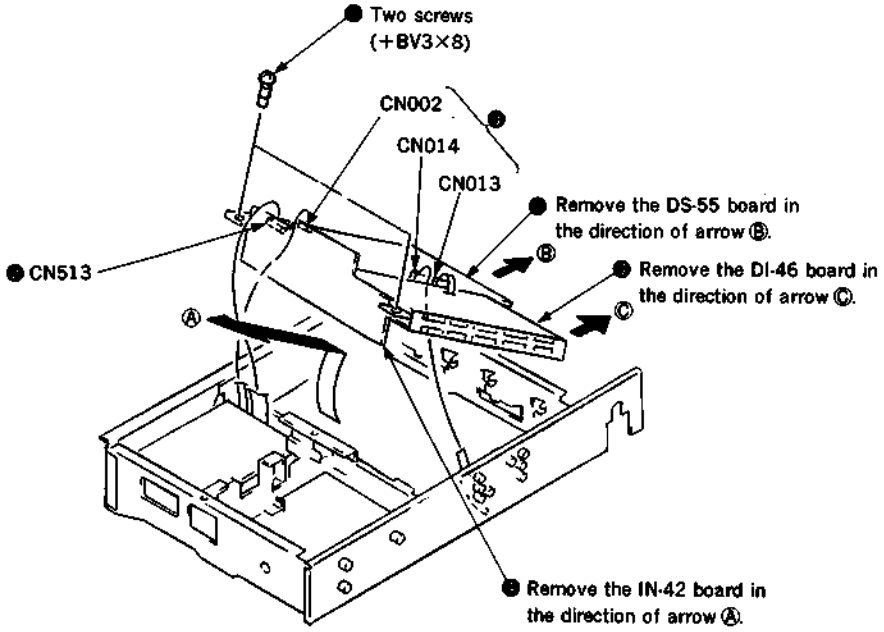


3-4. REMOVAL OF PS-278, RP-116 AND TU-100 BOARDS

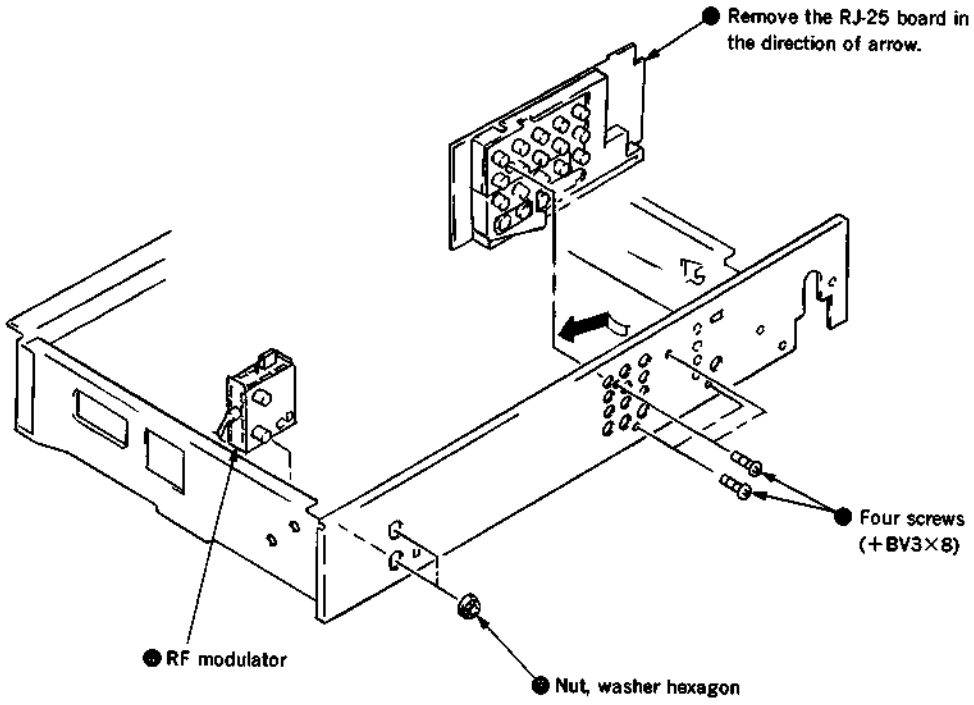


3-5. REMOVAL OF IN-42, DS-55 AND DI-46 BOARDS

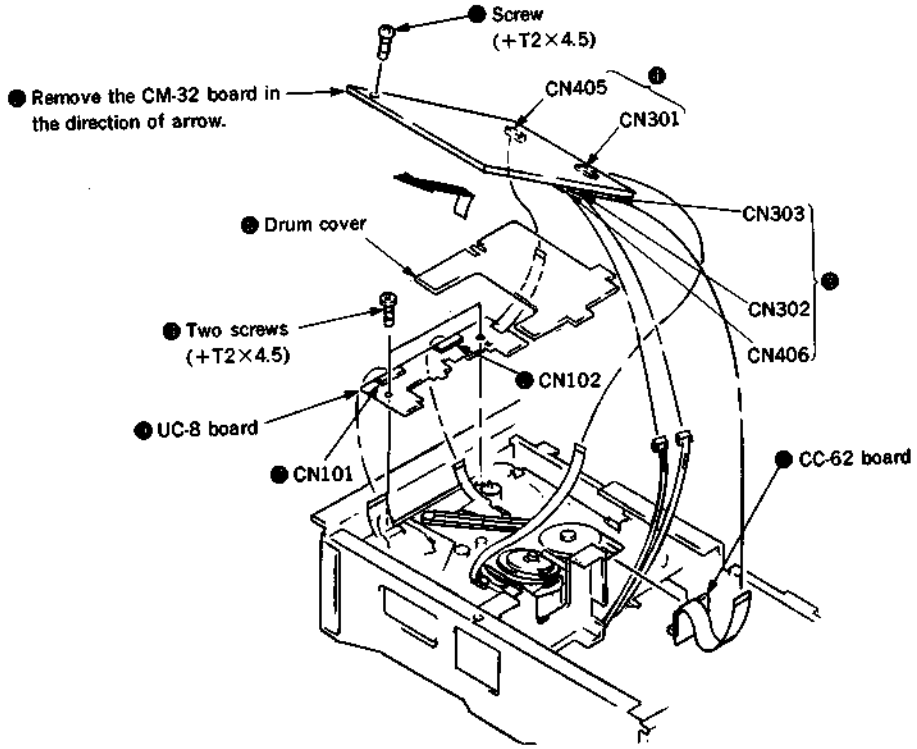
The set Positioned upside-down.



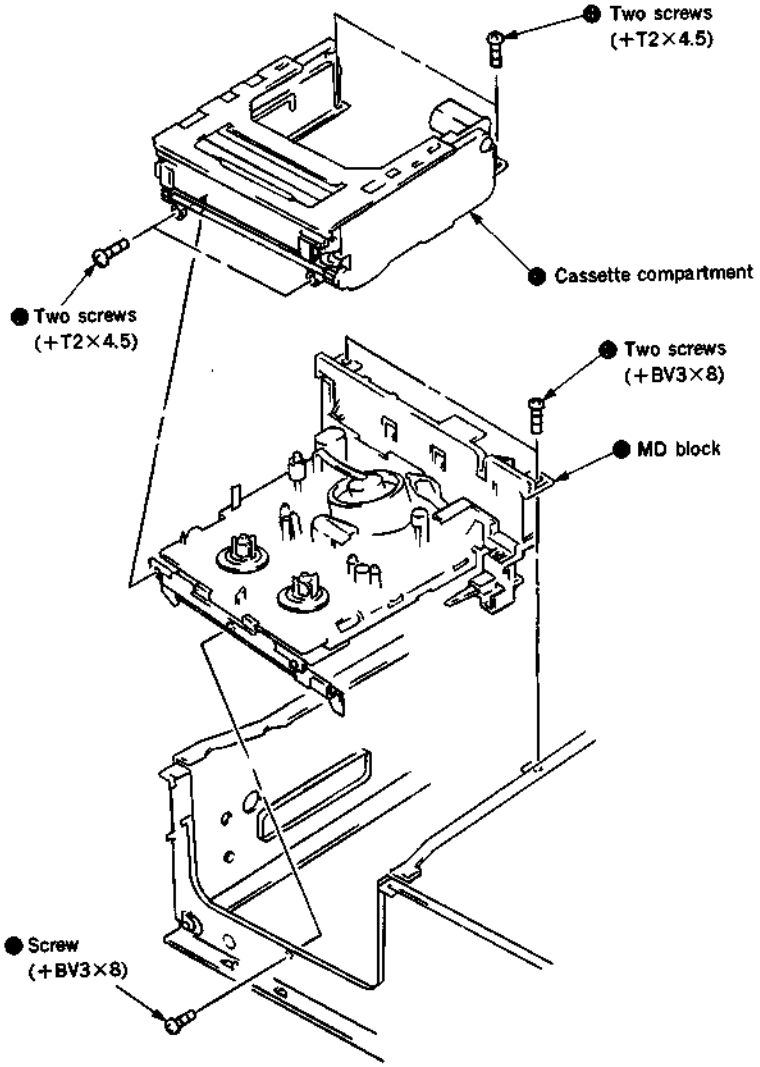
3-6. REMOVAL OF RJ-25 BOARD AND RF MODULATOR



3-7. REMOVAL OF CM-32, UC-8 AND CC-62 BOARDS

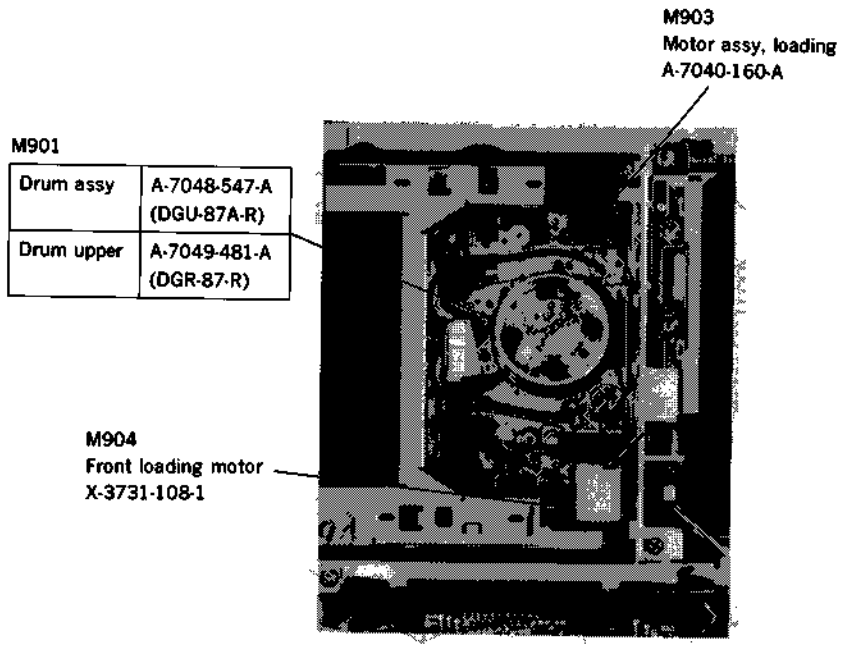


3-8. REMOVAL OF MD BLOCK AND CASSETTE COMPARTMENT ASSEMBLY

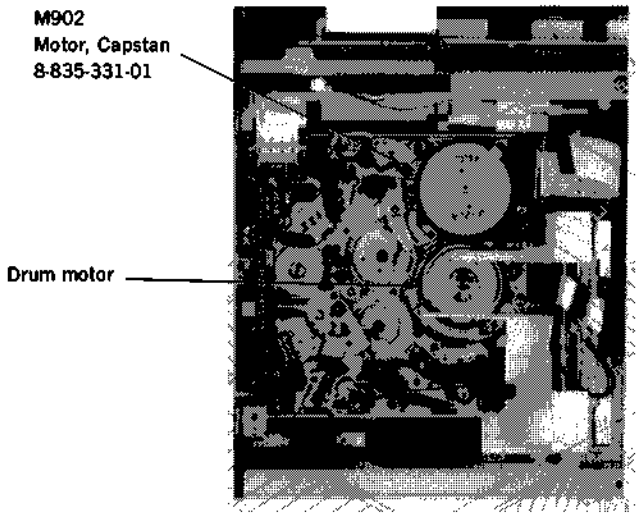


3-9. INTERNAL VIEWS

—Upper side—

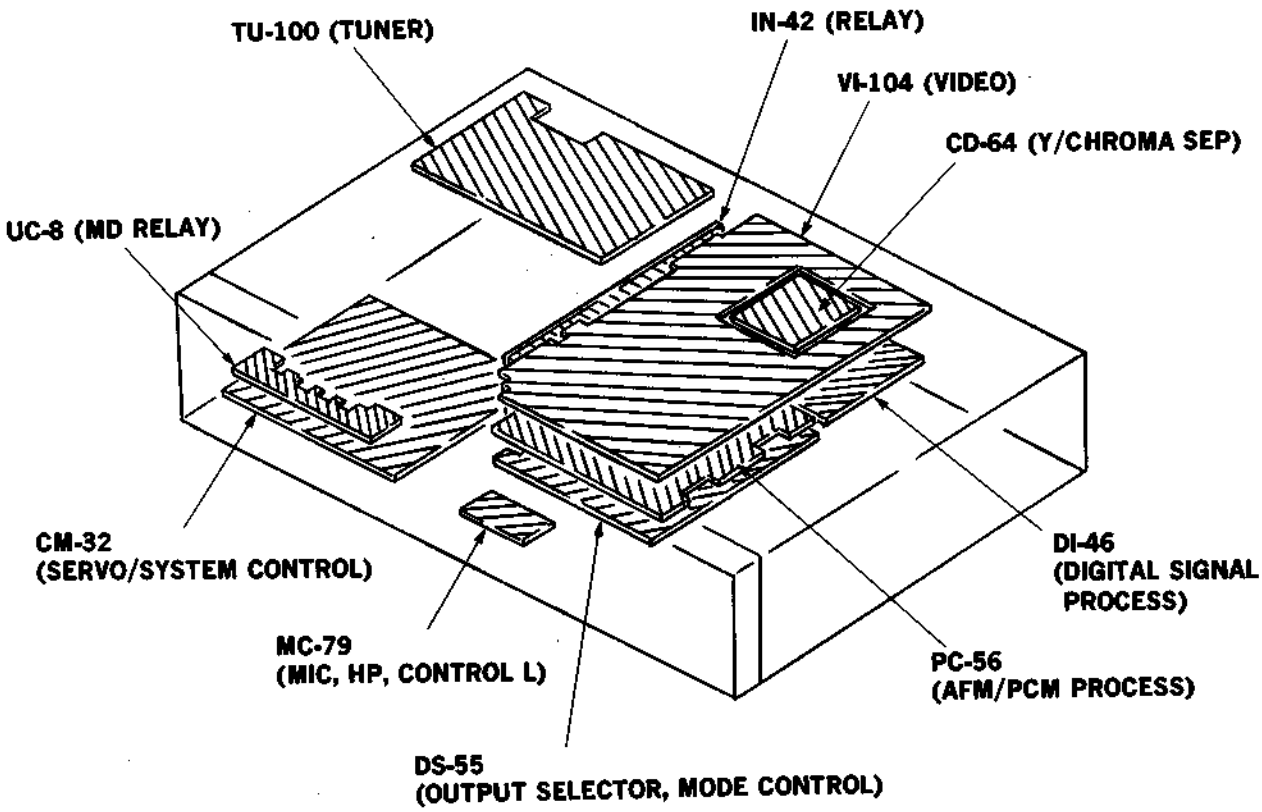


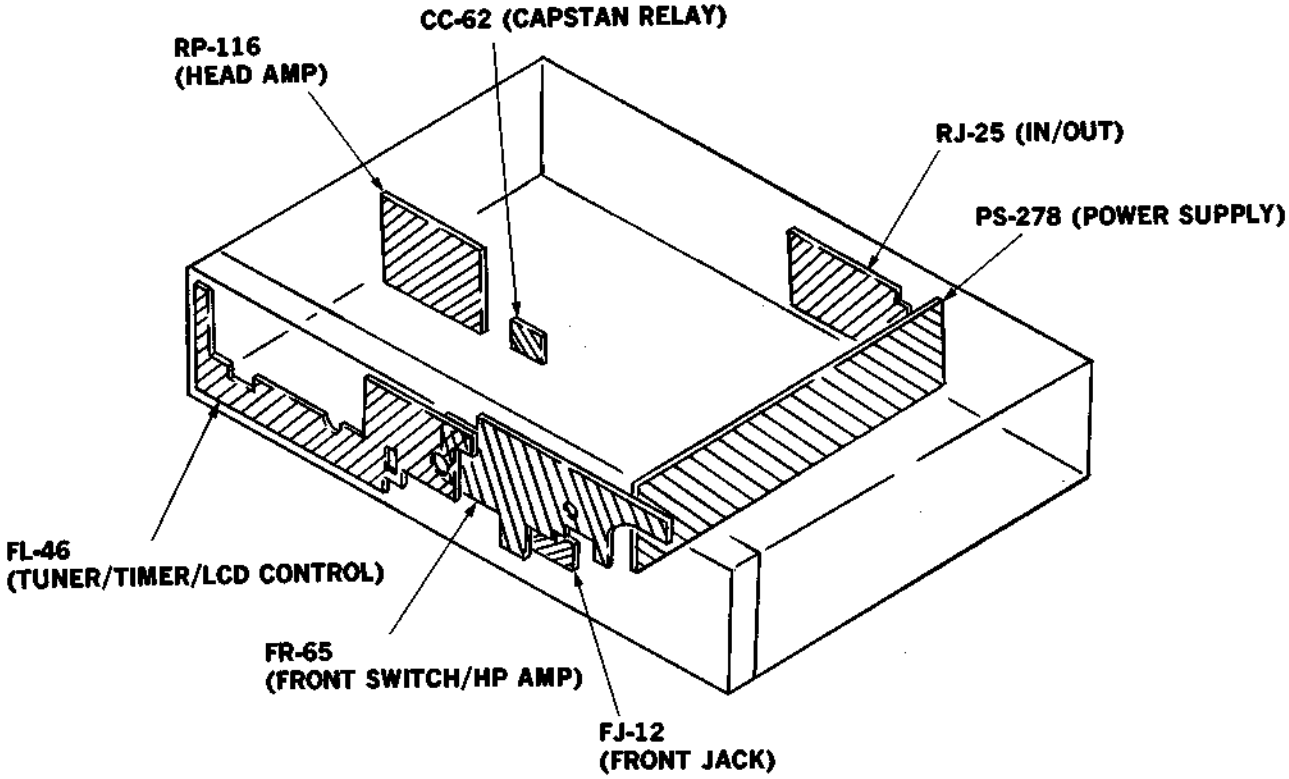
—Lower side—



SECTION 4
DIAGRAMS

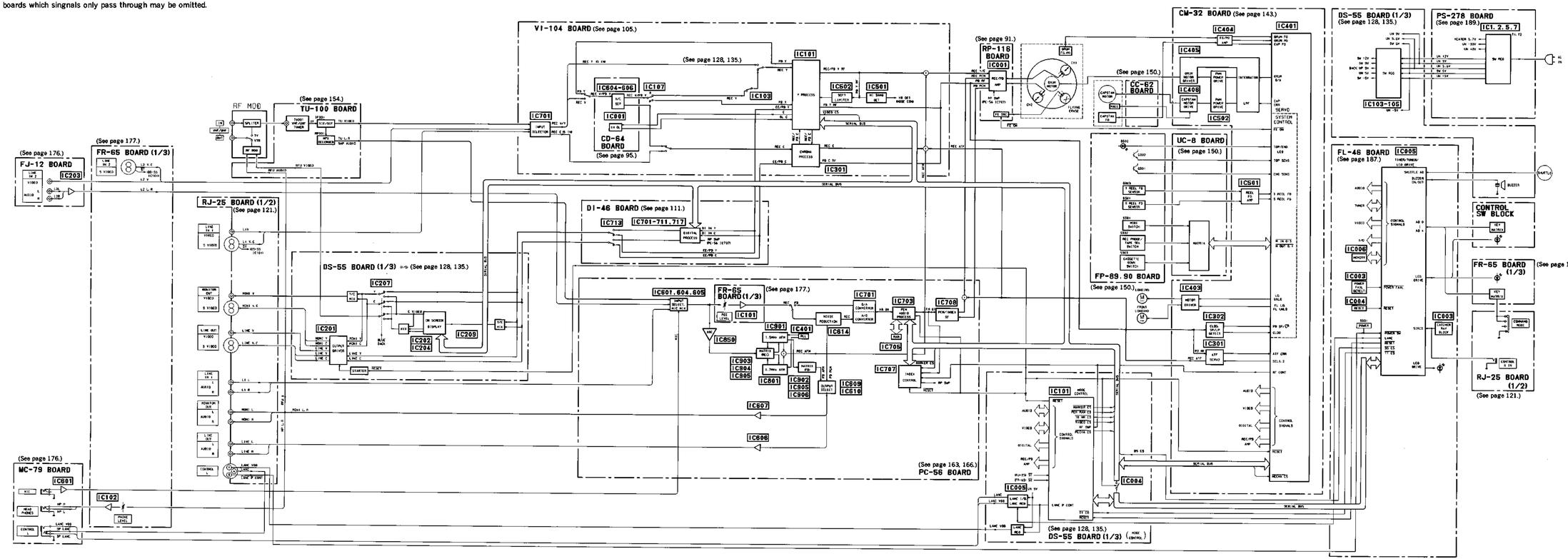
4-1. CIRCUIT BOARDS LOCATION





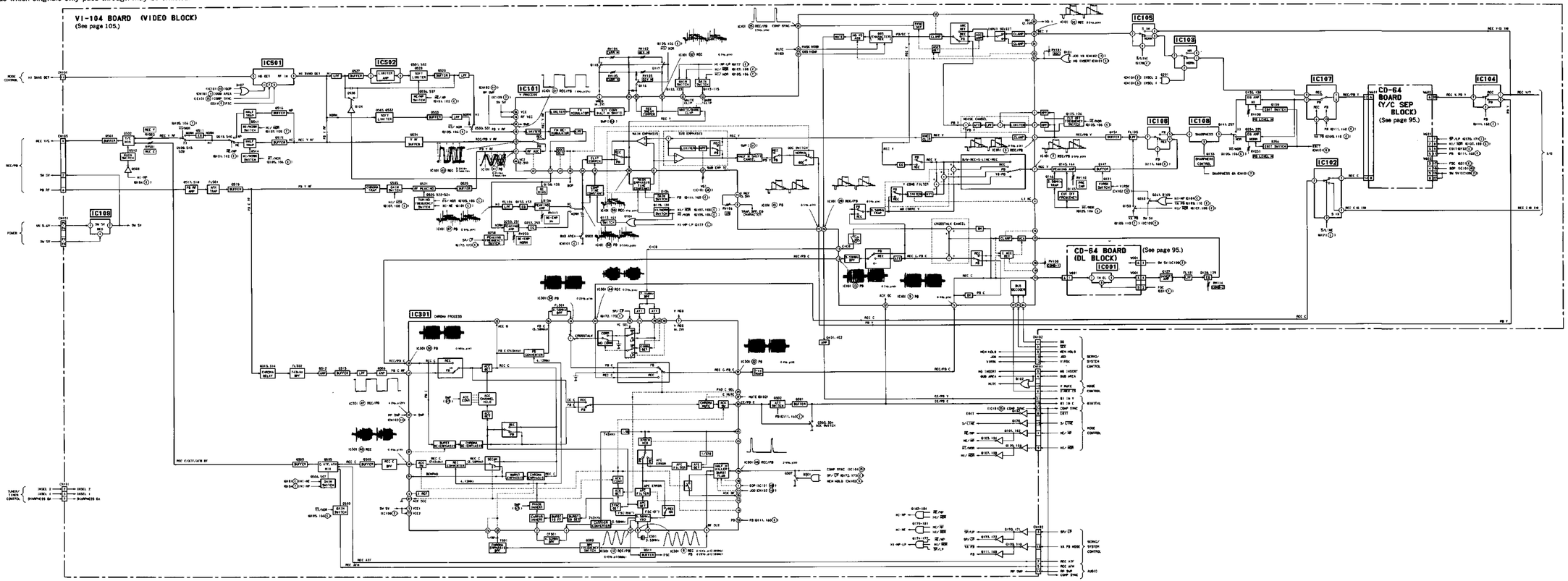
4-2. OVERALL BLOCK DIAGRAM

●The boards which singnals only pass through may be omitted.



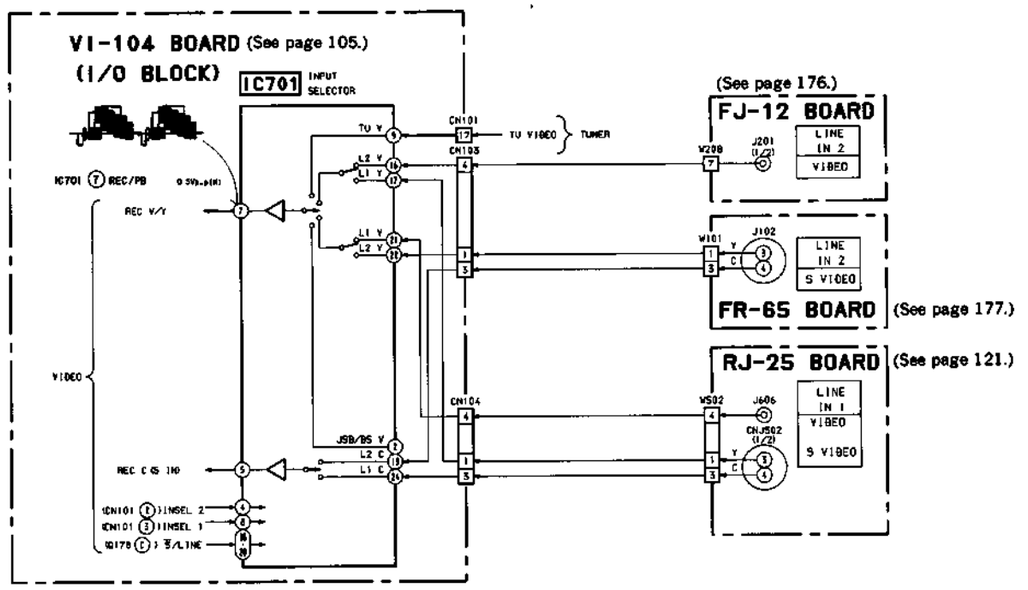
4-3. VIDEO BLOCK DIAGRAM

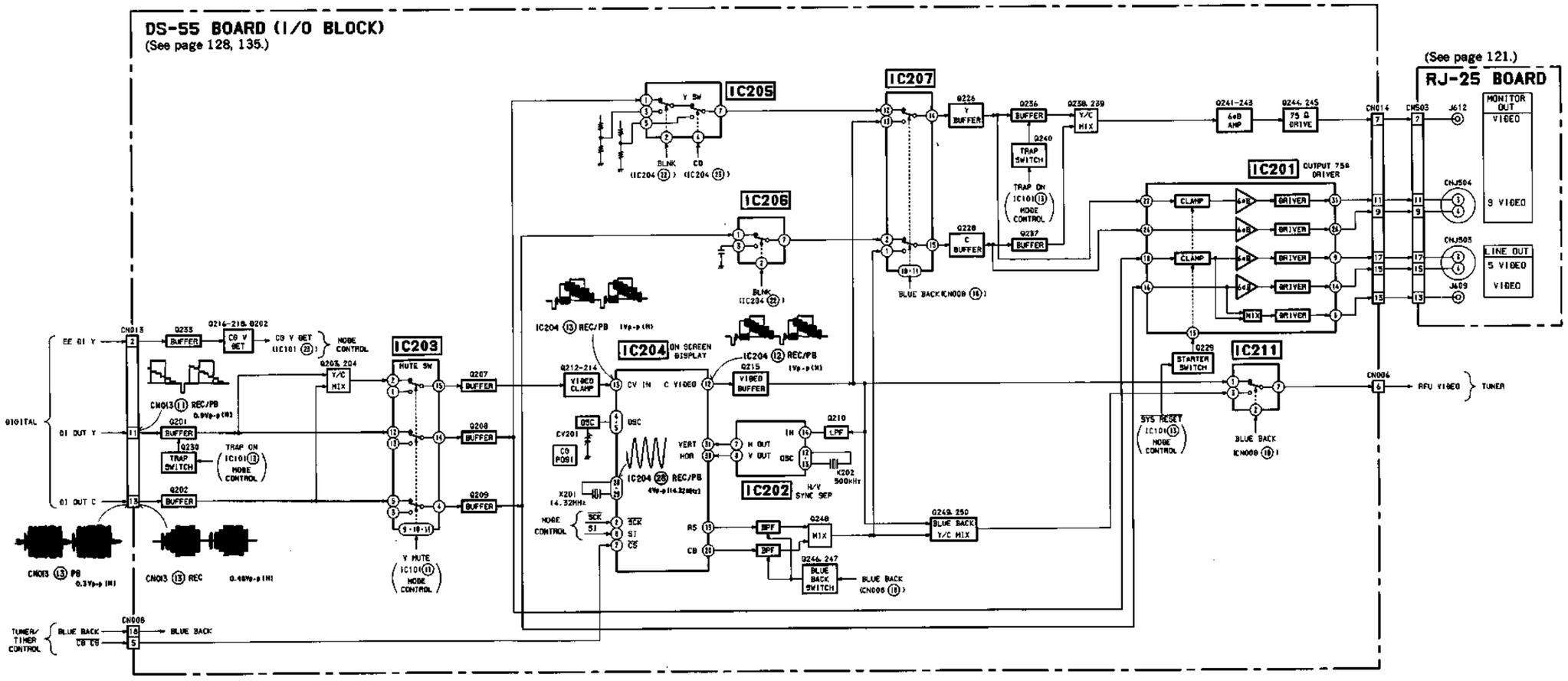
● The boards which singnals only pass through may be omitted.



4-4. IN/OUT BLOCK DIAGRAM

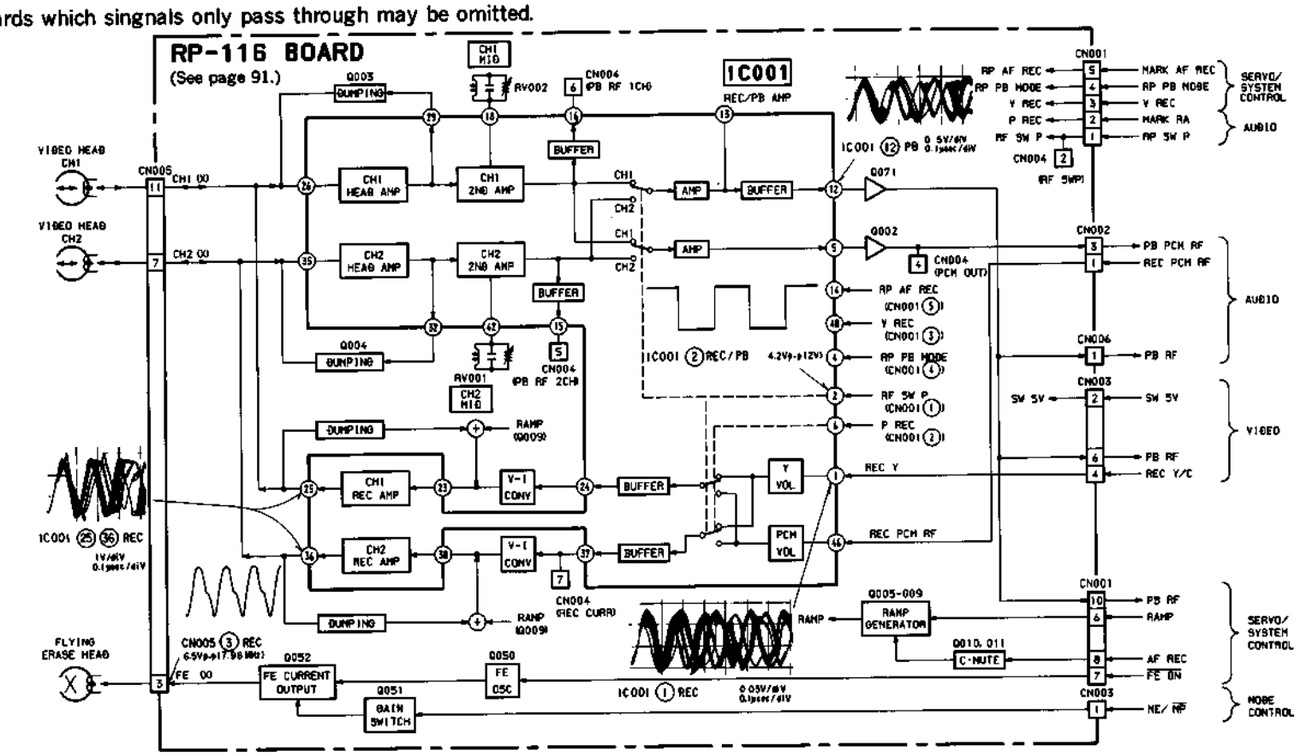
● The boards which singnals only pass through may be omitted.





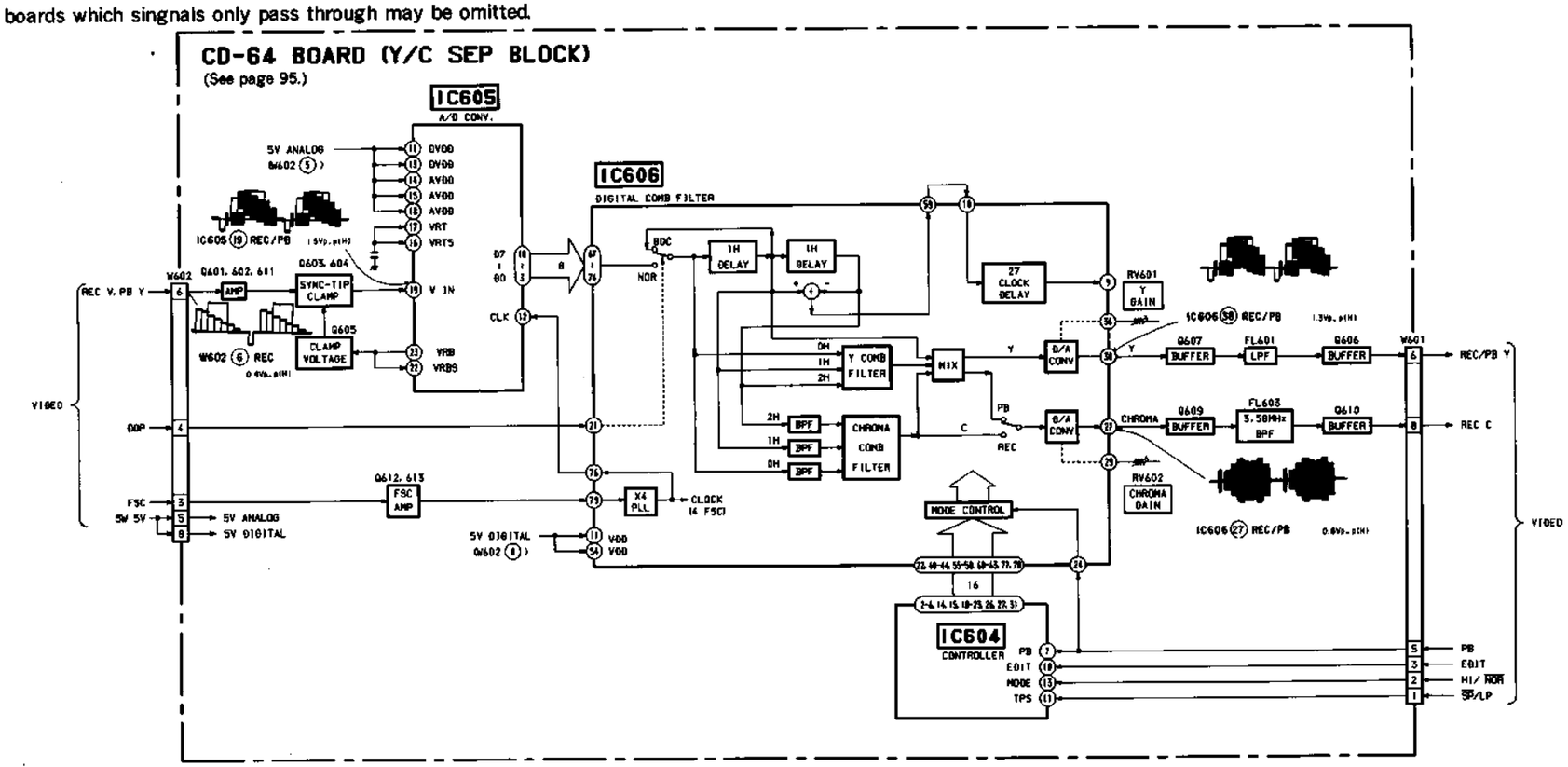
4-5. REC/PB AMP BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.



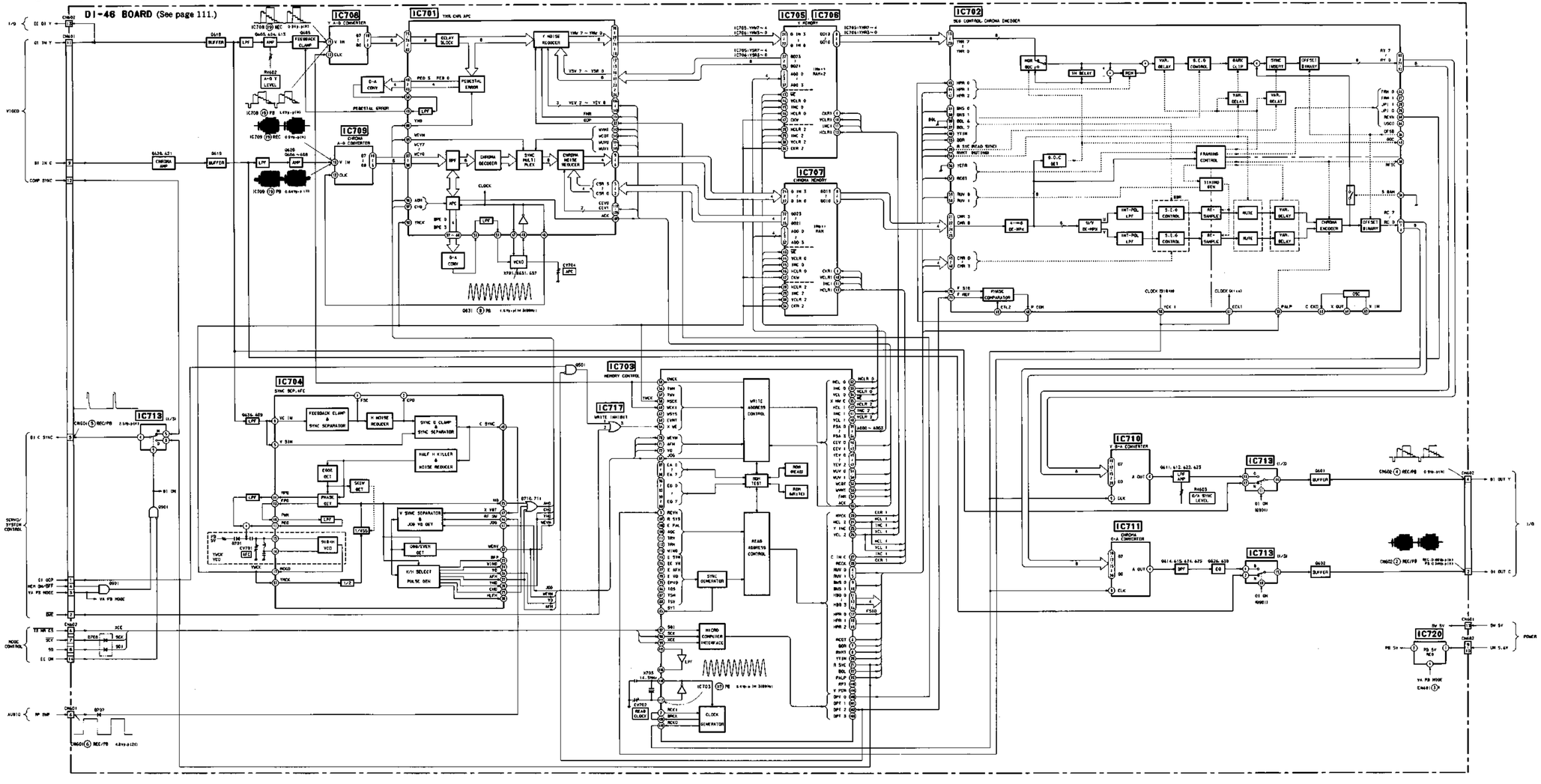
4-6. Y/C SEP BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.



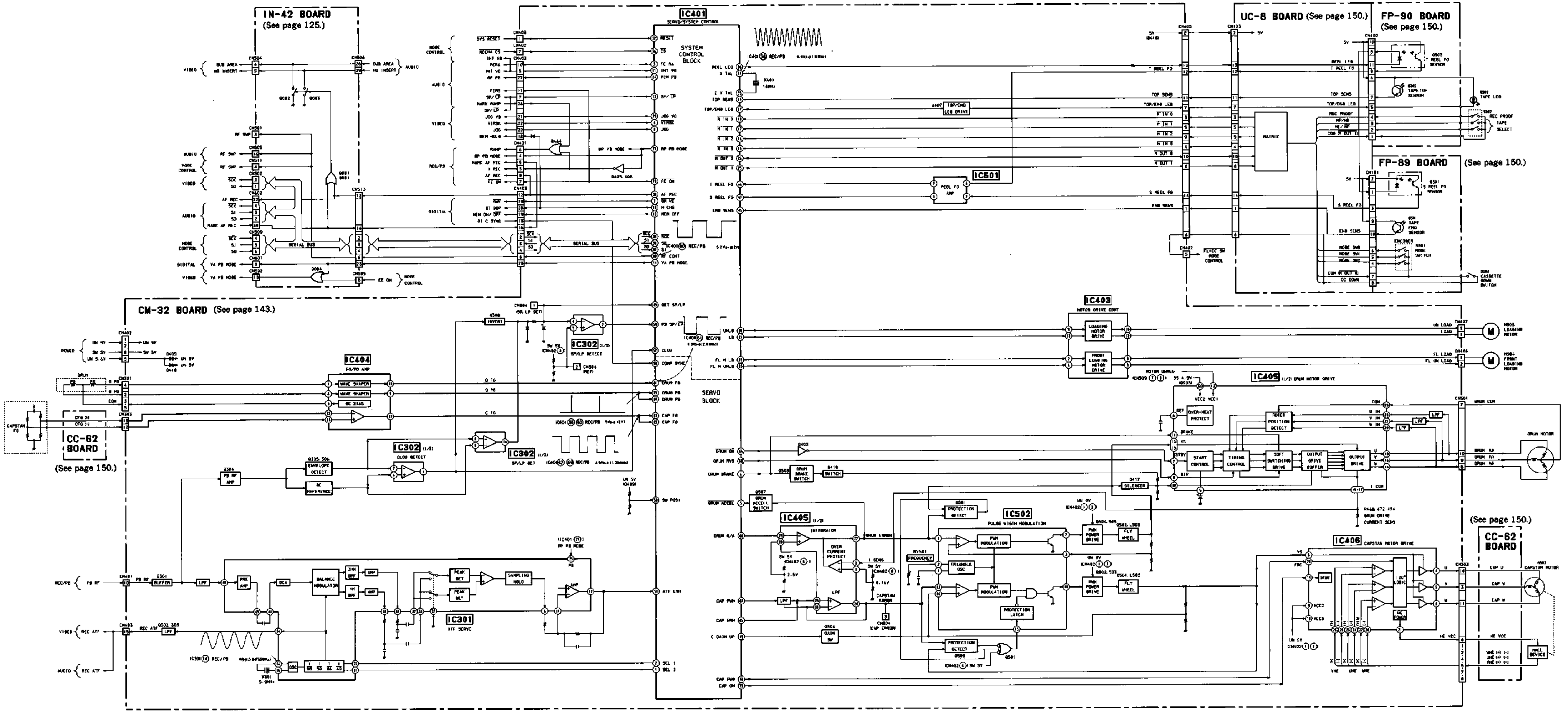
4-7. DIGITAL BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.



4-8. SERVO SYSTEM CONTROL BLOCK DIAGRAM

- The boards which singnals only pass through may be omitted.



4-9. PIN DESCRIPTION OF SERVO AND SYSTEM CONTROL MICROPROCESSOR (CXP80116 : IC401 on CM-32 BOARD)

Pin No.	Signal Name	I/O	Function
1	SEL 2	O	ATF REF Select signal
2	SEL 1	O	
3	FERA	O	Flying Erase REC AREA signal
4	$\overline{\text{VI RSK}}$	O	This signal masks character broadcast intervals during recording.
5	$\overline{\text{DRUM ACCEL}}$	O	Drum FH Acceleration pulse
6	DRUM BRAKE	O	Drum FH Deceleration pulse
7	$\overline{\text{DM WE}}$	O	This signal allows memory control during SLOW/STILL mode.
8	JOG	O	This is set "High" when a speed changed playback is entered.
9	PAL V	O	Not used
10	H CHG MECHA	O	Head Changeover signal
11	INT VD	O	Internal VD signal
12	SP/$\overline{\text{LP}}$	O	SPEED Mode signal
13	MEMORY OFF	O	PHASE II MEMORY ON/OFF signal
14	VA PB MODE	O	VIDEO and AUDIO REC/PB Changeover signal
15	$\overline{\text{M IN 3}}$	I	KEY MATRIX input
16	$\overline{\text{M IN 2}}$	I	
17	$\overline{\text{M IN 1}}$	I	
18	$\overline{\text{M IN 0}}$	I	
19	C GAIN UP	O	This signal allows CAPSTAN GAIN UP during RF/REW mode.
20	UN LD	O	LOADING MOTOR Control signal
21	LD	O	
22	FL M LD	O	FRONT LOADING MOTOR Control signal
23	FL M UNLD	O	
24	PCB PB	O	PCM Playback Control signal
25	$\overline{\text{M OUT 1}}$	O	KEY MATRIX output
26	$\overline{\text{M OUT 0}}$	O	
27	TOP/END LED	O	TOP/END Sensor LED Control signal
28	REEL LED	O	REEL LED Current signal
29	PCM REC INH	O	PCM REC ON/OFF signal
30	AF REC	O	This is set "High" when AF recording is entered.
31	MP		Not used
32	$\overline{\text{RESET}}$	I	Reset signal input
33	V_{SS}		GND
34	XTAL	O	16MHz Clock Oscillation
35	EXTAL	I	
36	$\overline{\text{SYSCON CS}}$	I	Serial Communication Chip Select signal from Mode control Microprocessor (IC101 on DS-55 board)
37	SYSCON SI	I	Serial Data input
38	SYSCOM SO	O	Serial Data output
39	$\overline{\text{SYSCON SCK}}$	I	Serial Communication Clock input
40			Not used
41	E/$\overline{\text{L}}$		
42			
43	$\overline{\text{MIN4}}$		

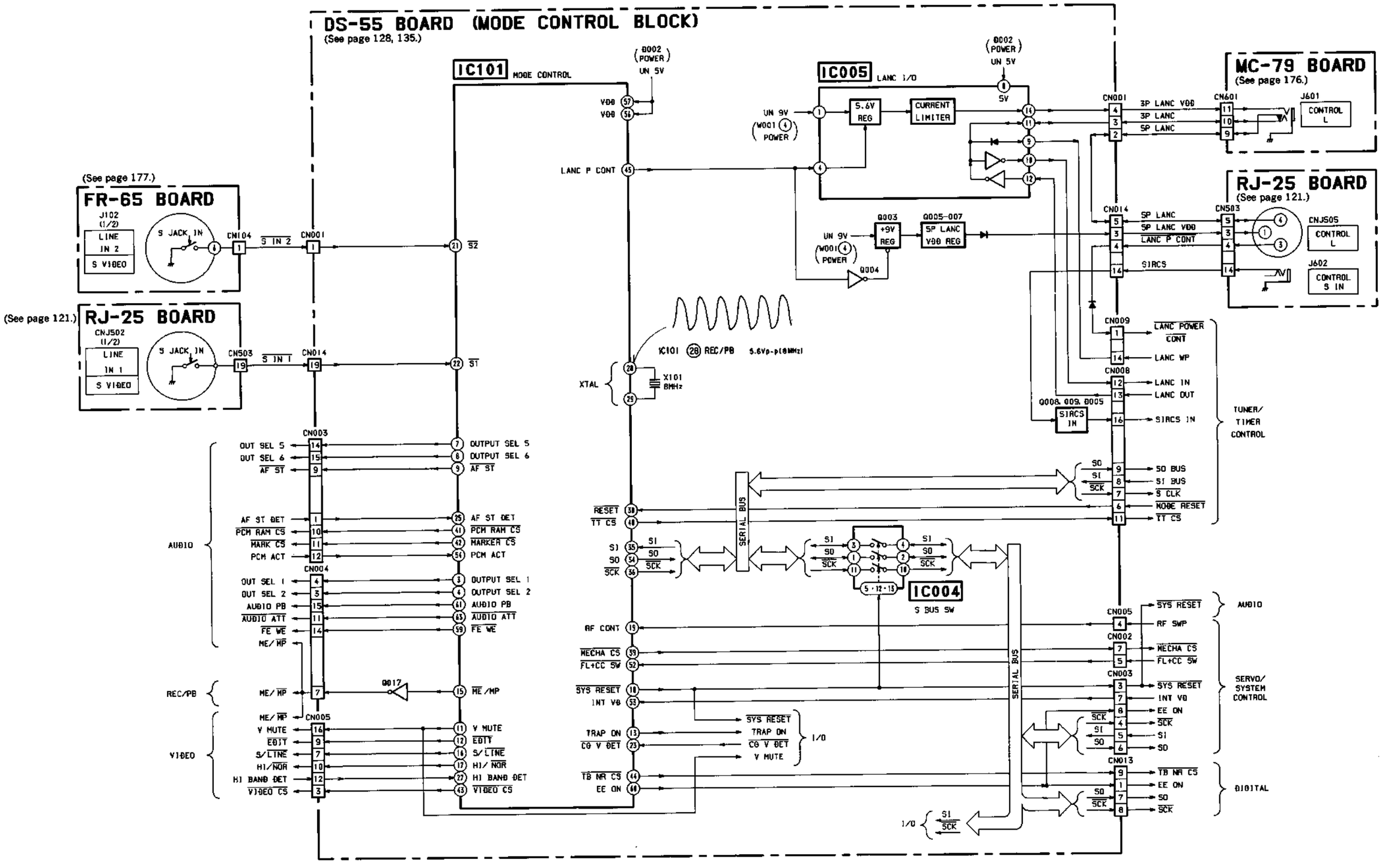
Table 4-1-1.

Pin No.	Signal Name	I/O	Function
44	TAPE TOP SENS	I	TAPE TOP Sensing A/D input
45	TAPE END SENS	I	TAPE END Sensing A/D input
46	$\overline{\text{T REEL FG}}$	I	T REEL FG A/D input
47	$\overline{\text{S REEL FG}}$	I	S REEL FG A/D input
48	BATT DOWN		Not used
49	DET SP/LP	O	SP/LP Detection output.
50	SW POSI ADJ	I	SW POSI Temperature Correction A/D input
51	ATF ERROR	I	ATF ERROR A/D input
52	A V_{SS}		GND for A/D
53	A V_{REF}		Reference Voltage for A/D
54	A V_{DD}		Power for A/D
55	DRUM PG	I	DRUM PG input
56	DRUM FG	I	DRUM FG input
57	CLOG	I	CLOG Detection input
58	COMP SYNC	I	Composite SYNC input
59	PB SP/$\overline{\text{LP}}$	I	FF/REW CUE/REV SP/LP Discrimination input
60	DRUM PG	I	DRUM PG input
61	DRUM FG	I	DRUM FG input
62	CAP FG	I	CAP FG input
63			N.C.
64	$\overline{\text{DRUM ON}}$	O	DRUM DRIVER ON/OFF signal
65	CAP ERH	O	CAPSTAN ERROR HIGH output
66	DRUM ERR	O	DRUM 3 STAGE ERROR output
67	CAP PWH	O	CAPSTAN PWH ERROR output
68	DRUM RVS	O	DRUM Direction Changeover signal
69	CAP FG	I	CAPSTAN FG input for HMS
70			Not used
71	$\overline{\text{NMI}}$		Not used
72	V_{DD}		+5V
73	V_{SS}		GND
74			Not used
75	CAP ON	O	CAPSTAN DRIVER ON/OFF signal
76	CAP FWD	O	CAPSTAN Direction Changeover signal
77	RP PB MODE	O	REC/PB Changeover signal
78	$\overline{\text{FE ON}}$	O	Flying Erase Oscillation ON/OFF signal
79	JOG VD	O	This is VD signal to be inserted into VIDEO signal when a changed speed playback is entered.
80	REF CONT	O	REF CONT signal

Table 4-1-2.

4-10. MODE CONTROL BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.



4-11-1. PIN DESCRIPTION OF MODE CONTROL MICROPROCESSOR (CXP80316 : IC101 on DS-55 BOARD)

Pin No.	Signal Name	I/O	Function
1	BLUE BACK		N.C.
2	NR AGC		
3	OUTPUT SEL 1	O	Audio Monitor Select signal (Refer to Sections 4-10-2. and 4-10-3.)
4	OUTPUT SEL 2	O	
5	OUTPUT SEL 3	O	N.C.
6	OUTPUT SEL 4	O	
7	OUTPUT SEL 5	O	Audio Monitor Select signal (Refer to Sections 4-10-2 and 4-10-3.)
8	OUTPUT SEL 6	O	
9	$\overline{\text{AF ST}}$	O	This is set "Low" when STEREO input is provided and set "Low" when AFM is placed in STEREO in playback mode.
10	BS V MUTE	O	N.C.
11	V MUTE	O	This is set "High" when VIDEO MUTE signal is placed in MUTE.
12	$\overline{\text{EDIT}}$	O	This is set "Low" when EDIT signal is placed in EDIT ON.
13	TRAP ON	O	This is set "High" when playback is entered. This is used to remove residual chroma in playback mode.
14	MP HG/$\overline{\text{MP}}$	O	This is set "High" when ME TAPE is used.
15	$\overline{\text{ME}}$/MP	O	This is set "Low" when ME TAPE is used.
16	S/$\overline{\text{LINE}}$	O	This is set "High" when S Pin input is provided. This is switched depending on the input state.
17	HI/$\overline{\text{NOR}}$	O	This is set "High" when HI BAND (Hi8) mode is entered.
18	$\overline{\text{SYS RESET}}$	O	System Reset output
19	RF CONT	I	RF SW PULSE input
20	$\overline{\text{S3}}$		Not used
21	$\overline{\text{S2}}$	I	This is set "Low" when LINE 2 S Pin input is provided.
22	$\overline{\text{S1}}$	I	This is set "Low" when LINE 1 S Pin input is provided.
23	$\overline{\text{CG V DET}}$	I	CG V Detection signal input (Active "Low")
24	$\overline{\text{AF BIL DET}}$	I	Not used
25	AF ST DET	I	This is set "High" when AFM is placed in STEREO in playback mode.
26	V_{SS}		GND
27	HI BAND DET	I	This is set "High" when HI BAND (Hi8) mode is entered.
28	XTAL	O	8MHz Clock Oscillation
29	EXTAL	I	
30	$\overline{\text{RESET}}$	I	Reset signal input from T/T Microprocessor (IC005 on FL-46 board)
31			N.C.
32			
33			
34	SO	O	Serial Data output
35	SI	I	Serial Data input
36	$\overline{\text{SCK}}$	O	Serial Communication Clock output
37			N.C.
38			
39	$\overline{\text{MECHA CS}}$	O	Serial Communication Chip Select output to S/S Microprocessor (IC401 on CM-32 board)
40	$\overline{\text{TT CS}}$	O	Serial Communication Chip Select signal output to T/T Microprocessor
41	$\overline{\text{PCM RAM CS}}$	O	Serial Communication Chip Select signal output to PCM Process IC (IC703 on PC-56 board)
42	$\overline{\text{MARKER CS}}$	O	Serial Communication Chip Select signal output to INDEX IC (IC707 on PC-56 board)
43	$\overline{\text{VIDEO CS}}$	O	Serial Communication Chip Select signal output to Y Process IC (IC101 on VI-104 board)

Table 4-2-1.

Pin No.	Signal Name	I/O	Function
44	$\overline{\text{TB NR CS}}$	O	Serial Communication Chip Select signal output to Digital Memory Control IC (IC703 on DI-46 board)
45	LANC P CONT	O	LANC POWER Control signal output
46			N.C.
47			
48	TEST D		Not used
49	TEST C		
50	TEST B	I	Used to switch between JAPAN and USA (CND). This is set "High" to switch to JAPAN.
51	TEST A	I	Test pin used for Board Adjustment. This is set "Low" to enter the test mode.
52	$\overline{\text{FL+CC SW}}$	I	This is set "Low" when Cassette Down switch is turned ON.
53	INT VD	I	VD signal input
54	PCM ACT	I	PCM Presence Discrimination signal
55			
56	V_{DD}		+5V power
57	V_{DD}		+5V power
58	V_{SS}		GND
59	FE WE	O	This is set "High" when INDEX ERASE is entered (SP is set).
60	EE ON	O	E-E Screen/PB Screen Changeover signal
61	AUDIO PB	O	This is set "High" when AUDIO playback is entered.
62	$\overline{\text{AF BIL}}$	O	Not used
63	AUDIO ATT	O	Used to attenuate audio during AF recording. This is set "High" when audio is attenuated.
64	C+R	O	This is set "High" when CUE/REV mode is entered.

Table 4-2-2.

4-11-2. AUIDO MONITOR SELECT

EE/PB	EE ST	AUDIO MON SW	PCM EXIST	PCM ID	AFM ID	PB ST/BIL	MONITOR OUT	DISPLAY	OUTPUT PATTERN Refer to Section 4-11-3.
PB		AUTO	Yes	STEREO			STEREO	STEREO	1
							L	L	3
							R	R	4
				MONO			MONO	no	1
			No		STEREO	STEREO	STEREO	STEREO	5
							L	L	6
							R	R	7
					MONO		MONO	no	6
		MIX	Yes	STEREO	STEREO	STEREO	STEREO	STEREO	2
							L	L	8
							R	R	9
					MONO		STEREO	STEREO	10
							L	L	8
							R	R	11
				MONO	STEREO				2
					MONO				10
			No		STEREO	STEREO	STEREO	STEREO	5
							L	L	6
							R	R	7
					MONO		MONO	no	6
		STD			STEREO	STEREO	STEREO	STEREO	5
							L	L	6
							R	R	7
					MONO		MONO	no	6
EE	MONO	AUTO					MONO	no	1
		MIX					MONO	no	2 Note1)
		STD					MONO	no	5
	STEREO	AUTO					STEREO	STEREO	1
		MIX					STEREO	STEREO	2 Note1)
		STD					STEREO	STEREO	5

Table 4-3.

Note 1) OUTPUT PATTERN is set to 10 when SAP is received.

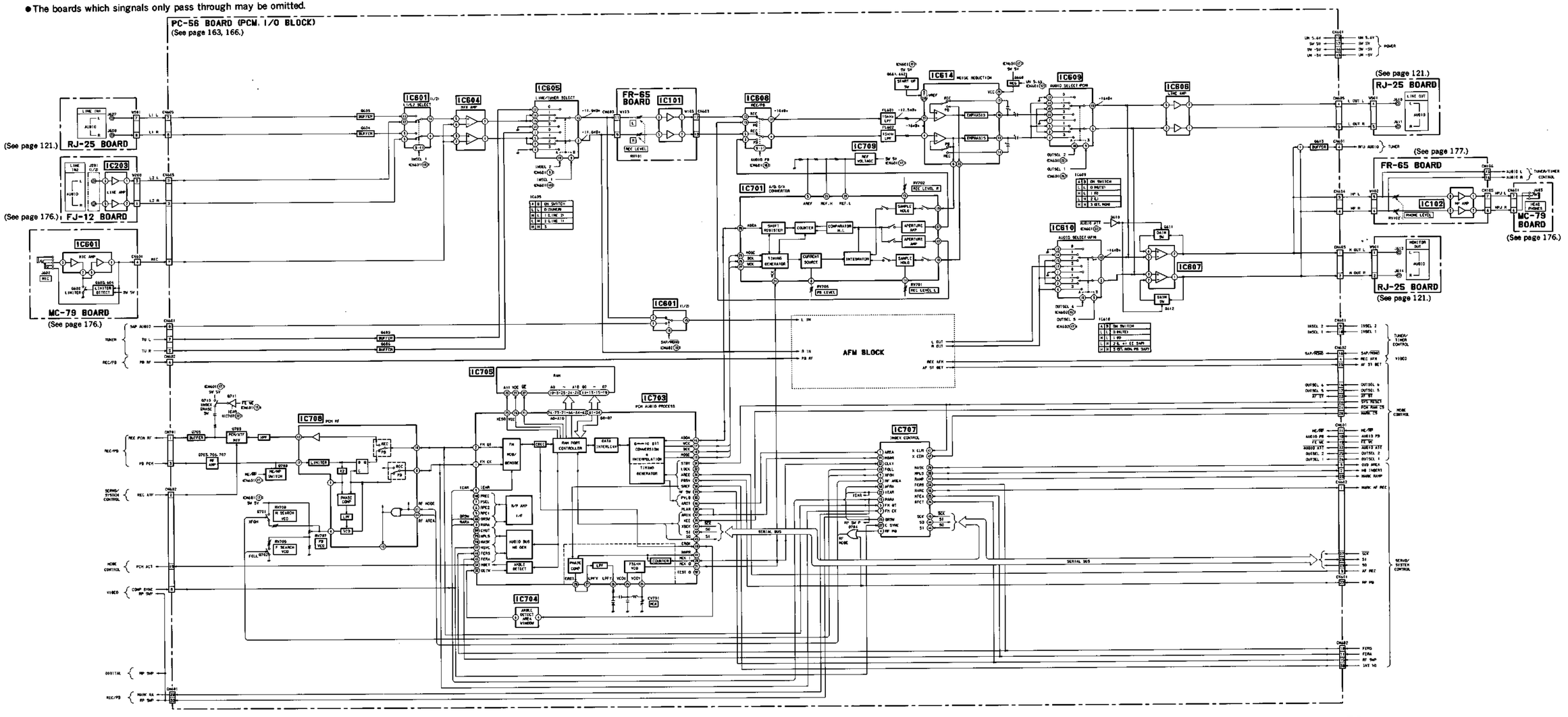
4-11-3. OUTPUT PATTERN

OUTPUT PATTERN	1	2	3	4	5	6	7	8	9	10	11
OUTSEL 1	H	H	H	L	L	L	L	H	L	H	L
OUTSEL 2	H	H	L	H	L	L	L	L	H	H	H
OUTSEL 3	H	H	H	L	L	L	L	H	L	H	L
OUTSEL 4	H	H	L	H	L	L	L	L	H	H	H
OUTSEL 5	L	H	L	L	H	H	L	H	L	H	H
OUTSEL 6	L	H	L	L	H	L	H	L	H	L	L

Table 4-4.

4-12. AUDIO BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.

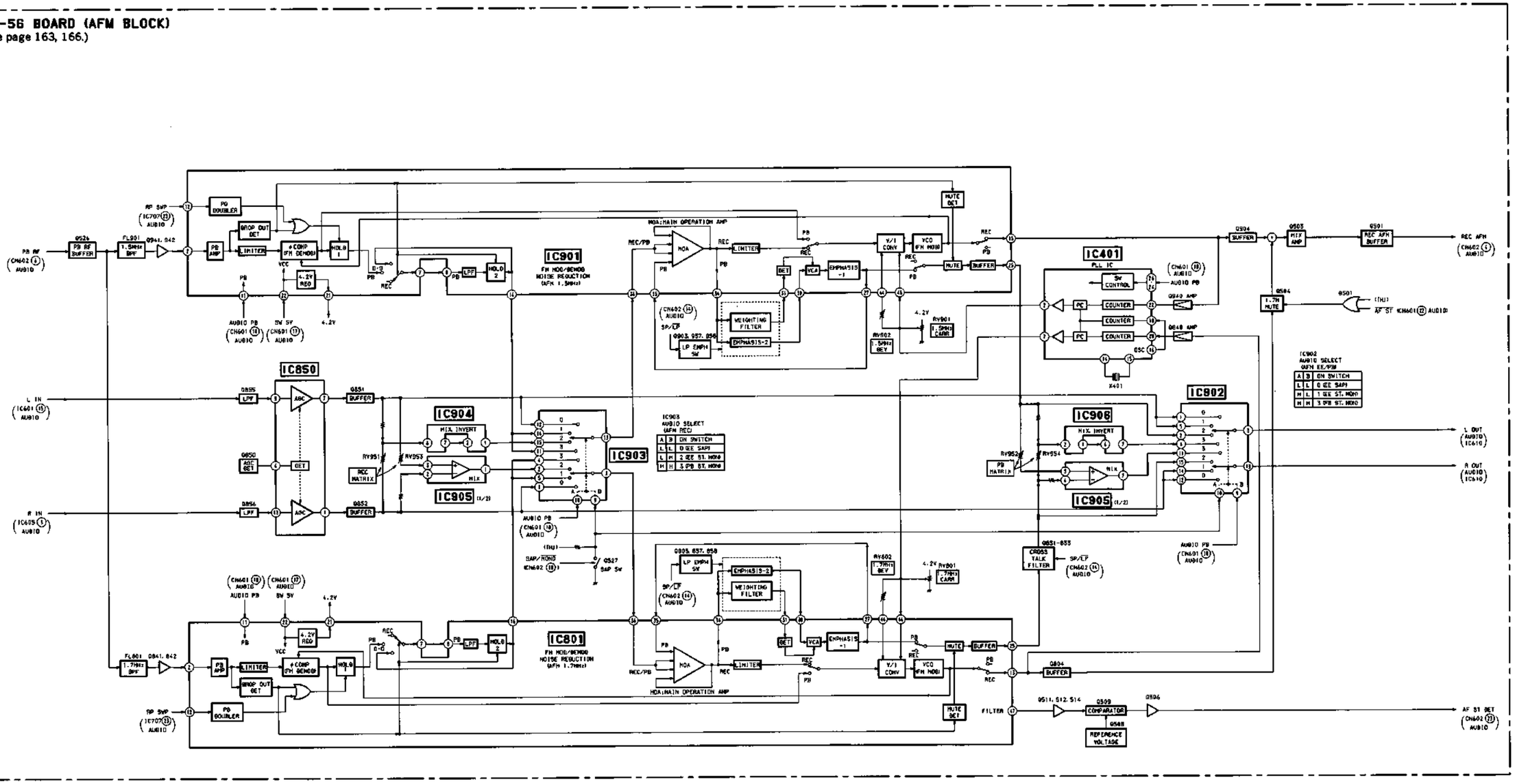


4-13. AFM BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.

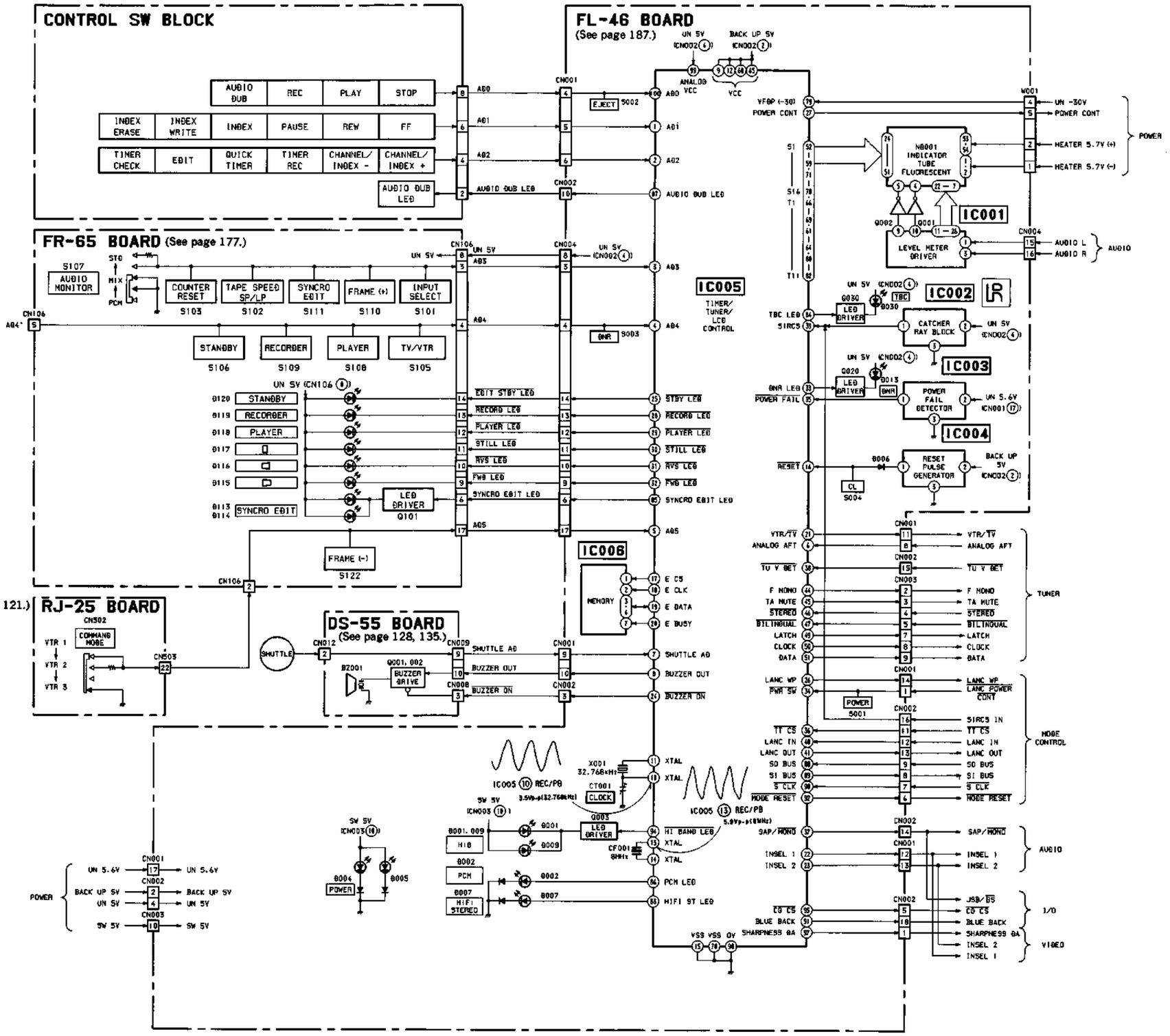
PC-56 BOARD (AFM BLOCK)

(See page 163, 166.)



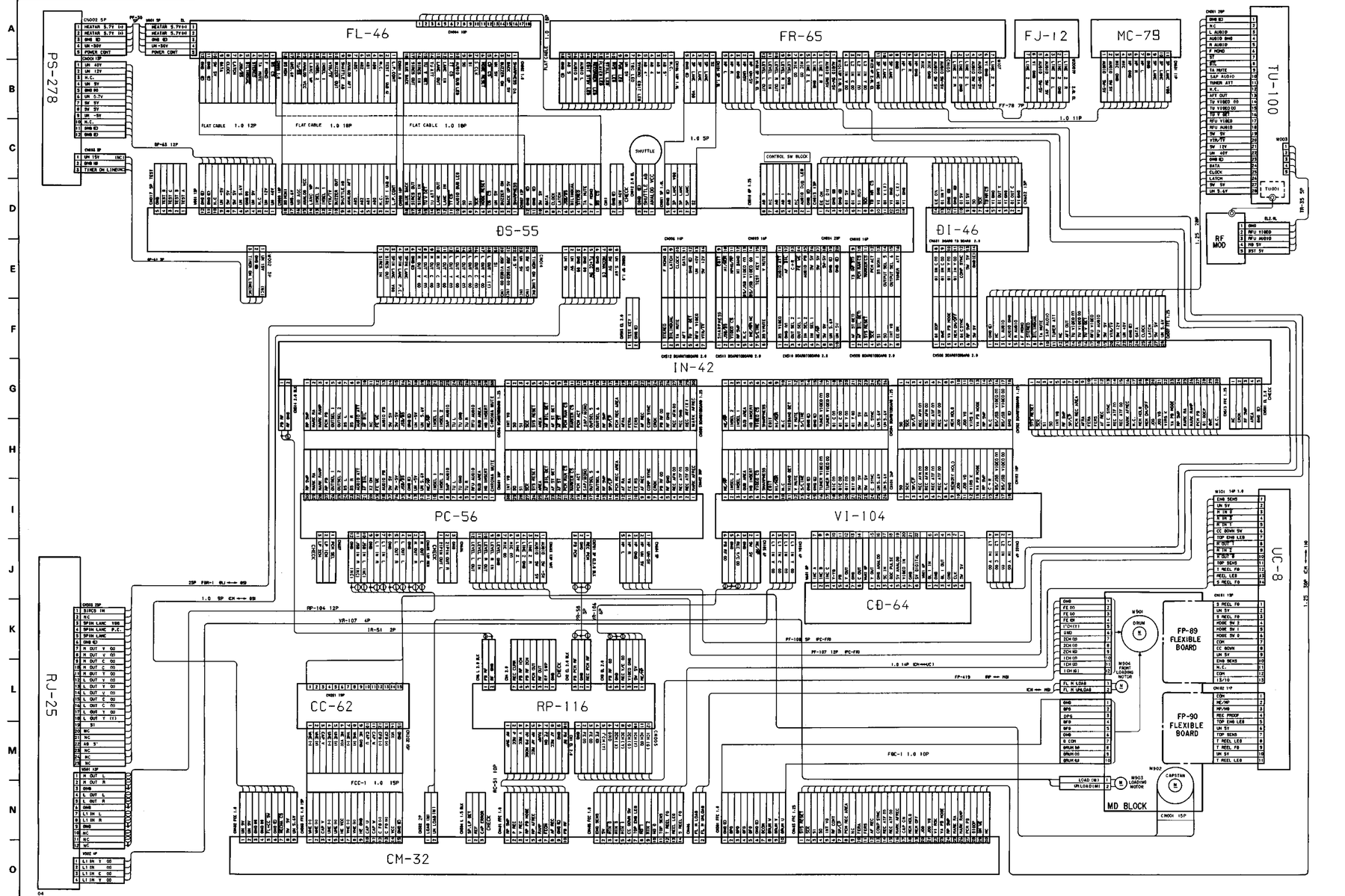
4-14. TUNER/TIMER CONTROL BLOCK DIAGRAM

● The boards which singnals only pass through may be omitted.



SECTION 5
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

5-1. FRAME SCHEMATIC DIAGRAM



5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

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

● **For printed wiring boards.**

- ● : Through hole.
- ■ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side. *
- Circled numbers refer to waveforms. *

● **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 unless otherwise noted.
- Chip resistor are 1/8W or 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.
- ▭ : adjustment for repair. *
- ——— : B + Line. *
- - - - : B — Line. *
- ⇨ : IN/OUT direction of (+, —) B line. *
- Circled numbers refer to waveforms. *
- Voltages are dc between ground and measurement points. *
- Readings are taken with a color-bar signal input. *
- Readings are taken with a digital multimeter (DC10MΩ). *
- Voltage variations may be noted due to normal production tolerances. *

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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

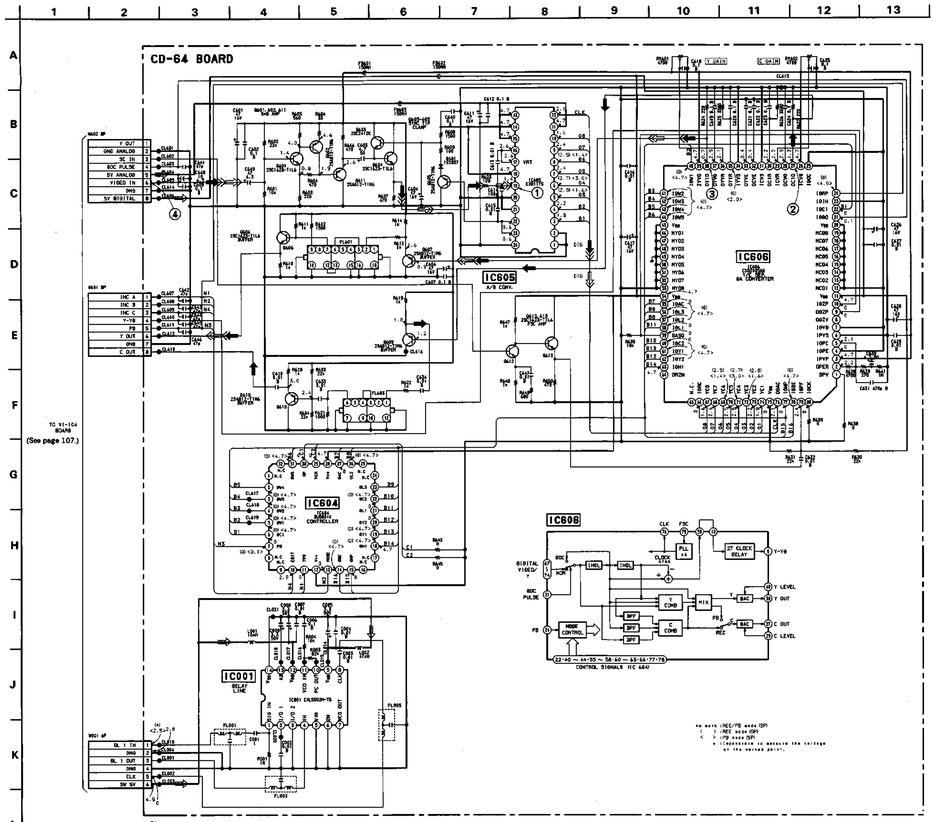
* : indicated by the color red.

CD-64 (Y/CHROMA SEP) SCHEMATIC DIAGRAM

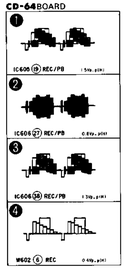
—Ref. No. CD-64 BOARD : 6000 series—

• Signal path

	VIDEO Signal		
	CHROMA	Y	Y/CHROMA
REC	➡	➡	➡
PB	⇨	⇨	⇨



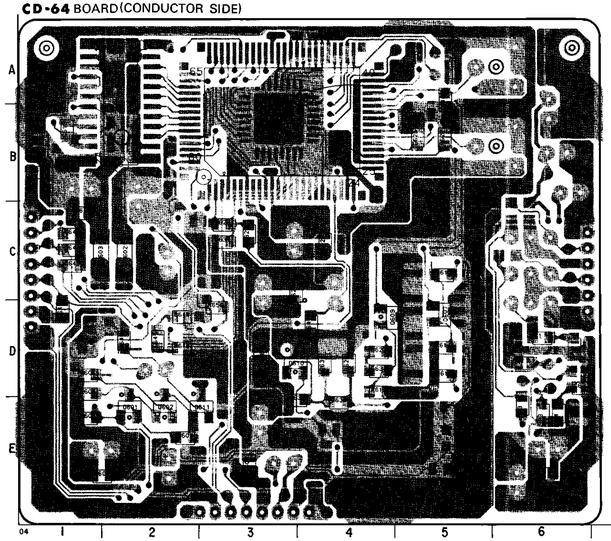
CD-64 BOARD



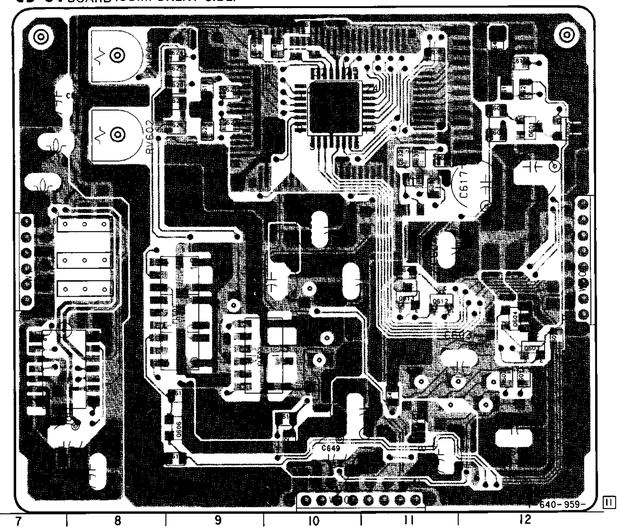
CD-64 (Y/CHROMA SEP) PRINTED WIRING BOARD

—Ref. No. CD-64 BOARD : 6000 series—

CD-64 BOARD (CONDUCTOR SIDE)



CD-64 BOARD (COMPONENT SIDE)



CD-64 BOARD
D601 B-12
IC001 D-7
IC604 B-10
IC605 A-2
IC606 B-3
Q601 E-2
Q602 E-2
Q603 D-12
Q604 D-12
Q605 B-12
Q606 E-9
Q607 D-5
Q609 D-4
Q610 D-3
Q611 E-3
Q612 D-11
Q613 D-11

640-959-11

< DIODE >

D601	B-719-488-18	MA152WK

< IC >

IC001	B-752-332-68	CXL5502M
IC604	B-759-596-97	BU5601K
IC605	B-752-334-55	CXD1175AM
IC606	B-752-242-61	CXD2105AQ

< TRANSISTOR >

Q501	B-729-103-66	2SC1623
Q502	B-729-215-22	2SA1162
Q503	B-729-103-66	2SC1623
Q504	B-729-103-66	2SC1623
Q505	B-729-215-22	2SA1162
Q506	B-729-103-66	2SC1623
Q507	B-729-215-22	2SA1162
Q508	B-729-215-22	2SA1162
Q510	B-729-215-22	2SA1162
Q511	B-729-215-22	2SA1162
Q512	B-729-103-66	2SC1623
Q513	B-729-103-66	2SC1623

VI-104 BOARD

D101	A8	Q105	C6	Q141	K7	Q184	C6	Q500	C1	Q532	E2
D102	B9	Q106	B7	Q143	K5	Q201	E13	Q501	C2	Q533	E1
D104	K7	Q107	C6	Q144	K5	Q250	D12	Q502	C2	Q534	E6
D107	D14	Q108	B6	Q145	J4	Q251	D11	Q503	B3	Q535	D3
D109	K8	Q109	B7	Q146	J5	Q252	D13	Q504	B3	Q536	E3
D201	B12	Q110	B7	Q147	K4	Q253	D10	Q505	B4	Q537	E4
D301	G1	Q111	B7	Q150	K8	Q254	K6	Q507	B4	Q538	F3
D501	F2	Q112	F7	Q151	J7	Q255	J6	Q508	B5	Q539	C4
D502	E2	Q113	G4	Q152	K6	Q256	H6	Q509	C3	Q540	C3
D503	D1	Q114	G5	Q153	E12	Q257	J6	Q510	C3	Q541	D4
D504	F3	Q115	H5	Q155	E12	Q258	D11	Q511	C3	Q908	E8
D801	C9	Q116	G6	Q156	E11	Q259	E10	Q512	B4		
		Q117	G7	Q157	E10	Q260	J8	Q513	B4		
IC101	H8	Q118	G5	Q158	D12	Q261	J8	Q514	C4		
IC102	D12	Q119	G5	Q159	E11	Q301	I2	Q515	C5		
IC103	E4	Q120	I5	Q160	B7	Q302	I3	Q516	C5		
IC104	F14	Q121	J4	Q161	B7	Q303	K2	Q517	D4		
IC105	E4	Q122	I5	Q170	C7	Q304	I2	Q518	D4		
IC106	J5	Q123	I6	Q171	B7	Q305	H3	Q519	E2		
IC107	G14	Q124	F7	Q172	B7	Q306	H2	Q520	E4		
IC108	I27	Q125	H6	Q173	B7	Q307	I3	Q521	E3		
IC109	B17	Q126	H6	Q174	C7	Q308	K3	Q522	E3		
IC301	J2	Q127	K12	Q175	C7	Q309	A3	Q523	E5		
IC501	C14	Q128	K10	Q176	C7	Q311	K1	Q524	E5		
IC502	F29	Q129	K9	Q177	C7	Q312	K2	Q525	D3		
IC701	C13	Q130	I4	Q178	B8	Q313	F4	Q526	D14		
		Q131	H4	Q179	B6	Q314	F4	Q527	F3		
Q101	B5	Q135	K7	Q180	B6	Q315	H2	Q528	E3		
Q102	B6	Q136	J7	Q181	B6	Q401	F10	Q529	D3		
Q103	B6	Q138	J7	Q182	C6	Q402	E10	Q530	F2		
Q104	B6	Q139	J6	Q183	C6			Q531	F2		

< DIODE >

D101	B-719-400-15	MA152WK
D102	B-719-400-15	MA152WK
D104	B-719-400-18	MA152WK
D107	B-719-403-15	MA152WK
D109	B-719-104-24	152826
D201	B-719-104-24	152826
D301	B-719-104-24	152826
D501	B-719-833-75	155226
D502	B-719-800-76	155226
D503	B-719-800-76	155226
D504	B-719-400-18	MA152WK
D801	B-719-104-34	152836

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IC101	B-752-954-87	CXA1207AQ
IC102	B-759-716-86	MJM2233BM
IC103	B-759-716-86	MJM2233BM
IC104	B-759-716-85	MJM2233BM
IC105	B-759-716-85	MJM2233BM
IC106	B-759-716-86	MJM2233BM
IC107	B-759-534-46	PQ05RF11
IC108	B-752-035-34	CXA1238Q
IC501	B-759-558-32	CXD-2107M
IC502	B-759-925-59	BA431
IC701	B-752-952-58	CXA1416M

< TRANSISTOR >

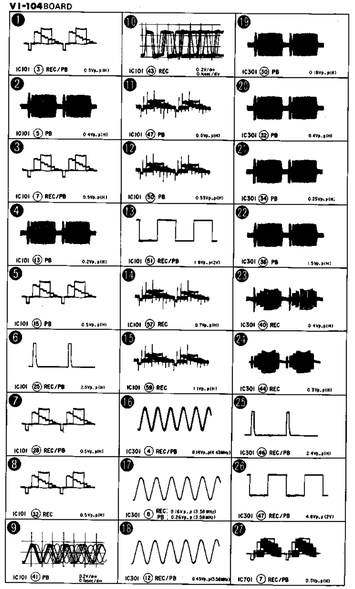
Q101	B-729-391-36	DTA144EK
Q102	B-729-900-01	DTC144EK
Q103	B-729-901-01	DTC144EK
Q104	B-729-901-01	DTC144EK
Q105	B-729-901-01	DTC144EK
Q106	B-729-901-01	DTC144EK
Q107	B-729-901-06	DTA144EK
Q108	B-729-901-01	DTC144EK
Q109	B-729-901-01	DTC144EK
Q110	B-729-901-01	DTC144EK
Q111	B-729-901-01	DTC144EK
Q112	B-729-901-06	DTA144EK
Q113	B-729-901-01	DTC144EK
Q114	B-729-901-06	DTA144EK
Q115	B-729-901-05	DTA144EK
Q116	B-729-901-06	DTA144EK
Q117	B-729-901-01	DTC144EK
Q118	B-729-901-01	DTC144EK
Q119	B-729-901-06	DTA144EK
Q120	B-729-392-38	2SC3326N
Q121	B-729-901-01	DTC144EK
Q122	B-729-901-01	DTC144EK
Q123	B-729-901-01	DTC144EK
Q124	B-729-901-06	DTA144EK
Q125	B-729-901-01	DTC144EK
Q126	B-729-901-06	DTA144EK
Q127	B-729-901-06	DTA144EK
Q128	B-729-100-66	2SC1623
Q129	B-729-100-66	2SC1623
Q130	B-729-901-05	DTA144EK
Q131	B-729-901-01	DTC144EK
Q132	B-729-901-01	DTC144EK
Q133	B-729-100-66	2SC1623
Q135	B-729-102-97	2SC2223-F13
Q136	B-729-100-66	2SC1623
Q138	B-729-102-97	2SC2223-F13
Q139	B-729-102-97	2SC2223-F13
Q141	B-725-102-07	2SC2223-F13
Q143	B-729-102-97	2SC2223-F13
Q144	B-729-102-97	2SC2223-F13
Q145	B-729-581-06	DTA144EK
Q146	B-729-102-97	2SC2223-F13
Q147	B-729-102-97	2SC2223-F13
Q150	B-725-216-22	2SA1162
Q151	B-725-216-22	2SA1162
Q152	B-729-100-66	2SC1623
Q153	B-729-100-66	2SC1623
Q155	B-729-581-06	DTA144EK
Q156	B-729-102-97	2SC2223-F13
Q157	B-729-100-66	2SC1623
Q158	B-729-100-66	2SC1623
Q159	B-729-100-66	2SC1623
Q160	B-729-901-01	DTC144EK
Q161	B-729-901-01	DTC144EK
Q170	B-729-901-06	DTA144EK
Q171	B-729-581-01	DTC144EK
Q172	B-729-581-06	DTA144EK
Q173	B-729-581-01	DTC144EK
Q174	B-729-901-01	DTC144EK
Q175	B-729-901-01	DTC144EK
Q176	B-729-581-01	DTC144EK
Q177	B-729-581-01	DTC144EK
Q178	B-729-581-81	DTC144EK
Q179	B-729-581-01	DTC144EK
Q180	B-729-581-01	DTC144EK
Q181	B-729-581-01	DTC144EK
Q182	B-729-581-01	DTC144EK
Q183	B-729-581-01	DTC144EK
Q184	B-729-581-01	DTC144EK
Q201	B-729-100-66	2SC1623
Q250	B-729-100-66	2SC1623
Q251	B-729-100-66	2SC1623
Q252	B-729-100-66	2SC1623
Q253	B-729-100-66	2SC1623
Q254	B-729-100-66	2SC1623
Q255	B-729-100-66	2SC1623
Q256	B-729-581-86	DTA144EK
Q257	B-729-100-66	2SC1623
Q258	B-729-901-05	DTA144EK
Q259	B-729-100-55	2SC1623
Q260	B-729-329-17	2SA1122-CD
Q261	B-729-901-01	DTC144EK
Q301	B-729-100-66	2SC1623
Q302	B-729-901-01	DTC144EK
Q303	B-725-282-38	2SC3326N
Q304	B-729-581-06	DTA144EK
Q305	B-729-100-66	2SC1623
Q306	B-729-100-66	2SC1623
Q307	B-729-581-01	DTC144EK
Q308	B-729-581-01	DTC144EK
Q309	B-729-581-01	DTC144EK
Q311	B-729-581-01	DTC144EK
Q312	B-729-581-01	DTC144EK
Q313	B-729-581-01	DTC144EK
Q314	B-729-581-01	DTC144EK
Q315	B-729-581-01	DTC144EK
Q401	B-729-581-01	DTC144EK
Q402	B-729-581-01	DTC144EK
Q500	B-729-903-36	DTC144TK
Q501	B-729-100-66	2SC1623
Q502	B-729-102-07	2SC2223-F13
Q503	B-729-100-66	2SC1623
Q504	B-729-100-66	2SC1623
Q505	B-729-581-01	DTC144EK
Q506	B-729-100-66	2SC1623
Q507	B-729-581-06	DTA144EK
Q508	B-729-581-06	DTA144EK
Q509	B-729-100-66	2SC1623
Q510	B-729-100-55	2SC1623
Q511	B-729-100-55	2SC1623
Q512	B-729-931-06	DTA144EK
Q513	B-729-100-66	2SC1623
Q514	B-725-216-22	2SA1162
Q515	B-725-100-66	2SC1623
Q516	B-729-100-66	2SC1623
Q517	B-729-102-97	2SC2223-F13
Q518	B-729-100-55	2SC1623
Q519	B-729-100-66	2SC1623
Q520	B-729-581-81	DTC144EK
Q521	B-729-102-97	2SC2223-F13
Q522	B-729-581-06	DTA144EK
Q523	B-729-581-81	DTC144EK
Q524	B-729-581-01	DTC144EK
Q525	B-725-216-22	2SA1162
Q527	B-729-100-66	2SC1623
Q528	B-729-100-66	2SC1623
Q529	B-729-100-55	2SC1623
Q530	B-729-100-55	2SC1623
Q531	B-729-100-66	2SC1623
Q532	B-729-100-66	2SC1623
Q533	B-729-100-66	2SC1623
Q534	B-729-100-66	2SC1623
Q535	B-729-100-66	2SC1623
Q536	B-729-100-66	2SC1623
Q537	B-729-100-66	2SC1623
Q538	B-729-100-66	2SC1623
Q539	B-729-100-66	2SC1623
Q540	B-729-100-66	2SC1623
Q541	B-729-100-66	2SC1623
Q908	B-729-901-01	DTC144EK

VI-104 (VIDEO) PRINTED WIRING BOARD
—Ref. No. VI-104 BOARD : 7000 series—

VI-104 BOARD (CONDUCTOR SIDE)

VI-104 BOARD (COMPONENT SIDE)

VI-104 BOARD



Pattern of conductor side.

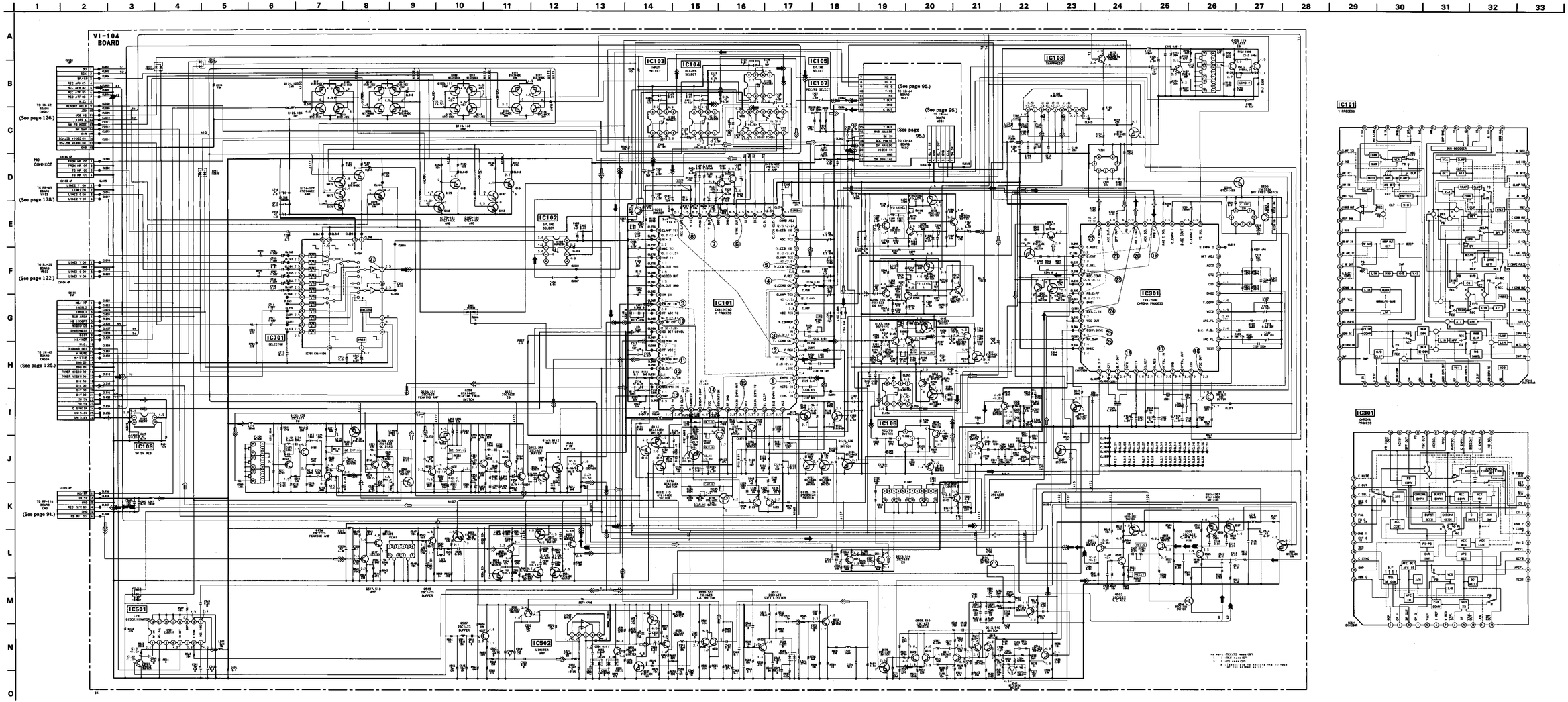
VI-104 (VIDEO) SCHEMATIC DIAGRAM
—Ref. No. VI-104 BOARD : 7000 series—

• Signal path

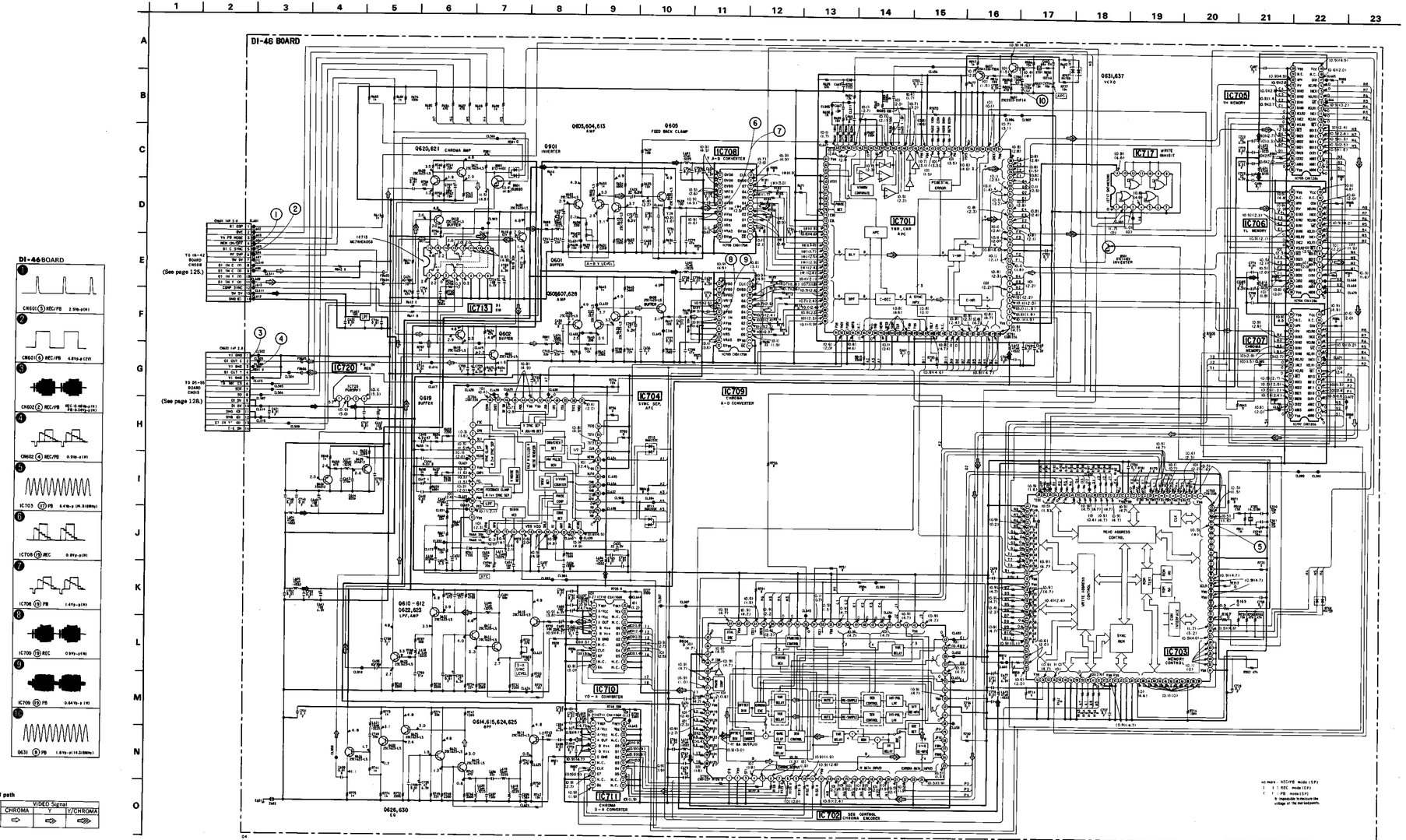
	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	➡
PB	⇨	⇨	⇨	⇨

• Signal path

Ref.signal	REC	REC/PB	PB
	➡	➡	⇨



DI-46 (DIGITAL SIGNAL PROCESS) SCHEMATIC DIAGRAM
—Ref. No. DI-46 BOARD : 1000 series—



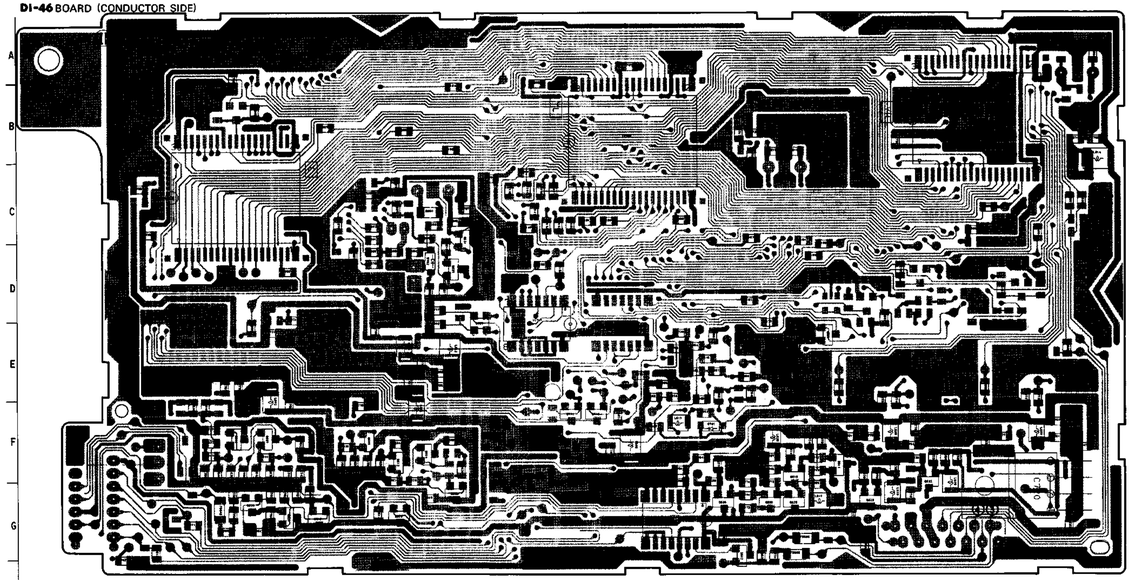
DI-46 BOARD

◆Signal path

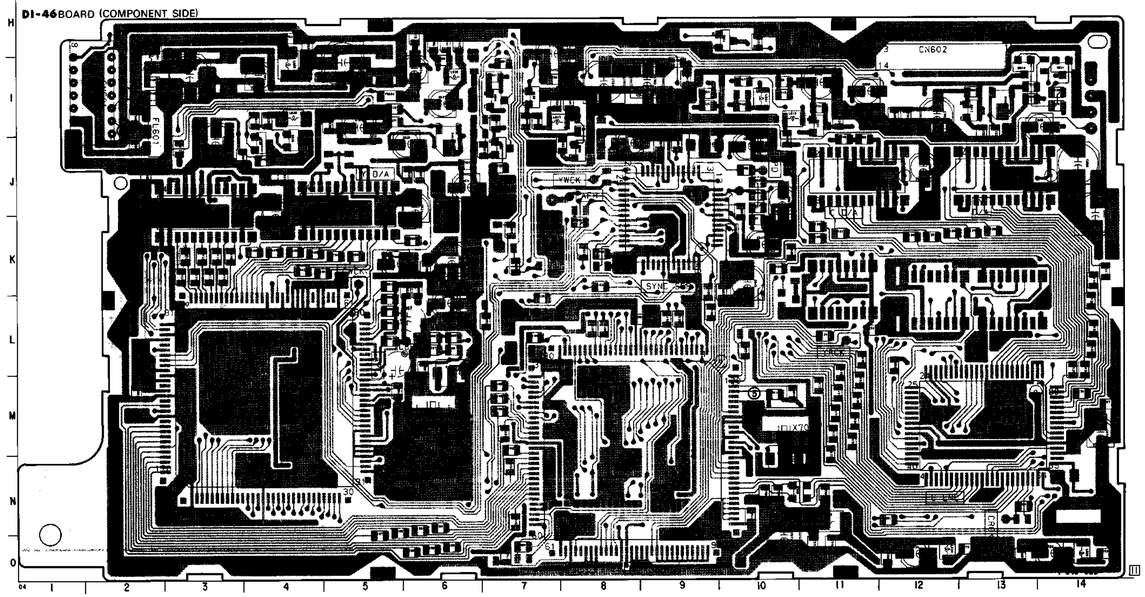
	VIDEO Signal		
	CHROMA	Y	Y/CHROMA
PB	⇨	⇨	⇨

DI-46 (DIGITAL SIGNAL PROCESS) PRINTED WIRING BOARD
—Ref. No. DI-46 BOARD : 1000 series—

DI-46 BOARD (CONDUCTOR SIDE)



DI-46 BOARD (COMPONENT SIDE)



DI-46 BOARD	
D701	F-9
D702	D-6
D707	D-6
D708	H-10
D710	F-8
D711	F-8
D901	J-7
IC701	M-4
IC702	M-13
IC703	M-9
IC704	K-9
IC705	B-13
IC706	B-8
IC707	G-3
IC708	J-5
IC709	J-3
IC710	J-13
IC711	J-11
IC713	G-9
IC717	D-7
IC720	F-14
Q501	E-11
Q631	H-10
Q602	G-10
Q603	G-6
Q604	F-6
Q605	F-5
Q606	J-4
Q607	F-4
Q608	F-2
Q609	J-8
Q610	I-13
Q611	I-14
Q612	I-13
Q613	F-5
Q614	F-11
Q615	F-10
Q618	G-5
Q619	G-4
Q620	G-4
Q621	G-4
Q622	F-12
Q623	G-11
Q624	I-11
Q625	G-10
Q626	G-10
Q628	J-4
Q630	G-10
Q631	C-6
Q636	I-7
Q637	D-6
Q901	I-7

< DIODE >

D701	8-713-388-88	1T33C-01
D702	8-719-948-46	1T32
D707	8-719-940-45	DMA010
D708	8-719-940-45	DMA010
D710	8-719-400-18	MA152WK
D711	8-719-400-18	MA152WK
D901	8-719-194-24	1S2836

< IC >

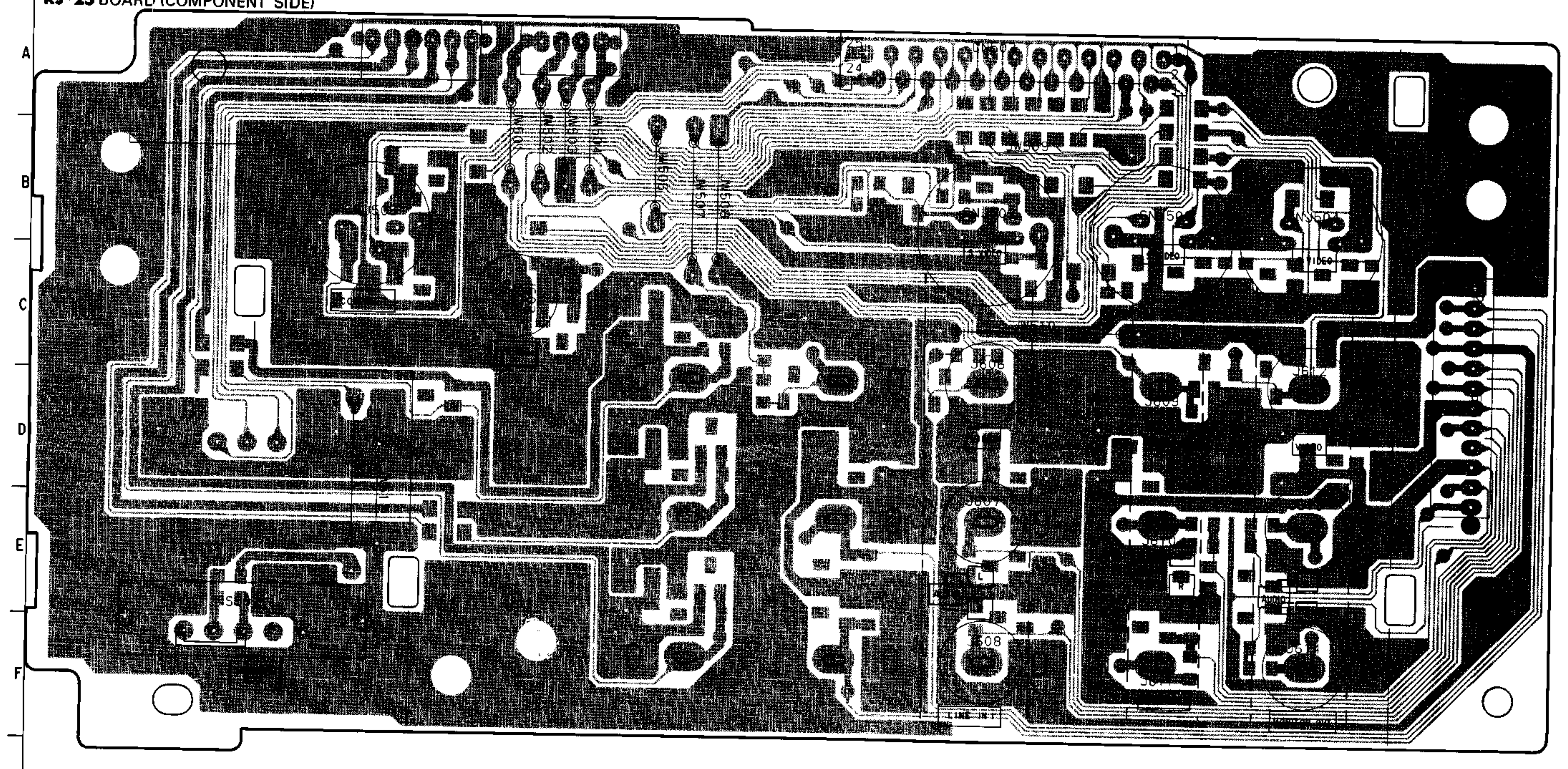
IC701	8-759-987-17	CXD1229Q
IC702	8-759-987-18	CXD1227Q
IC703	8-759-987-19	CXD1228Q
IC704	8-759-987-20	CXD1229Q
IC705	8-752-340-75	CXK1206M
IC706	8-752-340-75	CXK1206M
IC707	8-752-340-75	CXK1206M
IC708	8-752-334-55	CXD1175AM
IC709	8-752-334-55	CXD1175AM
IC710	8-752-032-96	CXA1106M
IC711	8-752-032-96	CXA1106M
IC713	8-759-011-65	MC74HC4053F
IC717	8-759-925-85	SN74HC32ANS
IC720	8-759-504-46	PQ05RF1

< TRANSISTOR >

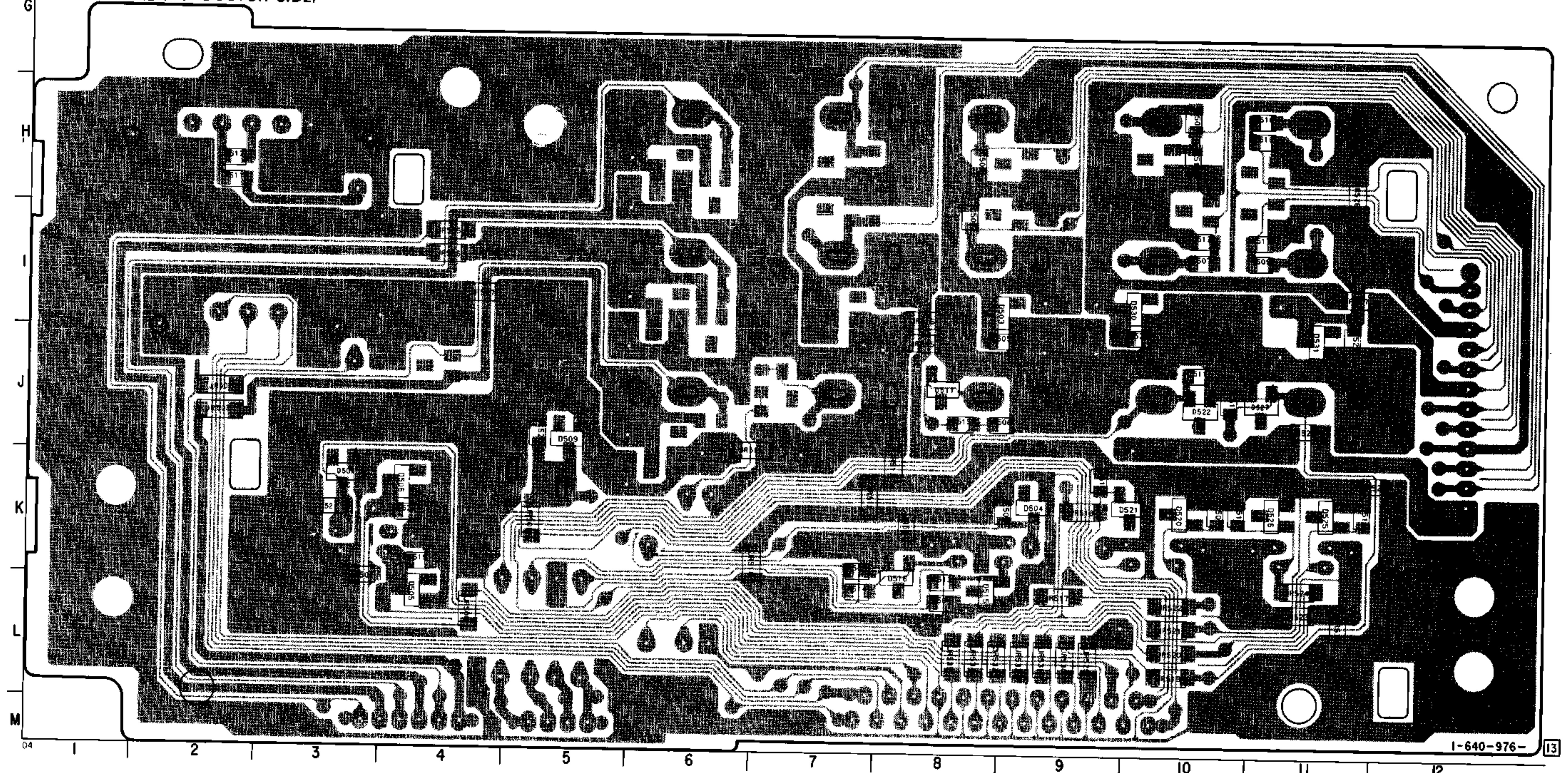
Q501	8-729-901-01	DTC144EK
Q601	8-729-100-56	2SC1623
Q602	8-729-100-66	2SC1623
Q603	8-729-100-66	2SC1623
Q604	8-729-100-66	2SC1623
Q605	8-729-100-66	2SC1623
Q606	8-729-100-66	2SC1623
Q607	8-729-100-66	2SC1623
Q608	8-729-100-66	2SC1623
Q609	8-729-216-22	2SA1162
Q610	8-729-100-66	2SC1623
Q611	8-729-100-66	2SC1623
Q612	8-729-100-66	2SC1623
Q613	8-729-100-66	2SC1623
Q614	8-729-100-66	2SC1623
Q615	8-729-100-66	2SC1623
Q618	8-729-100-66	2SC1623
Q619	8-729-100-66	2SC1623
Q620	8-729-100-66	2SC1623
Q621	8-729-100-66	2SC1623
Q622	8-729-100-66	2SC1623
Q623	8-729-100-66	2SC1623
Q624	8-729-100-66	2SC1623
Q625	8-729-100-66	2SC1623
Q626	8-729-100-66	2SC1623
Q628	8-729-100-66	2SC1623
Q630	8-729-100-66	2SC1623
Q631	8-729-102-08	2SC2223-F14
Q636	8-729-216-22	2SA1162
Q637	8-729-122-63	2SA1226
Q901	8-729-901-01	DTC144EK

RJ-25 (IN/OUT) PRINTED WIRING BOARD
—Ref. No. RJ-25 BOARD : 2000 series—

RJ-25 BOARD (COMPONENT SIDE)



RJ-25 BOARD (CONDUCTOR SIDE)

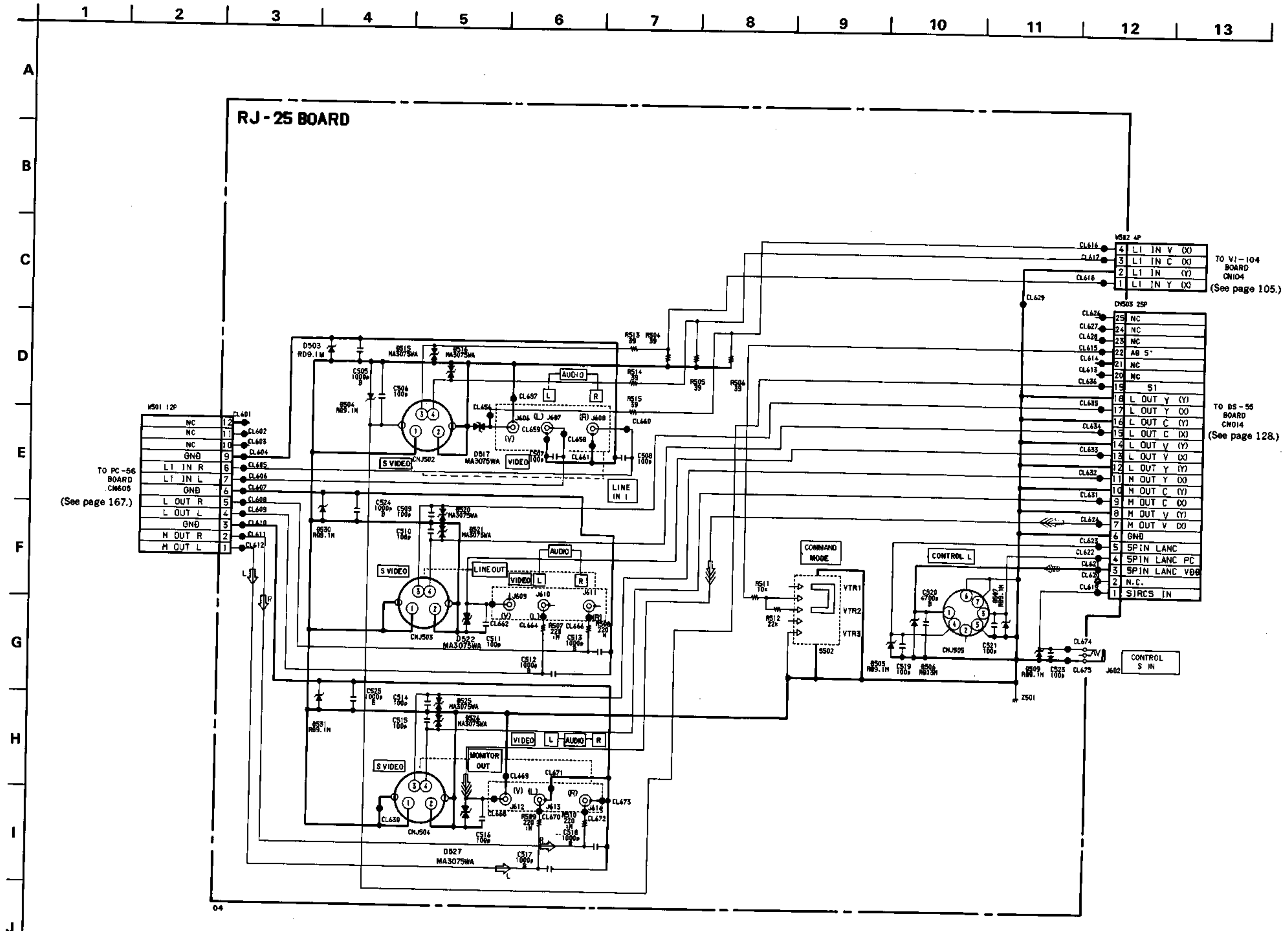


RJ-25 BOARD	
D503	I-8
D504	K-9
D505	L-4
D506	K-4
D507	K-3
D509	J-5
D515	L-8
D516	K-8
D517	J-8
D520	K-10
D521	K-10
D522	J-10
D525	K-11
D526	K-11
D527	J-11
D530	I-10
D531	J-11

< DIODE >

D503	8-719-106-43	RD9. 1M-B1
D504	8-719-106-43	RD9. 1M-B1
D505	8-719-106-43	RD9. 1M-B1
D506	8-719-106-79	RD13M-B1
D507	8-719-106-43	RD9. 1M-B1
D509	8-719-106-43	RD9. 1M-B1
D515	8-719-420-81	MA3075WA
D516	8-719-420-81	MA3075WA
D517	8-719-420-81	MA3075WA
D520	8-719-420-81	MA3075WA
D521	8-719-420-81	MA3075WA
D522	8-719-420-81	MA3075WA
D525	8-719-420-81	MA3075WA
D526	8-719-420-81	MA3075WA
D527	8-719-420-81	MA3075WA
D530	8-719-106-43	RD9. 1M-B1
D531	8-719-106-43	RD9. 1M-B1

RJ-25 (IN/OUT) SCHEMATIC DIAGRAM
—Ref. No. RJ-25 BOARD : 2000 series—



• Signal path

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
PB	⇨	⇨	⇨	⇨

IN-42 (RELAY) PRINTED WIRING BOARD

—Ref. No. IN-42 BOARD : 5000 series—

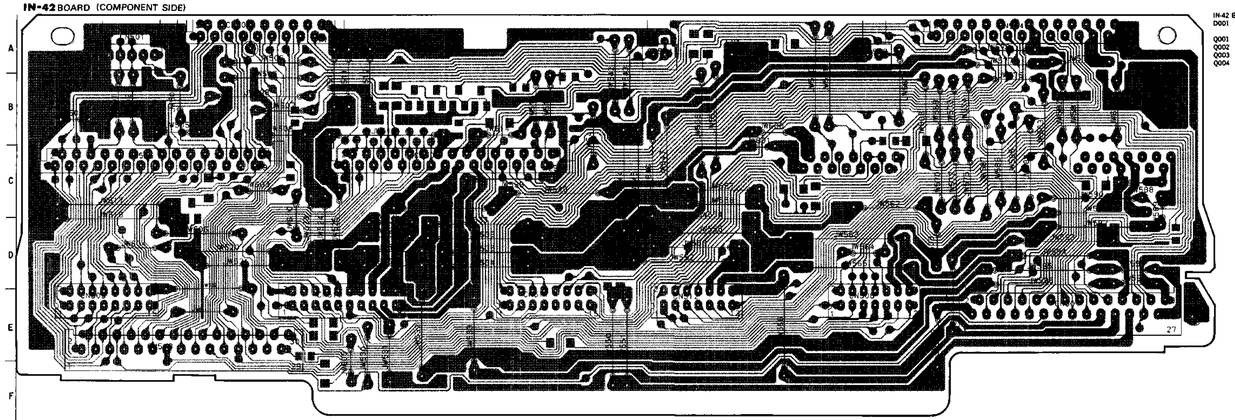
< DIODE >

D001 8-719-400-18 MA152WK

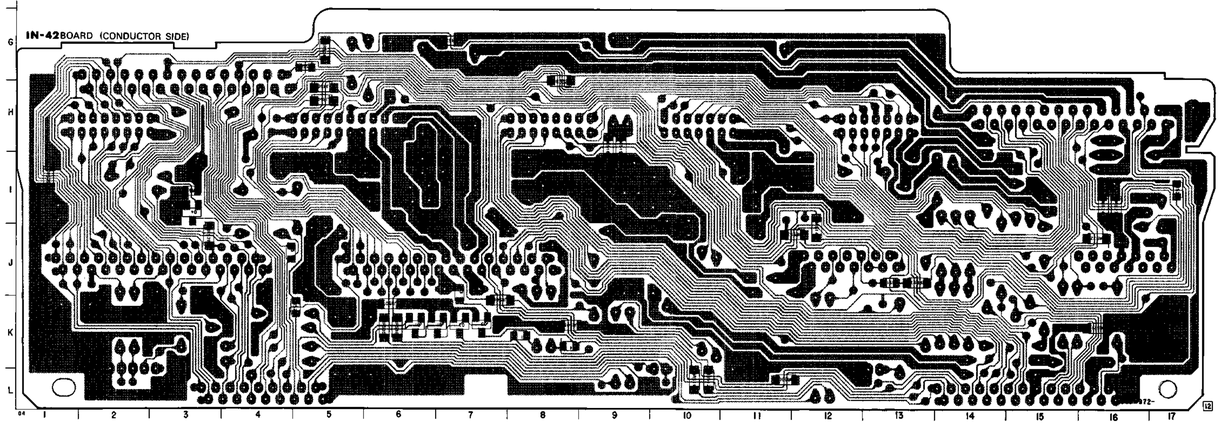
< TRANSISTOR >

Q001 8-729-901-00 DTC124EK
Q002 8-729-901-00 DTC124EK
Q003 8-729-901-00 DTC124EK
Q004 8-729-901-00 DTC124EK

IN-42 BOARD (COMPONENT SIDE)



IN-42 BOARD (CONDUCTOR SIDE)

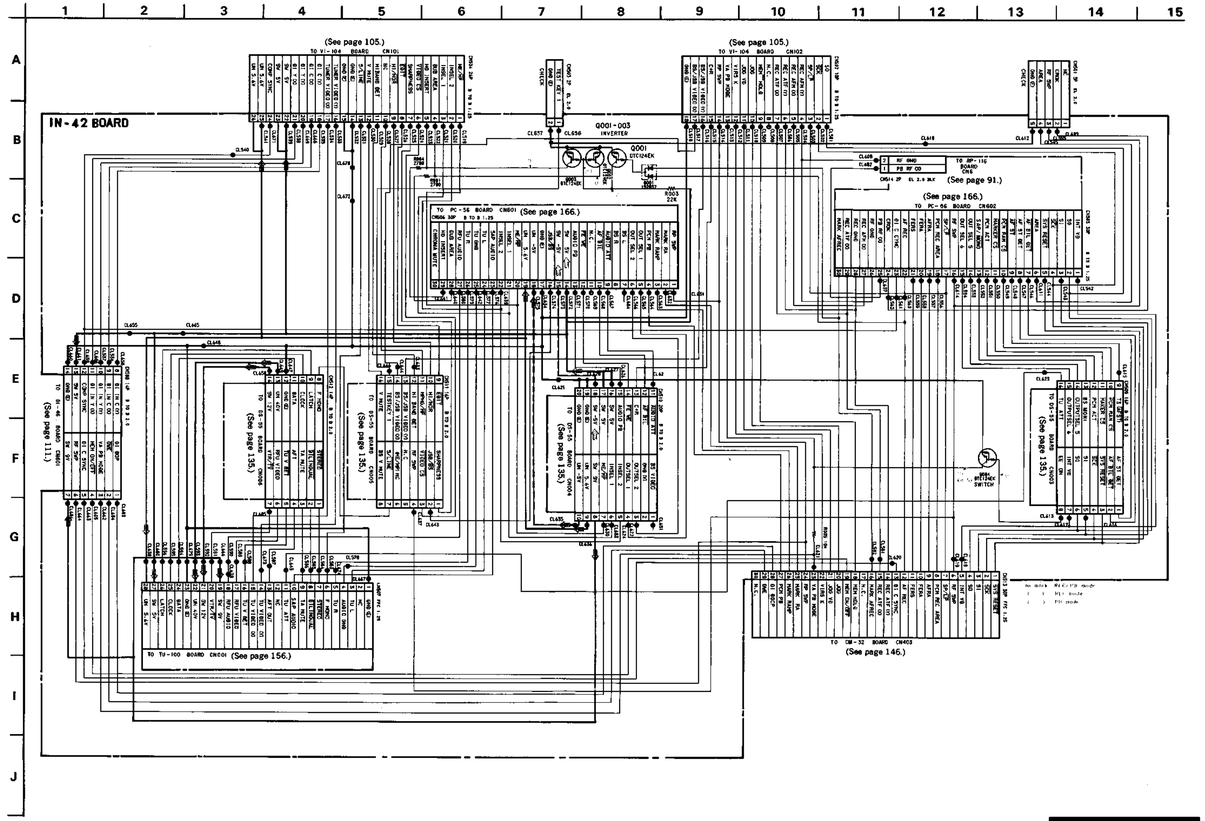


IN-42 BOARD
D001 K-6
Q001 K-7
Q002 K-7
Q003 K-7
Q004 I-3

■ pattern of conductor side.

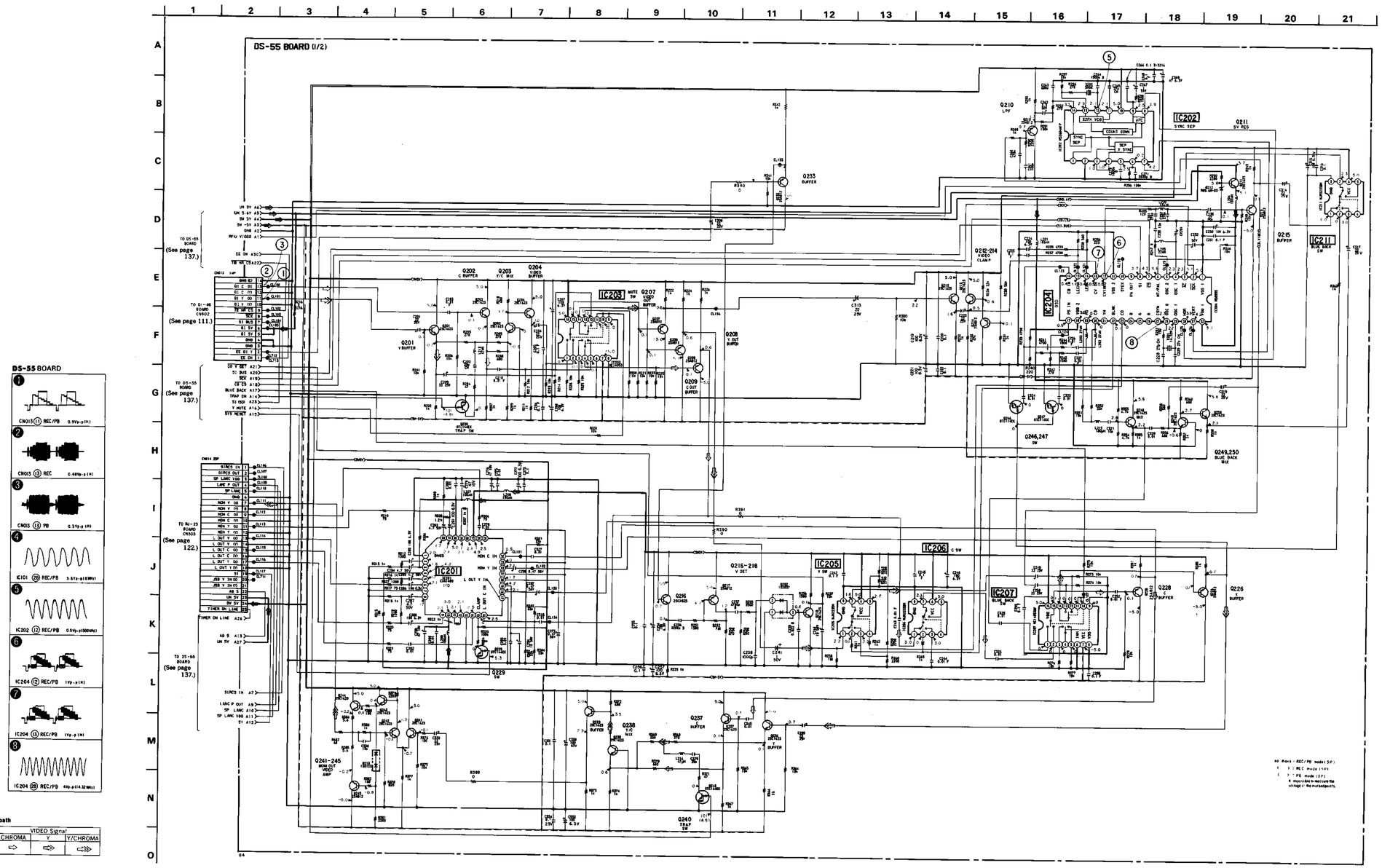
IN-42 (RELAY) SCHEMATIC DIAGRAM

—Ref. No. IN-42 BOARD : 5000 series—



DS-55 (OUTPUT SELECTOR) SCHEMATIC DIAGRAM

—Ref. No. DS-55 BOARD : 1000 series—



DS-55 BOARD

• Signal path

	VIDEO Signal		
	CHROMA	Y	Y/CHROMA
PB	⇨	⇨	⇨

< DIODE >

D001	8-719-209-35	E10QS04
D002	8-719-209-35	E10QS04
D003	8-719-209-27	E10QS7
D004	8-719-400-18	MA152WK
D005	8-719-400-18	MA152WK
D007	8-719-400-18	MA152WK
D008	8-719-205-82	10E2
D102	8-719-106-23	RD7.5M-B2
D202	8-719-400-18	MA152WK
D212	8-719-105-92	RD5.6M-B3
D213	8-719-800-76	1SS226

< IC >

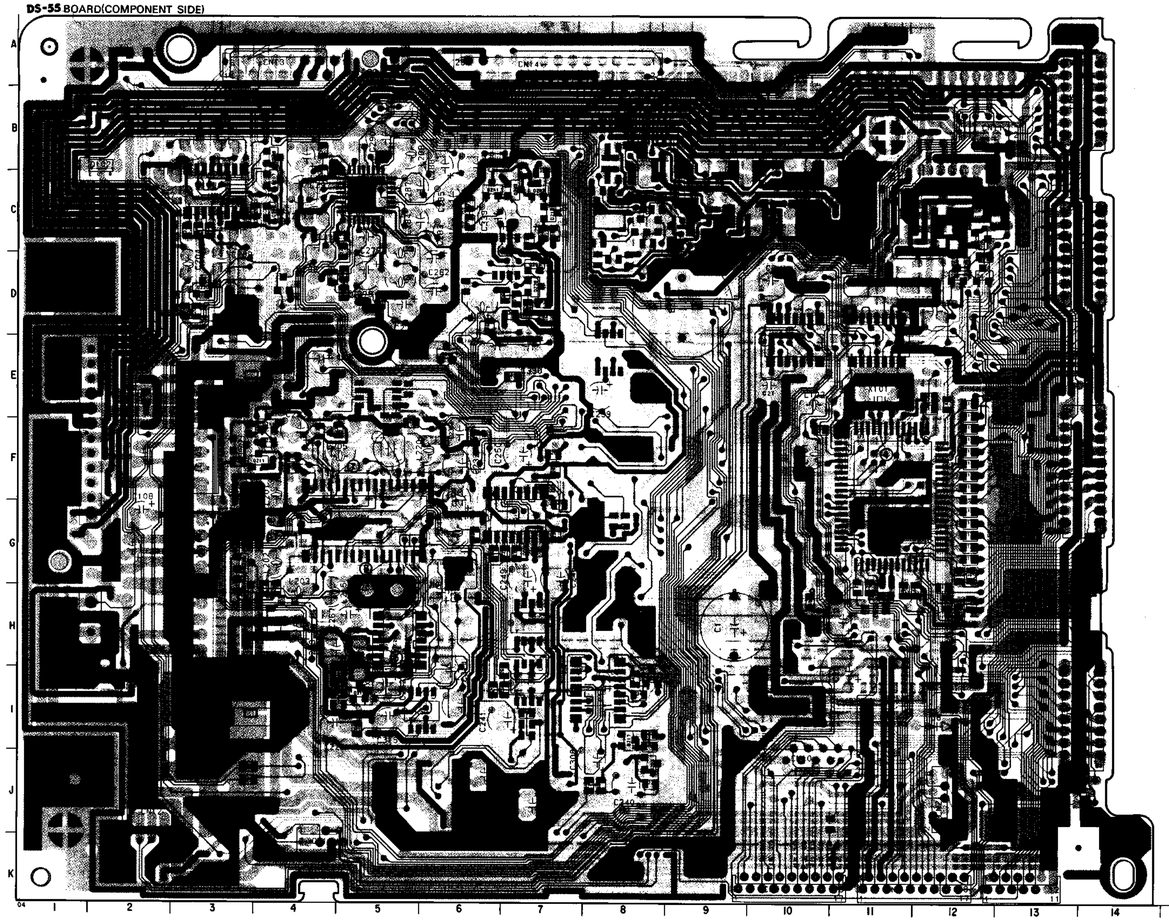
IC004	8-759-008-67	MC14066BF
IC005	8-759-990-07	TL1596CNS
IC101	8-751-634-15	CXP80316-016Q
IC104	8-759-513-72	P012RF11
IC105	8-759-513-73	P009RF11
IC201	8-752-055-95	CXA1405AQ-T3
IC202	8-759-631-10	M52684AFP
IC203	8-759-300-71	HD14053BFP
IC204	8-759-636-24	MSM555-054FP
IC205	8-759-718-29	NJM2235N
IC206	8-759-710-09	NJM2233AM
IC207	8-759-308-71	TC4053BF
IC211	8-759-710-09	NJM2233AM

< TRANSISTOR >

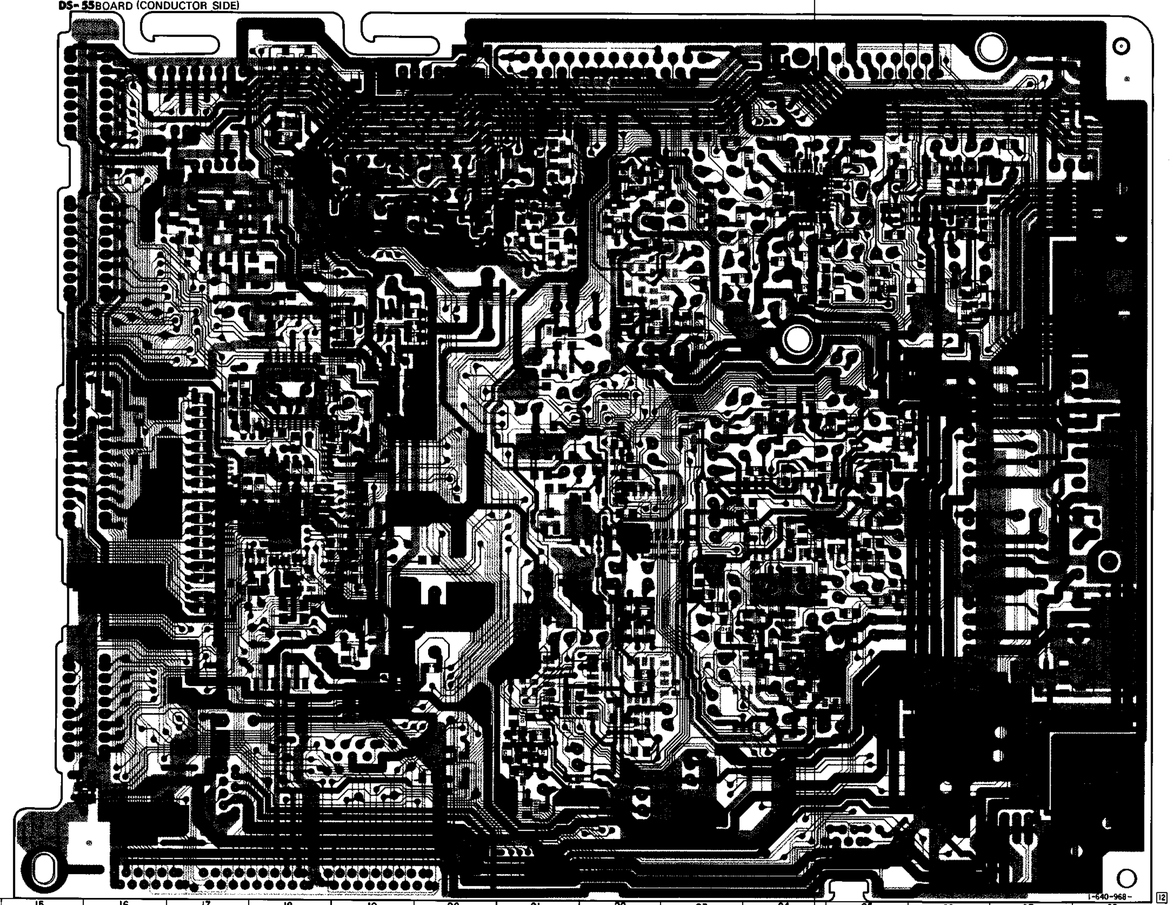
Q001	8-729-901-04	DTA114EK
Q002	8-729-901-04	DTA114EK
Q003	8-729-807-67	2SB1295-UL6
Q004	8-729-901-01	DTC144EK
Q005	8-729-855-25	2SB1121
Q006	8-729-216-22	2SA1162
Q007	8-729-216-22	2SA1162
Q008	8-729-901-05	DTA144EK
Q009	8-729-901-01	DTC144EK
Q204	8-729-901-01	DTC144EK
Q017	8-729-901-01	DTC144EK
Q102	8-729-140-98	2SD773
Q201	8-729-100-66	2SC1623
Q202	8-729-100-66	2SC1623
Q203	8-729-100-66	2SC1623
Q204	8-729-100-66	2SC1623
Q207	8-729-216-22	2SA1162
Q208	8-729-216-22	2SA1162
Q209	8-729-216-22	2SA1162
Q210	8-729-216-22	2SA1162
Q211	8-729-100-66	2SC1623
Q212	8-729-100-66	2SC1623
Q213	8-729-100-66	2SC1623
Q214	8-729-216-22	2SA1162
Q215	8-729-216-22	2SA1162
Q216	8-729-100-66	2SC1623
Q217	8-729-216-22	2SA1162
Q218	8-729-100-66	2SC1623
Q226	8-729-216-22	2SA1162
Q228	8-729-216-22	2SA1162
Q229	8-729-901-01	DTC144EK
Q230	8-729-901-01	DTC144EK
Q233	8-729-216-22	2SA1162
Q236	8-729-100-66	2SC1623
Q237	8-729-100-66	2SC1623
Q238	8-729-100-66	2SC1623
Q239	8-729-100-66	2SC1623
Q240	8-729-901-01	DTC144EK
Q241	8-729-100-66	2SC1623
Q242	8-729-100-66	2SC1623
Q243	8-729-100-66	2SC1623
Q244	8-729-100-66	2SC1623
Q245	8-729-216-22	2SA1162
Q246	8-729-900-53	DTC114EK
Q247	8-729-900-53	DTC114EK
Q248	8-729-100-66	2SC1623
Q249	8-729-100-66	2SC1623
Q250	8-729-100-66	2SC1623

DS-55 (OUTPUT SELECTOR) PRINTED WIRING BOARD
—Ref. No. DS-55 BOARD : 1000 series—

DS-55 BOARD (COMPONENT SIDE)



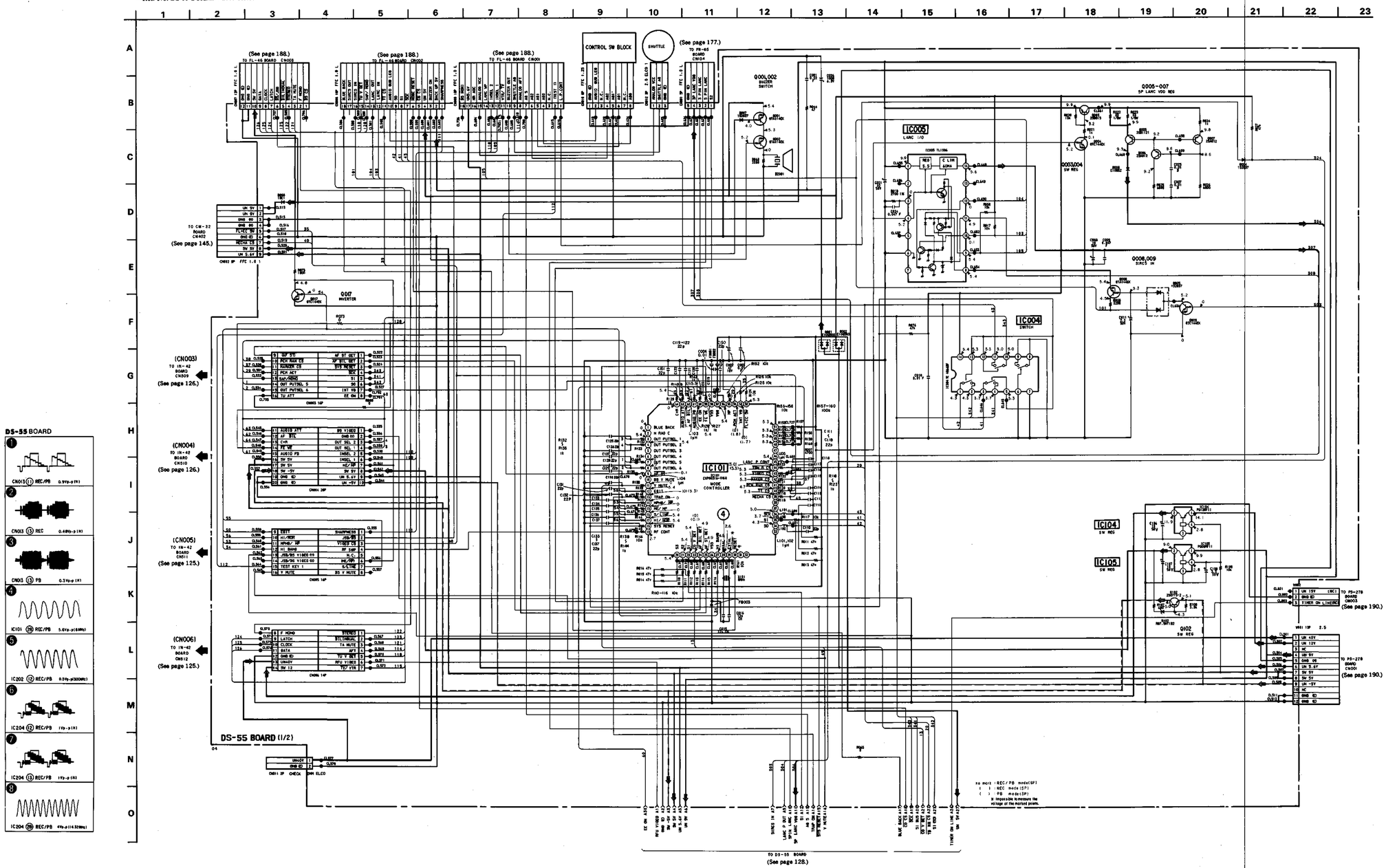
DS-55 BOARD (CONDUCTOR SIDE)



DS-55 BOARD

D001	H18
D002	I18
D003	B19
D004	H19
D005	D12
D007	J20
D008	L12
D102	B27
D202	J8
D212	F3
D213	G7
IC004	E11
IC005	E10
IC101	F11
IC104	G3
IC105	F3
IC201	G5
IC202	H5
IC203	G3
IC204	G5
IC205	H7
IC206	I7
IC207	G7
IC211	I6
Q001	J20
Q002	J20
Q003	C18
Q004	D18
Q005	B18
Q006	A18
Q007	A18
Q008	D12
Q009	C12
Q017	F16
Q102	B2
Q201	B26
Q202	C27
Q203	D26
Q204	D26
Q207	C4
Q208	B4
Q209	C4
Q210	F5
Q211	F4
Q212	F25
Q213	F25
Q214	F4
Q215	F23
Q216	I21
Q217	I8
Q218	J21
Q226	F22
Q228	F22
Q229	D25
Q230	D3
Q233	I8
Q236	D23
Q237	D22
Q238	D7
Q239	D7
Q240	E6
Q241	C6
Q242	C7
Q243	C7
Q244	C22
Q245	C22
Q246	G3
Q247	H3
Q248	G24
Q249	H23
Q250	H23

DS-55 (MODE CONTROL) SCHEMATIC DIAGRAM
—Ref. No. DS-55 BOARD : 1000 series—



DS-55 BOARD

DS-55 (MODE CONTROL) PRINTED WIRING BOARD
—Ref. No. DS-55 BOARD : 1000 series—

< DIODE >

D001	8-719-200-36	E10QS04
D002	8-719-200-36	E10QS04
D003	8-719-200-27	E10DS2
D004	8-719-400-18	MA152WK
D005	8-719-400-18	MA152WK
D006	8-719-400-18	MA152WK
D007	8-719-400-18	MA152WK
D008	8-719-200-82	10E2
D102	8-719-106-23	RD7.5M-B2
D202	8-719-400-18	MA152WK
D212	8-719-105-82	RD5.6M-B3
D213	8-719-800-76	1SS226

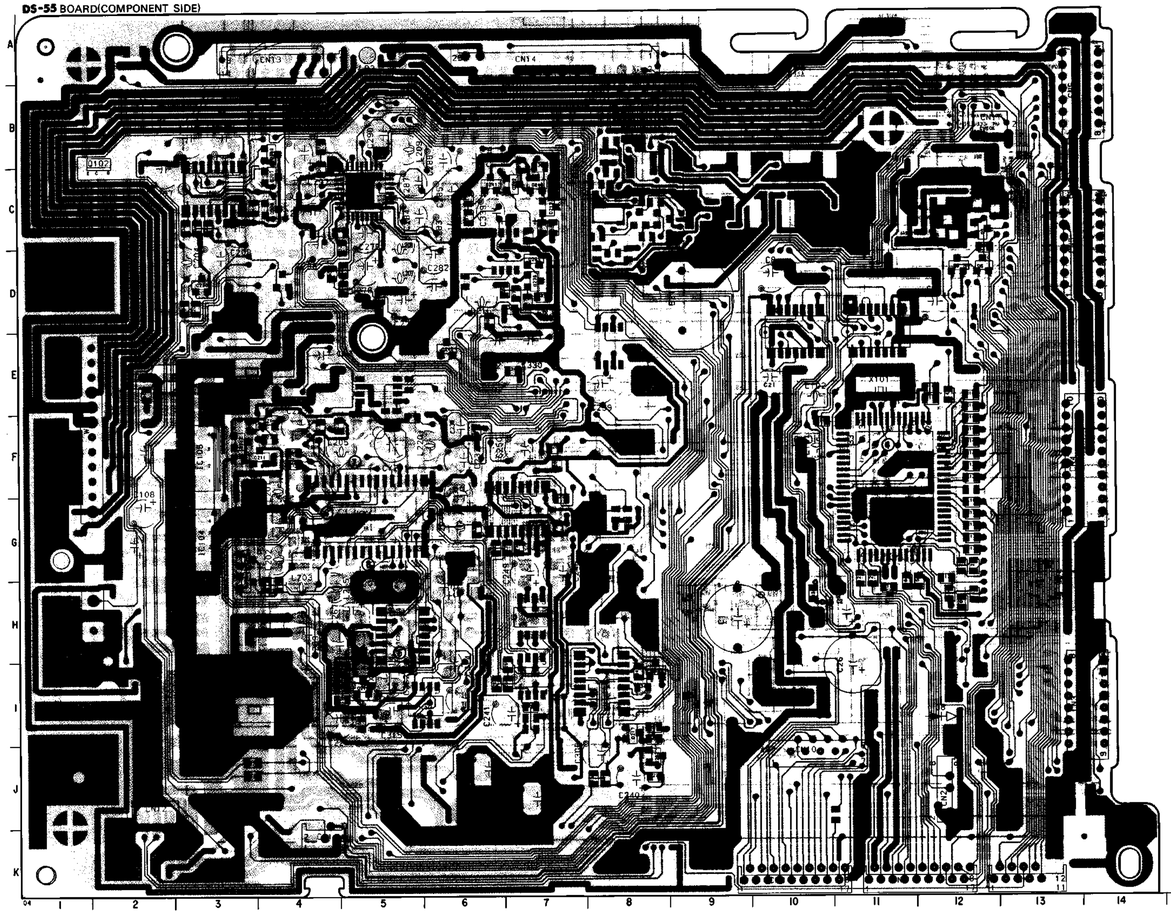
< IC >

IC004	8-759-003-67	MC14066BF
IC005	8-759-998-07	TL1555CNS
IC101	8-752-834-15	CXP80316-016Q
IC104	8-755-513-72	PQ12RF11
IC105	8-759-513-73	PQ09RF11
IC201	8-752-055-95	CXA1409AQ-T3
IC202	8-759-631-10	MS2664AFP
IC203	8-759-388-71	HD14052BFP
IC204	8-759-056-34	M50555-054FP
IC205	8-755-710-29	NJM2235M
IC206	8-759-710-09	NJM2233AM
IC207	8-759-388-71	TC4053BF
IC211	8-759-710-09	NJM2233AM

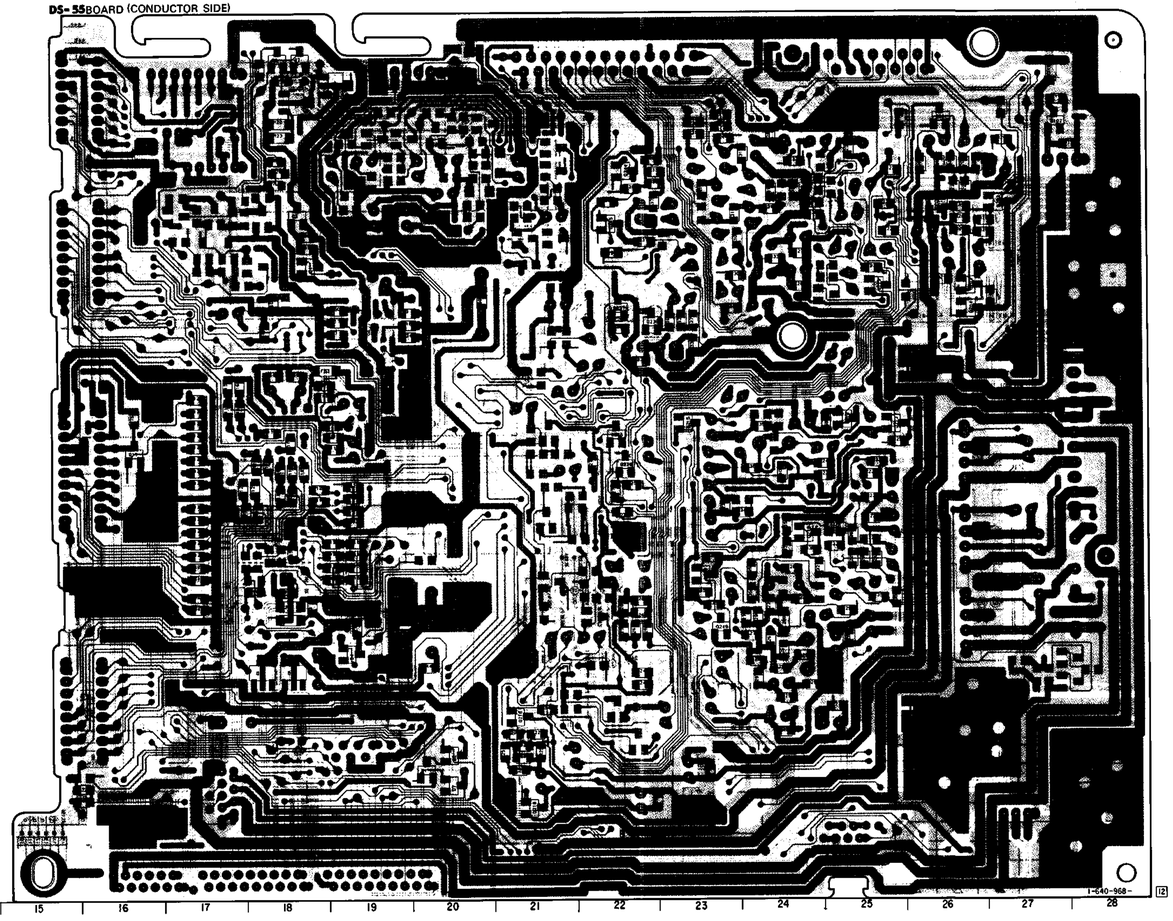
< TRANSISTOR >

Q001	8-729-901-04	DTA114EK
Q002	8-729-901-04	DTA114EK
Q003	8-729-807-87	2SB1295-UL6
Q004	8-729-901-01	DTC144EK
Q005	8-729-805-25	2SB1121
Q006	8-729-216-22	2SA1162
Q007	8-729-216-22	2SA1162
Q008	8-729-901-06	DTA144EK
Q009	8-729-901-01	DTC144EK
Q016	8-729-901-01	DTC144EK
Q017	8-729-140-98	2SD773
Q201	8-729-100-66	2SC1623
Q202	8-729-100-66	2SC1623
Q203	8-729-100-66	2SC1623
Q204	8-729-100-66	2SC1623
Q207	8-729-216-22	2SA1162
Q208	8-729-216-22	2SA1162
Q209	8-729-216-22	2SA1162
Q210	8-729-216-22	2SA1162
Q211	8-729-100-66	2SC1623
Q212	8-729-100-66	2SC1623
Q213	8-729-100-66	2SC1623
Q214	8-729-216-22	2SA1162
Q215	8-729-216-22	2SA1162
Q216	8-729-100-66	2SC1623
Q217	8-729-216-22	2SA1162
Q218	8-729-100-66	2SC1623
Q226	8-729-216-22	2SA1162
Q228	8-729-216-22	2SA1162
Q229	8-729-901-01	DTC144EK
Q230	8-729-901-01	DTC144EK
Q233	8-729-216-22	2SA1162
Q236	8-729-100-66	2SC1623
Q237	8-729-100-66	2SC1623
Q238	8-729-100-66	2SC1623
Q239	8-729-100-66	2SC1623
Q240	8-729-901-01	DTC144EK
Q241	8-729-100-66	2SC1623
Q242	8-729-100-66	2SC1623
Q243	8-729-100-66	2SC1623
Q244	8-729-100-66	2SC1623
Q245	8-729-216-22	2SA1162
Q246	8-729-900-53	DTC114EK
Q247	8-729-900-53	DTC114EK
Q248	8-729-100-66	2SC1623
Q249	8-729-100-55	2SC1623
Q250	8-729-100-66	2SC1623

DS-55 BOARD(COMPONENT SIDE)



DS-55BOARD (CONDUCTOR SIDE)

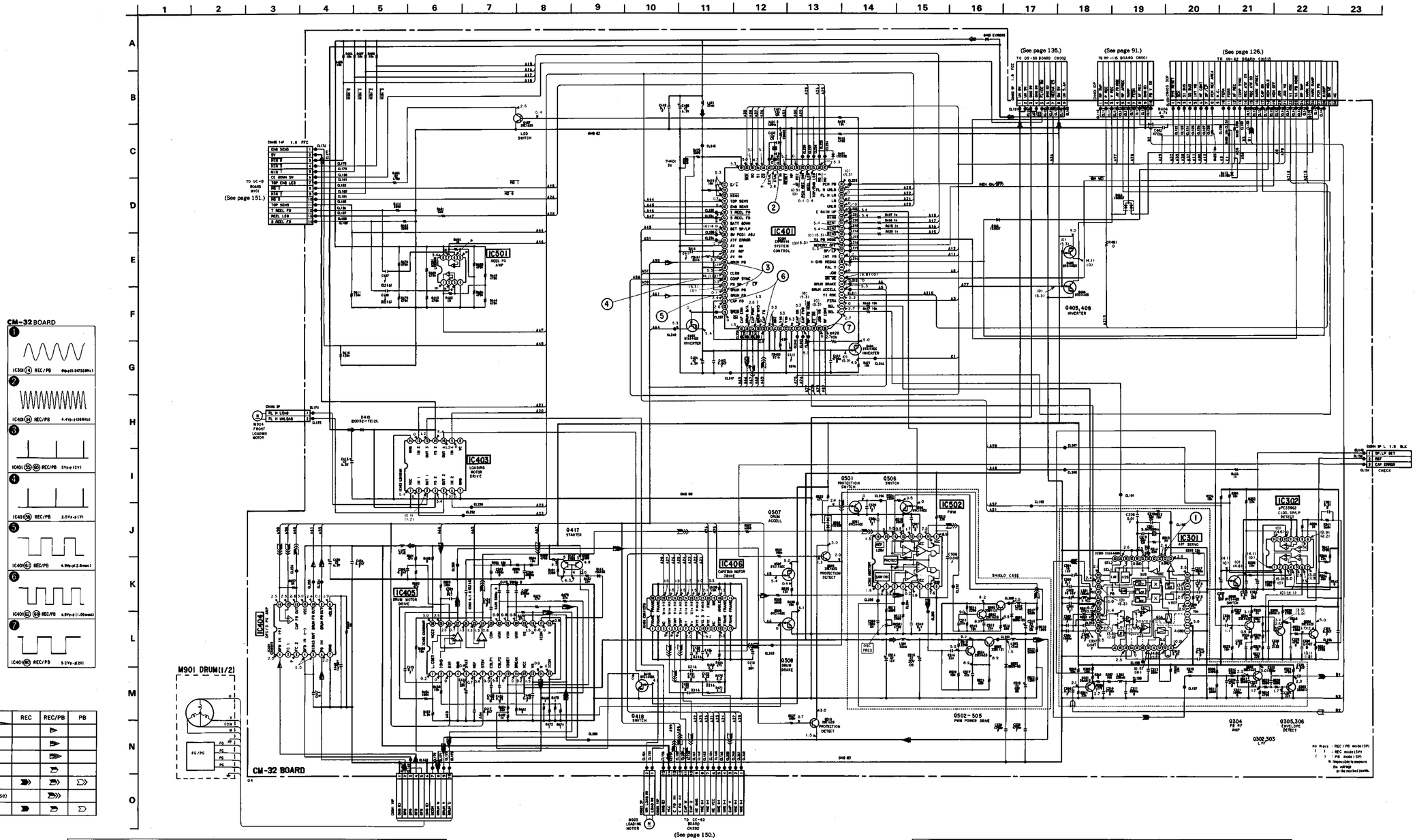


DS-55 BOARD

D001	H18
D002	I18
D003	B19
D004	H19
D005	D12
D007	J20
D008	I12
D102	B27
D202	J4
D212	F3
D213	C7
IC004	E11
IC005	E10
IC101	F11
IC104	G3
IC105	F3
IC201	C5
IC202	H5
IC203	C3
IC204	G5
IC205	H7
IC206	I7
IC207	G7
IC211	I4
Q001	J20
Q002	J20
Q003	C18
Q004	D18
Q005	B18
Q006	A18
Q007	A18
Q008	D12
Q009	C12
Q016	B12
Q017	B2
Q201	B26
Q202	C27
Q203	D28
Q204	D26
Q207	G4
Q208	G4
Q209	G4
Q210	I5
Q211	F4
Q212	F28
Q213	F26
Q214	F4
Q215	F23
Q216	I21
Q217	I8
Q218	J21
Q226	J22
Q228	F22
Q229	D25
Q230	C3
Q233	I6
Q236	B23
Q237	D22
Q238	D7
Q239	D7
Q240	E6
Q241	G6
Q242	C7
Q243	C7
Q244	C22
Q245	C23
Q246	G3
Q247	H3
Q248	G24
Q249	H23
Q250	H23

CM-32 (SERVO, SYSTEM CONTROL) SCHEMATIC DIAGRAM

—Ref. No. CM-32 BOARD : 3000 series—



CM-32 BOARD

• Signal path

	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶	
Drum servo(speed and phase)		▶	
Capstan speed servo		◁	
Capstan phase servo	▶	◁	◁
Capstan servo(speed and phase)		◁	
Ref.signal	▶	◁	▷

CM-32 (SERVO, SYSTEM CONTROL) PRINTED WIRING BOARD
—Ref. No. CM-32 BOARD : 3000 series—

< DIODE >

D401	8-719-400-18	MA152WK
D409	8-719-200-36	E10QS04
D410	8-719-200-27	E10DS2
D413	8-719-400-18	MA152WK
D414	8-719-400-18	MA152WK
D464	8-719-400-18	MA152WK
D466	8-719-400-18	MA152WK
D501	8-719-938-75	SB05-05CP
D502	8-719-938-75	SB05-05CP
D503	8-719-104-34	1S2836

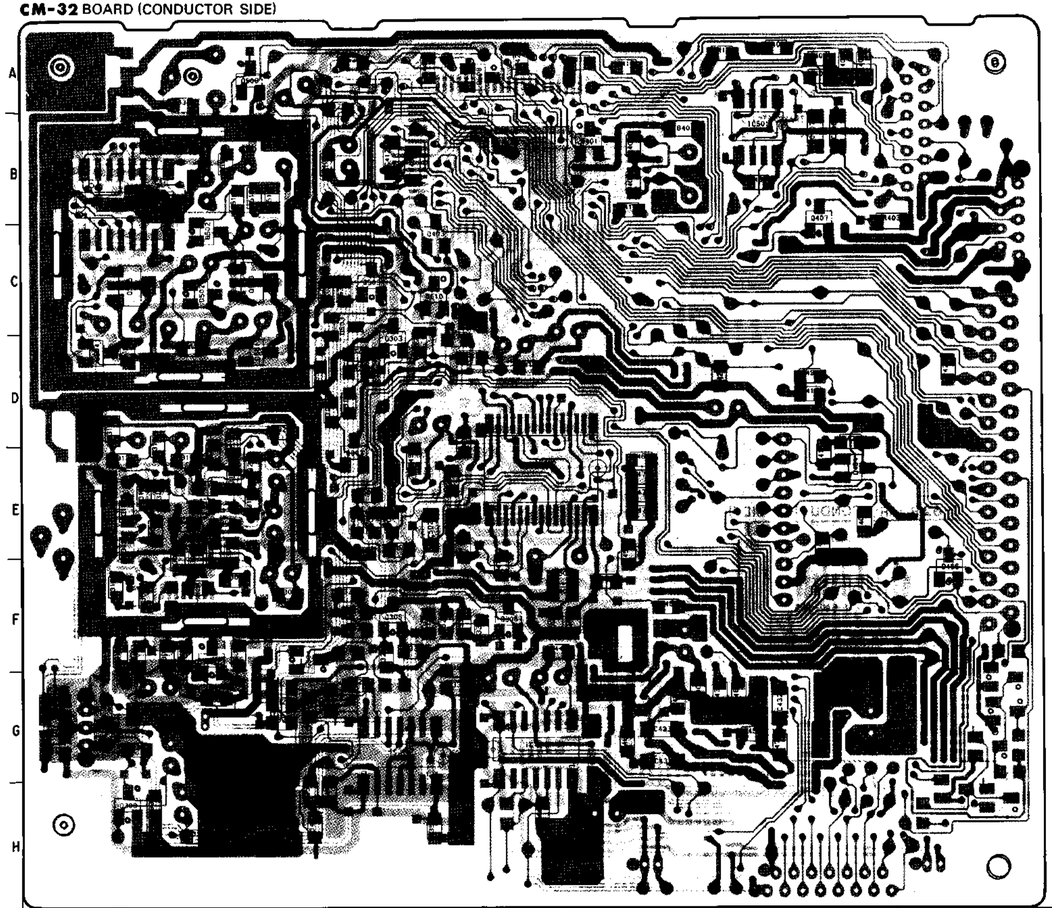
< IC >

IC301	8-752-058-54	CXA1449Q
IC302	8-759-100-97	uPC3396Z
IC401	8-752-834-12	CXP80116-852Q
IC403	8-759-823-94	LB1836M
IC404	8-759-148-05	CXA8010M
IC405	8-759-980-55	CXA8006M
IC406	8-759-805-06	CXA1127M
IC501	8-759-958-98	LM358D
IC502	8-759-945-17	MB3775PF

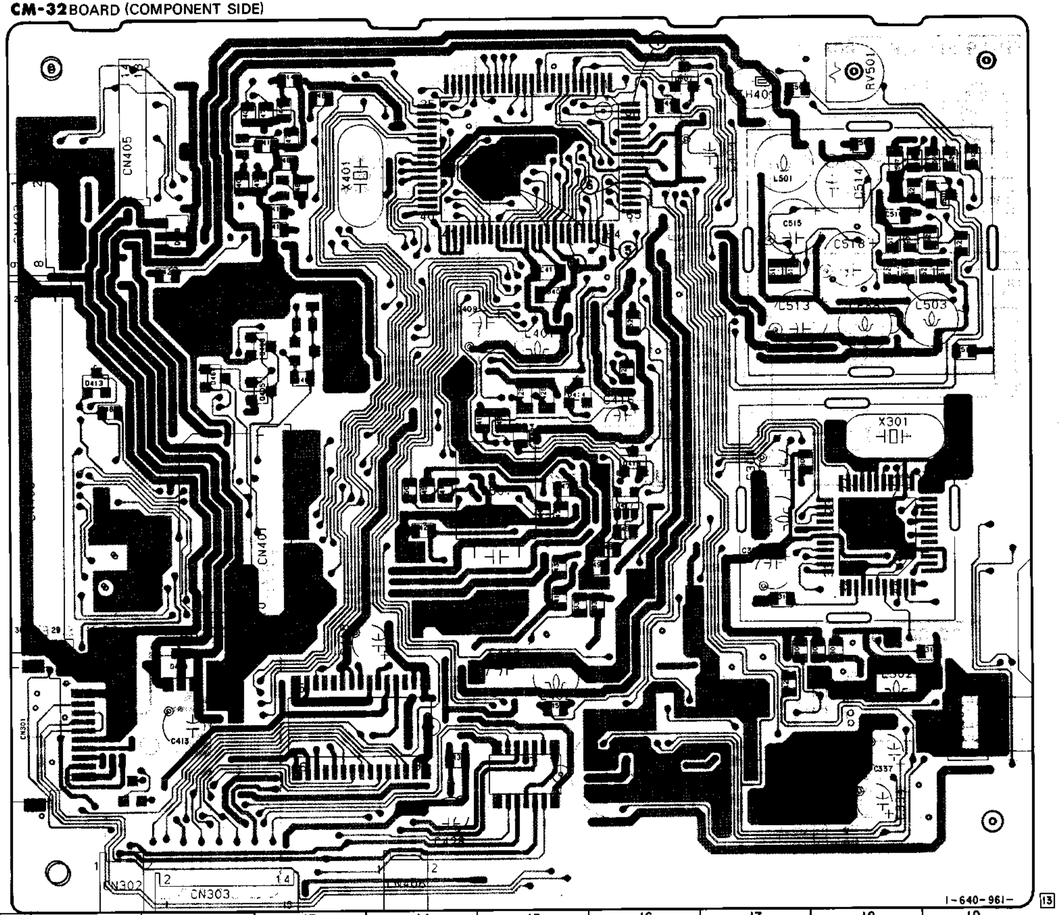
< TRANSISTOR >

Q301	8-729-216-22	2SA1162
Q302	8-729-100-66	2SC1623
Q303	8-729-216-22	2SA1162
Q304	8-729-100-66	2SC1623
Q305	8-729-216-22	2SA1162
Q306	8-729-100-66	2SC1623
Q308	8-729-901-01	DTC144EK
Q403	8-729-901-06	DTA144EK
Q404	8-729-901-06	DTA144EK
Q405	8-729-901-06	DTA144EK
Q407	8-729-100-66	2SC1623
Q408	8-729-901-01	DTC144EK
Q417	8-729-904-04	FMS2
Q418	8-729-901-01	DTC144EK
Q501	8-729-901-01	DTC144EK
Q502	8-729-100-66	2SC1623
Q503	8-729-805-25	2SB1121
Q504	8-729-100-66	2SC1623
Q505	8-729-805-25	2SB1121
Q506	8-729-901-01	DTC144EK
Q507	8-729-901-06	DTA144EK
Q508	8-729-901-01	DTC144EK
Q509	8-729-100-66	2SC1623
Q510	8-729-100-66	2SC1623

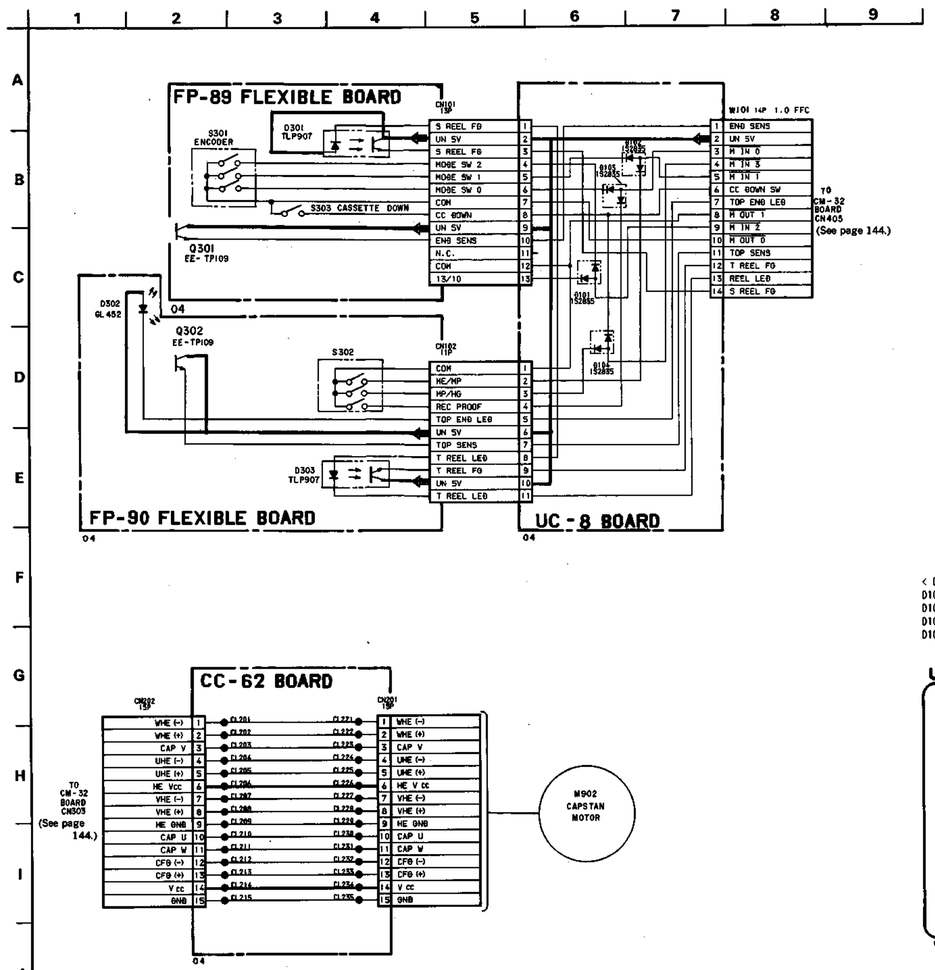
CM-32 BOARD (CONDUCTOR SIDE)



CM-32 BOARD (COMPONENT SIDE)

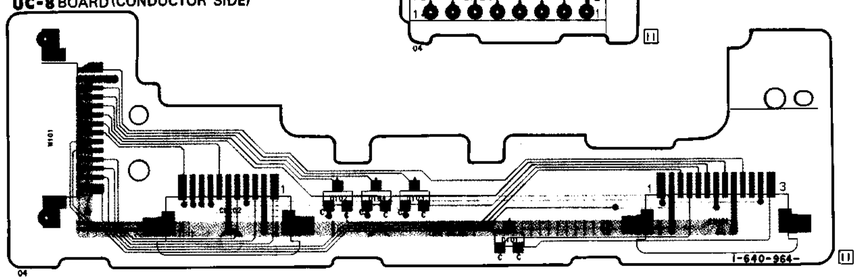


CM-32 BOARD	
D401	B-6
D409	C-12
D410	F-12
D413	D-11
D414	D-15
D464	D-12
D466	F-9
D501	D-3
D502	C-2
D503	C-3
IC301	E-18
IC302	G-4
IC401	B-15
IC403	G-15
IC404	G-5
IC405	E-5
IC406	G-13
IC501	B-7
IC502	B-1
Q301	F-2
Q302	E-4
Q303	D-4
Q304	F-3
Q305	F-4
Q306	F-5
Q308	H-1
Q403	C-4
Q404	E-6
Q405	D-13
Q407	C-8
Q408	D-13
Q417	E-16
Q418	E-16
Q501	B-19
Q502	C-2
Q503	C-3
Q504	D-1
Q505	C-1
Q506	A-3
Q507	A-16
Q508	A-1
Q509	C-4
Q510	C-4

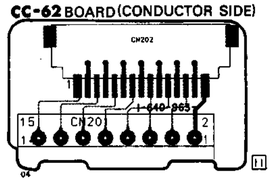


< DIODE >
D101 8-719-104-34 1S2836
D102 8-719-104-34 1S2836
D103 8-719-104-34 1S2836
D104 8-719-104-34 1S2836

UC-8 BOARD (CONDUCTOR SIDE)



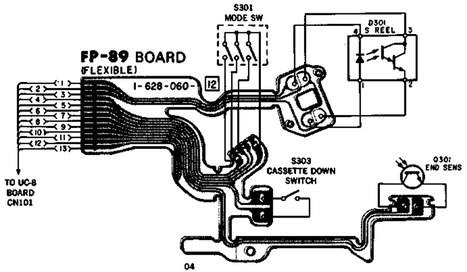
CC-62 BOARD (CONDUCTOR SIDE)



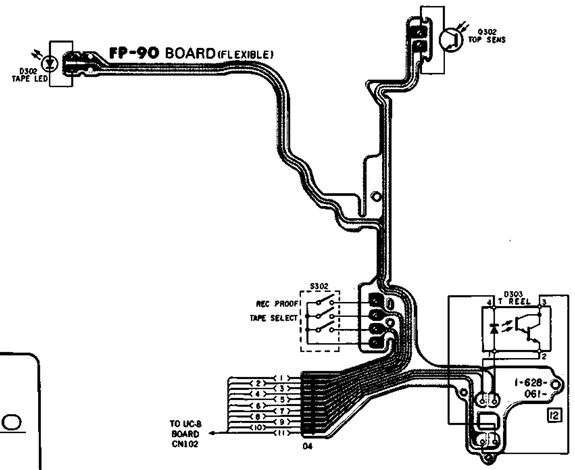
< DIODE >
D301 8-719-820-44 TLP907-0 (SONY2)

< TRANSISTOR >
Q301 8-729-906-48 EE-TP109

FP-89 BOARD (FLEXIBLE)



FP-90 BOARD (FLEXIBLE)



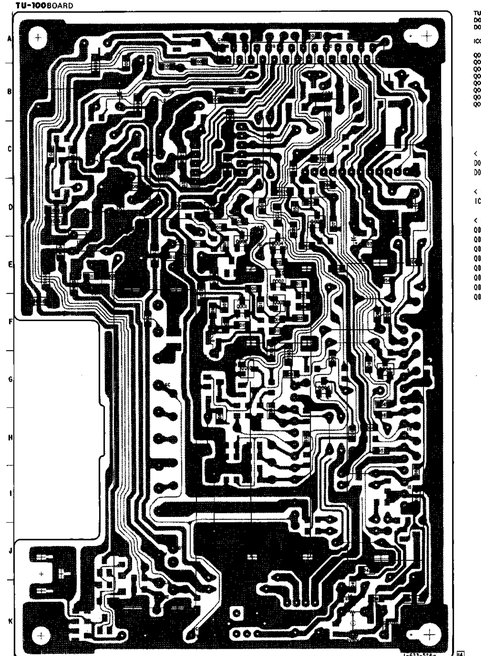
< DIODE >
D302 8-719-940-81 GL-452S
D303 8-719-820-41 TLP907-0 (SONY2)

< TRANSISTOR >
Q302 8-729-906-48 EE-TP109

TU-100 (TUNER) PRINTED WIRING BOARD

—Ref. No. TU-100 BOARD : 8000 series—

TU-100 BOARD



TU-100 BOARD
D002 E-5
D004 G-7

IC001 D-2

Q001 F-5
Q002 E-5
Q003 F-5
Q004 E-5
Q005 G-6
Q008 G-6
Q010 G-5
Q014 D-4

< DIODE >

D002	8-719-488-18	MA152WK
D004	8-719-184-24	152836

< IC >

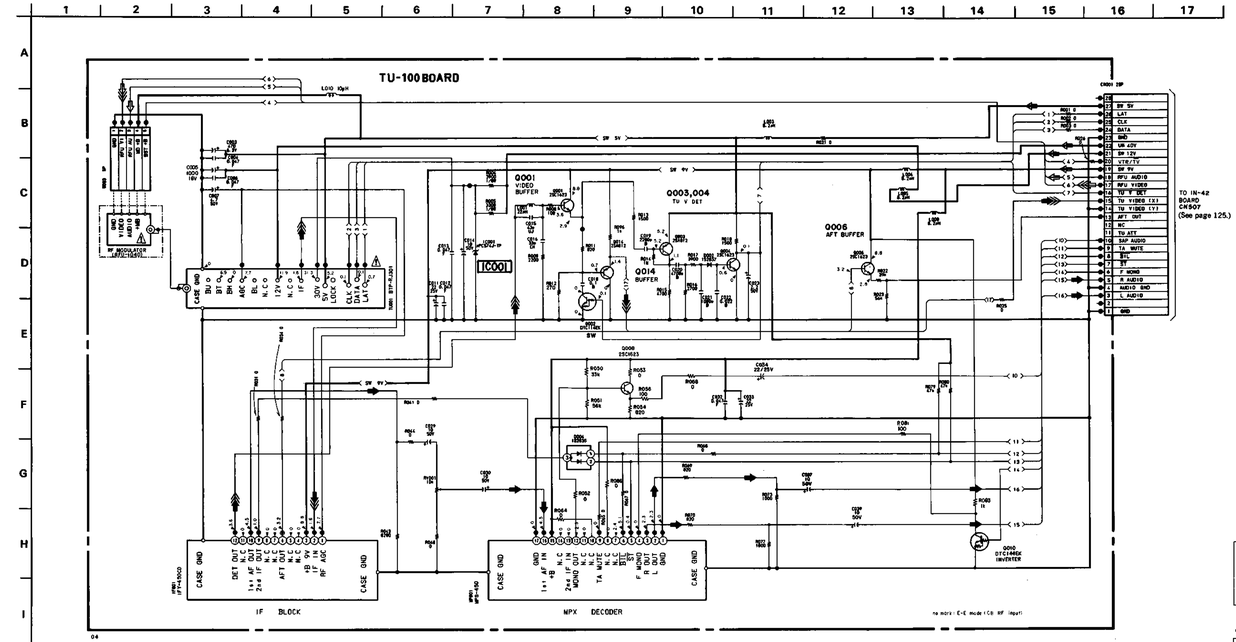
IC001	8-759-157-40	uPC574J

< TRANSISTOR >

Q001	8-729-100-66	2SC1623
Q002	8-729-500-53	DTC114EK
Q003	8-729-216-22	2SA1162
Q004	8-729-100-66	2SC1623
Q005	8-729-100-66	2SC1623
Q008	8-729-100-66	2SC1623
Q010	8-729-501-01	DTC144EK
Q014	8-729-216-22	2SA1162

TU-100 (TUNER) SCHEMATIC DIAGRAM

—Ref. No. TU-100 BOARD : 8000 series—



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

Note :
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

***Signal path**

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	➡
PB	⇨	⇨	⇨	⇨

PC-56 (AFM PROCESS) PRINTED WIRING BOARD

—Ref. No. PC-56 BOARD : 9000 series—

< DIODE >

D401	8-719-400-18	MA152WK
D501	8-719-104-34	1S2836
D602	8-719-104-34	1S2836
D702	8-719-400-18	MA152WK
D703	8-719-104-34	1S2836
D850	8-713-300-88	1T33C-B1
D704	8-719-104-34	1S2836
D856	8-719-400-18	MA152WK

< IC >

IC401	8-752-334-42	CXD2180Q
IC601	8-759-200-71	HD14053BFP
IC604	8-759-981-99	RC4560M
IC605	8-759-080-06	MC14053BF
IC606	8-759-981-99	RC4560M
IC607	8-759-981-99	RC4560M
IC608	8-759-080-71	HD14053BFP
IC609	8-759-005-06	MC14052BF
IC610	8-759-009-06	MC14052BF
IC614	8-759-822-93	LA7461M
IC703	8-752-332-45	CXD1200Q
IC704	8-759-089-51	MC14538BF
IC705	8-759-587-53	MSM548CLL-15FC
IC707	8-759-562-14	CF7805MPV
IC708	8-752-910-20	CX20202
IC709	8-759-968-15	TL431CLP
IC801	8-752-033-01	CXA1237AR
IC850	8-759-998-71	BA3308F
IC901	8-752-033-01	CXA1237AR
IC902	8-759-089-06	MC14053BF
IC903	8-759-089-06	MC14052BF
IC904	8-759-981-99	RC4558M
IC905	8-759-981-99	RC4558M
IC906	8-759-981-99	RC4558M

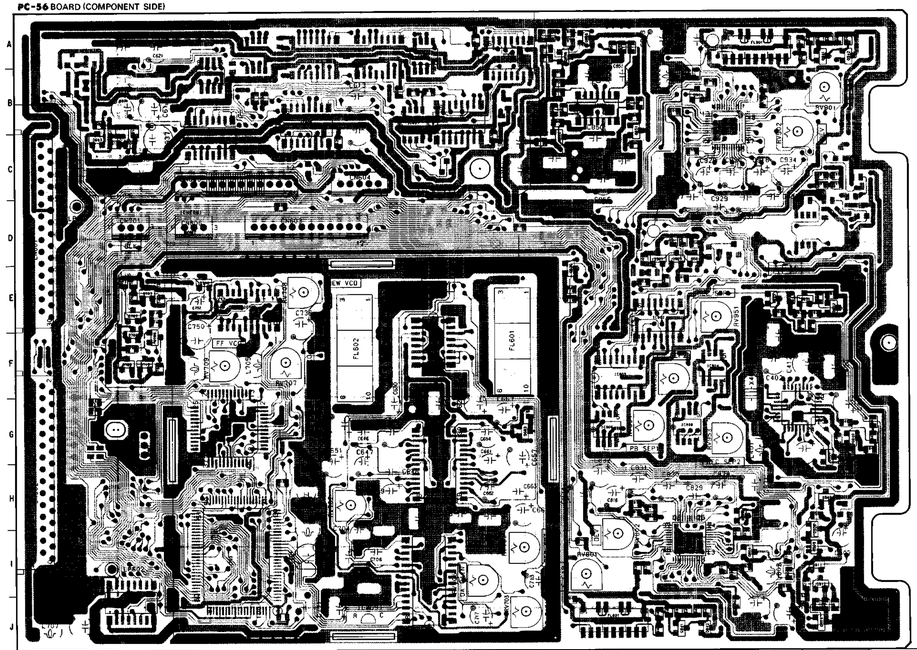
< TRANSISTOR >

Q501	8-729-100-66	2SC1623
Q502	8-729-100-66	2SC1623
Q504	8-729-902-95	DTC144EK
Q506	8-729-216-22	2SA1162
Q508	8-729-100-66	2SC1623
Q509	8-729-903-16	FMW1
Q511	8-729-100-66	2SC1623
Q512	8-729-100-66	2SC1623
Q514	8-729-216-22	2SA1162
Q526	8-729-100-66	2SC1623
Q527	8-729-901-01	DTC144EK
Q603	8-729-100-66	2SC1623
Q604	8-729-100-66	2SC1623
Q605	8-729-100-66	2SC1623
Q606	8-729-100-66	2SC1623
Q610	8-729-901-96	DTA144EK
Q611	8-729-116-05	2SK168-K5
Q612	8-729-116-05	2SK168-K5
Q613	8-729-100-66	2SC1623
Q660	8-729-100-66	2SC1623
Q661	8-729-216-22	2SA1162
Q662	8-729-216-22	2SA1162
Q701	8-729-901-96	DTA144EK
Q702	8-729-901-01	DTC144EK
Q703	8-729-100-66	2SC1623
Q705	8-729-100-66	2SC1623
Q707	8-729-100-66	2SC1623
Q708	8-729-100-66	2SC1623
Q709	8-729-100-66	2SC1623
Q710	8-729-100-66	2SC1623
Q711	8-729-901-01	DTC144EK
Q803	8-729-100-66	2SC1623
Q804	8-729-100-66	2SC1623
Q831	8-729-100-66	2SC1623
Q832	8-729-216-22	2SA1162
Q833	8-729-901-94	DTA114EK
Q840	8-729-100-66	2SC1623
Q841	8-729-100-66	2SC1623
Q842	8-729-100-66	2SC1623
Q850	8-729-901-01	DTC144EK
Q851	8-729-100-66	2SC1623
Q852	8-729-100-66	2SC1623
Q855	8-729-100-66	2SC1623
Q856	8-729-100-66	2SC1623
Q857	8-729-901-01	DTC144EK
Q858	8-729-901-01	DTC144EK
Q903	8-729-901-01	DTC144EK
Q904	8-729-100-66	2SC1623
Q905	8-729-100-66	2SC1623
Q940	8-729-100-66	2SC1623
Q941	8-729-100-66	2SC1623
Q957	8-729-901-01	DTC144EK
Q958	8-729-901-01	DTC144EK

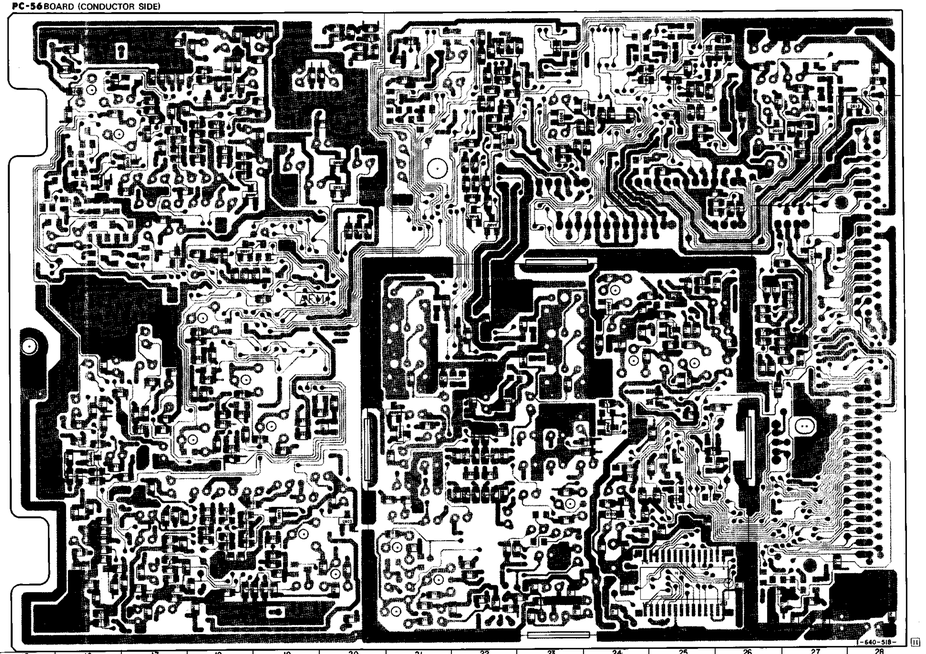
PC-56 BOARD

D401	H13
D501	D18
D603	G8
D702	F25
D703	H24
D704	G24
D850	C20
IC401	G12
IC601	C3
IC604	B4
IC605	B5
IC606	A7
IC607	B7
IC608	F7
IC609	B8
IC610	A8
IC614	N7
IC701	I7
IC703	I4
IC704	J3
IC705	L25
IC707	B4
IC708	E4
IC709	J6
IC801	G4
IC850	B9
IC901	B11
IC902	E10
IC903	F10
IC904	F11
IC905	G11
IC906	G10
Q501	D10
Q503	D11
Q504	D11
Q506	H13
Q508	I13
Q509	I15
Q511	I13
Q512	I13
Q514	J13
Q526	E9
Q527	D17
Q603	C8
Q604	B26
Q605	B24
Q606	B23
Q610	D22
Q611	D22
Q612	D22
Q613	B28
Q660	G22
Q661	G21
Q662	G21
Q701	I7
Q702	E24
Q705	F2
Q706	F2
Q707	E2
Q708	E3
Q709	F3
Q710	F3
Q711	D27
Q803	M9
Q804	M12
Q831	E13
Q832	E13
Q833	E12
Q840	G15
Q841	J13
Q842	J11
Q850	C20
Q851	C10
Q852	C9
Q855	A9
Q856	A9
Q857	M19
Q858	M12
Q903	C17
Q904	B11
Q940	G13
Q941	A13
Q942	A13
Q957	C16
Q958	C18

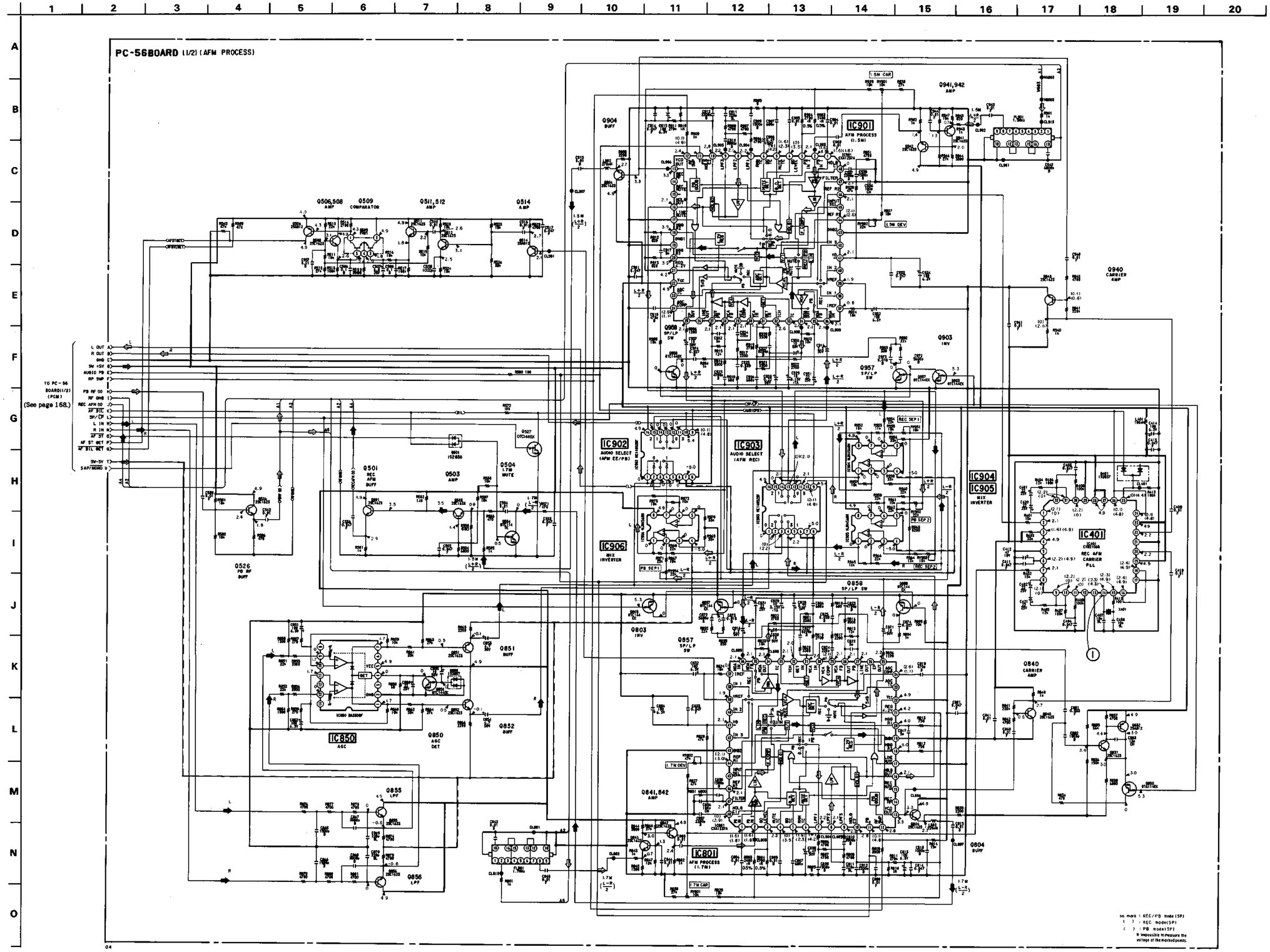
PC-56 BOARD (COMPONENT SIDE)



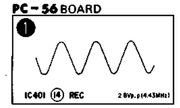
PC-56 BOARD (CONDUCTOR SIDE)



PC-56 (AFM PROCESS) SCHEMATIC DIAGRAM
—Ref. No. PC-56 BOARD : 9000 series—



PC-56 BOARD

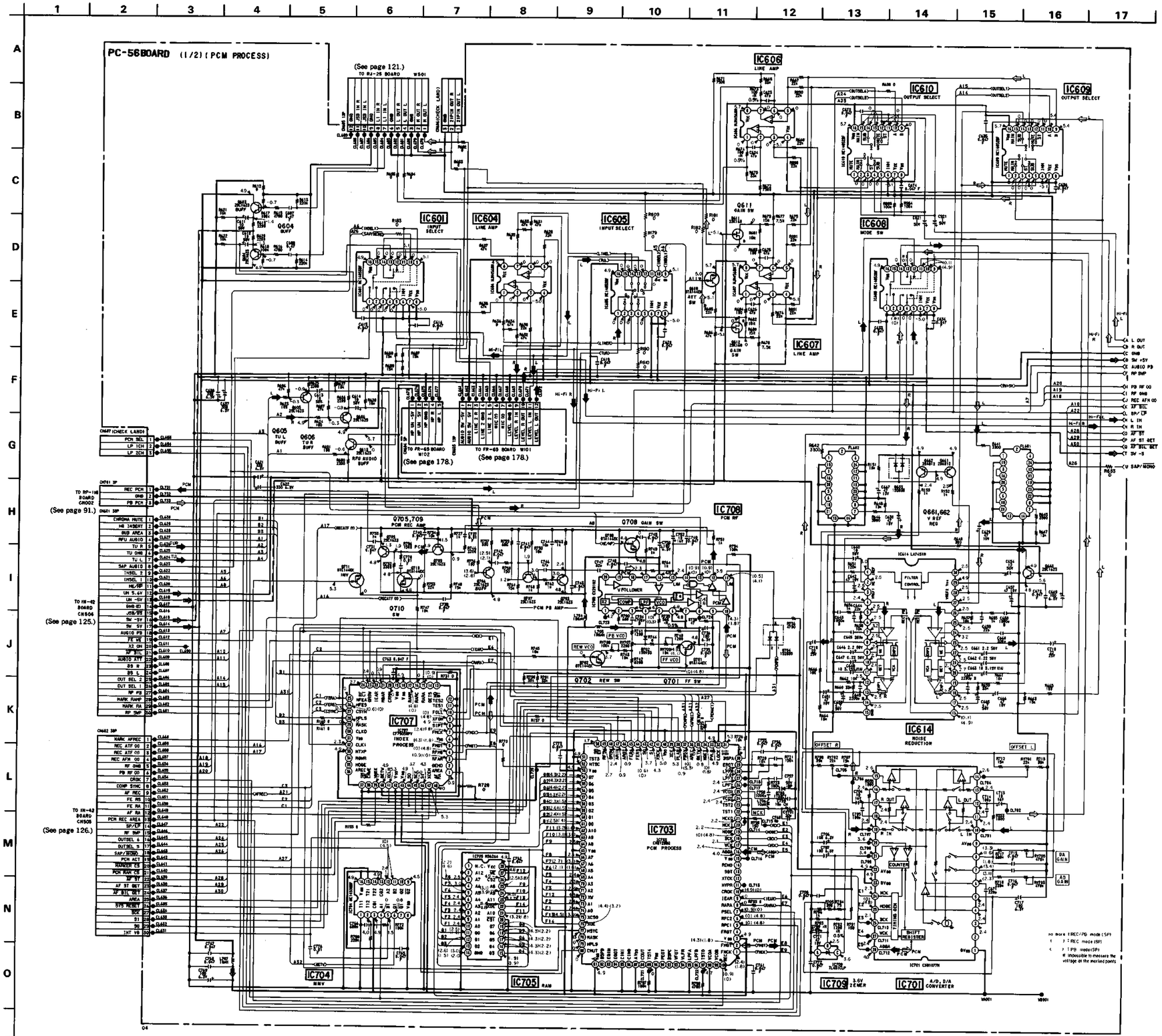


• Signal path

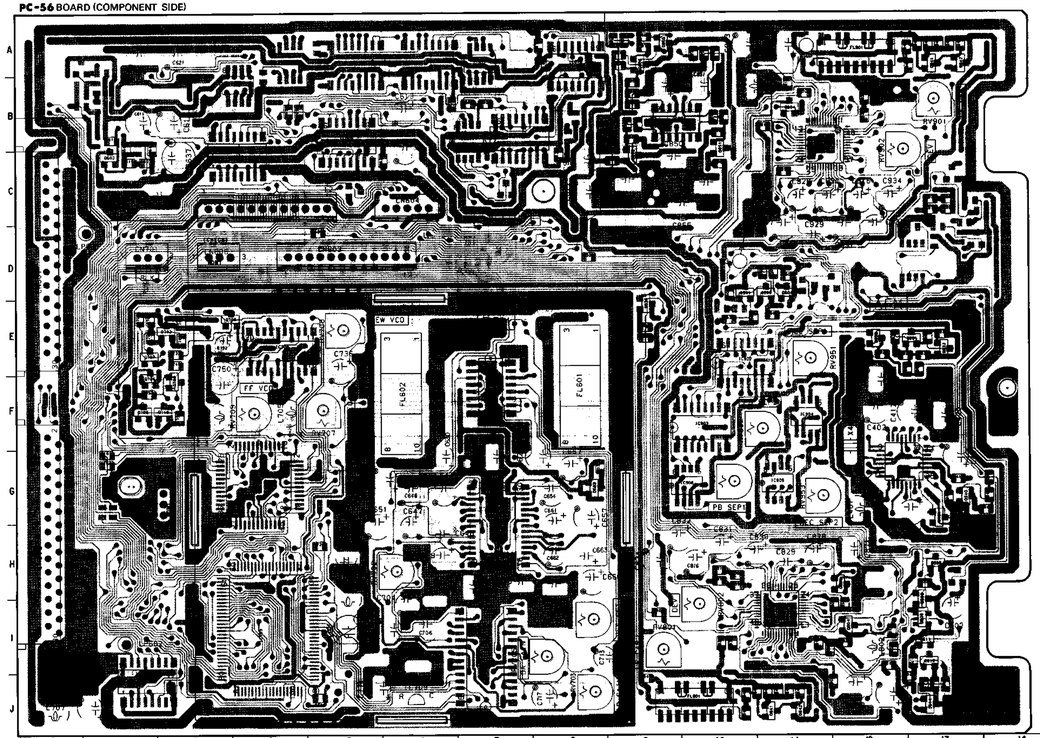
	AUDIO Signal
REC	➡
PB	⇨

PC-56 (PCM PROCESS) SCHEMATIC DIAGRAM

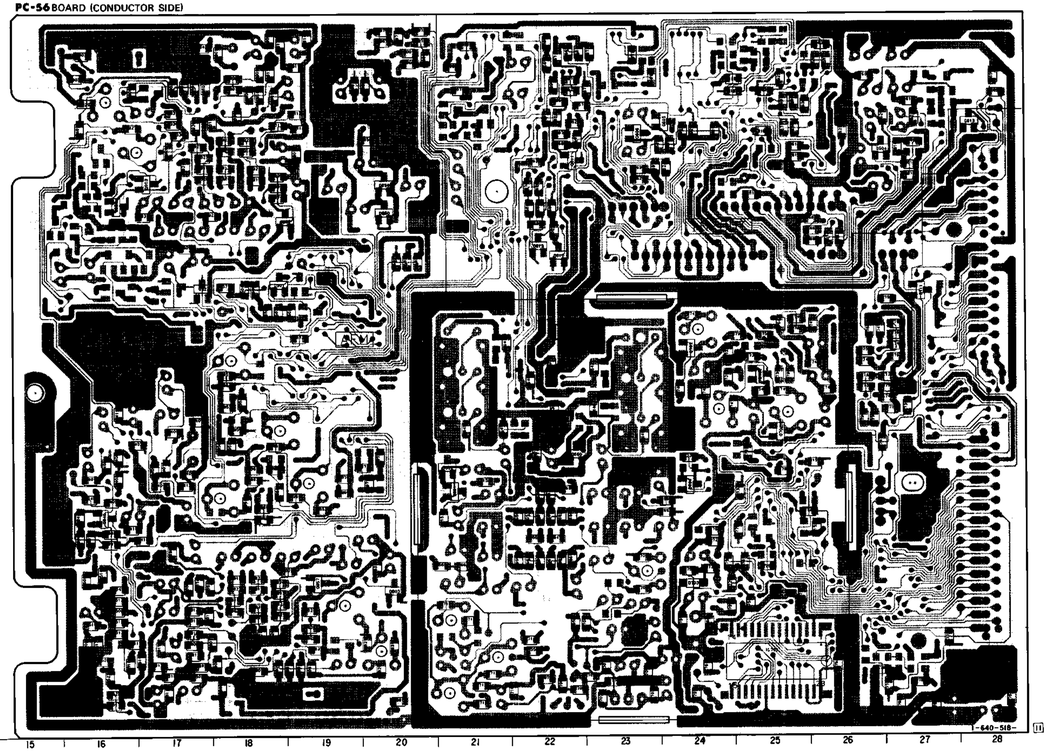
—Ref. No. PC-56 BOARD : 9000 series—



PC-56 BOARD (COMPONENT SIDE)



PC-56 BOARD (CONDUCTOR SIDE)



PC-56 BOARD

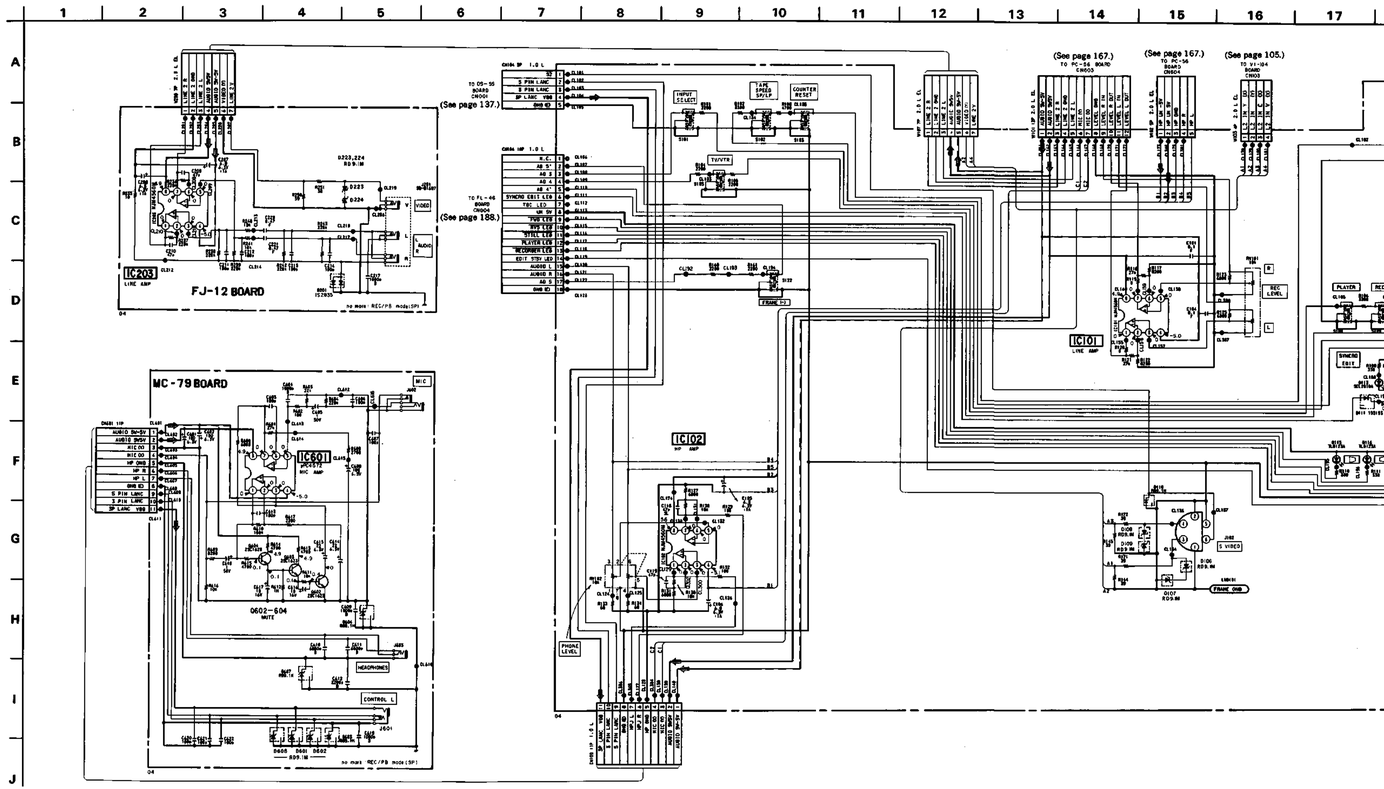
D401	H13	Q707	E2	< DIODE >			
D501	D18	Q708	E3	D401	8-719-400-18	MA152WK	
D503	G8	Q709	F3	D501	8-719-104-34	1S2836	
D702	F25	Q710	F3	D503	8-719-104-34	1S2836	
D703	H24	Q711	D27	D702	8-719-400-18	MA152WK	
D704	G24	Q803	I20	D703	8-713-300-88	1T33C-01	
D850	C20	Q804	I12	D704	8-719-104-34	1S2836	
		Q831	E13	D850	8-719-400-18	MA152WK	
IC401	G12	Q832	E13				
IC601	C3	Q833	E12				
IC604	B4	Q840	G16	< IC >			
IC605	B5	Q841	J11				
IC606	A7	Q842	J11	IC401	8-752-334-42	CXD2106Q	
IC607	B7	Q850	C20	IC601	8-759-388-71	HD14053BFP	
IC608	F3	Q851	C10	IC604	8-759-981-93	RC4558M	
IC610	A8	Q855	A9	IC605	8-755-089-86	MC14052BF	
IC614	H7	Q856	A9	IC606	8-759-981-93	RC4558M	
IC701	I7	Q857	H19	IC607	8-759-981-93	RC4558M	
IC703	I4	Q858	H12	IC608	8-759-388-71	HD14053BFP	
IC704	J2	Q903	C17	IC609	8-759-089-06	MC14052BF	
IC708	E25	Q904	B11	IC610	8-759-089-06	MC14052BF	
IC707	B4	Q940	G19	IC614	8-759-822-92	LA7451M	
IC708	E4	Q941	A13	IC703	8-752-332-45	CXD1288Q	
IC709	A6	Q942	A13	IC704	8-759-009-51	MC14538BF	
IC801	I11	Q957	C16	IC705	8-759-507-53	MS6264CLL-15FC	
IC850	B8	Q958	C16	IC707	8-759-502-14	CF75056PV	
IC901	B11			IC708	8-752-019-28	CX20102	
IC902	E10			IC709	8-759-908-15	TL431CLP	
IC903	E10			IC801	8-752-033-01	CXA1237AR	
IC904	F11			IC850	8-759-958-71	BA3308F	
IC905	G11			IC901	8-752-033-01	CXA1237AR	
IC906	G10			IC902	8-759-009-06	MC14052BF	
				IC903	8-759-009-06	MC14052BF	
Q501	D10			IC904	8-759-981-95	RC4560M	
Q503	D11			IC905	8-759-981-95	RC4560M	
Q504	D11			IC906	8-759-981-95	RC4560M	
Q506	H13						
Q508	I13						
Q509	I13						
Q511	I13						
Q512	I13						
Q514	I13						
Q515	C15						
Q526	E9						
Q527	D17						
Q603	C2						
Q604	B26						
Q605	B24						
Q606	B23						
Q610	D22						
Q611	C22						
Q612	D22						
Q613	B28						
Q660	D22						
Q661	C21						
Q662	C21						
Q701	I7						
Q702	E24						
Q703	E3						
Q705	F2						
Q706	F2						

< TRANSISTOR >

Q501	8-729-100-66	2SC1623
Q503	8-729-100-66	2SC1623
Q504	8-729-982-99	DTC114TK
Q506	8-729-216-22	2SA1162
Q508	8-729-100-66	2SC1623
Q509	8-729-903-16	FMH1
Q511	8-729-100-66	2SC1623
Q512	8-729-100-66	2SC1623
Q514	8-729-216-22	2SA1162
Q526	8-729-100-66	2SC1623
Q527	8-729-982-91	DTC144EK
Q603	8-729-100-66	2SC1623
Q604	8-729-100-66	2SC1623
Q605	8-729-100-66	2SC1623
Q606	8-729-100-66	2SC1623
Q610	8-729-901-06	DTA144EK
Q611	8-729-116-05	2SK160-K5
Q612	8-729-116-05	2SK160-K5
Q613	8-729-100-66	2SC1623
Q660	8-729-100-66	2SC1623
Q661	8-729-216-22	2SA1162
Q662	8-729-216-22	2SA1162
Q701	8-729-901-06	DTA144EK
Q702	8-729-901-01	DTC144EK
Q703	8-729-100-66	2SC1623
Q705	8-729-100-66	2SC1623
Q706	8-729-100-66	2SC1623
Q707	8-729-100-66	2SC1623
Q708	8-729-901-06	DTA144EK
Q709	8-729-100-66	2SC1623
Q710	8-729-901-06	DTA144EK
Q711	8-729-901-01	DTC144EK
Q803	8-729-901-01	DTC144EK
Q804	8-729-100-66	2SC1623
Q831	8-729-216-22	2SA1162
Q832	8-729-216-22	2SA1162
Q833	8-729-901-04	DTA114EK
Q840	8-729-100-66	2SC1623
Q841	8-729-100-66	2SC1623
Q842	8-729-100-66	2SC1623
Q850	8-729-901-01	DTC144EK
Q851	8-729-901-01	DTC144EK
Q852	8-729-100-66	2SC1623
Q855	8-729-100-66	2SC1623
Q856	8-729-100-66	2SC1623
Q857	8-729-100-66	2SC1623
Q858	8-729-901-01	DTC144EK
Q903	8-729-901-01	DTC144EK
Q904	8-729-100-66	2SC1623
Q940	8-729-100-66	2SC1623
Q941	8-729-100-66	2SC1623
Q942	8-729-100-66	2SC1623
Q957	8-729-901-01	DTC144EK
Q958	8-729-901-01	DTC144EK

FJ-12 (FRONT JACK) ,FR-65 (FRONT SW, HP AMP), MC-79 (MIC, HP, CONTROL L) SCHEMATIC DIAGRAM

—Ref. No. FJ-12, FR-65 and MC-79 BOARDS : 2000 series—



FJ-12 (FRONT JACK) ,FR-65 (FRONT SW, HP AMP), MC-79 (MIC, HP, CONTROL L) PRINTED WIRING BOARDS

—Ref. No. FJ-12, FR-65 and MC-79 BOARDS : 2000 series—

FR-65 BOARD	
D110	G-5
D111	J-9
D113	D-13
D114	D-12
D115	A-17
D116	A-15
D117	A-16
D118	A-12
D119	A-13
D120	D-12
IC101	L-4
IC102	K-2
Q101	J-9

< DIODE >

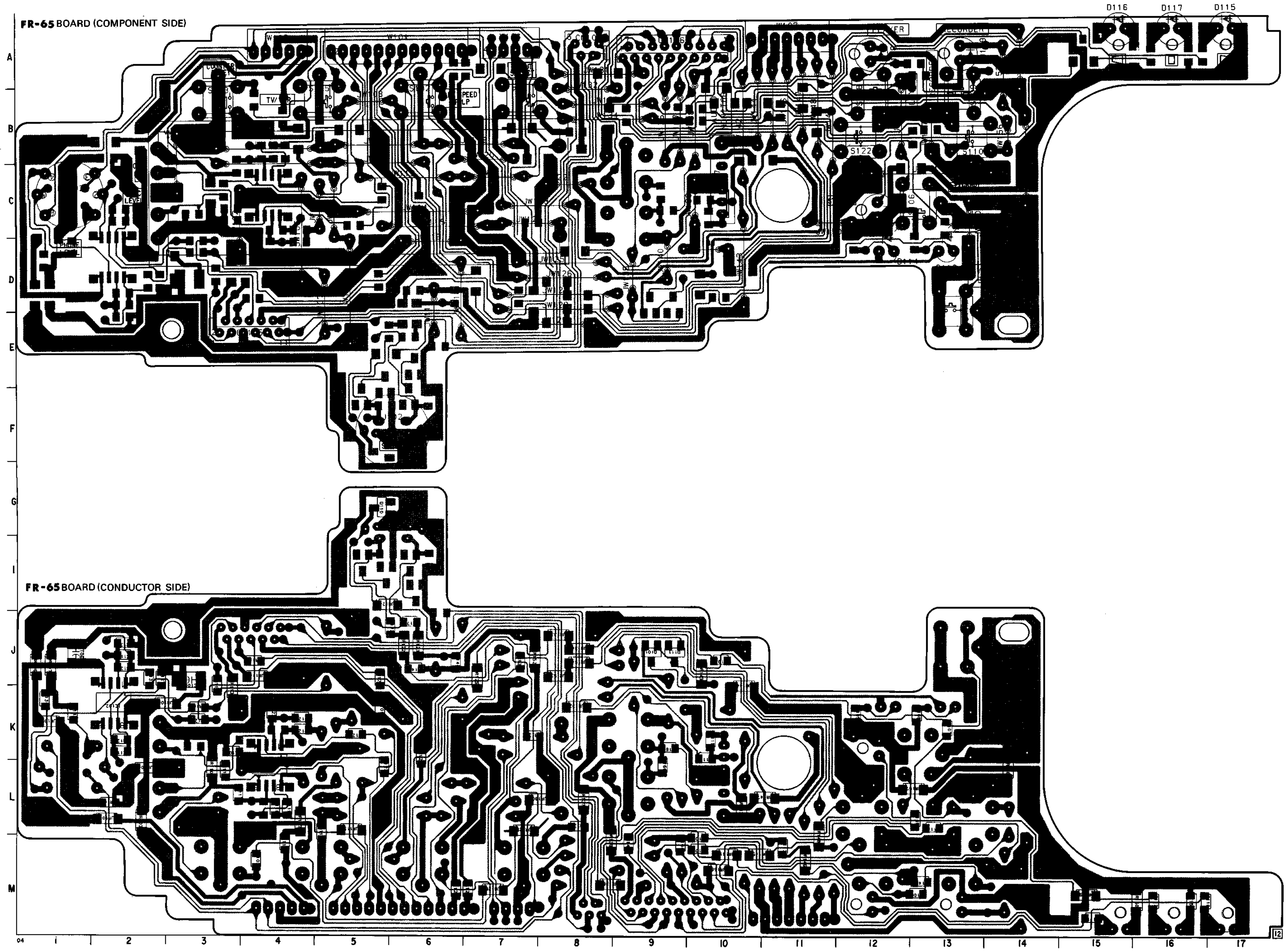
D106	8-719-106-45	RD9. 1M-B3
D107	8-719-106-45	RD9. 1M-B3
D108	8-719-106-45	RD9. 1M-B3
D109	8-719-106-45	RD9. 1M-B3
D110	8-719-106-45	RD9. 1M-B3
D111	8-719-400-18	MA152WK
D113	8-719-301-49	SEL2810A
D114	8-719-301-49	SEL2810A
D115	8-719-920-05	SLP281C-50
D116	8-719-920-05	SLP281C-50
D117	8-719-812-32	TLY123
D118	8-719-920-05	SLP281C-50
D119	8-719-920-05	SLP281C-50
D120	8-719-812-31	TLR123

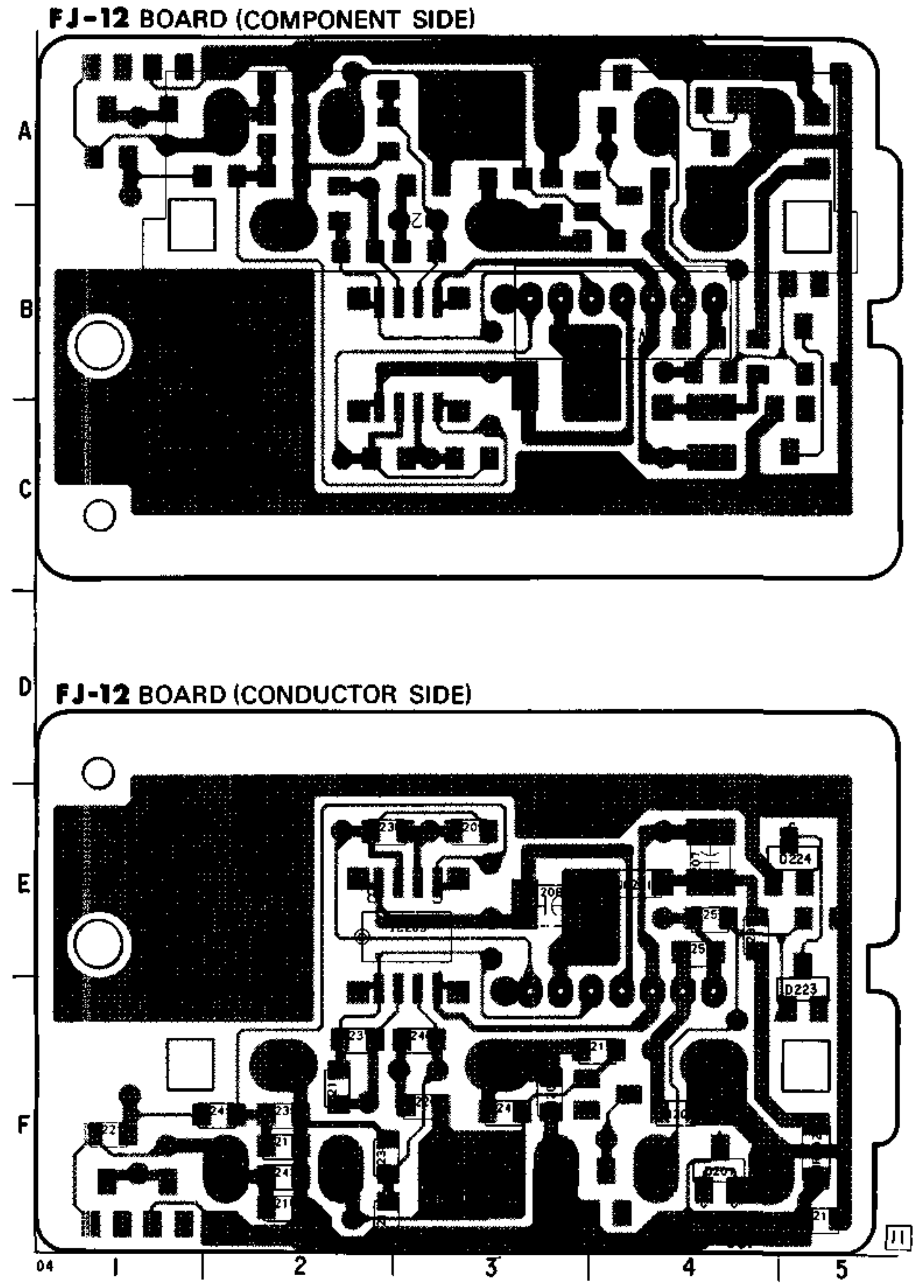
< IC >

IC101	8-759-981-99	RC4560M
IC102	8-759-981-99	RC4560M

< TRANSISTOR >

Q101	8-729-901-01	DTC144EK





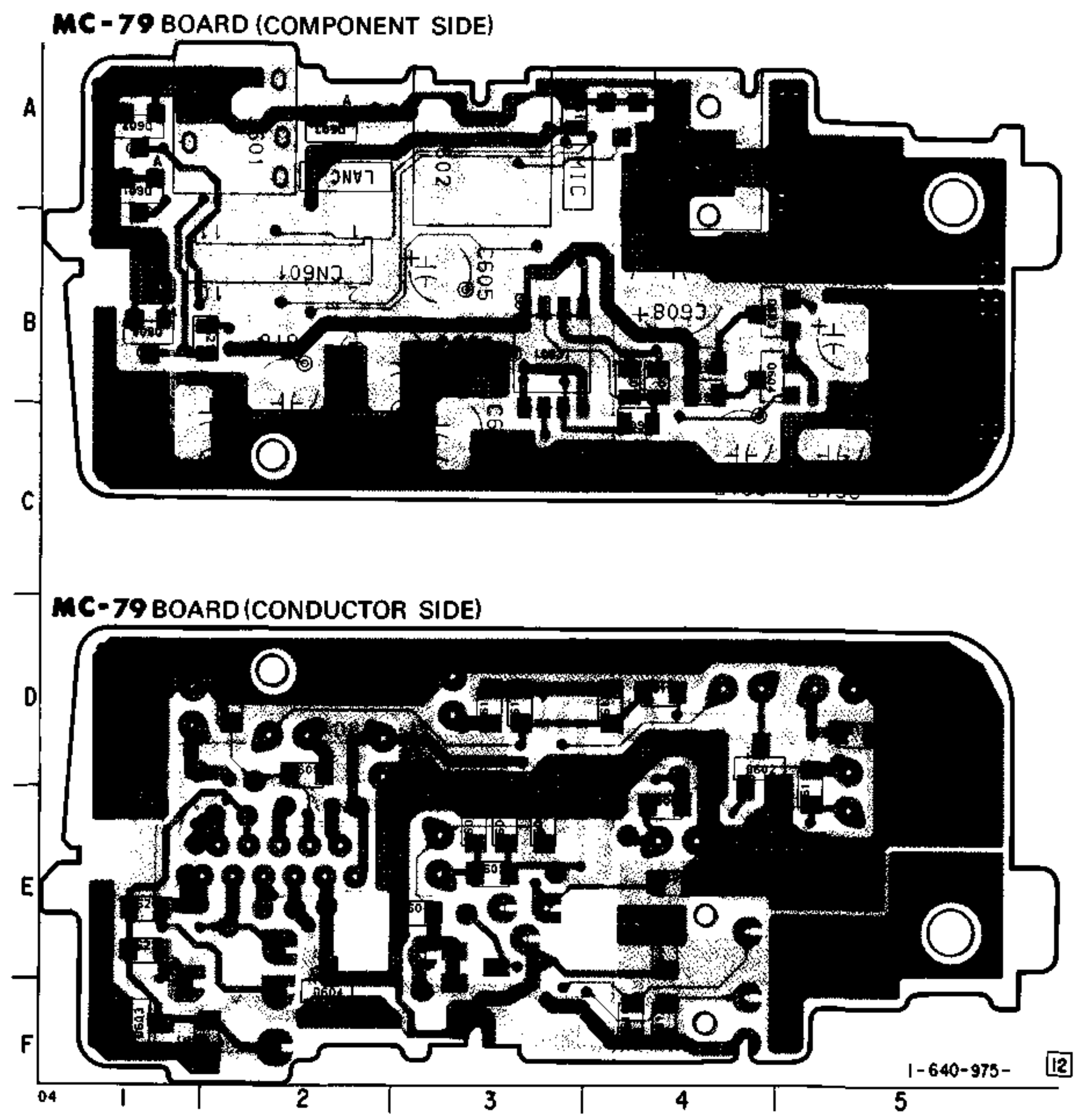
FJ-12 BOARD	
D201	F-4
D223	E-5
D224	F-5
IC203	E-2

< DIODE >

D201	8-719-104-34	1S2836
D223	8-719-106-45	RD9. 1M-B3
D224	8-719-106-45	RD9. 1M-B3

< IC >

IC203	8-759-981-99	RC4560M-T1



MC-79 BOARD	
D601	A-1
D602	A-1
D603	F-1
D604	F-2
D607	A-2
D608	B-1
IC601	B-3
Q602	D-4
Q603	B-4
Q604	B-4

< DIODE >

D601	8-719-106-45	RD9. 1M-B3
D602	8-719-106-45	RD9. 1M-B3
D603	8-719-106-45	RD9. 1M-B3
D604	8-719-106-45	RD9. 1M-B3
D607	8-719-106-45	RD9. 1M-B3
D608	8-719-106-45	RD9. 1M-B3

< IC >

IC601	8-759-111-56	uPC4572G2

< TRANSISTOR >

Q602	8-729-100-66	2SC1623
Q603	8-729-100-66	2SC1623
Q604	8-729-100-66	2SC1623

FJ-12 and FR-65 boards
- ■ : Pattern of conductor side.

MC-79 board
- ■ : Pattern from the side which enables seeing.
- : Pattern of the rear side

FL-46 (TUNER/TIMER/LCD CONTROL) PRINTED WIRING BOARD
—Ref. No. FL-46 BOARD : 2000 series—

< DIODE >

D001	8-719-920-85	SLP281C-50
D002	8-719-920-85	SLP281C-50
D003	8-719-400-18	MA152WK
D004	8-719-955-04	PY5504S-1
D005	8-719-955-04	PY5504S-1
D006	8-719-400-18	MA152WK
D007	8-719-812-31	TLR123
D008	8-719-400-18	MA152WK
D009	8-719-920-85	SLP281C-50
D013	8-719-812-32	TLY123
D030	8-719-812-32	TLY123
D031	8-719-400-18	MA152WK

< IC >

IC001	8-759-942-85	BA6800AFVC
IC002	1-466-131-21	GP1U52X
IC003	8-759-937-56	S-8054ALB-LM-S
IC004	8-759-941-78	S-8052ALB
IC005	8-759-064-19	MB89T645-GSX620
IC006	8-759-720-45	CAT35C202X

< TRANSISTOR >

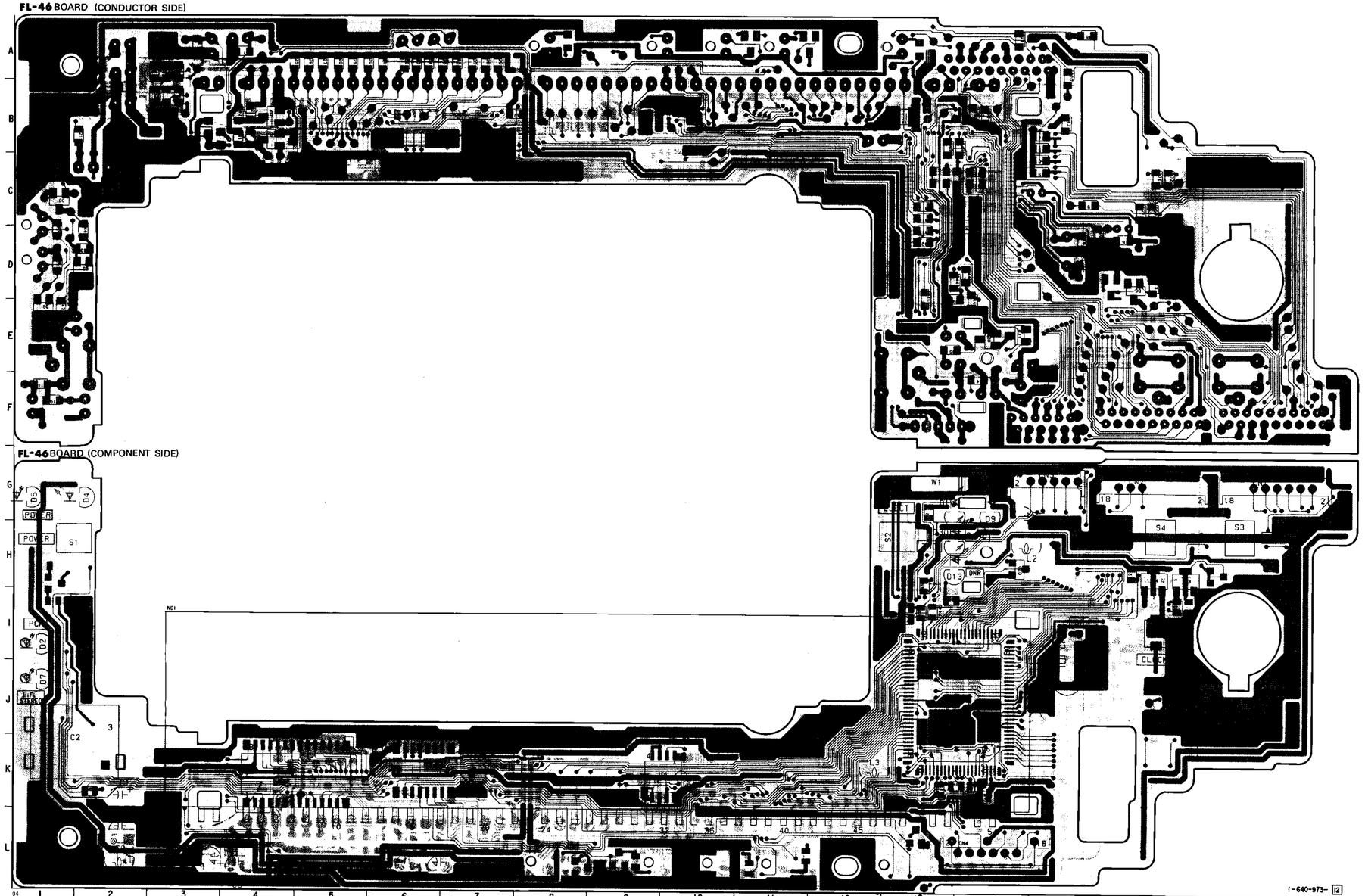
Q001	8-729-901-47	DTA143EK
Q002	8-729-901-47	DTA143EK
Q003	8-729-216-22	2SA1162
Q020	8-729-901-01	DTC144EK
Q030	8-729-901-01	DTC144EK

FL-46 BOARD

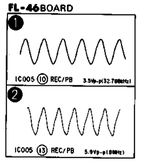
D001	G-13
D002	I-1
D003	C-1
D004	G-2
D005	G-1
D006	D-16
D007	J-1
D008	E-1
D009	G-14
D013	I-13
D030	H-13
D031	E-14
IC001	K-4
IC002	K-1
IC003	H-16
IC004	H-17
IC005	J-13
IC006	K-9
Q001	B-4
Q002	B-4
Q003	D-2
Q030	H-14
Q030	E-14

FL-46 BOARD (CONDUCTOR SIDE)

FL-46 BOARD (COMPONENT SIDE)

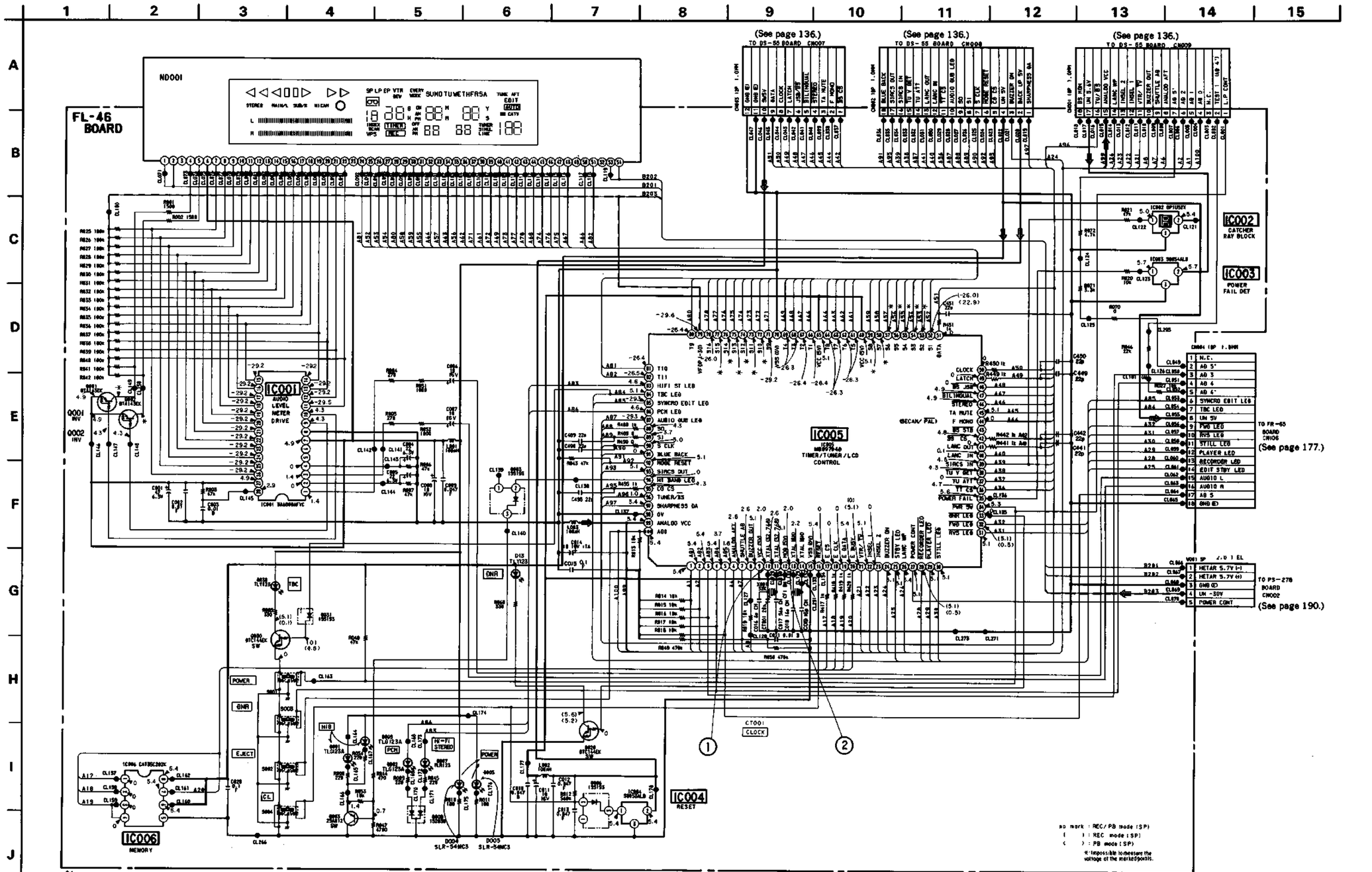


FL-46 BOARD



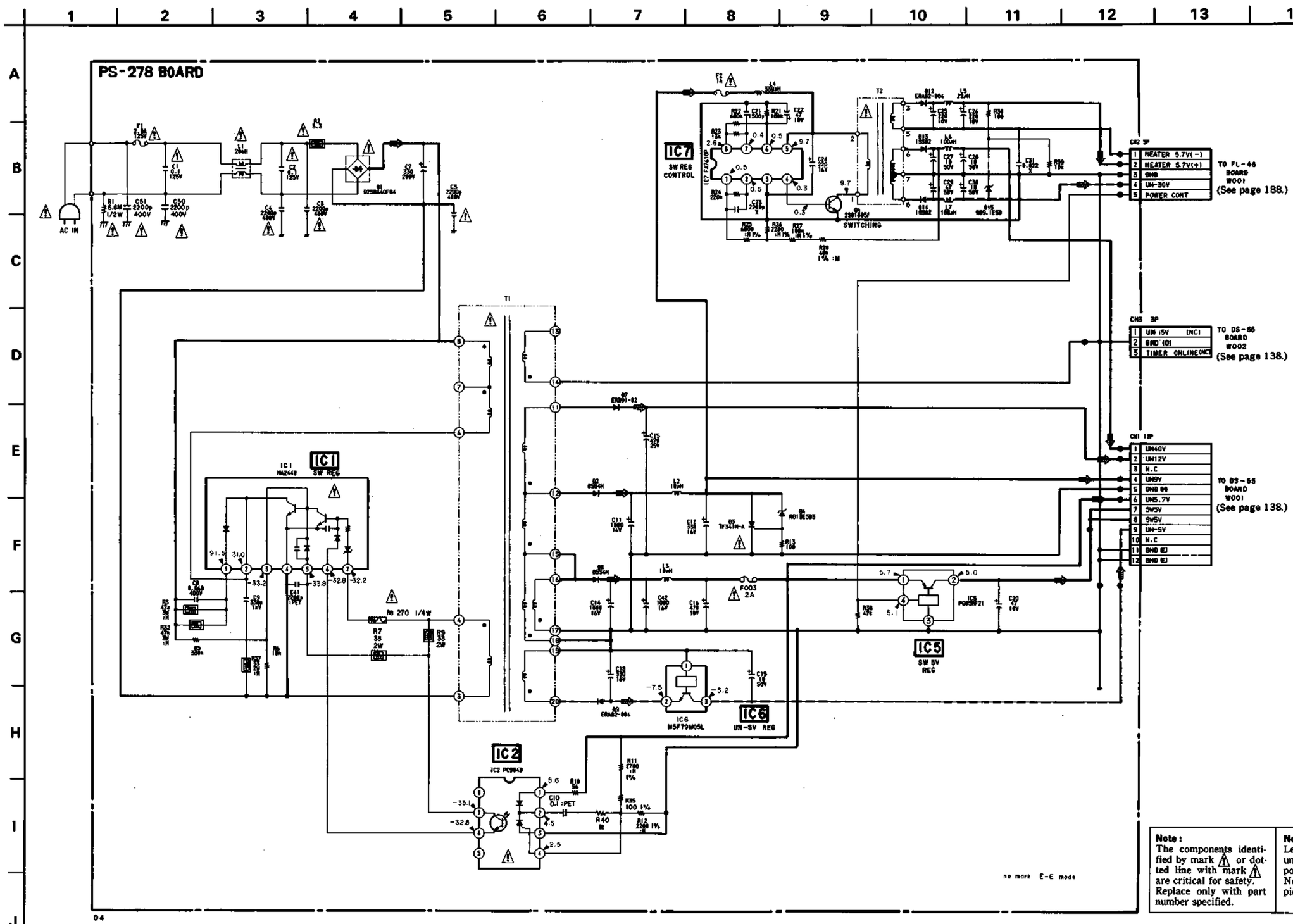
FL-46 (TUNER/TIMER/LCD CONTROL) SCHEMATIC DIAGRAM

—Ref. No. FL-46 BOARD : 2000 series—



PS-278 (POWER SUPPLY) SCHEMATIC DIAGRAM

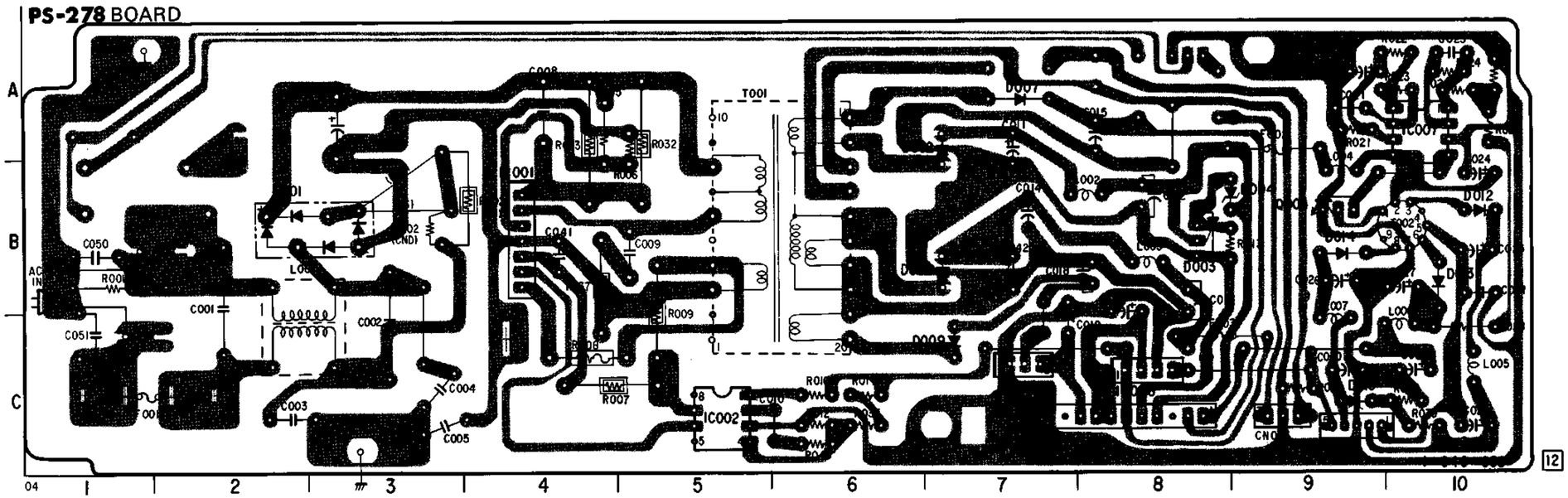
—Ref. No. PS-278 BOARD : 9000 series—



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

Note :
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

PS-278 (POWER SUPPLY) PRINTED WIRING BOARD
—Ref. No. PS-278 BOARD : 9000 series—



PS-278 BOARD

D001	B-2
D002	A-7
D003	B-8
D004	B-8
D007	A-7
D008	B-7
D009	C-7
D012	B-10
D013	B-10
D014	B-9
D015	C-9
IC001	B-4
IC002	C-5
IC005	C-8
IC006	C-7
IC007	A-10
Q004	B-9

< DIODE >

D001	8-719-510-67	D2SBA40F04
D002	8-719-500-70	D5S4M
D003	8-719-304-50	TF341M-A
D004	8-719-110-37	RD13ES-B3
D007	8-719-941-74	ERB91-02
D008	8-719-500-70	D5S4M
D009	8-719-913-44	ERA82-004
D012	8-719-913-44	ERA82-004
D013	8-719-901-83	1SS83
D014	8-719-901-83	1SS83
D015	8-719-121-24	RD9.1ES-L

< IC >

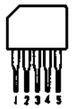
IC001	8-759-513-69	MA2440(N)
IC002	8-719-946-76	PC904-B
IC005	8-759-513-71	PQ05RF21
IC006	8-759-982-52	RC79M05FA
IC007	8-759-990-33	FA7610P

< TRANSISTOR >

Q004	8-729-824-22	2SD1805F

5-3. SEMICONDUCTORS

BA401



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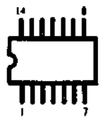

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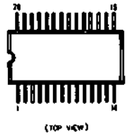

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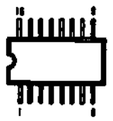

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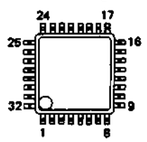

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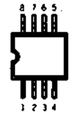

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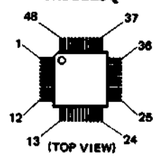

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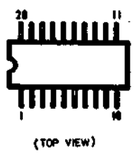

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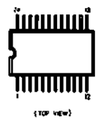

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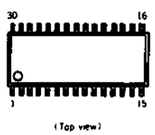

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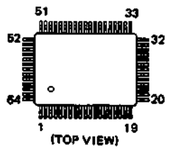

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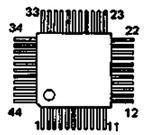

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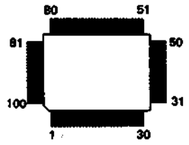

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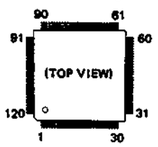

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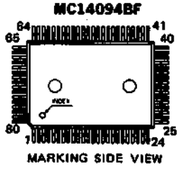

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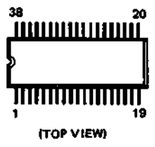

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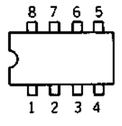

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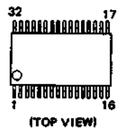

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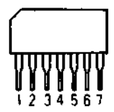

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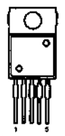

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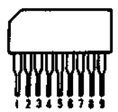

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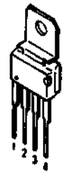
PQ05RF21
PQ09RF11
PQ12RF11
PQ30RV1



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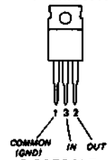

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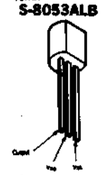

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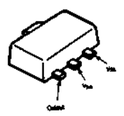

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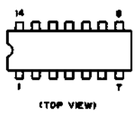

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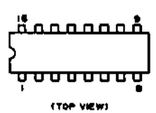

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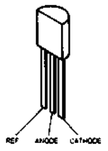

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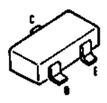

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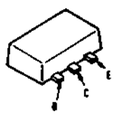

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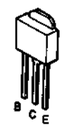

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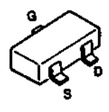

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EE-TP109

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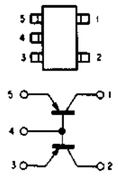

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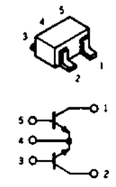

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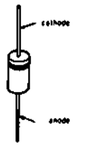

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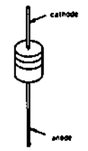
RD18ES-B2
RD2.7ES-B1
RD9.1ES-L



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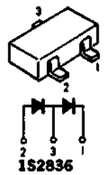

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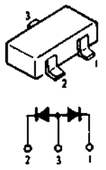

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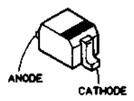

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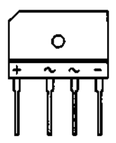

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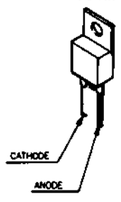

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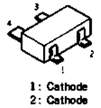
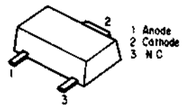


1 : Cathode
2 : Cathode
3 : Anode
4 : Anode

E10DS2
E10QS04

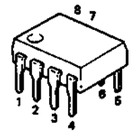


1 Anode
2 Cathode
3 N C

GL452S

MA152WK
MA3075WA

PC904-B



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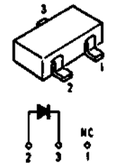
RD7.5M-B2
RD9.1M-B1
SB05-05CP



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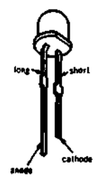

SLP281C-50
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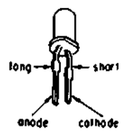

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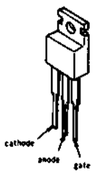

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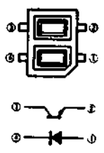


SECTION 6
EXPLODED VIEWS

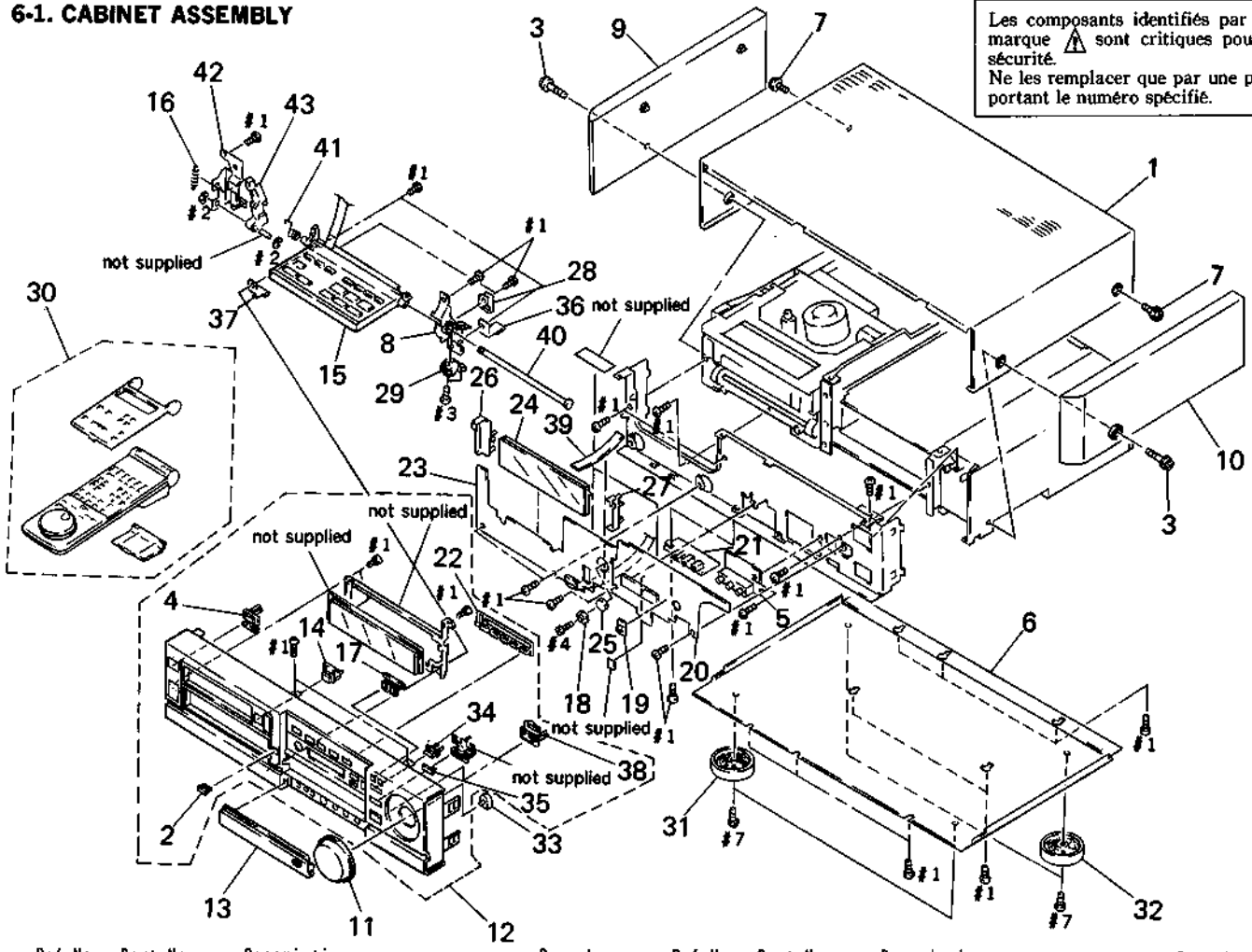
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- 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.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

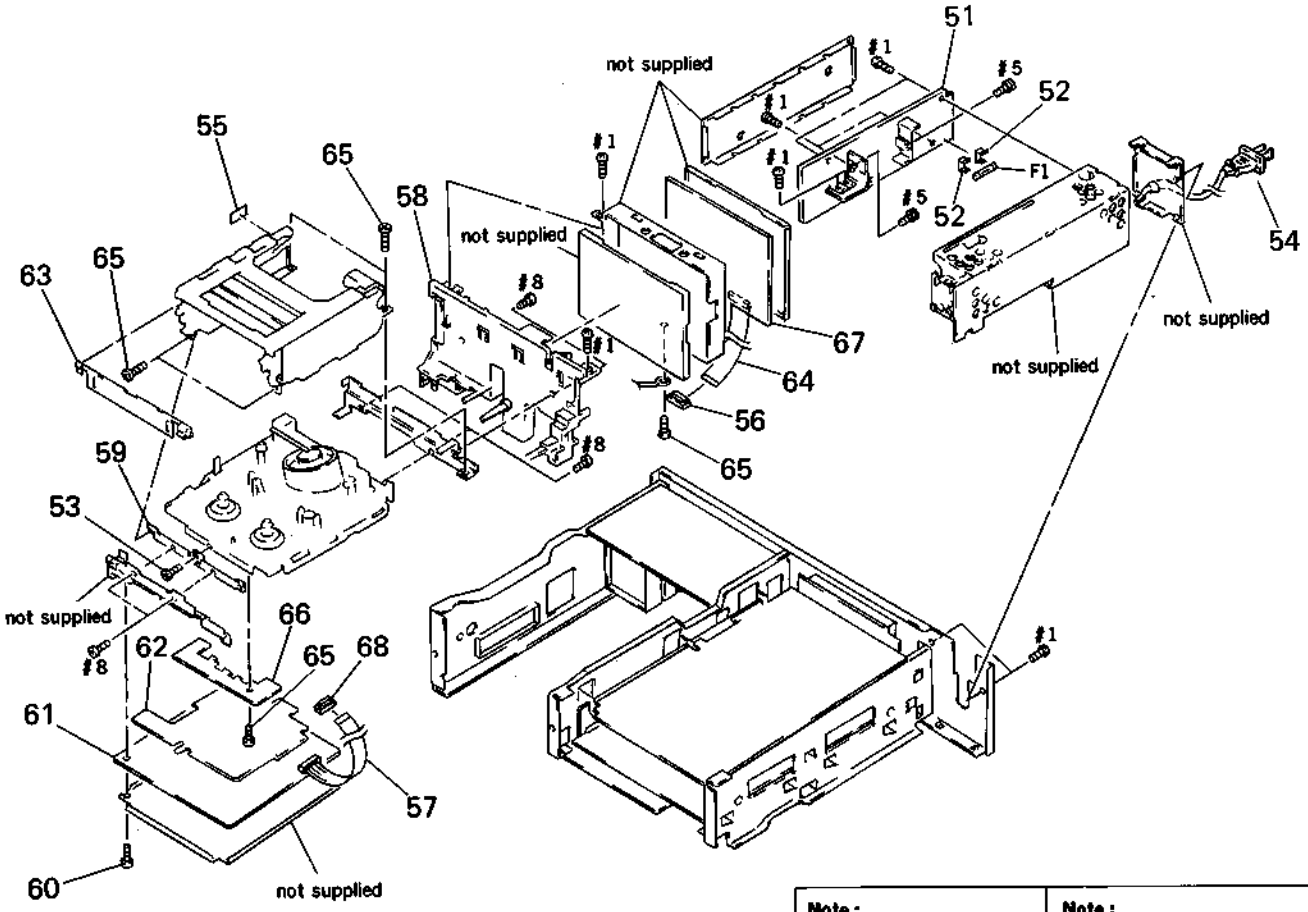
6-1. CABINET ASSEMBLY



Ref. No.	Part No.	Description	Remark
1	X-3941-414-1	CASE ASSY, UPPER	
2	3-742-518-11	BUTTON, DOOR RELEASE	
3	3-721-342-11	SCREW (3), SIDE WOOD	
4	3-742-536-11	BUTTON, POWER	
* 5	A-7063-053-A	FJ-12 BOARD, COMPLETE	
* 6	3-742-559-01	PLATE, BOTTOM	
7	3-710-901-11	SCREW, TAPPING	
* 8	3-742-550-02	BRACKET (RIGHT), DOOR	
9	X-3941-562-1	PANEL (L) ASSY, SIDE	
10	X-3941-563-1	PANEL (R) ASSY, SIDE	
11	X-3742-514-1	DIAL BLOCK ASSY	
12	X-3941-413-1	PANEL ASSY (U), FRONT	
13	X-3742-512-1	DOOR ASSY, JACK	
14	3-742-544-11	BUTTON, EJECT	
15	1-466-292-51	SWITCH BLOCK, CONTROL	
16	3-571-823-00	SPRING, TENSION	
17	3-742-538-01	BUTTON (B), CONTROL	
18	3-742-501-01	KNOB, HP	
19	3-742-502-01	KNOB, SLIDE	
* 20	A-7063-049-A	FR-65 BOARD, COMPLETE	
* 21	A-7063-051-A	MC-79 BOARD, COMPLETE	
22	3-742-541-12	BUTTON (A), CONTROL	

Ref. No.	Part No.	Description	Remark
* 23	A-7063-048-A	FL-46 BOARD, COMPLETE	
24	1-519-507-11	INDICATOR TUBE, FLUORESCENT	
25	3-731-123-01	BASE, VOLUME	
* 26	3-742-524-02	HOLDER (LEFT), INDICATION TUBE	
* 27	3-742-548-01	HOLDER (RIGHT), INDICATION TUBE	
28	3-742-513-01	SPRING, LEAF	
29	3-721-204-11	DAMPER	
30	1-693-039-11	REMOTE COMMANDER (RMT-V120)	
31	3-940-667-21	FOOT	
32	3-940-667-01	FOOT	
33	1-238-738-11	RES, VAR, CARBON 10K (SHUTTLE)	
34	3-944-231-11	BUTTON (F), CONTROL	
35	3-944-235-01	BUTTON (G), CONTROL	
* 36	3-742-574-01	PLATE (R), GROUND, DOOR	
* 37	3-742-575-01	PLATE (L), GROUND, DOOR	
38	3-742-537-31	BUTTON (D), CONTROL	
* 39	3-944-127-01	COVER, FL	
40	3-742-523-01	SHAFT, DOOR	
41	3-742-522-01	SPRING	
* 42	X-3742-511-1	BRACKET (L) BLOCK ASSY, DOOR	
43	3-742-534-01	ARM, DOOR LOCK	

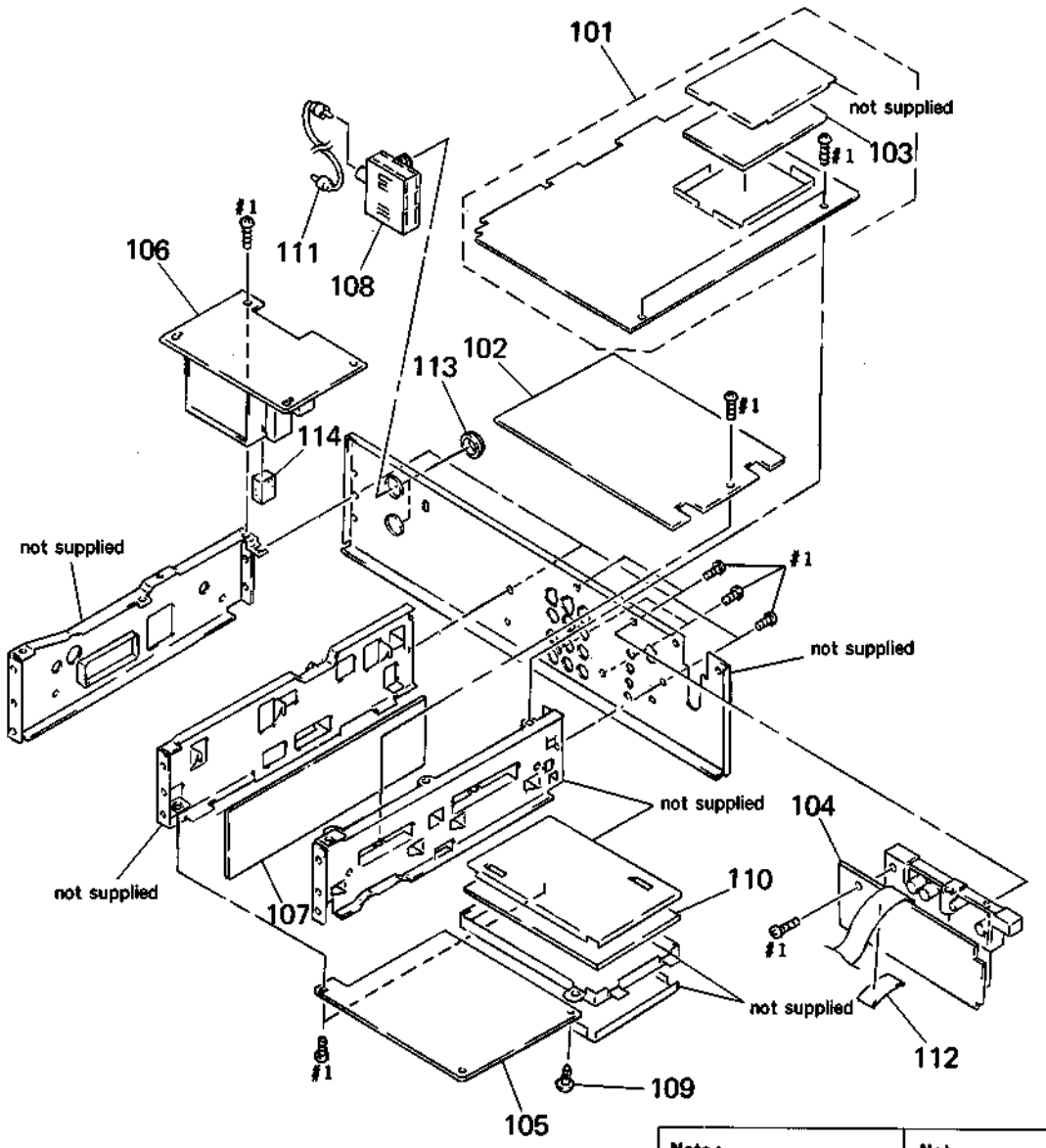
6-2. MAIN CHASSIS ASSEMBLY



Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 51	A-7063-057-A	PS-278 BOARD, COMPLETE (US)	
* 51	A-7063-176-A	PS-278 BOARD, COMPLETE (Canadian)	
52	1-533-183-11	HOLDER, FUSE	
53	3-732-816-01	SCREW, STEP	
⚠ 54	1-690-735-11	CORD, POWER	
* 55	3-730-176-01	SHEET, MD	
56	1-569-347-11	CONNECTOR, FPC (TRANSLATION) 13P	
57	1-640-971-11	FP-460 FLEXIBLE BOARD	
* 58	3-944-236-01	FRAME, RP	
* 59	3-732-810-02	BRACKET (FRONT)	
60	3-713-790-21	SCREW (M2X6), TAPPING, P3	
* 61	A-7062-572-A	CM-32 BOARD, COMPLETE	
* 62	3-944-128-01	COVER, DRUM	
63	3-738-312-41	WINDOW, CASSETTE COMPARTMENT	
64	1-640-970-11	FP-419 FLEXIBLE BOARD	
65	3-732-817-01	SCREW (2X4.5), TAPPING	
* 66	A-7062-575-A	UC-8 BOARD, COMPLETE	
* 67	A-7062-573-A	RP-116 BOARD, COMPLETE	
68	1-569-346-11	CONNECTOR, FPC (TRANSLATION) 10P	
⚠ F1	1-532-743-11	FUSE, GLASS TUBE	

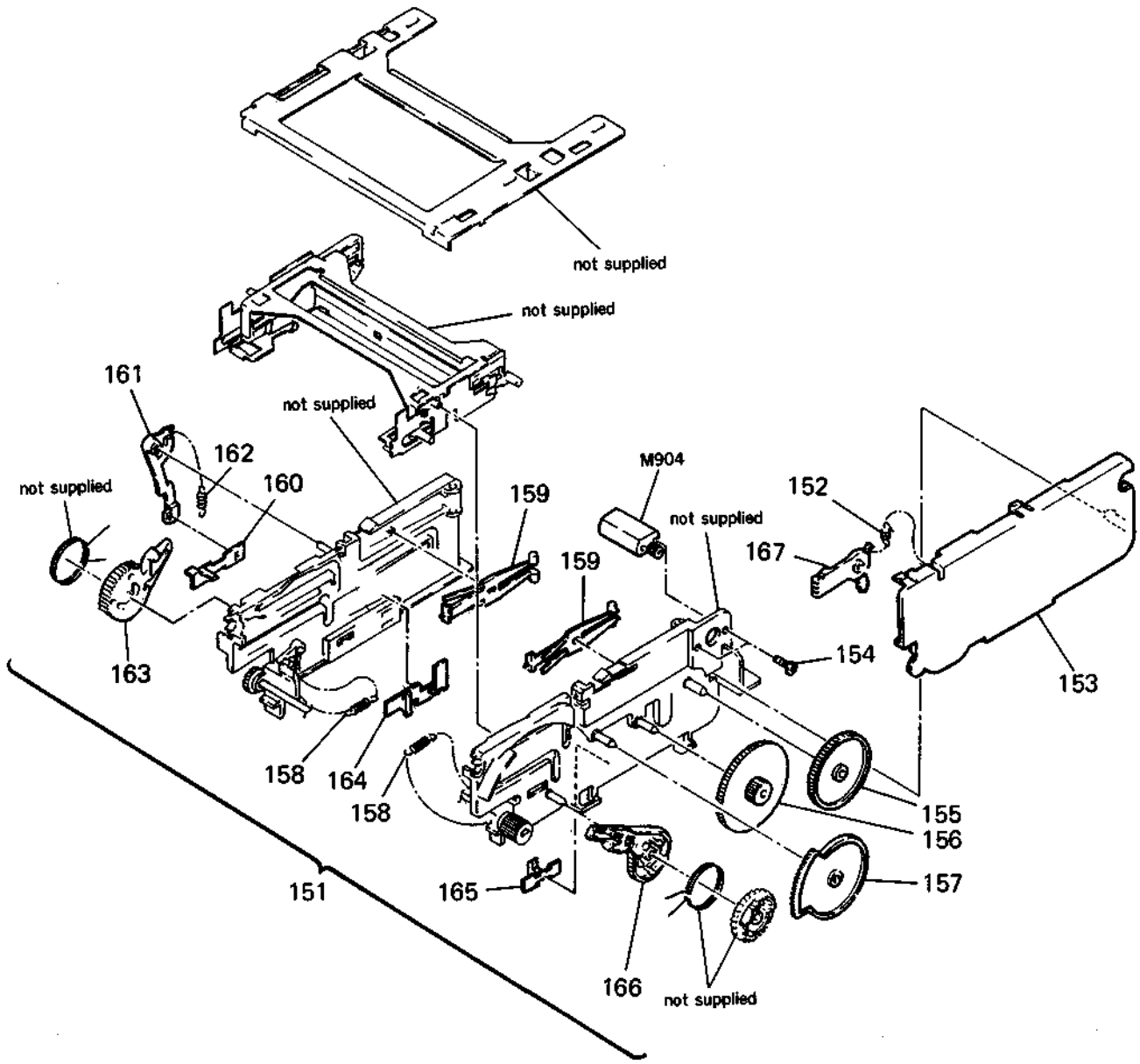
6-3. MAIN BOARD ASSEMBLY



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

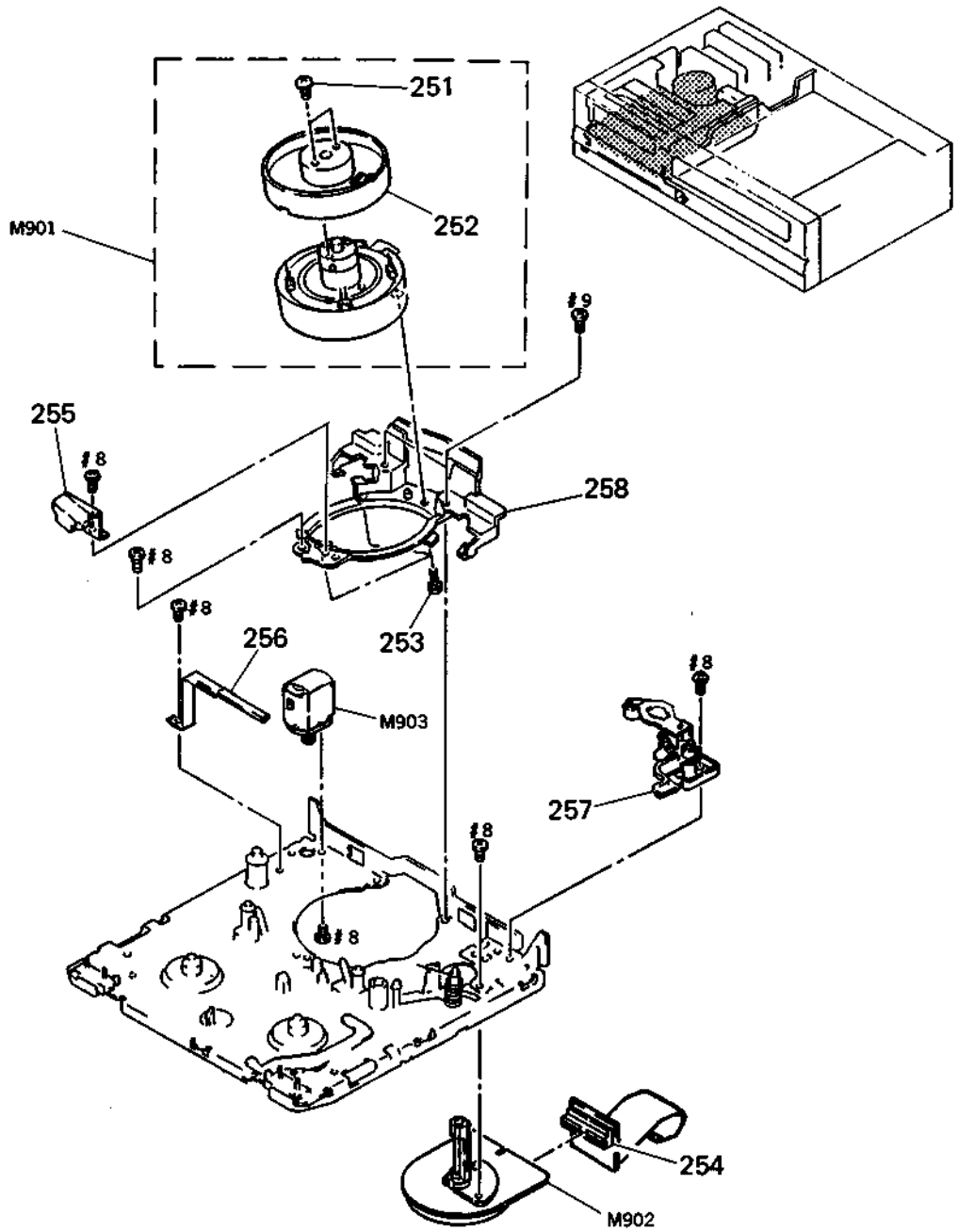
Ref. No.	Part No.	Description	Remark
* 101	A-7063-141-A	VI-104 BOARD, COMPLETE	
* 102	A-7063-052-A	PC-56 BOARD, COMPLETE	
* 103	A-7062-589-A	CD-64 BOARD, COMPLETE	
* 104	A-7063-058-A	RJ-25 BOARD, COMPLETE	
* 105	A-7063-054-A	DS-55 BOARD, COMPLETE	
* 106	A-7063-050-A	TU-100 BOARD, COMPLETE	
* 107	A-7063-056-A	IN-42 BOARD, COMPLETE	
⚠ 108	1-466-645-11	MODULATOR, RF (RFU-1040)	
109	3-646-090-11	RIVET, NYLON	
* 110	A-7063-055-A	DI-46 BOARD, COMPLETE	
111	1-558-924-41	CABLE, PIN	
* 112	3-945-536-01	COVER, RJ	
113	3-682-691-00	NUT, WASHER HEXAGON	
* 114	3-944-126-01	CUSHION, RUBBER	

6-4. FL CASSETTE COMPARTMENT ASSEMBLY



Ref. No.	Part No.	Description	Remark
* 151	A-7091-647-A	CASSETTE COMPARTMENT ASSY, FL	
152	3-731-175-02	SPRING, TENSION	
153	3-732-804-03	COVER, GEAR	
154	3-730-141-01	SCREW (PSW) (2X4)	
155	3-731-182-01	GEAR (B), DECELERATION	
156	3-731-181-01	GEAR (A), DECELERATION	
157	3-731-192-01	GEAR, MIDWAY	
158	3-731-176-02	SPRING, TENSION	
159	3-731-184-02	HOLDER LOCK	
160	3-731-189-01	SLIDER, LOCK	
161	3-731-188-01	ARM LOCK, DRIVING	
162	3-731-174-01	SPRING, TENSION	
163	X-3731-111-1	ARM (LEFT) ASSY, DRIVING	
164	X-3726-867-1	PRISM (LEFT) ASSY	
165	X-3726-866-1	PRISM (RIGHT) ASSY	
166	X-3731-109-2	ARM (RIGHT) ASSY, DRIVING	
167	3-731-185-01	LINK, SWITCHING, DOOR	
M904	X-3731-108-1	FL MOTOR ASSY (FRONT LOADING)	

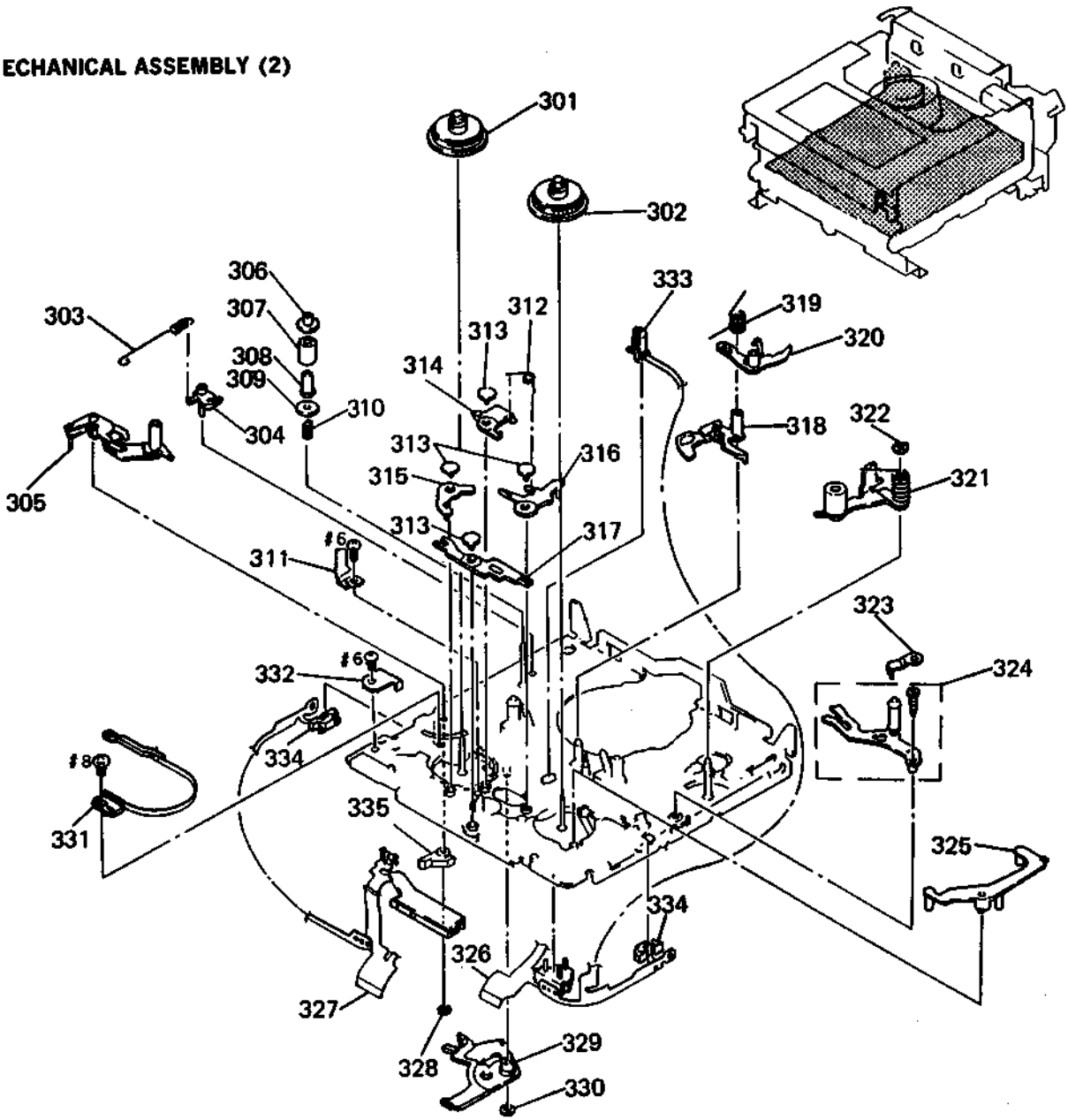
6-5. MECHANICAL ASSEMBLY (1)



Ref. No.	Part No.	Description	Remark
251	3-727-847-01	SCREW (M2X4), PI	
252	A-7049-481-A	DRUM ASSY, UPPER, ROTARY (DGR-87-R)	
253	3-686-493-01	SCREW (M2X5), PI	
* 254	A-7052-574-A	CC-62 BOARD, COMPLETE	
255	3-728-868-01	GUARD, GUIDE	
256	X-3728-864-1	GROUND ASSY, SHAFT	

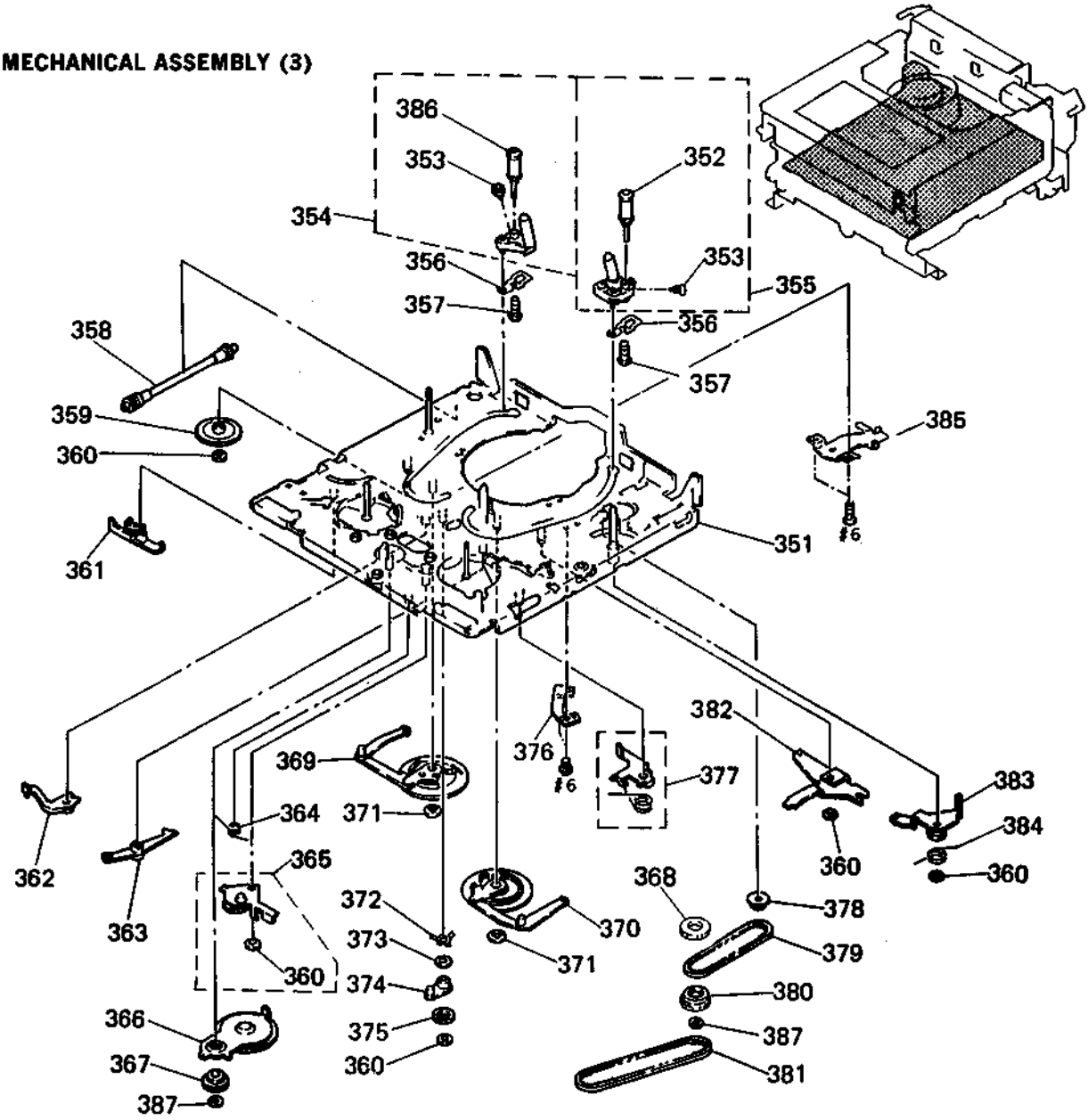
Ref. No.	Part No.	Description	Remark
257	A-7040-207-A	ROLLER BLOCK ASSY, HC	
258	X-3686-482-5	BASE ASSY, DRUM	
M901	A-7048-547-A	DRUM BLOCK ASSY (DGU-87A-R)	
M902	8-835-331-01	MOTOR, DC U-22A (CAPSTAN)	
M903	A-7040-160-A	MOTOR ASSY, THREADING (LOADING)	

6-6. MECHANICAL ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark
301	X-3728-851-1	TABLE ASSY, REEL, S	
302	X-3728-855-1	TABLE ASSY, REEL, T	
303	3-736-414-01	SPRING, TENSION	
304	3-728-855-03	ARM, ADJUSTMENT	
305	X-3728-867-1	ARM ASSY (S), TENSION REGULATOR	
306	3-726-884-01	FLANGE, UPPER, TG2	
307	3-726-883-01	ROLLER, TG2	
308	3-726-885-01	SLEEVE, TG2	
309	3-726-882-02	FLANGE, LOWER, TG2	
310	3-726-886-01	SPRING, COMPRESSION	
311	3-726-848-01	RETAINER, TL	
312	3-726-866-01	SPRING (ST), TORSION	
313	3-726-858-01	PIN, SHAFT RETAINER	
314	3-728-849-01	BRAKE, S	
315	3-726-852-01	BRAKE, LB	
316	3-728-850-01	BRAKE, T	
317	3-726-853-01	LEVER, LB	
318	3-728-875-01	STOPPER, RK	
319	3-726-864-01	SPRING (RK), TORSION	
320	3-728-852-02	ARM, RK STOPPER	
321	A-7040-219-A	ARM BLOCK ASSY, PINCH	
322	3-669-465-00	WASHER (1.5), STOPPER	
323	3-728-808-01	SPRING, LEAF	
324	X-3728-869-1	ARM ASSY, TG7	
325	3-728-848-01	ARM, L8 RELEASE	
326	1-628-061-12	FP-90 FLEXIBLE BOARD	
327	1-628-060-12	FP-89 FLEXIBLE BOARD	
328	3-321-393-11	WASHER, STOPPER	
329	X-3728-863-1	LEVER ASSY, SW	
330	3-726-829-01	WASHER, STOPPER	
331	X-3728-859-1	BAND ASSY, TENSION REGULATOR	
332	3-730-125-01	RETAINER, SW	
333	3-728-837-01	HOLDER, LED	
334	3-728-869-02	HOLDER, SENSOR	
335	X-3728-857-1	STOPPER ASSY, TENSION REGULATOR	

6-7. MECHANICAL ASSEMBLY (3)



Ref. No.	Part No.	Description	Remark
351	X-3728-862-1	CHASSIS ASSY, MECHANICAL	
352	X-3728-808-4	ROLLER ASSY (U) (PLATING), GUIDE	
353	3-726-822-01	SCREW (M1.4X2) (STEP), HEAD	
354	A-7040-204-A	COASTER (LEFT) BLOCK ASSY	
355	A-7040-216-A	COASTER (RIGHT) BLOCK ASSY (M1P)	
356	3-736-485-01	SPRING, LEAF, COSTER	
357	3-726-830-01	SCREW (M1.4X4) (THREE LOCK)	
358	X-3940-276-2	WORM ASSY	
359	3-744-109-01	GEAR, WHEEL	
360	3-726-829-01	WASHER, STOPPER	
361	3-728-842-01	LEVER, EJECT	
362	3-728-851-01	BRAKE, UL	
363	3-726-854-01	ARM, BRAKE RELEASE	
364	3-726-865-01	SPRING (LB), TORSION	
365	A-7040-225-A	GEAR BLOCK ASSY (N), LB	
366	X-3728-866-1	GEAR ASSY, RK	
367	X-3728-858-2	GEAR ASSY, RC	
368	X-3726-813-4	PULLEY (UPPER) ASSY, MIDWAY	
369	X-3728-842-1	GEAR (LEFT) ASSY, DRIVE	

Ref. No.	Part No.	Description	Remark
370	X-3728-843-1	GEAR (RIGHT) ASSY, DRIVE	
371	3-669-465-00	WASHER (1.5), STOPPER	
372	3-726-867-01	SPRING, LEAF	
373	3-701-436-21	WASHER, POLYEHTHYLENE	
374	3-726-857-03	ARM, UL	
375	3-726-856-04	GEAR, UL	
* 376	3-726-805-01	REINFORCEMENT (TT)	
377	X-3726-808-3	BRAKE ASSY, TS	
378	X-3726-805-1	GEAR ASSY, JOINT	
379	3-728-866-11	BELT (S), TIMING	
380	3-741-196-02	PULLEY (LOWER), BELT MIDWAY	
381	3-741-197-01	BELT (L), TIMING	
382	3-941-322-01	LEVER, LOADING	
383	X-3940-279-1	ARM ASSY, PINCH SUB	
384	3-726-895-01	SPRING	
385	X-3940-278-1	REINFORCEMENT (SS) ASSY	
386	X-3726-879-4	ROLLER ASSY ((U)-NB), GUIDE	
387	3-321-393-11	WASHER, STOPPER	

CC-62 CD-64

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: μF
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: μH
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD....

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

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-7052-574-A	CC-62 BOARD, COMPLETE (Ref. No. 3000 Series)			
		**********			
	1-690-373-11	CABLE, FLAT (1.0MM) (15 CORE)			
		< CONNECTOR >			
* CN201	1-562-880-21	CONNECTOR, CARD EDGE 15P			
CN202	1-566-547-11	CONNECTOR, FPC (NON ZIF) 15P			
**********					
	A-7062-589-A	CD-64 BOARD, COMPLETE (Ref. No. 6000 Series)			
		**********			
		< CAPACITOR >			
C001	1-164-345-11	CERAMIC CHIP	1uF		16V
C002	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C003	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C004	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C005	1-126-162-11	ELECT	3.3uF	20%	50V
C006	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C007	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C008	1-126-162-11	ELECT	3.3uF	20%	50V
C009	1-126-162-11	ELECT	3.3uF	20%	50V
C601	1-124-589-11	ELECT	47uF	20%	16V
C602	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C603	1-126-163-11	ELECT	4.7uF	20%	50V
C604	1-124-589-11	ELECT	47uF	20%	16V
C606	1-124-589-11	ELECT	47uF	20%	16V
C607	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C609	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C610	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C611	1-124-589-11	ELECT	47uF	20%	16V
C612	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C613	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C614	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C615	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C616	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C617	1-124-589-11	ELECT	47uF	20%	16V
C618	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C619	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C620	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C621	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C622	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C623	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C624	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C625	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C626	1-124-589-11	ELECT	47uF	20%	16V
C627	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C628	1-124-589-11	ELECT	47uF	20%	16V
C629	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C630	1-126-163-11	ELECT	4.7uF	20%	50V
C631	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C632	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C633	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C634	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C640	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C641	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C642	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C643	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C644	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C645	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C646	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C647	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C648	1-126-157-11	ELECT	10uF	20%	16V
C649	1-126-154-11	ELECT	47uF	20%	6.3V

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D601	8-719-400-18	DIODE MA152WK				
		< INDUCTOR >				
FB601	1-412-364-11	INDUCTOR	0UH			
FB602	1-412-364-11	INDUCTOR	0UH			
FB603	1-412-364-11	INDUCTOR	0UH			
		< FILTER >				
FL001	1-239-236-11	ENCAPSULATED COMPONENT				
FL002	1-239-236-11	ENCAPSULATED COMPONENT				
FL005	1-239-236-11	ENCAPSULATED COMPONENT				
FL601	1-235-925-11	FILTER, LOW PASS				
FL603	1-235-926-11	FILTER, BAND PASS				
		< IC >				
IC001	8-752-332-68	IC CXL5502M				
IC604	8-759-506-97	IC BU5801K				
IC605	8-752-334-55	IC CXD1175AM				
IC606	8-752-342-61	IC CXD2105AQ				
		< COIL >				
L001	1-408-970-21	INDUCTOR	10uH			
L002	1-408-978-21	INDUCTOR	47uH			
		< TRANSISTOR >				
Q601	8-729-100-66	TRANSISTOR	2SC1623			
Q602	8-729-216-22	TRANSISTOR	2SA1162			
Q603	8-729-100-66	TRANSISTOR	2SC1623			
Q604	8-729-100-66	TRANSISTOR	2SC1623			
Q605	8-729-216-22	TRANSISTOR	2SA1162			
Q606	8-729-100-66	TRANSISTOR	2SC1623			
Q607	8-729-216-22	TRANSISTOR	2SA1162			
Q609	8-729-216-22	TRANSISTOR	2SA1162			
Q610	8-729-216-22	TRANSISTOR	2SA1162			
Q611	8-729-216-22	TRANSISTOR	2SA1162			
Q612	8-729-100-66	TRANSISTOR	2SC1623			
Q613	8-729-100-66	TRANSISTOR	2SC1623			
		< RESISTOR >				
R001	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R003	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R004	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R601	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R602	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R603	1-216-033-00	METAL CHIP	220	5%	1/10W	
R604	1-216-041-00	METAL CHIP	470	5%	1/10W	
R605	1-216-043-00	METAL CHIP	560	5%	1/10W	
R606	1-216-013-00	METAL CHIP	33	5%	1/10W	
R607	1-216-041-00	METAL CHIP	470	5%	1/10W	
R608	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R609	1-216-025-00	METAL CHIP	100	5%	1/10W	
R610	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R611	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R612	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R613	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R614	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R619	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R620	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R621	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R622	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R623	1-216-025-00	METAL CHIP	100	5%	1/10W	
R624	1-216-033-00	METAL CHIP	220	5%	1/10W	
R625	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R626	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R627	1-216-033-00	METAL CHIP	220	5%	1/10W	
R628	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R629	1-216-035-00	METAL CHIP	270	5%	1/10W	
R630	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R631	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R633	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R634	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R635	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R638	1-216-295-00	METAL CHIP	0	5%	1/10W	
R639	1-216-295-00	METAL CHIP	0	5%	1/10W	
R641	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R643	1-216-295-00	METAL CHIP	0	5%	1/10W	
R645	1-216-295-00	METAL CHIP	0	5%	1/10W	
R646	1-216-041-00	METAL CHIP	470	5%	1/10W	
R647	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R648	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R649	1-216-045-00	METAL CHIP	680	5%	1/10W	
R650	1-216-041-00	METAL CHIP	470	5%	1/10W	
		< VARIABLE RESISTOR >				
RV601	1-228-993-00	RES, ADJ, METAL 4.7K				
RV602	1-228-993-00	RES, ADJ, METAL 4.7K				
		< PIN >				
W601	1-566-095-11	PIN, BOARD TO BOARD 8P				
W602	1-566-095-11	PIN, BOARD TO BOARD 8P				

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CM-32

Ref. No.	Part No.	Description			Remark
*	A-7062-572-A	CM-32 BOARD, COMPLETE (Ref. No. 3000 Series)			
		**********			
	1-574-420-11	WIRE, FLAT TYPE (30P)			
	1-575-388-11	CABLE, FLAT (1.0MM PITCH) 9P			
		< CAPACITOR >			
C301	1-126-157-11	ELECT	10uF	20%	16V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-126-157-11	ELECT	10uF	20%	16V
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C305	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C306	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C307	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C308	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C309	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C310	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C311	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C312	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C313	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C314	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C315	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C316	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C317	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C318	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C319	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C320	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C321	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C323	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C324	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C325	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C326	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C327	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C328	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C329	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C330	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C331	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C333	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C334	1-126-163-11	ELECT	4.7uF	20%	50V
C336	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C337	1-126-162-11	ELECT	3.3uF	20%	50V
C338	1-163-029-11	CERAMIC CHIP	0.0047uF		50V
C339	1-163-029-11	CERAMIC CHIP	0.0047uF		50V
C351	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C401	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C402	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C404	1-126-154-11	ELECT	47uF	20%	6.3V
C405	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C407	1-162-638-11	CERAMIC CHIP	1uF		16V
C408	1-162-638-11	CERAMIC CHIP	1uF		16V
C409	1-126-154-11	ELECT	47uF	20%	6.3V
C410	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C411	1-162-638-11	CERAMIC CHIP	1uF		16V
C412	1-162-638-11	CERAMIC CHIP	1uF		16V
C413	1-126-154-11	ELECT	47uF	20%	6.3V
C414	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C415	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C416	1-126-163-11	ELECT	4.7uF	20%	50V
C417	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C418	1-126-160-11	ELECT	1uF	20%	50V
C419	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C420	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C424	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C425	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C426	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C428	1-126-153-11	ELECT	22uF	20%	6.3V
C430	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C431	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C432	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C433	1-164-330-21	CERAMIC CHIP	0.22uF	10%	16V
C434	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C436	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C437	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C440	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C442	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C447	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C448	1-126-160-11	ELECT	1uF	20%	50V
C501	1-130-495-00	MYLAR	0.1uF	5%	50V
C502	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C503	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C504	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C505	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C506	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C507	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C508	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C509	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C510	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C511	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C512	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C513	1-127-491-00	ELECT (SOLID)	22uF	20%	10V
C514	1-124-589-11	ELECT	47uF	20%	16V
C515	1-127-530-11	ELECT (SOLID)	22uF	20%	20V
C516	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C517	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C518	1-127-491-00	ELECT (SOLID)	22uF	20%	10V
C520	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN301	1-566-542-31	CONNECTOR, FPC (NON ZIF) 10P	
* CN302	1-566-181-21	PIN, CONNECTOR (PC BOARD) 2P	
CN303	1-574-346-11	CONNECTOR, FPC/FFC 15P	
CN304	1-506-482-11	CONNECTOR 3P, MALE	
CN401	1-506-489-11	CONNECTOR 10P, MALE	
CN402	1-575-361-11	CONNECTOR, FPC/FFC 9P	
* CN403	1-563-633-11	CONNECTOR, FLEXIBLE 30P	
CN405	1-575-368-11	CONNECTOR, FPC/FFC 14P	
* CN406	1-566-181-61	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D401	8-719-400-18	DIODE MA152WK	
D409	8-719-200-36	DIODE E10QS04	
D410	8-719-200-27	DIODE E10DS2	
D413	8-719-400-18	DIODE MA152WK	
D414	8-719-400-18	DIODE MA152WK	
D464	8-719-400-18	DIODE MA152WK	
D466	8-719-400-18	DIODE MA152WK	
D501	8-719-938-75	DIODE SB05-05CP	
D502	8-719-938-75	DIODE SB05-05CP	
D503	8-719-104-34	DIODE 1S2836	
		< FERRITE BEAD >	
FB401	1-543-256-11	BEAD, FERRITE	
FB402	1-543-256-11	BEAD, FERRITE	
FB403	1-543-256-11	BEAD, FERRITE	
		< IC >	
IC301	8-752-050-54	IC CXA1449Q	
IC302	8-759-100-97	IC uPC339G2	
IC401	8-752-834-12	IC CXP80116-852Q	
IC403	8-759-823-94	IC LB1836M	
IC404	8-759-148-05	IC CXA8010M	
IC405	8-759-990-55	IC CXA8006M	
IC406	8-759-805-06	IC CXA1127M	
IC501	8-759-998-98	IC LM358D	
IC502	8-759-945-17	IC MB3775PF	
		< COIL >	
L301	1-407-169-XX	INDUCTOR 100uH	
L302	1-408-987-21	INDUCTOR 330uH	
L401	1-408-978-21	INDUCTOR 47uH	
L402	1-408-978-21	INDUCTOR 47uH	
L501	1-424-104-11	COIL, CHOKE 10uH	
L502	1-424-106-11	COIL, CHOKE 47uH	
L503	1-424-106-11	COIL, CHOKE 47uH	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q301	8-729-216-22	TRANSISTOR 2SA1162	
Q302	8-729-100-66	TRANSISTOR 2SC1623	
Q303	8-729-216-22	TRANSISTOR 2SA1162	
Q304	8-729-100-66	TRANSISTOR 2SC1623	
Q305	8-729-216-22	TRANSISTOR 2SA1162	
Q306	8-729-100-66	TRANSISTOR 2SC1623	
Q308	8-729-901-01	TRANSISTOR DTC144EK	
Q403	8-729-901-06	TRANSISTOR DTA144EK	
Q404	8-729-901-06	TRANSISTOR DTA144EK	
Q405	8-729-901-06	TRANSISTOR DTA144EK	
Q407	8-729-100-66	TRANSISTOR 2SC1623	
Q408	8-729-901-01	TRANSISTOR DTC144EK	
Q417	8-729-904-04	TRANSISTOR FMS2	
Q418	8-729-901-01	TRANSISTOR DTC144EK	
Q501	8-729-901-01	TRANSISTOR DTC144EK	
Q502	8-729-100-66	TRANSISTOR 2SC1623	
Q503	8-729-805-25	TRANSISTOR 2SB1121	
Q504	8-729-100-66	TRANSISTOR 2SC1623	
Q505	8-729-805-25	TRANSISTOR 2SB1121	
Q506	8-729-901-01	TRANSISTOR DTC144EK	
Q507	8-729-901-06	TRANSISTOR DTA144EK	
Q508	8-729-901-01	TRANSISTOR DTC144EK	
Q509	8-729-100-66	TRANSISTOR 2SC1623	
Q510	8-729-100-66	TRANSISTOR 2SC1623	
		< RESISTOR >	
R301	1-216-041-00	METAL CHIP 470 5% 1/10W	
R302	1-216-041-00	METAL CHIP 470 5% 1/10W	
R303	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R304	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R305	1-216-045-00	METAL CHIP 680 5% 1/10W	
R306	1-216-035-00	METAL CHIP 270 5% 1/10W	
R307	1-216-031-00	METAL CHIP 180 5% 1/10W	
R308	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R309	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R310	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R311	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R312	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R313	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R314	1-216-047-00	METAL CHIP 820 5% 1/10W	
R315	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R316	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R317	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R318	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R319	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R320	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R321	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

Ref.No.	Part No.	Description			Remark
R322	1-216-085-00	METAL CHIP	33K	5%	1/10W
R323	1-216-073-00	METAL CHIP	10K	5%	1/10W
R325	1-216-049-00	METAL CHIP	1K	5%	1/10W
R326	1-216-019-00	METAL CHIP	56	5%	1/10W
R327	1-216-033-00	METAL CHIP	220	5%	1/10W
R328	1-216-083-00	METAL CHIP	27K	5%	1/10W
R329	1-216-121-00	METAL CHIP	1M	5%	1/10W
R330	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R331	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R332	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R335	1-216-073-00	METAL CHIP	10K	5%	1/10W
R336	1-216-073-00	METAL CHIP	10K	5%	1/10W
R339	1-216-097-00	METAL CHIP	100K	5%	1/10W
R341	1-216-115-00	METAL CHIP	560K	5%	1/10W
R342	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R343	1-216-295-00	METAL CHIP	0	5%	1/10W
R350	1-216-121-00	METAL CHIP	1M	5%	1/10W
R351	1-216-073-00	METAL CHIP	10K	5%	1/10W
R352	1-216-073-00	METAL CHIP	10K	5%	1/10W
R355	1-216-081-00	METAL CHIP	22K	5%	1/10W
R356	1-216-085-00	METAL CHIP	33K	5%	1/10W
R357	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R361	1-216-295-00	METAL CHIP	0	5%	1/10W
R368	1-216-295-00	METAL CHIP	0	5%	1/10W
R369	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-043-00	METAL CHIP	560	5%	1/10W
R402	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R403	1-216-172-00	METAL CHIP	82	5%	1/8W
R404	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R405	1-216-073-00	METAL CHIP	10K	5%	1/10W
R406	1-216-073-00	METAL CHIP	10K	5%	1/10W
R407	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-113-00	METAL CHIP	470K	5%	1/10W
R410	1-216-099-00	METAL CHIP	120K	5%	1/10W
R411	1-216-099-00	METAL CHIP	120K	5%	1/10W
R412	1-216-113-00	METAL CHIP	470K	5%	1/10W
R414	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R415	1-216-073-00	METAL CHIP	10K	5%	1/10W
R416	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R417	1-216-049-00	METAL CHIP	1K	5%	1/10W
R418	1-216-049-00	METAL CHIP	1K	5%	1/10W
R419	1-216-049-00	METAL CHIP	1K	5%	1/10W
R420	1-216-049-00	METAL CHIP	1K	5%	1/10W
R421	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R425	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R426	1-216-049-00	METAL CHIP	1K	5%	1/10W
R428	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R429	1-216-073-00	METAL CHIP	10K	5%	1/10W
R443	1-216-113-00	METAL CHIP	470K	5%	1/10W
R444	1-216-113-00	METAL CHIP	470K	5%	1/10W
R447	1-216-073-00	METAL CHIP	10K	5%	1/10W
R448	1-216-073-00	METAL CHIP	10K	5%	1/10W
R449	1-216-121-00	METAL CHIP	1M	5%	1/10W
R450	1-216-073-00	METAL CHIP	10K	5%	1/10W
R452	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R454	1-216-037-00	METAL CHIP	330	5%	1/10W
R456	1-216-097-00	METAL CHIP	100K	5%	1/10W
R457	1-216-121-00	METAL CHIP	1M	5%	1/10W
R458	1-216-079-00	METAL CHIP	18K	5%	1/10W
R462	1-216-295-00	METAL CHIP	0	5%	1/10W
R466	1-216-089-00	METAL CHIP	47K	5%	1/10W
R468	1-217-671-11	METAL CHIP	1	5%	1/10W
R469	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R470	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R471	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R472	1-217-671-11	METAL CHIP	1	5%	1/10W
R473	1-217-671-11	METAL CHIP	1	5%	1/10W
R474	1-217-671-11	METAL CHIP	1	5%	1/10W
R475	1-216-083-00	METAL CHIP	27K	5%	1/10W
R476	1-216-083-00	METAL CHIP	27K	5%	1/10W
R477	1-216-083-00	METAL CHIP	27K	5%	1/10W
R478	1-216-113-00	METAL CHIP	470K	5%	1/10W
R479	1-216-113-00	METAL CHIP	470K	5%	1/10W
R480	1-216-073-00	METAL CHIP	10K	5%	1/10W
R481	1-216-295-00	METAL CHIP	0	5%	1/10W
R483	1-216-121-00	METAL CHIP	1M	5%	1/10W
R484	1-216-121-00	METAL CHIP	1M	5%	1/10W
R485	1-216-113-00	METAL CHIP	470K	5%	1/10W
R486	1-216-113-00	METAL CHIP	470K	5%	1/10W
R488	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R489	1-216-073-00	METAL CHIP	10K	5%	1/10W
R490	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R491	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R492	1-216-081-00	METAL CHIP	22K	5%	1/10W
R493	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R497	1-216-049-00	METAL CHIP	1K	5%	1/10W
R498	1-216-073-00	METAL CHIP	10K	5%	1/10W
R499	1-216-295-00	METAL CHIP	0	5%	1/10W
R501	1-216-089-00	METAL CHIP	47K	5%	1/10W
R502	1-216-089-00	METAL CHIP	47K	5%	1/10W
R503	1-216-097-00	METAL CHIP	100K	5%	1/10W
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W
R506	1-216-073-00	METAL CHIP	10K	5%	1/10W
R507	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R508	1-216-069-00	METAL CHIP	6.8K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R510	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R511	1-216-033-00	METAL CHIP	220	5%	1/10W
R512	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R513	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R514	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R515	1-216-079-00	METAL CHIP	18K	5%	1/10W
R516	1-216-045-00	METAL CHIP	680	5%	1/10W
R517	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R518	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R519	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R520	1-216-079-00	METAL CHIP	18K	5%	1/10W
R521	1-216-045-00	METAL CHIP	680	5%	1/10W
R522	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R523	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R524	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R525	1-216-075-00	METAL CHIP	12K	5%	1/10W
R527	1-216-097-00	METAL CHIP	100K	5%	1/10W
R531	1-216-097-00	METAL CHIP	100K	5%	1/10W
R532	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV501	1-228-993-00	RES. ADJ. METAL 4.7K			
		< THERMISTOR >			
TH401	1-800-200-00	THERMISTOR	S-3K		
		< CRYSTAL >			
X301	1-567-700-11	VIBRATOR, CRYSTAL 5.94755MHz			
X401	1-577-116-21	OSCILLATOR, CRYSTAL 16MHz			
**********					
*	A-7063-055-A	DI-46 BOARD, COMPLETE (Ref. No. 1000 Series)			
		**********			
	1-690-348-11	WIRE, FLAT TYPE (14 CORE)			
		< CAPACITOR >			
C620	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C621	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C624	1-124-779-00	ELECT CHIP	10uF	20%	16V
C627	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C629	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C630	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C631	1-126-193-11	ELECT	1uF	20%	50V
C634	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C635	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C636	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C637	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C639	1-124-778-00	ELECT CHIP	22uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C640	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C641	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C642	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C643	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C644	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C645	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C646	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C647	1-126-193-11	ELECT	1uF	20%	50V
C648	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C649	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C650	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C651	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C652	1-126-193-11	ELECT	1uF	20%	50V
C653	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C654	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C655	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C656	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C657	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C660	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C661	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C663	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
C665	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C666	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C667	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
C669	1-126-193-11	ELECT	1uF	20%	50V
C673	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C674	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C677	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C678	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C685	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C686	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C687	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C688	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C689	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C690	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C691	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C692	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C693	1-124-779-00	ELECT CHIP	10uF	20%	16V
C694	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C695	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C696	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C697	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C698	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C699	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C700	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C701	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C702	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C703	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C705	1-126-205-11	ELECT CHIP	47uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C706	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C707	1-124-779-00	ELECT CHIP	10uF	20%	16V
C708	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C709	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C714	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C720	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C722	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C723	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C724	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C725	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C726	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C727	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C729	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C730	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C731	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C732	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C733	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C734	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C735	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C736	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C737	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C738	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C739	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C740	1-163-107-00	CERAMIC CHIP	39PF	5%	50V
C741	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C742	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C743	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C744	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C746	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C747	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C748	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C749	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C752	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C753	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C754	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C755	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C756	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C757	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C758	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C759	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C760	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C761	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C762	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C763	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C764	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C765	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C766	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C767	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C768	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C769	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C770	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C771	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C772	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C773	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C774	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C775	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C776	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C777	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C778	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C779	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C780	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C781	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C783	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C786	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C787	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C791	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C797	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C800	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C910	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C911	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
		< CONNECTOR >			
CN602	1-563-591-11	CONNECTOR, FLEXIBLE 14P			
		< TRIMMER >			
CV701	1-141-311-11	CAP, TRIMMER	20PF		
CV702	1-141-422-11	CAP, ADJ			
CV704	1-141-422-11	CAP, ADJ			
		< DIODE >			
D701	8-719-300-88	DIODE	1T33C-01		
D702	8-719-949-46	DIODE	1T32		
D707	8-719-940-45	DIODE	DWA010		
D708	8-719-940-45	DIODE	DWA010		
D710	8-719-400-18	DIODE	MA152WK		
D711	8-719-400-18	DIODE	MA152WK		
D901	8-719-104-34	DIODE	1S2836		
		< FERRITE BEAD >			
FB603	1-543-256-11	BEAD, FERRITE			
FB604	1-543-256-11	BEAD, FERRITE			
FB605	1-543-256-11	BEAD, FERRITE			
FB606	1-543-256-11	BEAD, FERRITE			
		< FILTER >			
FL601	1-421-927-21	FILTER, NOISE			

Ref. No.	Part No.	Description		Remark
		< IC >		
IC701	8-759-987-17	IC	CXD1226Q	
IC702	8-759-987-18	IC	CXD1227Q	
IC703	8-759-987-19	IC	CXD1228Q	
IC704	8-759-987-20	IC	CXD1229Q	
IC705	8-752-340-75	IC	CXK1206M	
IC706	8-752-340-75	IC	CXK1206M	
IC707	8-752-340-75	IC	CXK1206M	
IC708	8-752-334-55	IC	CXD1175AM	
IC709	8-752-334-55	IC	CXD1175AM	
IC710	8-752-032-96	IC	CXA1106M	
IC711	8-752-032-96	IC	CXA1106M	
IC713	8-759-011-65	IC	MC74HC4053F	
IC717	8-759-925-85	IC	SN74HC32ANS	
IC720	8-759-504-46	IC	PQ05RF1	
		< COIL >		
L601	1-410-389-31	INDUCTOR CHIP	47uH	
L602	1-410-389-31	INDUCTOR CHIP	47uH	
L604	1-408-785-21	INDUCTOR CHIP	47uH	
L605	1-408-785-21	INDUCTOR CHIP	47uH	
L606	1-408-785-21	INDUCTOR CHIP	47uH	
L607	1-410-393-11	INDUCTOR CHIP	100uH	
L608	1-410-389-31	INDUCTOR CHIP	47uH	
L609	1-410-383-31	INDUCTOR CHIP	15uH	
L610	1-410-383-31	INDUCTOR CHIP	15uH	
L611	1-410-377-31	INDUCTOR CHIP	4.7uH	
L612	1-408-785-21	INDUCTOR CHIP	47uH	
L614	1-408-785-21	INDUCTOR CHIP	47uH	
L615	1-408-785-21	INDUCTOR CHIP	47uH	
L616	1-410-389-31	INDUCTOR CHIP	47uH	
L617	1-410-656-11	INDUCTOR CHIP	150uH	
L618	1-410-380-31	INDUCTOR CHIP	8.2uH	
L619	1-410-390-11	INDUCTOR CHIP	56uH	
L620	1-410-383-31	INDUCTOR CHIP	15uH	
L621	1-410-384-31	INDUCTOR CHIP	18uH	
L623	1-410-389-31	INDUCTOR CHIP	47uH	
L624	1-410-389-31	INDUCTOR CHIP	47uH	
L625	1-410-388-21	INDUCTOR CHIP	39uH	
L626	1-410-388-21	INDUCTOR CHIP	39uH	
		< TRANSISTOR >		
Q501	8-729-901-01	TRANSISTOR	DTC144EK	
Q601	8-729-100-66	TRANSISTOR	2SC1623	
Q602	8-729-100-66	TRANSISTOR	2SC1623	
Q603	8-729-100-66	TRANSISTOR	2SC1623	
Q604	8-729-100-66	TRANSISTOR	2SC1623	
Q605	8-729-100-66	TRANSISTOR	2SC1623	
Q606	8-729-100-66	TRANSISTOR	2SC1623	
Q607	8-729-100-66	TRANSISTOR	2SC1623	
Q608	8-729-100-66	TRANSISTOR	2SC1623	
Q609	8-729-216-22	TRANSISTOR	2SA1162	
Q610	8-729-100-66	TRANSISTOR	2SC1623	
Q611	8-729-100-66	TRANSISTOR	2SC1623	
Q612	8-729-100-66	TRANSISTOR	2SC1623	
Q613	8-729-100-66	TRANSISTOR	2SC1623	
Q614	8-729-100-66	TRANSISTOR	2SC1623	
Q615	8-729-100-66	TRANSISTOR	2SC1623	
Q618	8-729-100-66	TRANSISTOR	2SC1623	
Q619	8-729-100-66	TRANSISTOR	2SC1623	
Q620	8-729-100-66	TRANSISTOR	2SC1623	
Q621	8-729-100-66	TRANSISTOR	2SC1623	
Q622	8-729-100-66	TRANSISTOR	2SC1623	
Q623	8-729-100-66	TRANSISTOR	2SC1623	
Q624	8-729-100-66	TRANSISTOR	2SC1623	
Q625	8-729-100-66	TRANSISTOR	2SC1623	
Q626	8-729-100-66	TRANSISTOR	2SC1623	
Q628	8-729-100-66	TRANSISTOR	2SC1623	
Q630	8-729-100-66	TRANSISTOR	2SC1623	
Q631	8-729-102-08	TRANSISTOR	2SC2223-F14	
Q636	8-729-216-22	TRANSISTOR	2SA1162	
Q637	8-729-122-63	TRANSISTOR	2SA1226	
Q901	8-729-901-01	TRANSISTOR	DTC144EK	
		< RESISTOR >		
R101	1-216-295-00	METAL CHIP	0 5% 1/10W	
R102	1-216-295-00	METAL CHIP	0 5% 1/10W	
R103	1-216-295-00	METAL CHIP	0 5% 1/10W	
R104	1-216-295-00	METAL CHIP	0 5% 1/10W	
R105	1-216-295-00	METAL CHIP	0 5% 1/10W	
R106	1-216-295-00	METAL CHIP	0 5% 1/10W	
R107	1-216-295-00	METAL CHIP	0 5% 1/10W	
R108	1-216-295-00	METAL CHIP	0 5% 1/10W	
R109	1-216-295-00	METAL CHIP	0 5% 1/10W	
R110	1-216-295-00	METAL CHIP	0 5% 1/10W	
R111	1-216-295-00	METAL CHIP	0 5% 1/10W	
R112	1-216-295-00	METAL CHIP	0 5% 1/10W	
R113	1-216-295-00	METAL CHIP	0 5% 1/10W	
R114	1-216-295-00	METAL CHIP	0 5% 1/10W	
R115	1-216-295-00	METAL CHIP	0 5% 1/10W	
R116	1-216-295-00	METAL CHIP	0 5% 1/10W	
R117	1-216-295-00	METAL CHIP	0 5% 1/10W	
R119	1-216-295-00	METAL CHIP	0 5% 1/10W	
R120	1-216-295-00	METAL CHIP	0 5% 1/10W	
R121	1-216-295-00	METAL CHIP	0 5% 1/10W	
R122	1-216-295-00	METAL CHIP	0 5% 1/10W	
R123	1-216-295-00	METAL CHIP	0 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R124	1-216-295-00	METAL CHIP	0	5%	1/10W
R125	1-216-295-00	METAL CHIP	0	5%	1/10W
R126	1-216-295-00	METAL CHIP	0	5%	1/10W
R127	1-216-295-00	METAL CHIP	0	5%	1/10W
R128	1-216-295-00	METAL CHIP	0	5%	1/10W
R129	1-216-295-00	METAL CHIP	0	5%	1/10W
R130	1-216-295-00	METAL CHIP	0	5%	1/10W
R131	1-216-295-00	METAL CHIP	0	5%	1/10W
R132	1-216-295-00	METAL CHIP	0	5%	1/10W
R133	1-216-295-00	METAL CHIP	0	5%	1/10W
R134	1-216-295-00	METAL CHIP	0	5%	1/10W
R135	1-216-295-00	METAL CHIP	0	5%	1/10W
R140	1-216-295-00	METAL CHIP	0	5%	1/10W
R141	1-216-295-00	METAL CHIP	0	5%	1/10W
R142	1-216-295-00	METAL CHIP	0	5%	1/10W
R143	1-216-295-00	METAL CHIP	0	5%	1/10W
R144	1-216-295-00	METAL CHIP	0	5%	1/10W
R145	1-216-295-00	METAL CHIP	0	5%	1/10W
R146	1-216-295-00	METAL CHIP	0	5%	1/10W
R147	1-216-295-00	METAL CHIP	0	5%	1/10W
R148	1-216-295-00	METAL CHIP	0	5%	1/10W
R149	1-216-295-00	METAL CHIP	0	5%	1/10W
R150	1-216-295-00	METAL CHIP	0	5%	1/10W
R151	1-216-295-00	METAL CHIP	0	5%	1/10W
R152	1-216-295-00	METAL CHIP	0	5%	1/10W
R153	1-216-295-00	METAL CHIP	0	5%	1/10W
R154	1-216-295-00	METAL CHIP	0	5%	1/10W
R155	1-216-295-00	METAL CHIP	0	5%	1/10W
R156	1-216-295-00	METAL CHIP	0	5%	1/10W
R157	1-216-295-00	METAL CHIP	0	5%	1/10W
R158	1-216-295-00	METAL CHIP	0	5%	1/10W
R159	1-216-295-00	METAL CHIP	0	5%	1/10W
R160	1-216-295-00	METAL CHIP	0	5%	1/10W
R161	1-216-295-00	METAL CHIP	0	5%	1/10W
R162	1-216-295-00	METAL CHIP	0	5%	1/10W
R163	1-216-295-00	METAL CHIP	0	5%	1/10W
R164	1-216-295-00	METAL CHIP	0	5%	1/10W
R165	1-216-295-00	METAL CHIP	0	5%	1/10W
R166	1-216-295-00	METAL CHIP	0	5%	1/10W
R167	1-216-295-00	METAL CHIP	0	5%	1/10W
R168	1-216-295-00	METAL CHIP	0	5%	1/10W
R169	1-216-295-00	METAL CHIP	0	5%	1/10W
R170	1-216-295-00	METAL CHIP	0	5%	1/10W
R171	1-216-295-00	METAL CHIP	0	5%	1/10W
R172	1-216-295-00	METAL CHIP	0	5%	1/10W
R173	1-216-295-00	METAL CHIP	0	5%	1/10W
R174	1-216-295-00	METAL CHIP	0	5%	1/10W
R175	1-216-295-00	METAL CHIP	0	5%	1/10W
R176	1-216-295-00	METAL CHIP	0	5%	1/10W
R177	1-216-295-00	METAL CHIP	0	5%	1/10W
R178	1-216-295-00	METAL CHIP	0	5%	1/10W
R179	1-216-295-00	METAL CHIP	0	5%	1/10W
R180	1-216-295-00	METAL CHIP	0	5%	1/10W
R181	1-216-295-00	METAL CHIP	0	5%	1/10W
R182	1-216-295-00	METAL CHIP	0	5%	1/10W
R183	1-216-295-00	METAL CHIP	0	5%	1/10W
R184	1-216-295-00	METAL CHIP	0	5%	1/10W
R185	1-216-295-00	METAL CHIP	0	5%	1/10W
R186	1-216-295-00	METAL CHIP	0	5%	1/10W
R187	1-216-295-00	METAL CHIP	0	5%	1/10W
R188	1-216-295-00	METAL CHIP	0	5%	1/10W
R189	1-216-295-00	METAL CHIP	0	5%	1/10W
R190	1-216-295-00	METAL CHIP	0	5%	1/10W
R191	1-216-295-00	METAL CHIP	0	5%	1/10W
R192	1-216-295-00	METAL CHIP	0	5%	1/10W
R193	1-216-295-00	METAL CHIP	0	5%	1/10W
R194	1-216-295-00	METAL CHIP	0	5%	1/10W
R195	1-216-295-00	METAL CHIP	0	5%	1/10W
R501	1-216-295-00	METAL CHIP	0	5%	1/10W
R502	1-216-089-00	METAL CHIP	47K	5%	1/10W
R503	1-216-295-00	METAL CHIP	0	5%	1/10W
R601	1-216-049-00	METAL CHIP	1K	5%	1/10W
R602	1-216-295-00	METAL CHIP	0	5%	1/10W
R603	1-216-049-00	METAL CHIP	1K	5%	1/10W
R604	1-216-295-00	METAL CHIP	0	5%	1/10W
R605	1-216-049-00	METAL CHIP	1K	5%	1/10W
R606	1-216-041-00	METAL CHIP	470	5%	1/10W
R607	1-216-041-00	METAL CHIP	470	5%	1/10W
R608	1-216-049-00	METAL CHIP	1K	5%	1/10W
R609	1-216-049-00	METAL CHIP	1K	5%	1/10W
R611	1-216-295-00	METAL CHIP	0	5%	1/10W
R612	1-216-295-00	METAL CHIP	0	5%	1/10W
R613	1-216-049-00	METAL CHIP	1K	5%	1/10W
R614	1-216-085-00	METAL CHIP	33K	5%	1/10W
R615	1-216-089-00	METAL CHIP	47K	5%	1/10W
R616	1-216-295-00	METAL CHIP	0	5%	1/10W
R618	1-216-089-00	METAL CHIP	47K	5%	1/10W
R619	1-216-085-00	METAL CHIP	33K	5%	1/10W
R624	1-216-089-00	METAL CHIP	47K	5%	1/10W
R625	1-216-089-00	METAL CHIP	47K	5%	1/10W
R626	1-216-049-00	METAL CHIP	1K	5%	1/10W
R627	1-216-049-00	METAL CHIP	1K	5%	1/10W
R628	1-216-073-00	METAL CHIP	10K	5%	1/10W
R629	1-216-041-00	METAL CHIP	470	5%	1/10W
R630	1-216-037-00	METAL CHIP	330	5%	1/10W
R631	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R632	1-216-081-00	METAL CHIP	22K	5%	1/10W
R633	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R634	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R635	1-216-073-00	METAL CHIP	10K	5%	1/10W
R636	1-216-049-00	METAL CHIP	1K	5%	1/10W
R637	1-216-025-00	METAL CHIP	100	5%	1/10W
R638	1-216-025-00	METAL CHIP	100	5%	1/10W
R639	1-216-049-00	METAL CHIP	1K	5%	1/10W
R640	1-216-039-00	METAL CHIP	390	5%	1/10W
R641	1-216-073-00	METAL CHIP	10K	5%	1/10W
R642	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R643	1-216-049-00	METAL CHIP	1K	5%	1/10W
R644	1-216-081-00	METAL CHIP	22K	5%	1/10W
R645	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R646	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R647	1-216-025-00	METAL CHIP	100	5%	1/10W
R648	1-216-073-00	METAL CHIP	10K	5%	1/10W
R649	1-216-073-00	METAL CHIP	10K	5%	1/10W
R650	1-216-041-00	METAL CHIP	470	5%	1/10W
R652	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R653	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R654	1-216-019-00	METAL CHIP	56	5%	1/10W
R655	1-216-049-00	METAL CHIP	1K	5%	1/10W
R656	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R657	1-216-021-00	METAL CHIP	68	5%	1/10W
R658	1-216-049-00	METAL CHIP	1K	5%	1/10W
R659	1-216-117-00	METAL CHIP	680K	5%	1/10W
R660	1-216-085-00	METAL CHIP	33K	5%	1/10W
R661	1-216-085-00	METAL CHIP	33K	5%	1/10W
R662	1-216-085-00	METAL CHIP	33K	5%	1/10W
R663	1-216-073-00	METAL CHIP	10K	5%	1/10W
R664	1-216-085-00	METAL CHIP	33K	5%	1/10W
R665	1-216-049-00	METAL CHIP	1K	5%	1/10W
R666	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R671	1-216-295-00	METAL CHIP	0	5%	1/10W
R676	1-216-097-00	METAL CHIP	100K	5%	1/10W
R677	1-216-295-00	METAL CHIP	0	5%	1/10W
R679	1-216-119-00	METAL CHIP	820K	5%	1/10W
R680	1-216-111-00	METAL CHIP	390K	5%	1/10W
R681	1-216-105-00	METAL CHIP	220K	5%	1/10W
R682	1-216-097-00	METAL CHIP	100K	5%	1/10W
R685	1-216-121-00	METAL CHIP	1M	5%	1/10W
R686	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R687	1-216-097-00	METAL CHIP	100K	5%	1/10W
R688	1-216-119-00	METAL CHIP	820K	5%	1/10W
R689	1-216-111-00	METAL CHIP	390K	5%	1/10W
R690	1-216-105-00	METAL CHIP	220K	5%	1/10W
R691	1-216-097-00	METAL CHIP	100K	5%	1/10W
R692	1-216-073-00	METAL CHIP	10K	5%	1/10W
R693	1-216-121-00	METAL CHIP	1M	5%	1/10W
R694	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R695	1-216-085-00	METAL CHIP	33K	5%	1/10W
R696	1-216-009-00	METAL CHIP	22	5%	1/10W
R700	1-216-295-00	METAL CHIP	0	5%	1/10W
R701	1-216-295-00	METAL CHIP	0	5%	1/10W
R714	1-216-295-00	METAL CHIP	0	5%	1/10W
R716	1-216-097-00	METAL CHIP	100K	5%	1/10W
R717	1-216-295-00	METAL CHIP	0	5%	1/10W
R720	1-216-295-00	METAL CHIP	0	5%	1/10W
R727	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R728	1-216-295-00	METAL CHIP	0	5%	1/10W
R729	1-216-073-00	METAL CHIP	10K	5%	1/10W
R730	1-216-041-00	METAL CHIP	470	5%	1/10W
R731	1-216-035-00	METAL CHIP	270	5%	1/10W
R732	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R733	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R734	1-216-081-00	METAL CHIP	22K	5%	1/10W
R735	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R736	1-216-041-00	METAL CHIP	470	5%	1/10W
R737	1-216-037-00	METAL CHIP	330	5%	1/10W
R738	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R739	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R740	1-216-039-00	METAL CHIP	390	5%	1/10W
R741	1-216-041-00	METAL CHIP	470	5%	1/10W
R742	1-216-073-00	METAL CHIP	10K	5%	1/10W
R743	1-216-025-00	METAL CHIP	100	5%	1/10W
R744	1-216-049-00	METAL CHIP	1K	5%	1/10W
R745	1-216-041-00	METAL CHIP	470	5%	1/10W
R746	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R747	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R748	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R749	1-216-081-00	METAL CHIP	22K	5%	1/10W
R750	1-216-049-00	METAL CHIP	1K	5%	1/10W
R751	1-216-295-00	METAL CHIP	0	5%	1/10W
R755	1-216-295-00	METAL CHIP	0	5%	1/10W
R756	1-216-049-00	METAL CHIP	1K	5%	1/10W
R757	1-216-049-00	METAL CHIP	1K	5%	1/10W
R758	1-216-041-00	METAL CHIP	470	5%	1/10W
R759	1-216-049-00	METAL CHIP	1K	5%	1/10W
R760	1-216-049-00	METAL CHIP	1K	5%	1/10W
R761	1-216-081-00	METAL CHIP	22K	5%	1/10W
R762	1-216-077-00	METAL CHIP	15K	5%	1/10W
R763	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R764	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R765	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R767	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R768	1-216-025-00	METAL CHIP	100	5%	1/10W
R769	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R770	1-216-025-00	METAL CHIP	100	5%	1/10W
R771	1-216-085-00	METAL CHIP	33K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R772	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R773	1-216-049-00	METAL CHIP	1K	5%	1/10W
R774	1-216-049-00	METAL CHIP	1K	5%	1/10W
R775	1-216-049-00	METAL CHIP	1K	5%	1/10W
R776	1-216-073-00	METAL CHIP	10K	5%	1/10W
R777	1-216-073-00	METAL CHIP	10K	5%	1/10W
R788	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R789	1-216-089-00	METAL CHIP	47K	5%	1/10W
R790	1-216-089-00	METAL CHIP	47K	5%	1/10W
R791	1-216-073-00	METAL CHIP	10K	5%	1/10W
R795	1-216-295-00	METAL CHIP	0	5%	1/10W
R796	1-216-295-00	METAL CHIP	0	5%	1/10W
R799	1-216-295-00	METAL CHIP	0	5%	1/10W
R800	1-216-049-00	METAL CHIP	1K	5%	1/10W
R801	1-216-049-00	METAL CHIP	1K	5%	1/10W
R804	1-216-295-00	METAL CHIP	0	5%	1/10W
R806	1-216-077-00	METAL CHIP	15K	5%	1/10W
R807	1-216-077-00	METAL CHIP	15K	5%	1/10W
R808	1-216-013-00	METAL CHIP	33	5%	1/10W
R809	1-216-041-00	METAL CHIP	470	5%	1/10W
R816	1-216-025-00	METAL CHIP	100	5%	1/10W
R817	1-216-049-00	METAL CHIP	1K	5%	1/10W
R818	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R841	1-216-295-00	METAL CHIP	0	5%	1/10W
R842	1-216-295-00	METAL CHIP	0	5%	1/10W
R845	1-216-295-00	METAL CHIP	0	5%	1/10W
R848	1-216-049-00	METAL CHIP	1K	5%	1/10W
R850	1-216-296-00	METAL CHIP	0	5%	1/8W
R901	1-216-089-00	METAL CHIP	47K	5%	1/10W
R910	1-216-029-00	METAL CHIP	150	5%	1/10W
R911	1-216-121-00	METAL CHIP	1M	5%	1/10W
R920	1-216-295-00	METAL CHIP	0	5%	1/10W
R921	1-216-295-00	METAL CHIP	0	5%	1/10W
R924	1-216-295-00	METAL CHIP	0	5%	1/10W
R925	1-216-295-00	METAL CHIP	0	5%	1/10W
R959	1-216-295-00	METAL CHIP	0	5%	1/10W
R969	1-216-121-00	METAL CHIP	1M	5%	1/10W
R970	1-216-295-00	METAL CHIP	0	5%	1/10W
R971	1-216-295-00	METAL CHIP	0	5%	1/10W
R972	1-216-295-00	METAL CHIP	0	5%	1/10W
R973	1-216-295-00	METAL CHIP	0	5%	1/10W
R980	1-216-295-00	METAL CHIP	0	5%	1/10W
R981	1-216-295-00	METAL CHIP	0	5%	1/10W
R982	1-216-295-00	METAL CHIP	0	5%	1/10W
R983	1-216-295-00	METAL CHIP	0	5%	1/10W
R984	1-216-295-00	METAL CHIP	0	5%	1/10W
R985	1-216-295-00	METAL CHIP	0	5%	1/10W
R986	1-216-295-00	METAL CHIP	0	5%	1/10W
R987	1-216-295-00	METAL CHIP	0	5%	1/10W
R988	1-216-295-00	METAL CHIP	0	5%	1/10W
R994	1-216-295-00	METAL CHIP	0	5%	1/10W
R995	1-216-295-00	METAL CHIP	0	5%	1/10W
R996	1-216-295-00	METAL CHIP	0	5%	1/10W
R997	1-216-295-00	METAL CHIP	0	5%	1/10W

< VARIABLE RESISTOR >

RV602	1-230-866-11	RES, ADJ, METAL 470			
RV603	1-230-866-11	RES, ADJ, METAL 470			

< CRYSTAL >

X701	1-527-722-00	OSCILLATOR, CRYSTAL	14.31818MHz		
X703	1-567-900-11	OSCILLATOR, CRYSTAL	14.31818MHz		

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*	A-7063-054-A	DS-55 BOARD, COMPLETE (Ref. No. 1000 Series)			
		**********			
	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		
	7-685-646-79	SCREW +BVTP	3X8 TYPE2 IT-3		

< BUZZER >

BZ001	1-529-070-11	BUZZER			

< CAPACITOR >

C001	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C002	1-124-126-00	ELECT	47uF	20%	10V
C003	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C004	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C007	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C008	1-124-907-11	ELECT	10uF	20%	50V
C009	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C010	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C011	1-124-925-11	ELECT	2.2uF	20%	100V
C015	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C016	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C021	1-124-907-11	ELECT	10uF	20%	50V
C024	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C025	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C026	1-124-471-00	ELECT	1000uF	20%	6.3V
C106	1-124-907-11	ELECT	10uF	20%	50V
C107	1-124-907-11	ELECT	10uF	20%	50V
C108	1-123-382-00	ELECT	3.3uF	20%	100V
C110	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C111	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C112	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C113	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C114	1-163-101-00	CERAMIC CHIP	22PF	5%	50V

Ref. No.	Part No.	Description			Remark
C115	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C116	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C117	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C118	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C119	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C120	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C121	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C122	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C125	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C126	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C127	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C128	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C129	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C130	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C131	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C132	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C133	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C134	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C135	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C136	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C137	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C150	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C151	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C201	1-126-233-11	ELECT	22uF	20%	50V
C202	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C203	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C204	1-126-233-11	ELECT	22uF	20%	50V
C205	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C206	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C207	1-124-443-00	ELECT	100uF	20%	10V
C208	1-124-443-00	ELECT	100uF	20%	10V
C209	1-126-233-11	ELECT	22uF	20%	50V
C210	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C219	1-124-443-00	ELECT	100uF	20%	10V
C220	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C221	1-124-443-00	ELECT	100uF	20%	10V
C222	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C223	1-126-233-11	ELECT	22uF	20%	50V
C224	1-124-443-00	ELECT	100uF	20%	10V
C225	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C226	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C227	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C228	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C229	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C230	1-124-443-00	ELECT	100uF	20%	10V
C231	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C232	1-124-903-11	ELECT	1uF	20%	50V
C233	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C235	1-126-233-11	ELECT	22uF	20%	50V
C236	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C237	1-163-617-00	CERAMIC CHIP	0.0047uF	5%	50V
C238	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C239	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C240	1-124-907-11	ELECT	10uF	20%	50V
C241	1-124-903-11	ELECT	1uF	20%	50V
C242	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C243	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C244	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C245	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C246	1-124-443-00	ELECT	100uF	20%	10V
C249	1-126-233-11	ELECT	22uF	20%	50V
C250	1-126-233-11	ELECT	22uF	20%	50V
C252	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C254	1-124-443-00	ELECT	100uF	20%	10V
C255	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C256	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C257	1-124-443-00	ELECT	100uF	20%	10V
C258	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C259	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C260	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C261	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C262	1-126-162-11	ELECT	3.3uF	20%	50V
C263	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C264	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C265	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C266	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C267	1-126-301-11	ELECT	1uF	20%	50V
C268	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C269	1-126-154-11	ELECT	47uF	20%	6.3V
C270	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C271	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C272	1-124-443-00	ELECT	100uF	20%	10V
C273	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C275	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C276	1-124-126-00	ELECT	47uF	20%	10V
C277	1-124-902-00	ELECT	0.47uF	20%	50V
C278	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C279	1-124-126-00	ELECT	47uF	20%	10V
C280	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C281	1-124-443-00	ELECT	100uF	20%	10V
C282	1-124-927-11	ELECT	4.7uF	20%	100V
C283	1-124-443-00	ELECT	100uF	20%	10V
C284	1-124-927-11	ELECT	4.7uF	20%	100V
C285	1-124-927-11	ELECT	4.7uF	20%	100V
C286	1-124-443-00	ELECT	100uF	20%	10V
C287	1-124-927-11	ELECT	4.7uF	20%	100V
C288	1-124-443-00	ELECT	100uF	20%	10V
C289	1-163-031-11	CERAMIC CHIP	0.01uF		50V

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Ref. No.	Part No.	Description			Remark
C290	1-124-126-00	ELECT	47uF	20%	10V
C292	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C293	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C294	1-124-907-11	ELECT	10uF	20%	50V
C297	1-124-902-00	ELECT	0.47uF	20%	50V
C298	1-124-902-00	ELECT	0.47uF	20%	50V
C299	1-126-233-11	ELECT	22uF	20%	50V
C308	1-126-233-11	ELECT	22uF	20%	50V
C313	1-126-233-11	ELECT	22uF	20%	50V
C314	1-126-233-11	ELECT	22uF	20%	50V
C315	1-124-443-00	ELECT	100uF	20%	10V
C316	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C317	1-126-233-11	ELECT	22uF	20%	50V
C319	1-126-233-11	ELECT	22uF	20%	50V
C320	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C321	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C323	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C324	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C325	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C326	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C327	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C328	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C329	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C330	1-124-443-00	ELECT	100uF	20%	10V
C331	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C332	1-124-443-00	ELECT	100uF	20%	10V
C334	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C338	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C339	1-126-233-11	ELECT	22uF	20%	50V
C345	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C351	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C352	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
		< CONNECTOR >			
CN001	1-590-019-11	CONNECTOR, FPC/FFC 5P			
CN002	1-575-366-11	CONNECTOR, FPC/FFC 9P			
CN003	1-565-510-11	SOCKET, CONNECTOR 16P			
CN004	1-569-239-11	SOCKET, CONNECTOR 20P			
CN005	1-565-510-11	SOCKET, CONNECTOR 16P			
CN007	1-575-363-11	CONNECTOR, FPC/FFC 12P			
CN008	1-575-365-11	CONNECTOR, FPC/FFC 18P			
CN009	1-575-365-11	CONNECTOR, FPC/FFC 18P			
CN010	1-569-264-11	CONNECTOR, FPC (ZIF TYPE) 8P			
CN012	1-506-468-11	CONNECTOR 3P, MALE			
CN013	1-563-591-11	CONNECTOR, FLEXIBLE 14P			
CN014	1-563-602-11	CONNECTOR, FLEXIBLE 25P			

Ref. No.	Part No.	Description	Remark
		< TRIMMER >	
CV201	1-141-245-00	CAP, TRIMMER 30PF	
		< DIODE >	
D001	8-719-200-36	DIODE E10QS04	
D002	8-719-200-36	DIODE E10QS04	
D003	8-719-200-27	DIODE E10DS2	
D004	8-719-400-18	DIODE MA152WK	
D005	8-719-400-18	DIODE MA152WK	
D007	8-719-400-18	DIODE MA152WK	
D008	8-719-200-02	DIODE 10E2	
D102	8-719-106-23	DIODE RD7.5M-B2	
D202	8-719-400-18	DIODE MA152WK	
D212	8-719-105-92	DIODE RD5.6M-B3	
D213	8-719-800-76	DIODE 1SS226	
		< FERRITE BEAD >	
FB001	1-543-256-11	BEAD, FERRITE	
FB002	1-543-256-11	BEAD, FERRITE	
FB003	1-543-256-11	BEAD, FERRITE	
		< IC >	
IC004	8-759-008-67	IC MC14066BF	
IC005	8-759-990-07	IC TL1596CNS	
IC101	8-752-834-15	IC CXP80316-016Q	
IC104	8-759-513-72	IC PQ12RF11	
IC105	8-759-513-73	IC PQ09RF11	
IC201	8-752-055-95	IC CXA1409AQ-T3	
IC202	8-759-631-10	IC M52684AFP	
IC203	8-759-300-71	IC HD14053BFP	
IC204	8-759-056-34	IC M50555-054FP	
IC205	8-759-710-29	IC NJM2235M	
IC206	8-759-710-09	IC NJM2233AM	
IC207	8-759-300-71	IC TC4053BF	
IC211	8-759-710-09	IC NJM2233AM	
		< COIL >	
L101	1-408-958-21	INDUCTOR 1uH	
L102	1-408-958-21	INDUCTOR 1uH	
L103	1-410-993-11	INDUCTOR CHIP 1uH	
L104	1-410-993-11	INDUCTOR CHIP 1uH	
L105	1-410-993-11	INDUCTOR CHIP 1uH	
L201	1-407-169-XX	INDUCTOR 100uH	
L202	1-408-975-21	INDUCTOR 27uH	
L203	1-408-975-21	INDUCTOR 27uH	
L204	1-407-169-XX	INDUCTOR 100uH	
L205	1-408-974-21	INDUCTOR 22uH	

Ref. No.	Part No.	Description		Remark
L207	1-407-169-XX	INDUCTOR	100uH	
L208	1-407-169-XX	INDUCTOR	100uH	
L209	1-407-169-XX	INDUCTOR	100uH	
L213	1-408-978-21	INDUCTOR	47uH	
L215	1-408-985-21	INDUCTOR	180uH	
L216	1-408-978-21	INDUCTOR	47uH	
L220	1-408-970-21	INDUCTOR	10uH	

< TRANSISTOR >

Q001	8-729-901-04	TRANSISTOR	DTA114EK	
Q002	8-729-901-04	TRANSISTOR	DTA114EK	
Q003	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q004	8-729-901-01	TRANSISTOR	DTC144EK	
Q005	8-729-805-25	TRANSISTOR	2SB1121	
Q006	8-729-216-22	TRANSISTOR	2SA1162	
Q007	8-729-216-22	TRANSISTOR	2SA1162	
Q008	8-729-901-06	TRANSISTOR	DTA144EK	
Q009	8-729-901-01	TRANSISTOR	DTC144EK	
Q017	8-729-901-01	TRANSISTOR	DTC144EK	
Q102	8-729-140-98	TRANSISTOR	2SD773	
Q201	8-729-100-66	TRANSISTOR	2SC1623	
Q202	8-729-100-66	TRANSISTOR	2SC1623	
Q203	8-729-100-66	TRANSISTOR	2SC1623	
Q204	8-729-100-66	TRANSISTOR	2SC1623	
Q207	8-729-216-22	TRANSISTOR	2SA1162	
Q208	8-729-216-22	TRANSISTOR	2SA1162	
Q209	8-729-216-22	TRANSISTOR	2SA1162	
Q210	8-729-216-22	TRANSISTOR	2SA1162	
Q211	8-729-100-66	TRANSISTOR	2SC1623	
Q212	8-729-100-66	TRANSISTOR	2SC1623	
Q213	8-729-100-66	TRANSISTOR	2SC1623	
Q214	8-729-216-22	TRANSISTOR	2SA1162	
Q215	8-729-216-22	TRANSISTOR	2SA1162	
Q216	8-729-100-66	TRANSISTOR	2SC1623	
Q217	8-729-216-22	TRANSISTOR	2SA1162	
Q218	8-729-100-66	TRANSISTOR	2SC1623	
Q226	8-729-216-22	TRANSISTOR	2SA1162	
Q228	8-729-216-22	TRANSISTOR	2SA1162	
Q229	8-729-901-01	TRANSISTOR	DTC144EK	
Q230	8-729-901-01	TRANSISTOR	DTC144EK	
Q233	8-729-216-22	TRANSISTOR	2SA1162	
Q236	8-729-100-66	TRANSISTOR	2SC1623	
Q237	8-729-100-66	TRANSISTOR	2SC1623	
Q238	8-729-100-66	TRANSISTOR	2SC1623	
Q239	8-729-100-66	TRANSISTOR	2SC1623	
Q240	8-729-901-01	TRANSISTOR	DTC144EK	
Q241	8-729-100-66	TRANSISTOR	2SC1623	
Q242	8-729-100-66	TRANSISTOR	2SC1623	
Q243	8-729-100-66	TRANSISTOR	2SC1623	
Q244	8-729-100-66	TRANSISTOR	2SC1623	
Q245	8-729-216-22	TRANSISTOR	2SA1162	
Q246	8-729-900-53	TRANSISTOR	DTC114EK	
Q247	8-729-900-53	TRANSISTOR	DTC114EK	
Q248	8-729-100-66	TRANSISTOR	2SC1623	
Q249	8-729-100-66	TRANSISTOR	2SC1623	
Q250	8-729-100-66	TRANSISTOR	2SC1623	

< RESISTOR >

R007	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R011	1-216-089-00	METAL CHIP	47K	5%	1/10W
R012	1-216-089-00	METAL CHIP	47K	5%	1/10W
R013	1-216-089-00	METAL CHIP	47K	5%	1/10W
R014	1-216-089-00	METAL CHIP	47K	5%	1/10W
R015	1-216-089-00	METAL CHIP	47K	5%	1/10W
R016	1-216-089-00	METAL CHIP	47K	5%	1/10W
R017	1-216-073-00	METAL CHIP	10K	5%	1/10W
R018	1-216-596-11	METAL GLAZE	2.7K	1%	1/10W
R020	1-216-073-00	METAL CHIP	10K	5%	1/10W
R021	1-216-049-00	METAL CHIP	1K	5%	1/10W
R022	1-216-162-00	METAL GLAZE	33	5%	1/8W
R023	1-216-162-00	METAL GLAZE	33	5%	1/8W
R024	1-216-049-00	METAL CHIP	1K	5%	1/10W
R025	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R026	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R027	1-216-089-00	METAL CHIP	47K	5%	1/10W
R028	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R044	1-216-017-00	METAL CHIP	47	5%	1/10W
R050	1-216-073-00	METAL CHIP	10K	5%	1/10W
R060	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R065	1-216-295-00	METAL CHIP	0	5%	1/10W
R073	1-216-295-00	METAL CHIP	0	5%	1/10W
R075	1-216-049-00	METAL CHIP	1K	5%	1/10W
R076	1-216-089-00	METAL CHIP	47K	5%	1/10W
R099	1-216-295-00	METAL CHIP	0	5%	1/10W
R107	1-216-045-00	METAL CHIP	680	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-073-00	METAL CHIP	10K	5%	1/10W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-073-00	METAL CHIP	10K	5%	1/10W
R112	1-216-073-00	METAL CHIP	10K	5%	1/10W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W
R115	1-216-073-00	METAL CHIP	10K	5%	1/10W
R116	1-216-073-00	METAL CHIP	10K	5%	1/10W
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
R118	1-216-049-00	METAL CHIP	1K	5%	1/10W
R119	1-216-049-00	METAL CHIP	1K	5%	1/10W
R120	1-216-049-00	METAL CHIP	1K	5%	1/10W

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Ref. No.	Part No.	Description			Remark
R121	1-216-049-00	METAL CHIP	1K	5%	1/10W
R122	1-216-049-00	METAL CHIP	1K	5%	1/10W
R123	1-216-049-00	METAL CHIP	1K	5%	1/10W
R124	1-216-073-00	METAL CHIP	10K	5%	1/10W
R125	1-216-073-00	METAL CHIP	10K	5%	1/10W
R126	1-216-073-00	METAL CHIP	10K	5%	1/10W
R127	1-216-049-00	METAL CHIP	1K	5%	1/10W
R128	1-216-049-00	METAL CHIP	1K	5%	1/10W
R129	1-216-049-00	METAL CHIP	1K	5%	1/10W
R132	1-216-049-00	METAL CHIP	1K	5%	1/10W
R133	1-216-049-00	METAL CHIP	1K	5%	1/10W
R134	1-216-049-00	METAL CHIP	1K	5%	1/10W
R135	1-216-049-00	METAL CHIP	1K	5%	1/10W
R136	1-216-295-00	METAL CHIP	0	5%	1/10W
R138	1-216-049-00	METAL CHIP	1K	5%	1/10W
R139	1-216-049-00	METAL CHIP	1K	5%	1/10W
R140	1-216-049-00	METAL CHIP	1K	5%	1/10W
R141	1-216-049-00	METAL CHIP	1K	5%	1/10W
R142	1-216-049-00	METAL CHIP	1K	5%	1/10W
R143	1-216-049-00	METAL CHIP	1K	5%	1/10W
R144	1-216-049-00	METAL CHIP	1K	5%	1/10W
R145	1-216-049-00	METAL CHIP	1K	5%	1/10W
R146	1-216-073-00	METAL CHIP	10K	5%	1/10W
R149	1-216-049-00	METAL CHIP	1K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-073-00	METAL CHIP	10K	5%	1/10W
R154	1-216-073-00	METAL CHIP	10K	5%	1/10W
R155	1-216-073-00	METAL CHIP	10K	5%	1/10W
R156	1-216-073-00	METAL CHIP	10K	5%	1/10W
R157	1-216-097-00	METAL CHIP	100K	5%	1/10W
R158	1-216-097-00	METAL CHIP	100K	5%	1/10W
R159	1-216-097-00	METAL CHIP	100K	5%	1/10W
R160	1-216-097-00	METAL CHIP	100K	5%	1/10W
R161	1-216-073-00	METAL CHIP	10K	5%	1/10W
R162	1-216-049-00	METAL CHIP	1K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-049-00	METAL CHIP	1K	5%	1/10W
R203	1-216-035-00	METAL CHIP	270	5%	1/10W
R204	1-216-017-00	METAL CHIP	47	5%	1/10W
R205	1-216-035-00	METAL CHIP	270	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-049-00	METAL CHIP	1K	5%	1/10W
R208	1-216-045-00	METAL CHIP	680	5%	1/10W
R209	1-216-049-00	METAL CHIP	1K	5%	1/10W
R210	1-216-045-00	METAL CHIP	680	5%	1/10W
R211	1-216-049-00	METAL CHIP	1K	5%	1/10W
R212	1-216-073-00	METAL CHIP	10K	5%	1/10W
R214	1-216-073-00	METAL CHIP	10K	5%	1/10W
R215	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R216	1-216-296-00	METAL CHIP	0	5%	1/8W
R221	1-216-073-00	METAL CHIP	10K	5%	1/10W
R222	1-216-049-00	METAL CHIP	1K	5%	1/10W
R223	1-216-073-00	METAL CHIP	10K	5%	1/10W
R224	1-216-049-00	METAL CHIP	1K	5%	1/10W
R225	1-216-073-00	METAL CHIP	10K	5%	1/10W
R226	1-216-049-00	METAL CHIP	1K	5%	1/10W
R229	1-216-049-00	METAL CHIP	1K	5%	1/10W
R230	1-216-091-00	METAL CHIP	56K	5%	1/10W
R231	1-216-049-00	METAL CHIP	1K	5%	1/10W
R232	1-216-049-00	METAL CHIP	1K	5%	1/10W
R233	1-216-089-00	METAL CHIP	47K	5%	1/10W
R234	1-216-081-00	METAL CHIP	22K	5%	1/10W
R235	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R236	1-216-033-00	METAL CHIP	220	5%	1/10W
R237	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R238	1-216-043-00	METAL CHIP	560	5%	1/10W
R239	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R240	1-216-033-00	METAL CHIP	220	5%	1/10W
R241	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R242	1-216-035-00	METAL CHIP	270	5%	1/10W
R243	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R244	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R246	1-216-073-00	METAL CHIP	10K	5%	1/10W
R247	1-216-295-00	METAL CHIP	0	5%	1/10W
R248	1-216-073-00	METAL CHIP	10K	5%	1/10W
R249	1-216-049-00	METAL CHIP	1K	5%	1/10W
R250	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R251	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R252	1-216-121-00	METAL CHIP	1M	5%	1/10W
R253	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R254	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R255	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R256	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R257	1-216-073-00	METAL CHIP	10K	5%	1/10W
R258	1-216-121-00	METAL CHIP	1M	5%	1/10W
R259	1-216-596-11	METAL GLAZE	2.7K	1%	1/10W
R260	1-216-518-00	METAL GLAZE	2.2K	1%	1/10W
R261	1-216-049-00	METAL CHIP	1K	5%	1/10W
R262	1-216-049-00	METAL CHIP	1K	5%	1/10W
R263	1-216-518-00	METAL GLAZE	2.2K	1%	1/10W
R264	1-216-596-11	METAL GLAZE	2.7K	1%	1/10W
R265	1-216-049-00	METAL CHIP	1K	5%	1/10W
R273	1-216-073-00	METAL CHIP	10K	5%	1/10W
R274	1-216-073-00	METAL CHIP	10K	5%	1/10W
R275	1-216-073-00	METAL CHIP	10K	5%	1/10W
R276	1-216-073-00	METAL CHIP	10K	5%	1/10W
R277	1-216-073-00	METAL CHIP	10K	5%	1/10W
R279	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R281	1-216-049-00	METAL CHIP	1K	5%	1/10W
R282	1-216-029-00	METAL CHIP	150	5%	1/10W
R285	1-216-049-00	METAL CHIP	1K	5%	1/10W
R289	1-216-049-00	METAL CHIP	1K	5%	1/10W
R290	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R291	1-216-101-00	METAL CHIP	150K	5%	1/10W
R292	1-216-041-00	METAL CHIP	470	5%	1/10W
R293	1-216-049-00	METAL CHIP	1K	5%	1/10W
R294	1-216-035-00	METAL CHIP	270	5%	1/10W
R295	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R296	1-216-097-00	METAL CHIP	100K	5%	1/10W
R297	1-216-073-00	METAL CHIP	10K	5%	1/10W
R301	1-216-085-00	METAL CHIP	33K	5%	1/10W
R302	1-216-085-00	METAL CHIP	33K	5%	1/10W
R303	1-216-085-00	METAL CHIP	33K	5%	1/10W
R304	1-216-085-00	METAL CHIP	33K	5%	1/10W
R306	1-216-022-00	METAL CHIP	75	5%	1/10W
R307	1-216-049-00	METAL CHIP	1K	5%	1/10W
R308	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R309	1-216-049-00	METAL CHIP	1K	5%	1/10W
R310	1-216-022-00	METAL CHIP	75	5%	1/10W
R312	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R313	1-216-049-00	METAL CHIP	1K	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W
R316	1-216-049-00	METAL CHIP	1K	5%	1/10W
R317	1-216-022-00	METAL CHIP	75	5%	1/10W
R318	1-216-049-00	METAL CHIP	1K	5%	1/10W
R319	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R320	1-216-022-00	METAL CHIP	75	5%	1/10W
R321	1-216-022-00	METAL CHIP	75	5%	1/10W
R322	1-216-049-00	METAL CHIP	1K	5%	1/10W
R324	1-216-295-00	METAL CHIP	0	5%	1/10W
R325	1-216-097-00	METAL CHIP	100K	5%	1/10W
R327	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R328	1-216-073-00	METAL CHIP	10K	5%	1/10W
R329	1-216-073-00	METAL CHIP	10K	5%	1/10W
R330	1-216-073-00	METAL CHIP	10K	5%	1/10W
R331	1-216-073-00	METAL CHIP	10K	5%	1/10W
R336	1-216-295-00	METAL CHIP	0	5%	1/10W
R340	1-216-295-00	METAL CHIP	0	5%	1/10W
R341	1-216-073-00	METAL CHIP	10K	5%	1/10W
R342	1-216-049-00	METAL CHIP	1K	5%	1/10W
R350	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-216-077-00	METAL CHIP	15K	5%	1/10W
R352	1-216-081-00	METAL CHIP	22K	5%	1/10W
R353	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R354	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R355	1-216-049-00	METAL CHIP	1K	5%	1/10W
R356	1-216-045-00	METAL CHIP	680	5%	1/10W
R357	1-216-049-00	METAL CHIP	1K	5%	1/10W
R358	1-216-043-00	METAL CHIP	560	5%	1/10W
R359	1-216-049-00	METAL CHIP	1K	5%	1/10W
R360	1-216-045-00	METAL CHIP	680	5%	1/10W
R363	1-216-049-00	METAL CHIP	1K	5%	1/10W
R364	1-216-073-00	METAL CHIP	10K	5%	1/10W
R365	1-216-073-00	METAL CHIP	10K	5%	1/10W
R366	1-216-049-00	METAL CHIP	1K	5%	1/10W
R367	1-216-049-00	METAL CHIP	1K	5%	1/10W
R368	1-216-035-00	METAL CHIP	270	5%	1/10W
R369	1-216-037-00	METAL CHIP	330	5%	1/10W
R370	1-216-045-00	METAL CHIP	680	5%	1/10W
R371	1-216-017-00	METAL CHIP	47	5%	1/10W
R372	1-216-045-00	METAL CHIP	680	5%	1/10W
R373	1-216-049-00	METAL CHIP	1K	5%	1/10W
R374	1-216-049-00	METAL CHIP	1K	5%	1/10W
R375	1-216-073-00	METAL CHIP	10K	5%	1/10W
R376	1-216-025-00	METAL CHIP	100	5%	1/10W
R377	1-216-049-00	METAL CHIP	1K	5%	1/10W
R378	1-216-047-00	METAL CHIP	820	5%	1/10W
R379	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R380	1-216-025-00	METAL CHIP	100	5%	1/10W
R381	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R382	1-216-025-00	METAL CHIP	100	5%	1/10W
R383	1-216-049-00	METAL CHIP	1K	5%	1/10W
R384	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R385	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R389	1-216-295-00	METAL CHIP	0	5%	1/10W
R390	1-216-295-00	METAL CHIP	0	5%	1/10W
R391	1-216-295-00	METAL CHIP	0	5%	1/10W
R402	1-216-021-00	METAL CHIP	68	5%	1/10W
R405	1-216-027-00	METAL CHIP	120	5%	1/10W

< CRYSTAL >

X101	1-577-133-21	VIBRATOR, CRYSTAL 8MHz
X201	1-567-900-11	OSCILLATOR, CRYSTAL 14.31818MHz
X202	1-577-165-11	VIBLATOR, CERAMIC 500kHz

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* A-7063-053-A FJ-12 BOARD, COMPLETE (Ref. No. 2000 Series)

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< CAPACITOR >

C207	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C208	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C209	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C210	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C211	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C212	1-163-117-00	CERAMIC CHIP	100PF	5%	50V

Ref.No.	Part No.	Description			Remark
C215	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C216	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C217	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C220	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C221	1-164-005-11	CERAMIC CHIP	0.47uF		25V
		< DIODE >			
D201	8-719-104-34	DIODE 1S2836			
D223	8-719-106-45	DIODE RD9.1M-B3			
D224	8-719-106-45	DIODE RD9.1M-B3			
		< IC >			
IC203	8-759-981-99	IC RC4560M-T1			
		< JACK >			
J201	1-565-735-21	JACK, PIN 3P			
		< CHIP JUMPER >			
JR201	1-216-296-00	METAL CHIP	0	5%	1/8W
JR202	1-216-296-00	METAL CHIP	0	5%	1/8W
JR203	1-216-295-00	METAL CHIP	0	5%	1/10W
JR204	1-216-295-00	METAL CHIP	0	5%	1/10W
		< RESISTOR >			
R235	1-216-001-00	METAL CHIP	10	5%	1/10W
R236	1-216-105-00	METAL CHIP	220K	5%	1/10W
R237	1-216-105-00	METAL CHIP	220K	5%	1/10W
R238	1-216-105-00	METAL CHIP	220K	5%	1/10W
R239	1-216-105-00	METAL CHIP	220K	5%	1/10W
R240	1-216-073-00	METAL CHIP	10K	5%	1/10W
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W
R242	1-216-105-00	METAL CHIP	220K	5%	1/10W
R243	1-216-105-00	METAL CHIP	220K	5%	1/10W
R250	1-216-015-00	METAL CHIP	39	5%	1/10W
R251	1-216-015-00	METAL CHIP	39	5%	1/10W
**********					
*	A-7063-048-A	FL-46 BOARD, COMPLETE (Ref.No.2000 Series)			
		**********			
	1-575-386-11	CABLE, FLAT (1.0MM PITCH) 18P			
*	3-697-607-01	HOLDER (SU), LED			
*	3-742-524-02	HOLDER (LEFT), INDICATION TUBE			
*	3-742-548-01	HOLDER (RIGHT), INDICATION TUBE			
*	3-944-234-01	HOLDER (HI), LED			
		< CAPACITOR >			
C001	1-126-154-11	ELECT	47uF	20%	6.3V
C002	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C003	1-164-232-11	CERAMIC CHIP	0.01uF		50V

Ref.No.	Part No.	Description			Remark
C004	1-124-638-11	ELECT	22uF	20%	10V
C005	1-124-638-11	ELECT	22uF	20%	10V
C006	1-126-157-11	ELECT	10uF	20%	16V
C007	1-126-157-11	ELECT	10uF	20%	16V
C008	1-126-157-11	ELECT	10uF	20%	16V
C009	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C010	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C011	1-126-157-11	ELECT	10uF	20%	16V
C012	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C013	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C014	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C015	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C016	1-163-089-00	CERAMIC CHIP	6PF		50V
C017	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C018	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C019	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C020	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C021	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C441	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C442	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C449	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C450	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C451	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C489	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C490	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C495	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
		< OSCILLATOR >			
CF001	1-567-132-00	OSCILLATOR, CERAMIC 8.00MHz			
		< CONNECTOR >			
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			
		< TRIMMER >			
CT001	1-141-311-11	CAP, TRIMMER 20PF			
		< DIODE >			
D001	8-719-920-05	LED SLP281C-50			
D002	8-719-920-05	LED SLP281C-50			
D003	8-719-400-18	DIODE MA152WK			
D004	8-719-955-04	LED PY5504S-1			
D005	8-719-955-04	LED PY5504S-1			
D006	8-719-400-18	DIODE MA152WK			
D007	8-719-812-31	LED TLR123			
D008	8-719-400-18	DIODE MA152WK			

Ref. No.	Part No.	Description			Remark
D009	8-719-920-05	LED	SLP281C-50		
D013	8-719-812-32	LED	TLY123		
D030	8-719-812-32	LED	TLY123		
D031	8-719-400-18	DIODE	MA152WK		
		< IC >			
IC001	8-759-942-05	IC	BA6800AFVC		
IC002	1-466-131-21	IC	GP1U52X		
IC003	8-759-937-56	IC	S-8054ALB-LM-S		
IC004	8-759-941-78	IC	S-8053ALB		
IC005	8-759-064-19	IC	MB89794B-GDX620		
IC006	8-759-720-45	IC	CAT35C202K		
		< COIL >			
L001	1-407-169-XX	INDUCTOR	100uH		
L002	1-407-169-XX	INDUCTOR	100uH		
L003	1-407-169-XX	INDUCTOR	100uH		
		< INDICATOR >			
ND001	1-519-507-11	INDICATOR TUBE, FLUORESCENT			
		< TRANSISTOR >			
Q001	8-729-901-47	TRANSISTOR	DTA143EK		
Q002	8-729-901-47	TRANSISTOR	DTA143EK		
Q003	8-729-216-22	TRANSISTOR	2SA1162		
Q020	8-729-901-01	TRANSISTOR	DTC144EK		
Q030	8-729-901-01	TRANSISTOR	DTC144EK		
		< RESISTOR >			
R001	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R002	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R003	1-216-089-00	METAL CHIP	47K	5%	1/10W
R004	1-216-035-00	METAL CHIP	270	5%	1/10W
R005	1-216-035-00	METAL CHIP	270	5%	1/10W
R006	1-216-089-00	METAL CHIP	47K	5%	1/10W
R007	1-216-089-00	METAL CHIP	47K	5%	1/10W
R008	1-216-033-00	METAL CHIP	220	5%	1/10W
R009	1-216-033-00	METAL CHIP	220	5%	1/10W
R010	1-216-031-00	METAL CHIP	180	5%	1/10W
R011	1-216-031-00	METAL CHIP	180	5%	1/10W
R012	1-216-115-00	METAL CHIP	560K	5%	1/10W
R013	1-216-073-00	METAL CHIP	10K	5%	1/10W
R014	1-216-073-00	METAL CHIP	10K	5%	1/10W
R015	1-216-073-00	METAL CHIP	10K	5%	1/10W
R016	1-216-073-00	METAL CHIP	10K	5%	1/10W
R017	1-216-073-00	METAL CHIP	10K	5%	1/10W
R018	1-216-073-00	METAL CHIP	10K	5%	1/10W
R019	1-216-073-00	METAL CHIP	10K	5%	1/10W
R020	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R021	1-216-089-00	METAL CHIP	47K	5%	1/10W
R022	1-216-073-00	METAL CHIP	10K	5%	1/10W
R025	1-216-097-00	METAL CHIP	100K	5%	1/10W
R026	1-216-097-00	METAL CHIP	100K	5%	1/10W
R027	1-216-097-00	METAL CHIP	100K	5%	1/10W
R028	1-216-097-00	METAL CHIP	100K	5%	1/10W
R029	1-216-097-00	METAL CHIP	100K	5%	1/10W
R030	1-216-097-00	METAL CHIP	100K	5%	1/10W
R031	1-216-097-00	METAL CHIP	100K	5%	1/10W
R032	1-216-097-00	METAL CHIP	100K	5%	1/10W
R033	1-216-097-00	METAL CHIP	100K	5%	1/10W
R034	1-216-097-00	METAL CHIP	100K	5%	1/10W
R035	1-216-097-00	METAL CHIP	100K	5%	1/10W
R036	1-216-097-00	METAL CHIP	100K	5%	1/10W
R037	1-216-097-00	METAL CHIP	100K	5%	1/10W
R038	1-216-097-00	METAL CHIP	100K	5%	1/10W
R039	1-216-097-00	METAL CHIP	100K	5%	1/10W
R040	1-216-097-00	METAL CHIP	100K	5%	1/10W
R041	1-216-097-00	METAL CHIP	100K	5%	1/10W
R042	1-216-097-00	METAL CHIP	100K	5%	1/10W
R043	1-216-089-00	METAL CHIP	47K	5%	1/10W
R044	1-216-041-00	METAL CHIP	470	5%	1/10W
R045	1-216-033-00	METAL CHIP	220	5%	1/10W
R046	1-216-081-00	METAL CHIP	22K	5%	1/10W
R047	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R048	1-216-089-00	METAL CHIP	47K	5%	1/10W
R049	1-216-113-00	METAL CHIP	470K	5%	1/10W
R050	1-216-113-00	METAL CHIP	470K	5%	1/10W
R051	1-216-049-00	METAL CHIP	1K	5%	1/10W
R052	1-216-049-00	METAL CHIP	1K	5%	1/10W
R053	1-216-073-00	METAL CHIP	10K	5%	1/10W
R054	1-216-033-00	METAL CHIP	220	5%	1/10W
R060	1-216-037-00	METAL CHIP	330	5%	1/10W
R070	1-216-295-00	METAL CHIP	0	5%	1/10W
R071	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R072	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R085	1-216-037-00	METAL CHIP	330	5%	1/10W
R417	1-216-049-00	METAL CHIP	1K	5%	1/10W
R418	1-216-049-00	METAL CHIP	1K	5%	1/10W
R419	1-216-049-00	METAL CHIP	1K	5%	1/10W
R420	1-216-049-00	METAL CHIP	1K	5%	1/10W
R441	1-216-049-00	METAL CHIP	1K	5%	1/10W
R442	1-216-049-00	METAL CHIP	1K	5%	1/10W
R449	1-216-049-00	METAL CHIP	1K	5%	1/10W
R450	1-216-049-00	METAL CHIP	1K	5%	1/10W
R451	1-216-049-00	METAL CHIP	1K	5%	1/10W
R488	1-216-049-00	METAL CHIP	1K	5%	1/10W
R489	1-216-295-00	METAL CHIP	0	5%	1/10W
R490	1-216-295-00	METAL CHIP	0	5%	1/10W

FL-46 **FP-89** **FP-90** **FR-65**

Ref. No.	Part No.	Description	Remark
R495	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		< SWITCH >	
S001	1-553-856-00	SWITCH, KEY BOARD (POWER)	
S002	1-553-856-00	SWITCH, KEY BOARD (EJECT)	
S003	1-553-856-00	SWITCH, KEY BOARD (DNR)	
S004	1-553-856-00	SWITCH, KEY BOARD (CL)	
		< CRYSTAL >	
X001	1-567-098-00	OSCILLATOR, CRYSTAL (32.768kHz)	
**********			
	1-628-060-12	FP-89 FLEXIBLE BOARD (Ref. No. 2000 Series)	
		**********	
	3-728-869-02	HOLDER SENSOR	
		< DIODE >	
D301	8-719-820-44	TLP907-O (SONY2)	
		< TRANSISTOR >	
Q301	8-729-906-48	EE-TP109	
		< SWITCH >	
S301	1-572-173-11	SWITCH SLIDE (ENCODER)	
S303	1-571-099-11	SWITCH (CC DOWN)	
**********			
	1-628-061-12	FP-90 FLEXIBLE BOARD (Ref. No. 2000 Series)	
		**********	
	3-728-837-01	HOLDER LED	
	3-728-869-02	HOLDER SENSOR	
		< DIODE >	
D302	8-719-940-81	GL-452S	
D303	8-719-820-41	TLP907-O (SONY2)	
		< TRANSISTOR >	
Q302	8-729-906-48	EE-TP109	
		< SWITCH >	
S302	1-572-298-11	SWITCH PUSH (REC PROOF/TAPE SELECT)	
**********			

Ref. No.	Part No.	Description	Remark
*	A-7063-049-A	FR-65 BOARD, COMPLETE (Ref. No. 2000 Series)	
		**********	
	1-575-385-11	CABLE, FLAT (1.0MM PITCH) 11P	
*	3-689-521-01	HOLDER, LED, ROUND	
*	3-697-607-01	HOLDER (SU), LED	
	3-731-123-01	BASE, VOLUME	
*	3-947-530-01	HOLDER, TERMINAL, S	
	7-627-552-38	SCREW, PRECISION +P 1.7X3	
		< CAPACITOR >	
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C104	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C105	1-135-156-21	TANTALUM CHIP 6.8uF 10%	10V
C106	1-135-156-21	TANTALUM CHIP 6.8uF 10%	10V
C118	1-163-109-00	CERAMIC CHIP 47PF 5%	50V
C119	1-163-109-00	CERAMIC CHIP 47PF 5%	50V
		< CONNECTOR >	
CN104	1-575-360-11	CONNECTOR, FPC/FFC 5P	
CN105	1-575-362-11	CONNECTOR, FPC/FFC 11P	
CN106	1-575-365-11	CONNECTOR, FPC/FFC 18P	
		< DIODE >	
D106	8-719-106-45	DIODE RD9.1M-B3	
D107	8-719-106-45	DIODE RD9.1M-B3	
D108	8-719-106-45	DIODE RD9.1M-B3	
D109	8-719-106-45	DIODE RD9.1M-B3	
D110	8-719-106-45	DIODE RD9.1M-B3	
D111	8-719-400-18	DIODE MA152WK	
D113	8-719-301-49	LED SEL2810A	
D114	8-719-301-49	LED SEL2810A	
D115	8-719-920-05	LED SLP281C-50	
D116	8-719-920-05	LED SLP281C-50	
D117	8-719-812-32	LED TLY123	
D118	8-719-920-05	LED SLP281C-50	
D119	8-719-920-05	LED SLP281C-50	
D120	8-719-812-31	LED TLR123	
		< IC >	
IC101	8-759-981-99	IC RC4560M	
IC102	8-759-981-99	IC RC4560M	
		< JACK >	
J102	1-566-850-31	CONNECTOR, (S) TERMINAL 4P	

Ref. No.	Part No.	Description			Remark
		< CHIP JUMPER >			
JR101	1-216-296-00	METAL CHIP	0	5%	1/8W
JR102	1-216-295-00	METAL CHIP	0	5%	1/10W
JR103	1-216-296-00	METAL CHIP	0	5%	1/8W
JR104	1-216-296-00	METAL CHIP	0	5%	1/8W
JR105	1-216-296-00	METAL CHIP	0	5%	1/8W
JR106	1-216-296-00	METAL CHIP	0	5%	1/8W
JR107	1-216-296-00	METAL CHIP	0	5%	1/8W
JR108	1-216-296-00	METAL CHIP	0	5%	1/8W
JR109	1-216-295-00	METAL CHIP	0	5%	1/10W
JR110	1-216-296-00	METAL CHIP	0	5%	1/8W
JR111	1-216-295-00	METAL CHIP	0	5%	1/10W
JR112	1-216-295-00	METAL CHIP	0	5%	1/10W
JR113	1-216-296-00	METAL CHIP	0	5%	1/8W
JR114	1-216-296-00	METAL CHIP	0	5%	1/8W
JR115	1-216-295-00	METAL CHIP	0	5%	1/10W
JR116	1-216-295-00	METAL CHIP	0	5%	1/10W
JR117	1-216-296-00	METAL CHIP	0	5%	1/8W
JR118	1-216-295-00	METAL CHIP	0	5%	1/10W
JR119	1-216-296-00	METAL CHIP	0	5%	1/8W
JR120	1-216-295-00	METAL CHIP	0	5%	1/10W
JR121	1-216-295-00	METAL CHIP	0	5%	1/10W
JR122	1-216-296-00	METAL CHIP	0	5%	1/8W
JR123	1-216-296-00	METAL CHIP	0	5%	1/8W
JR124	1-216-296-00	METAL CHIP	0	5%	1/8W
JR125	1-216-296-00	METAL CHIP	0	5%	1/8W
JR126	1-216-295-00	METAL CHIP	0	5%	1/10W
JR127	1-216-295-00	METAL CHIP	0	5%	1/10W
JR128	1-216-296-00	METAL CHIP	0	5%	1/8W
JR129	1-216-296-00	METAL CHIP	0	5%	1/8W
JR130	1-216-296-00	METAL CHIP	0	5%	1/8W
JR131	1-216-295-00	METAL CHIP	0	5%	1/10W
JR132	1-216-296-00	METAL CHIP	0	5%	1/8W
JR133	1-216-296-00	METAL CHIP	0	5%	1/8W
JR134	1-216-296-00	METAL CHIP	0	5%	1/8W
JR135	1-216-295-00	METAL CHIP	0	5%	1/10W
JR136	1-216-295-00	METAL CHIP	0	5%	1/10W
JR137	1-216-296-00	METAL CHIP	0	5%	1/8W
JR138	1-216-296-00	METAL CHIP	0	5%	1/8W
JR139	1-216-296-00	METAL CHIP	0	5%	1/8W
JR140	1-216-295-00	METAL CHIP	0	5%	1/10W
JR141	1-216-296-00	METAL CHIP	0	5%	1/8W
JR142	1-216-296-00	METAL CHIP	0	5%	1/8W
JR143	1-216-296-00	METAL CHIP	0	5%	1/8W
JR144	1-216-296-00	METAL CHIP	0	5%	1/8W
JR145	1-216-296-00	METAL CHIP	0	5%	1/8W
JR146	1-216-296-00	METAL CHIP	0	5%	1/8W
JR147	1-216-296-00	METAL CHIP	0	5%	1/8W
JR148	1-216-296-00	METAL CHIP	0	5%	1/8W
JR149	1-216-296-00	METAL CHIP	0	5%	1/8W
JR150	1-216-296-00	METAL CHIP	0	5%	1/8W
JR151	1-216-295-00	METAL CHIP	0	5%	1/10W
JR152	1-216-296-00	METAL CHIP	0	5%	1/8W
JR153	1-216-296-00	METAL CHIP	0	5%	1/8W
JR154	1-216-296-00	METAL CHIP	0	5%	1/8W
JR156	1-216-296-00	METAL CHIP	0	5%	1/8W
JR157	1-216-296-00	METAL CHIP	0	5%	1/8W
JR158	1-216-296-00	METAL CHIP	0	5%	1/8W
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR	DTC144EK		
		< RESISTOR >			
R101	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R102	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R103	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R104	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R105	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R108	1-216-037-00	METAL CHIP	330	5%	1/10W
R109	1-216-037-00	METAL CHIP	330	5%	1/10W
R110	1-216-037-00	METAL CHIP	330	5%	1/10W
R111	1-216-037-00	METAL CHIP	330	5%	1/10W
R112	1-216-037-00	METAL CHIP	330	5%	1/10W
R113	1-216-037-00	METAL CHIP	330	5%	1/10W
R114	1-216-037-00	METAL CHIP	330	5%	1/10W
R115	1-216-081-00	METAL CHIP	22K	5%	1/10W
R116	1-216-073-00	METAL CHIP	10K	5%	1/10W
R117	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R118	1-216-083-00	METAL CHIP	27K	5%	1/10W
R119	1-216-295-00	METAL CHIP	0	5%	1/10W
R120	1-216-295-00	METAL CHIP	0	5%	1/10W
R121	1-216-083-00	METAL CHIP	27K	5%	1/10W
R122	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R123	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R127	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R128	1-216-079-00	METAL CHIP	18K	5%	1/10W
R129	1-216-025-00	METAL CHIP	100	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R132	1-216-025-00	METAL CHIP	100	5%	1/10W
R133	1-216-021-00	METAL CHIP	68	5%	1/10W
R134	1-216-021-00	METAL CHIP	68	5%	1/10W
R144	1-216-015-00	METAL CHIP	39	5%	1/10W
R145	1-216-015-00	METAL CHIP	39	5%	1/10W

Ref. No.	Part No.	Description			Remark
R148	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R149	1-216-037-00	METAL CHIP	330	5%	1/10W
R160	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R161	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R171	1-216-015-00	METAL CHIP	39	5%	1/10W
R172	1-216-015-00	METAL CHIP	39	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-237-877-11	RES, VAR, SLIDE 10K/10K (REC LEVEL)			
RV102	1-238-374-11	RES, VAR, CARBON 10K/10K (PHONE LEVEL)			
		< SWITCH >			
S101	1-553-856-00	SWITCH, KEY BOARD (INPUT SELECT)			
S102	1-553-856-00	SWITCH, KEY BOARD (TAPE SPEED)			
S103	1-553-856-00	SWITCH, KEY BOARD (COUNTER RESET)			
S105	1-553-856-00	SWITCH, KEY BOARD (TV/VTR)			
S106	1-553-856-00	SWITCH, KEY BOARD (STANDBY)			
S107	1-570-854-11	SWITCH, SLIDE (AUDIO MONITOR)			
S108	1-553-856-00	SWITCH, KEY BOARD (PLAYER)			
S109	1-553-856-00	SWITCH, KEY BOARD (RECORDER)			
S110	1-553-856-00	SWITCH, KEY BOARD (FRAME (+))			
S111	1-553-856-00	SWITCH, KEY BOARD (SYNCRO EDIT)			
S122	1-553-856-00	SWITCH, KEY BOARD (FRAME (-))			
**********					
*	A-7063-056-A	IN-42 BOARD, COMPLETE (Ref. No. 5000 Series)			
		**********			
	3-831-441-XX	CUSHION (5)			
		< CONNECTOR >			
CN501	1-506-484-11	CONNECTOR 5P, MALE			
CN502	1-568-092-11	CONNECTOR (PLUG) 18P			
CN503	1-506-481-11	CONNECTOR 2P, MALE			
CN504	1-568-096-11	CONNECTOR (PLUG) 26P			
* CN505	1-568-098-11	CONNECTOR (PLUG) 30P			
* CN506	1-568-098-11	CONNECTOR (PLUG) 30P			
CN507	1-563-631-11	CONNECTOR, FLEXIBLE 28P			
* CN508	1-564-988-11	PIN, CONNECTOR 14P			
* CN509	1-565-060-11	PIN, CONNECTOR 16P			
* CN510	1-566-668-11	PIN, CONNECTOR 20P			
* CN511	1-565-060-11	PIN, CONNECTOR 16P			
* CN512	1-564-988-11	PIN, CONNECTOR 14P			
* CN513	1-563-633-11	CONNECTOR, FLEXIBLE 30P			
CN514	1-506-481-11	CONNECTOR 2P, MALE			
		< DIODE >			
D001	8-719-400-18	DIODE MA152WK			

Ref. No.	Part No.	Description			Remark
		< CHIP JUMPER >			
JR501	1-216-296-00	METAL CHIP	0	5%	1/8W
JR502	1-216-296-00	METAL CHIP	0	5%	1/8W
JR504	1-216-296-00	METAL CHIP	0	5%	1/8W
JR505	1-216-296-00	METAL CHIP	0	5%	1/8W
JR506	1-216-296-00	METAL CHIP	0	5%	1/8W
JR507	1-216-296-00	METAL CHIP	0	5%	1/8W
JR508	1-216-296-00	METAL CHIP	0	5%	1/8W
JR509	1-216-296-00	METAL CHIP	0	5%	1/8W
JR511	1-216-296-00	METAL CHIP	0	5%	1/8W
JR512	1-216-296-00	METAL CHIP	0	5%	1/8W
JR513	1-216-296-00	METAL CHIP	0	5%	1/8W
JR514	1-216-296-00	METAL CHIP	0	5%	1/8W
JR516	1-216-295-00	METAL CHIP	0	5%	1/10W
JR517	1-216-296-00	METAL CHIP	0	5%	1/8W
JR518	1-216-296-00	METAL CHIP	0	5%	1/8W
JR519	1-216-296-00	METAL CHIP	0	5%	1/8W
JR521	1-216-296-00	METAL CHIP	0	5%	1/8W
JR522	1-216-296-00	METAL CHIP	0	5%	1/8W
JR523	1-216-296-00	METAL CHIP	0	5%	1/8W
JR524	1-216-296-00	METAL CHIP	0	5%	1/8W
JR525	1-216-295-00	METAL CHIP	0	5%	1/10W
JR526	1-216-296-00	METAL CHIP	0	5%	1/8W
JR527	1-216-295-00	METAL CHIP	0	5%	1/10W
JR528	1-216-295-00	METAL CHIP	0	5%	1/10W
JR529	1-216-296-00	METAL CHIP	0	5%	1/8W
JR530	1-216-296-00	METAL CHIP	0	5%	1/8W
JR531	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q001	8-729-901-00	TRANSISTOR DTC124EK			
Q002	8-729-901-00	TRANSISTOR DTC124EK			
Q003	8-729-901-00	TRANSISTOR DTC124EK			
Q004	8-729-901-00	TRANSISTOR DTC124EK			
		< RESISTOR >			
R001	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R003	1-216-081-00	METAL CHIP	22K	5%	1/10W
R004	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R005	1-216-073-00	METAL CHIP	10K	5%	1/10W
**********					
*	A-7063-051-A	MC-79 BOARD, COMPLETE (Ref. No. 2000 Series)			
		**********			
		< CAPACITOR >			
C601	1-126-177-11	ELECT	100uF	20%	10V
C602	1-126-177-11	ELECT	100uF	20%	10V
C603	1-163-123-00	CERAMIC CHIP	180PF	5%	50V

Ref. No.	Part No.	Description			Remark
C604	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C605	1-126-301-11	ELECT	1uF	20%	50V
C606	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C607	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C608	1-124-584-00	ELECT	100uF	20%	10V
C609	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C610	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C611	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C612	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C613	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C614	1-124-638-11	ELECT	22uF	20%	10V
C615	1-126-153-11	ELECT	22uF	20%	6.3V
C616	1-126-157-11	ELECT	10uF	20%	16V
C617	1-126-157-11	ELECT	10uF	20%	16V
C618	1-126-301-11	ELECT	1uF	20%	50V
C619	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C620	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C621	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C622	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN601	1-575-367-11	CONNECTOR, FPC/FFC 11P			
		< DIODE >			
D601	8-719-106-45	DIODE RD9.1M-B3			
D602	8-719-106-45	DIODE RD9.1M-B3			
D603	8-719-106-45	DIODE RD9.1M-B3			
D604	8-719-106-45	DIODE RD9.1M-B3			
D607	8-719-106-45	DIODE RD9.1M-B3			
D608	8-719-106-45	DIODE RD9.1M-B3			
		< IC >			
IC601	8-759-111-56	IC uPC4572G2			
		< JACK >			
J601	1-565-276-31	JACK, ULTRA SMALL 1P			
J602	1-563-282-11	JACK, SMALL TYPE			
J603	1-562-917-11	JACK (SMALL TYPE)			
		< TRANSISTOR >			
Q602	8-729-100-66	TRANSISTOR 2SC1623			
Q603	8-729-100-66	TRANSISTOR 2SC1623			
Q604	8-729-100-66	TRANSISTOR 2SC1623			
		< RESISTOR >			
R601	1-216-083-00	METAL CHIP	27K	5%	1/10W
R602	1-216-025-00	METAL CHIP	100	5%	1/10W
R603	1-216-081-00	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R604	1-216-105-00	METAL CHIP	220K	5%	1/10W
R605	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R608	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R609	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R610	1-216-097-00	METAL CHIP	100K	5%	1/10W
R611	1-216-073-00	METAL CHIP	10K	5%	1/10W
R612	1-216-121-00	METAL CHIP	1M	5%	1/10W
R613	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R614	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R615	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R616	1-216-073-00	METAL CHIP	10K	5%	1/10W
R617	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

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\# A-7063-052-A PC-56 BOARD, COMPLETE (Ref. No. 9000 Series)
****

3-710-578-01 COVER, VOLUME, 6 MOLD

< CAPACITOR >

C401	1-126-233-11	ELECT	22uF	20%	50V
C402	1-126-233-11	ELECT	22uF	20%	50V
C403	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C404	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C407	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C408	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C409	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C410	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C411	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C412	1-124-126-00	ELECT	47uF	20%	10V
C413	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C414	1-124-443-00	ELECT	100uF	20%	10V
C420	1-126-233-11	ELECT	22uF	20%	50V
C421	1-126-233-11	ELECT	22uF	20%	50V
C502	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C503	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C504	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C505	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C506	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C507	1-124-239-00	ELECT	6.9uF	20%	10V
C508	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C510	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C516	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C517	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C536	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C539	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C542	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C557	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C558	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C607	1-164-005-11	CERAMIC CHIP	0.47uF		25V

PC-56

Ref. No.	Part No.	Description			Remark
C608	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C611	1-124-907-11	ELECT	10uF	20%	50V
C612	1-124-907-11	ELECT	10uF	20%	50V
C613	1-124-907-11	ELECT	10uF	20%	50V
C614	1-124-907-11	ELECT	10uF	20%	50V
C615	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C616	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C619	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C620	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C621	1-124-442-00	ELECT	330uF	20%	6.3V
C622	1-124-442-00	ELECT	330uF	20%	6.3V
C623	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C624	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C625	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C626	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C629	1-124-126-00	ELECT	47uF	20%	10V
C630	1-124-126-00	ELECT	47uF	20%	10V
C633	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C634	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C635	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C636	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C637	1-124-442-00	ELECT	330uF	20%	6.3V
C638	1-124-442-00	ELECT	330uF	20%	6.3V
C640	1-124-907-11	ELECT	10uF	20%	50V
C642	1-124-126-00	ELECT	47uF	20%	10V
C643	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C644	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C645	1-163-124-00	CERAMIC CHIP	200PF	5%	50V
C646	1-124-925-11	ELECT	2.2uF	20%	100V
C647	1-124-464-11	ELECT	0.22uF	20%	50V
C648	1-131-377-00	TANTALUM	10uF	10%	10V
C649	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C650	1-124-927-11	ELECT	4.7uF	20%	100V
C651	1-124-126-00	ELECT	47uF	20%	10V
C654	1-124-907-11	ELECT	10uF	20%	50V
C657	1-124-126-00	ELECT	47uF	20%	10V
C658	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C659	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C660	1-163-124-00	CERAMIC CHIP	200PF	5%	50V
C661	1-124-925-11	ELECT	2.2uF	20%	100V
C662	1-124-464-11	ELECT	0.22uF	20%	50V
C663	1-131-377-00	TANTALUM	10uF	10%	10V
C664	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C665	1-124-927-11	ELECT	4.7uF	20%	100V
C666	1-124-126-00	ELECT	47uF	20%	10V
C667	1-124-126-00	ELECT	47uF	20%	10V
C669	1-124-443-00	ELECT	100uF	20%	10V
C671	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C672	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C673	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C674	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C704	1-126-157-11	ELECT	10uF	20%	16V
C705	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C706	1-124-443-00	ELECT	100uF	20%	10V
C707	1-124-443-00	ELECT	100uF	20%	10V
C708	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C713	1-126-157-11	ELECT	10uF	20%	16V
C714	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C715	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C716	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C717	1-124-443-00	ELECT	100uF	20%	10V
C718	1-126-233-11	ELECT	22uF	20%	50V
C719	1-126-233-11	ELECT	22uF	20%	50V
C731	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C734	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C735	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C736	1-124-443-00	ELECT	100uF	20%	10V
C737	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C739	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C740	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C741	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C742	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C743	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C744	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C745	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C746	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C747	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C748	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C749	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C750	1-126-177-11	ELECT	100uF	20%	10V
C752	1-126-157-11	ELECT	10uF	20%	16V
C755	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C756	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C757	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
C758	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C759	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C760	1-163-091-00	CERAMIC CHIP	8PF		50V
C761	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C762	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C763	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C765	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C766	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C767	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C768	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C769	1-124-443-00	ELECT	100uF	20%	10V
C770	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C771	1-124-126-00	ELECT	47uF	20%	10V
C772	1-163-035-00	CERAMIC CHIP	0.047uF		50V

Ref. No.	Part No.	Description			Remark
C773	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C775	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C801	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C803	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C804	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C805	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C807	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C808	1-124-902-00	ELECT	0.47uF	20%	50V
C809	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C810	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C811	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C812	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C813	1-124-443-00	ELECT	100uF	20%	10V
C814	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C815	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C816	1-124-925-11	ELECT	2.2uF	20%	100V
C817	1-163-038-00	CERAMIC CHIP	5PF		50V
C818	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C819	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C821	1-124-903-11	ELECT	1uF	20%	50V
C822	1-163-038-00	CERAMIC CHIP	5PF		50V
C823	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C824	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C825	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C826	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C827	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C828	1-124-464-11	ELECT	0.22uF	20%	50V
C829	1-131-377-00	TANTALUM	10uF	10%	10V
C830	1-124-907-11	ELECT	10uF	20%	50V
C831	1-126-233-11	ELECT	22uF	20%	50V
C832	1-124-443-00	ELECT	100uF	20%	10V
C833	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C834	1-124-443-00	ELECT	100uF	20%	10V
C836	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C837	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C838	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C840	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C841	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C842	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C843	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C844	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C850	1-126-233-11	ELECT	22uF	20%	50V
C851	1-124-443-00	ELECT	100uF	20%	10V
C852	1-124-443-00	ELECT	100uF	20%	10V
C853	1-124-927-11	ELECT	4.7uF	20%	100V
C854	1-124-927-11	ELECT	4.7uF	20%	100V
C855	1-124-907-11	ELECT	10uF	20%	50V
C865	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C866	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C867	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C868	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C869	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C870	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C871	1-124-907-11	ELECT	10uF	20%	50V
C872	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C873	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C874	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C880	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C881	1-163-034-00	CERAMIC CHIP	0.033uF		50V
C882	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C883	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C901	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C903	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C904	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C905	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C907	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C908	1-124-902-00	ELECT	0.47uF	20%	50V
C909	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C910	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C911	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C912	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C913	1-124-443-00	ELECT	100uF	20%	10V
C914	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C915	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C916	1-124-925-11	ELECT	2.2uF	20%	100V
C917	1-163-038-00	CERAMIC CHIP	5PF		50V
C919	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C921	1-124-903-11	ELECT	1uF	20%	50V
C922	1-163-038-00	CERAMIC CHIP	5PF		50V
C923	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C924	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C925	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C926	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C927	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C928	1-124-464-11	ELECT	0.22uF	20%	50V
C929	1-131-377-00	TANTALUM	10uF	10%	10V
C930	1-124-907-11	ELECT	10uF	20%	50V
C931	1-126-233-11	ELECT	22uF	20%	50V
C932	1-124-443-00	ELECT	100uF	20%	10V
C933	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C934	1-124-443-00	ELECT	100uF	20%	10V
C936	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C937	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C938	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C940	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C941	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C942	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C943	1-163-031-11	CERAMIC CHIP	0.01uF		50V

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Ref. No.	Part No.	Description			Remark
C944	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C957	1-124-907-11	ELECT	10uF	20% 50V	
C972	1-163-018-00	CERAMIC CHIP	0.0056uF	5% 50V	
C973	1-163-024-00	CERAMIC CHIP	0.018uF	10% 50V	
C974	1-163-986-00	CERAMIC CHIP	0.027uF	10% 25V	
		< CONNECTOR >			
CN601	1-568-084-11	CONNECTOR (RECEPTALE) 30P			
CN602	1-568-084-11	CONNECTOR (RECEPTALE) 30P			
CN603	1-506-477-11	CONNECTOR	12P, MALE		
CN604	1-506-470-11	CONNECTOR	5P, MALE		
CN605	1-506-477-11	CONNECTOR	12P, MALE		
CN701	1-506-468-11	CONNECTOR	3P, MALE		
		< TRIMMER >			
CV701	1-141-227-00	CAP, TRIMMER	20PF		
		< DIODE >			
D401	8-719-400-18	DIODE	MA152WK		
D501	8-719-104-34	DIODE	1S2836		
D603	8-719-104-34	DIODE	1S2836		
D702	8-719-400-18	DIODE	MA152WK		
D703	8-713-300-88	DIODE	1T33C-01		
D704	8-719-104-34	DIODE	1S2836		
D850	8-719-400-18	DIODE	MA152WK		
		< FILTER >			
FL601	1-236-043-11	FILTER, LOW PASS			
FL602	1-236-043-11	FILTER, LOW PASS			
FL801	1-236-838-21	FILTER, BAND PASS			
FL901	1-236-837-21	FILTER, BAND PASS			
		< IC >			
IC401	8-752-334-42	IC	CXD2106Q		
IC601	8-759-300-71	IC	HD14053BFP		
IC604	8-759-981-99	IC	RC4560M		
IC605	8-759-009-06	IC	MC14052BF		
IC606	8-759-981-99	IC	RC4560M		
IC607	8-759-981-99	IC	RC4560M		
IC608	8-759-300-71	IC	HD14053BFP		
IC609	8-759-009-06	IC	MC14052BF		
IC610	8-759-009-06	IC	MC14052BF		
IC614	8-759-822-92	IC	LA7451M		
IC703	8-752-332-46	IC	CXD1208Q		
IC704	8-759-009-51	IC	MC14538BF		
IC705	8-759-507-53	IC	MS6264CLL-15FC		
IC707	8-759-502-14	IC	CF79050PV		
IC708	8-752-010-20	IC	CX20102		

Ref. No.	Part No.	Description		Remark
IC709	8-759-908-15	IC	TL431CLP	
IC801	8-752-033-01	IC	CXA1237AR	
IC850	8-759-998-71	IC	BA3308F	
IC901	8-752-033-01	IC	CXA1237AR	
IC902	8-759-009-06	IC	MC14052BF	
IC903	8-759-009-06	IC	MC14052BF	
IC904	8-759-981-99	IC	RC4560M	
IC905	8-759-981-99	IC	RC4560M	
IC906	8-759-981-99	IC	RC4560M	
		< COIL >		
L401	1-407-169-XX	INDUCTOR	100uH	
L704	1-407-169-XX	INDUCTOR	100uH	
L705	1-407-169-XX	INDUCTOR	100uH	
L706	1-408-970-21	INDUCTOR	10uH	
L707	1-408-970-21	INDUCTOR	10uH	
L802	1-408-948-00	INDUCTOR	220uH	
L902	1-408-986-21	INDUCTOR	270uH	
		< TRANSISTOR >		
Q501	8-729-100-66	TRANSISTOR	2SC1623	
Q503	8-729-100-66	TRANSISTOR	2SC1623	
Q504	8-729-902-99	TRANSISTOR	DTC114TK	
Q506	8-729-216-22	TRANSISTOR	2SA1162	
Q508	8-729-100-66	TRANSISTOR	2SC1623	
Q509	8-729-903-10	TRANSISTOR	FMW1	
Q511	8-729-100-66	TRANSISTOR	2SC1623	
Q512	8-729-100-66	TRANSISTOR	2SC1623	
Q514	8-729-216-22	TRANSISTOR	2SA1162	
Q526	8-729-100-66	TRANSISTOR	2SC1623	
Q527	8-729-901-01	TRANSISTOR	DTC144EK	
Q603	8-729-100-66	TRANSISTOR	2SC1623	
Q604	8-729-100-66	TRANSISTOR	2SC1623	
Q605	8-729-100-66	TRANSISTOR	2SC1623	
Q606	8-729-100-66	TRANSISTOR	2SC1623	
Q610	8-729-901-06	TRANSISTOR	DTA144EK	
Q611	8-729-116-05	TRANSISTOR	2SK160-K5	
Q612	8-729-116-05	TRANSISTOR	2SK160-K5	
Q613	8-729-100-66	TRANSISTOR	2SC1623	
Q660	8-729-100-66	TRANSISTOR	2SC1623	
Q661	8-729-216-22	TRANSISTOR	2SA1162	
Q662	8-729-216-22	TRANSISTOR	2SA1162	
Q701	8-729-901-06	TRANSISTOR	DTA144EK	
Q702	8-729-901-01	TRANSISTOR	DTC144EK	
Q703	8-729-100-66	TRANSISTOR	2SC1623	
Q705	8-729-100-66	TRANSISTOR	2SC1623	
Q706	8-729-100-66	TRANSISTOR	2SC1623	
Q707	8-729-100-66	TRANSISTOR	2SC1623	
Q708	8-729-901-06	TRANSISTOR	DTA144EK	

Ref. No.	Part No.	Description		Remark
Q709	8-729-100-66	TRANSISTOR	2SC1623	
Q710	8-729-901-06	TRANSISTOR	DTA144EK	
Q711	8-729-901-01	TRANSISTOR	DTC144EK	
Q803	8-729-901-01	TRANSISTOR	DTC144EK	
Q804	8-729-100-66	TRANSISTOR	2SC1623	
Q831	8-729-100-66	TRANSISTOR	2SC1623	
Q832	8-729-216-22	TRANSISTOR	2SA1162	
Q833	8-729-901-04	TRANSISTOR	DTA114EK	
Q840	8-729-100-66	TRANSISTOR	2SC1623	
Q841	8-729-100-66	TRANSISTOR	2SC1623	
Q842	8-729-100-66	TRANSISTOR	2SC1623	
Q850	8-729-901-01	TRANSISTOR	DTC144EK	
Q851	8-729-100-66	TRANSISTOR	2SC1623	
Q852	8-729-100-66	TRANSISTOR	2SC1623	
Q855	8-729-100-66	TRANSISTOR	2SC1623	
Q856	8-729-100-66	TRANSISTOR	2SC1623	
Q857	8-729-901-01	TRANSISTOR	DTC144EK	
Q858	8-729-901-01	TRANSISTOR	DTC144EK	
Q903	8-729-901-01	TRANSISTOR	DTC144EK	
Q904	8-729-100-66	TRANSISTOR	2SC1623	
Q940	8-729-100-66	TRANSISTOR	2SC1623	
Q941	8-729-100-66	TRANSISTOR	2SC1623	
Q942	8-729-100-66	TRANSISTOR	2SC1623	
Q957	8-729-901-01	TRANSISTOR	DTC144EK	
Q958	8-729-901-01	TRANSISTOR	DTC144EK	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R151	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R152	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R153	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R155	1-216-295-00	METAL CHIP	0	5%	1/10W	
R157	1-216-295-00	METAL CHIP	0	5%	1/10W	
R160	1-216-295-00	METAL CHIP	0	5%	1/10W	
R161	1-216-295-00	METAL CHIP	0	5%	1/10W	
R179	1-216-295-00	METAL CHIP	0	5%	1/10W	
R180	1-216-295-00	METAL CHIP	0	5%	1/10W	
R181	1-216-295-00	METAL CHIP	0	5%	1/10W	
R182	1-216-295-00	METAL CHIP	0	5%	1/10W	
R183	1-216-295-00	METAL CHIP	0	5%	1/10W	
R401	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R402	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R403	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R404	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R405	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R406	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R407	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R408	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R409	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R412	1-216-025-00	METAL CHIP	100	5%	1/10W	
R413	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R501	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R502	1-216-050-00	METAL GLAZE	1.1K	5%	1/10W	
R504	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R505	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R506	1-216-041-00	METAL CHIP	470	5%	1/10W	
R507	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R509	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R510	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R511	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R512	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R513	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R514	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R515	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R516	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R517	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R519	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R520	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R523	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R524	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R526	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R529	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R545	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R553	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R550	1-216-045-00	METAL CHIP	680	5%	1/10W	
R555	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R571	1-216-041-00	METAL CHIP	470	5%	1/10W	
R572	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R580	1-216-025-00	METAL CHIP	100	5%	1/10W	
R581	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R582	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R585	1-216-041-00	METAL CHIP	470	5%	1/10W	
R609	1-216-295-00	METAL CHIP	0	5%	1/10W	
R610	1-216-295-00	METAL CHIP	0	5%	1/10W	
R612	1-216-295-00	METAL CHIP	0	5%	1/10W	
R613	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R614	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R615	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R616	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R617	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R618	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R619	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R620	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R621	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R622	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R623	1-216-025-00	METAL CHIP	100	5%	1/10W	
R624	1-216-025-00	METAL CHIP	100	5%	1/10W	
R625	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	

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Ref. No.	Part No.	Description			Remark
R625	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R627	1-216-073-00	METAL CHIP	10K	5%	1/10W
R628	1-216-073-00	METAL CHIP	10K	5%	1/10W
R629	1-216-081-00	METAL CHIP	22K	5%	1/10W
R630	1-216-081-00	METAL CHIP	22K	5%	1/10W
R631	1-216-089-00	METAL CHIP	47K	5%	1/10W
R632	1-216-089-00	METAL CHIP	47K	5%	1/10W
R633	1-216-089-00	METAL CHIP	47K	5%	1/10W
R634	1-216-089-00	METAL CHIP	47K	5%	1/10W
R635	1-216-295-00	METAL CHIP	0	5%	1/10W
R636	1-216-295-00	METAL CHIP	0	5%	1/10W
R637	1-216-089-00	METAL CHIP	47K	5%	1/10W
R638	1-216-089-00	METAL CHIP	47K	5%	1/10W
R640	1-216-039-00	METAL CHIP	390	5%	1/10W
R641	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R642	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R645	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R646	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R647	1-216-076-00	METAL CHIP	13K	5%	1/10W
R648	1-216-076-00	METAL CHIP	13K	5%	1/10W
R651	1-216-099-00	METAL CHIP	120K	5%	1/10W
R653	1-216-295-00	METAL CHIP	0	5%	1/10W
R655	1-216-049-00	METAL CHIP	1K	5%	1/10W
R656	1-216-049-00	METAL CHIP	1K	5%	1/10W
R657	1-216-073-00	METAL CHIP	10K	5%	1/10W
R658	1-216-073-00	METAL CHIP	10K	5%	1/10W
R659	1-216-085-00	METAL CHIP	33K	5%	1/10W
R660	1-216-085-00	METAL CHIP	33K	5%	1/10W
R661	1-216-073-00	METAL CHIP	10K	5%	1/10W
R662	1-216-073-00	METAL CHIP	10K	5%	1/10W
R663	1-216-073-00	METAL CHIP	10K	5%	1/10W
R664	1-216-073-00	METAL CHIP	10K	5%	1/10W
R665	1-216-025-00	METAL CHIP	100	5%	1/10W
R666	1-216-025-00	METAL CHIP	100	5%	1/10W
R667	1-216-081-00	METAL CHIP	22K	5%	1/10W
R668	1-216-081-00	METAL CHIP	22K	5%	1/10W
R669	1-216-085-00	METAL CHIP	33K	5%	1/10W
R670	1-216-085-00	METAL CHIP	33K	5%	1/10W
R671	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R672	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R673	1-216-627-11	METAL CHIP	100	0.5%	1/10W
R674	1-216-627-11	METAL CHIP	100	0.5%	1/10W
R675	1-216-081-00	METAL CHIP	22K	5%	1/10W
R676	1-216-081-00	METAL CHIP	22K	5%	1/10W
R677	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R678	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R679	1-216-077-00	METAL CHIP	15K	5%	1/10W
R680	1-216-077-00	METAL CHIP	15K	5%	1/10W
R681	1-216-079-00	METAL CHIP	18K	5%	1/10W
R682	1-216-079-00	METAL CHIP	18K	5%	1/10W
R683	1-216-025-00	METAL CHIP	100	5%	1/10W
R684	1-216-025-00	METAL CHIP	100	5%	1/10W
R685	1-216-081-00	METAL CHIP	22K	5%	1/10W
R686	1-216-089-00	METAL CHIP	47K	5%	1/10W
R687	1-216-077-00	METAL CHIP	15K	5%	1/10W
R688	1-216-077-00	METAL CHIP	15K	5%	1/10W
R689	1-216-077-00	METAL CHIP	15K	5%	1/10W
R690	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R691	1-216-025-00	METAL CHIP	100	5%	1/10W
R692	1-216-295-00	METAL CHIP	0	5%	1/10W
R693	1-216-295-00	METAL CHIP	0	5%	1/10W
R694	1-216-295-00	METAL CHIP	0	5%	1/10W
R695	1-216-295-00	METAL CHIP	0	5%	1/10W
R696	1-216-089-00	METAL CHIP	47K	5%	1/10W
R697	1-216-089-00	METAL CHIP	47K	5%	1/10W
R698	1-216-295-00	METAL CHIP	0	5%	1/10W
R701	1-216-029-00	METAL CHIP	150	5%	1/10W
R702	1-216-653-11	METAL CHIP	1.2K	0.5%	1/10W
R703	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R704	1-216-022-00	METAL CHIP	75	5%	1/10W
R705	1-216-039-00	METAL CHIP	390	5%	1/10W
R706	1-216-049-00	METAL CHIP	1K	5%	1/10W
R707	1-216-077-00	METAL CHIP	15K	5%	1/10W
R708	1-216-748-11	METAL CHIP	39K	1%	1/10W
R712	1-216-077-00	METAL CHIP	15K	5%	1/10W
R713	1-216-748-11	METAL CHIP	39K	1%	1/10W
R717	1-216-117-00	METAL CHIP	680K	5%	1/10W
R718	1-216-105-00	METAL CHIP	220K	5%	1/10W
R720	1-216-073-00	METAL CHIP	10K	5%	1/10W
R721	1-216-101-00	METAL CHIP	150K	5%	1/10W
R723	1-216-097-00	METAL CHIP	100K	5%	1/10W
R725	1-216-295-00	METAL CHIP	0	5%	1/10W
R726	1-216-073-00	METAL CHIP	10K	5%	1/10W
R727	1-216-049-00	METAL CHIP	1K	5%	1/10W
R728	1-216-295-00	METAL CHIP	0	5%	1/10W
R731	1-216-295-00	METAL CHIP	0	5%	1/10W
R733	1-216-295-00	METAL CHIP	0	5%	1/10W
R736	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R738	1-216-017-00	METAL CHIP	47	5%	1/10W
R739	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R740	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R741	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R742	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R743	1-216-073-00	METAL CHIP	10K	5%	1/10W
R744	1-216-295-00	METAL CHIP	0	5%	1/10W
R745	1-216-073-00	METAL CHIP	10K	5%	1/10W
R746	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R747	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R748	1-216-077-00	METAL CHIP	15K	5%	1/10W
R749	1-216-049-00	METAL CHIP	1K	5%	1/10W
R750	1-216-073-00	METAL CHIP	10K	5%	1/10W
R751	1-216-049-00	METAL CHIP	1K	5%	1/10W
R752	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R753	1-216-081-00	METAL CHIP	22K	5%	1/10W
R754	1-216-073-00	METAL CHIP	10K	5%	1/10W
R755	1-216-049-00	METAL CHIP	1K	5%	1/10W
R756	1-216-025-00	METAL CHIP	100	5%	1/10W
R757	1-216-037-00	METAL CHIP	330	5%	1/10W
R758	1-216-029-00	METAL CHIP	150	5%	1/10W
R759	1-216-045-00	METAL CHIP	680	5%	1/10W
R760	1-216-049-00	METAL CHIP	1K	5%	1/10W
R761	1-216-077-00	METAL CHIP	15K	5%	1/10W
R762	1-216-049-00	METAL CHIP	1K	5%	1/10W
R763	1-216-049-00	METAL CHIP	1K	5%	1/10W
R764	1-216-049-00	METAL CHIP	1K	5%	1/10W
R770	1-216-295-00	METAL CHIP	0	5%	1/10W
R772	1-216-097-00	METAL CHIP	100K	5%	1/10W
R780	1-216-045-00	METAL CHIP	680	5%	1/10W
R789	1-216-105-00	METAL CHIP	220K	5%	1/10W
R790	1-216-085-00	METAL CHIP	33K	5%	1/10W
R791	1-216-085-00	METAL CHIP	33K	5%	1/10W
R794	1-216-097-00	METAL CHIP	100K	5%	1/10W
R796	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R797	1-216-097-00	METAL CHIP	100K	5%	1/10W
R798	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R799	1-216-029-00	METAL CHIP	150	5%	1/10W
R801	1-216-049-00	METAL CHIP	1K	5%	1/10W
R802	1-216-049-00	METAL CHIP	1K	5%	1/10W
R803	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R804	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R805	1-216-295-00	METAL CHIP	0	5%	1/10W
R806	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R807	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R808	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R809	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R810	1-216-121-00	METAL CHIP	1M	5%	1/10W
R811	1-216-107-00	METAL CHIP	270K	5%	1/10W
R812	1-216-046-00	METAL CHIP	750	5%	1/10W
R813	1-216-046-00	METAL CHIP	750	5%	1/10W
R814	1-216-077-00	METAL CHIP	15K	5%	1/10W
R815	1-216-075-00	METAL CHIP	12K	5%	1/10W
R816	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R817	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R818	1-216-045-00	METAL CHIP	680	5%	1/10W
R819	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R820	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R821	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R822	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R823	1-216-073-00	METAL CHIP	10K	5%	1/10W
R824	1-216-079-00	METAL CHIP	18K	5%	1/10W
R827	1-216-089-00	METAL CHIP	47K	5%	1/10W
R828	1-216-089-00	METAL CHIP	47K	5%	1/10W
R829	1-216-079-00	METAL CHIP	18K	5%	1/10W
R830	1-216-083-00	METAL CHIP	27K	5%	1/10W
R831	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R834	1-216-041-00	METAL CHIP	470	5%	1/10W
R835	1-216-091-00	METAL CHIP	56K	5%	1/10W
R836	1-216-101-00	METAL CHIP	150K	5%	1/10W
R837	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R838	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R839	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R840	1-216-049-00	METAL CHIP	1K	5%	1/10W
R841	1-216-105-00	METAL CHIP	220K	5%	1/10W
R842	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R843	1-216-049-00	METAL CHIP	1K	5%	1/10W
R844	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R845	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R846	1-216-083-00	METAL CHIP	27K	5%	1/10W
R847	1-216-073-00	METAL CHIP	10K	5%	1/10W
R850	1-216-121-00	METAL CHIP	1M	5%	1/10W
R851	1-216-081-00	METAL CHIP	22K	5%	1/10W
R852	1-216-081-00	METAL CHIP	22K	5%	1/10W
R853	1-216-052-00	METAL CHIP	1.3K	5%	1/10W
R854	1-216-052-00	METAL CHIP	1.3K	5%	1/10W
R855	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R856	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R857	1-216-035-00	METAL CHIP	270	5%	1/10W
R858	1-216-035-00	METAL CHIP	270	5%	1/10W
R859	1-216-073-00	METAL CHIP	10K	5%	1/10W
R860	1-216-073-00	METAL CHIP	10K	5%	1/10W
R861	1-216-748-11	METAL CHIP	39K	1%	1/10W
R862	1-216-748-11	METAL CHIP	39K	1%	1/10W
R863	1-216-083-00	METAL CHIP	27K	5%	1/10W
R864	1-216-083-00	METAL CHIP	27K	5%	1/10W
R865	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R866	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R874	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R875	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R876	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R877	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R878	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R879	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R880	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R881	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R885	1-216-097-00	METAL CHIP	100K	5%	1/10W
R890	1-216-081-00	METAL CHIP	22K	5%	1/10W

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Ref. No.	Part No.	Description			Remark
R891	1-216-081-00	METAL CHIP	22K	5%	1/10W
R892	1-216-081-00	METAL CHIP	22K	5%	1/10W
R893	1-216-037-00	METAL CHIP	330	5%	1/10W
R894	1-216-049-00	METAL CHIP	1K	5%	1/10W
R895	1-216-073-00	METAL CHIP	10K	5%	1/10W
R896	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R901	1-216-049-00	METAL CHIP	1K	5%	1/10W
R902	1-216-049-00	METAL CHIP	1K	5%	1/10W
R903	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R904	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R905	1-216-295-00	METAL CHIP	0	5%	1/10W
R906	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R907	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R908	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R909	1-216-049-00	METAL CHIP	1K	5%	1/10W
R910	1-216-121-00	METAL CHIP	1M	5%	1/10W
R911	1-216-107-00	METAL CHIP	270K	5%	1/10W
R912	1-216-047-00	METAL CHIP	820	5%	1/10W
R913	1-216-047-00	METAL CHIP	820	5%	1/10W
R915	1-216-075-00	METAL CHIP	12K	5%	1/10W
R916	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R917	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R918	1-216-045-00	METAL CHIP	680	5%	1/10W
R919	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R920	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R921	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R922	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R923	1-216-073-00	METAL CHIP	10K	5%	1/10W
R924	1-216-079-00	METAL CHIP	18K	5%	1/10W
R927	1-216-079-00	METAL CHIP	18K	5%	1/10W
R928	1-216-089-00	METAL CHIP	47K	5%	1/10W
R929	1-216-079-00	METAL CHIP	18K	5%	1/10W
R930	1-216-083-00	METAL CHIP	27K	5%	1/10W
R931	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R939	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R940	1-216-049-00	METAL CHIP	1K	5%	1/10W
R941	1-216-105-00	METAL CHIP	220K	5%	1/10W
R942	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R943	1-216-049-00	METAL CHIP	1K	5%	1/10W
R944	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R945	1-216-047-00	METAL CHIP	820	5%	1/10W
R946	1-216-083-00	METAL CHIP	27K	5%	1/10W
R947	1-216-073-00	METAL CHIP	10K	5%	1/10W
R952	1-216-073-00	METAL CHIP	10K	5%	1/10W
R953	1-216-074-00	METAL CHIP	11K	5%	1/10W
R954	1-216-081-00	METAL CHIP	22K	5%	1/10W
R955	1-216-079-00	METAL CHIP	18K	5%	1/10W
R956	1-216-085-00	METAL CHIP	33K	5%	1/10W
R957	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R958	1-216-085-00	METAL CHIP	33K	5%	1/10W
R959	1-216-081-00	METAL CHIP	22K	5%	1/10W
R960	1-216-081-00	METAL CHIP	22K	5%	1/10W
R961	1-216-073-00	METAL CHIP	10K	5%	1/10W
R962	1-216-081-00	METAL CHIP	22K	5%	1/10W
R963	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R964	1-216-075-00	METAL CHIP	12K	5%	1/10W
R965	1-216-074-00	METAL CHIP	11K	5%	1/10W
R966	1-216-081-00	METAL CHIP	22K	5%	1/10W
R967	1-216-073-00	METAL CHIP	10K	5%	1/10W
R968	1-216-081-00	METAL CHIP	22K	5%	1/10W
R969	1-216-085-00	METAL CHIP	33K	5%	1/10W
R970	1-216-085-00	METAL CHIP	33K	5%	1/10W
R971	1-216-081-00	METAL CHIP	22K	5%	1/10W
R972	1-216-073-00	METAL CHIP	10K	5%	1/10W
R973	1-216-073-00	METAL CHIP	10K	5%	1/10W
R984	1-216-097-00	METAL CHIP	100K	5%	1/10W
R990	1-216-081-00	METAL CHIP	22K	5%	1/10W
R991	1-216-081-00	METAL CHIP	22K	5%	1/10W
R992	1-216-081-00	METAL CHIP	22K	5%	1/10W
R993	1-216-037-00	METAL CHIP	330	5%	1/10W
R994	1-216-049-00	METAL CHIP	1K	5%	1/10W
R995	1-216-073-00	METAL CHIP	10K	5%	1/10W
R996	1-216-051-00	METAL CHIP	1.2K	5%	1/10W

< VARIABLE RESISTOR >

RV701	1-228-995-00	RES, ADJ, METAL	22K
RV702	1-228-995-00	RES, ADJ, METAL	22K
RV703	1-228-999-00	RES, ADJ, METAL	470K
RV705	1-228-999-00	RES, ADJ, METAL	470K
RV707	1-228-991-00	RES, ADJ, METAL	2.2K
RV708	1-228-997-00	RES, ADJ, METAL	100K
RV709	1-228-994-00	RES, ADJ, METAL	10K
RV801	1-228-994-00	RES, ADJ, METAL	10K
RV802	1-228-996-00	RES, ADJ, METAL	47K
RV901	1-228-994-00	RES, ADJ, METAL	10K
RV902	1-228-995-00	RES, ADJ, METAL	22K
RV951	1-228-994-00	RES, ADJ, METAL	10K
RV952	1-228-995-00	RES, ADJ, METAL	22K
RV953	1-228-994-00	RES, ADJ, METAL	10K
RV954	1-228-995-00	RES, ADJ, METAL	22K

< CRYSTAL >

X401 1-567-504-11 OSCILLATOR, CRYSTAL (4.43MHz)

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Ref. No.	Part No.	Description			Remark
*	A-7063-057-A	PS-278 BOARD, COMPLETE (Ref. No. 9000 Series) **********			(US)
*	A-7063-176-A	PS-278 BOARD, COMPLETE (Ref. No. 9000 Series) **********			(Canadian)
	1-533-183-11	HOLDER, FUSE			
*	3-714-460-01	RETAINER, TRANSISTOR			
	3-731-146-01	RETAINER (B), PS			
	7-628-253-40	SCREW +PS 2X10			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
⚠ C001	1-136-345-21	FILM	0.1uF	20%	125V
⚠ C002	1-136-345-21	FILM	0.1uF	20%	125V
⚠ C003	1-161-742-00	CERAMIC	0.0022MF	20%	400V
⚠ C004	1-161-742-00	CERAMIC	0.0022MF	20%	400V
⚠ C005	1-161-742-00	CERAMIC	0.0022uF	20%	400V
C007	1-125-708-11	ELECT	330uF	20%	200V
C008	1-136-208-11	FILM	0.068uF	10%	400V
C009	1-162-115-00	CERAMIC	330PF	10%	1KV
C010	1-130-495-00	MYLAR	0.1uF	5%	50V
C011	1-126-588-11	ELECT	1000uF	20%	16V
C012	1-126-587-11	ELECT	330uF	20%	16V
C014	1-126-588-11	ELECT	1000uF	20%	16V
C015	1-126-376-11	ELECT	470uF	20%	25V
C016	1-126-373-11	ELECT	470uF	20%	10V
C018	1-126-587-11	ELECT	330uF	20%	16V
C019	1-123-875-11	ELECT	10uF	20%	50V
C020	1-124-126-00	ELECT	47uF	20%	10V
C021	1-130-473-00	MYLAR	0.0015uF	5%	50V
C022	1-124-126-00	ELECT	47uF	20%	10V
C023	1-161-043-00	CERAMIC	0.0022uF	10%	50V
C024	1-124-570-11	ELECT	220uF	20%	16V
C025	1-126-335-11	ELECT	220uF	20%	10V
C026	1-126-335-11	ELECT	220uF	20%	10V
C027	1-123-875-11	ELECT	10uF	20%	50V
C028	1-123-875-11	ELECT	10uF	20%	50V
C029	1-126-803-11	ELECT	47uF	20%	50V
C030	1-123-875-11	ELECT	10uF	20%	50V
C031	1-161-055-00	CERAMIC	0.022uF	10%	50V
C041	1-130-475-00	MYLAR	0.0022uF	5%	50V
C042	1-126-588-11	ELECT	1000uF	20%	16V
⚠ C050	1-161-742-00	CERAMIC	0.0022uF	20%	400V
⚠ C051	1-161-742-00	CERAMIC	0.0022uF	20%	400V
		< CONNECTOR >			
* CN001	1-564-037-11	PIN, CONNECTOR 12P			
CN002	1-505-484-11	CONNECTOR 5P, MALE			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
⚠ D001	8-719-510-67	DIODE D2SBA40F04			
D002	8-719-500-70	DIODE D5S4M			
⚠ D003	8-719-304-50	DIODE TF341M-A			
D004	8-719-110-37	DIODE RD13ES-B3			
D007	8-719-941-74	DIODE ERB91-02			
D008	8-719-500-70	DIODE D5S4M			
D009	8-719-913-44	DIODE ERA82-004			
D012	8-719-913-44	DIODE ERA82-004			
D013	8-719-901-83	DIODE 1SS83			
D014	8-719-901-83	DIODE 1SS83			
D015	8-719-121-24	DIODE RD9.1ES-L			
		< FUSE >			
⚠ F001	1-532-743-11	FUSE, GLASS TUBE 2A 125V			
⚠ F002	1-532-776-21	FUSE, MICRO (SECONDARY) 1A			
⚠ F003	1-532-779-11	FUSE, MICRO (SECONDARY) 2A			
		< IC >			
⚠ IC001	8-759-513-69	IC MA2440(N)			
⚠ IC002	8-719-946-76	DIODE PC904-B			
IC005	8-759-513-71	IC PQ05RF21			
IC006	8-759-982-52	IC RC79M05FA			
IC007	8-759-990-33	IC FA7610P			
		< COIL >			
⚠ L001	1-424-121-11	TRANSFORMER, LINE FILTER			
L002	1-421-918-11	COIL, CHOKE 10uH			
L003	1-421-918-11	COIL, CHOKE 10uH			
L004	1-410-794-11	INDUCTOR 330uH			
L005	1-410-667-31	INDUCTOR 22uH			
L006	1-410-645-31	INDUCTOR 100uH			
L007	1-410-645-31	INDUCTOR 100uH			
		< TRANSISTOR >			
Q004	8-729-824-22	TRANSISTOR 2SD1805F			
		< RESISTOR >			
⚠ R001	1-202-729-00	SOLID	6.8M	10%	1/2W
⚠ R002	1-207-673-00	WIREWOUND	3.3	10%	5W F (US)
⚠ R002	1-217-782-11	CEMENT (FUSE)	3.3	5%	5W F (Canadian)
R003	1-215-927-00	METAL OXIDE	47K	5%	3W F
R005	1-247-891-00	CARBON	330K	5%	1/4W
R006	1-249-429-11	CARBON	10K	5%	1/4W
R007	1-215-883-11	METAL OXIDE	33	5%	2W F
⚠ R008	1-212-891-00	FUSIBLE	270	5%	1/4W F
R009	1-215-883-11	METAL OXIDE	33	5%	2W F
R010	1-249-402-11	CARBON	56	5%	1/4W

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

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

PS-278 RJ-25

Ref. No.	Part No.	Description			Remark
R011	1-215-431-00	METAL	2.7K	1%	1/6W
R012	1-215-429-00	METAL	2.2K	1%	1/6W
R013	1-249-405-11	CARBON	100	5%	1/4W
R021	1-247-885-00	CARBON	180K	5%	1/4W
R022	1-247-899-11	CARBON	680K	5%	1/4W
R023	1-247-858-11	CARBON	13K	5%	1/4W
R024	1-247-887-00	CARBON	220K	5%	1/4W
R025	1-215-441-00	METAL	6.8K	1%	1/6W
R026	1-215-429-00	METAL	2.2K	1%	1/6W
R027	1-215-469-00	METAL	100K	1%	1/6W
R028	1-214-773-00	METAL	68K	1%	1/4W
R030	1-249-405-11	CARBON	100	5%	1/4W
R032	1-215-927-00	METAL OXIDE	47K	5%	3W F
R035	1-215-397-00	METAL	100	1%	1/6W
R037	1-215-883-11	METAL OXIDE	33	5%	2W F
R038	1-249-437-11	CARBON	47K	5%	1/4W
R039	1-249-429-11	CARBON	10K	5%	1/4W
R040	1-249-417-11	CARBON	1K	5%	1/4W

< TRANSFORMER >

⚠ T001	1-450-821-11	TRANSFORMER, CONVERTER	
⚠ T002	1-450-686-11	TRANSFORMER, CONVERTER	

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*	A-7063-058-A	RJ-25 BOARD, COMPLETE (Ref. No. 2000 Series)	
		**********	
	1-537-386-21	TERMINAL BOARD (J606-614, CNJ502-505, J602)	
	1-690-349-11	WIRE, FLAT TYPE (25 CORE)	
	3-831-441-XX	CUSHION (5)	
*	3-944-142-01	PLATE, GROUND, RJ	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

< CAPACITOR >

C505	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C506	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C507	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C508	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C509	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C510	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C511	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C512	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C513	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C514	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C515	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C516	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C517	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C518	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C519	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C520	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C521	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C523	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C524	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C525	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C529	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C531	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

< CONNECTOR >

CN503	1-563-628-11	CONNECTOR, FLEXIBLE 25P

< DIODE >

D503	8-719-106-43	DIODE	RD9.1M-B1
D504	8-719-106-43	DIODE	RD9.1M-B1
D505	8-719-106-43	DIODE	RD9.1M-B1
D506	8-719-106-79	DIODE	RD13M-B1
D507	8-719-106-43	DIODE	RD9.1M-B1
D509	8-719-106-43	DIODE	RD9.1M-B1
D515	8-719-420-81	DIODE	MA3075WA
D516	8-719-420-81	DIODE	MA3075WA
D517	8-719-420-81	DIODE	MA3075WA
D520	8-719-420-81	DIODE	MA3075WA
D521	8-719-420-81	DIODE	MA3075WA
D522	8-719-420-81	DIODE	MA3075WA
D525	8-719-420-81	DIODE	MA3075WA
D526	8-719-420-81	DIODE	MA3075WA
D527	8-719-420-81	DIODE	MA3075WA
D530	8-719-106-43	DIODE	RD9.1M-B1
D531	8-719-106-43	DIODE	RD9.1M-B1

< CHIP JUMPER >

JR501	1-216-295-00	METAL CHIP	0	5%	1/10W
JR502	1-216-296-00	METAL CHIP	0	5%	1/8W
JR503	1-216-296-00	METAL CHIP	0	5%	1/8W
JR505	1-216-296-00	METAL CHIP	0	5%	1/8W
JR506	1-216-296-00	METAL CHIP	0	5%	1/8W
JR507	1-216-296-00	METAL CHIP	0	5%	1/8W
JR508	1-216-296-00	METAL CHIP	0	5%	1/8W
JR509	1-216-296-00	METAL CHIP	0	5%	1/8W
JR510	1-216-296-00	METAL CHIP	0	5%	1/8W
JR511	1-216-296-00	METAL CHIP	0	5%	1/8W
JR512	1-216-296-00	METAL CHIP	0	5%	1/8W
JR513	1-216-296-00	METAL CHIP	0	5%	1/8W
JR514	1-216-295-00	METAL CHIP	0	5%	1/10W
JR515	1-216-296-00	METAL CHIP	0	5%	1/8W
JR516	1-216-296-00	METAL CHIP	0	5%	1/8W
JR517	1-216-296-00	METAL CHIP	0	5%	1/8W
JR518	1-216-296-00	METAL CHIP	0	5%	1/8W
JR519	1-216-296-00	METAL CHIP	0	5%	1/8W

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

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
JR520	1-216-296-00	METAL CHIP	0	5%	1/8W
JR521	1-216-296-00	METAL CHIP	0	5%	1/8W
JR522	1-216-296-00	METAL CHIP	0	5%	1/8W
JR523	1-216-296-00	METAL CHIP	0	5%	1/8W
JR524	1-216-296-00	METAL CHIP	0	5%	1/8W
JR525	1-216-295-00	METAL CHIP	0	5%	1/10W
JR526	1-216-295-00	METAL CHIP	0	5%	1/10W
JR527	1-216-296-00	METAL CHIP	0	5%	1/8W
JR528	1-216-296-00	METAL CHIP	0	5%	1/8W
JR529	1-216-296-00	METAL CHIP	0	5%	1/8W
JR530	1-216-296-00	METAL CHIP	0	5%	1/8W
JR531	1-216-296-00	METAL CHIP	0	5%	1/8W
JR532	1-216-296-00	METAL CHIP	0	5%	1/8W
JR533	1-216-296-00	METAL CHIP	0	5%	1/8W
JR534	1-216-296-00	METAL CHIP	0	5%	1/8W
JR535	1-216-296-00	METAL CHIP	0	5%	1/8W
JR536	1-216-295-00	METAL CHIP	0	5%	1/10W
		< RESISTOR >			
R504	1-216-015-00	METAL CHIP	39	5%	1/10W
R505	1-216-015-00	METAL CHIP	39	5%	1/10W
R506	1-216-015-00	METAL CHIP	39	5%	1/10W
R507	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R508	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R509	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R510	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R511	1-216-073-00	METAL CHIP	10K	5%	1/10W
R512	1-216-081-00	METAL CHIP	22K	5%	1/10W
R513	1-216-015-00	METAL CHIP	39	5%	1/10W
R514	1-216-015-00	METAL CHIP	39	5%	1/10W
R515	1-216-015-00	METAL CHIP	39	5%	1/10W
		< SWITCH >			
S502	1-571-880-11	SWITCH, SLIDE (COMMAND MODE)			

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* A-7062-573-A RP-116 BOARD, COMPLETE (Ref. No. 300 Series)

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		< CAPACITOR >			
C001	1-163-087-00	CERAMIC CHIP	4PF		50V
C002	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C003	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C004	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C005	1-126-193-11	ELECT	1uF	20%	50V
C006	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C007	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C008	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C009	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C010	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C011	1-126-193-11	ELECT	1uF	20%	50V
C012	1-124-779-00	ELECT CHIP	10uF	20%	16V
C013	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C014	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C015	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C016	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C017	1-126-193-11	ELECT	1uF	20%	50V
C018	1-163-087-00	CERAMIC CHIP	4PF		50V
C019	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C020	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C021	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C022	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C023	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C024	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C025	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C026	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C027	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C028	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C029	1-164-633-11	CERAMIC CHIP	0.1uF	10%	25V
C030	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C031	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C032	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C033	1-124-779-00	ELECT CHIP	10uF	20%	16V
C034	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C035	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C036	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C037	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C038	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C039	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C040	1-124-779-00	ELECT CHIP	10uF	20%	16v
C041	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C042	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C043	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C044	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C045	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C046	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C047	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C048	1-124-779-00	ELECT CHIP	10uF	20%	16v
C050	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C051	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C052	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C053	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C054	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C055	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
		< CONNECTOR >			
CN001	1-506-475-11	CONNECTOR	10P, MALE		
CN002	1-506-468-11	CONNECTOR	3P, MALE		

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Ref.No.	Part No.	Description	Remark
CN003	1-506-471-11	CONNECTOR 6P, MALE	
CN004	1-506-486-11	PIN, CONNECTOR 7P	
CN005	1-566-528-11	CONNECTOR, FPC (ZIF) 12P	
CN006	1-506-467-11	CONNECTOR 2P, MALE	
		< DIODE >	
D001	8-719-404-46	DIODE MA110	
D002	8-719-404-46	DIODE MA110	
D003	8-719-404-46	DIODE MA110	
D004	8-719-404-46	DIODE MA110	
		< IC >	
IC001	8-752-003-44	IC CX20034	
		< COIL >	
L001	1-410-384-31	INDUCTOR CHIP 18uH	
L002	1-410-393-11	INDUCTOR CHIP 100uH	
L003	1-410-381-11	INDUCTOR CHIP 10uH	
L004	1-410-384-31	INDUCTOR CHIP 18uH	
L005	1-410-393-11	INDUCTOR CHIP 100uH	
L006	1-410-385-11	INDUCTOR CHIP 22uH	
L007	1-410-658-31	INDUCTOR CHIP 220uH	
L050	1-410-658-31	INDUCTOR CHIP 220uH	
L051	1-410-381-11	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q001	8-729-100-66	TRANSISTOR 2SC1623	
Q002	8-729-100-66	TRANSISTOR 2SC1623	
Q003	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q004	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q005	8-729-901-01	TRANSISTOR DTC144EK	
Q006	8-729-901-01	TRANSISTOR DTC144EK	
Q007	8-729-216-22	TRANSISTOR 2SA1162	
Q008	8-729-100-66	TRANSISTOR 2SC1623	
Q009	8-729-100-66	TRANSISTOR 2SC1623	
Q010	8-729-901-06	TRANSISTOR DTA144EK	
Q011	8-729-901-01	TRANSISTOR DTC144EK	
Q050	8-729-216-22	TRANSISTOR 2SA1162	
Q051	8-729-216-22	TRANSISTOR 2SA1162	
Q052	8-729-216-22	TRANSISTOR 2SA1162	
Q071	8-729-100-66	TRANSISTOR 2SC1623	
		< RESISTOR >	
R001	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R002	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R003	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R004	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R005	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R006	1-216-049-00	METAL CHIP 1K 5% 1/10W	

Ref.No.	Part No.	Description	Remark
R008	1-216-025-00	METAL CHIP 100 5% 1/10W	
R009	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R010	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R011	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R012	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R013	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R014	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R015	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R016	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R017	1-216-748-11	METAL CHIP 39K 1% 1/10W	
R018	1-216-748-11	METAL CHIP 39K 1% 1/10W	
R019	1-216-748-11	METAL CHIP 39K 1% 1/10W	
R020	1-216-748-11	METAL CHIP 39K 1% 1/10W	
R021	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R022	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R023	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R024	1-216-031-00	METAL CHIP 180 5% 1/10W	
R025	1-216-001-00	METAL CHIP 10 5% 1/10W	
R026	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R027	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R028	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R029	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R030	1-216-031-00	METAL CHIP 180 5% 1/10W	
R031	1-216-001-00	METAL CHIP 10 5% 1/10W	
R032	1-216-086-00	METAL CHIP 36K 5% 1/10W	
R033	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R034	1-216-072-00	METAL CHIP 9.1K 5% 1/10W	
R035	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R036	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R037	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R038	1-216-048-00	METAL CHIP 910 5% 1/10W	
R039	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R040	1-216-025-00	METAL CHIP 100 5% 1/10W	
R041	1-216-025-00	METAL CHIP 100 5% 1/10W	
R050	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R051	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R052	1-216-035-00	METAL CHIP 270 5% 1/10W	
R053	1-216-033-00	METAL CHIP 220 5% 1/10W	
R054	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R055	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R056	1-216-017-00	METAL CHIP 47 5% 1/10W	
R057	1-216-017-00	METAL CHIP 47 5% 1/10W	
R058	1-216-043-00	METAL CHIP 560 5% 1/10W	
R073	1-216-039-00	METAL CHIP 390 5% 1/10W	
R074	1-216-025-00	METAL CHIP 100 5% 1/10W	
R075	1-216-021-00	METAL CHIP 68 5% 1/10W	
R076	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R080	1-216-041-00	METAL CHIP 470 5% 1/10W	

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV001	1-230-720-11	RES, ADJ, CARBON 4.7K			
RV002	1-230-720-11	RES, ADJ, CARBON 4.7K			
**********					
*	A-7063-050-A	TU-100 BOARD, COMPLETE (Ref. No. 8000Series)			
		**********			
	1-575-454-11	WIRE, FLAT TYPE (28P)			
		< CAPACITOR >			
C003	1-124-472-11	ELECT	470uF	20%	10V
C004	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C005	1-124-360-00	ELECT	1000uF	20%	16V
C006	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C007	1-124-927-11	ELECT	4.7uF	20%	100V
C011	1-126-233-11	ELECT	22uF	20%	50V
C012	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C013	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C014	1-124-907-11	ELECT	10uF	20%	50V
C015	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C016	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C018	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C019	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C020	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C021	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C022	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C023	1-124-925-11	ELECT	2.2uF	20%	100V
C029	1-124-907-11	ELECT	10uF	20%	50V
C030	1-124-907-11	ELECT	10uF	20%	50V
C032	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C033	1-126-233-11	ELECT	22uF	20%	50V
C034	1-126-233-11	ELECT	22uF	20%	50V
C037	1-124-907-11	ELECT	10uF	20%	50V
C039	1-124-907-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
CN001	1-563-605-11	CONNECTOR, FLEXIBLE 28P			
		< DIODE >			
D002	8-719-400-18	DIODE MA152WK			
D004	8-719-104-34	DIODE 1S2836			
		< IC >			
IC001	8-759-157-40	IC uPC574J			
		< IF BLOCK >			
IF001	1-466-582-11	IF BLOCK (IFY-450CD)			

Ref. No.	Part No.	Description			Remark
		< CHIP JUMPER >			
JR001	1-216-295-00	METAL CHIP	0	5%	1/10W
JR002	1-216-295-00	METAL CHIP	0	5%	1/10W
JR003	1-216-295-00	METAL CHIP	0	5%	1/10W
JR004	1-216-295-00	METAL CHIP	0	5%	1/10W
JR005	1-216-295-00	METAL CHIP	0	5%	1/10W
JR006	1-216-295-00	METAL CHIP	0	5%	1/10W
JR008	1-216-295-00	METAL CHIP	0	5%	1/10W
JR011	1-216-295-00	METAL CHIP	0	5%	1/10W
JR012	1-216-295-00	METAL CHIP	0	5%	1/10W
JR013	1-216-296-00	METAL CHIP	0	5%	1/8W
JR014	1-216-296-00	METAL CHIP	0	5%	1/8W
JR015	1-216-296-00	METAL CHIP	0	5%	1/8W
JR016	1-216-296-00	METAL CHIP	0	5%	1/8W
JR017	1-216-296-00	METAL CHIP	0	5%	1/8W
JR018	1-216-296-00	METAL CHIP	0	5%	1/8W
JR019	1-216-296-00	METAL CHIP	0	5%	1/8W
JR020	1-216-296-00	METAL CHIP	0	5%	1/8W
JR021	1-216-296-00	METAL CHIP	0	5%	1/8W
JR023	1-216-296-00	METAL CHIP	0	5%	1/8W
JR025	1-216-296-00	METAL CHIP	0	5%	1/8W
JR027	1-216-296-00	METAL CHIP	0	5%	1/8W
JR032	1-216-296-00	METAL CHIP	0	5%	1/8W
JR033	1-216-296-00	METAL CHIP	0	5%	1/8W
JR034	1-216-296-00	METAL CHIP	0	5%	1/8W
JR035	1-216-296-00	METAL CHIP	0	5%	1/8W
JR036	1-216-296-00	METAL CHIP	0	5%	1/8W
JR038	1-216-296-00	METAL CHIP	0	5%	1/8W
JR039	1-216-296-00	METAL CHIP	0	5%	1/8W
JR040	1-216-296-00	METAL CHIP	0	5%	1/8W
JR097	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L001	1-408-413-00	INDUCTOR	22uH		
L003	1-408-408-00	INDUCTOR	8.2uH		
L004	1-408-408-00	INDUCTOR	8.2uH		
L005	1-408-408-00	INDUCTOR	8.2uH		
L008	1-408-408-00	INDUCTOR	8.2uH		
L010	1-408-409-00	INDUCTOR	10uH		
		< DECODER >			
MP001	1-466-072-11	DECODER BLOCK, MULTIPLE SOUND			
		< TRANSISTOR >			
Q001	8-729-100-66	TRANSISTOR 2SC1623			
Q002	8-729-900-53	TRANSISTOR DTC114EK			
Q003	8-729-216-22	TRANSISTOR 2SA1162			
Q004	8-729-100-66	TRANSISTOR 2SC1623			

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Ref. No.	Part No.	Description				Remark
Q006	8-729-100-66	TRANSISTOR	2SC1623			
Q008	8-729-100-66	TRANSISTOR	2SC1623			
Q010	8-729-901-01	TRANSISTOR	DTC144EK			
Q014	8-729-216-22	TRANSISTOR	2SA1162			
		< RESISTOR >				
R001	1-216-295-00	METAL CHIP	0	5%	1/10W	
R002	1-216-295-00	METAL CHIP	0	5%	1/10W	
R003	1-216-295-00	METAL CHIP	0	5%	1/10W	
R004	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W	
R005	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W	
R008	1-216-025-00	METAL CHIP	100	5%	1/10W	
R009	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R011	1-216-047-00	METAL CHIP	820	5%	1/10W	
R012	1-216-035-00	METAL CHIP	270	5%	1/10W	
R013	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R014	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R015	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R016	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R017	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R018	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R021	1-216-295-00	METAL CHIP	0	5%	1/10W	
R022	1-216-748-11	METAL CHIP	39K	1%	1/10W	
R023	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R025	1-216-295-00	METAL CHIP	0	5%	1/10W	
R026	1-216-295-00	METAL CHIP	0	5%	1/10W	
R031	1-216-295-00	METAL CHIP	0	5%	1/10W	
R034	1-216-295-00	METAL CHIP	0	5%	1/10W	
R041	1-216-295-00	METAL CHIP	0	5%	1/10W	
R043	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R044	1-216-295-00	METAL CHIP	0	5%	1/10W	
R048	1-216-295-00	METAL CHIP	0	5%	1/10W	
R050	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R051	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R052	1-216-295-00	METAL CHIP	0	5%	1/10W	
R053	1-216-295-00	METAL CHIP	0	5%	1/10W	
R054	1-216-047-00	METAL CHIP	820	5%	1/10W	
R056	1-216-025-00	METAL CHIP	100	5%	1/10W	
R058	1-216-295-00	METAL CHIP	0	5%	1/10W	
R064	1-216-295-00	METAL CHIP	0	5%	1/10W	
R065	1-216-295-00	METAL CHIP	0	5%	1/10W	
R066	1-216-295-00	METAL CHIP	0	5%	1/10W	
R067	1-216-295-00	METAL CHIP	0	5%	1/10W	
R068	1-216-295-00	METAL CHIP	0	5%	1/10W	
R069	1-216-047-00	METAL CHIP	820	5%	1/10W	
R070	1-216-047-00	METAL CHIP	820	5%	1/10W	
R073	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R077	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R079	1-216-089-00	METAL CHIP	47K	5%	1/10W	

Ref. No.	Part No.	Description				Remark
R080	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R081	1-216-025-00	METAL CHIP	100	5%	1/10W	
R083	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R096	1-216-049-00	METAL CHIP	1K	5%	1/10W	
		< VARIABLE RESISTOR >				
RV001	1-228-994-00	RES, ADJ, METAL 10K				
		< TUNER >				
⚠ TU001	1-465-239-11	TUNER, ET				
**********						
*	A-7062-575-A	UC-8 BOARD, COMPLETE (Ref. No. 6000 Series)				
		**********				
		< CONNECTOR >				
CN101	1-566-529-11	CONNECTOR, FPC (ZIF) 13P				
CN102	1-566-527-11	CONNECTOR, FPC (ZIF) 11P				
		< DIODE >				
D101	8-719-104-34	DIODE	1S2836			
D102	8-719-104-34	DIODE	1S2836			
D103	8-719-104-34	DIODE	1S2836			
D104	8-719-104-34	DIODE	1S2836			
		< CABLE >				
W101	1-575-392-21	CABLE, FLAT (1.0MM PITCH) 14P				
**********						
*	A-7063-141-A	VI-104 BOARD, COMPLETE (Ref. No. 7000 Series)				
		**********				
		(Including the CD-64 board)				
	3-710-578-01	COVER, VOLUME, 6 MOLD				
		< CAPACITOR >				
C101	1-126-157-11	ELECT	10uF	20%	16V	
C102	1-124-465-00	ELECT	0.47uF	20%	50V	
C103	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C104	1-126-154-11	ELECT	47uF	20%	6.3V	
C105	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C106	1-164-222-11	CERAMIC CHIP	0.22uF		25V	
C107	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C108	1-126-157-11	ELECT	10uF	20%	16V	
C109	1-126-163-11	ELECT	4.7uF	20%	50V	
C110	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C111	1-163-833-00	CERAMIC CHIP	0.068uF		25V	
C112	1-126-157-11	ELECT	10uF	20%	16V	
C113	1-163-035-00	CERAMIC CHIP	0.047uF		50V	
C114	1-163-038-00	CERAMIC CHIP	0.1uF		25V	

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

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
C115	1-163-201-00	CERAMIC CHIP	680PF	5%	50V
C116	1-126-154-11	ELECT	47uF	20%	6.3V
C117	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C118	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C119	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C120	1-126-157-11	ELECT	10uF	20%	16V
C121	1-126-157-11	ELECT	10uF	20%	16V
C122	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C124	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C125	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C126	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C127	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C128	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C129	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C130	1-126-157-11	ELECT	10uF	20%	16V
C131	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C132	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C133	1-126-157-11	ELECT	10uF	20%	16V
C134	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C135	1-126-162-11	ELECT	3.3uF	20%	50V
C136	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C137	1-126-157-11	ELECT	10uF	20%	16V
C138	1-126-162-11	ELECT	3.3uF	20%	50V
C139	1-126-162-11	ELECT	3.3uF	20%	50V
C141	1-126-157-11	ELECT	10uF	20%	16V
C142	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C143	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C144	1-124-471-00	ELECT	1000uF	20%	6.3V
C145	1-126-154-11	ELECT	47uF	20%	6.3V
C148	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C150	1-126-154-11	ELECT	47uF	20%	6.3V
C151	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C152	1-124-584-00	ELECT	100uF	20%	10V
C153	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C155	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C156	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C158	1-124-472-11	ELECT	470uF	20%	10V
C159	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C160	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C161	1-126-154-11	ELECT	47uF	20%	6.3V
C162	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C163	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C164	1-126-154-11	ELECT	47uF	20%	6.3V
C166	1-126-154-11	ELECT	47uF	20%	6.3V
C167	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C168	1-126-154-11	ELECT	47uF	20%	6.3V
C170	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C171	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C172	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C173	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C174	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C175	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C176	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C177	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C180	1-126-176-11	ELECT	220uF	20%	10V
C181	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C182	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C183	1-126-154-11	ELECT	47uF	20%	6.3V
C184	1-126-154-11	ELECT	47uF	20%	6.3V
C185	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C190	1-124-472-11	ELECT	470uF	20%	10V
C195	1-126-157-11	ELECT	10uF	20%	16V
C201	1-126-154-11	ELECT	47uF	20%	6.3V
C202	1-126-154-11	ELECT	47uF	20%	6.3V
C203	1-124-638-11	ELECT	22uF	20%	10V
C204	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C250	1-126-154-11	ELECT	47uF	20%	6.3V
C251	1-126-154-11	ELECT	47uF	20%	6.3V
C252	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C253	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C254	1-124-638-11	ELECT	22uF	20%	10V
C255	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C256	1-126-154-11	ELECT	47uF	20%	6.3V
C257	1-126-157-11	ELECT	10uF	20%	16V
C258	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C259	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C260	1-124-638-11	ELECT	22uF	20%	10V
C261	1-126-157-11	ELECT	10uF	20%	16V
C301	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C302	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C303	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C304	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C305	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C306	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C307	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C308	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C309	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C310	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C311	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C312	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C313	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C314	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C315	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C316	1-126-154-11	ELECT	47uF	20%	6.3V
C317	1-126-154-11	ELECT	47uF	20%	6.3V
C318	1-126-154-11	ELECT	47uF	20%	6.3V
C319	1-163-031-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description		Remark	
C320	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C321	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C322	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C323	1-135-176-21	TANTALUM CHIP	0.68uF	10%	20V
C324	1-126-157-11	ELECT	10uF	20%	16V
C325	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C326	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C327	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C328	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C329	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C331	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C332	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C333	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C334	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C335	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C336	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C337	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C338	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C339	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C401	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C402	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C403	1-126-157-11	ELECT	10uF	20%	16V
C404	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C405	1-126-154-11	ELECT	47uF	20%	6.3V
C406	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C407	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C408	1-126-157-11	ELECT	10uF	20%	16V
C409	1-126-157-11	ELECT	10uF	20%	16V
C410	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C411	1-126-157-11	ELECT	10uF	20%	16V
C412	1-126-154-11	ELECT	47uF	20%	6.3V
C413	1-126-154-11	ELECT	47uF	20%	6.3V
C414	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C415	1-126-157-11	ELECT	10uF	20%	16V
C416	1-126-154-11	ELECT	47uF	20%	6.3V
C417	1-126-154-11	ELECT	47uF	20%	6.3V
C418	1-126-154-11	ELECT	47uF	20%	6.3V
C419	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C420	1-126-157-11	ELECT	10uF	20%	16V
C421	1-126-154-11	ELECT	47uF	20%	6.3V
C422	1-126-154-11	ELECT	47uF	20%	6.3V
C423	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C424	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C426	1-126-154-11	ELECT	47uF	20%	6.3V
C427	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C428	1-126-154-11	ELECT	47uF	20%	6.3V
C429	1-126-154-11	ELECT	47uF	20%	6.3V
C430	1-126-154-11	ELECT	47uF	20%	6.3V
C431	1-126-154-11	ELECT	47uF	20%	6.3V
C432	1-126-157-11	ELECT	10uF	20%	16V
C433	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C502	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C503	1-126-373-11	ELECT	470uF	20%	10V
C504	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C505	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C506	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C507	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C508	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C510	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C511	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C512	1-164-232-11	CERAMIC CHIP	0.01MF	5%	50V
C513	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C514	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C515	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C516	1-126-154-11	ELECT	47uF	20%	6.3V
C517	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C518	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C519	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C520	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C521	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C522	1-163-114-00	CERAMIC CHIP	75PF	5%	50V
C527	1-126-154-11	ELECT	47uF	20%	6.3V
C528	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C529	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C530	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C531	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C532	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C533	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C534	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C535	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C536	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C537	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C538	1-163-120-00	CERAMIC CHIP	130PF	5%	50V
C539	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C540	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C541	1-126-157-11	ELECT	10uF	20%	16V
C542	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C543	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C544	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C545	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C546	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C547	1-126-157-11	ELECT	10uF	20%	16V
C548	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C549	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C550	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C551	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C552	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C553	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V

Ref. No.	Part No.	Description			Remark
C554	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C555	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C556	1-163-091-00	CERAMIC CHIP	8PF		50V
C557	1-163-085-00	CERAMIC CHIP	2PF		50V
C558	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C559	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C560	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C561	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C562	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C563	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C564	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C565	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C566	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C568	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C569	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C570	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C571	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C572	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C574	1-163-116-00	CERAMIC CHIP	91PF	5%	50V
C576	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C577	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C579	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C580	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C581	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C582	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C583	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C584	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C585	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C586	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C704	1-126-301-11	ELECT	1uF	20%	50V
C705	1-126-301-11	ELECT	1uF	20%	50V
C706	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C707	1-126-301-11	ELECT	1uF	20%	50V
C708	1-126-301-11	ELECT	1uF	20%	50V
C709	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C711	1-126-301-11	ELECT	1uF	20%	50V
C712	1-126-301-11	ELECT	1uF	20%	50V
C713	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C714	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C715	1-126-154-11	ELECT	47uF	20%	6.3V
C716	1-126-154-11	ELECT	47uF	20%	6.3V
C717	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C718	1-126-154-11	ELECT	47uF	20%	6.3V
C850	1-102-947-00	CERAMIC	10PF	5%	50V
C912	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C913	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C914	1-163-243-11	CERAMIC CHIP	47PF	5%	50V

Ref. No.	Part No.	Description	Remark
		< FILTER >	
CF301	1-567-306-11	FILTER, CERAMIC	
		< CONNECTOR >	
CN101	1-568-082-11	CONNECTOR (RECEPTALE) 26P	
CN102	1-568-078-11	CONNECTOR (RECEPTALE) 18P	
CN103	1-506-469-11	CONNECTOR 4P, MALE	
CN104	1-506-469-11	CONNECTOR 4P, MALE	
CN105	1-506-471-11	CONNECTOR 6P, MALE	
CN106	1-506-469-11	CONNECTOR 4P, MALE	
		< DIODE >	
D101	8-719-400-18	DIODE MA152WK	
D102	8-719-400-18	DIODE MA152WK	
D104	8-719-400-18	DIODE MA152WK	
D107	8-719-400-18	DIODE MA152WK	
D109	8-719-104-34	DIODE 1S2836	
D201	8-719-104-34	DIODE 1S2836	
D301	8-719-104-34	DIODE 1S2836	
D501	8-719-800-76	DIODE 1SS226	
D502	8-719-800-76	DIODE 1SS226	
D503	8-719-800-76	DIODE 1SS226	
D504	8-719-400-18	DIODE MA152WK	
D801	8-719-104-34	DIODE 1S2836	
		< FILTER >	
FL101	1-239-169-11	FILTER, LOW PASS (Y)	
FL103	1-236-774-11	FILTER, LOW PASS (Y)	
FL104	1-239-168-11	FILTER, LOW PASS (DE MOD)	
FL301	1-239-170-11	FILTER, CHROMA BAND PASS	
FL302	1-239-171-11	FILTER, CHROMA BAND PASS	
FL501	1-409-466-11	TRAP	
		< IC >	
IC101	8-752-054-87	IC CXA1207AQ	
IC102	8-759-710-86	IC NJM2233BM	
IC103	8-759-710-86	IC NJM2233BM	
IC104	8-759-710-86	IC NJM2233BM	
IC105	8-759-710-86	IC NJM2233BM	
IC106	8-759-710-86	IC NJM2233BM	
IC107	8-759-008-67	IC MC14066BF	
IC108	1-808-584-11	IC NJM2209S	
IC109	8-759-504-46	IC PQ05RF1	
IC301	8-752-039-34	IC CXA1208Q	
IC501	8-759-998-32	IC CXD-2107M	
IC502	8-759-925-60	IC BA401	
IC701	8-752-052-58	IC CXA1410M	

< CHIP JUMPER >

Ref. No.	Part No.	Description			Remark
JR001	1-216-296-00	METAL CHIP	0	5%	1/8W
JR002	1-216-296-00	METAL CHIP	0	5%	1/8W
JR003	1-216-295-00	METAL CHIP	0	5%	1/10W
JR004	1-216-295-00	METAL CHIP	0	5%	1/10W
JR005	1-216-296-00	METAL CHIP	0	5%	1/8W
JR007	1-216-296-00	METAL CHIP	0	5%	1/8W
JR008	1-216-295-00	METAL CHIP	0	5%	1/10W
JR010	1-216-296-00	METAL CHIP	0	5%	1/8W
JR012	1-216-296-00	METAL CHIP	0	5%	1/8W
JR013	1-216-295-00	METAL CHIP	0	5%	1/10W
JR014	1-216-295-00	METAL CHIP	0	5%	1/10W
JR016	1-216-295-00	METAL CHIP	0	5%	1/10W
JR017	1-216-295-00	METAL CHIP	0	5%	1/10W
JR018	1-216-295-00	METAL CHIP	0	5%	1/10W
JR019	1-216-295-00	METAL CHIP	0	5%	1/10W
JR020	1-216-295-00	METAL CHIP	0	5%	1/10W
JR024	1-216-296-00	METAL CHIP	0	5%	1/8W
JR025	1-216-296-00	METAL CHIP	0	5%	1/8W
JR027	1-216-296-00	METAL CHIP	0	5%	1/8W
JR029	1-216-296-00	METAL CHIP	0	5%	1/8W
JR030	1-216-296-00	METAL CHIP	0	5%	1/8W
JR031	1-216-296-00	METAL CHIP	0	5%	1/8W
JR032	1-216-296-00	METAL CHIP	0	5%	1/8W
JR033	1-216-295-00	METAL CHIP	0	5%	1/10W
JR034	1-216-295-00	METAL CHIP	0	5%	1/10W
JR035	1-216-296-00	METAL CHIP	0	5%	1/8W
JR036	1-216-296-00	METAL CHIP	0	5%	1/8W
JR037	1-216-295-00	METAL CHIP	0	5%	1/10W
JR038	1-216-295-00	METAL CHIP	0	5%	1/10W
JR039	1-216-295-00	METAL CHIP	0	5%	1/10W
JR040	1-216-296-00	METAL CHIP	0	5%	1/8W
JR044	1-216-296-00	METAL CHIP	0	5%	1/8W
JR045	1-216-295-00	METAL CHIP	0	5%	1/10W
JR046	1-216-295-00	METAL CHIP	0	5%	1/10W
JR047	1-216-295-00	METAL CHIP	0	5%	1/10W
JR049	1-216-296-00	METAL CHIP	0	5%	1/8W
JR052	1-216-296-00	METAL CHIP	0	5%	1/8W
JR053	1-216-295-00	METAL CHIP	0	5%	1/10W
JR054	1-216-296-00	METAL CHIP	0	5%	1/8W
JR055	1-216-295-00	METAL CHIP	0	5%	1/10W
JR056	1-216-295-00	METAL CHIP	0	5%	1/10W
JR057	1-216-295-00	METAL CHIP	0	5%	1/10W
JR058	1-216-295-00	METAL CHIP	0	5%	1/10W
JR059	1-216-295-00	METAL CHIP	0	5%	1/10W
JR060	1-216-295-00	METAL CHIP	0	5%	1/10W
JR061	1-216-296-00	METAL CHIP	0	5%	1/8W
JR062	1-216-295-00	METAL CHIP	0	5%	1/10W
JR063	1-216-295-00	METAL CHIP	0	5%	1/10W
JR064	1-216-295-00	METAL CHIP	0	5%	1/10W
JR065	1-216-296-00	METAL CHIP	0	5%	1/8W
JR066	1-216-296-00	METAL CHIP	0	5%	1/8W
JR067	1-216-296-00	METAL CHIP	0	5%	1/8W
JR068	1-216-295-00	METAL CHIP	0	5%	1/10W
JR069	1-216-296-00	METAL CHIP	0	5%	1/8W
JR070	1-216-296-00	METAL CHIP	0	5%	1/8W
JR071	1-216-296-00	METAL CHIP	0	5%	1/8W
JR072	1-216-295-00	METAL CHIP	0	5%	1/10W
JR073	1-216-296-00	METAL CHIP	0	5%	1/8W
JR075	1-216-296-00	METAL CHIP	0	5%	1/8W
JR076	1-216-295-00	METAL CHIP	0	5%	1/10W
JR077	1-216-296-00	METAL CHIP	0	5%	1/8W
JR080	1-216-295-00	METAL CHIP	0	5%	1/10W
JR081	1-216-296-00	METAL CHIP	0	5%	1/8W
JR082	1-216-296-00	METAL CHIP	0	5%	1/8W
JR083	1-216-296-00	METAL CHIP	0	5%	1/8W
JR084	1-216-296-00	METAL CHIP	0	5%	1/8W
JR085	1-216-295-00	METAL CHIP	0	5%	1/10W
JR086	1-216-295-00	METAL CHIP	0	5%	1/10W
JR088	1-216-295-00	METAL CHIP	0	5%	1/10W
JR090	1-216-296-00	METAL CHIP	0	5%	1/8W
JR092	1-216-295-00	METAL CHIP	0	5%	1/10W
JR093	1-216-295-00	METAL CHIP	0	5%	1/10W
JR094	1-216-295-00	METAL CHIP	0	5%	1/10W
JR095	1-216-296-00	METAL CHIP	0	5%	1/8W
JR096	1-216-296-00	METAL CHIP	0	5%	1/8W
JR097	1-216-296-00	METAL CHIP	0	5%	1/8W
JR098	1-216-295-00	METAL CHIP	0	5%	1/10W
JR099	1-216-296-00	METAL CHIP	0	5%	1/8W
JR100	1-216-296-00	METAL CHIP	0	5%	1/8W
JR101	1-216-295-00	METAL CHIP	0	5%	1/10W
JR102	1-216-296-00	METAL CHIP	0	5%	1/8W
JR103	1-216-296-00	METAL CHIP	0	5%	1/8W
JR104	1-216-295-00	METAL CHIP	0	5%	1/10W
JR105	1-216-295-00	METAL CHIP	0	5%	1/10W
JR106	1-216-295-00	METAL CHIP	0	5%	1/10W
JR107	1-216-296-00	METAL CHIP	0	5%	1/8W
JR108	1-216-296-00	METAL CHIP	0	5%	1/8W
JR109	1-216-296-00	METAL CHIP	0	5%	1/8W
JR110	1-216-296-00	METAL CHIP	0	5%	1/8W
JR111	1-216-295-00	METAL CHIP	0	5%	1/10W
JR112	1-216-295-00	METAL CHIP	0	5%	1/10W
JR113	1-216-296-00	METAL CHIP	0	5%	1/8W
JR115	1-216-296-00	METAL CHIP	0	5%	1/8W
JR116	1-216-295-00	METAL CHIP	0	5%	1/10W
JR117	1-216-295-00	METAL CHIP	0	5%	1/10W
JR118	1-216-295-00	METAL CHIP	0	5%	1/10W

Ref. No.	Part No.	Description			Remark
JR119	1-216-295-00	METAL CHIP	0	5%	1/10W
JR120	1-216-295-00	METAL CHIP	0	5%	1/10W
JR121	1-216-295-00	METAL CHIP	0	5%	1/10W
JR123	1-216-296-00	METAL CHIP	0	5%	1/8W
JR124	1-216-296-00	METAL CHIP	0	5%	1/8W
JR125	1-216-296-00	METAL CHIP	0	5%	1/8W
JR126	1-216-296-00	METAL CHIP	0	5%	1/8W
JR127	1-216-295-00	METAL CHIP	0	5%	1/10W
JR128	1-216-295-00	METAL CHIP	0	5%	1/10W
JR129	1-216-296-00	METAL CHIP	0	5%	1/8W
JR130	1-216-295-00	METAL CHIP	0	5%	1/10W
JR131	1-216-295-00	METAL CHIP	0	5%	1/10W
JR132	1-216-295-00	METAL CHIP	0	5%	1/10W
JR134	1-216-295-00	METAL CHIP	0	5%	1/10W
JR135	1-216-296-00	METAL CHIP	0	5%	1/8W
JR136	1-216-296-00	METAL CHIP	0	5%	1/8W
JR137	1-216-296-00	METAL CHIP	0	5%	1/8W
JR138	1-216-295-00	METAL CHIP	0	5%	1/10W
JR139	1-216-296-00	METAL CHIP	0	5%	1/8W
JR140	1-216-296-00	METAL CHIP	0	5%	1/8W
JR141	1-216-296-00	METAL CHIP	0	5%	1/8W
JR142	1-216-295-00	METAL CHIP	0	5%	1/10W
JR143	1-216-296-00	METAL CHIP	0	5%	1/8W
JR150	1-216-295-00	METAL CHIP	0	5%	1/10W
JR160	1-216-295-00	METAL CHIP	0	5%	1/10W
JR161	1-216-296-00	METAL CHIP	0	5%	1/8W
JR162	1-216-296-00	METAL CHIP	0	5%	1/8W
JR163	1-216-296-00	METAL CHIP	0	5%	1/8W
JR164	1-216-296-00	METAL CHIP	0	5%	1/8W
JR165	1-216-296-00	METAL CHIP	0	5%	1/8W
JR166	1-216-295-00	METAL CHIP	0	5%	1/10W
JR167	1-216-295-00	METAL CHIP	0	5%	1/10W
JR168	1-216-296-00	METAL CHIP	0	5%	1/8W
JR169	1-216-296-00	METAL CHIP	0	5%	1/8W
JR170	1-216-296-00	METAL CHIP	0	5%	1/8W
JR171	1-216-296-00	METAL CHIP	0	5%	1/8W
JR172	1-216-296-00	METAL CHIP	0	5%	1/8W
JR173	1-216-296-00	METAL CHIP	0	5%	1/8W
JR174	1-216-296-00	METAL CHIP	0	5%	1/8W
JR200	1-216-296-00	METAL CHIP	0	5%	1/8W
JR202	1-216-295-00	METAL CHIP	0	5%	1/10W
JR203	1-216-295-00	METAL CHIP	0	5%	1/10W
JR204	1-216-296-00	METAL CHIP	0	5%	1/8W
JR223	1-216-296-00	METAL CHIP	0	5%	1/8W

< COIL >

Ref. No.	Part No.	Description	
L101	1-408-978-21	INDUCTOR	47uH
L102	1-408-968-21	INDUCTOR	6.8uH
L103	1-407-169-XX	INDUCTOR	100uH
L104	1-407-169-XX	INDUCTOR	100uH
L105	1-408-975-21	INDUCTOR	27uH
L106	1-408-979-21	INDUCTOR	56uH
L107	1-408-970-21	INDUCTOR	10uH
L108	1-407-169-XX	INDUCTOR	100uH
L109	1-408-975-21	INDUCTOR	27uH
L111	1-407-169-XX	INDUCTOR	100uH
L112	1-408-967-21	INDUCTOR	5.6uH
L113	1-408-970-21	INDUCTOR	10uH
L114	1-408-979-21	INDUCTOR	56uH
L116	1-408-974-21	INDUCTOR	22uH
L118	1-408-977-21	INDUCTOR	39uH
L119	1-407-169-XX	INDUCTOR	100uH
L120	1-408-968-21	INDUCTOR	6.8uH
L121	1-407-169-XX	INDUCTOR	100uH
L122	1-408-948-00	INDUCTOR	220uH
L201	1-412-956-21	INDUCTOR	27uH
L251	1-408-977-21	INDUCTOR	39uH
L252	1-408-979-21	INDUCTOR	56uH
L253	1-408-977-21	INDUCTOR	39uH
L301	1-407-169-XX	INDUCTOR	100uH
L302	1-408-983-21	INDUCTOR	120uH
L303	1-408-981-21	INDUCTOR	82uH
L304	1-408-984-21	INDUCTOR	150uH
L305	1-408-984-21	INDUCTOR	150uH
L306	1-408-974-21	INDUCTOR	22uH
L307	1-408-974-21	INDUCTOR	22uH
L308	1-408-987-21	INDUCTOR	330uH
L309	1-408-984-21	INDUCTOR	150uH
L401	1-407-169-XX	INDUCTOR	100uH
L402	1-407-169-XX	INDUCTOR	100uH
L403	1-407-169-XX	INDUCTOR	100uH
L501	1-408-970-21	INDUCTOR	10uH
L502	1-408-969-21	INDUCTOR	8.2uH
L503	1-408-987-21	INDUCTOR	330uH
L504	1-408-983-21	INDUCTOR	120uH
L506	1-410-072-21	INDUCTOR	820uH
L507	1-408-970-21	INDUCTOR	10uH
L508	1-408-963-11	INDUCTOR	2.7uH
L509	1-408-968-21	INDUCTOR	6.8uH
L510	1-408-968-21	INDUCTOR	6.8uH
L511	1-408-973-21	INDUCTOR	18uH
L512	1-408-989-21	INDUCTOR	470uH
L513	1-408-989-21	INDUCTOR	470uH
L514	1-408-973-21	INDUCTOR	18uH
L515	1-407-169-XX	INDUCTOR	100uH
L516	1-408-975-21	INDUCTOR	27uH
L517	1-408-970-21	INDUCTOR	10uH
L518	1-407-169-XX	INDUCTOR	100uH

Remark

Ref. No.	Part No.	Description		Remark
L519	1-407-169-XX	INDUCTOR	100uH	
L520	1-408-987-21	INDUCTOR	330uH	
L521	1-408-985-21	INDUCTOR	180uH	
L522	1-408-984-21	INDUCTOR	150uH	
L523	1-408-948-00	INDUCTOR	220uH	
L703	1-407-169-XX	INDUCTOR	100uH	
L904	1-408-970-21	INDUCTOR	10uH	
		< TRANSISTOR >		
Q101	8-729-901-06	TRANSISTOR	DTA144EK	
Q102	8-729-901-01	TRANSISTOR	DTC144EK	
Q103	8-729-901-06	TRANSISTOR	DTA144EK	
Q104	8-729-901-01	TRANSISTOR	DTC144EK	
Q105	8-729-901-06	TRANSISTOR	DTA144EK	
Q106	8-729-901-01	TRANSISTOR	DTC144EK	
Q107	8-729-901-06	TRANSISTOR	DTA144EK	
Q108	8-729-901-01	TRANSISTOR	DTC144EK	
Q109	8-729-901-06	TRANSISTOR	DTA144EK	
Q110	8-729-901-01	TRANSISTOR	DTC144EK	
Q111	8-729-901-06	TRANSISTOR	DTA144EK	
Q112	8-729-901-01	TRANSISTOR	DTC144EK	
Q113	8-729-901-01	TRANSISTOR	DTC144EK	
Q114	8-729-901-06	TRANSISTOR	DTA144EK	
Q115	8-729-901-01	TRANSISTOR	DTC144EK	
Q116	8-729-901-06	TRANSISTOR	DTA144EK	
Q117	8-729-320-17	TRANSISTOR	2SA1122-CD	
Q118	8-729-901-06	TRANSISTOR	DTA144EK	
Q119	8-729-202-38	TRANSISTOR	2SC3326N	
Q120	8-729-202-38	TRANSISTOR	2SC3326N	
Q121	8-729-901-01	TRANSISTOR	DTC144EK	
Q122	8-729-901-01	TRANSISTOR	DTC144EK	
Q123	8-729-901-01	TRANSISTOR	DTC144EK	
Q124	8-729-901-01	TRANSISTOR	DTC144EK	
Q125	8-729-901-06	TRANSISTOR	DTA144EK	
Q126	8-729-901-06	TRANSISTOR	DTA144EK	
Q127	8-729-216-22	TRANSISTOR	2SA1162	
Q128	8-729-100-66	TRANSISTOR	2SC1623	
Q129	8-729-100-66	TRANSISTOR	2SC1623	
Q130	8-729-901-06	TRANSISTOR	DTA144EK	
Q131	8-729-901-01	TRANSISTOR	DTC144EK	
Q132	8-729-901-01	TRANSISTOR	DTC144EK	
Q133	8-729-100-66	TRANSISTOR	2SC1623	
Q135	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q136	8-729-100-66	TRANSISTOR	2SC1623	
Q138	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q139	8-729-901-06	TRANSISTOR	DTA144EK	
Q141	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q143	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q144	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q145	8-729-901-06	TRANSISTOR	DTA144EK	
Q146	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q147	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q150	8-729-216-22	TRANSISTOR	2SA1162	
Q151	8-729-216-22	TRANSISTOR	2SA1162	
Q152	8-729-100-66	TRANSISTOR	2SC1623	
Q153	8-729-100-66	TRANSISTOR	2SC1623	
Q155	8-729-901-06	TRANSISTOR	DTA144EK	
Q156	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q157	8-729-100-66	TRANSISTOR	2SC1623	
Q158	8-729-100-66	TRANSISTOR	2SC1623	
Q159	8-729-100-66	TRANSISTOR	2SC1623	
Q160	8-729-901-01	TRANSISTOR	DTC144EK	
Q161	8-729-901-01	TRANSISTOR	DTC144EK	
Q170	8-729-901-06	TRANSISTOR	DTA144EK	
Q171	8-729-901-01	TRANSISTOR	DTC144EK	
Q172	8-729-901-06	TRANSISTOR	DTA144EK	
Q173	8-729-901-01	TRANSISTOR	DTC144EK	
Q174	8-729-901-01	TRANSISTOR	DTC144EK	
Q175	8-729-901-01	TRANSISTOR	DTC144EK	
Q176	8-729-901-01	TRANSISTOR	DTC144EK	
Q177	8-729-901-01	TRANSISTOR	DTC144EK	
Q178	8-729-901-01	TRANSISTOR	DTC144EK	
Q179	8-729-901-01	TRANSISTOR	DTC144EK	
Q180	8-729-901-01	TRANSISTOR	DTC144EK	
Q181	8-729-901-01	TRANSISTOR	DTC144EK	
Q182	8-729-901-01	TRANSISTOR	DTC144EK	
Q183	8-729-901-01	TRANSISTOR	DTC144EK	
Q184	8-729-901-01	TRANSISTOR	DTC144EK	
Q201	8-729-100-66	TRANSISTOR	2SC1623	
Q250	8-729-100-66	TRANSISTOR	2SC1623	
Q251	8-729-100-66	TRANSISTOR	2SC1623	
Q252	8-729-100-66	TRANSISTOR	2SC1623	
Q253	8-729-100-66	TRANSISTOR	2SC1623	
Q254	8-729-100-66	TRANSISTOR	2SC1623	
Q255	8-729-100-66	TRANSISTOR	2SC1623	
Q256	8-729-901-06	TRANSISTOR	DTA144EK	
Q257	8-729-100-66	TRANSISTOR	2SC1623	
Q258	8-729-901-06	TRANSISTOR	DTA144EK	
Q259	8-729-100-66	TRANSISTOR	2SC1623	
Q260	8-729-320-17	TRANSISTOR	2SA1122-CD	
Q261	8-729-901-01	TRANSISTOR	DTC144EK	
Q301	8-729-100-66	TRANSISTOR	2SC1623	
Q302	8-729-901-01	TRANSISTOR	DTC144EK	
Q303	8-729-202-38	TRANSISTOR	2SC3326N	
Q304	8-729-901-01	TRANSISTOR	DTC144EK	
Q305	8-729-216-22	TRANSISTOR	2SA1162	
Q306	8-729-100-66	TRANSISTOR	2SC1623	
Q307	8-729-901-01	TRANSISTOR	DTC144EK	

Ref. No.	Part No.	Description		Remark
Q308	8-729-901-01	TRANSISTOR	DTC144EK	
Q309	8-729-202-38	TRANSISTOR	2SC3326N	
Q311	8-729-100-66	TRANSISTOR	2SC1623	
Q312	8-729-100-66	TRANSISTOR	2SC1623	
Q313	8-729-100-66	TRANSISTOR	2SC1623	
Q314	8-729-100-66	TRANSISTOR	2SC1623	
Q315	8-729-100-66	TRANSISTOR	2SC1623	
Q327	8-729-901-01	TRANSISTOR	DTC144EK	
Q401	8-729-100-66	TRANSISTOR	2SC1623	
Q402	8-729-100-66	TRANSISTOR	2SC1623	
Q500	8-729-903-30	TRANSISTOR	DTC144TK	
Q501	8-729-100-66	TRANSISTOR	2SC1623	
Q502	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q503	8-729-100-66	TRANSISTOR	2SC1623	
Q505	8-729-100-66	TRANSISTOR	2SC1623	
Q506	8-729-901-06	TRANSISTOR	DTA144EK	
Q507	8-729-901-06	TRANSISTOR	DTA144EK	
Q508	8-729-901-01	TRANSISTOR	DTC144EK	
Q509	8-729-100-66	TRANSISTOR	2SC1623	
Q510	8-729-100-66	TRANSISTOR	2SC1623	
Q511	8-729-100-66	TRANSISTOR	2SC1623	
Q512	8-729-901-06	TRANSISTOR	DTA144EK	
Q513	8-729-100-66	TRANSISTOR	2SC1623	
Q514	8-729-216-22	TRANSISTOR	2SA1162	
Q515	8-729-100-66	TRANSISTOR	2SC1623	
Q516	8-729-100-66	TRANSISTOR	2SC1623	
Q517	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q518	8-729-100-66	TRANSISTOR	2SC1623	
Q519	8-729-100-66	TRANSISTOR	2SC1623	
Q520	8-729-901-01	TRANSISTOR	DTC144EK	
Q521	8-729-102-07	TRANSISTOR	2SC2223-F13	
Q522	8-729-901-06	TRANSISTOR	DTA144EK	
Q523	8-729-901-01	TRANSISTOR	DTC144EK	
Q524	8-729-901-01	TRANSISTOR	DTC144EK	
Q525	8-729-100-66	TRANSISTOR	2SC1623	
Q526	8-729-216-22	TRANSISTOR	2SA1162	
Q527	8-729-100-66	TRANSISTOR	2SC1623	
Q528	8-729-100-66	TRANSISTOR	2SC1623	
Q529	8-729-100-66	TRANSISTOR	2SC1623	
Q530	8-729-100-66	TRANSISTOR	2SC1623	
Q531	8-729-100-66	TRANSISTOR	2SC1623	
Q532	8-729-100-66	TRANSISTOR	2SC1623	
Q533	8-729-100-66	TRANSISTOR	2SC1623	
Q534	8-729-100-66	TRANSISTOR	2SC1623	
Q535	8-729-901-01	TRANSISTOR	DTC144EK	
Q536	8-729-901-06	TRANSISTOR	DTA144EK	
Q537	8-729-901-01	TRANSISTOR	DTC144EK	
Q538	8-729-102-08	TRANSISTOR	2SC2223-F14	
Q539	8-729-901-01	TRANSISTOR	DTC144EK	
Q540	8-729-100-66	TRANSISTOR	2SC1623	
Q541	8-729-902-99	TRANSISTOR	DTC114TK	
Q908	8-729-901-01	TRANSISTOR	DTC144EK	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R101	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R102	1-216-041-00	METAL CHIP	470	5%	1/10W	
R103	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R105	1-216-041-00	METAL CHIP	470	5%	1/10W	
R106	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R107	1-216-041-00	METAL CHIP	470	5%	1/10W	
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R109	1-216-631-11	METAL CHIP	150	0.5%	1/10W	
R110	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R111	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R112	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R115	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R116	1-216-699-11	METAL CHIP	100K	0.5%	1/10W	
R117	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R118	1-216-043-00	METAL CHIP	560	5%	1/10W	
R119	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R120	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R121	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R122	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R123	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R124	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	
R125	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	
R126	1-216-645-11	METAL CHIP	560	0.5%	1/10W	
R127	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R128	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R129	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R130	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R131	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R132	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R133	1-216-653-11	METAL CHIP	1.2K	0.5%	1/10W	
R134	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W	
R135	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	
R136	1-216-641-11	METAL CHIP	390	0.5%	1/10W	
R137	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W	
R138	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R139	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R140	1-216-643-11	METAL CHIP	470	0.5%	1/10W	
R141	1-216-641-11	METAL CHIP	390	0.5%	1/10W	
R142	1-216-031-00	METAL CHIP	180	5%	1/10W	
R143	1-216-697-11	METAL CHIP	82K	0.5%	1/10W	
R144	1-216-687-11	METAL CHIP	33K	0.5%	1/10W	

Ref. No.	Part No.	Description			Remark
R145	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R146	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R147	1-216-049-00	METAL CHIP	1K	5%	1/10W
R148	1-216-049-00	METAL CHIP	1K	5%	1/10W
R149	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R150	1-216-041-00	METAL CHIP	470	5%	1/10W
R151	1-216-083-00	METAL CHIP	27K	5%	1/10W
R152	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-091-00	METAL CHIP	56K	5%	1/10W
R155	1-216-041-00	METAL CHIP	470	5%	1/10W
R156	1-216-049-00	METAL CHIP	1K	5%	1/10W
R157	1-216-049-00	METAL CHIP	1K	5%	1/10W
R158	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R159	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R161	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R164	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R165	1-216-089-00	METAL CHIP	47K	5%	1/10W
R172	1-216-029-00	METAL CHIP	150	5%	1/10W
R175	1-216-043-00	METAL CHIP	560	5%	1/10W
R178	1-216-035-00	METAL CHIP	270	5%	1/10W
R179	1-216-039-00	METAL CHIP	390	5%	1/10W
R181	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R182	1-216-041-00	METAL CHIP	470	5%	1/10W
R183	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R184	1-216-035-00	METAL CHIP	270	5%	1/10W
R186	1-216-073-00	METAL CHIP	10K	5%	1/10W
R187	1-216-073-00	METAL CHIP	10K	5%	1/10W
R188	1-216-041-00	METAL CHIP	470	5%	1/10W
R189	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R190	1-216-060-00	METAL GLAZE	3K	5%	1/10W
R191	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R192	1-216-041-00	METAL CHIP	470	5%	1/10W
R194	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R195	1-216-041-00	METAL CHIP	470	5%	1/10W
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R197	1-216-073-00	METAL CHIP	10K	5%	1/10W
R198	1-216-073-00	METAL CHIP	10K	5%	1/10W
R199	1-216-035-00	METAL CHIP	270	5%	1/10W
R200	1-216-073-00	METAL CHIP	10K	5%	1/10W
R201	1-216-192-00	METAL CHIP	560	5%	1/8W
R202	1-216-198-00	METAL CHIP	1K	5%	1/8W
R203	1-216-035-00	METAL CHIP	270	5%	1/10W
R204	1-216-035-00	METAL CHIP	270	5%	1/10W
R205	1-216-049-00	METAL CHIP	1K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R208	1-216-085-00	METAL CHIP	33K	5%	1/10W
R209	1-216-049-00	METAL CHIP	1K	5%	1/10W
R210	1-216-031-00	METAL CHIP	180	5%	1/10W
R211	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R212	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R213	1-216-039-00	METAL CHIP	390	5%	1/10W
R214	1-216-031-00	METAL CHIP	180	5%	1/10W
R215	1-216-039-00	METAL CHIP	390	5%	1/10W
R216	1-216-039-00	METAL CHIP	390	5%	1/10W
R217	1-216-041-00	METAL CHIP	470	5%	1/10W
R218	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R219	1-216-045-00	METAL CHIP	680	5%	1/10W
R220	1-216-047-00	METAL CHIP	820	5%	1/10W
R221	1-216-037-00	METAL CHIP	330	5%	1/10W
R222	1-216-025-00	METAL CHIP	100	5%	1/10W
R223	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R224	1-216-073-00	METAL CHIP	10K	5%	1/10W
R225	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R227	1-216-073-00	METAL CHIP	10K	5%	1/10W
R228	1-216-049-00	METAL CHIP	1K	5%	1/10W
R229	1-216-073-00	METAL CHIP	10K	5%	1/10W
R230	1-216-073-00	METAL CHIP	10K	5%	1/10W
R233	1-216-089-00	METAL CHIP	47K	5%	1/10W
R234	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R235	1-216-073-00	METAL CHIP	10K	5%	1/10W
R240	1-216-079-00	METAL CHIP	18K	5%	1/10W
R241	1-216-041-00	METAL CHIP	470	5%	1/10W
R243	1-216-049-00	METAL CHIP	1K	5%	1/10W
R250	1-216-037-00	METAL CHIP	330	5%	1/10W
R251	1-216-047-00	METAL CHIP	820	5%	1/10W
R252	1-216-043-00	METAL CHIP	560	5%	1/10W
R253	1-216-073-00	METAL CHIP	10K	5%	1/10W
R254	1-216-073-00	METAL CHIP	10K	5%	1/10W
R255	1-216-073-00	METAL CHIP	10K	5%	1/10W
R256	1-216-073-00	METAL CHIP	10K	5%	1/10W
R257	1-216-073-00	METAL CHIP	10K	5%	1/10W
R258	1-216-047-00	METAL CHIP	820	5%	1/10W
R259	1-216-047-00	METAL CHIP	820	5%	1/10W
R260	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R261	1-216-025-00	METAL CHIP	100	5%	1/10W
R262	1-216-046-00	METAL CHIP	750	5%	1/10W
R263	1-216-041-00	METAL CHIP	470	5%	1/10W
R264	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R266	1-216-049-00	METAL CHIP	1K	5%	1/10W
R267	1-216-049-00	METAL CHIP	1K	5%	1/10W
R268	1-216-035-00	METAL CHIP	270	5%	1/10W
R269	1-216-041-00	METAL CHIP	470	5%	1/10W
R270	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R271	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R272	1-216-049-00	METAL CHIP	1K	5%	1/10W
R273	1-216-073-00	METAL CHIP	10K	5%	1/10W
R274	1-216-073-00	METAL CHIP	10K	5%	1/10W
R275	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R277	1-216-073-00	METAL CHIP	10K	5%	1/10W
R278	1-216-089-00	METAL CHIP	47K	5%	1/10W
R279	1-216-073-00	METAL CHIP	10K	5%	1/10W
R280	1-216-073-00	METAL CHIP	10K	5%	1/10W
R281	1-216-081-00	METAL CHIP	22K	5%	1/10W
R282	1-216-081-00	METAL CHIP	22K	5%	1/10W
R283	1-216-049-00	METAL CHIP	1K	5%	1/10W
R285	1-216-045-00	METAL CHIP	680	5%	1/10W
R301	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R302	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R303	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R304	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R305	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R306	1-216-089-00	METAL CHIP	47K	5%	1/10W
R307	1-216-049-00	METAL CHIP	1K	5%	1/10W
R308	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R309	1-216-043-00	METAL CHIP	560	5%	1/10W
R310	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R311	1-216-049-00	METAL CHIP	1K	5%	1/10W
R312	1-216-049-00	METAL CHIP	1K	5%	1/10W
R313	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R314	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W
R317	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R318	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R319	1-216-033-00	METAL CHIP	220	5%	1/10W
R320	1-216-037-00	METAL CHIP	330	5%	1/10W
R321	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R322	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R323	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R324	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R325	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R326	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R327	1-216-041-00	METAL CHIP	470	5%	1/10W
R328	1-216-073-00	METAL CHIP	10K	5%	1/10W
R329	1-216-073-00	METAL CHIP	10K	5%	1/10W
R330	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R331	1-216-073-00	METAL CHIP	10K	5%	1/10W
R332	1-216-073-00	METAL CHIP	10K	5%	1/10W
R333	1-216-043-00	METAL CHIP	560	5%	1/10W
R334	1-216-043-00	METAL CHIP	560	5%	1/10W
R335	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R336	1-216-043-00	METAL CHIP	560	5%	1/10W
R337	1-216-049-00	METAL CHIP	1K	5%	1/10W
R338	1-216-033-00	METAL CHIP	220	5%	1/10W

Ref. No.	Part No.	Description			Remark
R339	1-216-049-00	METAL CHIP	1K	5%	1/10W
R341	1-216-047-00	METAL CHIP	820	5%	1/10W
R342	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W
R343	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W
R344	1-216-049-00	METAL CHIP	1K	5%	1/10W
R346	1-216-295-00	METAL CHIP	0	5%	1/10W
R348	1-216-295-00	METAL CHIP	0	5%	1/10W
R365	1-216-295-00	METAL CHIP	0	5%	1/10W
R367	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R368	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-089-00	METAL CHIP	47K	5%	1/10W
R402	1-216-077-00	METAL CHIP	15K	5%	1/10W
R403	1-216-073-00	METAL CHIP	10K	5%	1/10W
R404	1-216-041-00	METAL CHIP	470	5%	1/10W
R405	1-216-047-00	METAL CHIP	820	5%	1/10W
R406	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R407	1-216-050-00	METAL GLAZE	1.1K	5%	1/10W
R500	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R501	1-216-049-00	METAL CHIP	1K	5%	1/10W
R502	1-216-073-00	METAL CHIP	10K	5%	1/10W
R503	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R504	1-216-047-00	METAL CHIP	820	5%	1/10W
R505	1-216-049-00	METAL CHIP	1K	5%	1/10W
R506	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W
R508	1-216-077-00	METAL CHIP	15K	5%	1/10W
R510	1-216-049-00	METAL CHIP	1K	5%	1/10W
R511	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R512	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R513	1-216-047-00	METAL CHIP	820	5%	1/10W
R514	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R515	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W
R516	1-216-198-00	METAL CHIP	1K	5%	1/8W
R517	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R518	1-216-081-00	METAL CHIP	22K	5%	1/10W
R519	1-216-083-00	METAL CHIP	27K	5%	1/10W
R520	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R521	1-216-049-00	METAL CHIP	1K	5%	1/10W
R522	1-216-043-00	METAL CHIP	560	5%	1/10W
R523	1-216-025-00	METAL CHIP	100	5%	1/10W
R524	1-216-041-00	METAL CHIP	470	5%	1/10W
R525	1-216-073-00	METAL CHIP	10K	5%	1/10W
R526	1-216-041-00	METAL CHIP	470	5%	1/10W
R527	1-216-073-00	METAL CHIP	10K	5%	1/10W
R528	1-216-037-00	METAL CHIP	330	5%	1/10W
R529	1-216-295-00	METAL CHIP	0	5%	1/10W
R530	1-216-049-00	METAL CHIP	1K	5%	1/10W
R531	1-216-033-00	METAL CHIP	220	5%	1/10W
R532	1-216-079-00	METAL CHIP	18K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R533	1-216-043-00	METAL CHIP	560	5%	1/10W
R534	1-216-043-00	METAL CHIP	560	5%	1/10W
R535	1-216-049-00	METAL CHIP	1K	5%	1/10W
R538	1-216-073-00	METAL CHIP	10K	5%	1/10W
R539	1-216-073-00	METAL CHIP	10K	5%	1/10W
R540	1-216-085-00	METAL CHIP	33K	5%	1/10W
R541	1-216-077-00	METAL CHIP	15K	5%	1/10W
R542	1-216-043-00	METAL CHIP	560	5%	1/10W
R543	1-216-039-00	METAL CHIP	390	5%	1/10W
R544	1-216-041-00	METAL CHIP	470	5%	1/10W
R545	1-216-049-00	METAL CHIP	1K	5%	1/10W
R546	1-216-049-00	METAL CHIP	1K	5%	1/10W
R547	1-216-073-00	METAL CHIP	10K	5%	1/10W
R548	1-216-073-00	METAL CHIP	10K	5%	1/10W
R549	1-216-043-00	METAL CHIP	560	5%	1/10W
R550	1-216-049-00	METAL CHIP	1K	5%	1/10W
R551	1-216-049-00	METAL CHIP	1K	5%	1/10W
R552	1-216-041-00	METAL CHIP	470	5%	1/10W
R553	1-216-081-00	METAL CHIP	22K	5%	1/10W
R554	1-216-081-00	METAL CHIP	22K	5%	1/10W
R555	1-216-037-00	METAL CHIP	330	5%	1/10W
R556	1-216-041-00	METAL CHIP	470	5%	1/10W
R557	1-216-041-00	METAL CHIP	470	5%	1/10W
R558	1-216-037-00	METAL CHIP	330	5%	1/10W
R559	1-216-043-00	METAL CHIP	560	5%	1/10W
R560	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R561	1-216-031-00	METAL CHIP	180	5%	1/10W
R562	1-216-073-00	METAL CHIP	10K	5%	1/10W
R563	1-216-073-00	METAL CHIP	10K	5%	1/10W
R564	1-216-295-00	METAL CHIP	0	5%	1/10W
R565	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R566	1-216-049-00	METAL CHIP	1K	5%	1/10W
R567	1-216-073-00	METAL CHIP	10K	5%	1/10W
R568	1-216-033-00	METAL CHIP	220	5%	1/10W
R569	1-216-029-00	METAL CHIP	150	5%	1/10W
R570	1-216-077-00	METAL CHIP	15K	5%	1/10W
R571	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R572	1-216-041-00	METAL CHIP	470	5%	1/10W
R573	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R574	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R575	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R576	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R577	1-216-073-00	METAL CHIP	10K	5%	1/10W
R578	1-216-073-00	METAL CHIP	10K	5%	1/10W
R579	1-216-037-00	METAL CHIP	330	5%	1/10W
R580	1-216-047-00	METAL CHIP	820	5%	1/10W
R581	1-216-073-00	METAL CHIP	10K	5%	1/10W
R582	1-216-073-00	METAL CHIP	10K	5%	1/10W
R583	1-216-049-00	METAL CHIP	1K	5%	1/10W
R584	1-216-083-00	METAL CHIP	27K	5%	1/10W
R585	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R588	1-216-075-00	METAL CHIP	12K	5%	1/10W
R589	1-216-073-00	METAL CHIP	10K	5%	1/10W
R590	1-216-033-00	METAL CHIP	220	5%	1/10W
R591	1-216-021-00	METAL CHIP	68	5%	1/10W
R592	1-216-043-00	METAL CHIP	560	5%	1/10W
R593	1-216-045-00	METAL CHIP	680	5%	1/10W
R594	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R595	1-216-049-00	METAL CHIP	1K	5%	1/10W
R596	1-216-043-00	METAL CHIP	560	5%	1/10W
R597	1-216-079-00	METAL CHIP	18K	5%	1/10W
R598	1-216-079-00	METAL CHIP	18K	5%	1/10W
R599	1-216-049-00	METAL CHIP	1K	5%	1/10W
R600	1-216-039-00	METAL CHIP	390	5%	1/10W
R601	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R604	1-216-073-00	METAL CHIP	10K	5%	1/10W
R605	1-216-027-00	METAL CHIP	120	5%	1/10W
R606	1-216-043-00	METAL CHIP	560	5%	1/10W
R610	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R611	1-216-081-00	METAL CHIP	22K	5%	1/10W
R612	1-216-081-00	METAL CHIP	22K	5%	1/10W
R613	1-216-085-00	METAL CHIP	33K	5%	1/10W
R614	1-216-081-00	METAL CHIP	22K	5%	1/10W
R615	1-216-085-00	METAL CHIP	33K	5%	1/10W
R616	1-216-192-00	METAL CHIP	560	5%	1/8W
R617	1-216-295-00	METAL CHIP	0	5%	1/10W
R618	1-216-192-00	METAL CHIP	560	5%	1/8W
R634	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R635	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R636	1-216-043-00	METAL CHIP	560	5%	1/10W
R637	1-216-043-00	METAL CHIP	560	5%	1/10W
R638	1-216-041-00	METAL CHIP	470	5%	1/10W
R639	1-216-035-00	METAL CHIP	270	5%	1/10W
R640	1-216-035-00	METAL CHIP	270	5%	1/10W
R651	1-216-041-00	METAL CHIP	470	5%	1/10W
R701	1-216-033-00	METAL CHIP	220	5%	1/10W
R702	1-216-033-00	METAL CHIP	220	5%	1/10W
R703	1-216-295-00	METAL CHIP	0	5%	1/10W
R705	1-216-295-00	METAL CHIP	0	5%	1/10W
R801	1-249-435-11	CARBON	33K	5%	1/4W
R802	1-249-434-11	CARBON	27K	5%	1/4W
R803	1-249-416-11	CARBON	820	5%	1/4W
R804	1-216-049-00	METAL CHIP	1K	5%	1/10W
R807	1-216-165-00	METAL GLAZE	43	5%	1/8W
R919	1-216-027-00	METAL CHIP	120	5%	1/10W
R920	1-216-049-00	METAL CHIP	1K	5%	1/10W
R921	1-216-029-00	METAL CHIP	150	5%	1/10W

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV101	1-228-996-00	RES. ADJ. METAL 47K	
RV102	1-228-993-00	RES. ADJ. METAL 4.7K	
RV103	1-228-993-00	RES. ADJ. METAL 4.7K	
RV104	1-228-995-00	RES. ADJ. METAL 22K	
RV105	1-228-993-00	RES. ADJ. METAL 4.7K	
RV106	1-228-995-00	RES. ADJ. METAL 22K	
RV108	1-228-996-00	RES. ADJ. METAL 47K	
RV109	1-228-990-00	RES. ADJ. METAL 1K	
RV110	1-228-991-00	RES. ADJ. METAL 2.2K	
RV111	1-228-990-00	RES. ADJ. METAL 1K	
RV114	1-228-990-00	RES. ADJ. METAL 1K	
RV250	1-228-990-00	RES. ADJ. METAL 1K	
RV251	1-228-991-00	RES. ADJ. METAL 2.2K	
RV501	1-228-994-00	RES. ADJ. METAL 10K	
RV502	1-228-993-00	RES. ADJ. METAL 4.7K	
		< FILTER >	
T301	1-409-489-11	FILTER, BAND PASS	
		< PIN >	
W001	1-566-095-11	PIN, BOARD TO BOARD 6P	
		< CRYSTAL >	
X301	1-577-080-11	VIBRATOR, CRYSTAL 3.58MHz	
**********			
		MISCELLANEOUS	
		**********	
15	1-466-292-51	SWITCH BLOCK, CONTROL	
33	1-238-738-11	RES, VAR, CARBON 10K (SHUTTLE)	
⚠ 54	1-690-735-11	CORD, POWER	
56	1-569-347-11	CONNECTOR, FPC (TRANSLATION) 13P	
57	1-640-971-11	FP-460 FLEXBLE BOARD	
64	1-640-970-11	FP-419 FLEXBLE BOARD	
68	1-569-346-11	CONNECTOR, FPC (TRANSLATION) 10P	
⚠ 108	1-466-645-11	MODULATOR, RF (RFU-1040)	
111	1-558-924-41	CABLE, PIN	
⚠ F1	1-532-743-11	FUSE, GLASS TUBE	
M901	A-7048-547-A	DRUM BLOCK ASSY (DGU-87A-R)	
M902	8-835-331-01	MOTOR, DC U-22A (CAPSTAN)	
M903	A-7040-160-A	MOTOR ASSY, THREADING (LOADING)	
M904	X-3731-108-1	FL MOTOR ASSY (FRONT LOADING)	
**********			

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-417-139-11	MATCHING TRANSFORMER, ANTENNA	
	1-558-076-41	CORD, CONNECTION CONNECTOR (75-OHM COAXIAL CABLE WITH F-TYPE)	
	1-575-334-11	CORD, CONNECTION (CABLE, AV)	
	1-575-335-21	CORD, CONNECTION (CONNECTING S VIDEO CABLE)	
	1-690-935-11	CORD, CONNECTION (CABLE, CONTROL L (LANC))	
	1-693-039-11	REMOTE COMMANDER (RMT-V120)	
*	3-677-503-00	SHEET, PROTECTION	
*	3-742-569-41	INDIVIDUAL CARTON	
	3-753-820-21	MANUAL, INSTRUCTION (ENGLISH)	
	3-753-820-31	MANUAL, INSTRUCTION (FRENCH) (Canadian)	
*	3-795-581-21	SAFEGUARD (SONY), IMPORTANT (US)	
*	3-944-144-01	CUSHION (UPPER)	
*	3-944-145-01	CUSHION (LOWER)	

****

HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3
#2	7-624-105-04	STOP RING 2.3, TYPE -E
#3	7-621-772-30	SCREW +B 2X6
#4	7-627-552-38	SCREW, PRECISION +P 1.7X3
#5	7-628-253-40	SCREW +PS 2X10
#6	7-627-555-88	SCREW (M1.4X1.8)
#7	7-682-547-04	SCREW +BVTT 3X6 (S)
#8	7-627-553-37	SCREW (M2X3), SPECIAL HEAD
#9	7-627-553-68	SCREW, PRECISION +P 2X6 TYPE3

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

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 8
SERVICE MODE

☆This unit uses the EVR (Electronic Variable Resistor) for performing adjustments and tests. These functions are implemented by the SENSER LANC system.

8-1. SENSER LANC

SENSER LANC is the LANC format designed to perform EVR (electronic variable resistor) adjustments and various tests for this 8mm VTR by using the LANC (Control L). The SENSER LANC is synonymous with the old SERVICE LANC. But there have been enhancements and the SENSER LANC is now used as a unified word.

8-2. HOW TO USE THE RM-95 JIG (ADJUSTMENT REMOTE CONTROL)

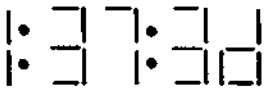
The RM-95 jig is used to operate the SENSER LANC. This jig will create the SENSER LANC Mode. Because of this, the HOLD switch has been modified for service purpose.
Note that the old models of the RM-95 have no page display function and it is needed to replace their microcomputers within these old models.

Old	UPD7503G-A71-12 UPD7503G-C23-12	8-759-142-56 8-759-146-77	No Page display (The microcomputer must be replaced.)
New	UPD7503G-C56-12	8-759-148-35	Page display

LCD Display of RM-95

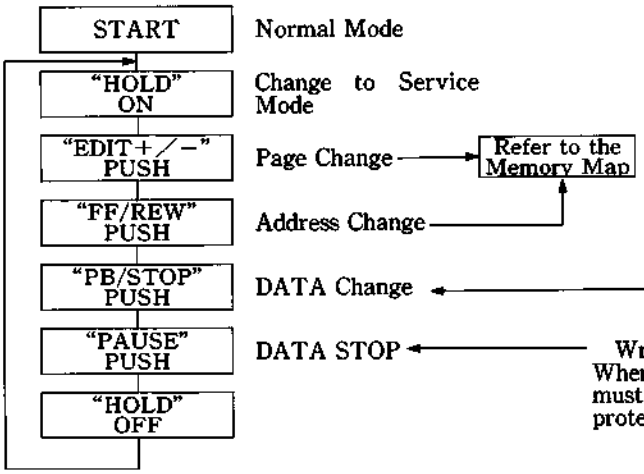
Page Data Address

Example



This means that the data on page 1, address 3D is 37.

8-3. HOW TO CHANGE THE SERVICE MODE WITH RM-95



LCD Display (Hexadecimal form) P : DD : AA (F : 00 : 00) ← Display Data
The data at the selected address will be displayed. The page entered first from Normal mode is 0.

P : 00 : 00 ← If a selected page is not incorporated, the preset data value will be indefinite. When a change is made within an incorporated page, the address will remain intact.

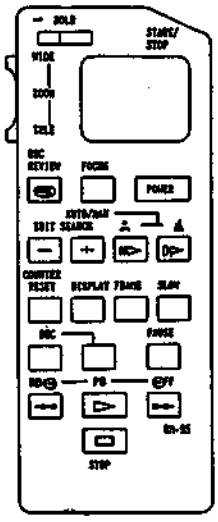
P : DD : AA

<When ADJ Data Has Been Changed>
The EVR value (RAM) will be renewed by changed data. (This data will not be written to EE PROM.)

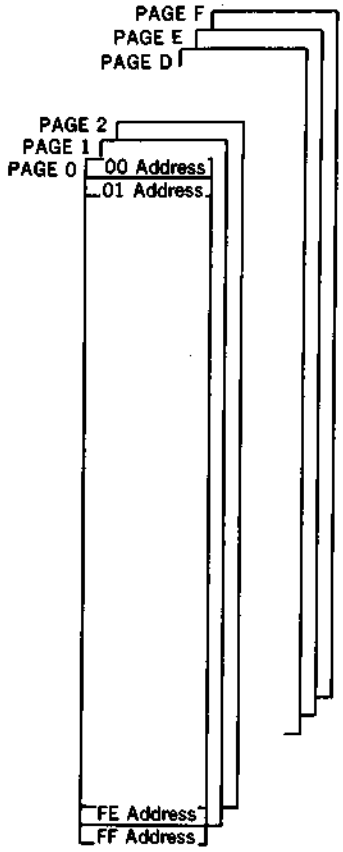
Write to EE PROM.
When writing changed data to EEPROM, WRITE PROTECT must be released before it cannot be written. To release this protect, the data on page 0, address 00 must be set to 01 first.

Command	Action	RM-95 Control Button Pushed
Page Up	Page+1	Edit Search+
Page Down	Page−1	Edit Search−
Direct Page Set	Sets to specified page.	Event Clear
Address Up	Address+1	Fast Forward
Address Down	Address−1	Rewind
Data Up	Data+1	Play Back
Data Down	Data−1	Stop
Store	Writes data to EEPROM. RAM	Pause

RM-95 (J-6082-053-B)



8-4. SENSER LANC MEMORY MAP



This unit has pages 0 to F allocated as listed below.

PAGE	Page Allocation
0	Service
1	
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	VTR EE-PROM
E	
F	

Note : The adjustment address 00 of the first page for the RAM is a control code for total control. This address is used to permit write to EE-PROM.
The initial data for this control code is "00" which inhibits write to EE-PROM. In order to write the VTR EE-PROM, the control codes for their respective adjustment pages must be set to "01" as shown by the arrow.
Sixteen different pages from 0 to F are available. Page allocations are as listed above. Only pages D and F are allocated to those memories that will not be cleared even if the power is turned off as the EVR (electronic variable resistor).

8-5. D PAGE WRITE PROTECT

D Page Write Protect is released and established as follows:

Page 0	Address 00

Data	Function
00	Normal (Write Protected)
01	Write Protect Release

8-6. TEST MODE SETTING

Variety of test modes are established and changed as listed below. Before setting data, Write Protect should be released by setting as follows:
(page: 0, address: 00, data: 01)

Page 0 or D	Address 01

Data	Function
00	Normal
01	Test Mode 1 Various Emergencies, Inhibit and Release Drum, Capstan, Loading Motor, Reel, Tape Top and End, DEW SP/LP Automatic Discrimination Inhibit, Manual Changeover (EDIT SW ON:LP, OFF:SP)
02	Test Mode 2 Not used
03	Test Mode 3 Track Shift Execution of Track Shift Playback Back Lock Discrimination Inhibit during PB SP/LP Automatic Discrimination Inhibit, Manual Changeover (EDIT SW ON:LP, OF:SP)

* The data at this address will be stored to a nonvolatile memory by pressing the PAUSE button on the adjustment remote control.
  It should be remembered that once the data has been stored, even if the power is turned off, the test mode will not be released.
* After completing necessary adjustments/repairs, be sure to return the data at this address to 00.

8-7. EMERGENCY CODES

These codes can be used to check the condition of failure (abnormality) that occurred.

Page 0 or D	Address 06

First Emergency Code
....The code of the first failure that occurred.

Page 0 or D	Address 07

Last Emergency Code
....The code of the last failure that occurred (This data will be renewed each time a failure occurs.

* After completing necessary adjustments/repairs, be sure to rewrite the data at address 06 and the data at address 07 to 00.
* When writing data, after setting the data, be sure to press the PAUSE button on the adjustment remote control.
* Address 06 and address 07 on page 0 have the same functions as address 06 and address 07 on page D respectively.

Code	Condition of Failure
00	No Failure
01	Loading Motor Failure
02	Reel Failure during Unloading
03	Reel Failure during operation other than unloading
04	Capstan Failure
05	FG Failure at Start of Drum
06	PG Failure at Start of Drum
07	FG Failure when Drum is Stationary.
08	PG Failure when Drum is Stationary.
09	Phase Failure when Drum is Stationary.

8-8. EMERGENCY MODE

This mode allows you to check the mode of operation in which the VTR was placed when failure occurred.

Page 0 or D	Address 08

First Emergency Code

....The code of the first failure that occurred.

Page 0 or D	Address 09

Last Emergency Code

....The code of the last failure that occurred

(This data will be renewed each time a failure occurs.)

* After completing necessary adjustments/repairs, be sure to rewrite the data at address 08 and the data at address 09 to 00.
* When writing data, after setting the data, be sure to press the PAUSE button on the adjustment remote control.
* Address 08 and address 09 on page 0 have the same functions as address 08 and address 09 on page D respectively.

Code	Condition of Failure
00	INITIAL
10	EJECTED
11	EJECTED DEW
13	EJECT [/STOP] UNLOADED
1E	EJECTED POWER OFF
20	STOP
22	CASSETTE LOAD
23	STOP UNLOADED
24	STOP DEW
25	STOP EMERGENCY
26	STOP TAPE END
27	STOP TAPE TOP
29	STOP ZERO
2E	STOP POWER OFF
30	FF
33	FF ZERO PB
34	FF ZERO STOP
38	REW
3A	REW PB
3B	REW ZERO PB
3C	REW ZERO STOP
3D	REW HIGH SPEED
40	REC
41	REC PAUSE
42	TIMER REC
43	TIMER REC PAUSE
45	VA INSERT

Code	Condition of Failure
45	VA INSERT PAUSE
46	V INSERT
47	V INSERT PAUSE
48	A INSERT
49	A INSERT PAUSE
50	EDITSEARCH SLOW 1/5
52	EDITSEARCH CUE
53	EDITSEARCH REVIEW
54	EDITSEARCH Hi CUE
55	EDITSEARCH Hi REVIEW
5A	EDITSEARCH FWD
5B	EDITSEARCH RVS
5C	EDITSEARCH STILL
60	PB
62	+1
63	−1
64	CUE
65	REVIEW
66	+2
67	−1
68	LOCKED CUE
69	LOCKED REVIEW
6A	FR CUE
6B	FR REVIEW
6C	Hi CUE
6D	Hi REVIEW
70	+STILL
71	−STILL
72	+SLOW 1/5
73	−SLOW 1/5
74	+SLOW 1/10
75	−SLOW 1/10
76	+FRAME
77	−FRAME
FF	NULL

8-9. 0 PAGE MEMORY MAP

Adjustment Address	Contents	Remarks
00	Control Code	
01	Test Mode	
02		
03	Switching Position Adjustment (LOW)	
04	Switching Position Adjustment (HIGH)	
05	Various Flag Areas	
06	Emergency Code (FIRST)	FF (Initial Value)
07	Emergency Code (LAST)	FF (Initial Value)
08	Emergency Code (FIRST)	FF (Initial Value)
09	Emergency Code (LAST)	FF (Initial Value)
0A		
0B		
0C		
0D		
0E		
0F		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
1A		
1B		
1C		
1D		
1E		
1F		

8-10. D PAGE MEMORY MAP

Address	Function	Initial Value	Memo Column
00			
01			
02			
03	Switching Position Adjustment (LOW)	Adjustment	
04	Switching Position Adjustment (HIGH)	Adjustment	
05	Various Flag Areas		
06	Emergency Code (FIRST)	FF	
07	Emergency Code (LAST)	FF	
08	Emergency Code (FIRST)	FF	
09	Emergency Code (LAST)	FF	
0A	DNR OFF	40	
0B	DNR Standard	50	
0C	DNR Maximum	A0	
0D			
0E			
0F			
10	Serial Data Storage Area LOW MP LP	0C	
11	Serial Data Storage Area LOW MP SP	04	
12	Serial Data Storage Area LOW MP LP	0C	
13	Serial Data Storage Area LOW MP SP	04	
14	Serial Data Storage Area HIGH ME LP	08	
15	Serial Data Storage Area HIGH ME SP	00	
16	Serial Data Storage Area HIGH ME LP	08	
17	Serial Data Storage Area HIGH ME SP	00	
18	SLOW TRACON DATA (LP)	Adjustment	
19	SLOW TRACON DATA (SP)	Adjustment	
1A	−SLOW TRACON DATA (LP)	Adjustment	
1B	−SLOW TRACON DATA (SP)	Adjustment	
1C	×2 TRACON DATA (LP)	Not used	
1D	×2 TRACON DATA (SP)	Not used	
1E	STILL ADJUST DATA	Not used	
1F	Sharpness Data	A6	
20	Air Stop Address	FF	
21	Air Stop Address	FF	
22	Air Stop Address	FF	
23	Air Stop Address	FF	
24	Air Stop Address	FF	
25	Air Stop Address	FF	
26	Air Stop Address	FF	
27	Air Stop Address	FF	
28	Air Stop Address	FF	
29	Air Stop Address	FF	
2A	CATV Stop Address	FF	
2B	CATV Stop Address	FF	
2C	CATV Stop Address	FF	

Address	Function	Initial Value	Memo Column
2D	CATV Stop Address	FF	
2E	CATV Stop Address	FF	
2F	CATV Stop Address	FF	
30	CATV Stop Address	FF	
31	CATV Stop Address	FF	
32	CATV Stop Address	FF	
33	CATV Stop Address	FF	
34	CATV Stop Address	FF	
35	CATV Stop Address	FF	
36	CATV Stop Address	FF	
37	CATV Stop Address	FF	
38	CATV Stop Address	FF	
39	CATV Stop Address	FF	
3A			
3B			
3C			
3D			
3E			
3F			
40	Air AFT Address	FF	
41	Air AFT Address	FF	
42	Air AFT Address	FF	
43	Air AFT Address	FF	
44	Air AFT Address	FF	
45	Air AFT Address	FF	
46	Air AFT Address	FF	
47	Air AFT Address	FF	
48	Air AFT Address	FF	
49	Air AFT Address	FF	
4A	CATV AFT Address	FF	
4B	CATV AFT Address	FF	
4C	CATV AFT Address	FF	
4D	CATV AFT Address	FF	
4E	CATV AFT Address	FF	
4F	CATV AFT Address	FF	
50	CATV AFT Address	FF	
51	CATV AFT Address	FF	
52	CATV AFT Address	FF	
53	CATV AFT Address	FF	
54	CATV AFT Address	FF	
55	CATV AFT Address	FF	
56	CATV AFT Address	FF	
57	CATV AFT Address	FF	
58	CATV AFT Address	FF	
59	CATV AFT Address	FF	
5A			
5B			
5C			

Address	Function	Initial Value	Memo Column
5D			
5E			
5F			
60	Fine Tuning Data (16 Pieces)	FF	
61	Fine Tuning Data (16 Pieces)	FF	
62	Fine Tuning Data (16 Pieces)	FF	
63	Fine Tuning Data (16 Pieces)	FF	
64	Fine Tuning Data (16 Pieces)	FF	
65	Fine Tuning Data (16 Pieces)	FF	
66	Fine Tuning Data (16 Pieces)	FF	
67	Fine Tuning Data (16 Pieces)	FF	
68	Fine Tuning Data (16 Pieces)	FF	
69	Fine Tuning Data (16 Pieces)	FF	
6A	Fine Tuning Data (16 Pieces)	FF	
6B	Fine Tuning Data (16 Pieces)	FF	
6C	Fine Tuning Data (16 Pieces)	FF	
6D	Fine Tuning Data (16 Pieces)	FF	
6E	Fine Tuning Data (16 Pieces)	FF	
6F	Fine Tuning Data (16 Pieces)	FF	
70	Fine Tuning Data (16 Pieces)	FF	
71	Fine Tuning Data (16 Pieces)	FF	
72	Fine Tuning Data (16 Pieces)	FF	
73	Fine Tuning Data (16 Pieces)	FF	
74	Fine Tuning Data (16 Pieces)	FF	
75	Fine Tuning Data (16 Pieces)	FF	
76	Fine Tuning Data (16 Pieces)	FF	
77	Fine Tuning Data (16 Pieces)	FF	
78	Fine Tuning Data (16 Pieces)	FF	
79	Fine Tuning Data (16 Pieces)	FF	
7A	Fine Tuning Data (16 Pieces)	FF	
7B	Fine Tuning Data (16 Pieces)	FF	
7C	Fine Tuning Data (16 Pieces)	FF	
7D	Fine Tuning Data (16 Pieces)	FF	
7E	Fine Tuning Data (16 Pieces)	FF	
7F	Fine Tuning Data (16 Pieces)	FF	

SECTION 9
MECHANICAL ADJUSTMENTS

For Mechanical Adjustments

For the procedures how to adjust and check the mechanism, as well as how to replace mechanical parts, refer to the separate 8mm Video Mechanical Adjustment Manual III (9-972-732-01).

However, for the procedures how to set the Track Shift mode, refer to the following text.

9-1. TAPE PASS ADJUSTMENT

(TRACK SHIFT)

The 8mm Video Tape Recorder system uses the AFT (Automatic Track Finding) function in which four different pilot signals are used for controlling the tape speed instantaneously to provide high precision tracking. This eliminates the Tracking Adjustment control, thus allowing accurate tracing.

In spite of its advantageous feature, the AFT system may have a difficulty in adjusting the tape pass system. The ATF will automatically corrects tracing even if the head has only a little tracing distortion. This may make it impossible to perform a complete adjustment.

Therefore, when performing a fine adjustment for tracking, the Track Shift mode should be entered before starting this adjustment. This mode will force to operate the ATF to shift the amount of tracking by a given quantity (approximately 1/4), so that tracking can be easily fine adjusted. Furthermore, no track shift jig is needed.

9-1-1. Setting the Track Shift Mode

1) Short between pin ① and pin ② of connector CN503 on the IN-42 board.
2) Place the adjustment remote control RM-95 (J-6082-053-B) in the HOLD ON position.
3) Operate the EDIT +/— button to select adjustment page 0.
4) Operate the FF/REW button to select adjustment address 01.
5) Operate the PB/STOP button to set to adjustment data 03. (This will go to the Test Mode 3 (Pass Adjustment).)

Note 1 : For details of the Test Mode, refer to "SECTION 8. SERVICE MODE."

Note 2 : If the LP mode is recognized by the system wrongly, operate the Recording Time SP/LP button to enter the SP mode.

Note 3 : After adjustment, operate the PB/STOP button to reset to adjustment data 00. Place the remote control in the HOLD OFF position to return to the normal mode.

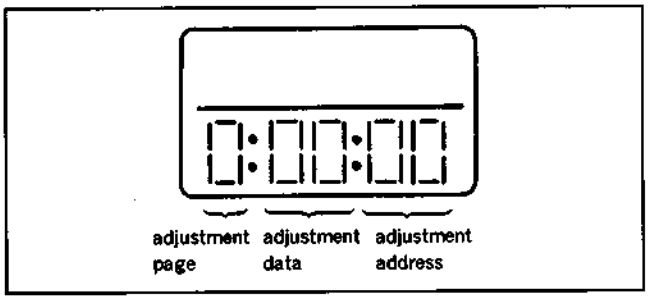


Fig. 9-1.

9-1-2. Preparation before Adjustment

1) Clean the surfaces over which tape moves past (of the tape guides, drum, capstan shaft and pinch rollers).
2) Oscilloscope Connection and Waveform Output:
   1 ch: Drum head's RF signal output, RP-116 board CN004 pin ③ (PB RF OUT)
   External trigger input: RP-116 board CN004 pin ② (RF SWP)
   GND: RP-116 board CN004 pin ① (GND)
3) Play back alignment tape for tracking (WR5-1NP).
4) Check that RF waveform observed on the oscilloscope is flat on both entrance and exit sides.
   If not flat, perform necessary adjustment according to the separate 8 mm Video Mechanical Adjustment III.

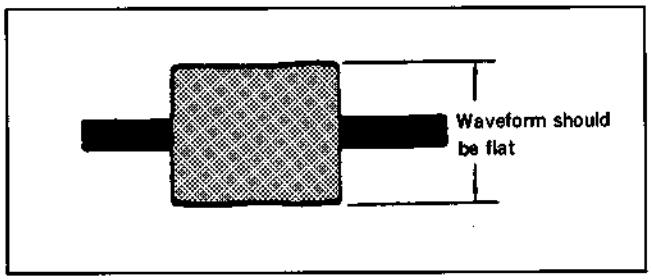


Fig. 9-2.

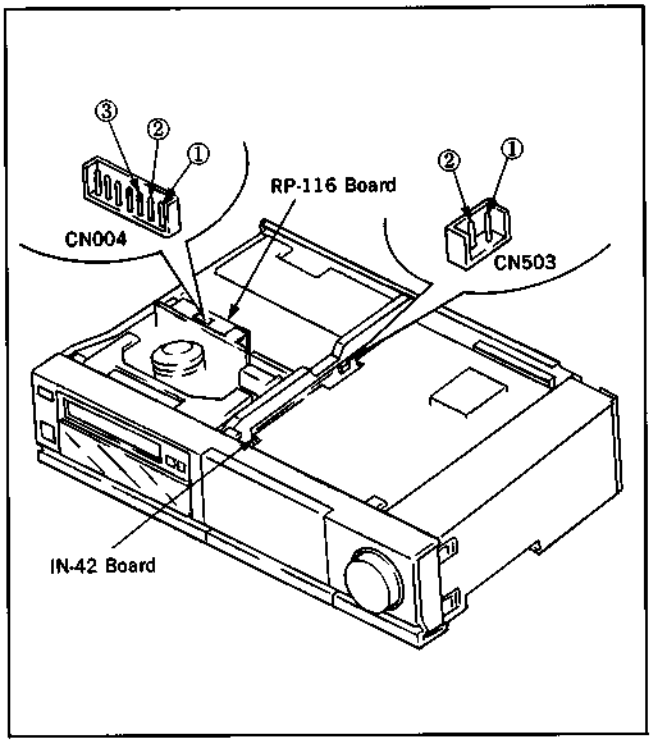


Fig. 9-3.

SECTION 10
ELECTRICAL ADJUSTMENTS

See the adjusting part location diagram from on page 282 for the adjustment.

For details of the SENSER LANC , refer to "SECTION 8. SERVICE MODE".

10-1. PREPARATION BEFORE ADJUSTMENT

10-1-1. Equipment Required

The measuring instruments used for this alignment include :

1) Monitor TV
2) Oscilloscope, dual-trace, bandwidth of 30MHz or more, with delay mode (A probe 10:1 should be used unless otherwise specified.)
3) Frequency counter
4) Pattern generator (with Video Output terminal; refer to Section 10-1-2. Equipment Connection.)
5) Digital voltmeter
6) Audio generator
7) Audio level meter
8) Audio distortion meter
9) Audio attenuator
10) Vector scope
11) Alignment tapes
   - For tracking adjustment (WR5-1NP)
     Part No.: 8-967-995-02
   - For video frequency adjustment (WR5-7NE)
     Part No.: 8-967-995-13
   - For L mode operation check
     For SP (WR5-5NSP)
     Part No.: 8-967-995-42
     or (WR5-4NSP)
     Part No.: 8-967-995-41
     For LP (WR5-4NL)
     Part No.: 8-967-995-51
   - For E mode operation check (ME tape)
     For SP (WR5-8NSE)
     Part No.: 8-967-995-43
     For LP (WR5-8NLE)
     Part No.: 8-967-995-52
   - For AFM stereo operation check (WR5-9NS)
     Part No.: 8-967-995-23
12) Adjustment remote control (J-6082-053-B)

10-1-2. Equipment Connection

According to the specification of the input terminal (S VIDEO or VIDEO), connect required measuring instruments as shown in Fig. 10-1. and perform adjustment. The input terminal is specified in the parentheses ( ) in the signal column. Unless otherwise specified, either terminal may be used. Note that the S VIDEO input terminal takes precedence. When performing adjustment with the VIDEO input terminal, pull out the connector from the S VIDEO input terminal.

Note 1 : When S VIDEO input is specified for a specific adjustment, if the adjustment is performed with VIDEO input, the product specifications for this unit may not be satisfied. The specified input must be always used.

Note 2 : If an adjustment is performed by using a VTR with S Video output terminal as a signal source, the performance of this unit will be affected by that VTR. A pattern generator with Y/C separation output terminal should be used wherever possible.

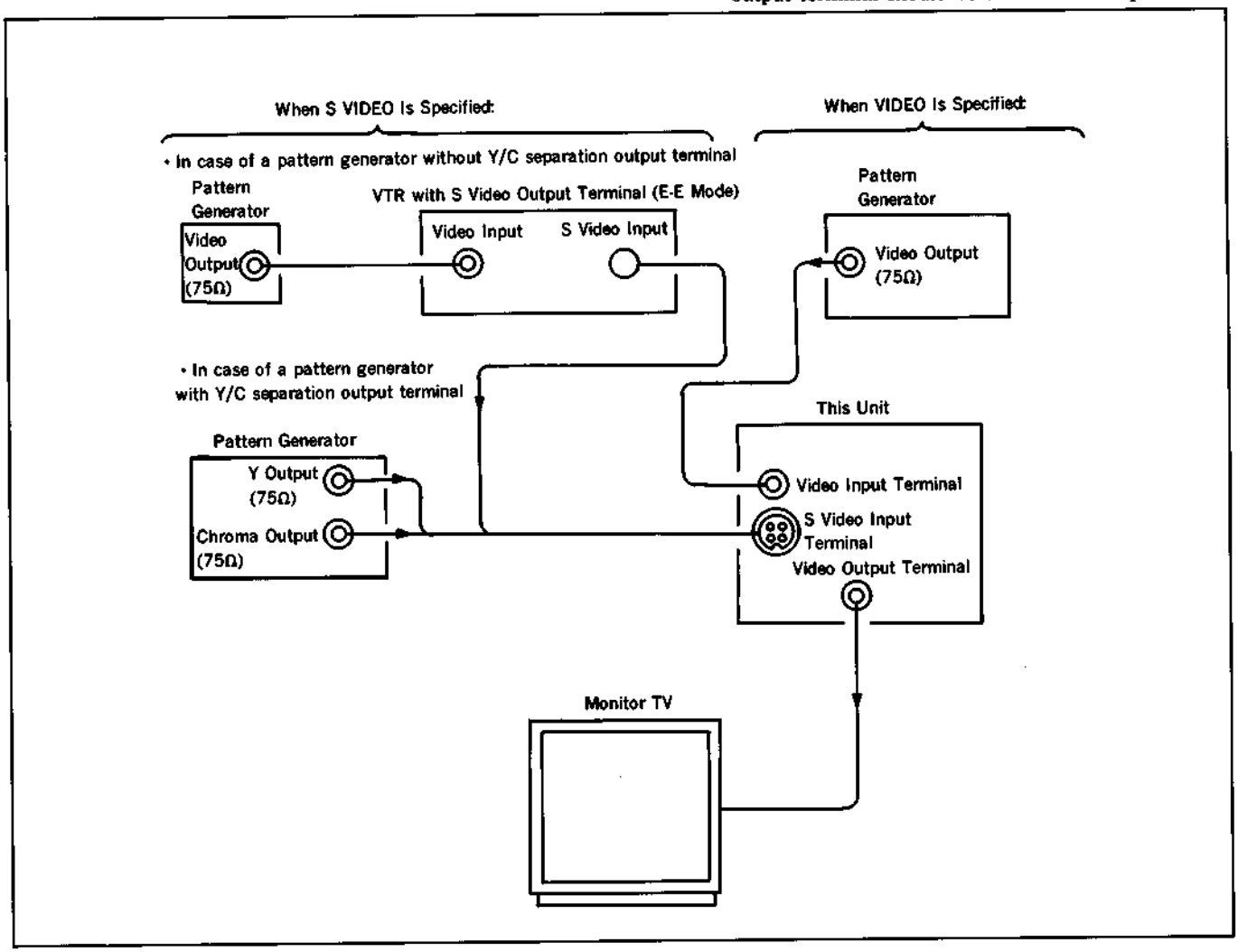


Fig. 10-1.

10-1-3. Input Signal Check

Video signal produced by a pattern generator is used as an adjustment signal to perform electrical alignment for this unit. This video signal must satisfy the specification.

1) S VIDEO Input

Connect an oscilloscope to the Y Signal terminal of the S Video Input terminal. Check that the synchronizing signal of the Y signal is approximately at 0.3Vp-p and that its video portion has an amplitude of approximately 0.7Vp-p. (When a VTR with S video output terminal is used, in addition to these checks, make sure that there are no residual chroma and burst signals.) Then, connect the scope to the Chroma signal terminal of the S Video Input terminal and check that the chroma signal has a burst signal amplitude of 0.3Vp-p and the burst signal waveform is flat. And check that the amplitude ratio of burst signal to chroma signal is 0.30 : 0.66. The Y and chroma signals used for electrical alignment are shown in Fig. 10-2.

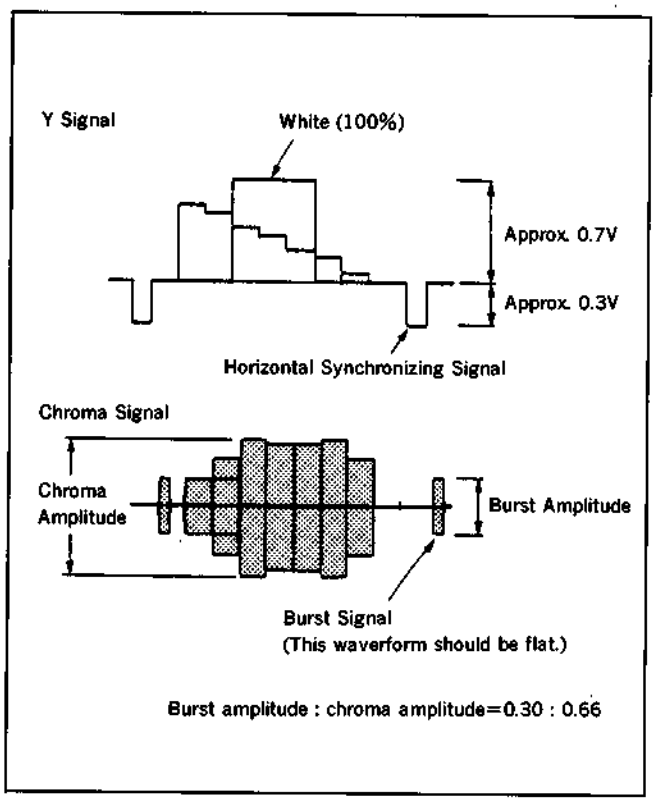


Fig. 10-2. Color Bar Signals of Pattern Generator

2) VIDEO Input

Connect an oscilloscope to the Video Input terminal. Check that the synchronizing signal of the Y signal has an amplitude of approximately 0.7V and that the burst signal has an amplitude of approximately 0.3V and its waveform is flat. And check that the level ratio of burst signal to "red" signal is 0.30 : 0.66.

The video signal (color bar) used for electrical aligning this unit is shown in Fig. 10-3.

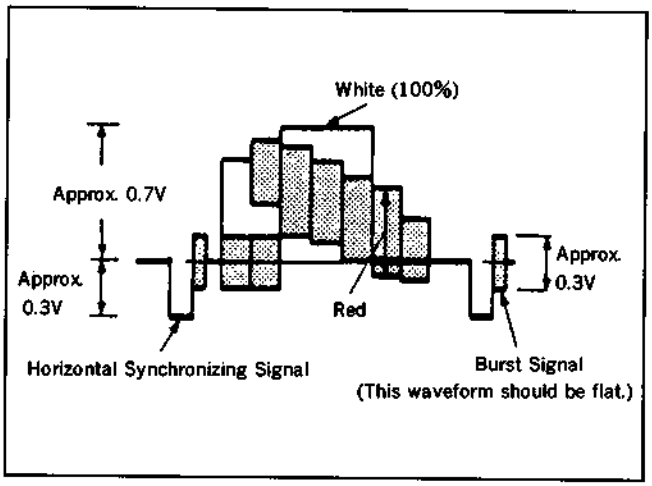


Fig. 10-3. Color Bar Signals of Pattern Generator

10-1-4. Alignment Tapes

The following alignment tapes are available.
The tape specified in the signal column for the adjustment to be performed should be used.

Note that if no tape code is specificed for the adjustments in which alignment tapes for operation check are used, any tape for operation check may be used.

Alignment Tape	Record Mode	Tape Type	Tape Speed	Contents of Record		Applications
				Video Area	PCM Area	
Tracking WR5-1NP	L	MP	SP	CH2 : 1MHz tape pass adjustment signal Switching position adjustment marker (CH1 : 9MHz)		Tape pass adjustment Switching position adjustment
Video frequency characteristic WR5-7NE	E	ME	SP	RF sweep 0~15MHz Marker 2, 4.5, 7, 8.5, 10MHz		Frequency characteristic
Operation check WR5-4NSP or WR5-5NSP	L	MP	SP	● Video signal Color bar 4 min. Monoscope 4 min. ● Audio signal (AFM) 400Hz 60% modulated	● Audio signal (PCM) Monoscope portion 20Hz 20sec. 400Hz 20sec. 14kHz 20sec. } This cycle is repeated 4 times Color bar portion 1kHz 4min. Operation check	
WR5-8NSE	E	ME	SP			
WR5-4NL	L	MP	LP	● Video signal Color bar 4 min. Monoscope 4 min. ● Audio signal (AFM) 400Hz 60% modulated		
WR5-8NLE	E	ME	LP		● Audio signal (PCM) 400Hz	
AFM stereo operation check WR5-9NS	L	MP	SP	● Video signal Color bar 4 min. Monoscope 4 min. ● Audio signal (AFM) Stereo portion (color bar) Lch : 400Hz Rch : 1kHz (L+R 1.5MHz±60kHz DEV) (L−R 1.5MHz±30kHz DEV) Bilingual portion (monoscope) MAIN : 400Hz (1.5MHz±60kHz DEV) SUB : 1kHz (1.7MHz±30kHz DEV)	● Audio signal (PCM) 400Hz 8 min.	AFM stereo operation check

Note : Recording Mode
L ..... Conventional mode
E ..... Hi 8 (High Band) mode

Tape Type
MP ..... Metal powder tape
ME ..... Metal evaporated tape

The color bar signal recorded on these alignment tapes are shown in Fig. 10-4.

Note : This waveform is measured at the VIDEO OUT terminal (terminated at 75Ω).

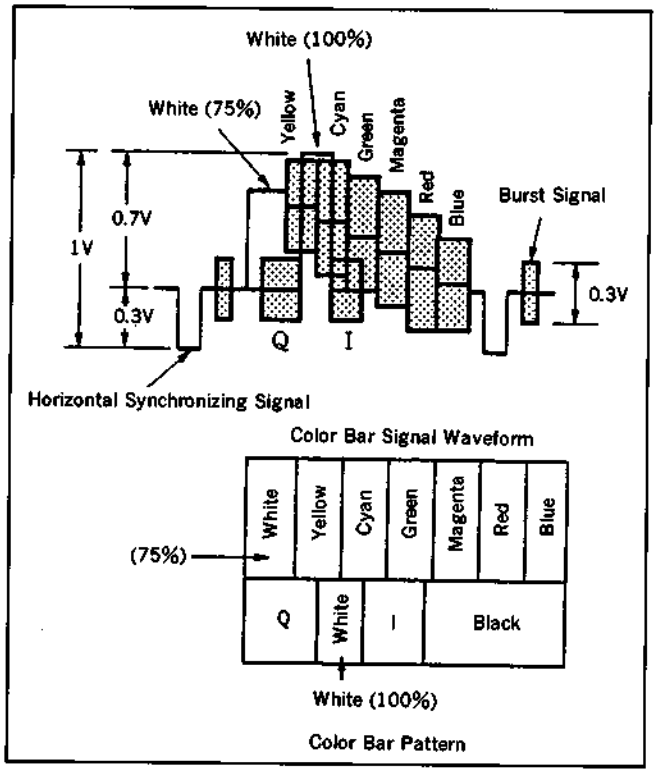


Fig. 10-4. Color Bar Signal of Alignment Tape

10-1-5. Input/Output Levels and Impedance

Video input LINE 1/2 VIDEO (phono jack)
(1 each)
Input signal : 1Vp-p, 75 ohms, unbalanced, sync negative

Video output LINE OUT/MONITOR OUT VIDEO
(phono jack)
(1 each)
Output signal : 1Vp-p, 75ohms, unbalanced, sync negative

S VIDEO input LINE IN 1/2 S VIDEO
(4-pin, mini-DIN)
(1 each)
Luminance signal : 1 Vp-p, 75 ohms, unbalanced, sync negative
Chrominance signal : 0.286 Vp-p, 75 ohms, unbalanced

S VIDEO output LINE OUT/MONITOR OUT S VIDEO
(4-pin, mini-DIN)
Luminance signal : 1 Vp-p, 75 ohms, unbalanced, sync negative
Chrominance signal : 0.286 Vp-p, 75 ohms, unbalanced

Audio input LINE 1/2 AUDIO (phono jack)
(2 each)
Input level : −7.5 dBs
Input impedance : more than 47 kilohms

Audio output LINE OUT/MONITOR OUT AUDIO
(phono jack)
(2 each)
Standard impedance : −7.5 dBs at load impedance 47 kilohms
Output impedance : less than 10 kilohms

CONTROL S IN Minijack

CONTROL L 5-pin DIN (rear panel)
(Mini jack) (front panel)

10-2. POWER SUPPLY CHECK

10-2-1. Output Voltage Check (PS-278 Board)

Mode	E-E
Measurement instrument	Digital voltmeter
UN 40V check	
Measurement point	CN1 pin ①
Specified value	40±2Vdc
UN 12V check	
Measurement point	CN1 pin ②
Specified value	12.0±0.5Vdc
UN 9V check	
Measurement point	CN1 pin ④
Specified value	9.0±0.5Vdc
UN 5.7V check	
Measurement point	CN1 pin ⑥
Specified value	5.7±0.2Vdc
SW 5V check	
Measurement point	CN1 pin ⑦
Specified value	5.0±0.2Vdc
UN −5V check	
Measurement point	CN1 pin ⑦
Specified value	−5.1±0.2Vdc

[Check Method]

1) Each of these supply voltages must meet its specified value.

10-3. SYSTEM CONTROL SYSTEM ADJUSTMENTS

10-3-1. Timer Clock Adjustment (FL-46 Board)

Mode	E-E
Signal	Arbitrary
Measurement point	IC005 pin ⑧
Measuring instrument	Frequency counter
Adjustment element	CT001
Specified value	4096.000±0.015Hz

Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

1) Use CT001 to adjust to 4096.000±0.015Hz.

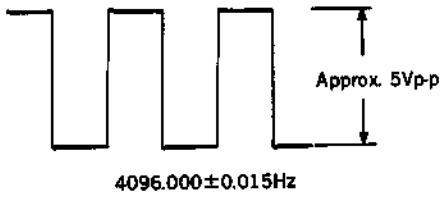


Fig. 10-5.

10-4. SERVO SYSTEM ADJUSTMENTS

[Adjustment sequence]

1. PWM Frequency Adjustment
2. Switching Position Adjustment
3. SLOW Adjustment

10-4-1. PWM Frequency Adjustment (CM-32 Board)

Mode	Record
Signal	Arbitrary
Measurement point	IC502 pin ⑦
Measuring instrument	Frequency counter
Adjustment element	RV501
Specified value	476.56±5.00kHz

[Adjustment Method]

1) Set Recording Time to SP mode.
2) Use RV501 to adjust to 476.56±5.00kHz.
3) Set Recording Time to LP mode.
4) Check for at 476.56±5.00kHz.
5) If the specification is not met, repeat Steps 1) to 4).

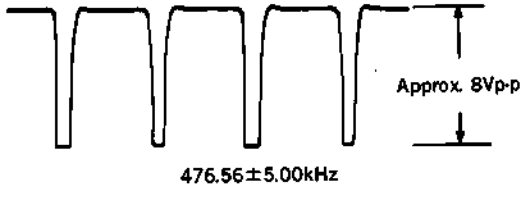


Fig. 10-6.

10-4-2. Switching Position Adjustment

Mode	Playback
Signal	Alignment tape: For operation check (WR5-1NP)
Measurement point	CH-1: RP-116 board CN004 pin ② (RF SWP) CH-2: RP-116 board CN004 pin ⑤ (PB RF 2CH)
Measuring instrument	Oscilloscope
Adjustment page	D
Adjustment address	03 04
Specified value	t=0±5μsec

[Connection]

1) Short between pin ① and pin ② of connector CN503 on the IN-42 board.

[Adjustment Method]

1) Place the adjustment remote control RM-95 (J-6082-053-B) in the HOLD ON position.
2) Use EDIT+/— button to select adjustment page D.
3) Use FF/REW button to select adjustment address 80.
4) Use PB/STOP button to set to adjustment data 80.
5) Press PAUSE button on the remote control to store the adjustment data.
6) Use EDIT+/— button to select adjustment page d.
7) Use FF/REW button to select adjustment address 04.
8) Operate PB/STOP button to change and set adjustment data so that t=0±255μsec.
9) Press PAUSE button on the remote control to store the adjustment data.
10) Use FF/REW button to select adjustment address 03.
11) Use FF/REW button to change and set adjustment data so that t=0±5μsec.
12) Press PAUSE button to store the adjustment data.

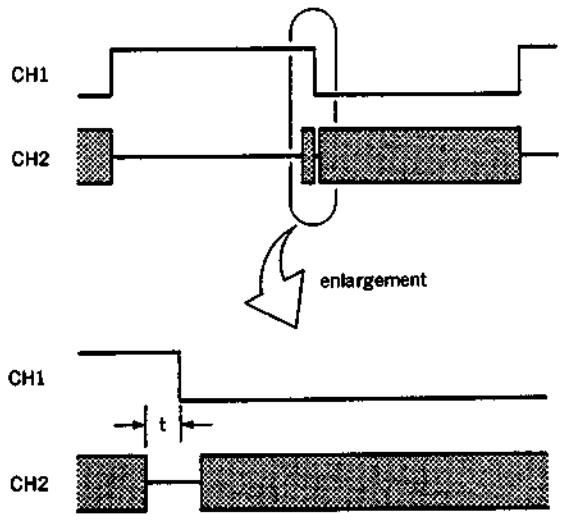


Fig. 10-7.

10-4-3. SLOW Adjustment

Mode	Self-record playback (SP and LP modes)
Signal	Color bar
Measurement point	CH-1: RP-116 board CN004 pin ② (RF SWP) CH-2: RP-116 board CN004 pin ③ (RF OUT)
Measuring instrument	Oscilloscope
Adjustment page	D
Adjustment address	18 (SLOW TRACON DATA (LP)) 19 (SLOW TRACON DATA (SP)) 1A (—SLOW TRACON DATA (LP)) 1B (—SLOW TRACON DATA (SP))
Specified value	A=B

[Adjustment Method]

1) Record color bar signal in both SP and LP modes.
2) Play back the recorded signal.
3) Place the adjustment remote control in the HOLD ON position.
4) Use EDIT+/— button to select adjustment page d.
5) Use FF/REW button to select adjustment address 18.
6) Enter LP mode and check that the record is played back.
7) Use the remote commander or the EDIT SHUTTLE SLOW on the set to enter SLOW 1/5) mode.
8) Operate PB/STOP button on the remote control RM-95 to change and set adjustment data so that A=B.
9) Press PAUSE button on the remote control to store the adjustment data.
10) In the same manner, select adjustment address 19 for SP Mode SLOW (1/5) mode, adjustment address 1A for LP Mode —SLOW (—1/5) mode, and address 1b for SP Mode —SLOW (—1/5) mode and adjust so that A=B.

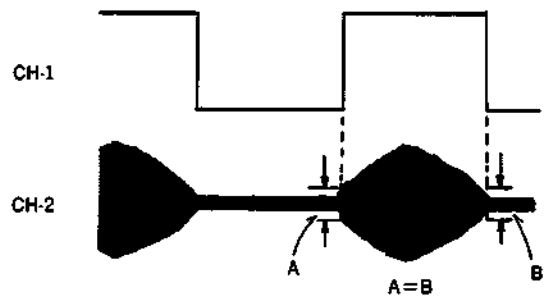


Fig. 10-8.

10-5. VIDEO SYSTEM ADJUSTMENTS

Color video signal supplied from a pattern generator is used as a video input signal for Video System Alignment in the Recording mode. This signal should be checked to ensure that it meets the specifications provided in Figs. 10-2 and 10-3 and "INPUT SIGNAL CHECK".

The adjustments in Video System Alignment should be performed in the following sequence.

[Adjustment sequence]

1. Playback Frequency Characteristic Adjustment
2. SYNC AGC Adjustment
3. CD-64 Board Output Adjustment
4. IR Adjustment
5. Chroma Comb Filter Adjustment
6. Pre-emphasis Input Level Adjustment
7. L Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
8. E Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
9. Chroma Emphasis Adjustment
10. L Mode De-emphasis Level Adjustment
11. E Mode De-emphasis Level Adjustment
12. E Mode Playback Level Adjustment
13. L Mode Playback Level Adjustment
14. Recording Y Level Adjustment
15. Recording Chroma Level Adjustment
16. Playback Vector Adjustment

10-5-1. Playback Frequency Characteristic Adjustment (RP-116 Board)

Note : The designation ( ) stands for adjustment on CH-2.

Mode	Playback
Signal	Alignment tape: for frequency characteristic adjustment (WR5-7NE)
Measurement point	CN004 pin ⑥ (PB RF 1CH) (CN004 pin ⑤ (PB RF 2CH)) External trigger: CN004 pin ② (RF SWP) Trigger slope:—(+)
Measuring instrument	Oscilloscope
Adjustment element	RV002 (RV001)
Specified value	4.5MHz level: 8.5MHz level=3 : (2±0.2)

[Adjustment Method]

1) Use RV002 [RV001] to adjust so that the ratio of 4.5MHz level to 8.5MHz of PB RF output waveform is 3 : (2±0.2).

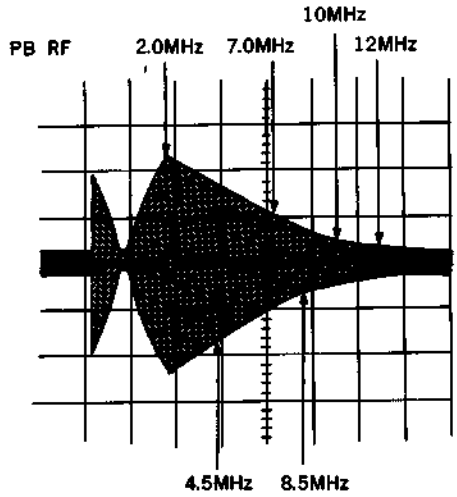


Fig. 10-9.

10-5-2. SYNC AGC Adjustment (VI-104 Board)

Mode	E-E
Signal	Color bar (S VIDEO)
Measurement point	CN101 pin ㉑ (DI Y (X))
Measuring instrument	Oscilloscope
Adjustment element	RV101
Specified value	1.00±0.05Vp-p

[Adjustment Method]

1) Use RV101 to adjust to 1.00±0.05Vp-p.

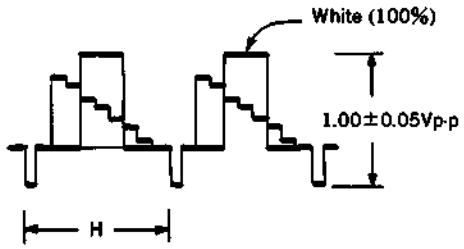


Fig. 10-10.

10-5-3. CD-64 Board Output Adjustment (CD-64 Board/VI-104 Board)

Mode	E-E
Signal	Color bar
Measurement point	Y signal: IC101 pin ㉜ (V IN 1) (VI-104 board) Burst signal: CN101 pin ⑲ (DI C (X)) (VI-104 board)
Measuring instrument	Oscilloscope
Adjustment element	Y signal: RV601 (CD-64 board) Burst signal: RV602 (CD-64 board)
Specified value	Y signal: 0.50±0.02Vp-p Burst signal: 143±10mVp-p

[Adjustment Method]

1) Use RV601 to adjust the Y signal to 0.50±0.02Vp-p.

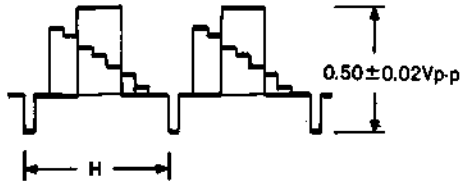


Fig. 10-11.

2) Use RV602 to adjust the burst signal to 143±10mVp-p.

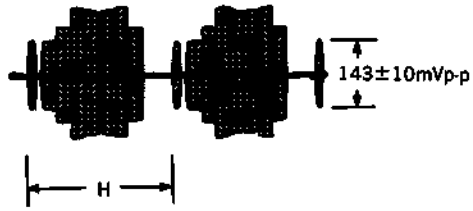


Fig. 10-12.

10-5-4. IR Adjustment (VI-104 Board)

Mode	E-E
Signal	Color bar (VIDEO)
Measurement point	IC101 pin ⑦ (Y COMB OUT)
Measuring instrument	Oscilloscope
Adjustment element	RV106
Specified value	Red residual chroma component should be minimized (to 50mVp-p or less).

[Connection]

1) Connect between pin ⑤① (SWP) and pin ⑥④ (VG2) of IC101.

[Adjustment Method]

1) Use RV106 to adjust so that the red residual chroma component is minimized (to a level of 50mVp-p or less).

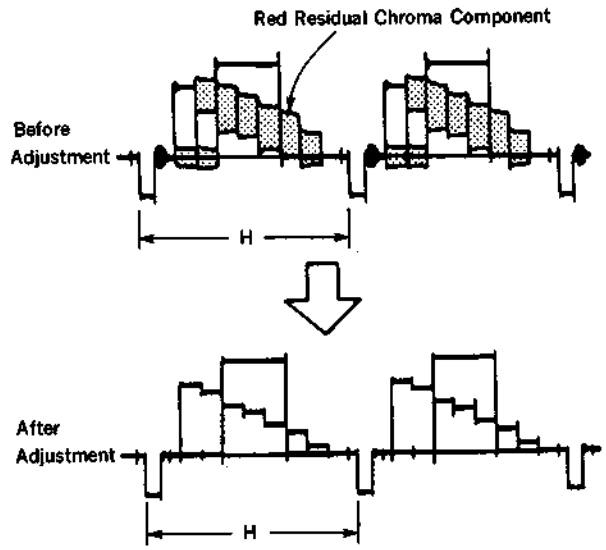


Fig. 10-13.

10-5-5. Chroma Comb Filter Adjustment (VI-104 Board)

Mode	E-E
Signal	Color bar (VIDEO)
Measurement point	IC101 pin ⑪ (C+CD)
Measuring instrument	Oscilloscope
Adjustment element	RV108 RV114
Specified value	Red residual chroma component should be minimized (to 30mVp-p or less).

[Adjustment Method]

1) Adjust RV108 and RV114 alternately to minimize the red residual chroma component (to a level of 30mVp-p or less).

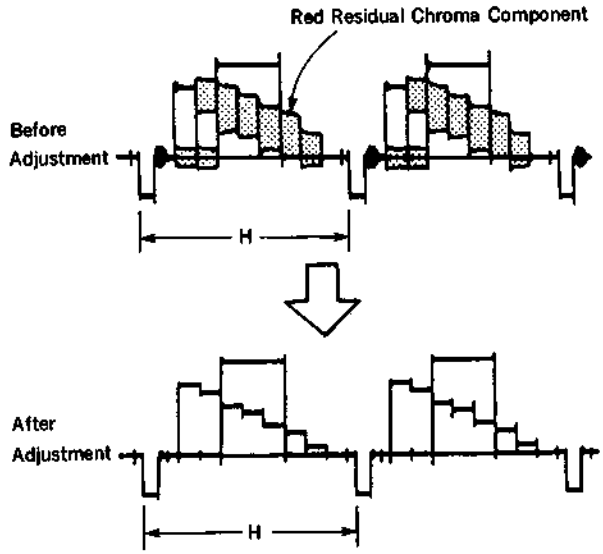


Fig. 10-14.

10-5-6. Pre-emphasis Input Level Adjustment (VI-104 Board)

Mode	E-E
Signal	Color bar (S VIDEO)
Measurement point	Q151 emitter
Measuring instrument	Oscilloscope
Adjustment element	RV110
Specified value	500±5mVp-p

[Adjustment Method]

1) Use RV110 and adjust to 500±5mVp-p.

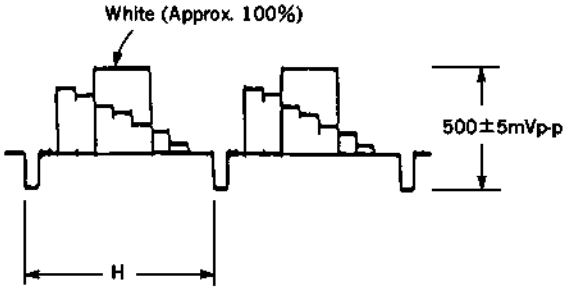


Fig. 10-15.

10-5-7. L Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

Note 1: After this adjustment, be sure to perform "10-5-8. E Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".

Note 2: The S Video Line output terminal should be terminated at 75Ω.

(1) L Mode Y FM Carrier Frequency Adjustment (VI-104 Board)

Mode	E-E
Signal	No signal
Measurement point	IC101 pin ㊸ (Y RF OUT)
Measuring instrument	Frequency counter Oscilloscope
Adjustment element	RV105
Specified value	4.38±0.05MHz

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

1) Insert MP type cassette tape.
2) Use RV105 to adjust to 4.38±0.05MHz.

Fig. 10-16.

(2) L Mode Y FM Deviation Adjustment (VI-104 Board)

Mode	Record and playback
Signal	Color bar (S VIDEO)
Measurement point	S Video Line Output, Y Signal terminal
Measuring instrument	Oscilloscope
Adjustment element	RV103
Specified value	Playback level should be at 1.00±0.05Vp-p.

[Adjustment Method]

1) Insert MP type cassette tape.
2) Record color bar signal.
3) Play back the recorded signal.
4) Check the playback output level.
   Specification: 1.00±0.05Vp-p
5) If the specification is not met, rotate RV103 as directed below and then repeat Steps 1) to 4).

	Direction of Rotating RV103
Over specified value	Counterclockwise (↺)
Below specified value	Clockwise (↻)

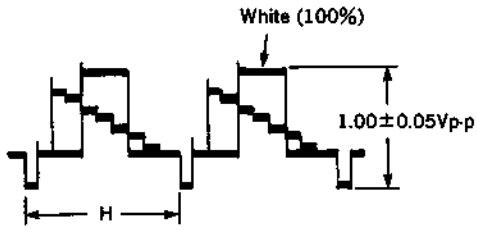


Fig. 10-17.

10-5-8. E Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

Note 1 : When performing this adjustment, it is a prerequisite that "10-5-7. L Mode FM Carrier Frequency, Y FM Deviation Adjustment" has been completed.

Note 2 : The S Video Line output terminal should be terminated at 75Ω.

(1) E Mode Y FM Carrier Frequency Adjustment (VI-104 Board)

Mode	E-E
Signal	No signal
Measurement point	IC101 pin ㊸ (Y RF OUT)
Measuring instrument	Frequency counter Oscilloscope
Adjustment element	RV104
Specified value	5.96±0.05MHz

Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

1) Insert ME type cassette tape.
2) Use RV104 to adjust to 5.96±0.05MHz.

5.96±0.05MHz

Fig. 10-18.

(2) E Mode Y FM Deviation Adjustment (VI-104 Board)

Mode	Record and playback
Signal	Color bar (S VIDEO)
Measurement point	S Video Line Output, Y Signal terminal
Measuring instrument	Oscilloscope
Adjustment element	RV102
Specified value	Playback level should be at 1.00±0.05Vp-p.

[Adjustment Method]

1) Insert ME type cassette tape.
2) Record color bar signal.
3) Play back the recorded signal.
4) Check the playback output level.
   Specification: 1.00±0.05Vp-p
5) If the specification is not met, rotate RV102 as directed below and then repeat Steps 1) to 4).

	Direction of Rotating RV102
Over specified value	Counterclockwise (↺)
Below specified value	Clockwise (↻)

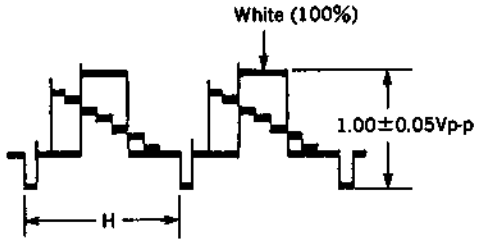


Fig. 10-19.

10-5-9. Chroma Emphasis Adjustment (VI-104 Board)

Mode	Record
Signal	Color bar
Measurement point	IC301 pin ㉔ (B.EMPH 0)
Measuring instrument	Oscilloscope
Adjustment element	T301
Specified value	f0 component should be reduced to a minimum.

[Connection]

1) Connect pin ㉔ of IC301 with GND by inserting 3.9kΩ (1-249-424-11).

[Adjustment Method]

1) Adjust T301 to allow the latter half of the yellow component in the chroma signal to have a minimum amplitude.
2) After this adjustment, remove the resistor 3.9kΩ.

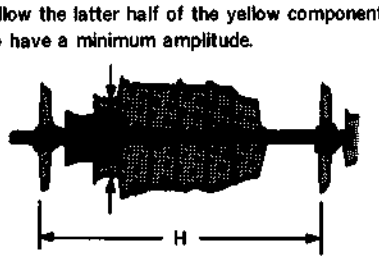


Fig. 10-20.

10-5-10. L Mode De-emphasis Level Adjustment (VI-104 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5NSP)
Measurement point	IC101 pin ⑮ (Y CCD OUT)
Measuring instrument	Oscilloscope
Adjustment element	RV250
Specified value	500±2mVp-p

[Adjustment Method]

1) Use RV250 to adjust to 500±2mVp-p.

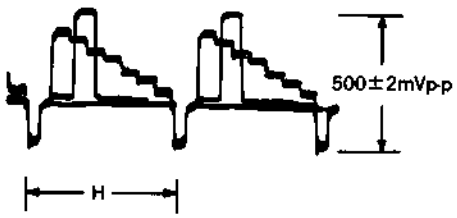


Fig. 10-21.

10-5-11. E Mode De-emphasis Level Adjustment (VI-104 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-8NSE)
Measurement point	IC101 pin ⑮ (Y CCD OUT)
Measuring instrument	Oscilloscope
Adjustment element	RV111
Specified value	500±2mVp-p

[Adjustment Method]

1) Use RV111 to adjust to 500±2mVp-p.

Fig. 10-22.

10-5-12. E Mode Playback Level Adjustment (VI-104 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-8NSE)
Measurement point	IC101 pin ㉑ (DI Y X)
Measuring instrument	Oscilloscope
Adjustment element	RV109
Specified value	1.00±0.05Vp-p

[Adjustment Method]

1) Use RV109 to adjust to 1.00±0.05Vp-p.

Fig. 10-23.

10-5-13. L Mode Playback Level Adjustment (VI-104 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5NSP)
Measurement point	IC101 pin ㉑ (DI Y (X))
Measuring instrument	Oscilloscope
Adjustment element	RV251
Specified value	1.00±0.05Vp-p

[Adjustment Method]

1) Use RV251 to adjust to 1.00±0.05Vp-p.

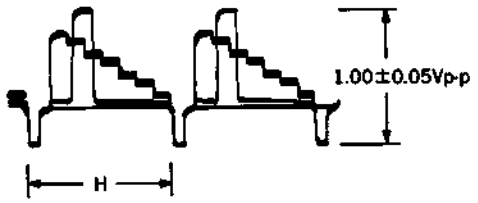


Fig. 10-24.

10-5-14. Recording Y Level Adjustment (VI-104 Board)

Mode	Record
Signal	No signal
Measurement point	CN105 pin ④ (REC Y/C (X))
Measuring instrument	Oscilloscope (20MHz bandwidth)
Adjustment element	RV502
Specified value	200±10mVp-p

Note : Set an oscilloscope to 20MHz bandwidth.

[Adjustment Method]

1) Insert ME tape.
2) Record.
3) Use RV502 to adjust to 200±10mVp-p.

Fig. 10-25.

10-5-15. Playback Vector Adjustment (VI-104 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5NSP)
Measurement point	Video Line Output terminal
Measuring instrument	Vector scope
Adjustment element	RV114
specified value	Blue bright point should be centered in specified frame (⊞ mark).

[Adjustment Method]

1) Adjust RV114 so that the blue bright point will be centered in the specified frame (⊞ mark) on the vector scope screen.
2) At this time, make sure that the other bright points are centered in the respective specified frames (⊞ mark).

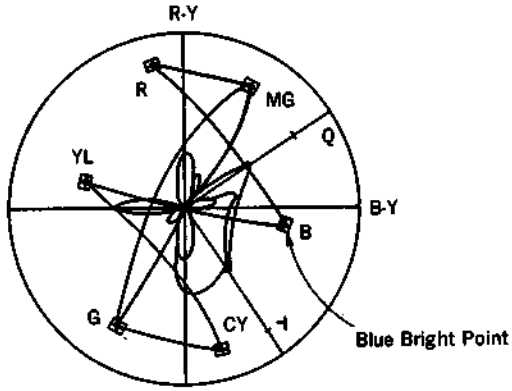


Fig. 10-26.

10-6. DIGITAL SYSTEM ADJUSTMENTS

The adjustments provided in Digital System Adjustments should be performed in the following sequence.

[Adjustment sequence]

1. AFC Adjustment
2. APC Adjustment
3. Read Clock Adjustment
4. Y Output Level Adjustment

10-6-1. AFC Adjustment (DI-46 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5NSP or WR5-8NSE)
Measurement point	IC701 pin ㉜ (YWCK) (CL003 or CL904)
Measuring instrument	Frequency counter
Adjustment element	CV701
Specified value	14318.18±50kHz

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

1) Connect between pin ⑤ (VSIN) and pin ㊸ (VDD) of IC704 by inserting 10kΩ (1-249-429-11). (This will make AFC free running.)
2) Short between pin ⑩ (PWM) and pin ⑪ (PEO) of IC704.

[Adjustment Method]

1) Use CV701 to adjust to 14318.18±50kHz.
2) After this adjustment, perform the following check.

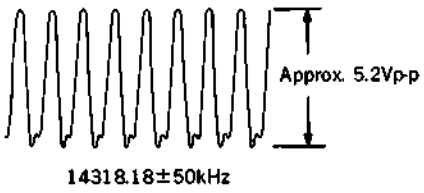


Fig. 10-27.

[Connection]

1) Remove the resistor inserted between pin ⑤ (VSIN) and pin ㊸ (VDD) of IC704. (This will enter the AFC mode.)
2) Open between pin ⑩ (PWM) and pin ⑪ (PEO) of IC704.
3) Check the waveform at the following measuring points.

● (RPD) Waveform Check

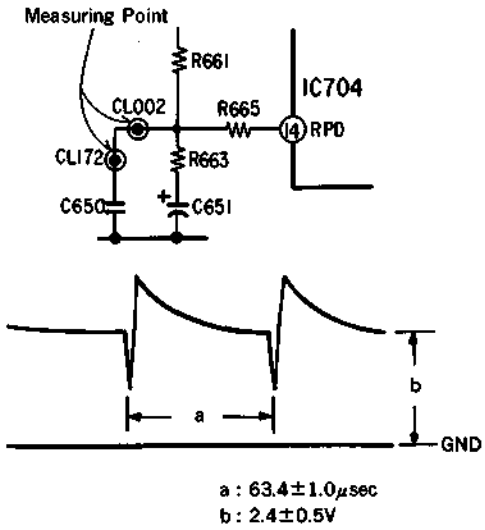


Fig. 10-28.

● (FPD) Waveform Check

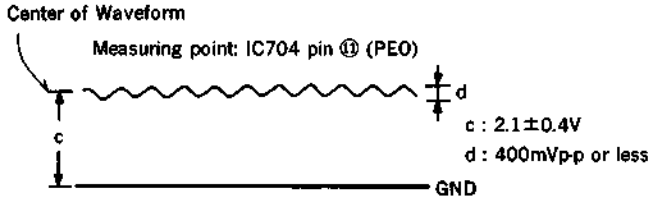


Fig. 10-29.

● (AFH) Waveform Check

Measuring point : CH-1 IC704 pin ㉗ (AFH)
CH-2 CN601 pin ⑪ (DI IN Y (X))

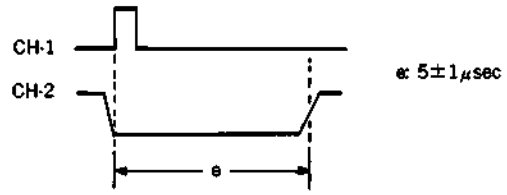


Fig. 10-30.

10-6-2. APC Adjustment (DI-46 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5NSP or WR5-8NSE)
Measurement point	IC701 pin ㊷ (CWCK)
Measuring instrument	Frequency counter
Adjustment element	CV704
Specified value	14318180±50Hz

Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

1) Open pin ⑨ (DI IN C (X)) of CN601.

[Adjustment Method]

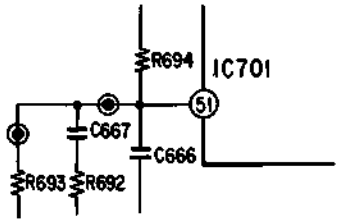
1) Use CV704 to adjust to 14318180±50Hz.
2) After this adjustment, perform the following check.

14318180±50Hz

Fig. 10-31.

[Connection]

1) Connect pin ⑨ (DI IN C (X)) of CN601. (This will enter the APC mode.)
2) Check the waveform at pin ㊶ of IC701.



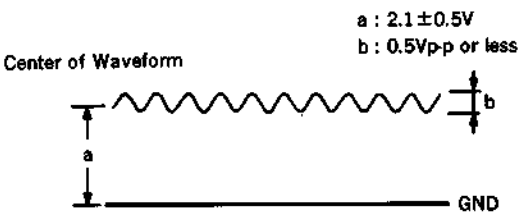


Fig. 10-32.

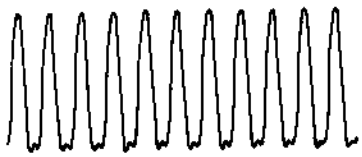
10-6-3. Read Clock Adjustment (DI-46 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5NSP or WR5-8NSE)
Measurement point	IC703 pin ㊷ (YWCK) (CL903 or CL904)
Measuring instrument	Frequency counter
Adjustment element	CV702
Specified value	14318180±200Hz

Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

1) Use CV702 to adjust to 14318180±200Hz.



14318180±200Hz

Fig. 10-33.

10-6-4. Y Output Level Adjustment (DI-46 Board)

Note: For this Adjustment, the sequence of adjustments (1) and (2) should be performed twice.

(1) D/A Amplifier Gain Adjustment

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5NSP or WR5-8NSE)
Measurement point	CN602 pin ④ (DI OUT Y)
Measuring instrument	Oscilloscope
Adjustment element	RV603
Specified value	240±10mV

[Adjustment Method]

1) Adjust RV603 so that the center of the pedestal level is 240±10mV above from the center of the sync tip level.

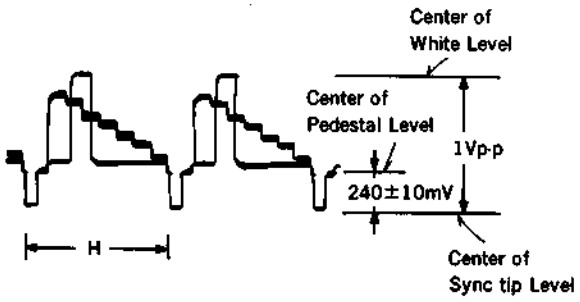


Fig. 10-34.

(2) A/D Amplifier Gain Adjustment

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5NSP or WR5-8NSE)
Measurement point	CN602 pin ④ (DI OUT Y)
Measuring instrument	Oscilloscope
Adjustment element	RV602
Specified value	760±10mV

[Adjustment Method]

1) Adjust RV602 so that the center of the pedestal level is 760±10mV above from the center of sync tip level.

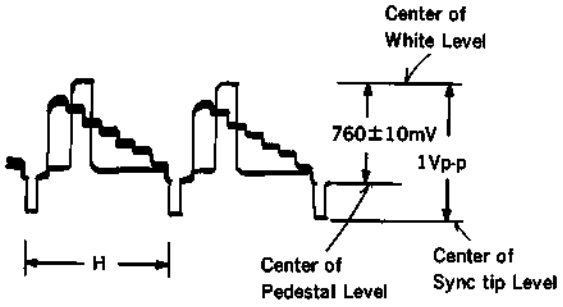


Fig. 10-35.

10-7. CHARACTER GENERATOR SYSTEM ADJUSTMENTS

10-7-1. CG OSC Adjustment (DS-55 Board)

Mode	Record
Signal	Arbitrary
Measurement point	IC204 pin ⑤ (OSC 2)
Measuring instrument	Frequency counter
Adjustment element	CV201
Specified value	6.85±0.05MHz

Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

1) Use CV201 to adjust to 6.85±0.05MHz.

Fig. 10-36.

10-8. PCM AUDIO SYSTEM ADJUSTMENTS

Color bar signal should be used as Video signal input for performing this adjustment.

[Connection of Equipment for Audio Measurement]

In addition to equipment for video measurement, equipment for audio system measurement should be connected as illustrated below.

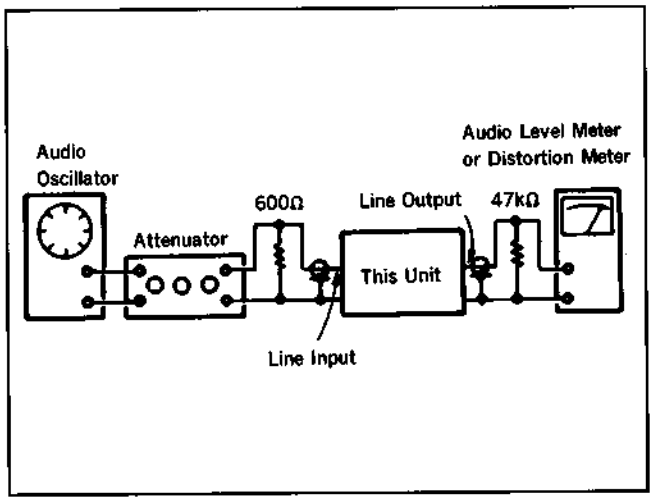


Fig. 10-37.

Unless otherwise specified, place the switches and controls of this unit in the following positions:

- Input Select switch .....LINE 1
- Audio Monitor (PCM/MIX/Standard) switch .....PCM

The adjustments should be performed in the following sequence.

[Adjustment sequence]

1. Master Clock Adjustment
2. Recording Level Adjustment
3. Offset Adjustment
4. Playback VCO Adjustment
5. Playback Level Adjustment
6. E-E Output Level Check
7. Overall Frequency Characteristic Adjustment
8. Overall Distortion Factor Check
9. Overall Noise Level Check

10-8-1. Master Clock Adjustment (PC-56 Board)

Mode	Record
Signal	Arbitrary
Measurement point	IC703 pin ⑳ (MCK 1)
Measuring instrument	Frequency counter
Adjustment element	CV701
Specified value	11.58±0.05MHz

Note 1: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

1) Short between pin ⑲ (TST 4) and pin ㉑ (A VDD) of IC703.
2) Short between pin ⑰ (TST 0) and pin ⑩ (VSS) of IC703.
3) Short between pin ㉖ (LPF Y) and pin ㉗ (LPF X) of IC703.

[Adjustment Method]

1) Use CV701 to adjust to 11.58±0.05MHz.

Note 2: After this adjustment, open the shorted pins.

Fig. 10-38.

10-8-2. Recording Level Adjustment (PC-56 Board)

Mode	Record
Signal	400Hz, −7.5dBs
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Adjustment element	RV703
Specified value	Left side: −6.0±0.5dBs Right side: ±1.5dBs with respect to left side level

[Adjustment Method]

1) Adjust RV703 so that the left side level is at −6.0± 0.5dBs.
2) At this time, check that the right level is within ±1.5dBs of the left side level.

10-8-3. Offset Adjustment (PC-56 Board)

Mode	Self-record playback
Signal	400Hz, +3dBs
Measurement point	Left side: IC608 pin ⑬ Right side: IC608 pin ③
Measuring instrument	Oscilloscope
Adjustment element	Left side: RV701 Right side: RV702
Specified value	Top and bottom clips observed on waveform should be equal with each other.

[Adjustment Method]

1) Record signal.
2) Play back the recorded portion.
3) Check that the clip at the top is equal with the clip at the bottom of the waveform observed.
4) If not equal, rotate the RV701 on the left side and RV702 on the right side as directed below. Then, repeat Steps 1) to 3) to check for the clip.

	Direction of Rotating RV701 or RV702
Top clip less	Counterclockwise (↺)
Top clip more	Clockwise (↻)

Note: In this adjustment, the left and right sides will be affected by each other. Alternately adjust the left and right sides.

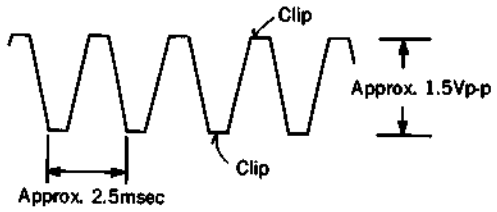


Fig. 10-39.

10-8-4. Playback VCO Adjustment (PC-56 Board)

Mode	Playback, Fast Forward Search, Rewind Search
Signal	Arbitrary tape
Measurement point	IC708 pin ⑧ (FMCK)
Measuring instrument	Frequency counter
Adjustment element	Playback : RV707 Fast Forward Search: RV709 Rewind Search : RV708
Specified value	Playback : 11.58±0.05MHz Fast Forward Search: 10.52±0.05MHz Rewind Search : 12.73±0.05MHz

Note 1: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

1) Connect pin ① (DUTY) of IC708 to 5V.

[Adjustment Method]

1) Use the remote commander to enter the Playback mode.
2) Use RV707 to adjust to 11.58±0.05MHz.
3) Use the remote commander to execute Fast Forward Search. (Press SERACH on "Fast Forward" side.)
4) Use RV709 to adjust to 10.52±0.05MHz.
5) Use the remote commander to execute Rewind Search. (Press SERACH on "Rewind" side.)
6) Use RV708 to adjust to 12.73±0.05MHz.

Note 2: After this adjustment, open pin ① of IC708.

During Playback : 11.58±0.05MHz
During Fast Forward Search : 10.52±0.05MHz
During Rewind Search : 12.73±0.05MHz

Fig. 10-40.

10-8-5. Playback Level Adjustment (PC-56 Board)

Mode	Playback
Signal	Alignment tape: For operation check, 400Hz portion (WR5-9NS)
Measurement point	Audio Line Output terminal, left and right
Measuring instrument	Audio level meter
Adjustment element	RV705
Specified value	Left side: −7.5±0.3dBs Right side: ±1.5dBs with respect to left side level

[Adjustment Method]

1) Adjust RV705 so that the left side level is at −7.5± 0.3dBs.
2) At this time, check that the right level is within ±1.5dBs of the left side level.

10-8-6. E-E Output Level Check

Mode	E-E
Signal	400Hz, −7.5dBs
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	−7.5±3dBs

[Check Method]

1) Place the Recording Level control in [5] position.
2) Check that the indicated value of a peak level meter is −7.5dBs.
3) Check that the respective levels of Audio Line Output terminals, left and right are −7.5±3dBs.

10-8-7. Overall Frequency Characteristic Adjustment

Mode	Self-record playback
Signal	Ⓐ 400Hz, −7.5dBs Ⓑ 20Hz, −7.5dBs Ⓒ 14kHz, −7.5dBs : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	The playback output levels of 20Hz and 14kHz should be 0±3dBs with 400Hz playback output level at 0dBs.

[Check Method]

1) Record signals Ⓐ to Ⓒ in turn.
2) Play back the recorded portion.
3) Check that the respective playback output levels of 20Hz and 14kHz are 0±3dBs with 400Hz playback output level at 0dBs.

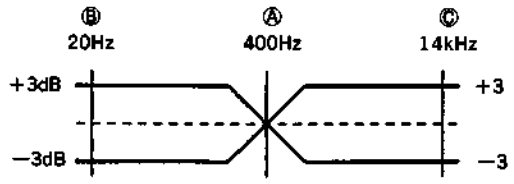


Fig. 10-41.

10-8-8. Overall Distortion Factor Check

Mode	Self-record playback
Signal	400Hz, −7.5dBs : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Distortion meter
Specified value	0.35% or less

[Check Method]

1) Record signal.
2) Play back the recorded portion.
3) Check that the distortion factor is 0.35% or less.

10-8-9. Overall Noise Level Check

Mode	Self-record playback
Signal	No signal (Insert a shorting plug into the Audio Line Input jacks, left and right.)
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	−82dBs or less Note)

[Check Method]

1) Record.
2) Play back recorded portion.
3) Check that the noise level is −82dBs or less.

Note : This is a value when an IHF-A weighing filter is used.

10-9. AFM AUDIO SYSTEM ADJUSTMENTS

Color bar signal should be used as Video signal input for performing this adjustment.

[Connection of Equipment for Audio Measurement]

In addition to equipment for video measurement, the audio measurement equipment should be connected as illustrated below.

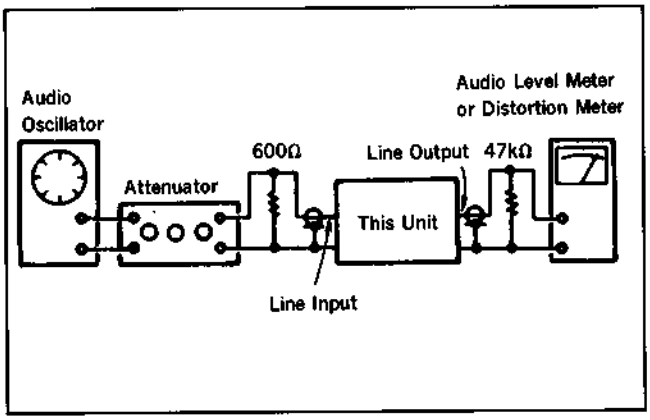


Fig. 10-42.

Unless otherwise specified, place the switches and controls of this unit in the following positions:

- Input Select switch .....LINE 1
- Audio Monitor (PCM/MIX/Standard) switch .....PCM

The adjustments should be performed in the following sequence.

[Adjustment sequence]

1. Recording Separation 2 Adjustment
2. Recording Separation 1 Adjustment
3. Carrier Frequency 1.5MHz Adjustment
4. Carrier Frequency 1.7MHz Adjustment
5. 1.5MHz Deviation Adjustment
6. 1.7Mhz Deviation Adjustment
7. Playback Separation 2 Adjustment
8. Playback Separation 1 Adjustment
9. E-E Output Level Check
10. Overall Frequency Characteristic Check
11. Overall Distortion Factor Check
12. Overall Noise Check

10-9-1. Recording Separation 2 Adjustment (PC-56 Board)

Mode	Record
Signal	400Hz, −7.5dBs
Measurement point	IC801 pin ㊳ (MOA IN)
Measuring instrument	Audio level meter
Adjustment element	RV953
Specified value	−60dBs or less

[Adjustment Method]

1) Use RV953 to adjust to −60dBs or less.

10-9-2. Recording Separation 1 Adjustment (PC-56 Board)

Mode	Record
Signal	400Hz, −7.5dBs
Measurement point	IC901 pin ㊳ (MOA IN)
Measuring instrument	Audio level meter
Adjustment element	RV951
Specified value	−60dBs or less

[Adjustment Method]

1) Use RV951 to adjust to −60dBs or less.

10-9-3. Carrier Frequency 1.5MHz Adjustment (PC-56 Board)

Mode	Record
Signal	No signal
Measurement point	IC901 pin ⑬ (VCO OUT)
Measuring instrument	Frequency counter
Adjustment element	RV901
Specified value	1500±3kHz

Note 1 : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

1) Connect pin ㉕ (VA PB) and pin ㉑ of IC401 by inserting 10kΩ (1-249-429-11).

[Adjustment Method]

1) Use RV901 to adjust to 1500±3kHz.

Note 2 : After this adjustment, remove the resistor 10kΩ.

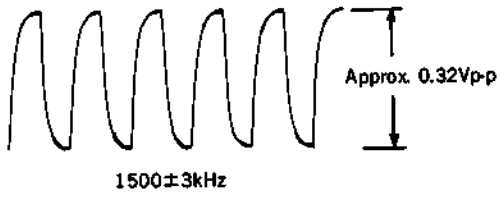


Fig. 10-43.

10-9-4. Carrier Frequency 1.7MHz Adjustment (PC-56 Board)

Mode	Record
Signal	No signal
Measurement point	IC901 pin ⑬ (VCO OUT)
Measuring instrument	Frequency counter
Adjustment element	RV801
Specified value	1700±3kHz

Note 1 : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

1) Connect pin ㉕ (VA PB) and pin ㉗ of IC401 by inserting 10kΩ (1-249-429-11).

[Adjustment Method]

1) Use RV801 to adjust to 1700±3kHz.

Note 2 : After this adjustment, remove the resistor 10kΩ.

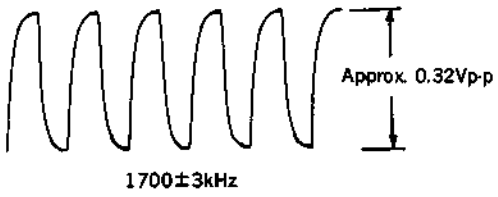


Fig. 10-44.

10-9-5. 1.5MHz Deviation Adjustment (PC-56 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-9NS)
Measurement point	Audio Line Output terminal, left
Measuring instrument	Audio level meter
Adjustment element	RV902
Specified value	−7.5±0.5dBs

[Adjustment Method]

1) Use RV902 to adjust to −7.5±0.5dBs.

10-9-6. 1.7MHz Deviation Adjustment (PC-56 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-9NS)
Measurement point	Audio Line Output terminal, left
Measuring instrument	Audio level meter
Adjustment element	RV802
Specified value	−7.5±0.5dBs

[Adjustment Method]

1) Use RV802 to adjust to −7.5±0.5dBs.

10-9-7. Playback Separation 2 Adjustment (PC-56 Board)

Mode	Playback
Signal	Alignment tape: For operation check, 400Hz portion (WR5-9NS)
Measurement point	IC905 pin ⑦
Measuring instrument	Audio level meter
Adjustment element	RV952
Specified value	The level should be minimized (to −35dBs or less).

[Adjustment Method]

1) Use RV952 to minimize the right side level (to −35dBs or less).

10-9-8. Playback Separation 1 Adjustment (PC-56 Board)

Mode	Playback
Signal	Alignment tape: For operation check, 400Hz portion (WR5-9NS)
Measurement point	IC906 pin ①
Measuring instrument	Audio level meter
Adjustment element	RV954
Specified value	The level should be minimized (to −35dBs or less).

[Adjustment Method]

1) Use RV954 to minimize the left side level (to −35dBs or less).

10-9-9. E-E Output Level Check

Mode	E-E
Signal	400Hz, −7.5dBs
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	−7.5±3dBs

[Check Method]

1) Place the Recording Level control in [5] position.
2) Check that the indicated value of a peak level meter is −7.5dBs.
3) Check that the respective levels of Audio Line Output terminals, left and right are −7.5±3dBs.

10-9-10. Overall Frequency Characteristic Check

Mode	Self-record playback
Signal	Ⓐ 400Hz, −7.5dBs Ⓑ 20Hz, −7.5dBs Ⓒ 14kHz, −7.5dBs : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	The playback output levels of 20Hz and 14kHz should be 0±3dBs with 400Hz playback output level at 0dBs.

[Check Method]

1) Record signals Ⓐ to Ⓒ in turn.
2) Play back the recorded portion.
3) Check that the respective playback output levels of 20Hz and 14kHz are 0±3dBs with 400Hz playback output level at 0dBs.

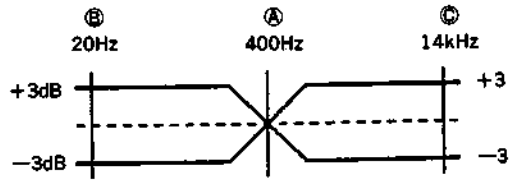


Fig. 10-45.

10-9-11. Overall Distortion Factor Check

Mode	Self-record playback
Signal	400Hz, −7.5dBs : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Distortion meter
Specified value	Left side: 0.5% or less Note) Right side: 1.0% or less Note)

[Check Method]

1) Record signal.
2) Play back the recorded portion.
3) Check that the distortion factor is 0.5% or less on the left side and 1.0% or less on the right side Note).

Note : These are values when a 200Hz - 6kHz BPF is used.

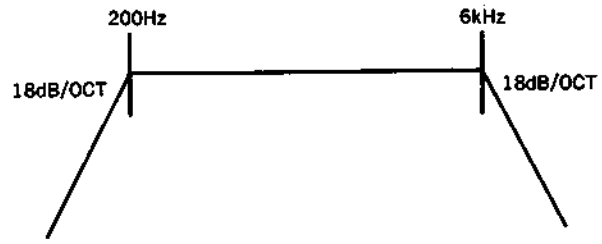


Fig. 10-46.

10-9-12. Overall Noise Level Check

Mode	Self-record playback
Signal	No signal (Insert a shorting plug into the Audio Line Input jacks, left and right.)
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	Left side: −68dBs or less Note) Right side: −63dBs or less Note)

[Check Method]

1) Record.
2) Play back recorded portion.
3) Check that the noise level is −68dBs or less on the left side and −63dBs on the right side.

Note : These are values when an IHF-A weighing filter is used.

10-10. TUNER SYSTEM ADJUSTMENTS

This adjustment should be made in the VHF/UHF Broadcasting Listening mode.
The adjustments should be made in the following sequence.

[Adjustment sequence]

1. AGC Adjustment
2. Separation Adjustment

10-10-1. AGC Adjustment (TU-100 Board)

Mode	E-E
Signal	TV signal (62dBμ)
Measurement point	IF001 pin ①
Measuring instrument	Digital voltmeter
Adjustment element	AGC VR (IF001)
Specified value	6±0.3V

[Adjustment Method]

1) Use AGC VR to adjust the voltage value to 6±0.3V.
2) Input TV signal of 60dBμ and make sure that the voltage is 7V or more.

10-10-2. Separation Adjustment (TU-100 Board)

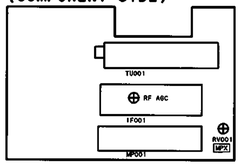
Signal	Stereo L CH: 400Hz, 100% modulated R CH: No modulation
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Oscilloscope
Adjustment element	RV001

[Adjustment Method]

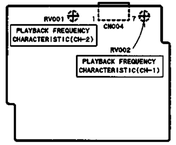
1) Set a sound multiplex signal generator to Stereo mode. Set L CH to 400Hz, 100% modulated.
2) Connect an oscilloscope to the R channel of Audio Line Output.
3) Adjust RV001 so that R CH output is minimized. In this adjustment, Do not rotate R001 fully.

10-11. ADJUSTING PARTS LOCATION DIAGRAM

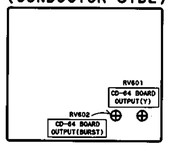
TU-100 BOARD (COMPONENT SIDE)



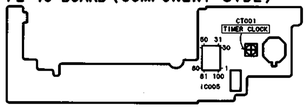
RP-116 BOARD (CONDUCTOR SIDE)



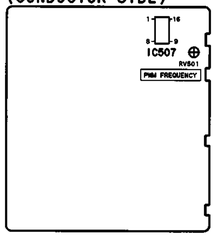
CD-64 BOARD (CONDUCTOR SIDE)



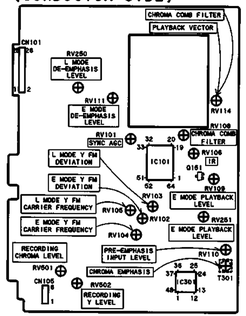
FL-46 BOARD (COMPONENT SIDE)



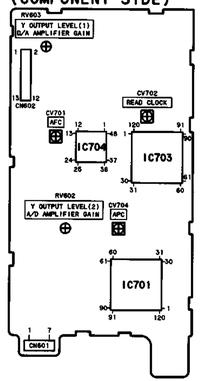
CM-32 BOARD (CONDUCTOR SIDE)



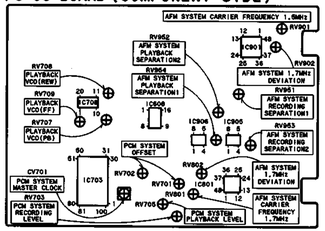
VI-104 BOARD (CONDUCTOR SIDE)



DI-46 BOARD (COMPONENT SIDE)



PC-56 BOARD (COMPONENT SIDE)



DS-55 BOARD (COMPONENT SIDE)