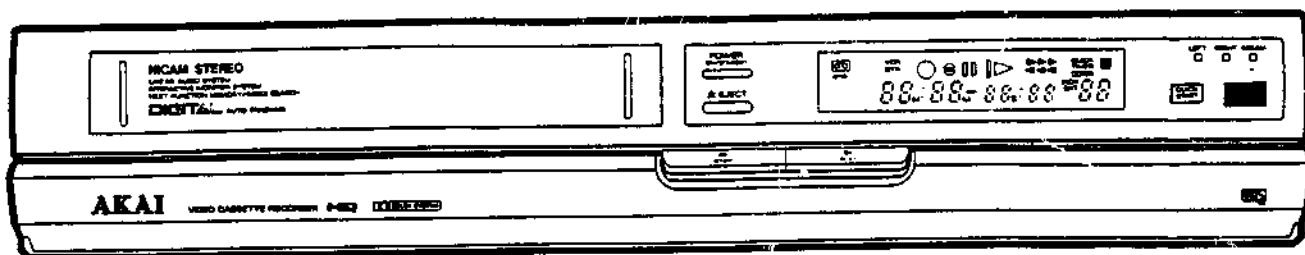


AKAI SERVICE MANUAL



HQ **VHS**
HIGH QUALITY PAL

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VIDEO CASSETTE RECORDER


MODEL VS-422_{EOH}

MODEL VS-425_{EM/EOG/EOH}

MODEL VS-427,467,485_{EK}

SPECIFICATIONS

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Format | EK VHS standard EM/EOG/EOH . VHS standard(PAL, MESECAM) | S/N ratio | EXCEPT EK more than 40 dB EK more than 36 dB (improves by 8.5 dB with Dolby NR ON) |
| Video recording system | Rotary, slant azimuth two-head helical scan system | Frequency response | EXCEPT EOG ... 70 - 10,000 Hz EOG 80 - 10,000 Hz |
| Rotary heads | EXCEPT 467EK 2 video heads 467EK 3 video heads | Recording/playback time | 240 min. with E-240 cassette in SP mode |
| RF input | EK System I UHF ch 21 - 69 EM System B, G (PAL, SECAM) Middle East VHF ch 2 - 12 UHF ch 21 - 69 | Tape speed | 23.39 mm/sec. |
| EOG | System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12 UHF ch 21 - 69 | Quick finder | approx. 5 or 15 times normal speed |
| EOH | Cable ch S1' - S3', S1 - S20 System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12 UHF ch 21 - 69 | FF, REW time | approx. 5 min. with E-180 cassette |
| RF output | EK System I type modulation UHF ch 30 - 39 adjustable(preset ch 36) | Timer | Program 8 program / 1 year and QUICK TIMER Clock reference Quartz crystal |
| EM | System B type modulation VHF ch 3, 4 switchable(preset ch 4) | Display | TV screen & FL(Tape counter, Timer etc.) |
| EOG/EOH | System G type modulation UHF ch 30 - 39 adjustable(preset ch 36) | Power requirements | 422EOH/425EOG/ 425EOH 220 V AC, 50 Hz 425EM 110-127/220-240 V AC, 50/60 Hz 427EK/467EK/485EK 240 V AC, 50 Hz |
| Recording(line input) | EK PAL EM/EOG/EOH . PAL, SECAM(recorded as MESECAM) | Power consumption | 425EM/427EK/467EK 36 W 422EOH/425EOH/ 425EOG 37 W 485EK 38 W |
| Playback(line output) | EK PAL EM/EOG/EOH . PAL, SECAM(MESECAM Tape) | Operating temperature | 5°c - 40°c |
| Video | Line input level 0.5 - 2.0 Vp-p/75 ohms, unbalanced Line output level 1.0 Vp-p/75 ohms, unbalanced SN ratio more than 45dB Horizontal resolution more than 250 lines | Dimensions | 422EOH/427EK/ 467EK/485EK 425(W) × 82(H) × 318(B) mm 425EM/425EOG/ 425EOH 425(W) × 82(H) × 310(B) mm |
| Audio | Line input level -6 dBs/ 50 K ohms, unbalanced Line output level -6 dBs/ 1 K ohms, unbalanced | Weight | 5.0 Kg |
| | | Standard accessories | (except EK model) (EK model) |
| | | Connection cord | 1 1 |
| | | Remote control unit | 1 1 |
| | | Batteries for remote control | 2 4 |
| | | Function decal sheet | - 1 |
| | | Operator's manual | 1 1 |

- * For improvement purposes, specifications and design are subject to change without notice.
- * Noise reduction manufactured under license from dolby laboratories licensing corporation.
"DOLBY" and  symbol are trade marks of dolby licensing corporation.

★ SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the Δ (*) symbol are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
These must also be replaced only with specified replacements.
Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation Tape
 - 2) PVC tubing
 - 3) Spacers (Insulating Barriers)
 - 4) Insulation sheets for transistors
 - 5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

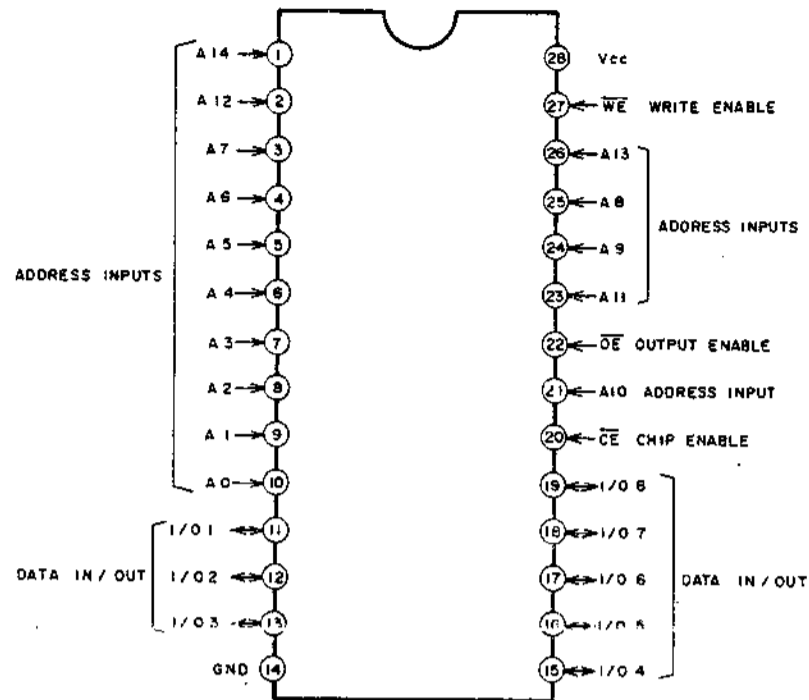
After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.

The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal-input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 μ F capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.

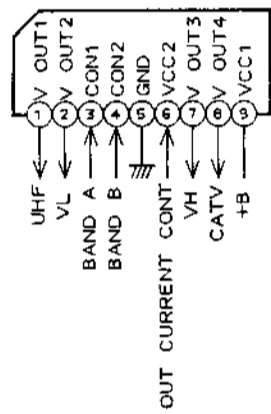
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 Mohms.

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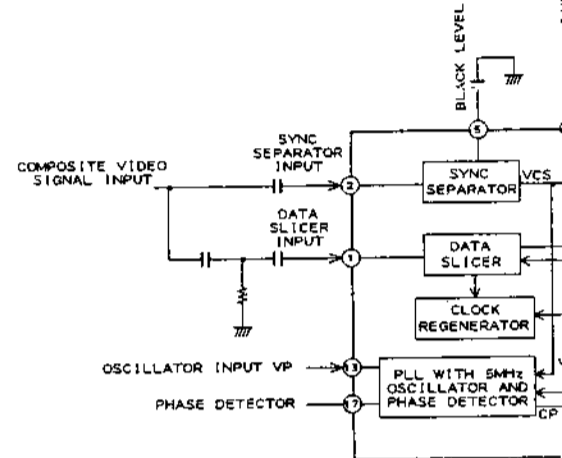
LA7910 (TUNER BAND SELECTOR)



| INPUT | | OUTPUT | | | |
|-------|------|--------|--------|--------|--------|
| CON1 | CON2 | V OUT1 | V OUT2 | V OUT3 | V OUT4 |
| L | L | H | Z | Z | Z |
| H | L | Z | H | Z | Z |
| L | H | Z | Z | H | Z |
| H | H | Z | Z | Z | H |

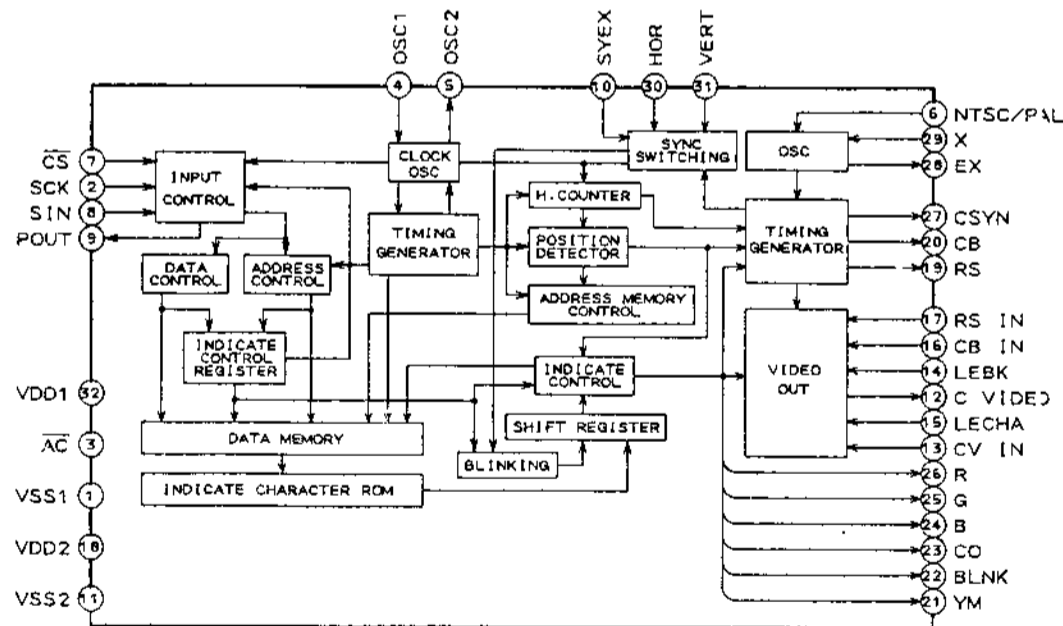
Z: HIGH IMPEDANCE

SAA4700 (VPS DATA LINE P)

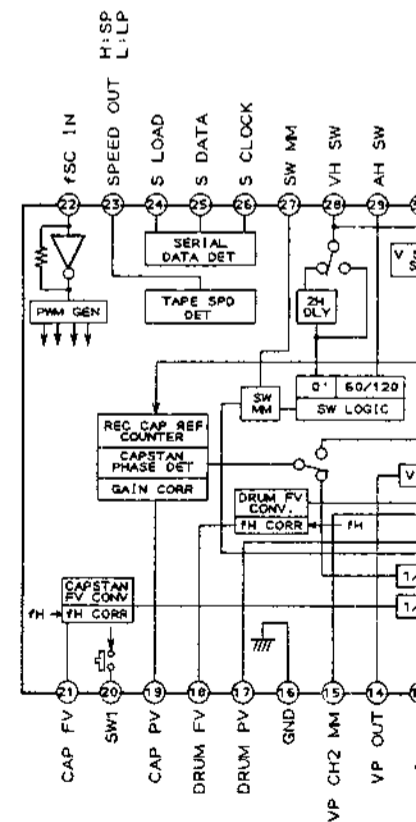


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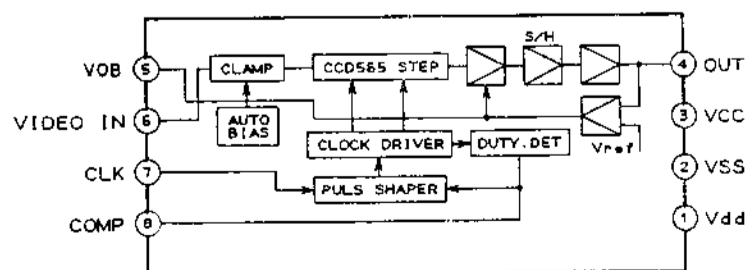
M50455-142SP (CHARACTER GENERATOR)



SX2777AS (DIGITAL SERVO)

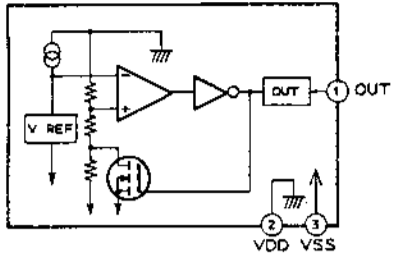


MSM6965-3RS (1H CCD DELAY LINE)

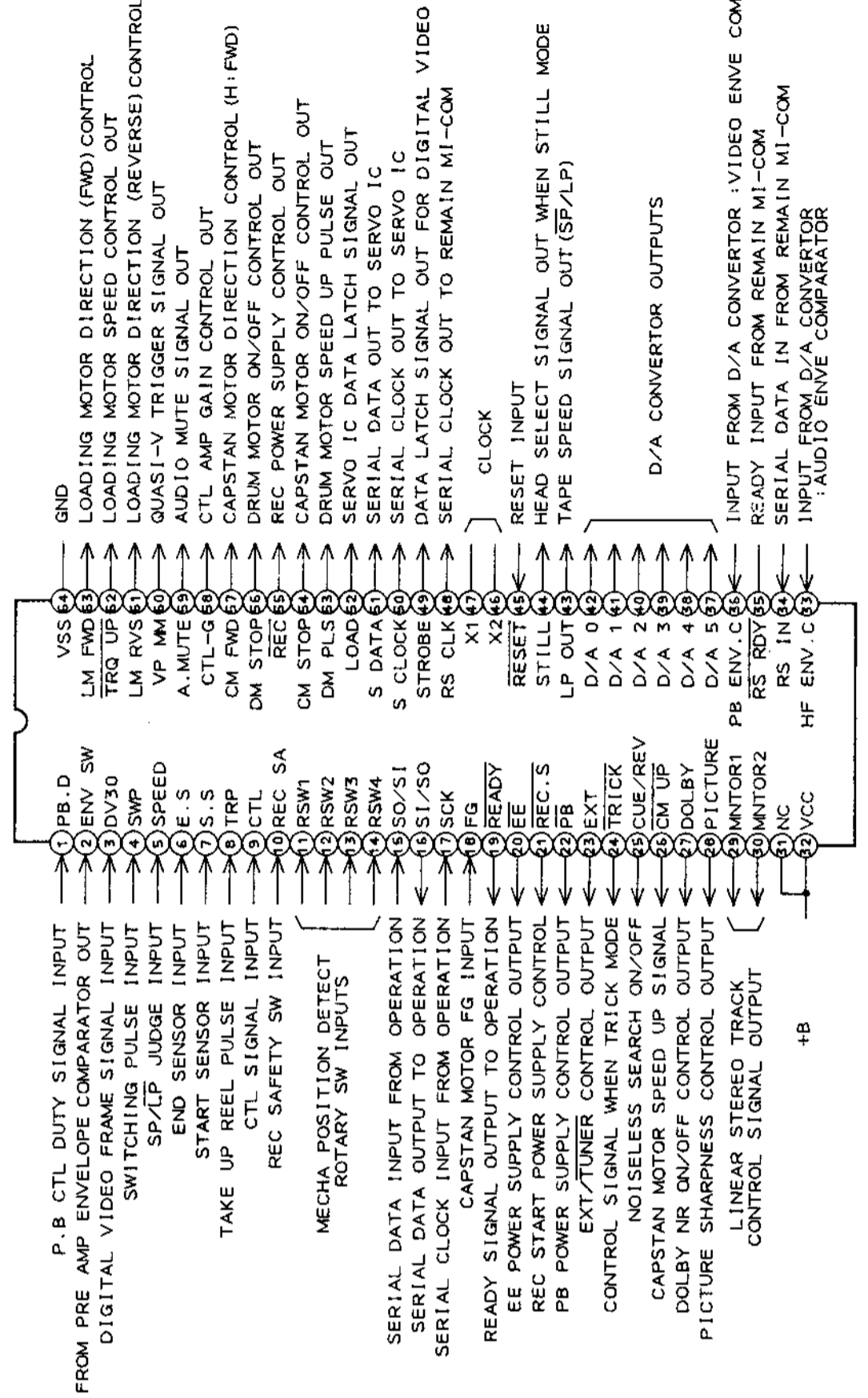
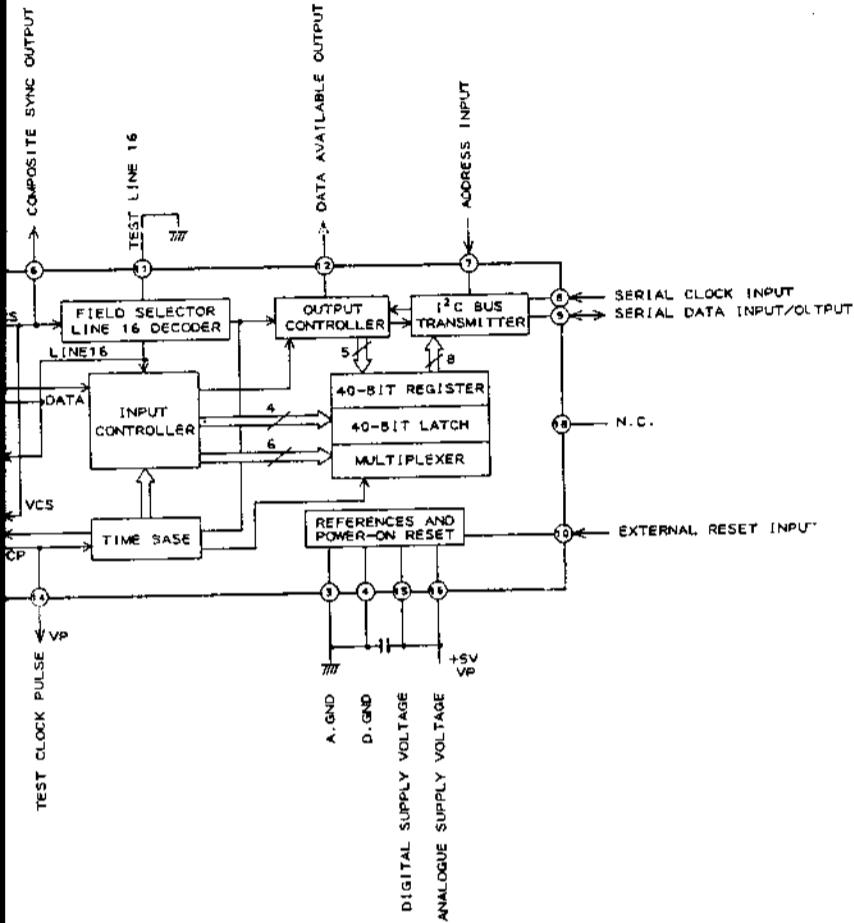


µPD75108CW-A54 (SYSCON MI-COM)

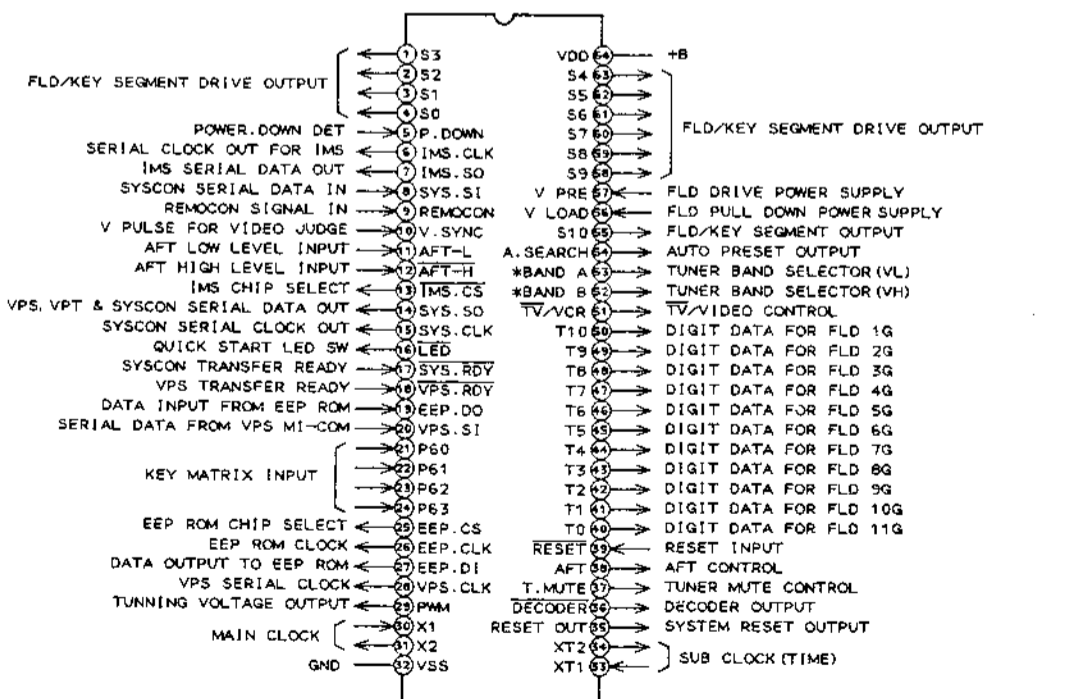
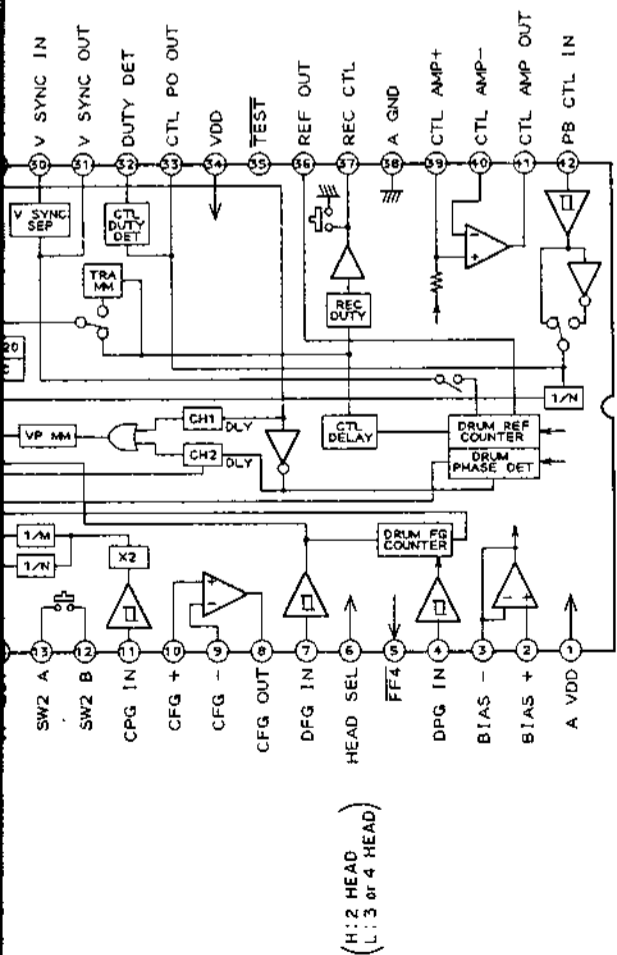
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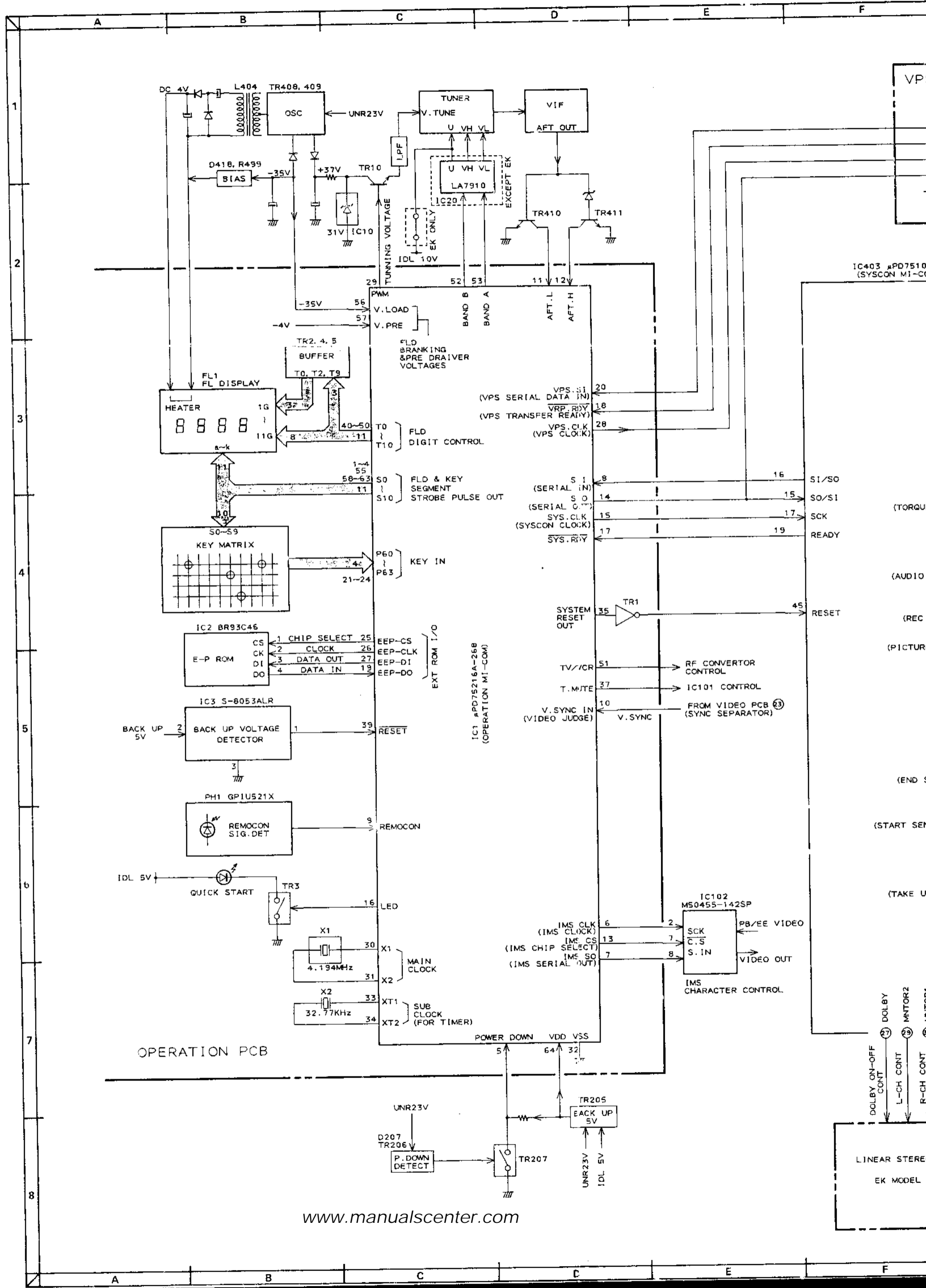


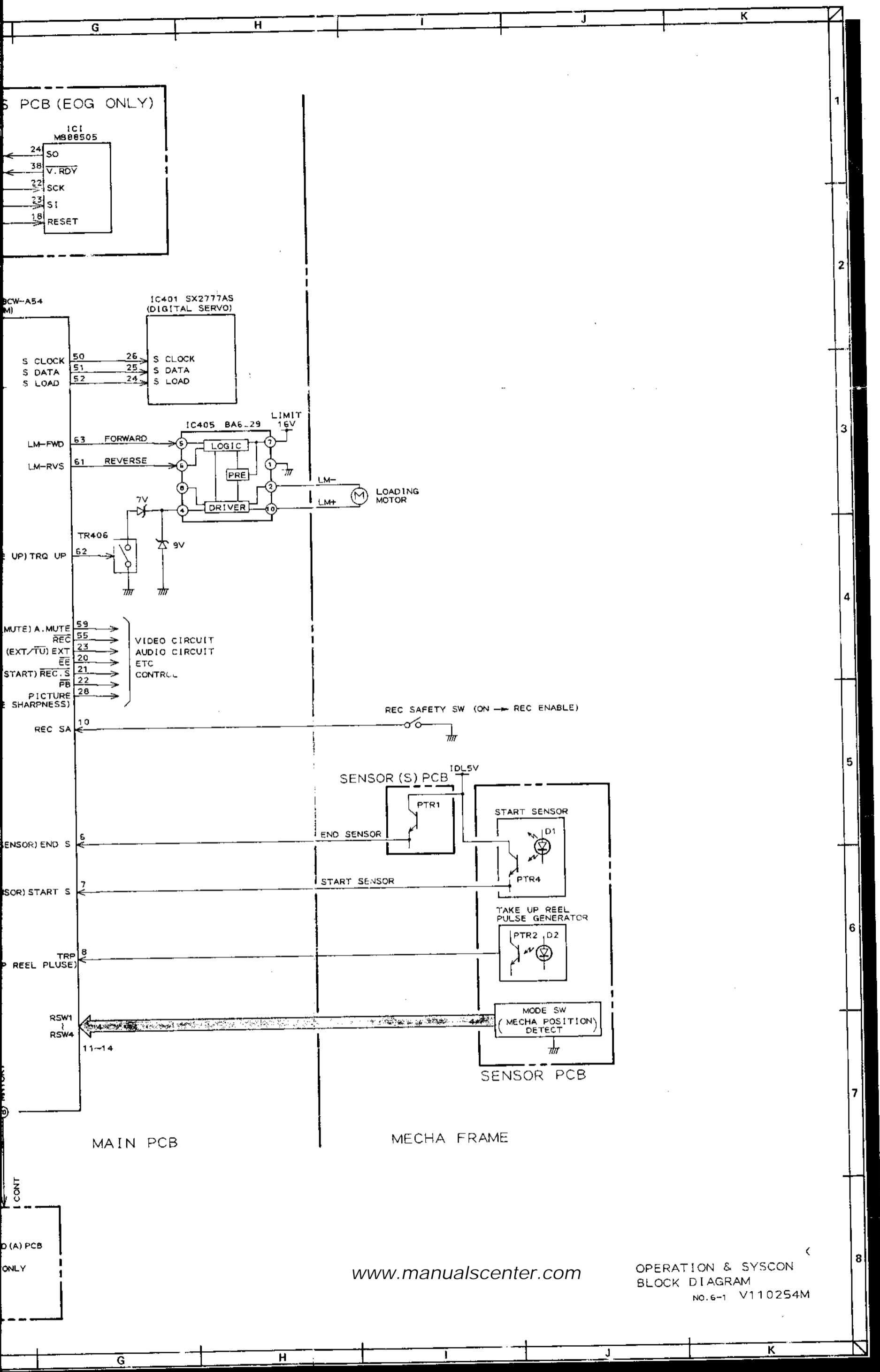
PROCESSOR)

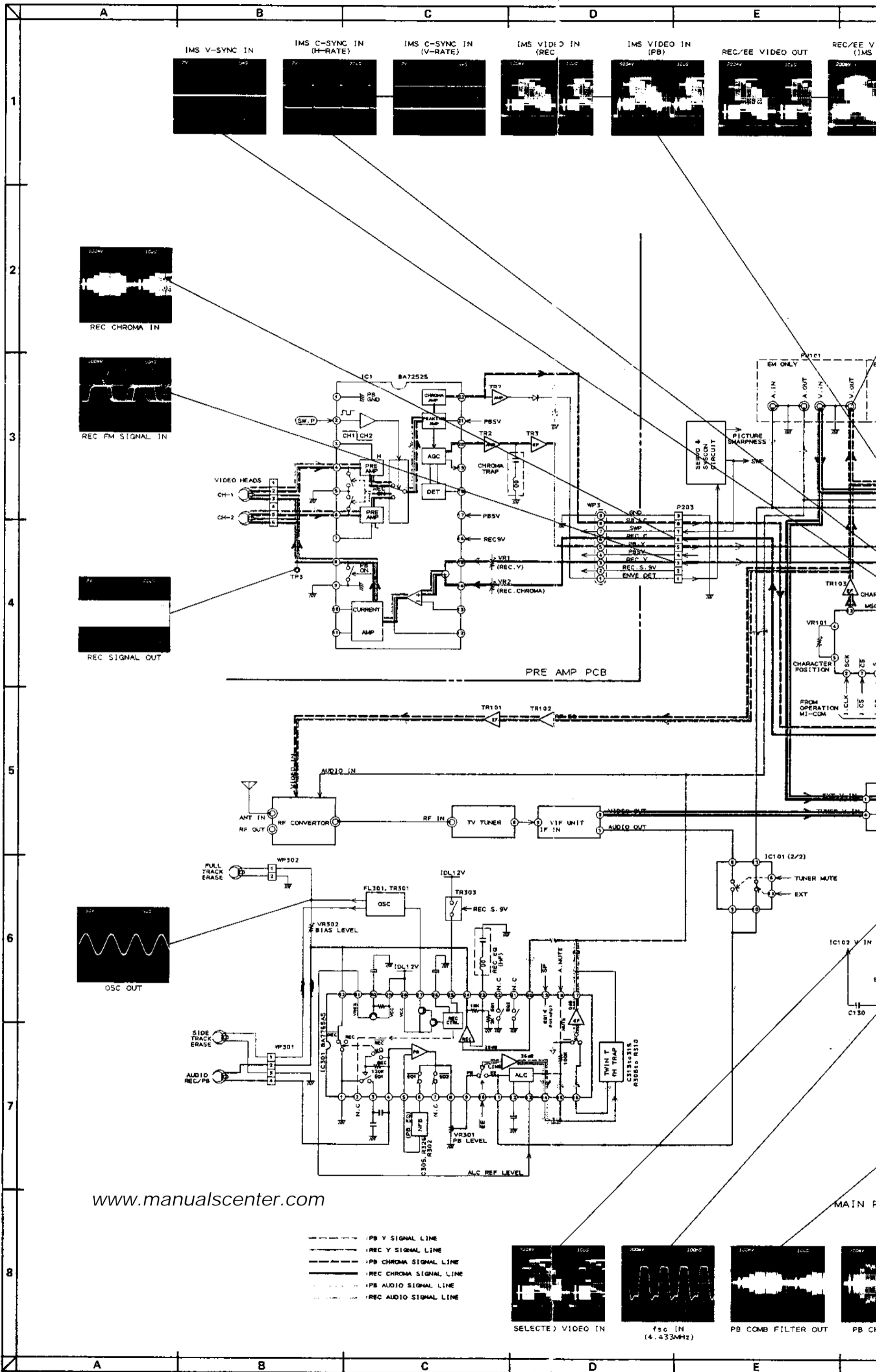


µPD75216A-268 (OPERATION MI-COM)



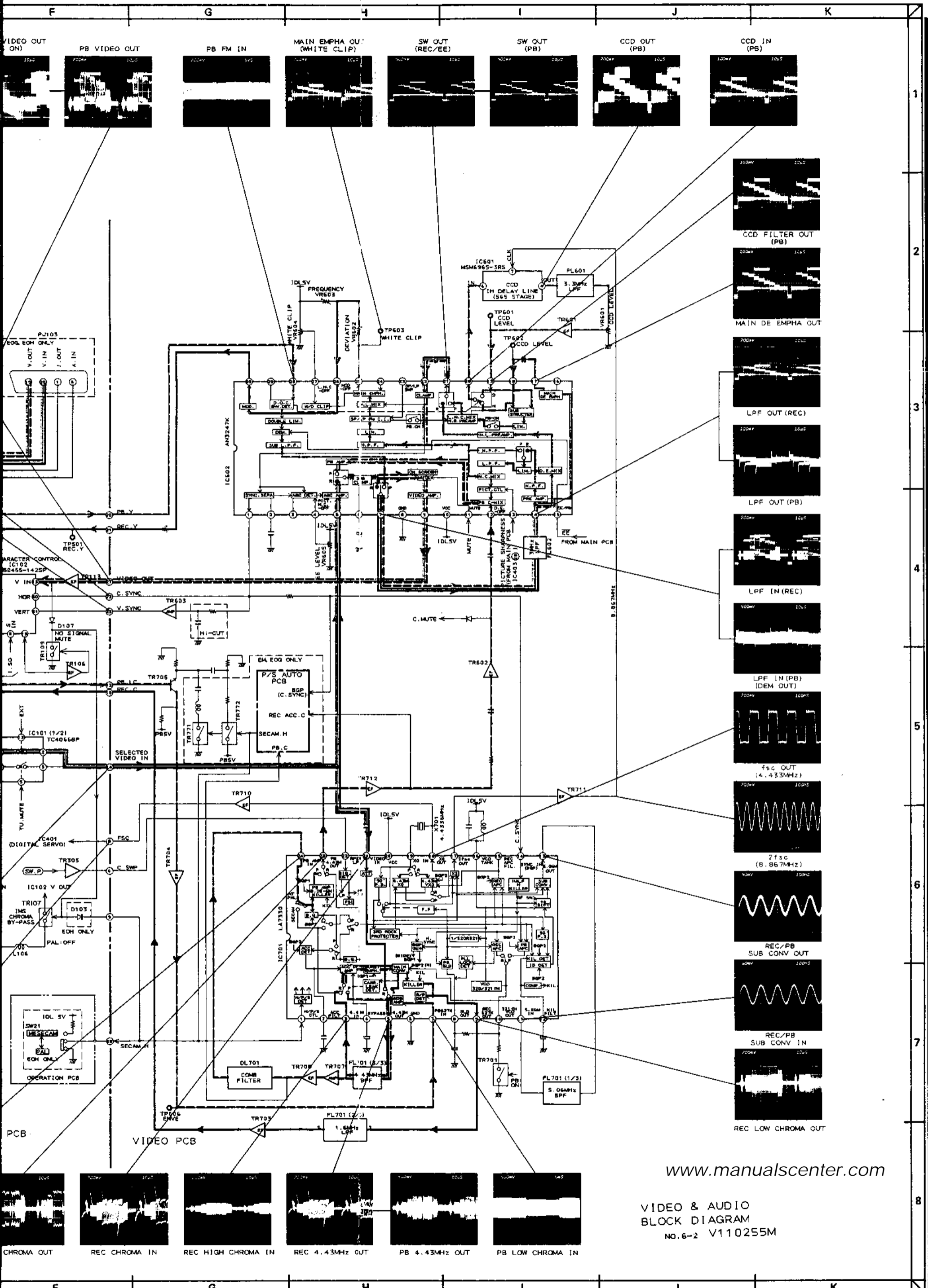






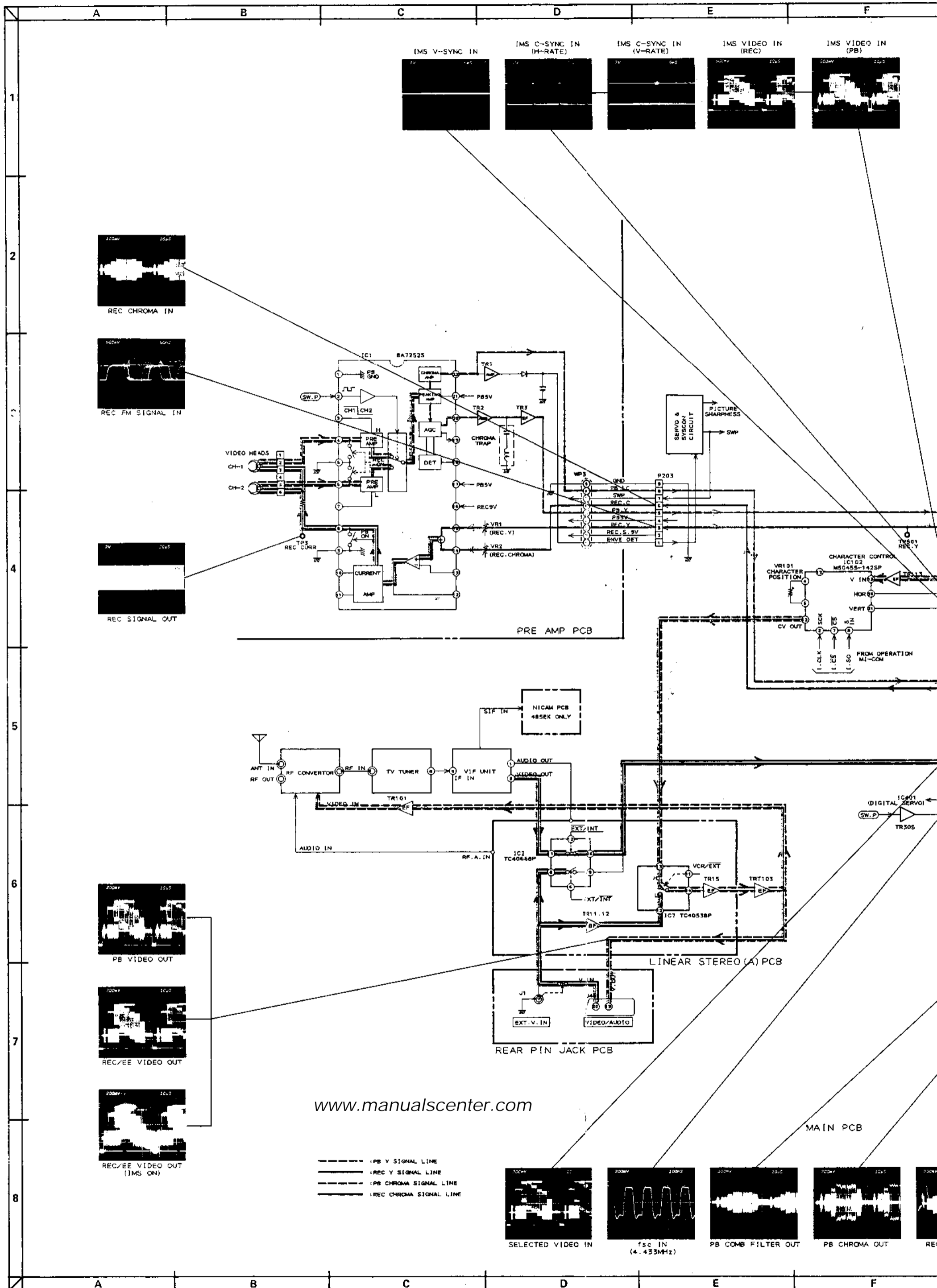
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MAIN P



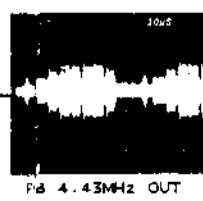
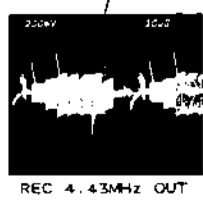
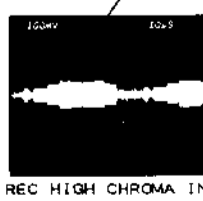
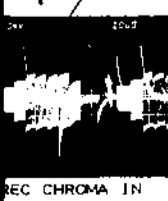
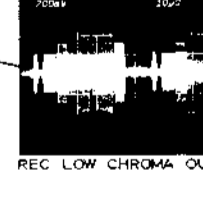
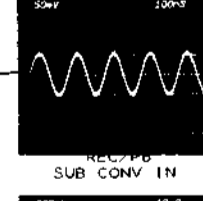
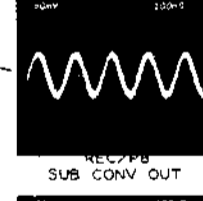
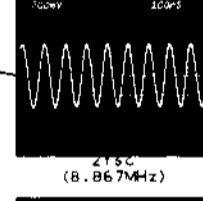
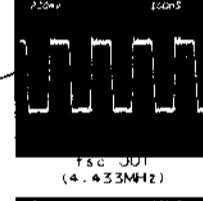
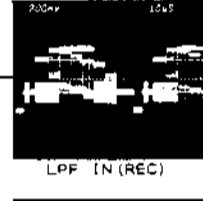
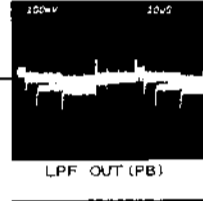
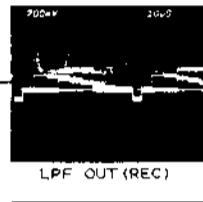
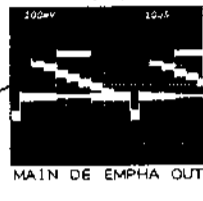
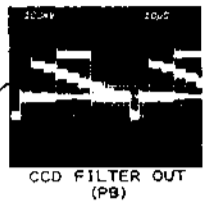
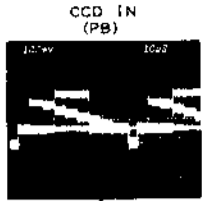
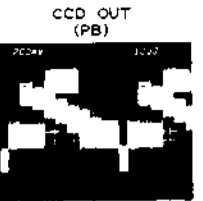
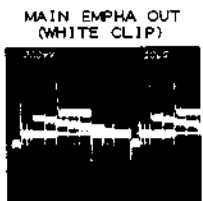
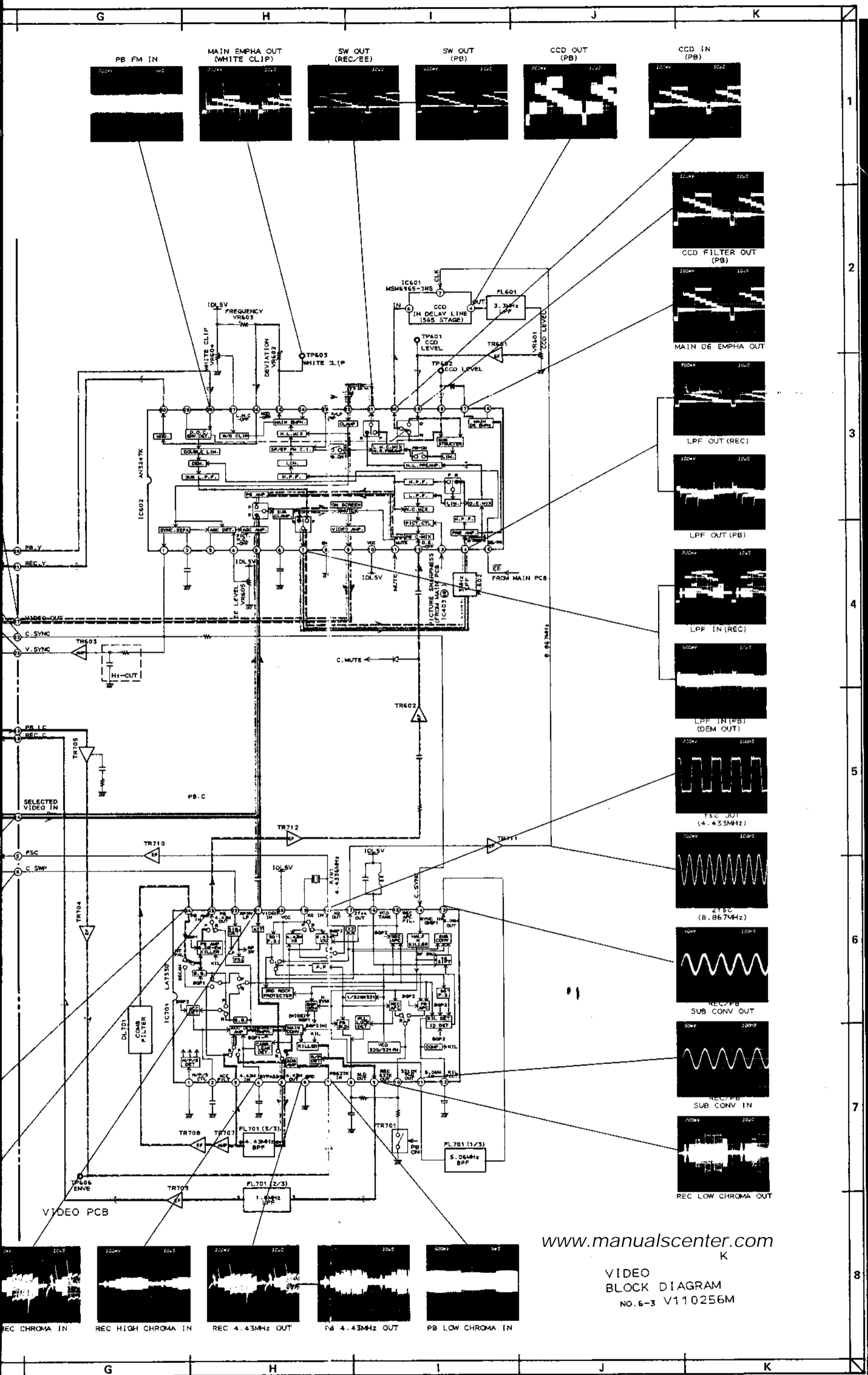
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VIDEO & AUDIO
BLOCK DIAGRAM
No. 6-2 V110255M



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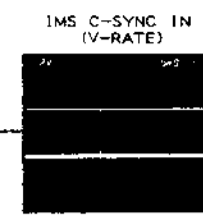
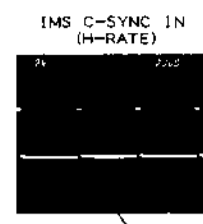
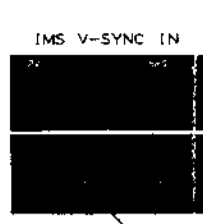
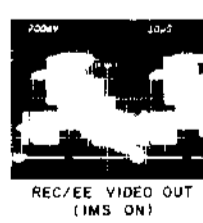
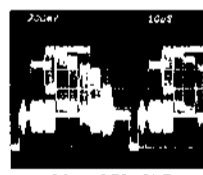
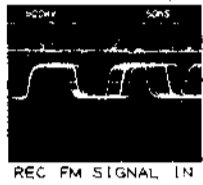
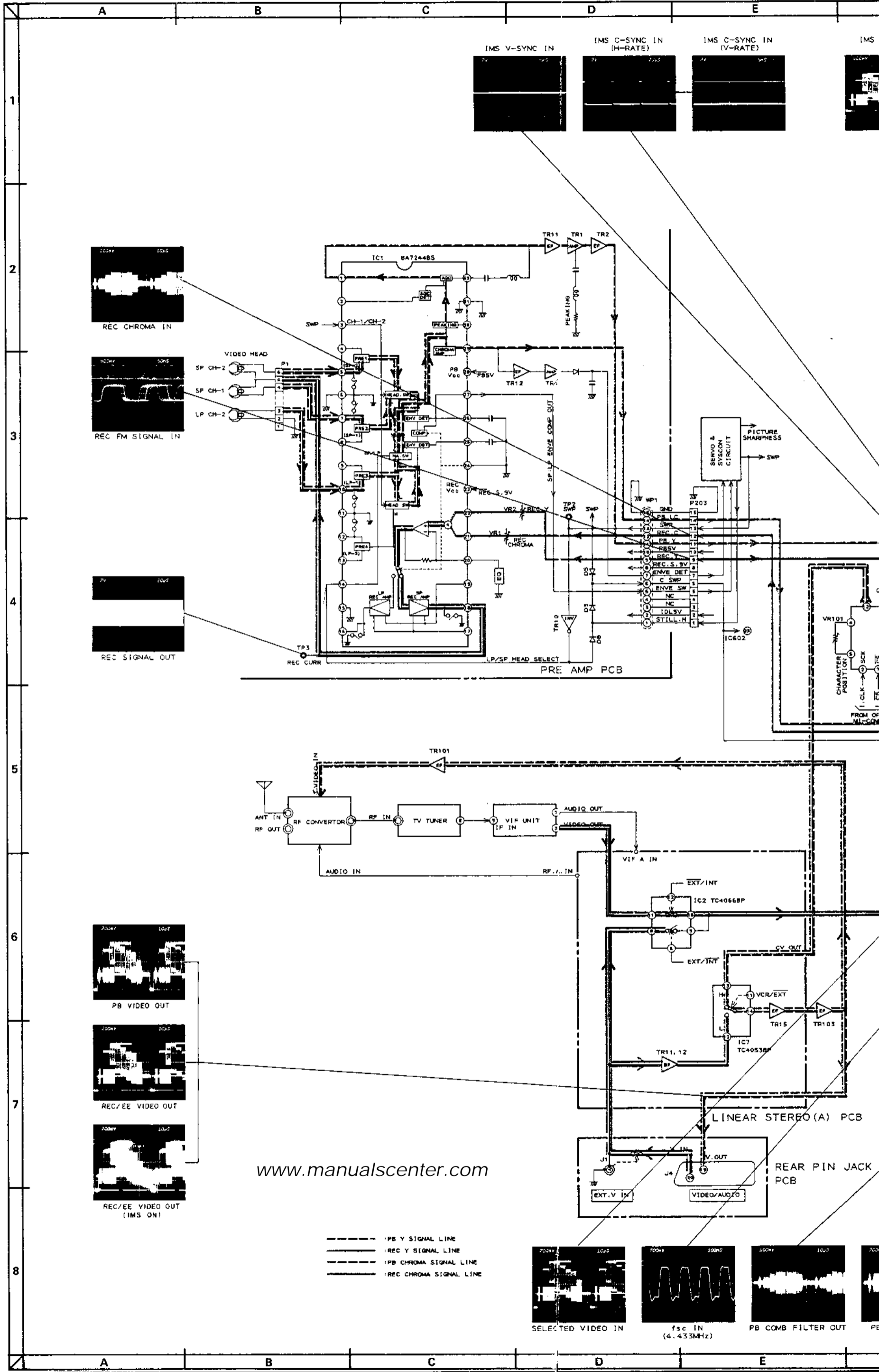
MAIN PCB



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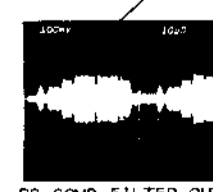
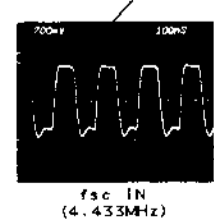
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VIDEO
BLOCK DIAGRAM
NO. 6-3 V110256M

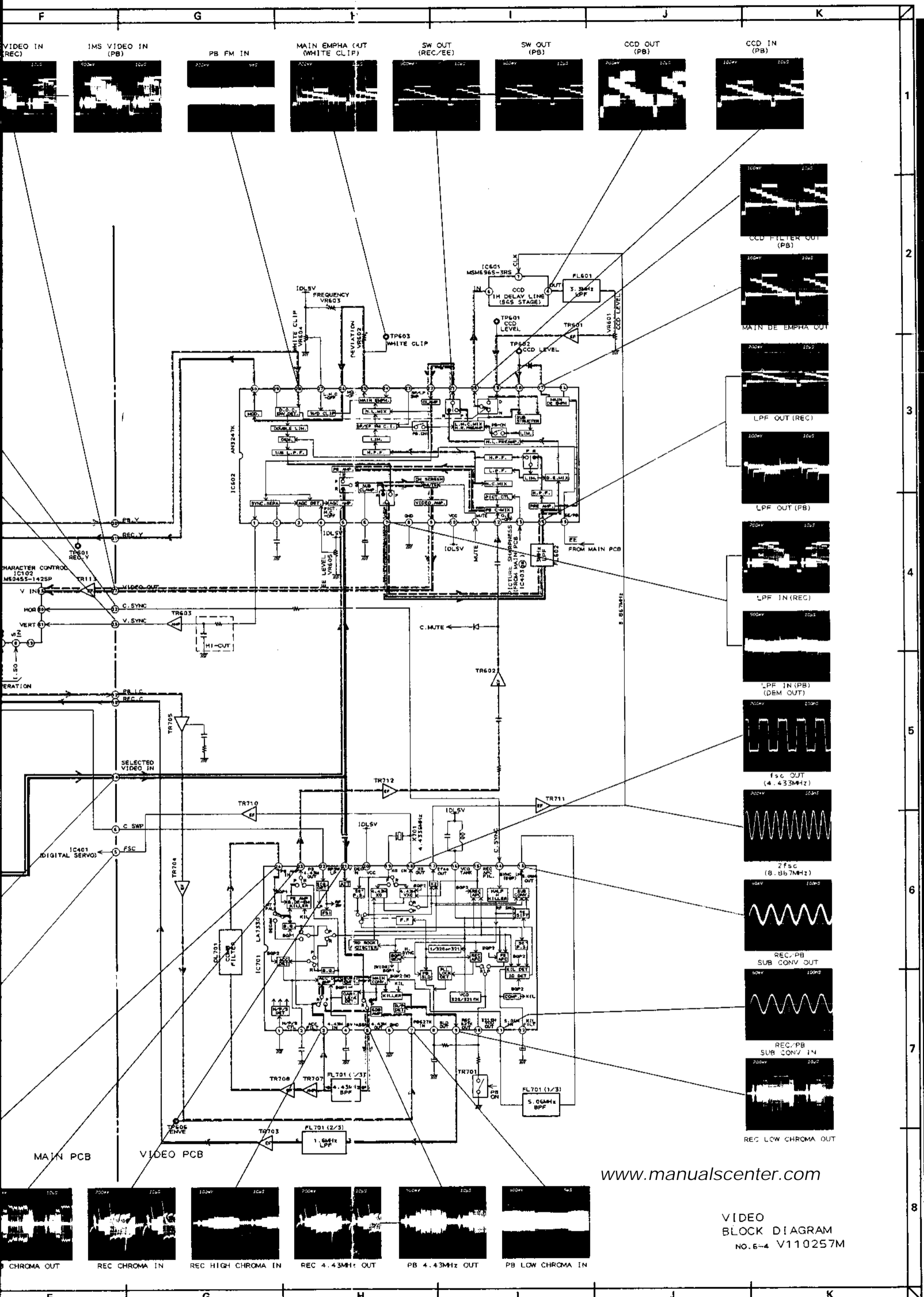
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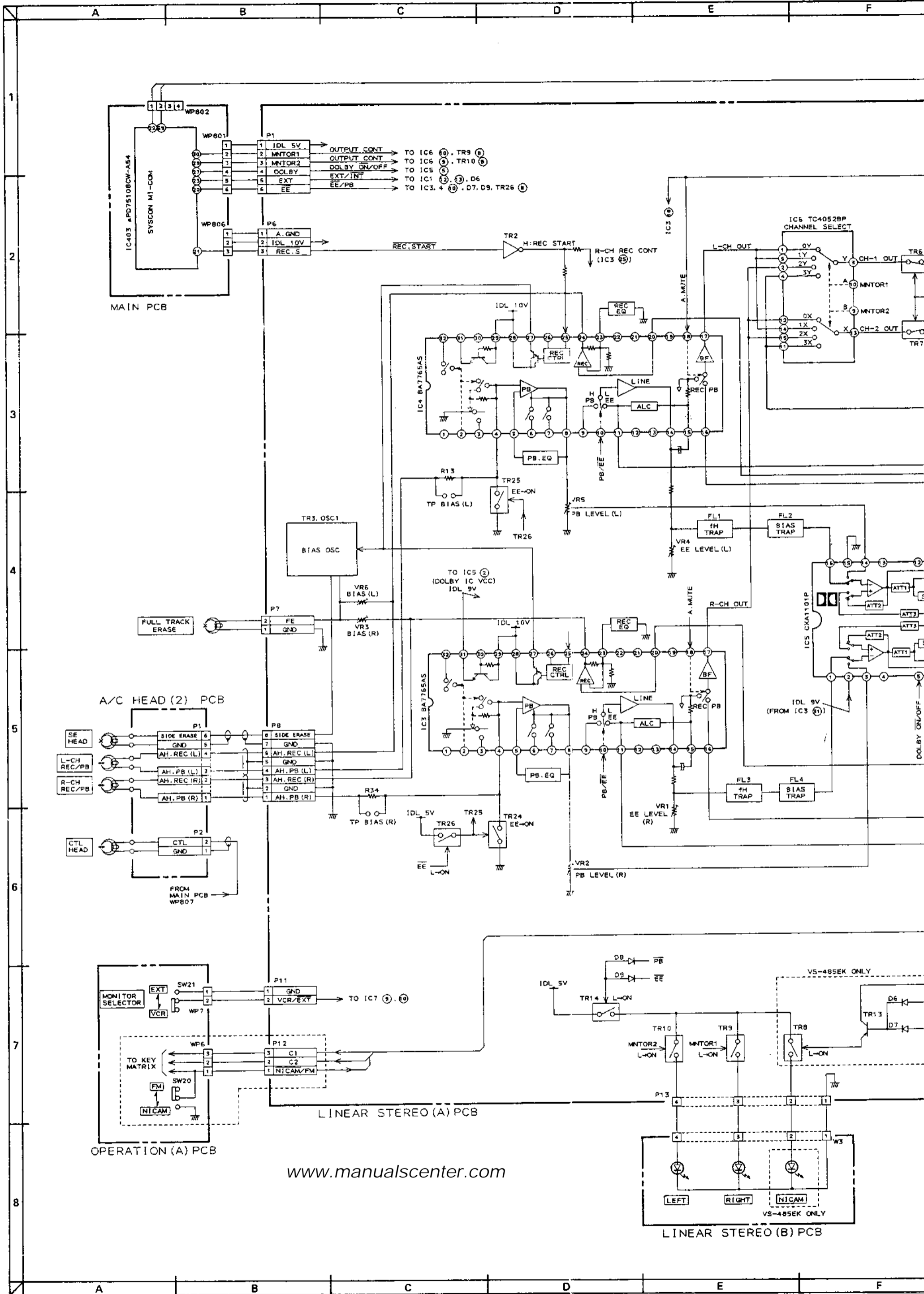
- PB Y SIGNAL LINE
- REC Y SIGNAL LINE
- ... PB CHROMA SIGNAL LINE
- · - REC CHROMA SIGNAL LINE



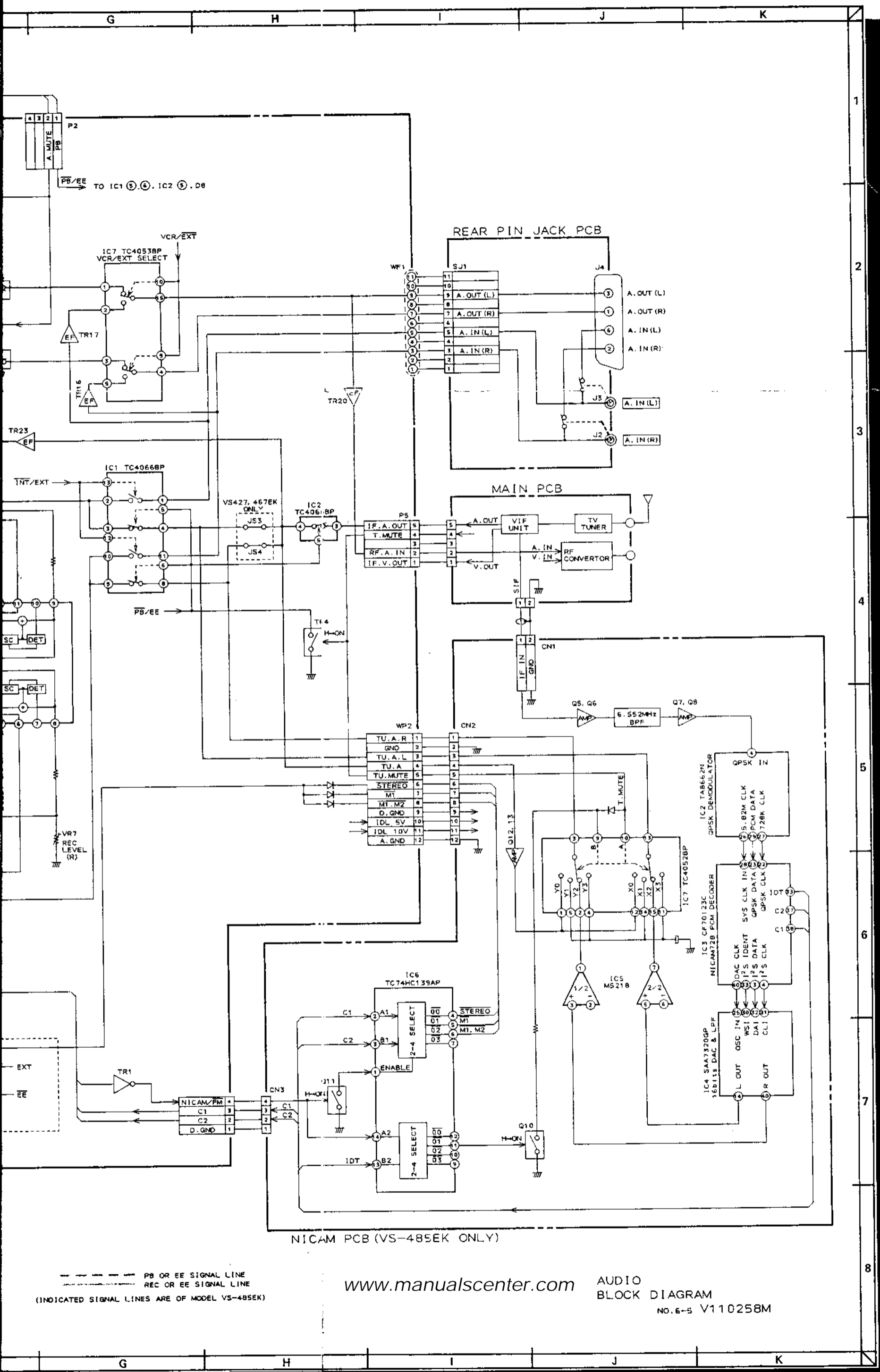


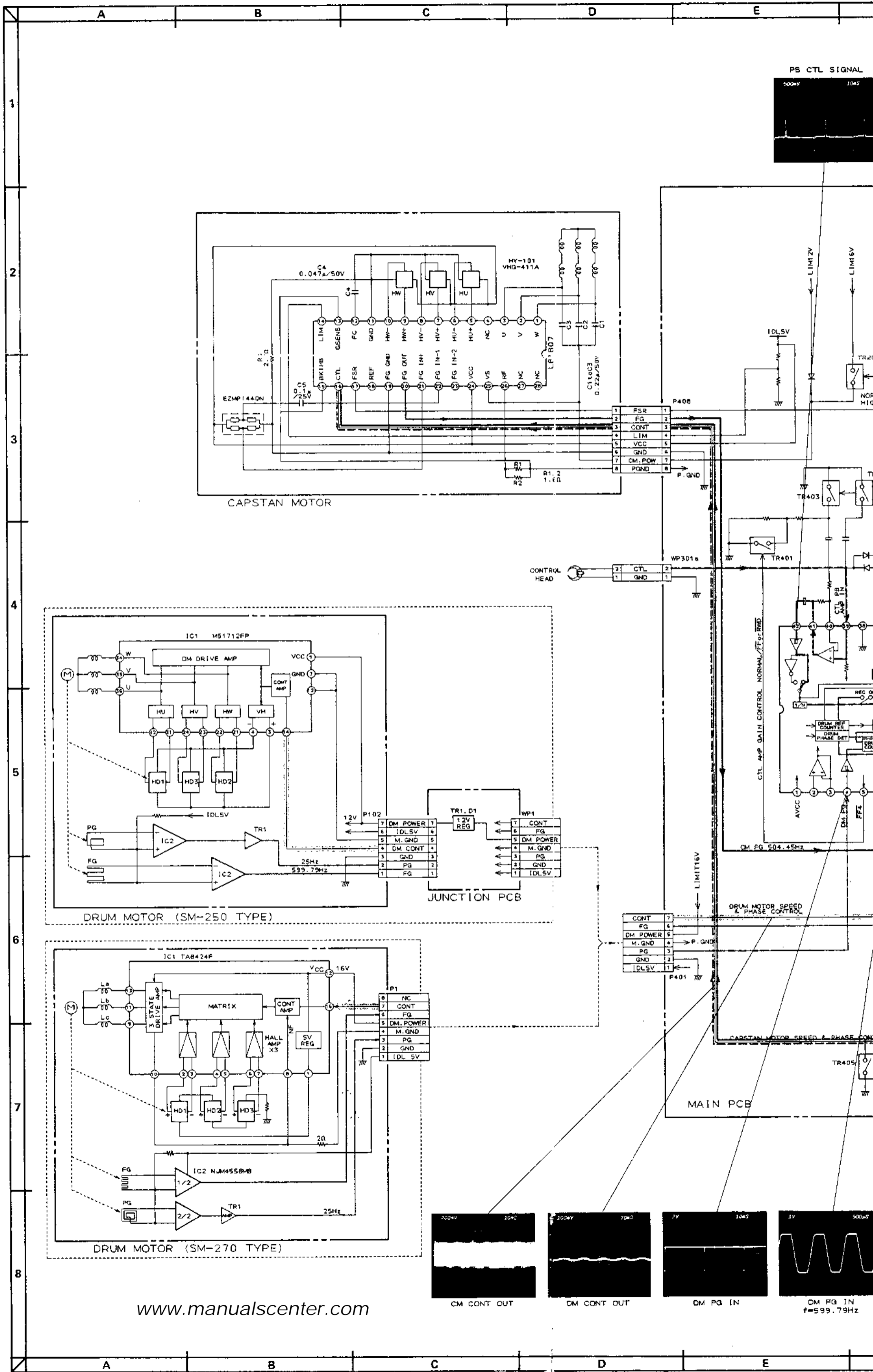
www.manualscenter.com

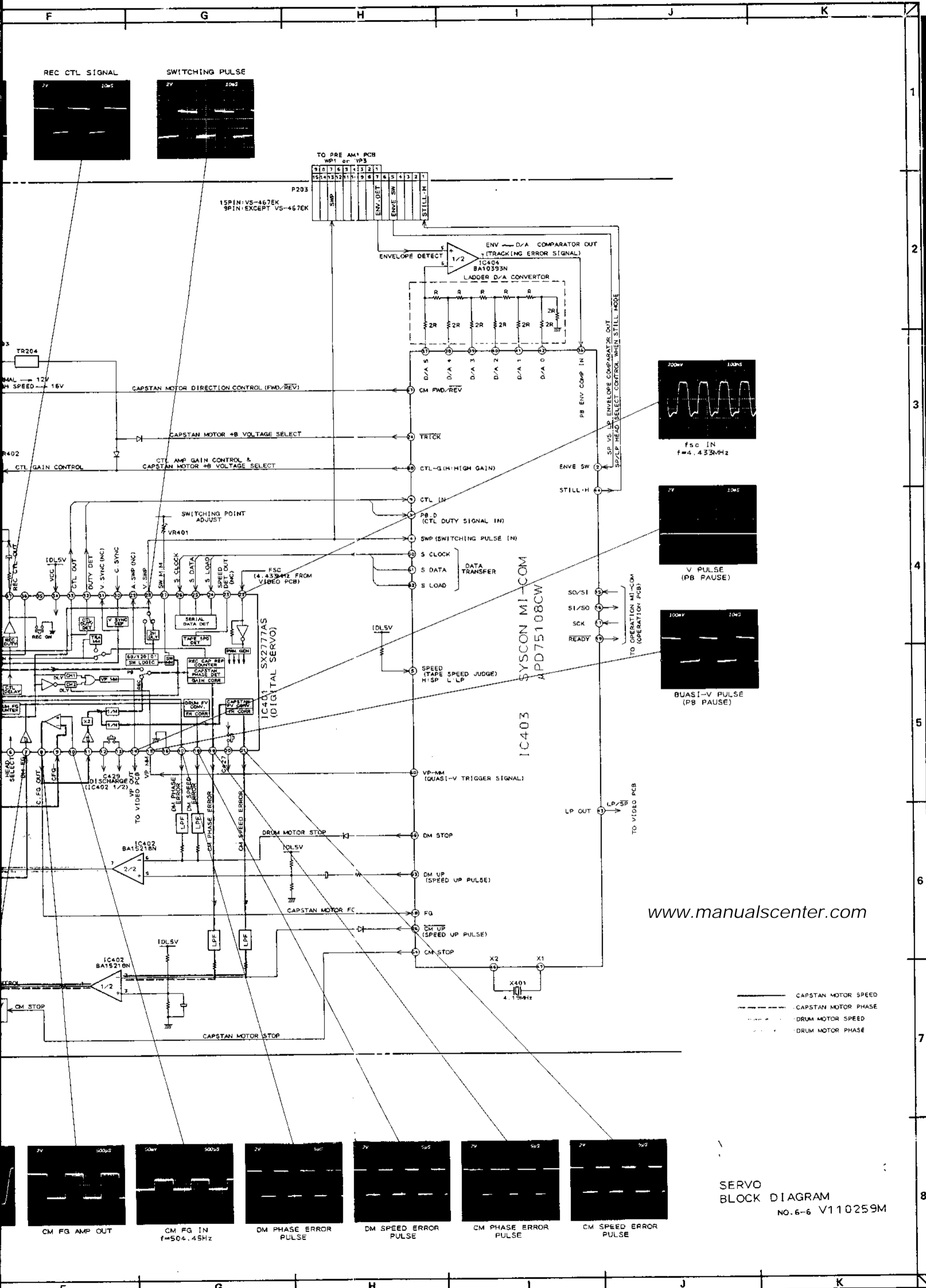
VIDEO
BLOCK DIAGRAM
NO. 6-4 V110257M



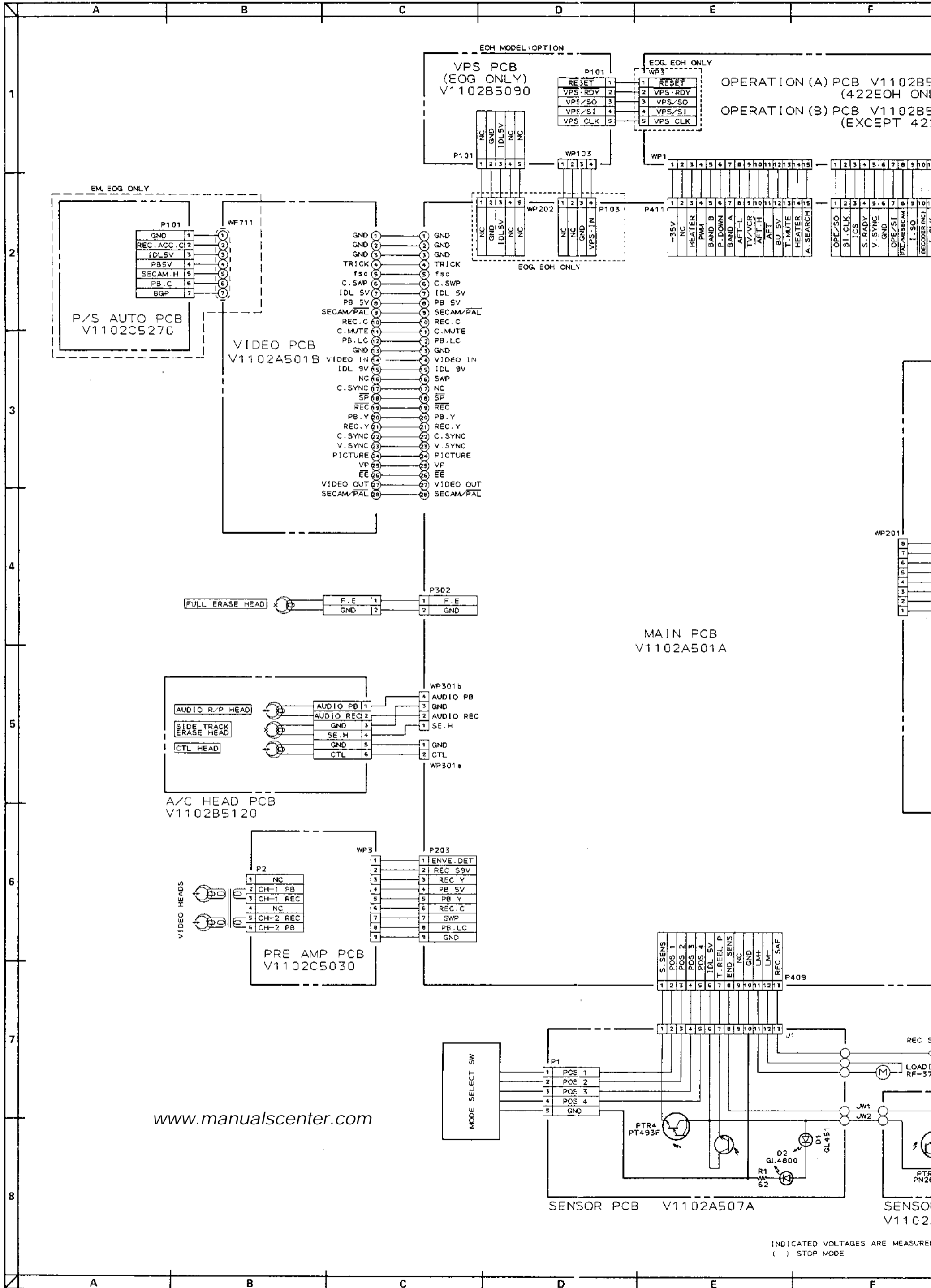
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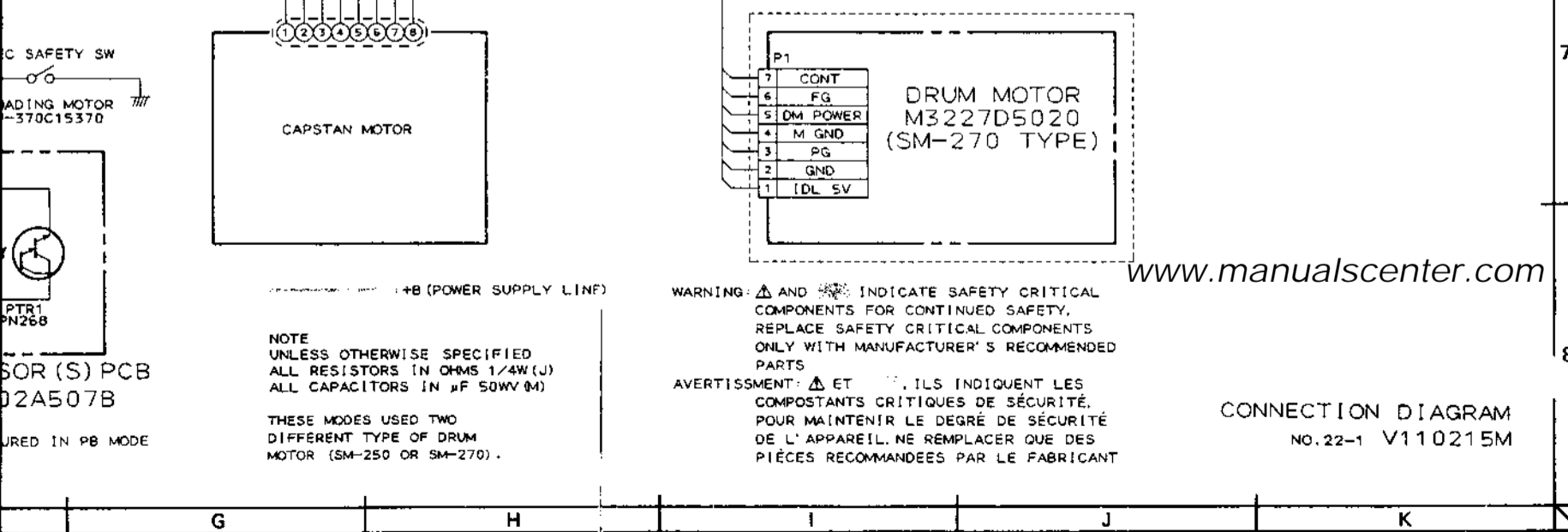
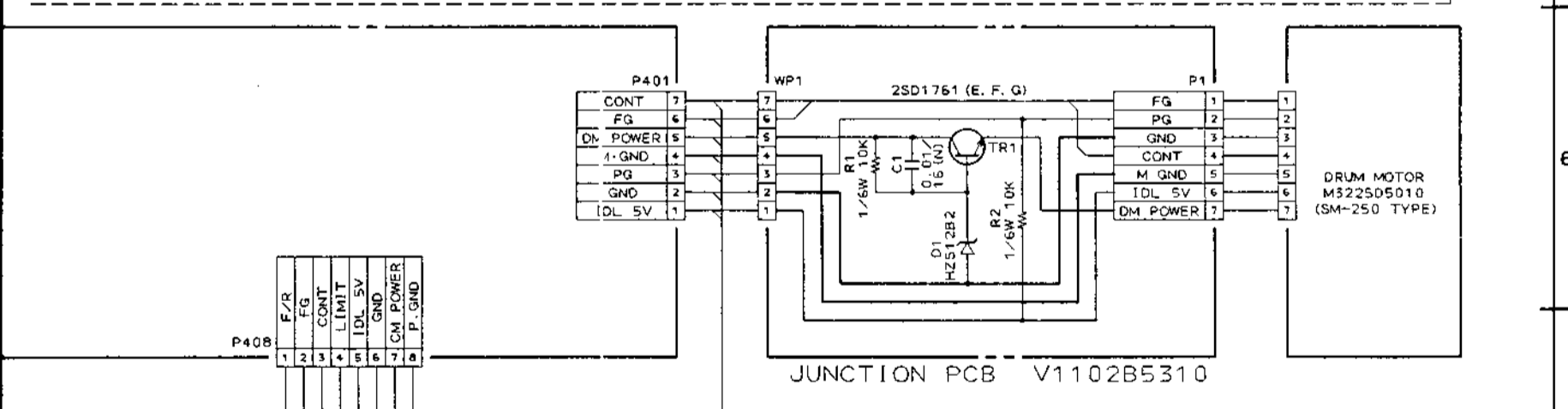
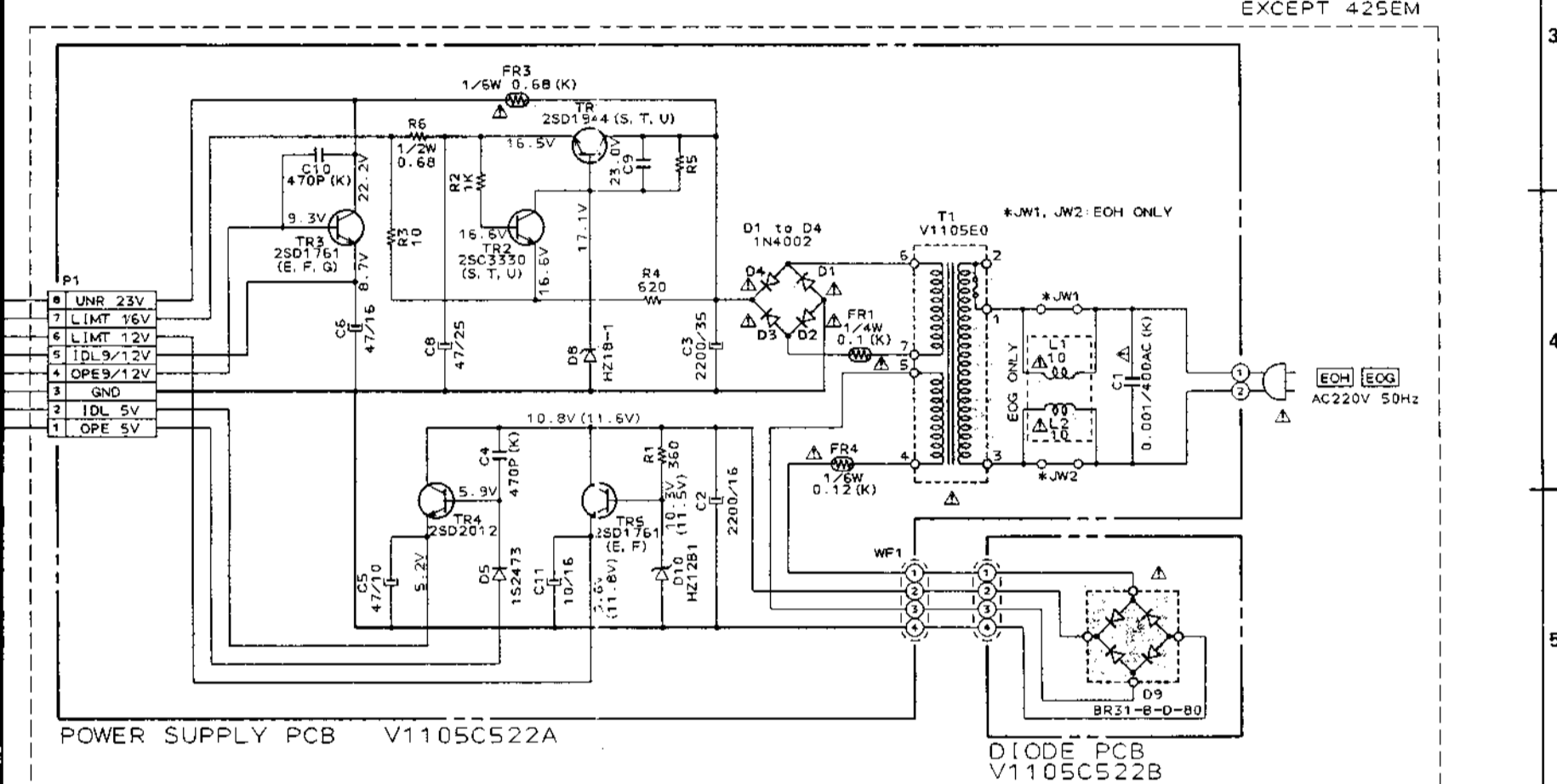
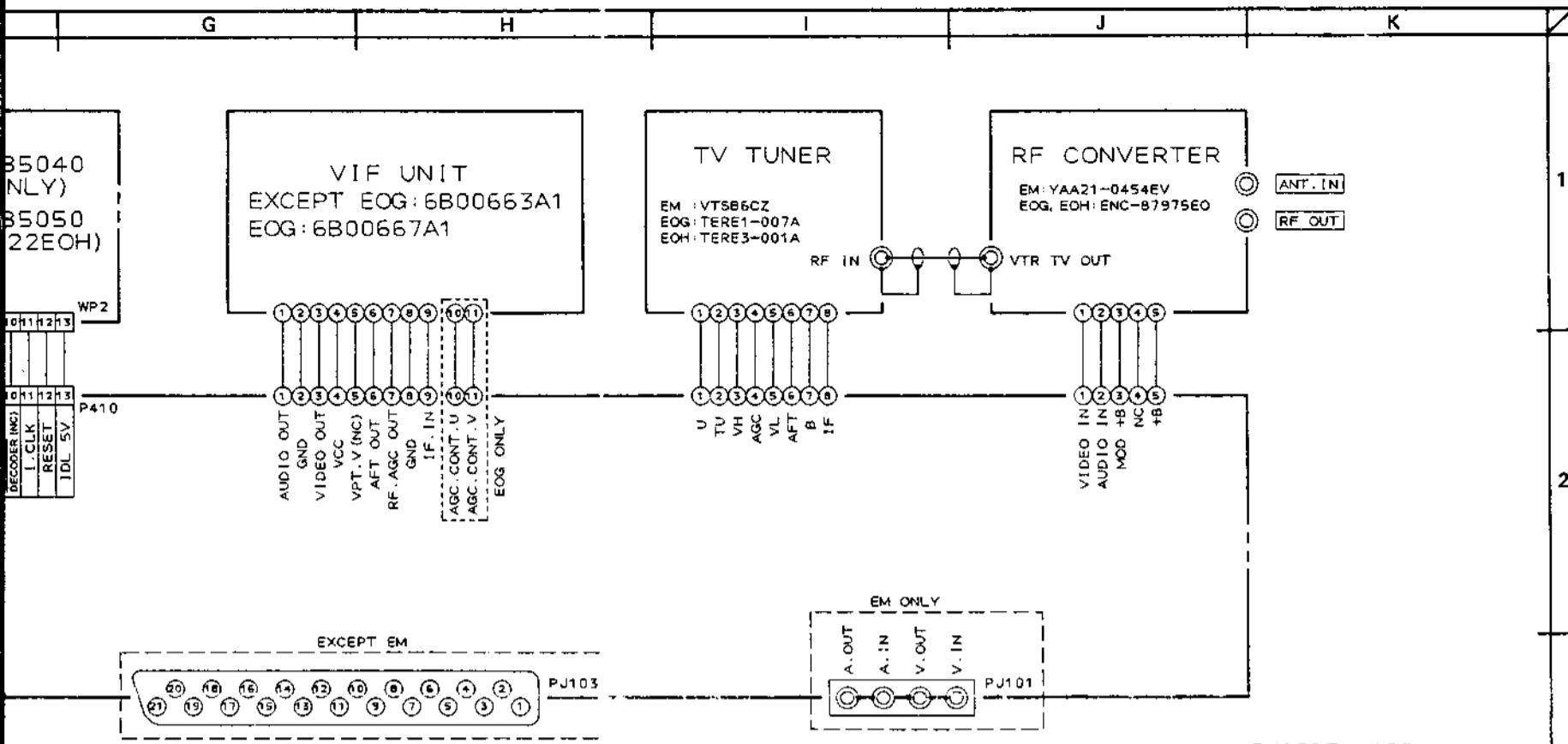


SERVO
BLOCK DIAGRAM
NO. 6-6 V110259M



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INDICATED VOLTAGES ARE MEASURED
() STOP MODE



NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μ F 50WV(M)

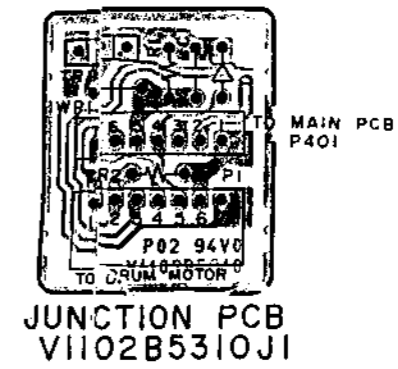
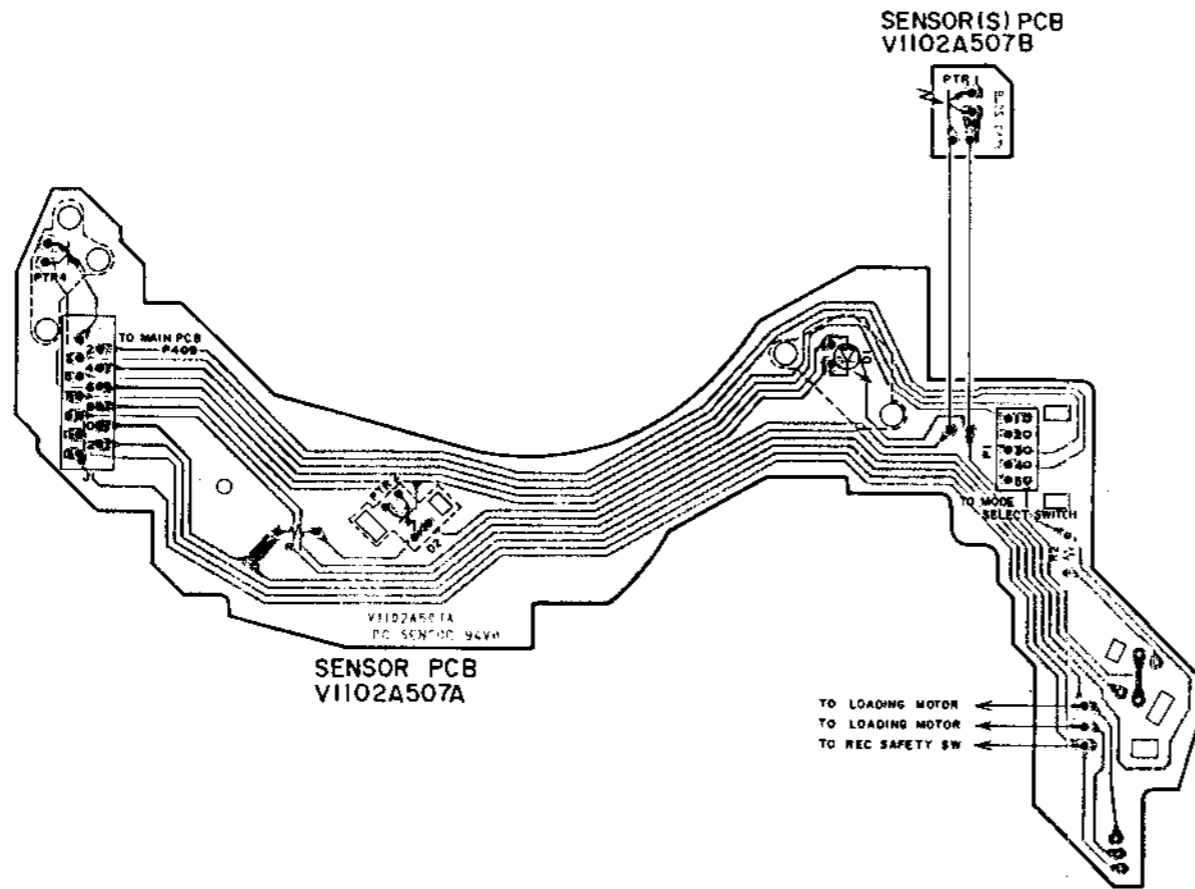
THESE MODES USED TWO
DIFFERENT TYPE OF DRUM
MOTOR (SM-250 OR SM-270).

WARNING: Δ AND \circledast INDICATE SAFETY CRITICAL
COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS
ONLY WITH MANUFACTURER'S RECOMMENDED
PARTS

AVERTISSEMENT: Δ ET \circledast ILS INDIQUENT LES
COMPOSTANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
DE L'APPAREIL, NE REMPLACER QUE DES
PIÈCES RECOMMANDÉES PAR LE FABRICANT

CONNECTION DIAGRAM
NO.22-1 V110215M

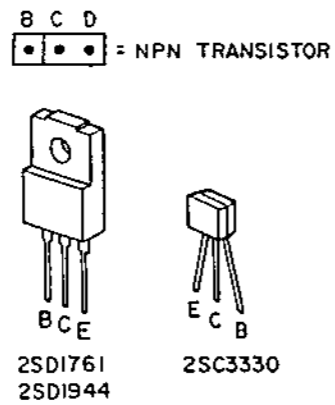
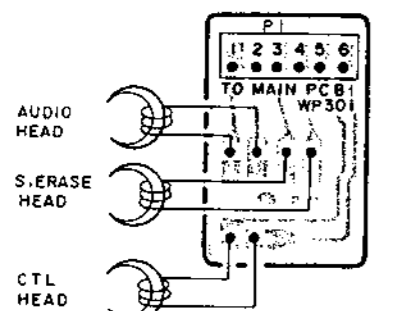
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B C E
• • • = NPN TRANSISTOR

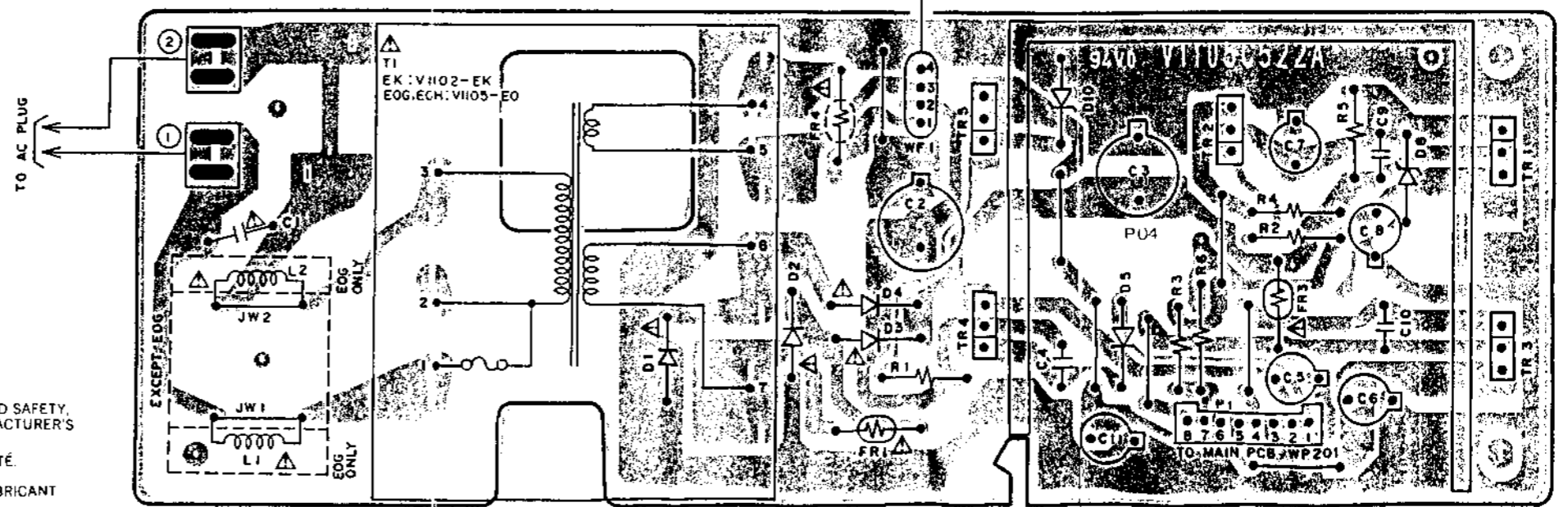


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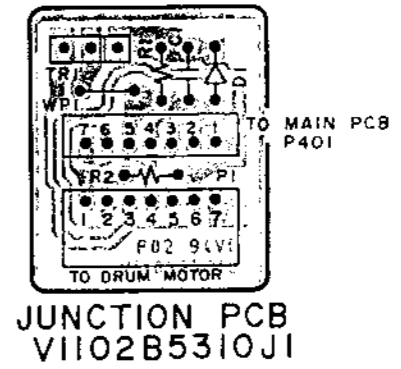
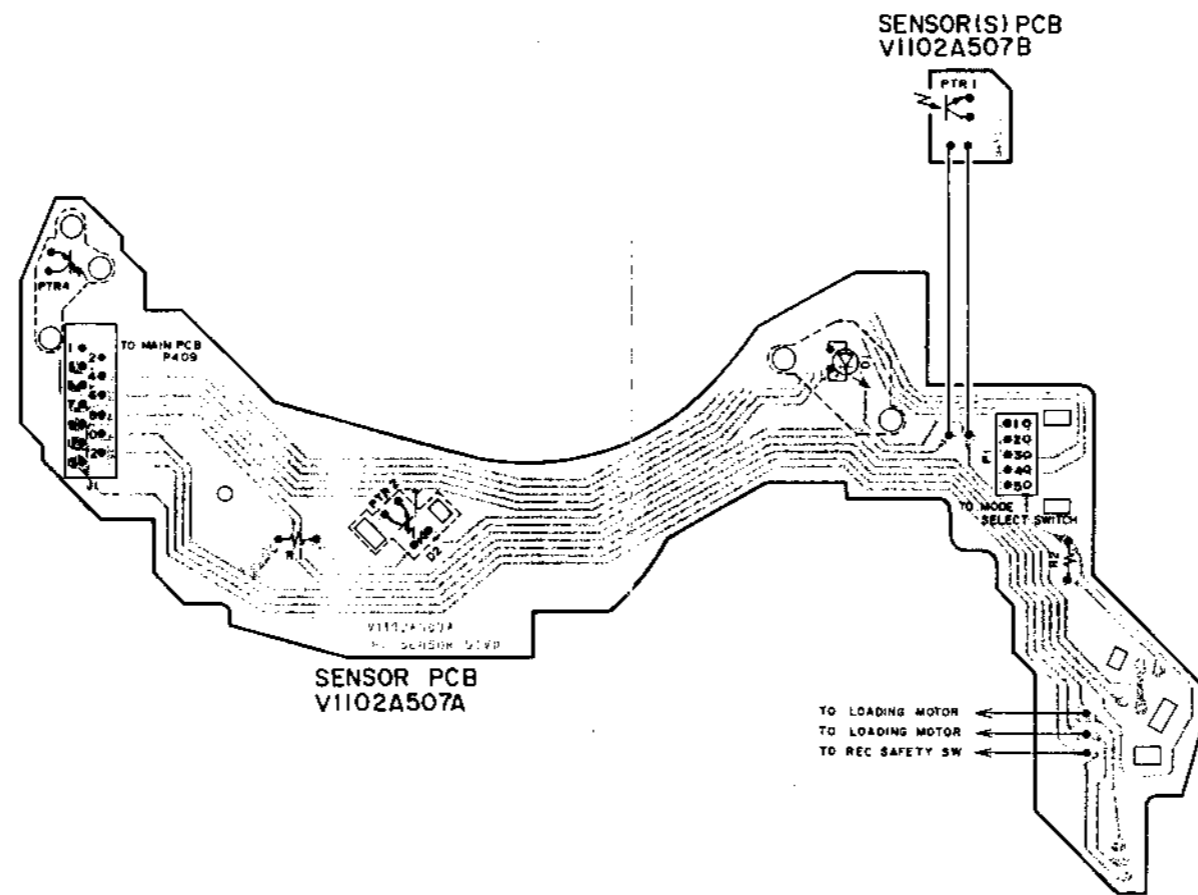
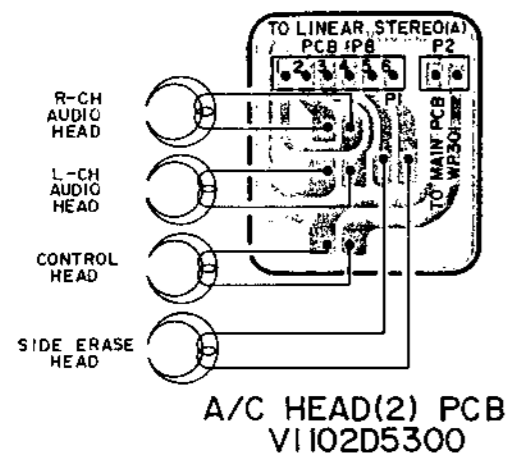


WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

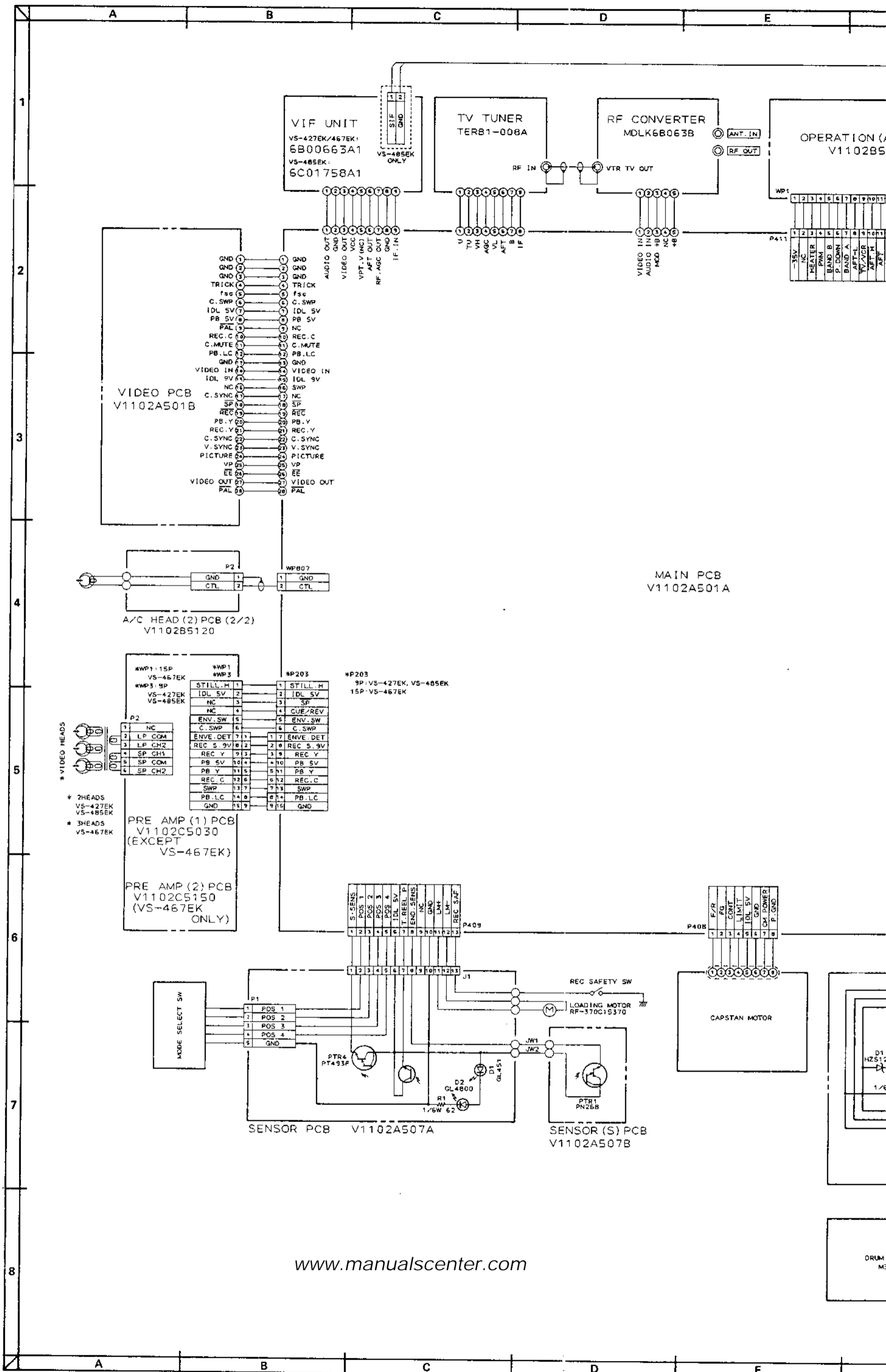


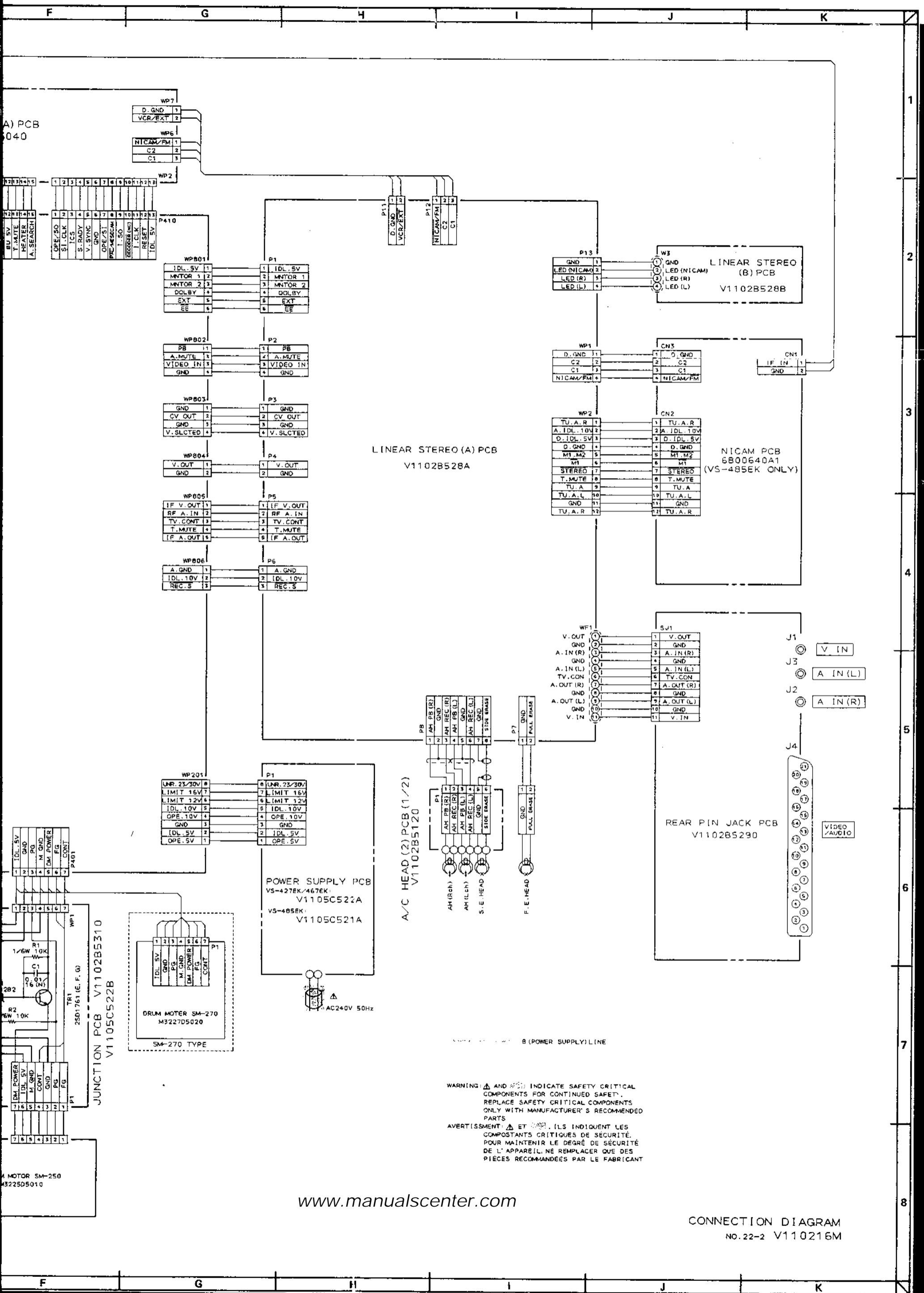
H POWER PCB V1105C522AJ3



B C E
• • • = NPN TRANSISTOR

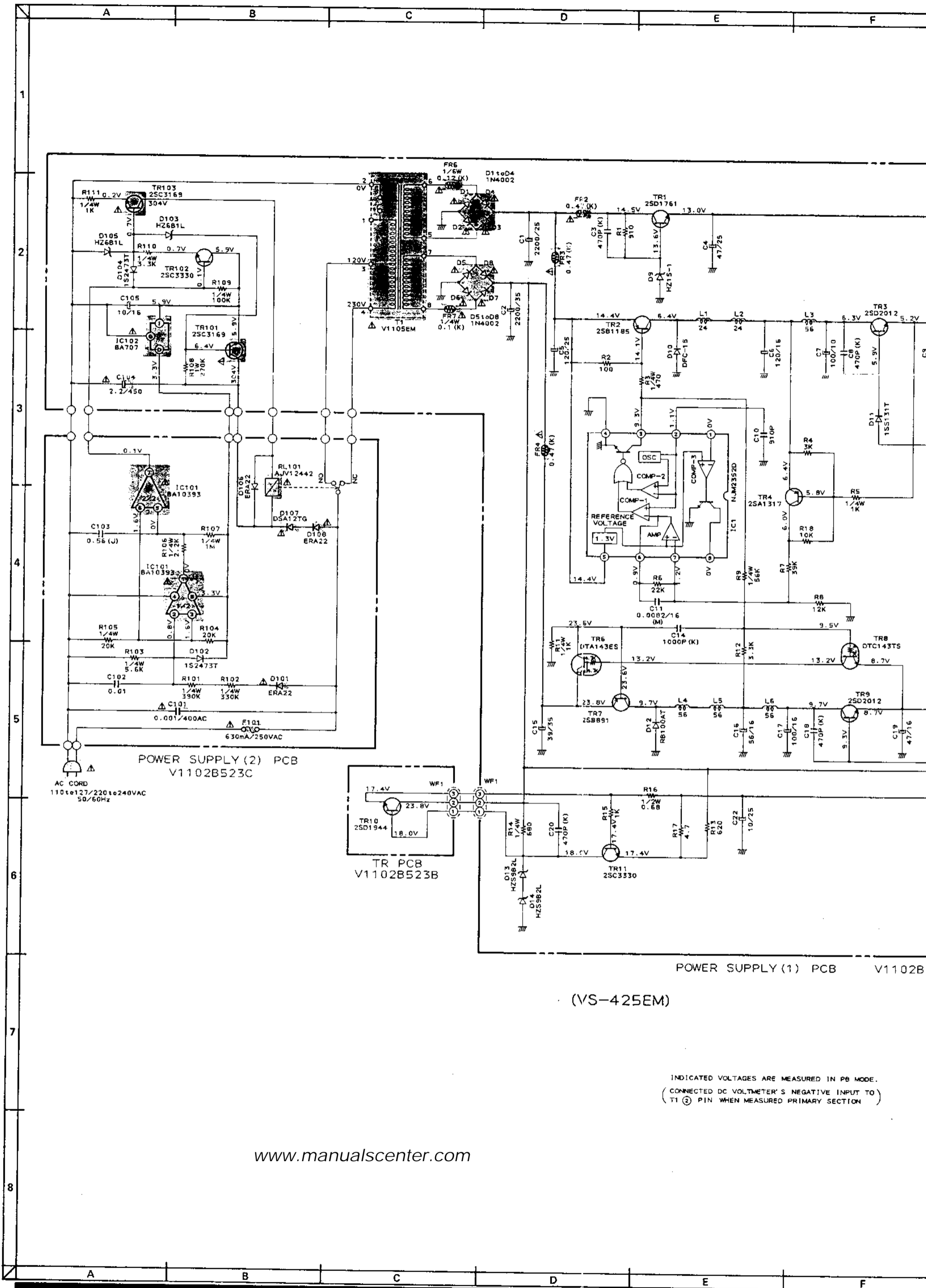
www.manualscenter.com





WARNING: ⚠ AND ⚡ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ ET ⚡ ILS INDICENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDÉES PAR LE FABRICANT.



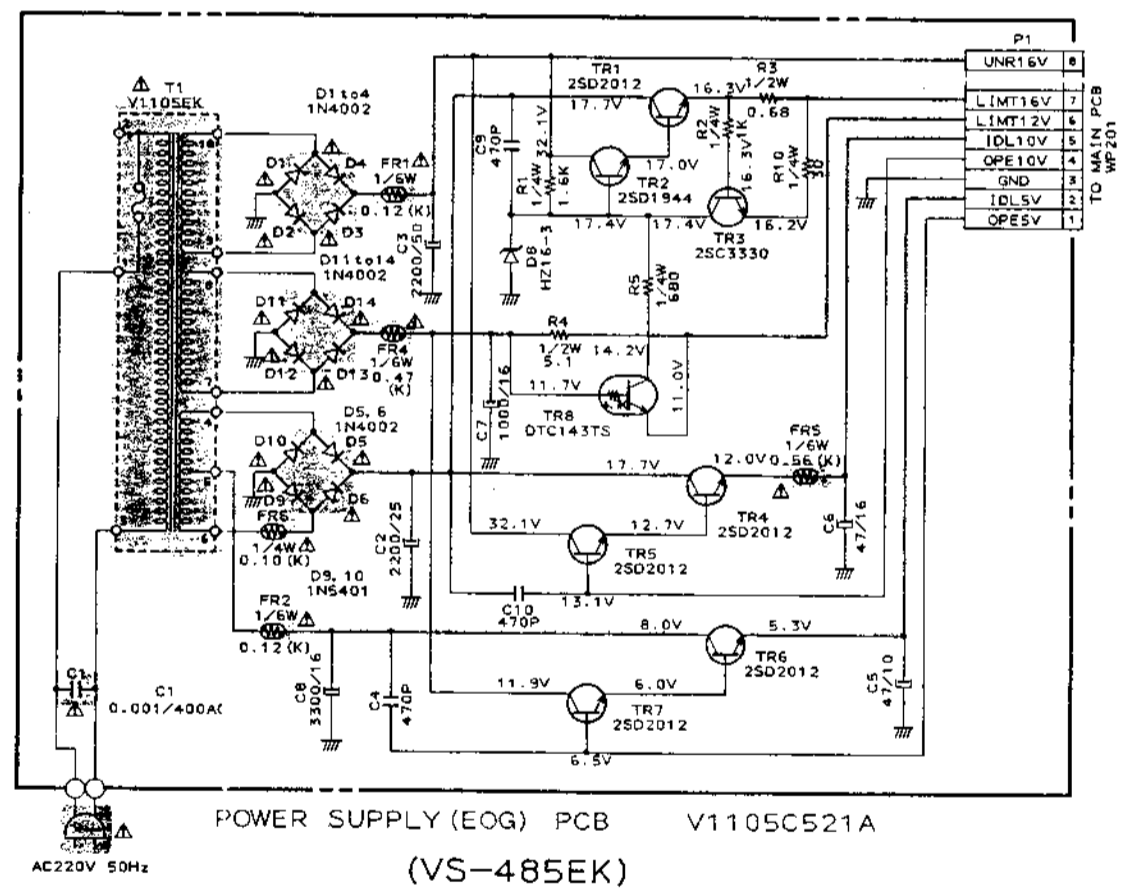
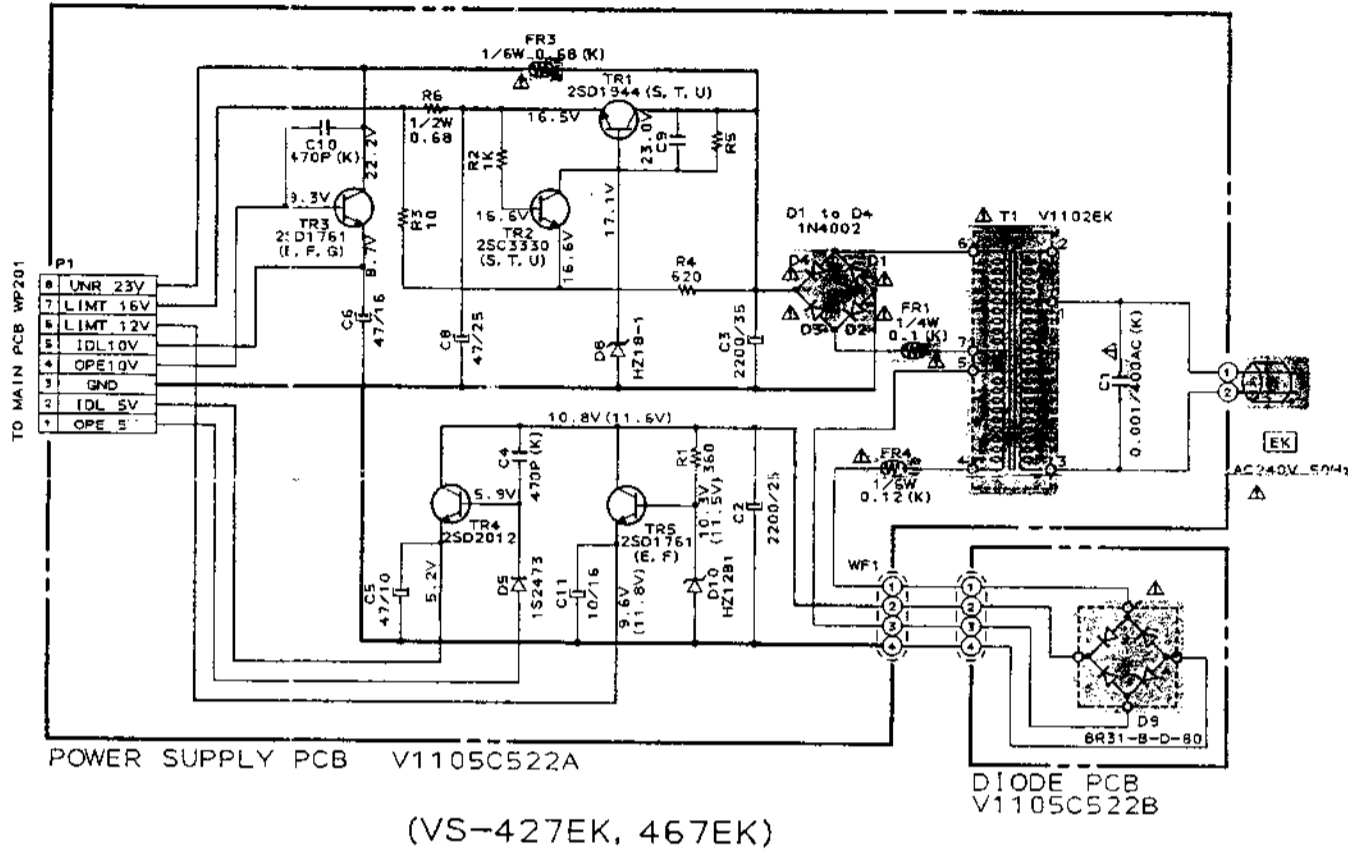
POWER SUPPLY (2) PCB
V1102B523C

TR PCB
V1102B523B

POWER SUPPLY (1) PCB
V1102B523B

(VS-425EM)

INDICATED VOLTAGES ARE MEASURED IN PG MODE.
(CONNECTED DC VOLTMETER'S NEGATIVE INPUT TO
T1 (2) PIN WHEN MEASURED PRIMARY SECTION)



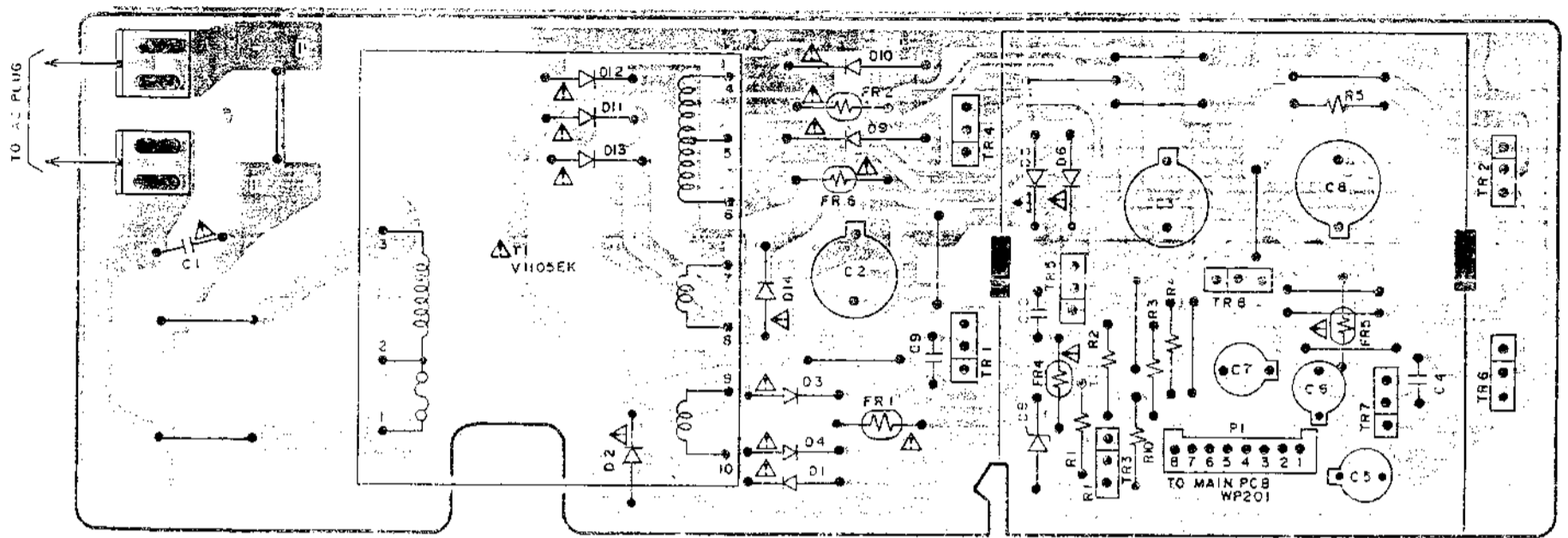
WARNING: AND INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ET ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μ F 50 WV(0)
ALL INDUCTORS IN μ H(K)

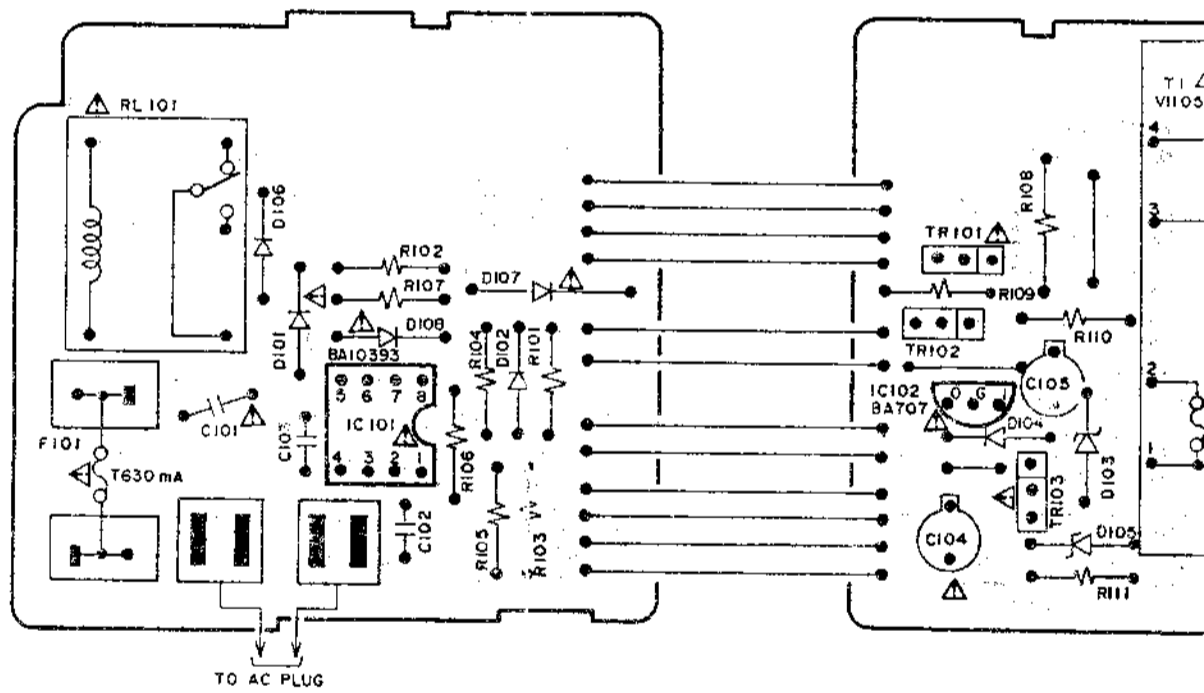
----- B (POWER SUPPLY) LINE

POWER SUPPLY
SCHEMATIC DIAGRAM
NO. 22-3 V110217M



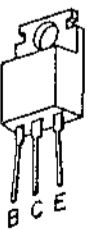
POWER SUPPLY (EOG) PCB V1105C521AJ2

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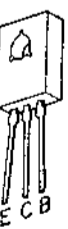


POWER SUPPLY (2) PCB V1102B523C (J1)

= NPN
 = PNP

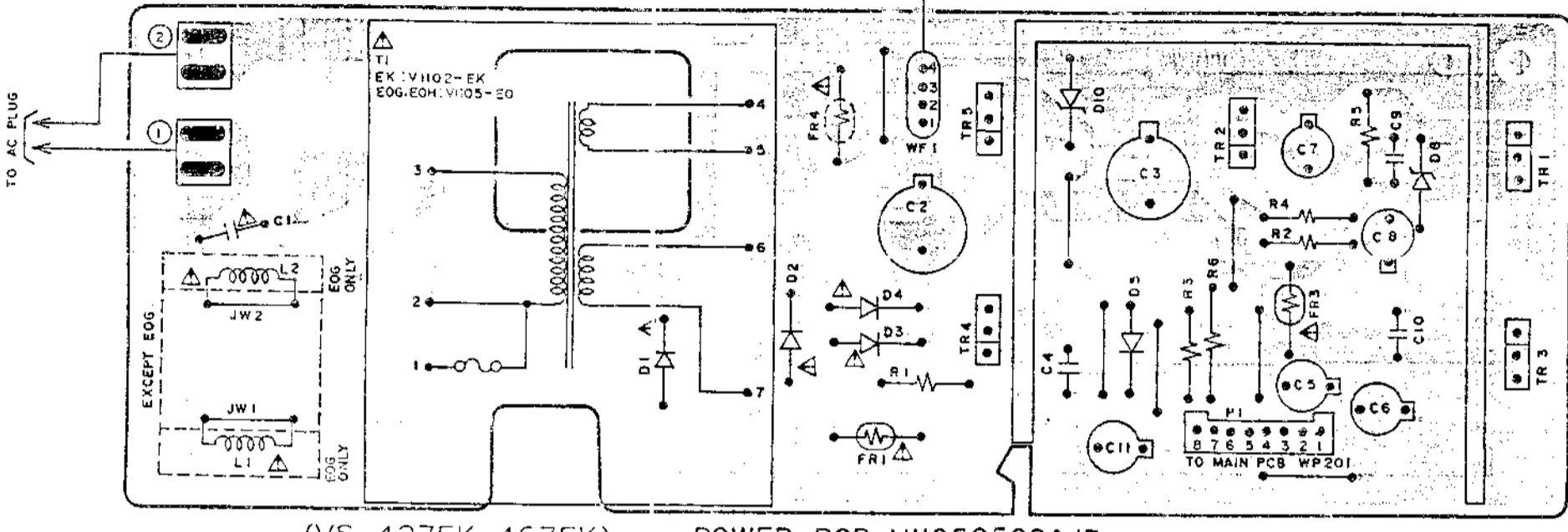


2SB1185



2SB891

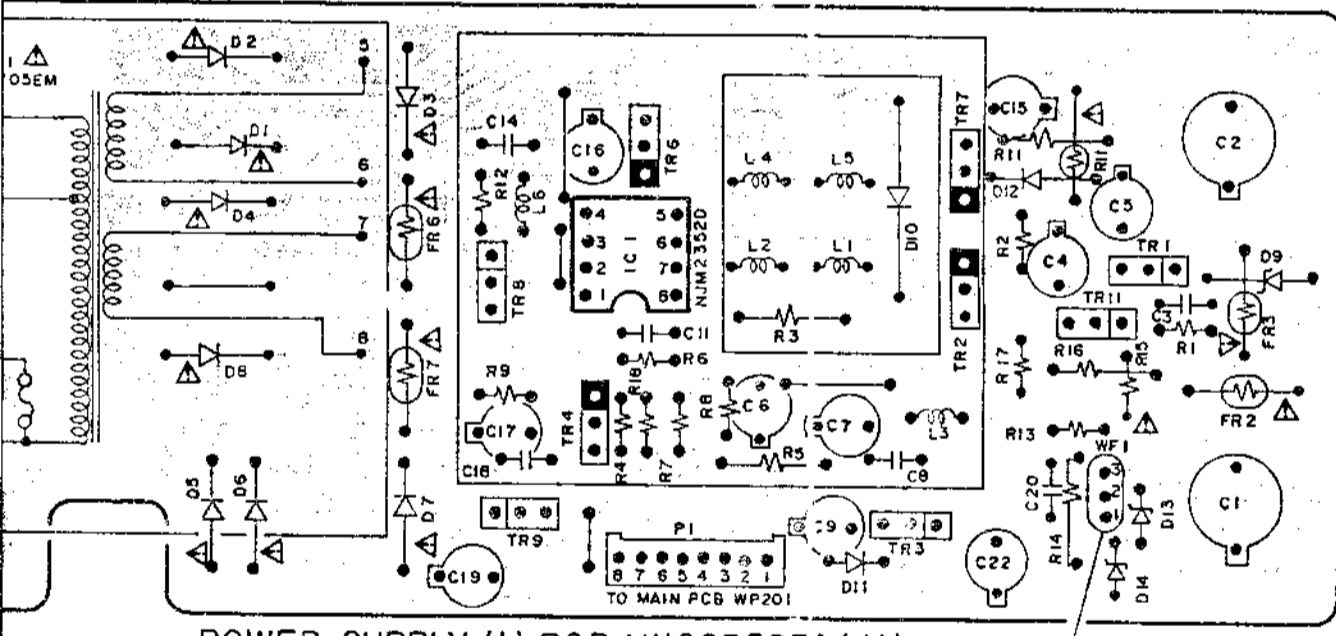
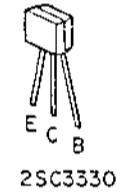
DIODE PCB
VII05C522BJ3



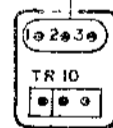
(VS-427EK, 467EK) POWER PCB VII05C522AJ3

B C D
• • • = NPN TRANSISTOR

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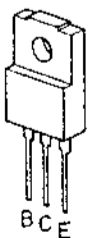


POWER SUPPLY (I) PCB VII02B523A (J1)



TR PCB
VII02B523B (J1)

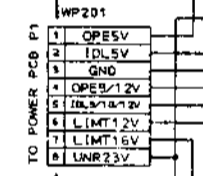
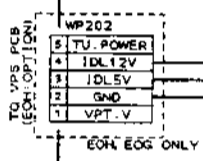
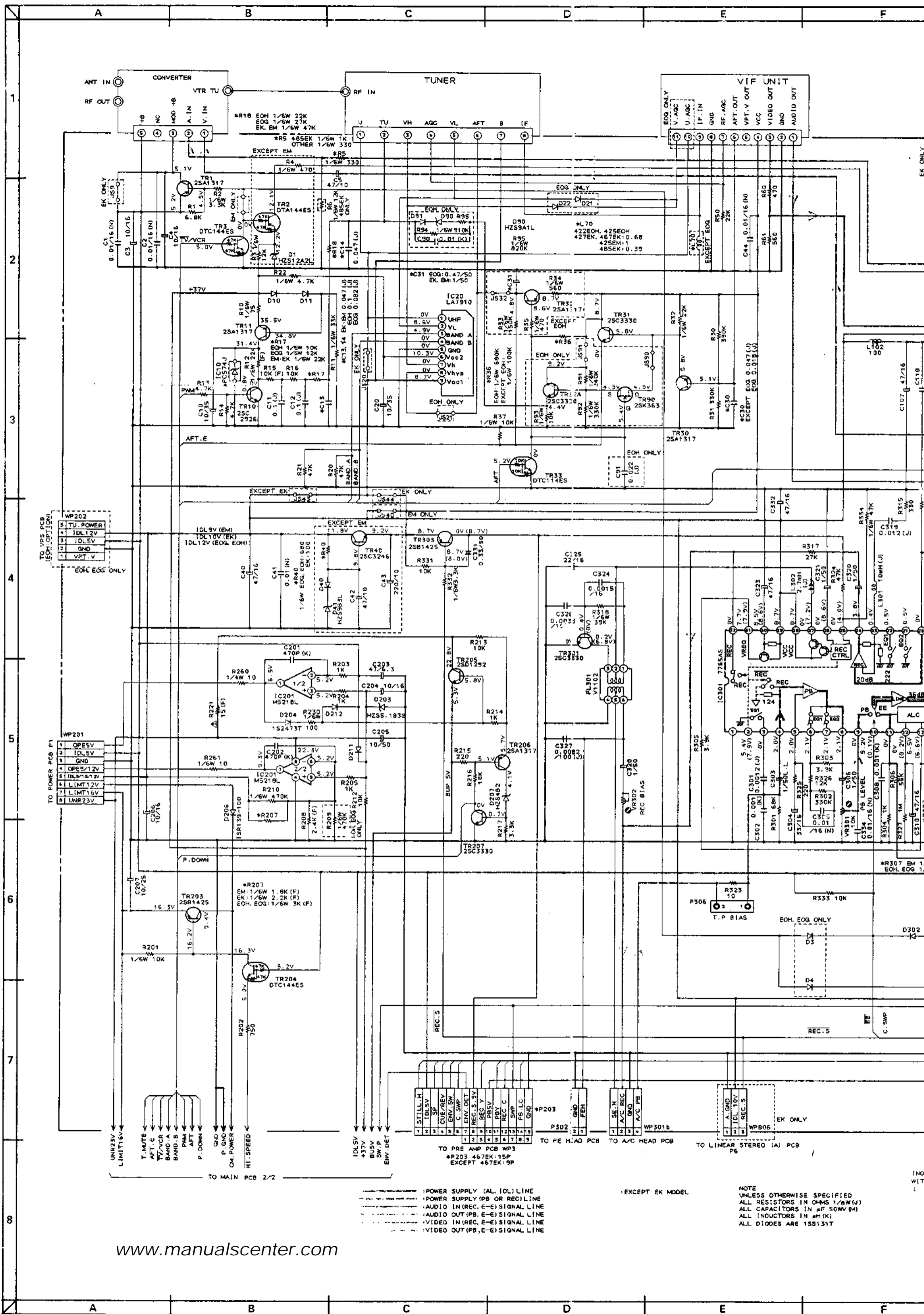
NPN TRANSISTOR
PNP TRANSISTOR



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE NIVEAU DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

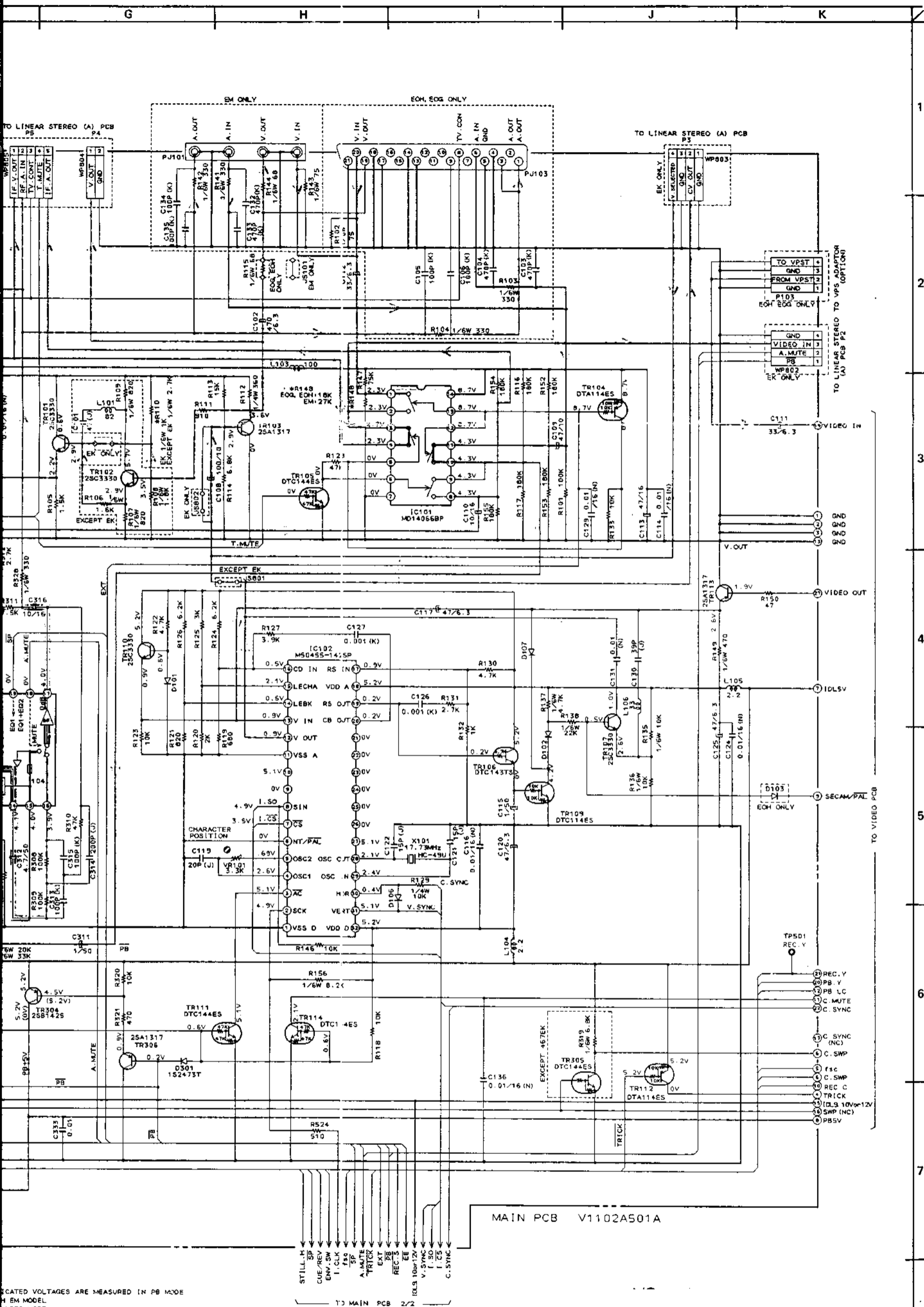
| | | |
|----|---------|----------|
| 91 | 2SD3169 | 2SA1317 |
| | 2SD1761 | 2SC3330 |
| | 2SD1944 | DTC143ES |
| | 2SD2012 | DTC143TS |



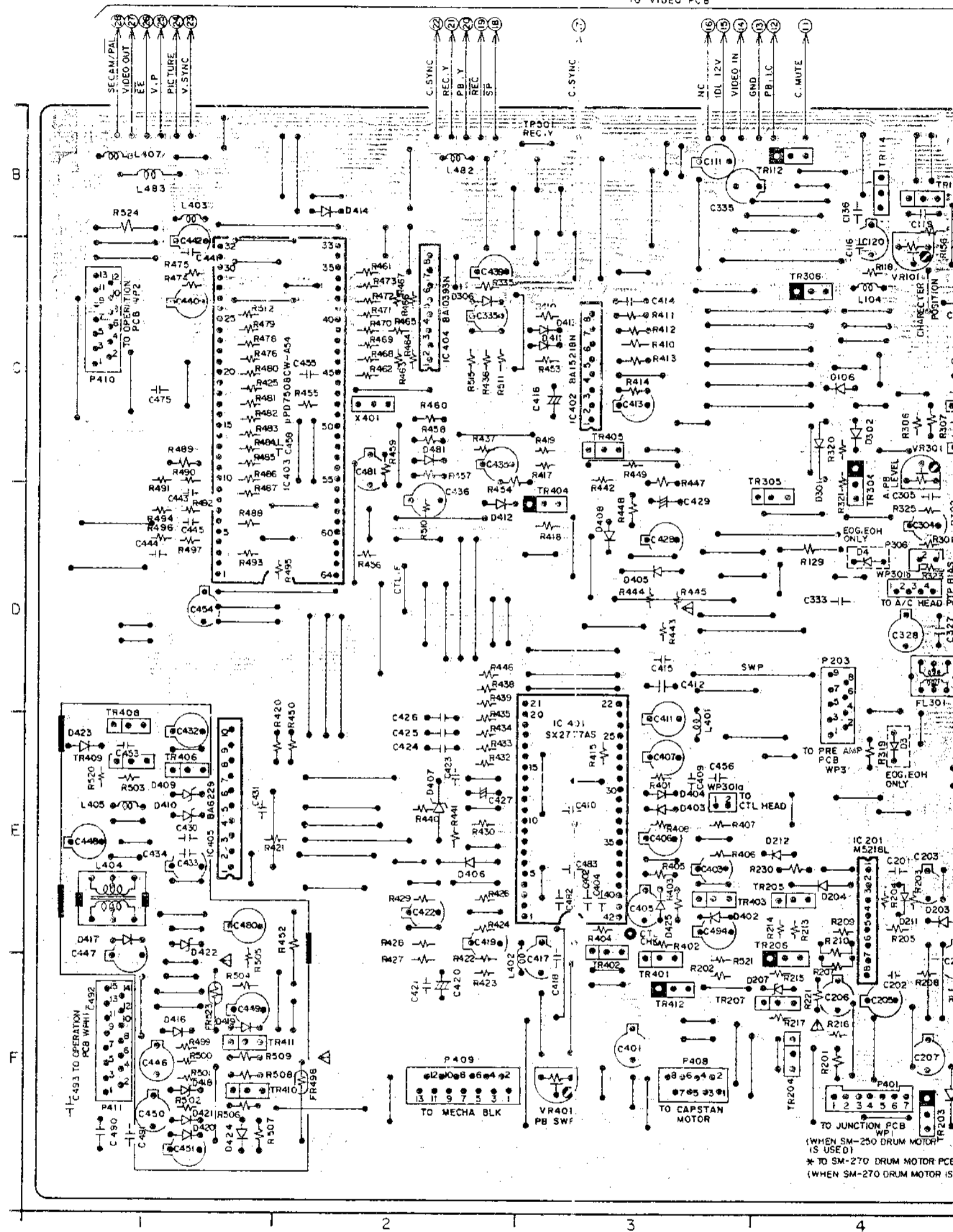
- POWER SUPPLY (AL, IDL) LINE
- POWER SUPPLY (PS OR REC) LINE
- AUDIO IN (REC, E-E) SIGNAL LINE
- AUDIO OUT (PB, E-E) SIGNAL LINE
- VIDEO IN (REC, E-E) SIGNAL LINE
- VIDEO OUT (PB, E-E) SIGNAL LINE

EXCEPT EK MODEL

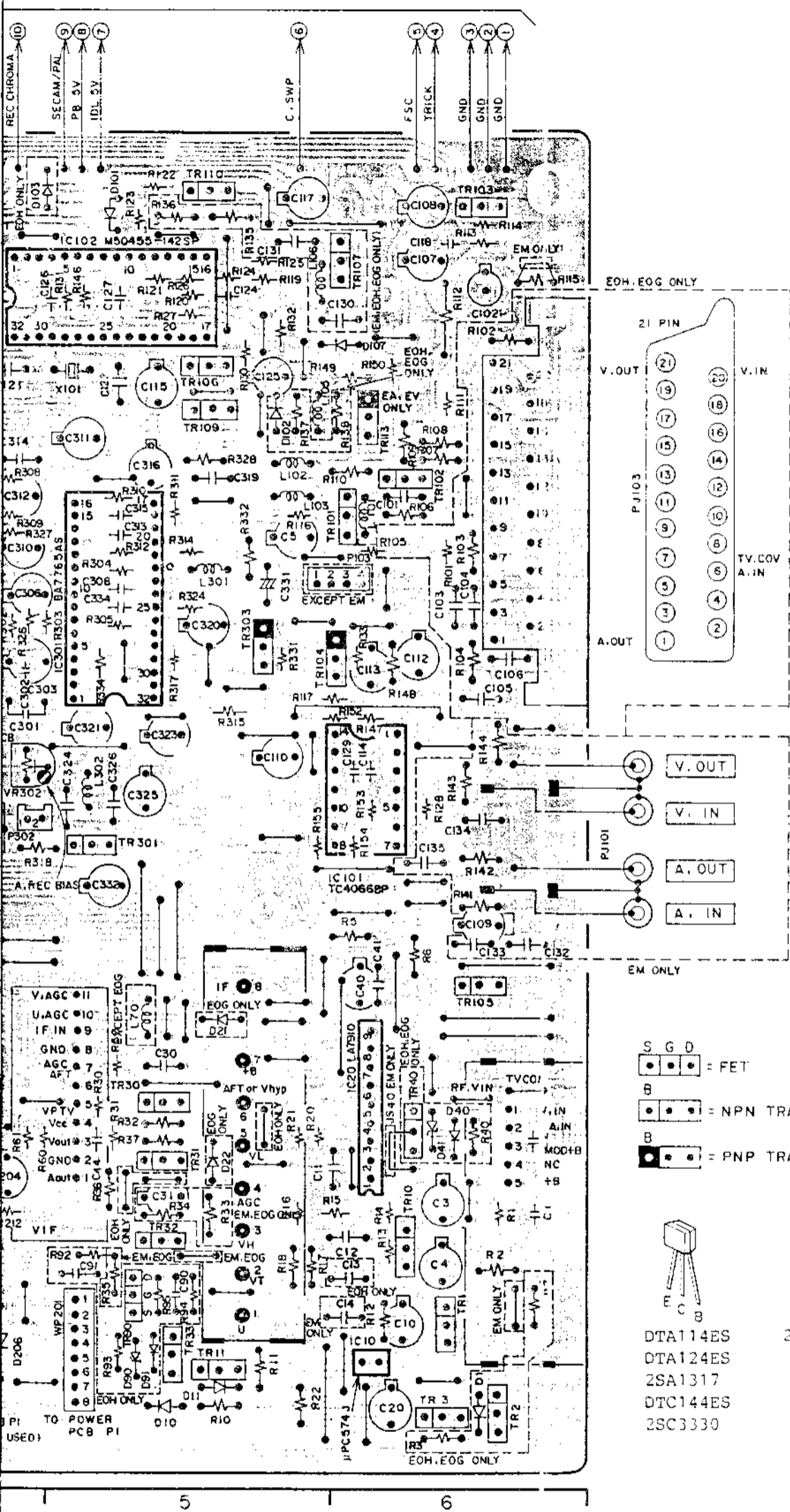
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS (1/8W)
ALL CAPACITORS IN μF (50V)
ALL INDUCTORS IN μH (K)
ALL DIODES ARE 1SS131T



TO VIDEO PCB



MAIN PCB V1102A501A (J1)



PRINCIPAL PARTS LOCATION

| ICS | TRANSISTORS |
|---------------|----------------|
| IC101.....F16 | TR1.....F6 |
| IC101.....D6 | TR2.....F6 |
| IC201.....F4 | TR3.....F6 |
| IC301.....D5 | TR10.....F6 |
| IC401.....E3 | TR11.....F5 |
| IC403.....D1 | TR30.....E5 |
| IC404.....C2 | TR32.....F5 |
| IC405.....E1 | TR33.....E5 |
| | TR40.....E6 |
| WP | TR90.....F5 |
| WP2.....C1 | TR101.....C5,6 |
| WP102.....C6 | TR102.....C6 |
| WP201.....F5 | TR103.....B6 |
| WP301a.....E3 | TR104.....D5,6 |
| WP301b.....D4 | TR105.....E6 |
| | TR107.....B6 |
| CONNECTORS | TR110.....B4 |
| P103.....C,D6 | TR111.....B4 |
| P105.....C6 | TR112.....B4 |
| P106.....C3 | TR113.....C6 |
| P203.....E4 | TR114.....B4 |
| P302.....E4 | TR203.....F4 |
| P306.....D4 | TR205.....E4 |
| P401.....F4 | TR206.....E,F4 |
| P408.....F3 | TR207.....F4 |
| P409.....F2 | TR301.....D5 |
| P410.....C1 | TR303.....D5 |
| P411.....F1 | TR304.....D4 |
| | TR305.....D4 |
| | TR306.....C4 |
| | TR401.....F3 |
| | TR402.....E,F3 |
| | TR403.....E3 |
| | TR404.....D3 |
| | TR405.....C3 |
| | TR406.....E1 |
| | TR407.....C2 |
| | TR408.....E,D1 |
| | TR409.....E1 |
| | TR410.....F1 |
| | TR411.....F1 |
| | TR412.....F3 |

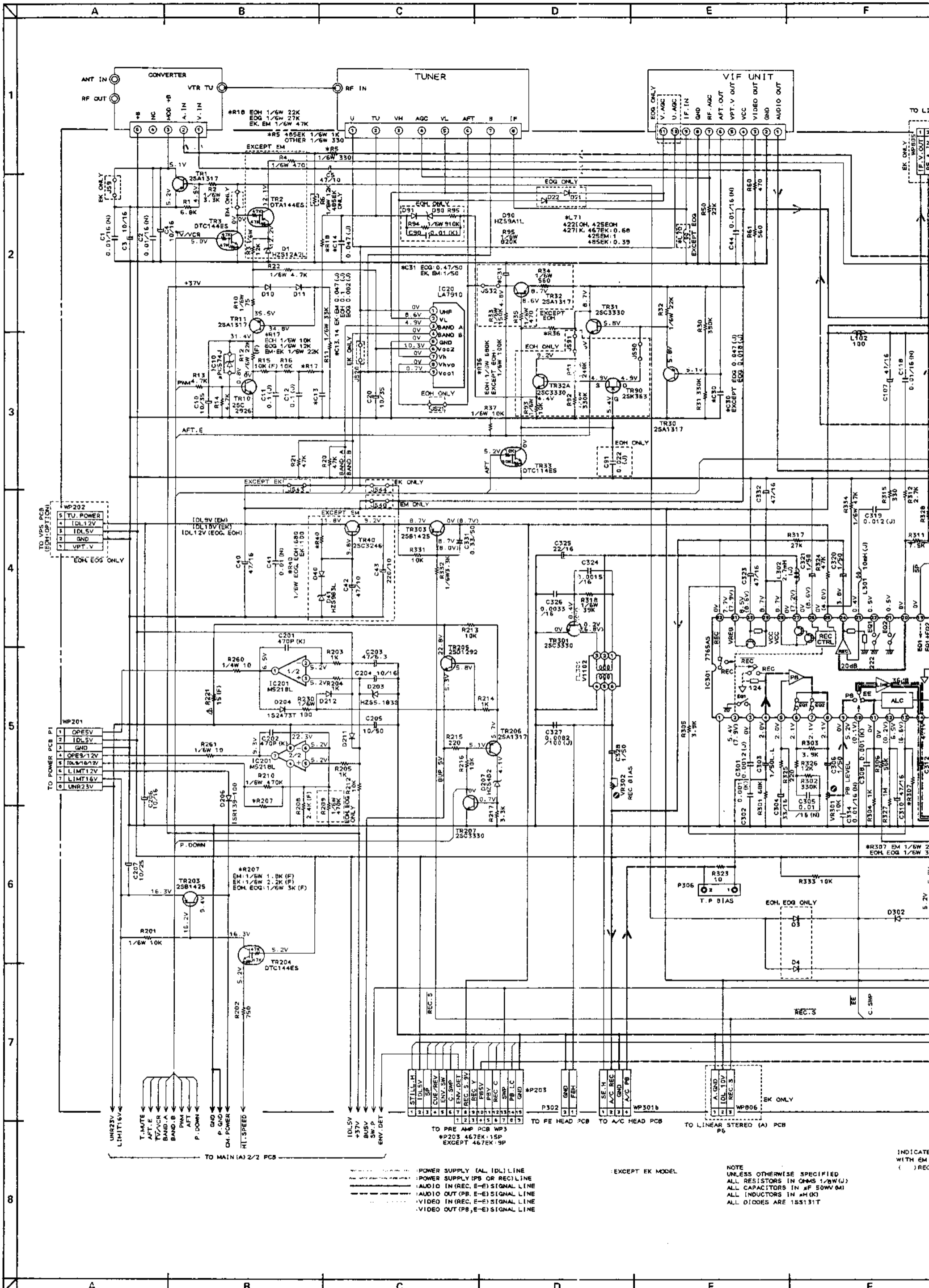
- = FET
- = NPN TRANSISTOR
- = PNP TRANSISTOR

- DTA114ES
- DTA124ES
- 2SA1317
- DTC144ES
- 2SC3330

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WARNING: INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.



TO VPS PCB
(OPTIONAL)

TO POWER PCB P1
(OPTIONAL)

TO MAIN (A) 2/2 PCB

TO PRE AMP PCB WP3
*P203 467EK-15P
EXCEPT 467EK-9P

TO FE HEAD PCB

TO A/C HEAD PCB

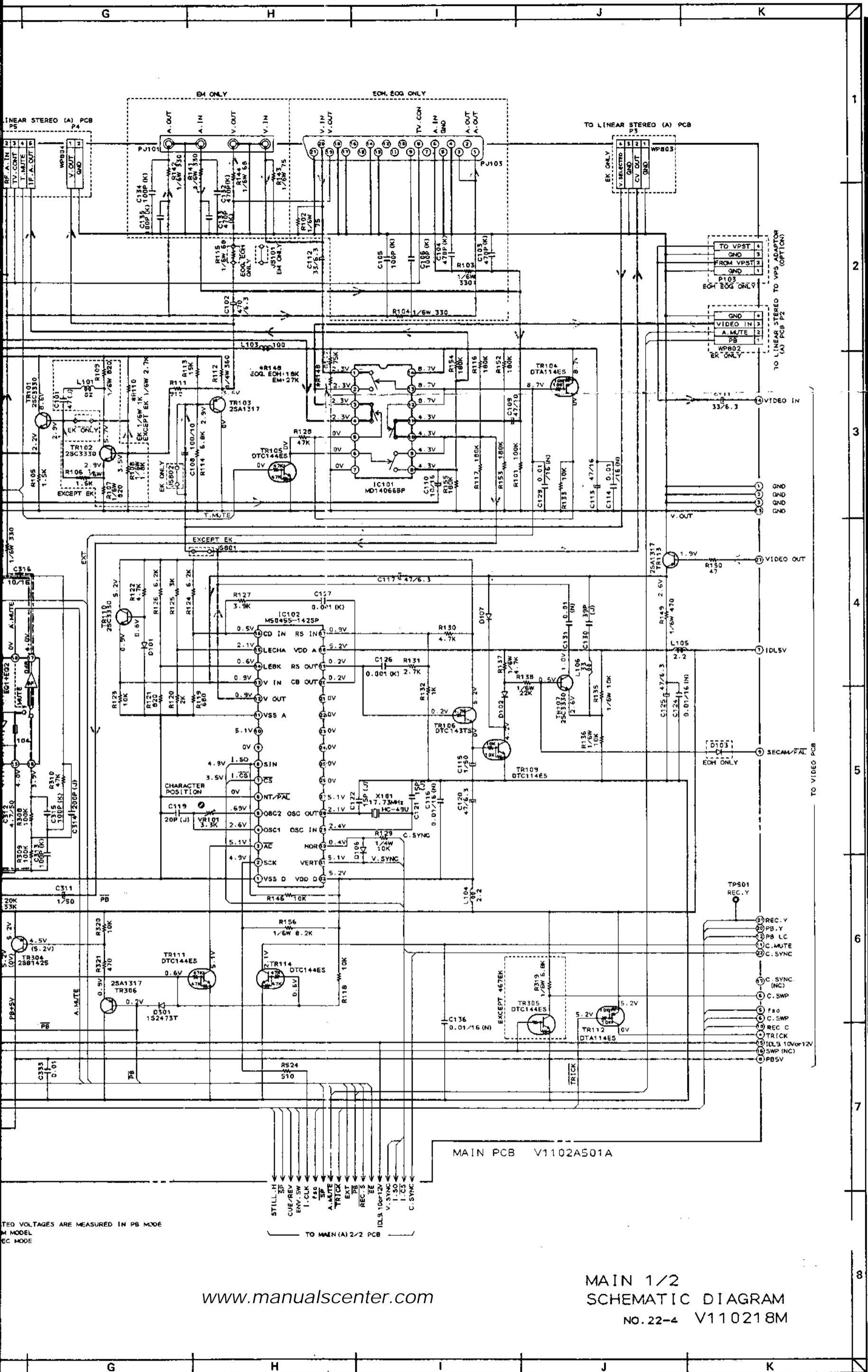
TO LINEAR STEREO (A) PCB
P6

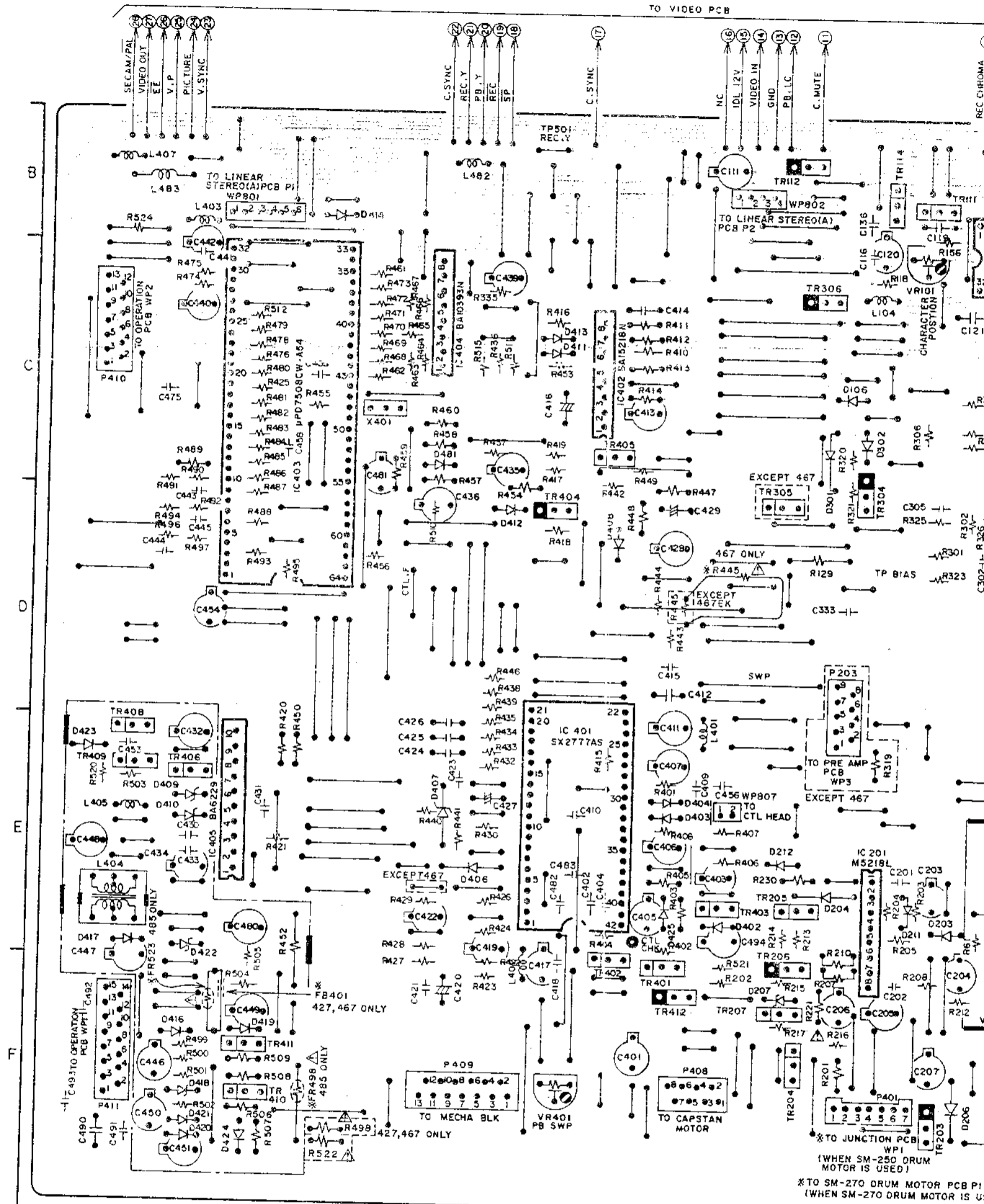
--- POWER SUPPLY (AL, IDL) LINE
 - - - POWER SUPPLY (PB OR REC) LINE
 --- AUDIO IN (REC, E-E) SIGNAL LINE
 --- AUDIO OUT (PB, E-E) SIGNAL LINE
 --- VIDEO IN (REC, E-E) SIGNAL LINE
 --- VIDEO OUT (PB, E-E) SIGNAL LINE

EXCEPT EK MODEL

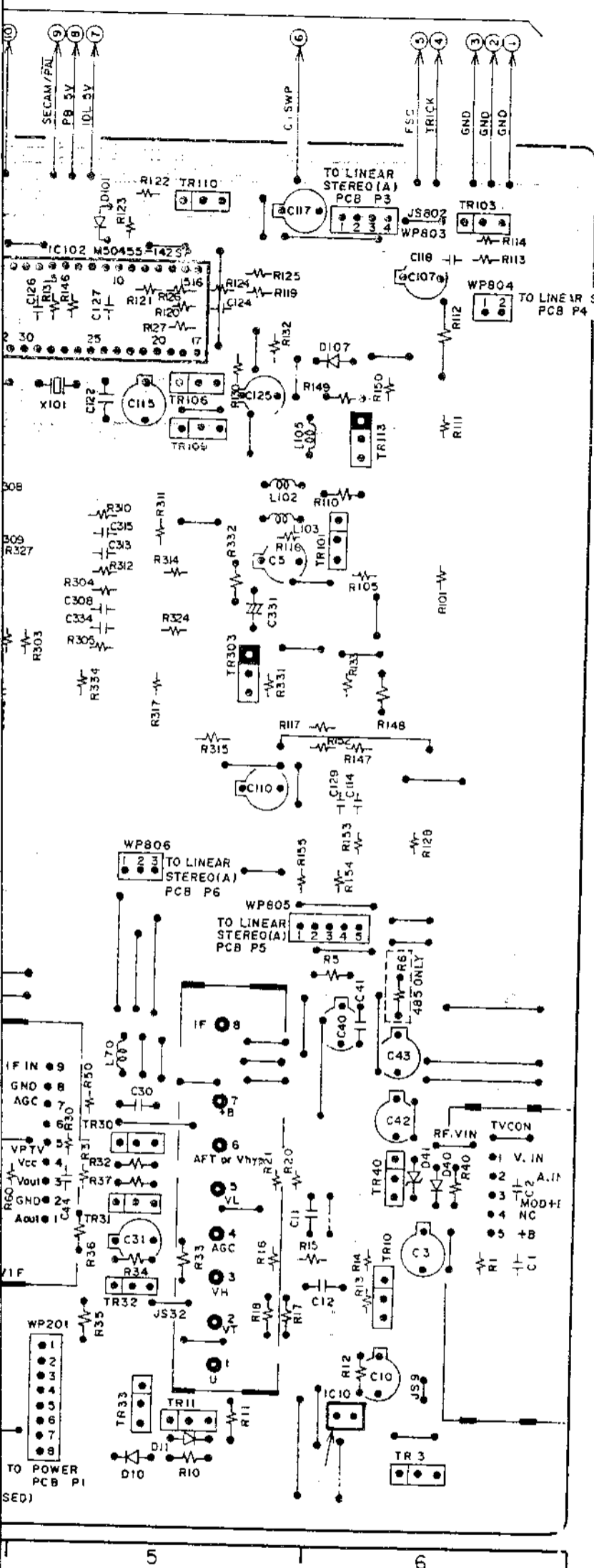
NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS (1/8W(J))
 ALL CAPACITORS IN µF (50WV 50V)
 ALL INDUCTORS IN µH (K)
 ALL DIODES ARE 1S5131T

INDICATE
 WITH EM
 () REC





MAIN PCB VII02A501A (J1)

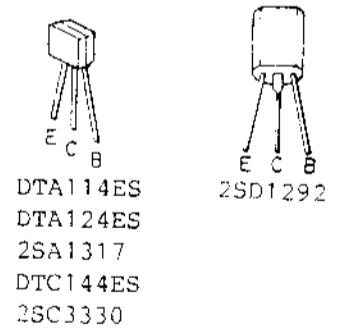
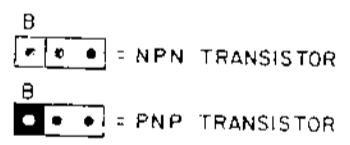


PRINCIPAL PARTS LOCATION

| | | | |
|------------|-----|-------------|-------|
| ICS | | TRANSISTORS | |
| IC10..... | F16 | TR3..... | F6 |
| IC201..... | F4 | TR10..... | F6 |
| IC401..... | E3 | TR11..... | F5 |
| IC403..... | D1 | TR30..... | E5 |
| IC404..... | C2 | TR32..... | F5 |
| IC405..... | E1 | TR33..... | E5 |
| | | TR40..... | E6 |
| | | TR90..... | F5 |
| | | TR101..... | C5, 6 |
| | | TR103..... | B6 |
| | | TR106..... | C5 |
| | | TR110..... | B4 |
| | | TR111..... | B4 |
| | | TR112..... | B4 |
| | | TR113..... | C6 |
| | | TR114..... | B4 |
| | | TR203..... | F4 |
| | | TR205..... | E4 |
| | | TR206..... | E, F4 |
| | | TR207..... | F4 |
| | | TR303..... | D5 |
| | | TR304..... | D4 |
| | | TR305..... | D4 |
| | | TR306..... | C4 |
| | | TR401..... | F3 |
| | | TR402..... | E, F3 |
| | | TR403..... | E3 |
| | | TR404..... | D3 |
| | | TR405..... | C3 |
| | | TR406..... | E1 |
| | | TR407..... | C2 |
| | | TR408..... | E, D1 |
| | | TR409..... | E1 |
| | | TR410..... | F1 |
| | | TR411..... | F1 |
| | | TR412..... | F3 |

CONNECTORS

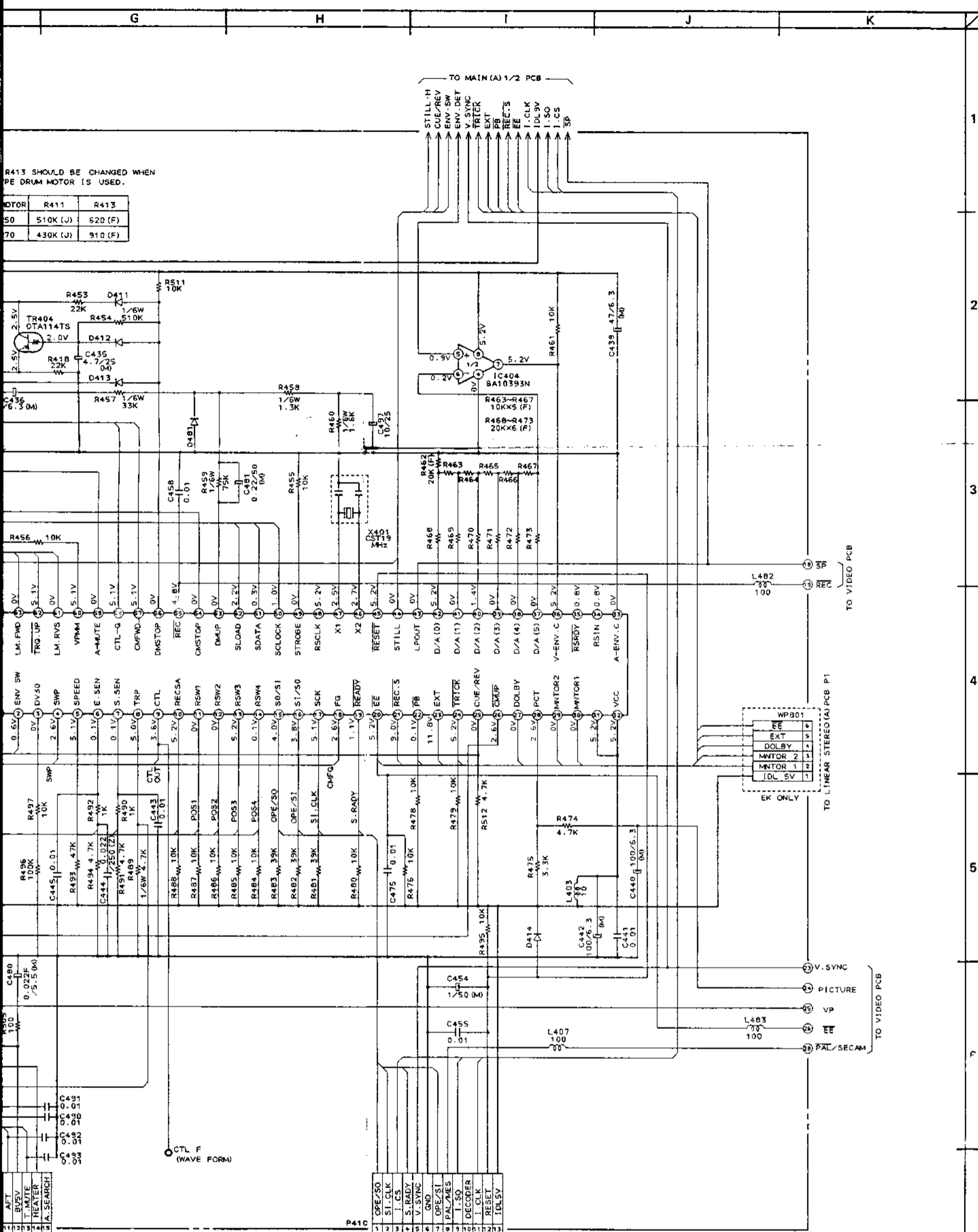
| | |
|-----------|----|
| P105..... | C6 |
| P106..... | C3 |
| P203..... | E4 |
| P401..... | F4 |
| P408..... | F3 |
| P409..... | F2 |
| P410..... | C1 |
| P411..... | F1 |



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WARNING ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL. NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.

467EK ONLY
 TO PRE AMP(2) PCB
 WPI

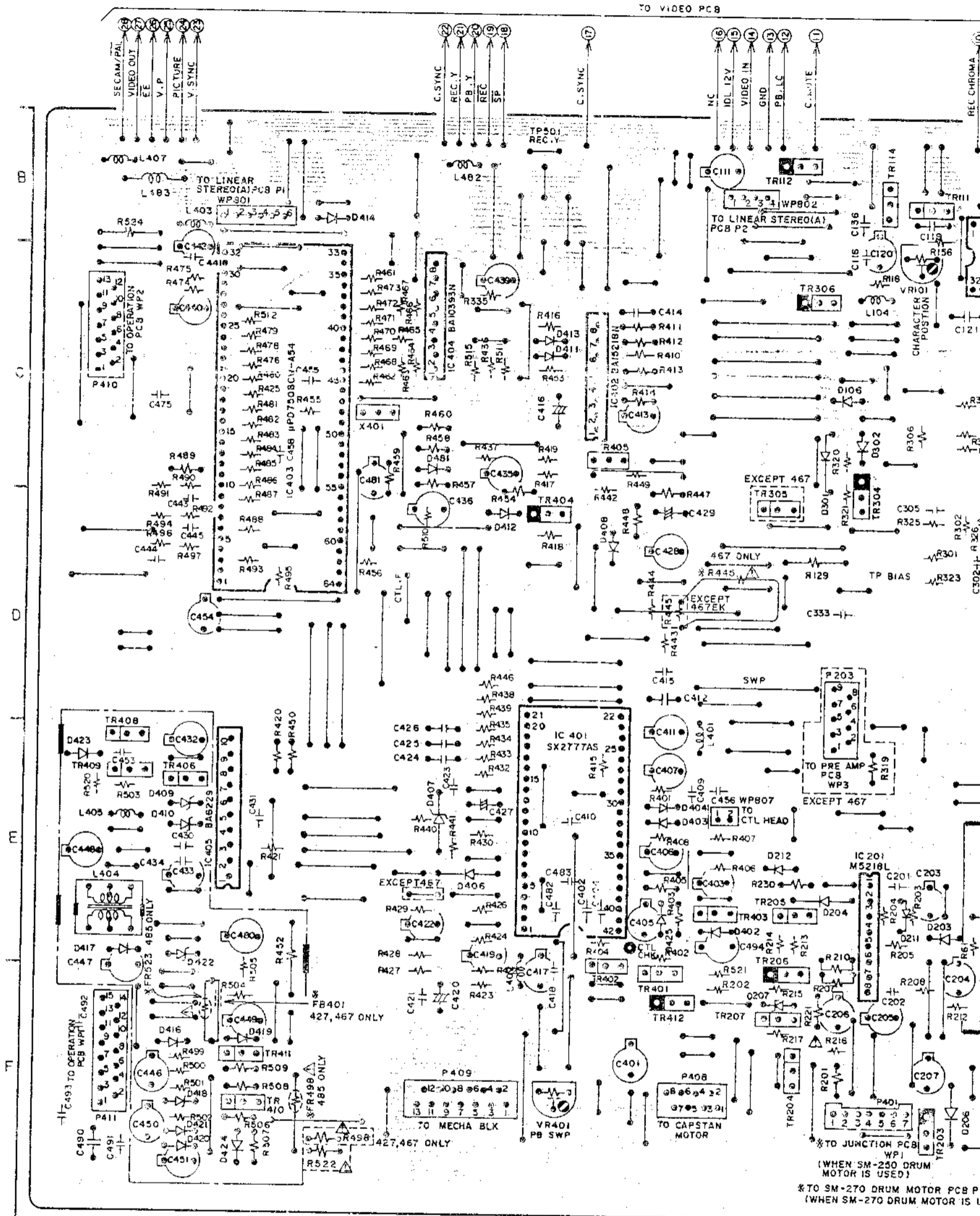


1
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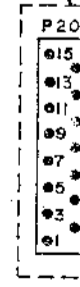
WARNING: ⚠ AND ⚡ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

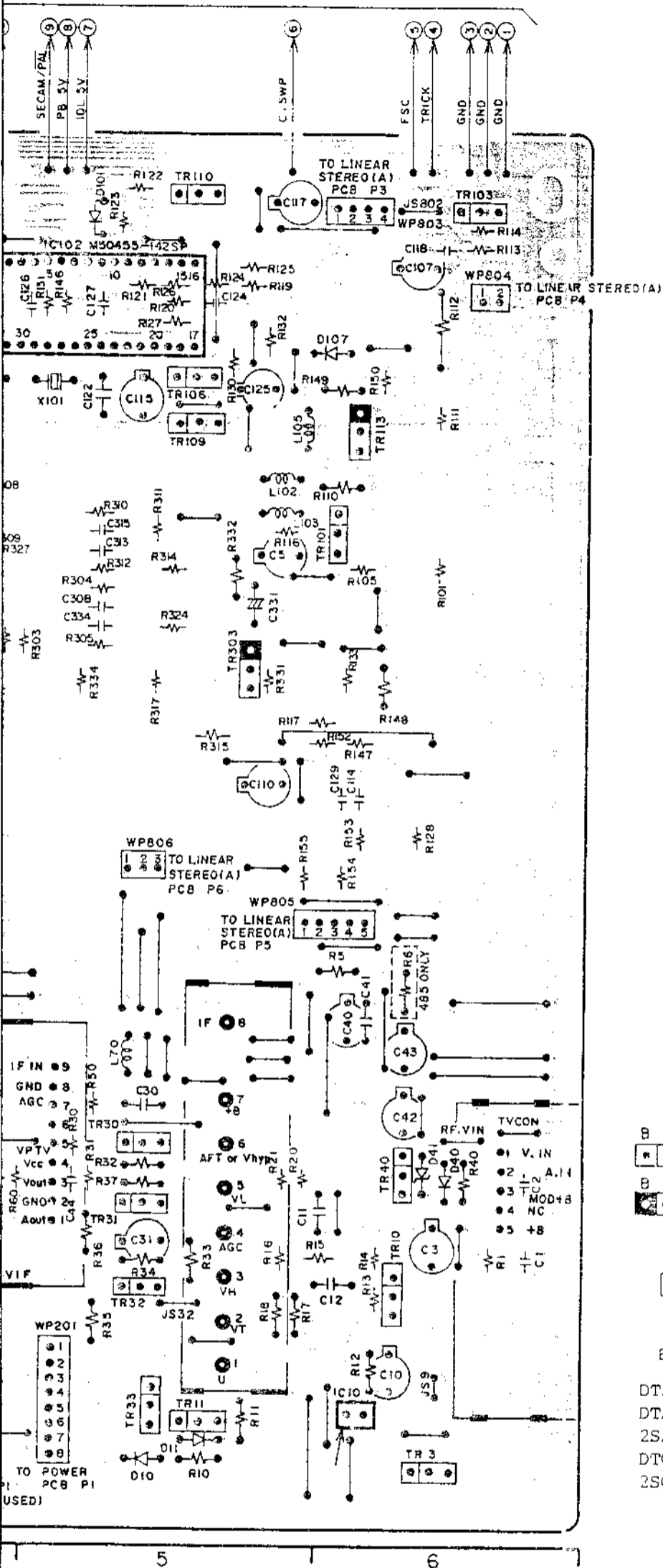
AVERTISSEMENT: ⚠ ET ⚡ ILS INDICENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

MAIN 2/2 (SERVO/SYSCON) SCHEMATIC DIAGRAM NO. 22-5 V110219M





MAIN PCB VII02A501A (J1)












PRINCIPAL PARTS LOCATION

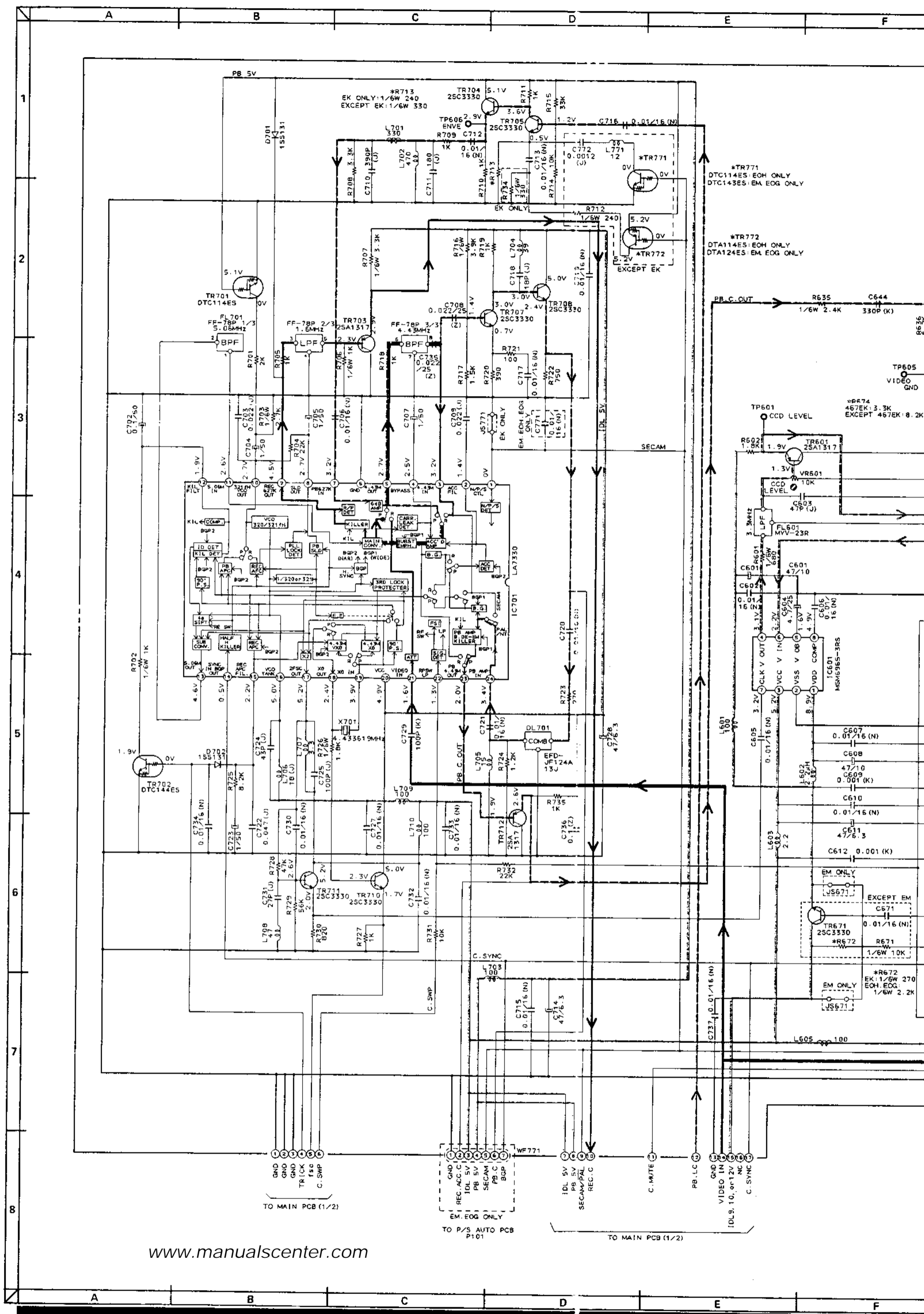
| | |
|----------------|----------------|
| ICS | TRANSISTORS |
| IC10.....F16 | TR3.....F6 |
| IC201.....F4 | TR10.....F6 |
| IC401.....E3 | TR11.....F5 |
| IC403.....D1 | TR30.....E5 |
| IC404.....C2 | TR32.....F5 |
| IC405.....E1 | TR33.....E5 |
| | TR40.....E6 |
| WP | TR90.....F5 |
| WP2.....C1 | TR101.....C5,6 |
| WP102.....C6 | TR103.....B6 |
| WP201.....F5 | TR106.....C5 |
| WP801.....B1 | TR110.....B4 |
| WP802.....B3,4 | TR111.....B4 |
| WP803.....B6 | TR112.....B4 |
| WP804.....B,C6 | TR113.....C6 |
| WP805.....E5,6 | TR114.....B4 |
| WP806.....D5 | TR203.....F4 |
| WP807.....E3 | TR205.....E4 |
| | TR206.....E,F4 |
| | TR207.....F4 |
| CONNECTORS | TR303.....D5 |
| P105.....C6 | TR304.....D4 |
| P106.....C3 | TR305.....D4 |
| P203.....E4 | TR306.....C4 |
| P401.....F4 | TR401.....F3 |
| P408.....F3 | TR402.....E,F3 |
| P409.....F2 | TR403.....E3 |
| P410.....C1 | TR404.....D3 |
| P411.....F1 | TR405.....C3 |
| | TR406.....E1 |
| | TR407.....C2 |
| | TR408.....E,D1 |
| | TR409.....E1 |
| | TR410.....F1 |
| | TR411.....F1 |
| | TR412.....F3 |

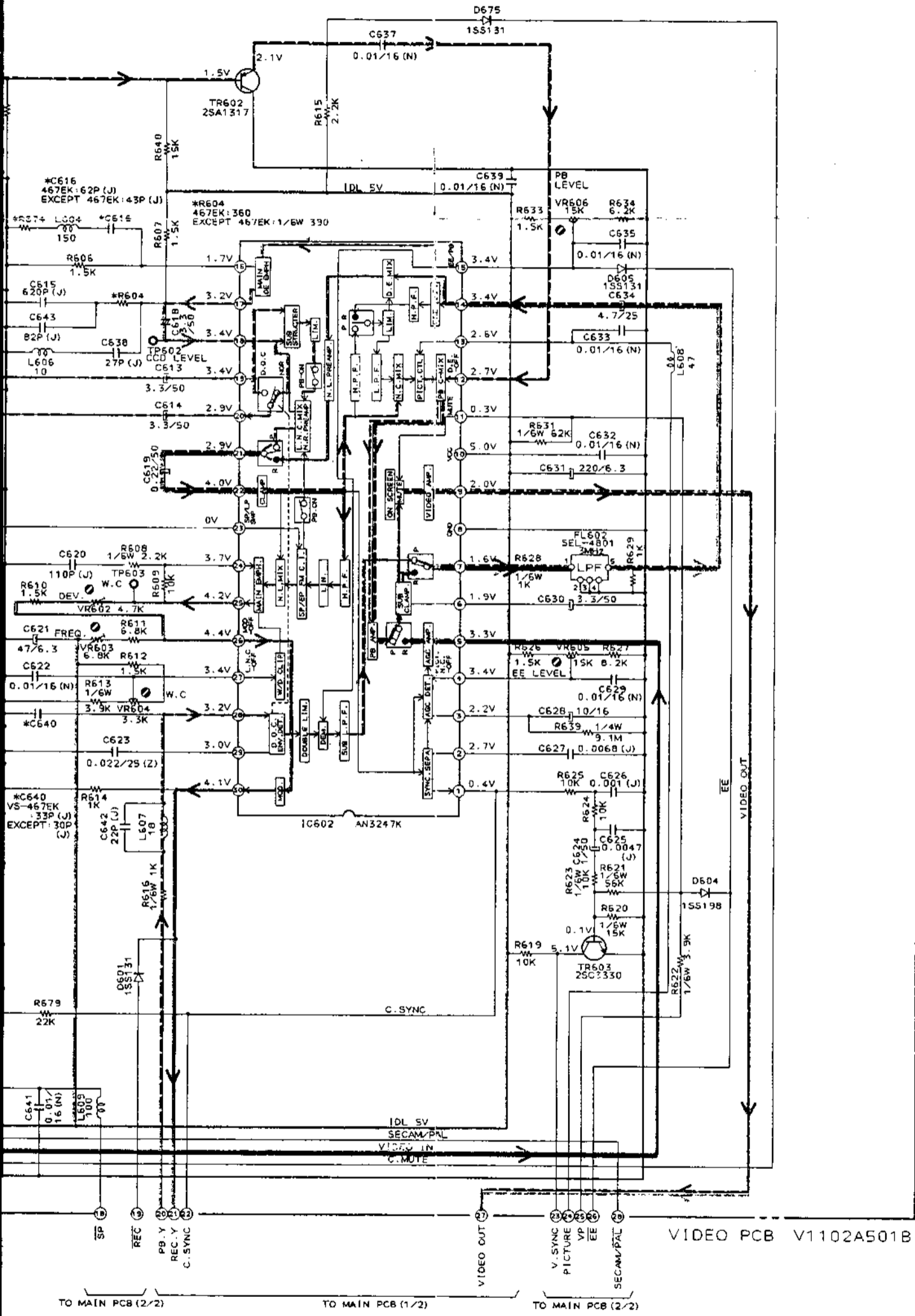
 = NPN TRANSISTOR
 = PNP TRANSISTOR

-  DTA114ES
-  DTA124ES
-  2SA1317
-  DTC144ES
-  2SC3330

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WARNING  INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT  IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.





VIDEO PCB V1102A501B

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/50W(J)
ALL CAPACITORS IN μF 50W(M)
ALL INDUCTORS IN μH(K)

- POWER SUPPLY (AL. IDL) LINE
- POWER SUPPLY (PB or REC) LINE
- REC Y SIGNAL LINE
- PB Y SIGNAL LINE
- REC CHROMA SIGNAL LINE
- PB CHROMA SIGNAL LINE

VIDEO SCHEMATIC DIAGRAM
NO. 22-6 V110220M

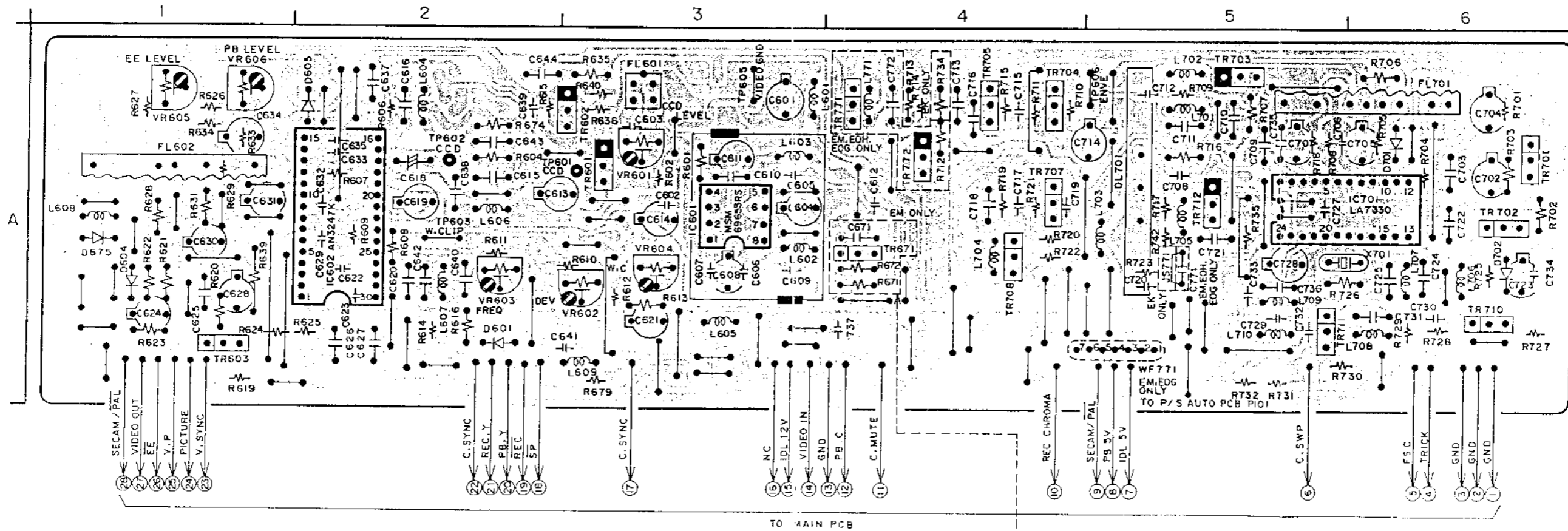
LOCATION OF COMPONENTS

| | |
|----------------|----------------|
| ICS | TRANSISTORS |
| IC601.....A3 | TR601.....A3 |
| IC602.....A2 | TR602.....A2,3 |
| IC701.....A5,6 | TR603.....A1 |
| WIRE | TR671.....A4 |
| WF771.....A4,5 | TR701.....A6 |
| (EM,EOG ONLY) | TR702.....A6 |
| | TR703.....A5 |
| | TR704.....A4 |
| | TR705.....A4 |
| | TR707.....A4 |
| | TR708.....A4 |
| | TR710.....A6 |
| | TR711.....A5 |
| | TR712.....A5 |
| | TR771.....A4 |
| | TR772.....A4 |



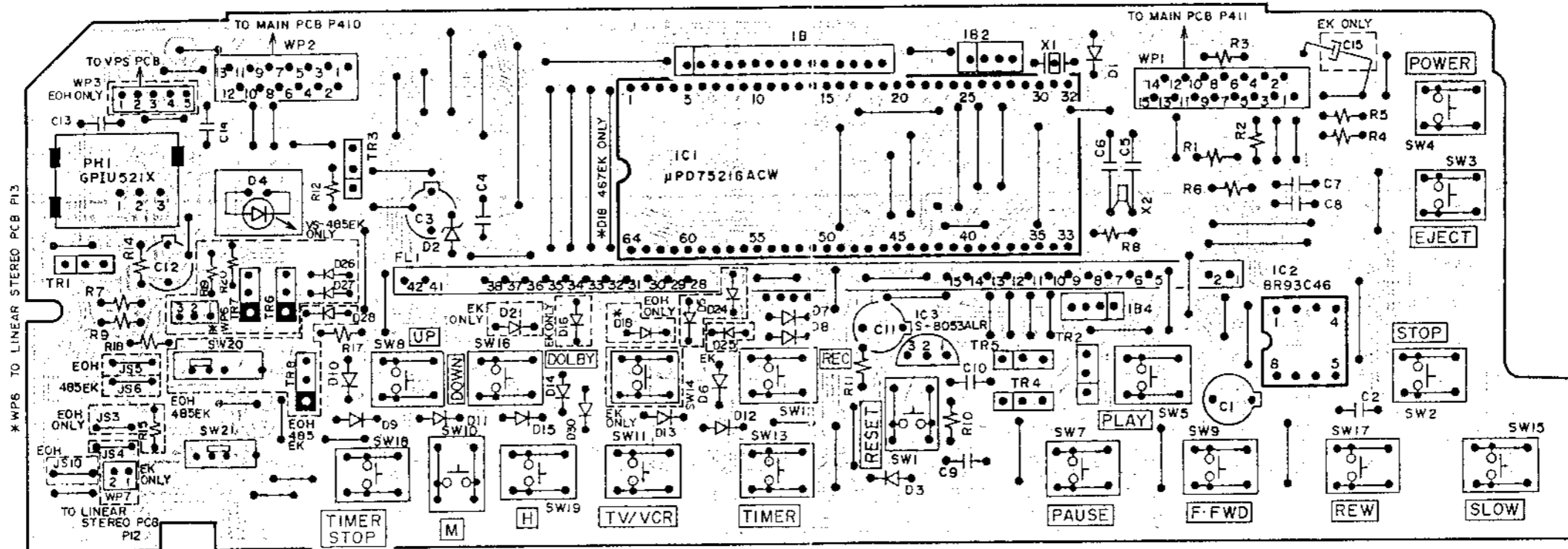
- DTA124ES
- DTC114ES
- DTC143ES
- DTC144ES
- 2SA1317
- 2SC3330

- B C E
- • • = PNP TRANSISTOR
- B C E
- • • = NPN TRANSISTOR

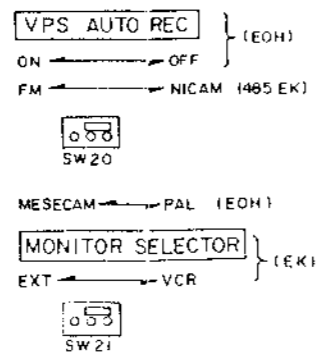


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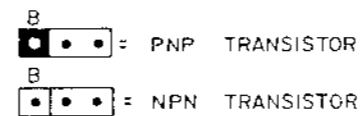
VIDEO PCB VII02A501B (J1)



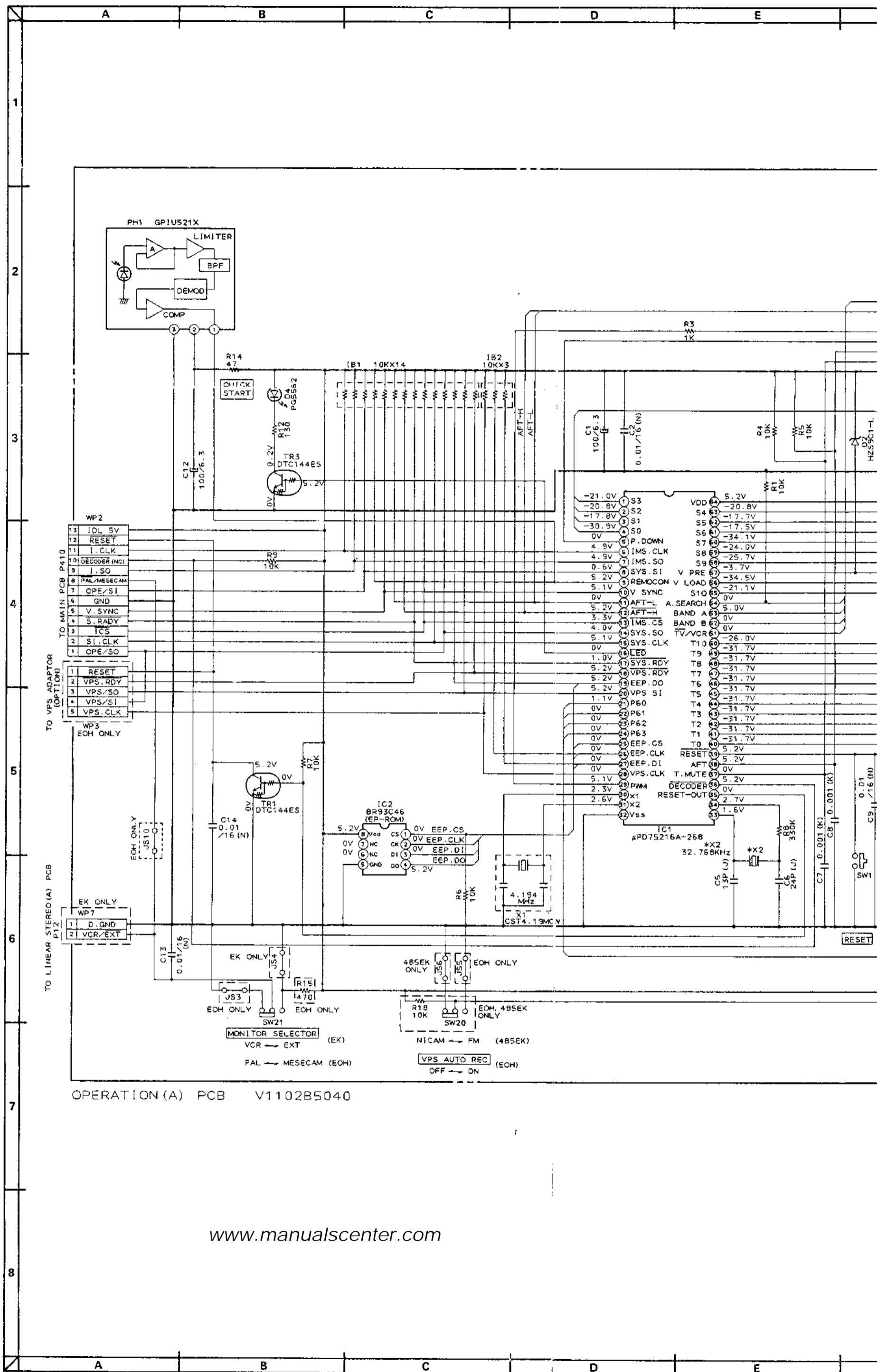
OPERATION (A) PCB VII02B5040

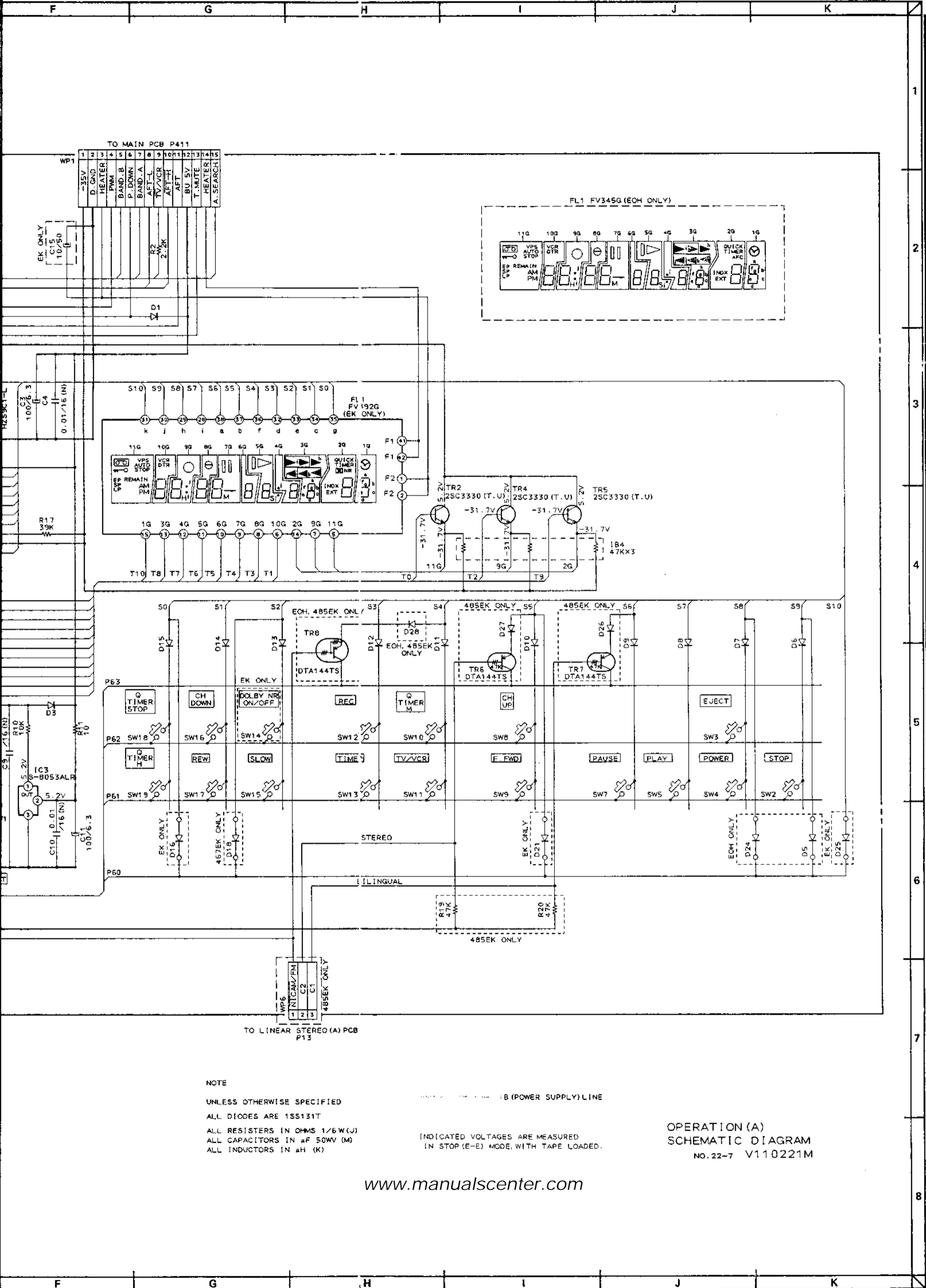


www.manualscenter.com



2SC3330
DTC114ES
DTA144TS

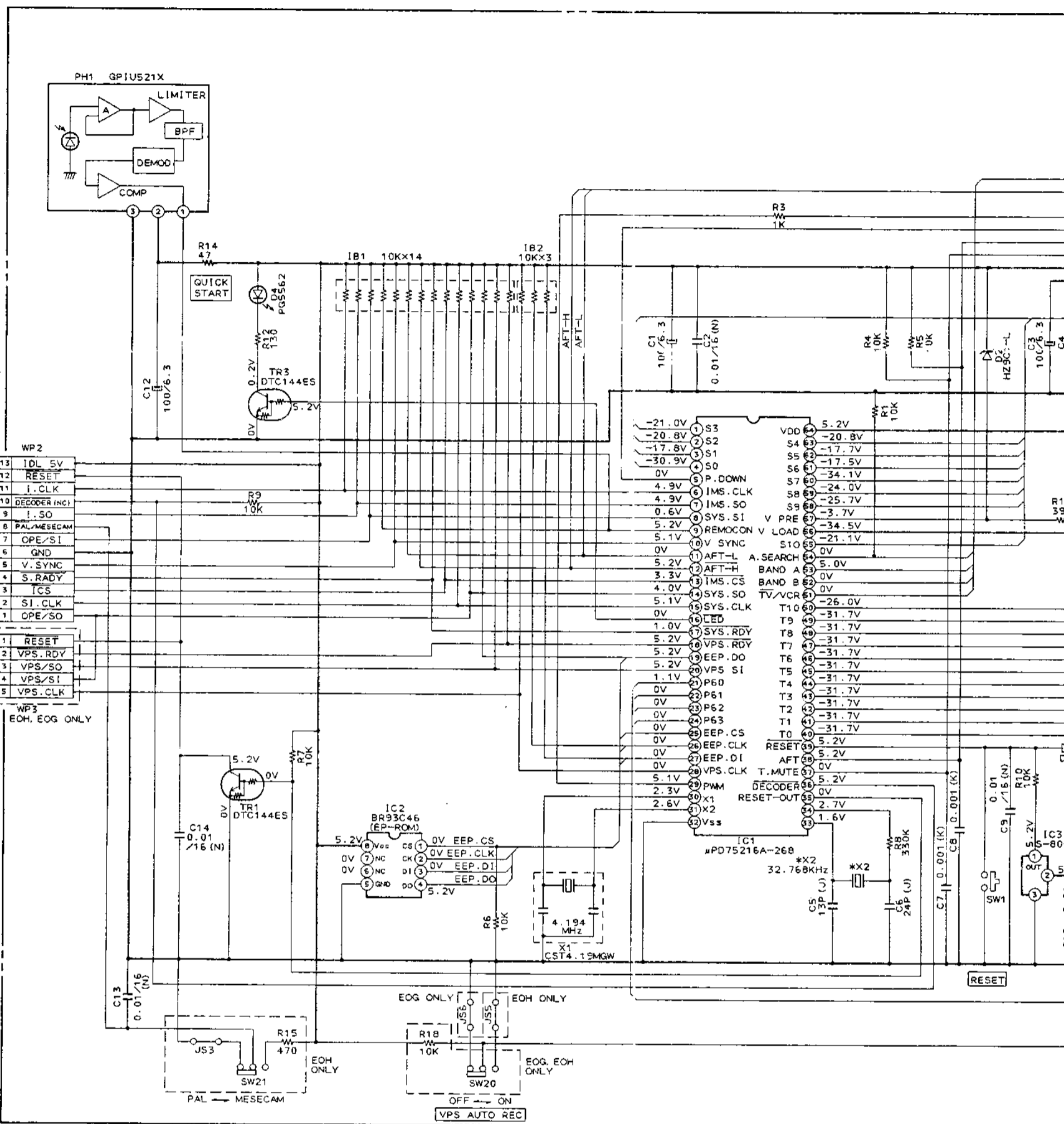




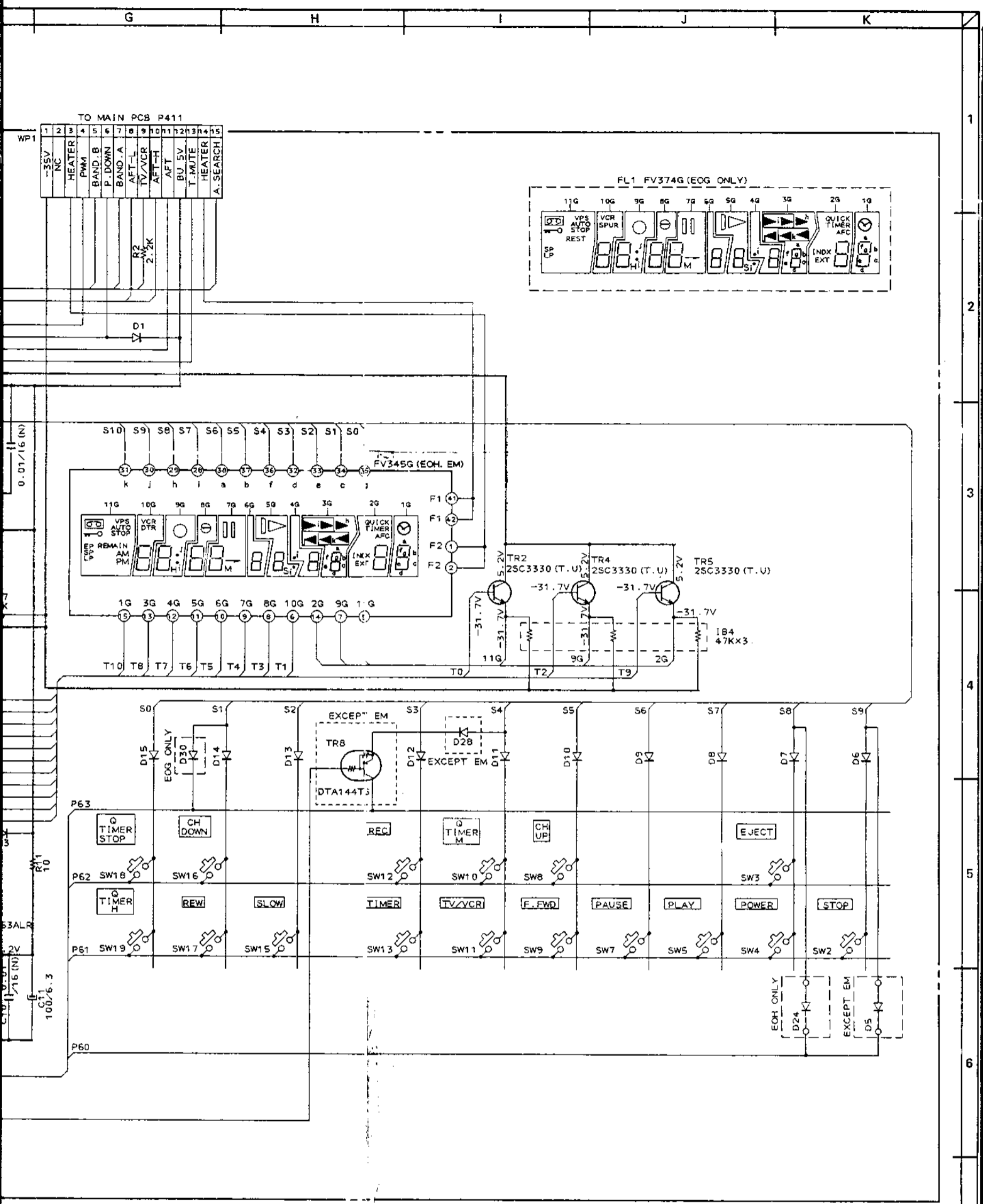
NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL DIODES ARE 1SS131T
 ALL RESISTORS IN OHMS 1/6W (J)
 ALL CAPACITORS IN μ F 50WV (M)
 ALL INDUCTORS IN μ H (K)

INDICATED VOLTAGES ARE MEASURED
 IN STOP (E-E) MODE, WITH TAPE LOADED.

OPERATION (A)
 SCHEMATIC DIAGRAM
 NO. 22-7 V110221M



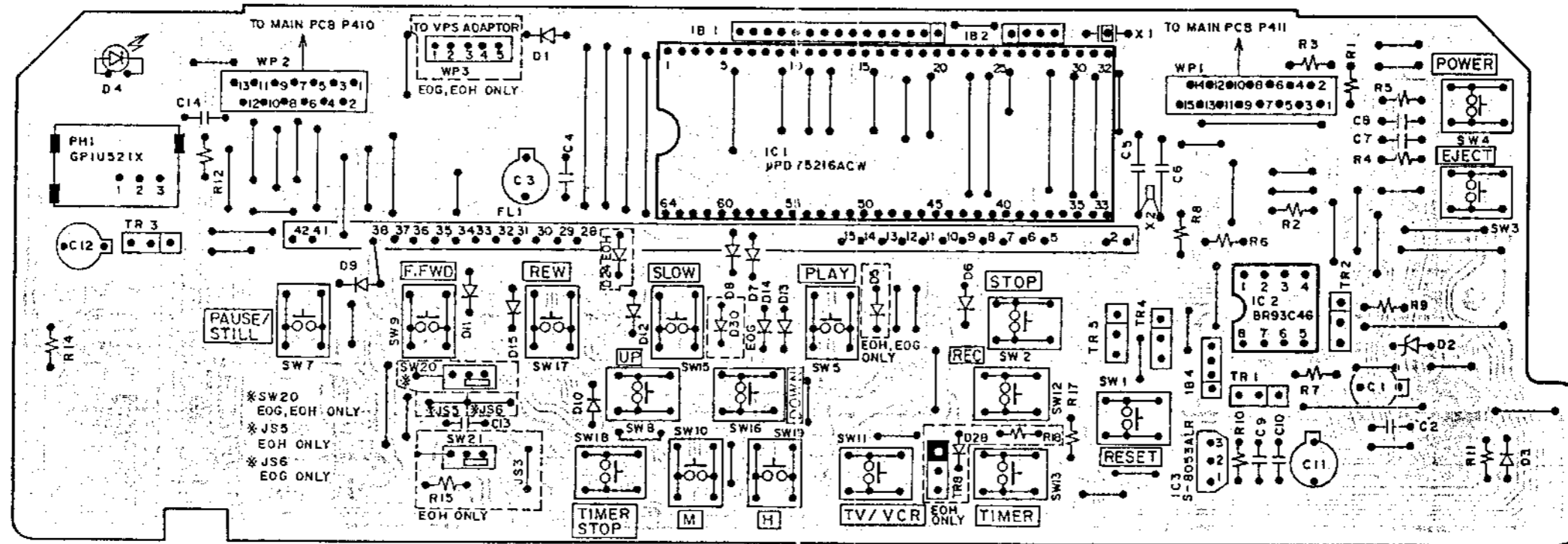
OPERATION (B) PCB V1102B5050



NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL DIODES ARE 1SS131T
 ALL RESISTERS IN OHMS 1/6 W (J)
 ALL CAPACITORS IN μF 50WV (M)
 ALL INDUCTORS IN μH (K)

— 1B (POWER SUPPLY) LINE
 INDICATED VOLTAGES ARE MEASURED
 IN STOP (E-E) MODE, WITH TAPE LOADED.

OPERATION (B)
 SCHEMATIC DIAGRAM
 NO.22-8 V110222M



OPERATION (B) PCB VII02B5050 (J1)

= NPN TRANSISTOR

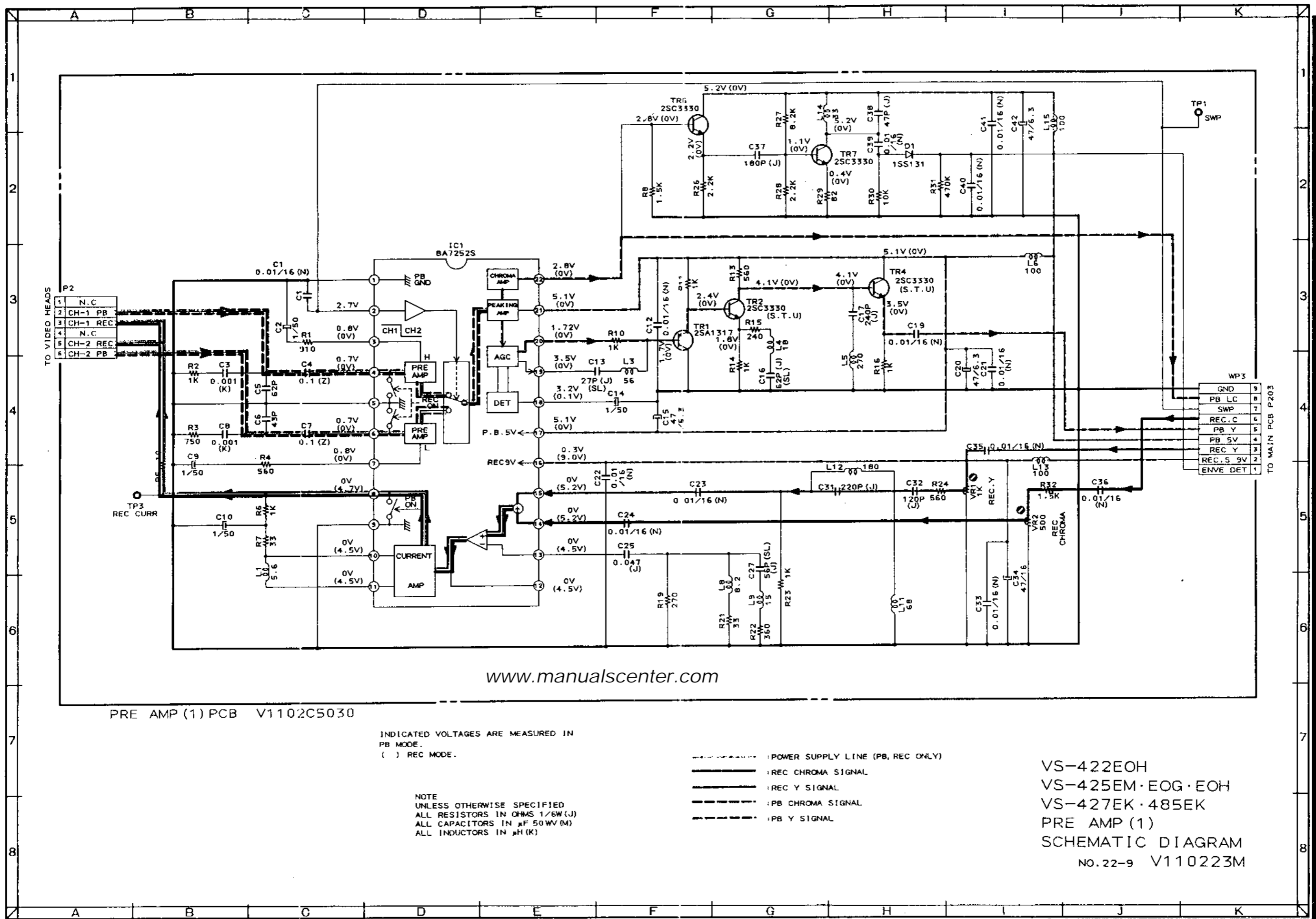
VPS AUTO REC
 ON OFF (EOH)
 OFF ON (EOG)

SW 20

MESECAM PAL
 SW 21

E C B
 2SC3330
 DTC114ES
 DTA144TS

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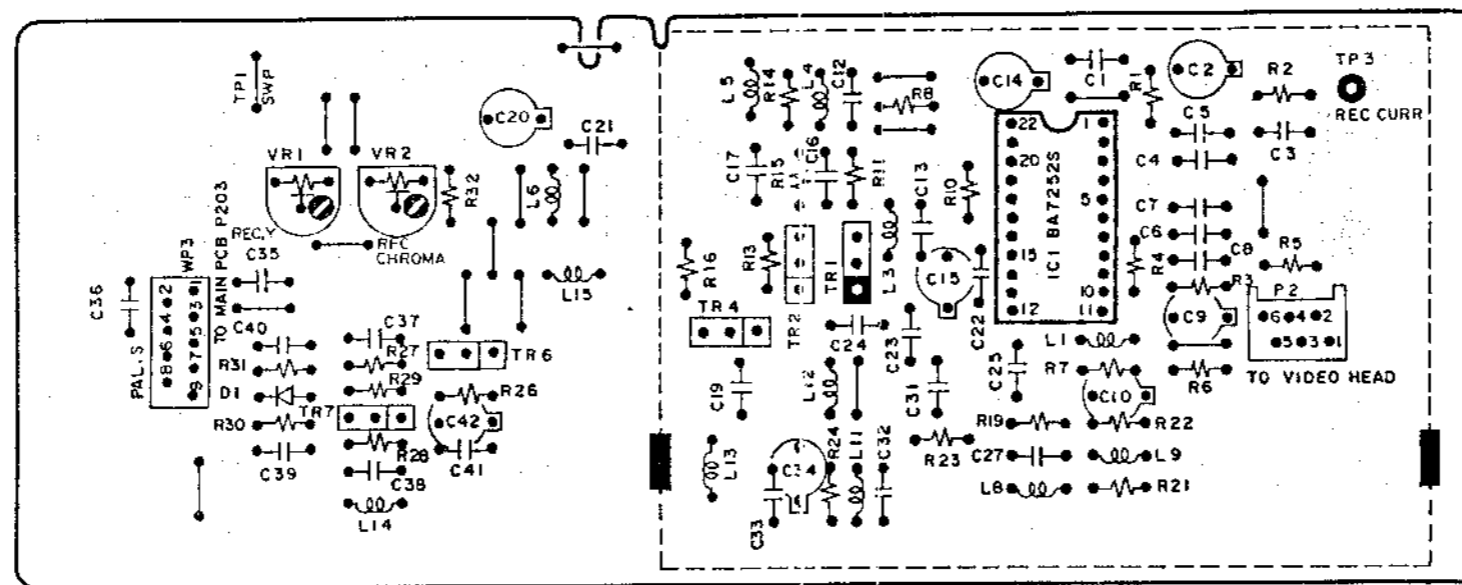
PRE AMP (1) PCB V1102C5030

INDICATED VOLTAGES ARE MEASURED IN
PB MODE.
() REC MODE.

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/5W(J)
ALL CAPACITORS IN μ F 50WV(M)
ALL INDUCTORS IN μ H(K)

- POWER SUPPLY LINE (PB, REC ONLY)
- REC CHROMA SIGNAL
- REC Y SIGNAL
- PB CHROMA SIGNAL
- PB Y SIGNAL

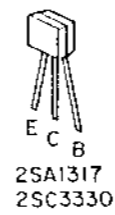
VS-422EOH
VS-425EM·EOG·EOH
VS-427EK·485EK
PRE AMP (1)
SCHEMATIC DIAGRAM
NO.22-9 V110223M

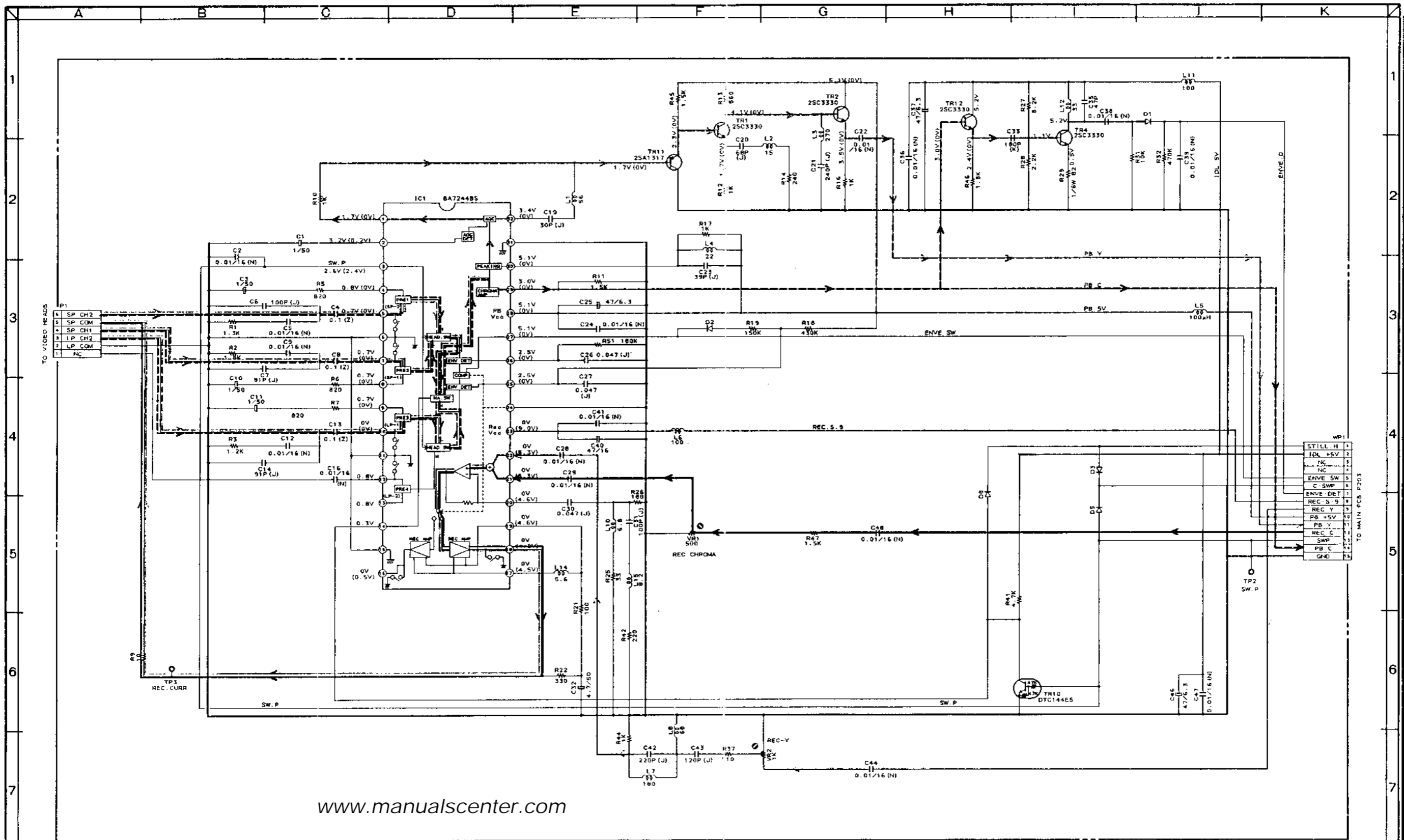


PRE AMP (I) PCB VII02C5030J2

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- B = NPN TRANSISTOR
- B = PNP TRANSISTOR





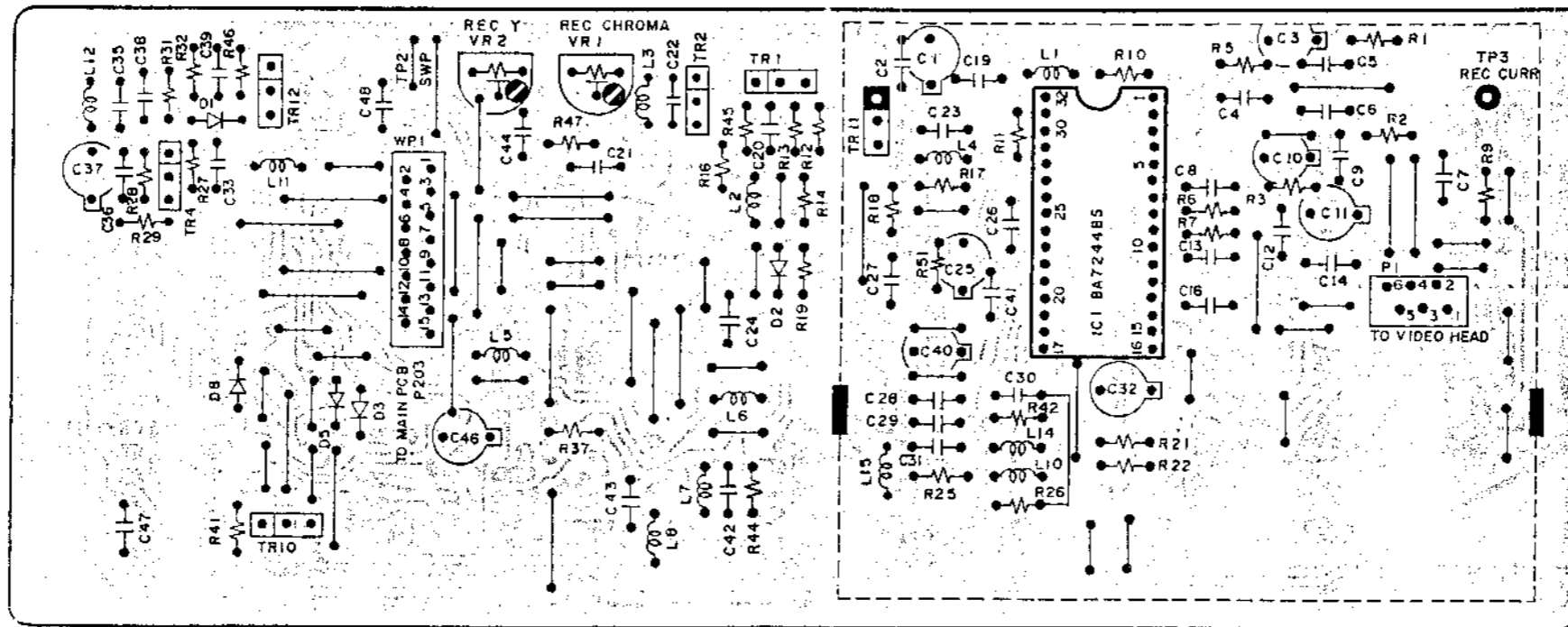
www.manualscenter.com

PREAMP (2) PCB V1102C5150

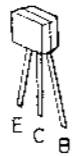
- POWER SUPPLY LINE (AL,IDL)
- POWER SUPPLY LINE (PB OR REC ONLY)
- PB Y SIGNAL LINE
- REC Y SIGNAL LINE
- PB CHROMA SIGNAL LINE
- REC CHROMA SIGNAL LINE

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS (1/5W)(J)
 ALL CAPACITORS IN pF (50WV)(M)
 ALL INDUCTORS IN μH(K)
 ALL DIODES ARE 1S5131-77
 INDICATED VOLTAGES ARE MEASURED IN PB MODE
 () REC MODE.

SCHMATIC DIAGRAM
 NO.22-10 V110224M



PRE AMP(2) PCB VII02C5I50 (J1)



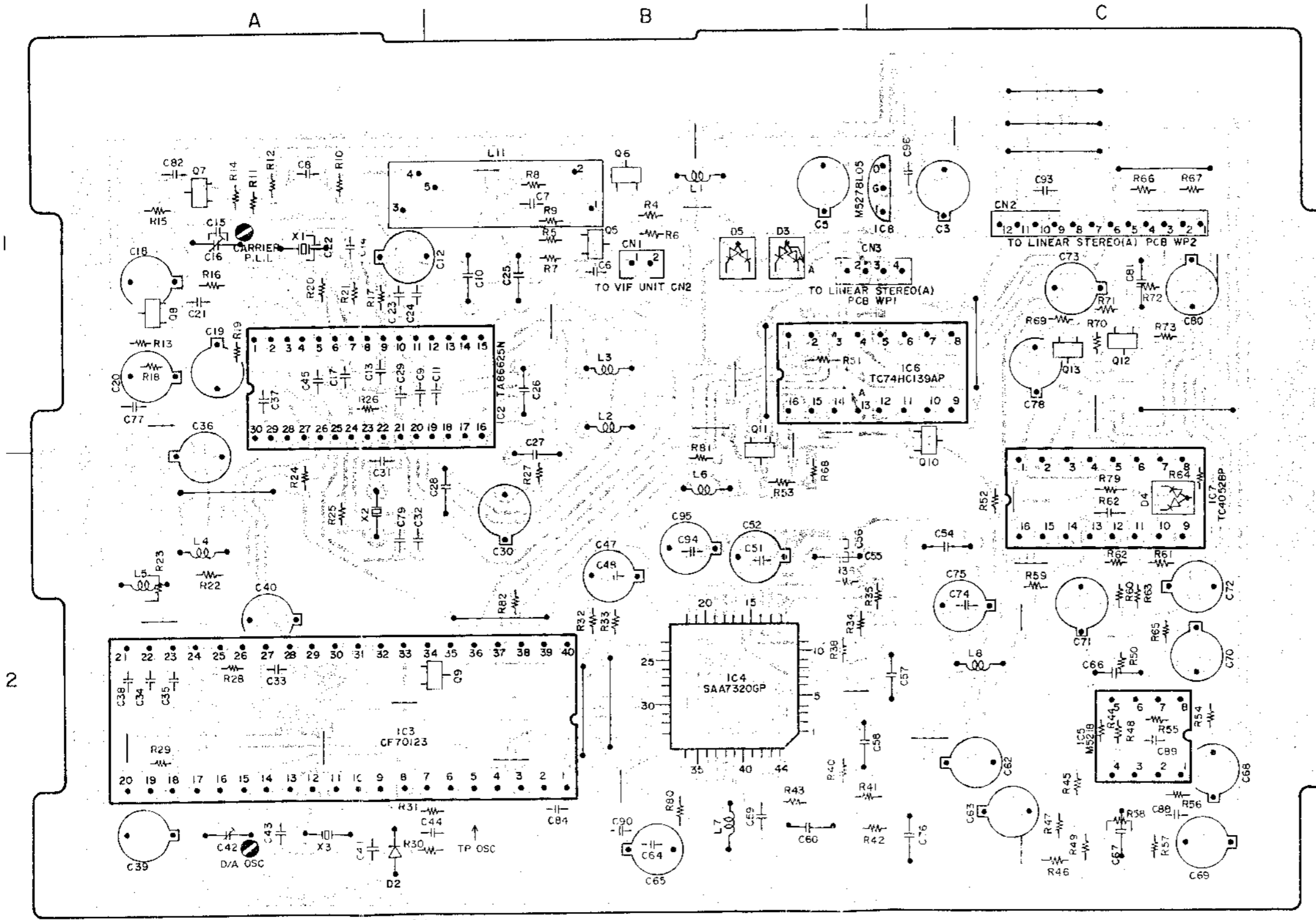
- 2SA1317
- 2SC3330
- DTC114ES
- DTC144ES

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- | | | |
|---|---|---|
| B | C | E |
| • | • | • |

 = NPN TRANSISTOR
- | | | |
|---|---|---|
| B | C | E |
| • | • | • |

 = PNP TRANSISTOR



NICAM PCB 6B00640A1

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LOCATION OF COMPONENTS

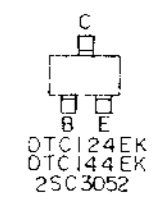
- ICS
- IC2.....A,B1
- IC3.....A,B2
- IC4.....B2
- IC5.....C2
- IC6.....B,C1
- IC7.....C2

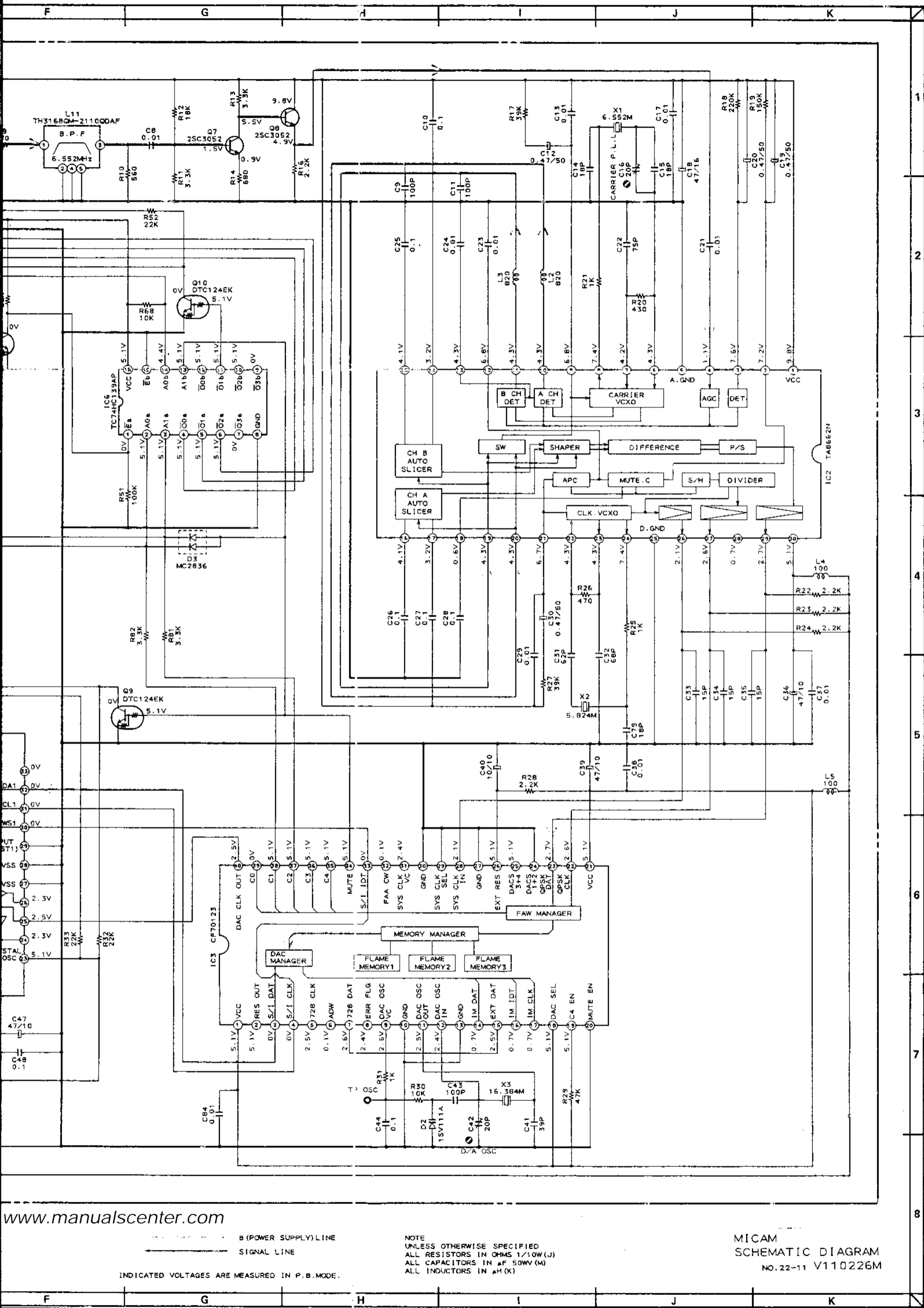
TRANSISTORS

- Q5.....B1
- Q6.....B1
- Q7.....A1
- Q8.....A1
- Q9.....A2
- Q10.....C1
- Q11.....B1
- Q12.....C1
- Q13.....C1

CONNECTORS

- CN1.....B1
- CN2.....C2
- CN3.....B,C1

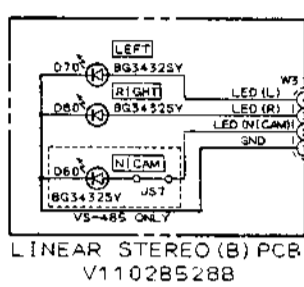
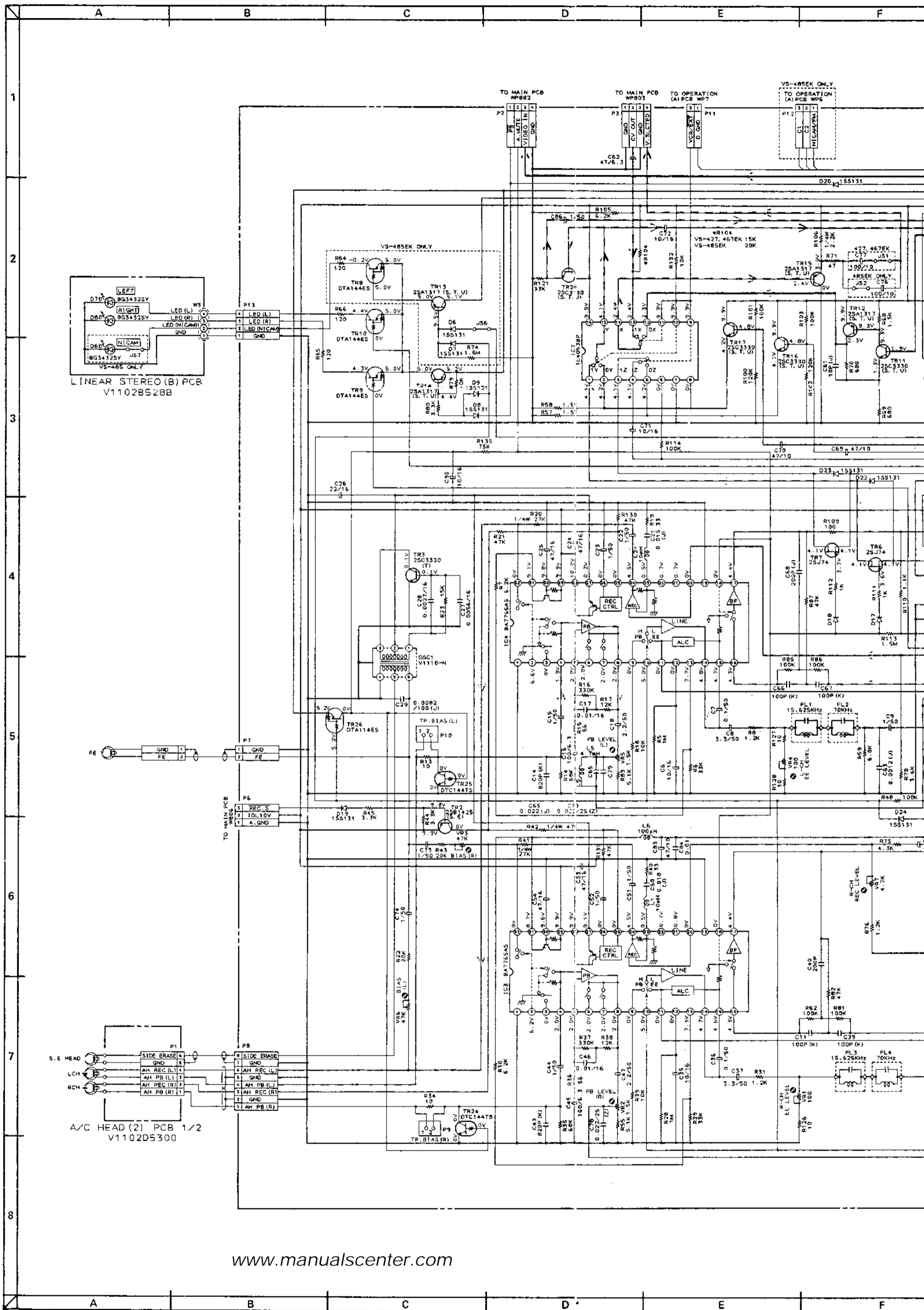




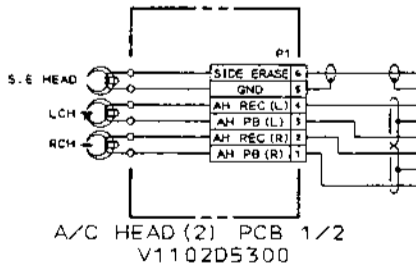
- - - - - B (POWER SUPPLY) LINE
 ———— SIGNAL LINE
 INDICATED VOLTAGES ARE MEASURED IN P.B. MODE.

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/10W(J)
 ALL CAPACITORS IN μ F 50WV(M)
 ALL INDUCTORS IN μ H(X)

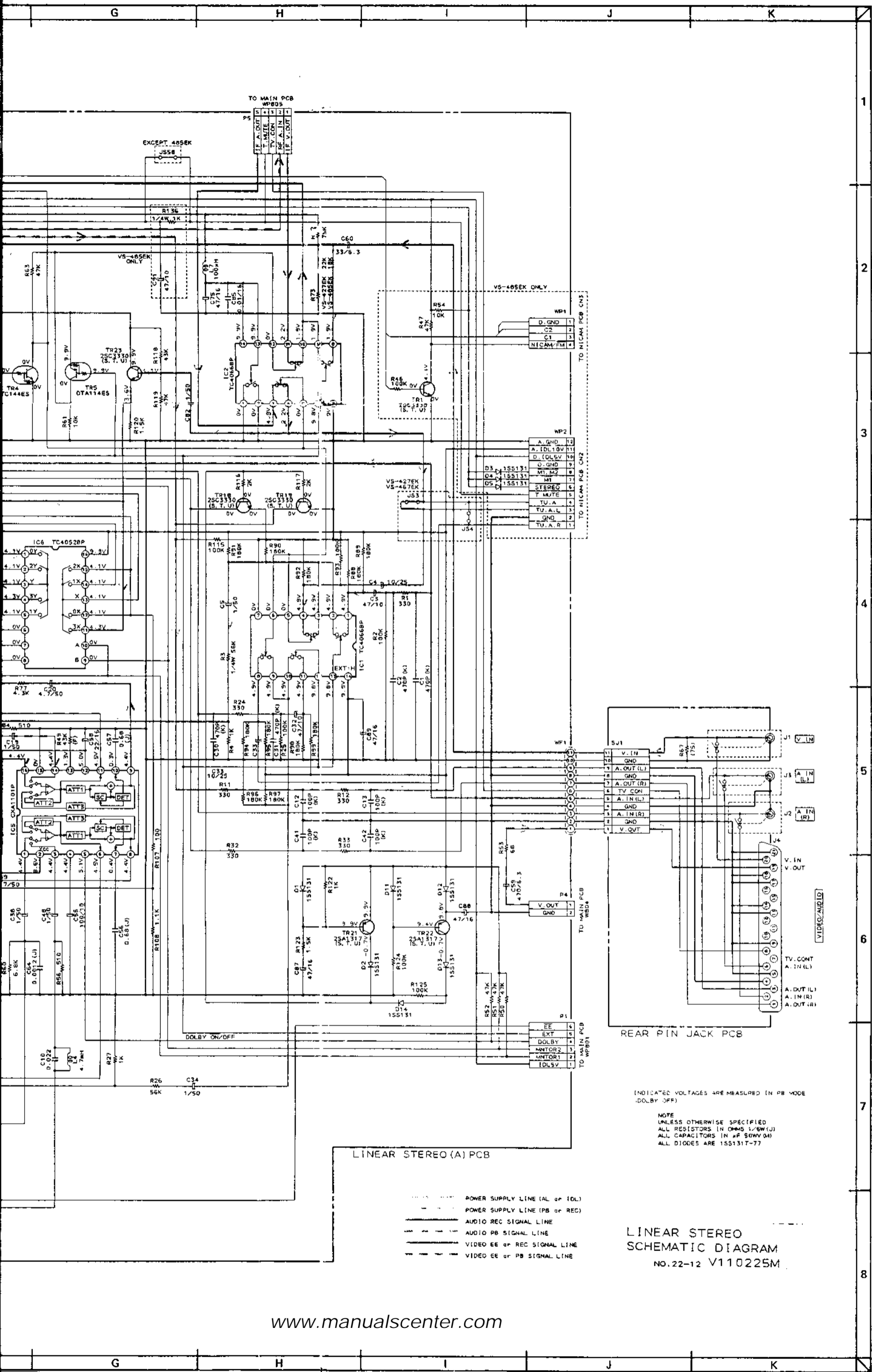
MICAM
 SCHEMATIC DIAGRAM
 NO. 22-11 V110226M



LINEAR STEREO (B) PCB
V1102B5288



A/C HEAD (2) PCB 1/2
V1102D5300



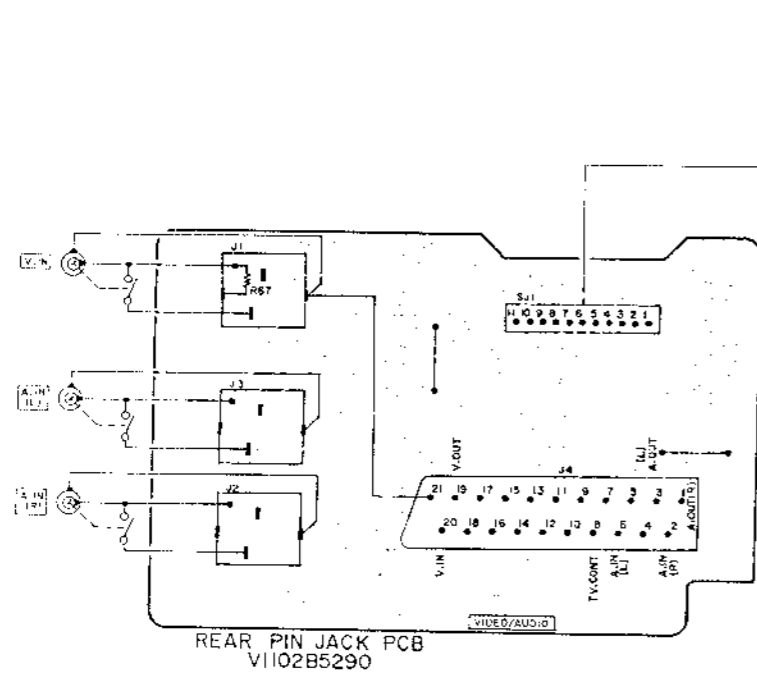
LINEAR STEREO (A) PCB

- POWER SUPPLY LINE (AL or 10L)
- POWER SUPPLY LINE (PB or REC)
- AUDIO REC SIGNAL LINE
- AUDIO PB SIGNAL LINE
- VIDEO EE or REC SIGNAL LINE
- VIDEO EE or PB SIGNAL LINE

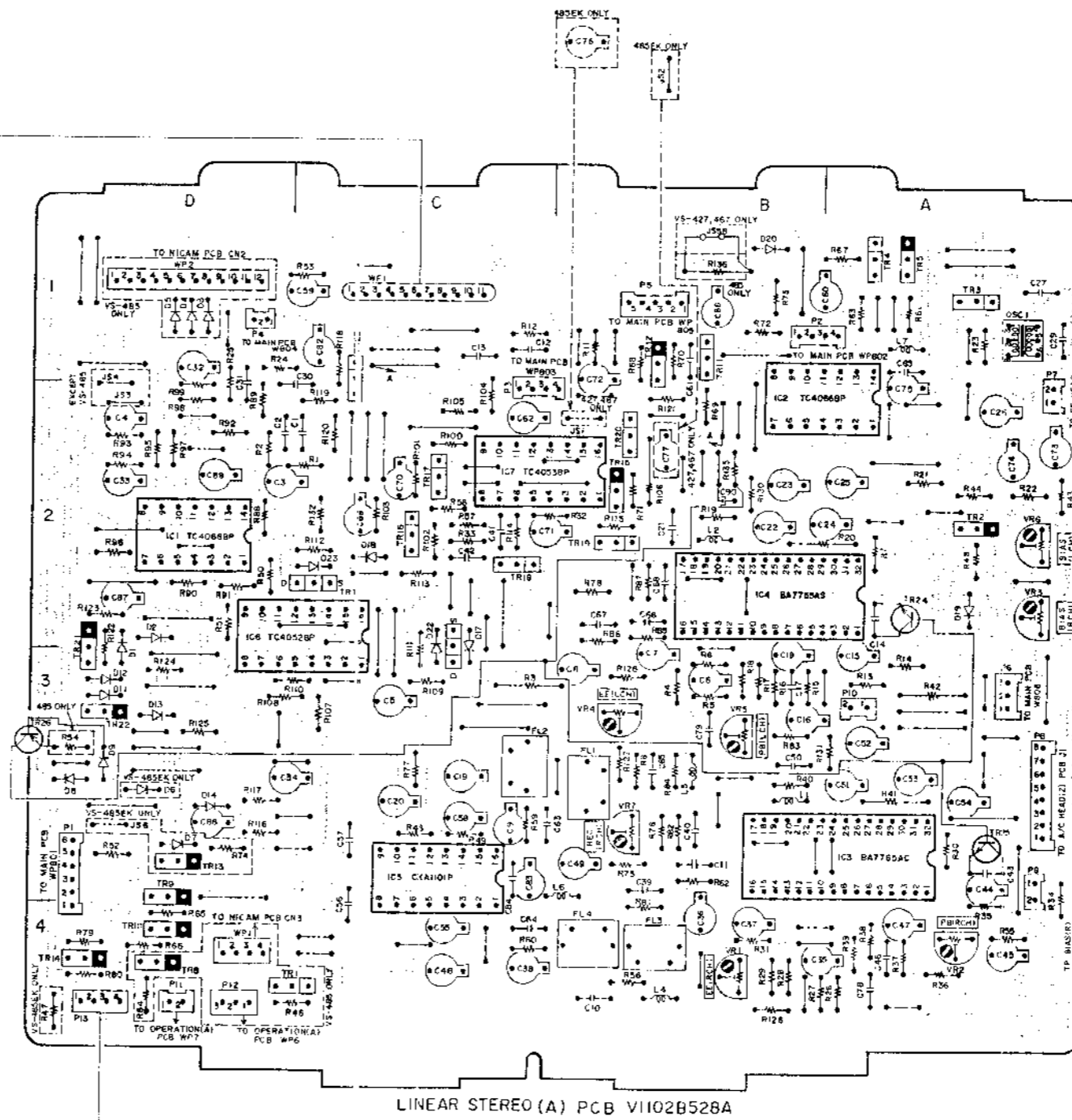
LINEAR STEREO SCHEMATIC DIAGRAM NO.22-12 V110225M

INDICATED VOLTAGES ARE MEASURED IN PB MODE (DOLBY OFF)

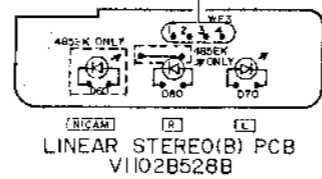
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W(1)
ALL CAPACITORS IN μF 50V(01)
ALL DIODES ARE 1SS131T-77



REAR PIN JACK PCB
V1102B5290



LINEAR STEREO (A) PCB V1102B528A



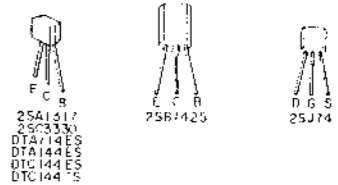
LINEAR STEREO (B) PCB
V1102B528B

LOCATION OF COMPONENTS

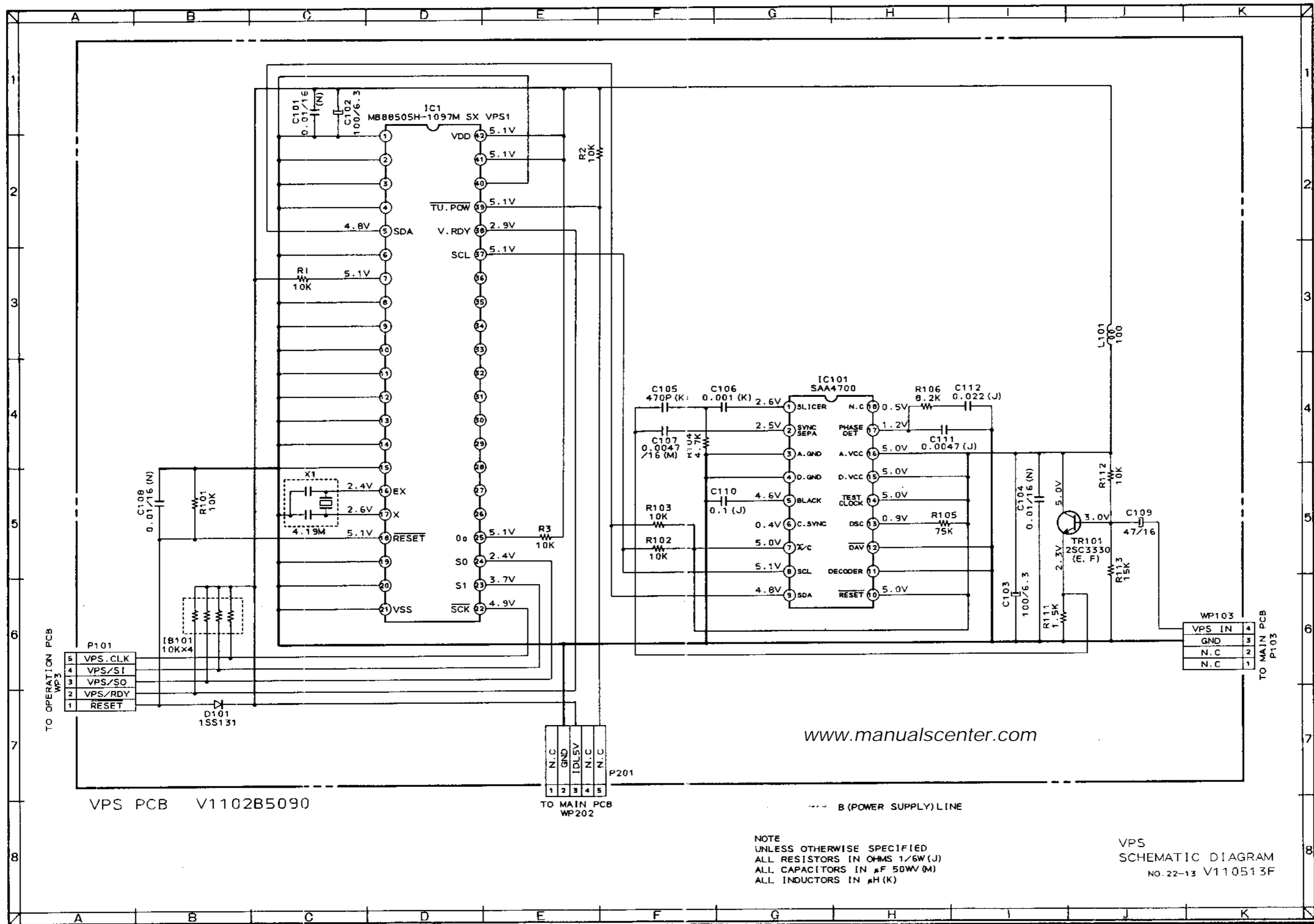
| ICs | CONNECTORS |
|----------------|---------------|
| IC1.....02 | P1.....D3,4 |
| IC2.....A,B1,2 | P2.....A,B1 |
| IC3.....A,B1 | P3.....H,C1,2 |
| IC4.....A,B2 | P4.....B1 |
| IC5.....C3 | P5.....B1 |
| IC6.....C,D2,1 | P6.....A1 |
| IC7.....B,C2 | P7.....A1,2 |
| | P8.....A3 |
| | P9.....A3 |
| | P10.....A3 |
| | P11.....D4 |
| | P12.....D4 |
| | P13.....D4 |
| | WP1.....C1 |
| | WP2.....D4 |
| | WP3.....D1 |

| TRANSISTORS | CONNECTORS |
|---------------|---------------|
| TR1.....C4 | P1.....D3,4 |
| TR2.....A2 | P2.....A,B1 |
| TR3.....A1 | P3.....H,C1,2 |
| TR4.....A1 | P4.....B1 |
| TR5.....A1 | P5.....B1 |
| TR6.....C2,3 | P6.....A1 |
| TR7.....C2 | P7.....A1,2 |
| TR8.....D4 | P8.....A3 |
| TR9.....D4 | P9.....A3 |
| TR10.....D4 | P10.....A3 |
| TR11.....B1 | P11.....D4 |
| TR12.....B1 | P12.....D4 |
| TR13.....D3 | P13.....D4 |
| TR14.....D4 | WP1.....C1 |
| TR15.....B2 | WP2.....D4 |
| TR16.....C2 | WP3.....D1 |
| TR17.....C2 | |
| TR18.....C2 | |
| TR19.....B2 | |
| TR20.....B2 | |
| TR21.....D2,3 | |
| TR22.....D3 | |
| TR23.....C1,2 | |
| TR24.....A2 | |
| TR25.....A3 | |
| TR26.....D1 | |

D G S
FET
PNP TRANSISTOR
NPN TRANSISTOR



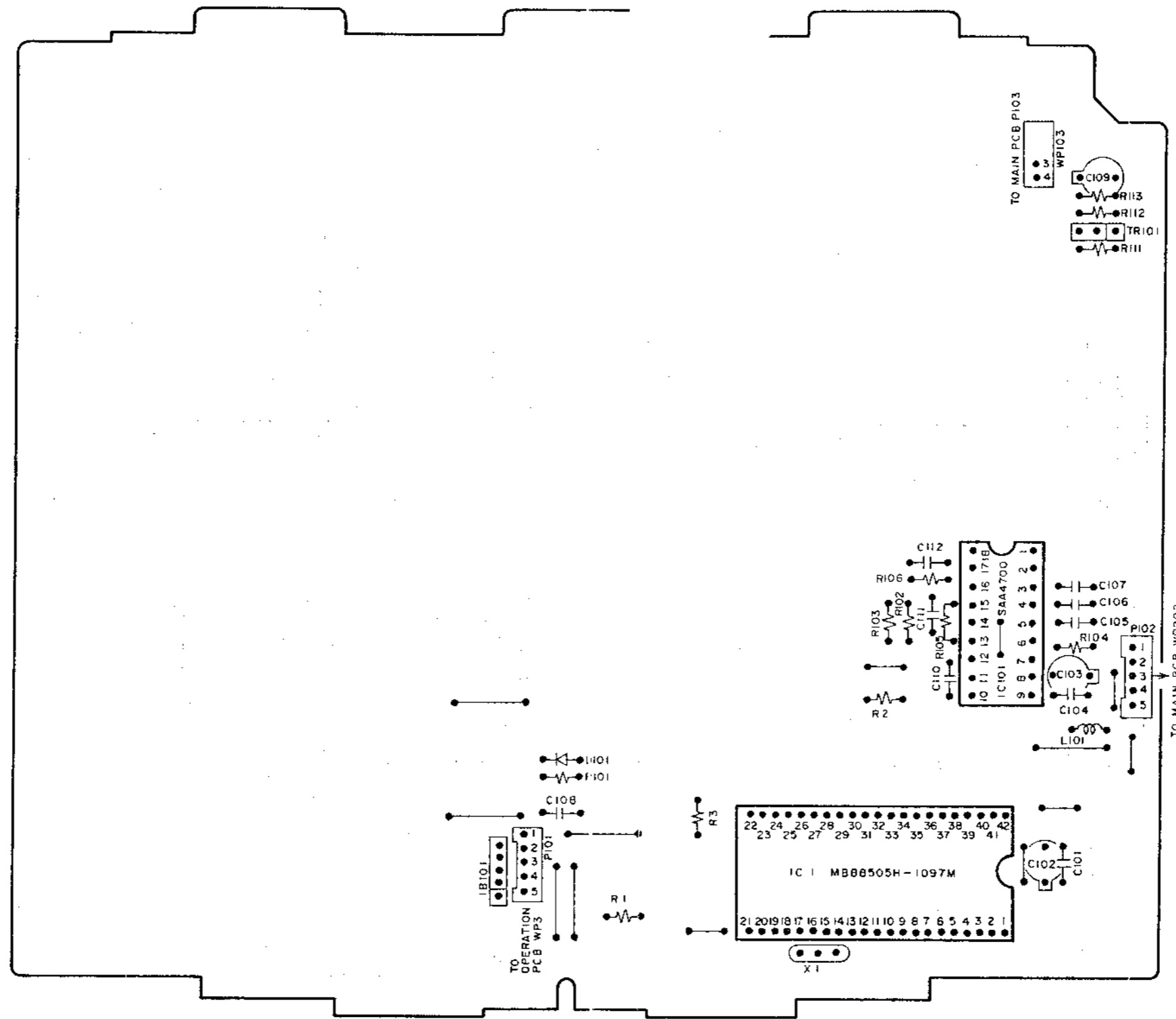
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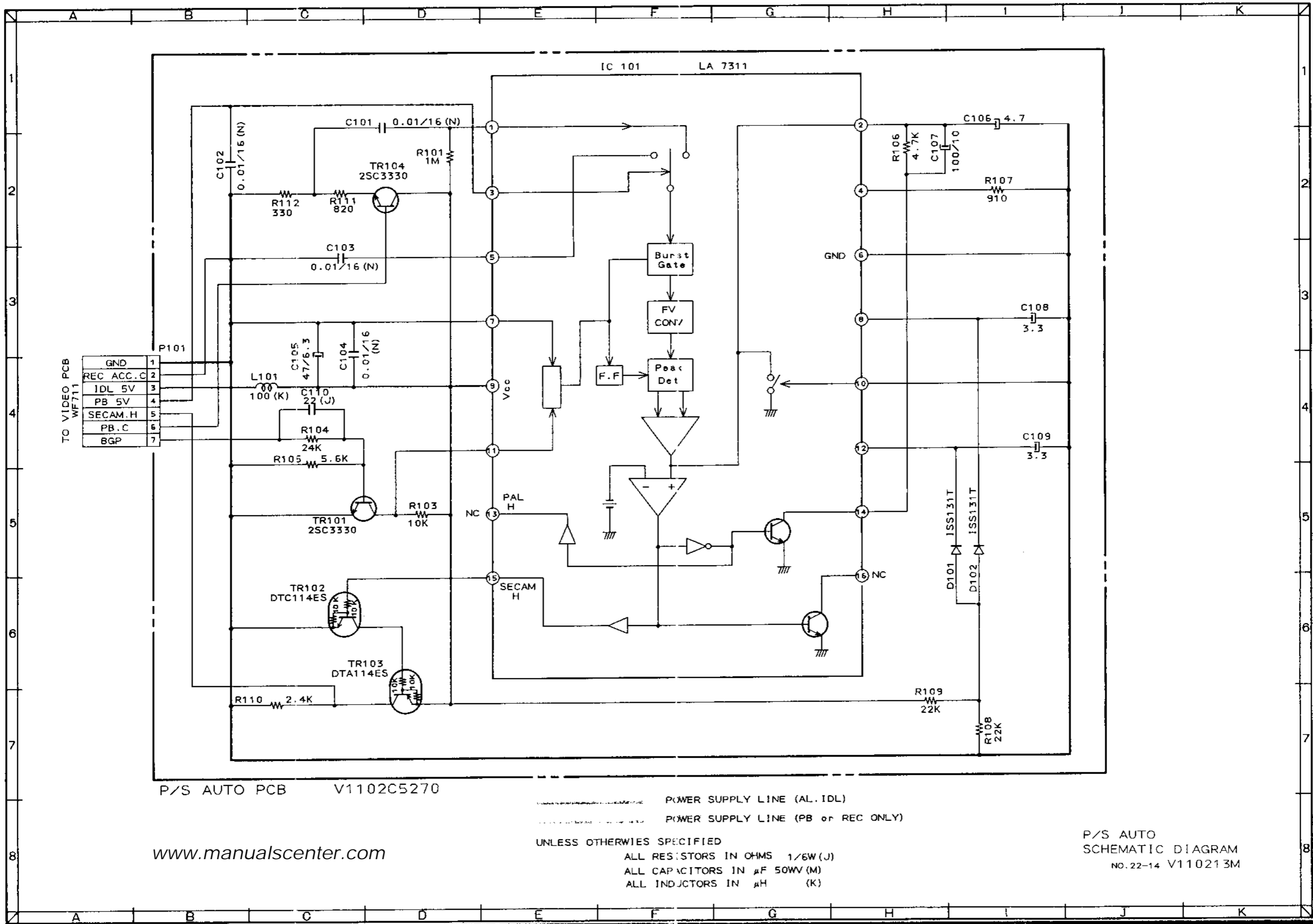
NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/6W(J)
 ALL CAPACITORS IN μF 50WV(M)
 ALL INDUCTORS IN μH(K)

VPS
 SCHEMATIC DIAGRAM
 NO.22-13 V110513F



VPS PCB VII0285090

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5-3. A/C HEAD POSITION ADJUSTMENT

5-3-1. Azimuth adjustment

- 1) Connect an AC volt meter or an oscilloscope to the AUDIO OUT terminal on the rear panel.
- 2) Play back the reference tape TF-530RFS (AT-751775).
- 3) Adjust the (b) screw to obtain the maximum audio output.

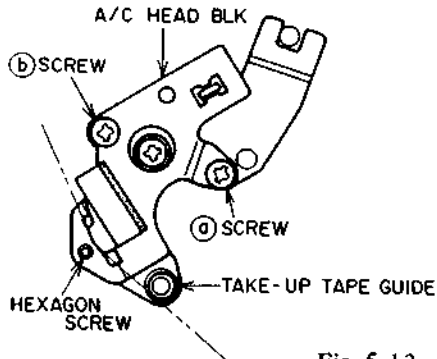


Fig. 5-13

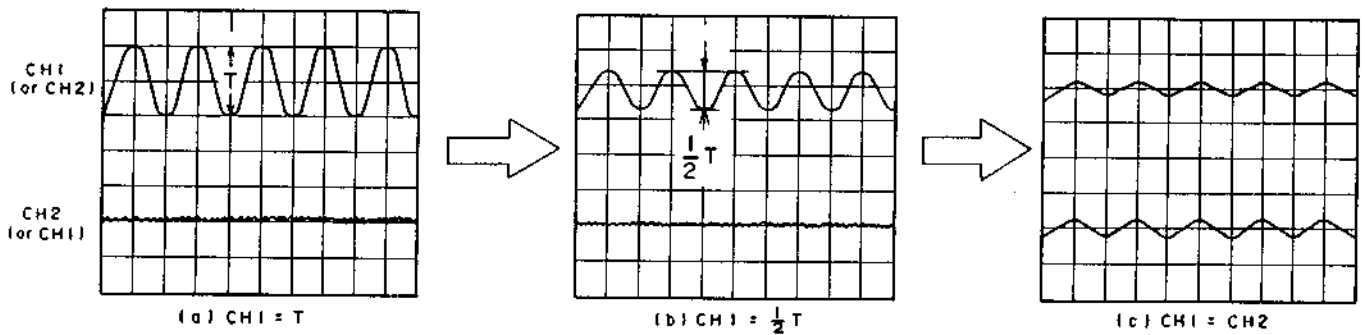


Fig. 5-14

5-3-3. Phase adjustment

- 1) Connect an oscilloscope to TP606 (ENVE) on the VIDEO PCB.
- 2) Play back the reference tape TF-530RFS (AT-851775).
- 3) Press one of the TRACKING buttons on the remote control until the "X" mark can be seen in the center position of the tracking range on the TV screen as shown in Fig. 5-15.

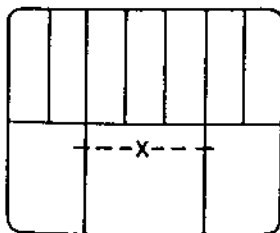


Fig. 5-15

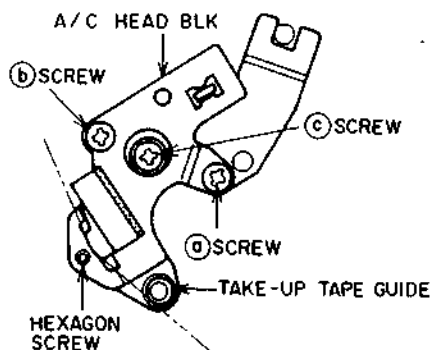


Fig. 5-16

- 4) Loosen the (c) screw slightly so that the A/C HEAD PLATE can be moved with reasonable tightness.
- 5) Insert a sharp flat head (→) screwdriver into the A/C HEAD BASE and (a) hole as shown in Fig. 5-15.
- 6) Move the A/C HEAD BASE by moving a screwdriver in the direction of the arrow as shown in Fig. 5-15 to obtain the maximum RF output, then tighten the (c) screw.

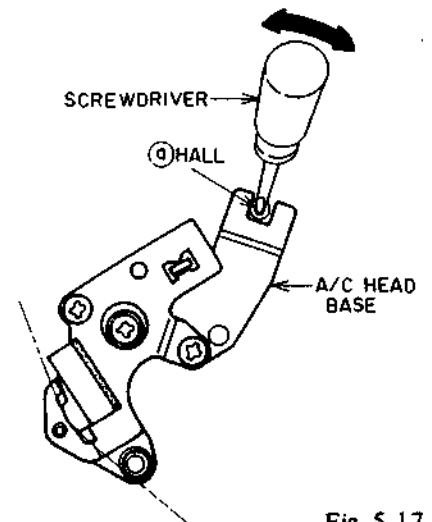


Fig. 5-17

VI. ELECTRICAL ADJUSTMENT

6-1. VIDEO, SERVO CIRCUITS

AUDIO CIRCUIT.

Precautionary items prior to adjustments

1. The color bar generator output should be 1.0 Vp-p.
2. The video output terminal should be terminated with 75 ohms (connect dummy load or 75 ohms input TV).

Required following test tapes.

| Test tape | Parts No. |
|-----------|-----------|
| TF-527BL | AT-711880 |
| TF-530RES | AT-751775 |
| TF-532CBS | AT-751360 |

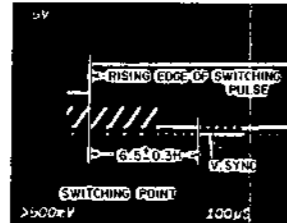
STEP ADJUSTMENT ITEM

1. MODE and INPUT SIGNAL/TEST TAPE
2. TEST POINT and ADJ part
3. RESULT & REMARKS

ADJ. part
Test point

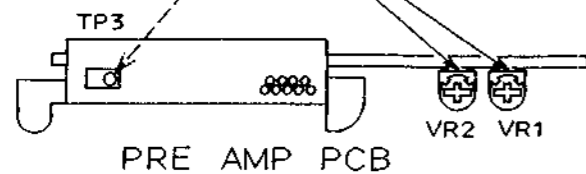
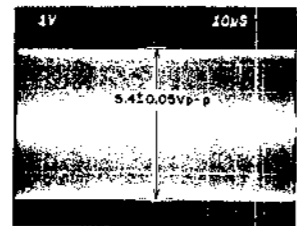
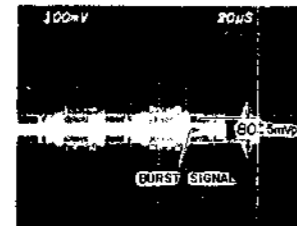
1 PB SWITCHING POINT

1. "PB", test tape TF-530RES
2. TP-SWP, VIDEO OUT & VR401 (SW. POINT)
3. * Connect an oscilloscope's CH-1 to TP-SWP for triggering and CH-2 to VIDEO OUT
- * Adjust VR401 so that the switching point is positioned 6.5 ± 0.3 H from the V-SYNC left edge as shown.



7 VIDEO REC CURRENT

1. "REC", PAL color bar signal
2. TP3(REC.CURR), JW149(C.SYNC) & VR1(Y), VR2(CHROMA)
3. * Connect an oscilloscope's CH-1 to TP3 (REC.CURR), CH-2 to JW149(C.SYNC) for triggering and ground to PRE AMP P.C.B.
- * Turn the VR1(Y) fully counter-clockwise.
- * Adjust VR2(CHROMA) so that the chroma REC current becomes 80 ± 5 mVp-p at burst signal area.
- * Disconnect the input signal, then adjust VR1(Y) so that Y REC current becomes 5.4 ± 0.05 Vp-p.



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3 AUDIO REC BIAS

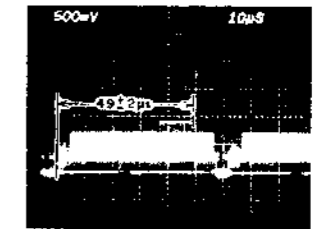
1. "REC" (no signal input)
2. P306 @ pin, @ pin & VR302
3. * Connect an AC voltmeter to P306 @ pin (GND side) and @ pin
- * Adjust VR302 so that the reading on the AC voltmeter becomes 2.4 ± 0.1 mV.

2 AUDIO PB LEVEL

1. "PB", test tape TF-527BL
2. AUDIO OUT & VR301
3. * Connect AC voltmeter to AUDIO OUT
- * -4 ± 1 dBs

10 CHARACTER POSITION

1. "E-E" (stop mode), (No signal input)
2. VIDEO OUT, TV screen & VR101(IMS)
3. * Press "DISPLAY" button once on the remote control to display elapsed tape counter.
- * Connect an oscilloscope to VIDEO OUT
- * Adjust VR101(IMS) so that right end of the IMS signal becomes 49 ± 2 µs from the H-SYNC as shown.

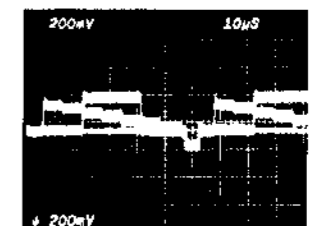


0H00m00s

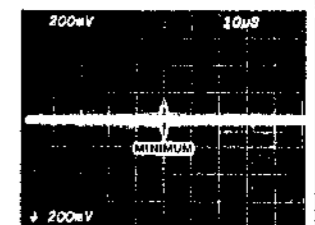
ON THE SCREEN

8 CCD

1. "PB", test tape TF-532CBS
2. TP601(CCD), TP602(CCD) & VR601 (CCD LEVEL)
3. * Set an oscilloscope to "ADD" mode and CH-2's polarity to "INVERTED".
- * Connect CH-1 to TP601(CCD) and CH-2 to TP602(CCD).
- * Adjust VR601 so that waveform level on the oscilloscope becomes minimum.



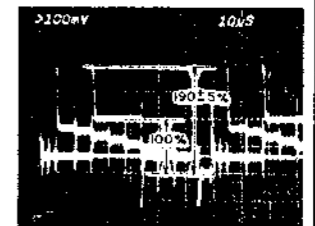
NO GOOD



GOOD

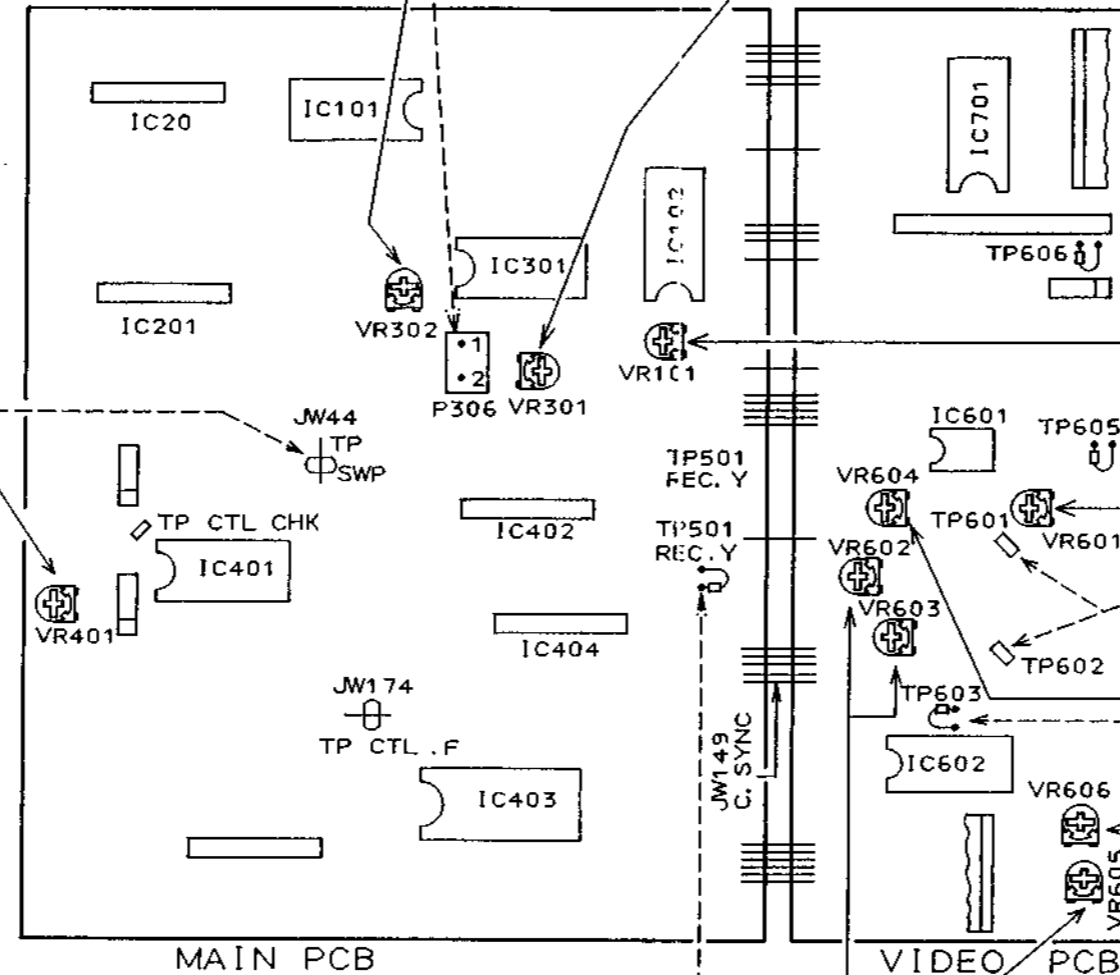
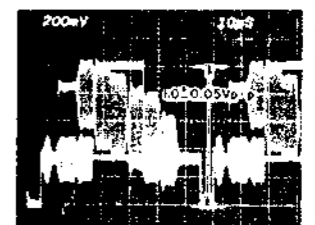
5 WHITE CLIP

1. "E-E" (stop mode), PAL color bar signal
2. TP603(W.CLIP) & VR604(W.CLIP)
3. * Connect an oscilloscope to TP603(W. CLIP)
- * Adjust VR604(W.CLIP) so that white clip level becomes 190 ± 5 % as shown.



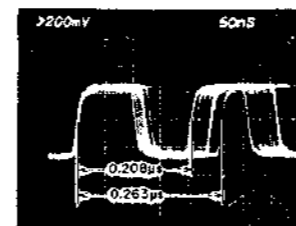
9 VIDEO PB LEVEL

1. "REC"- "PB", PAL color bar signal
2. VIDEO OUT & VR606(PB LEVEL)
3. * Connect an oscilloscope to VIDEO OUT
- * Make some recording on the tape then play it back
- * Adjust VR606 so that PB level becomes 1.0 ± 0.05 Vp-p



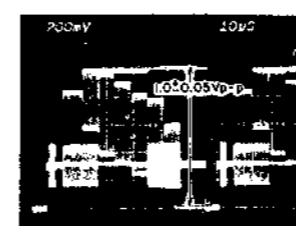
6 CARRIER SET & DEVIATION

1. "REC", PAL color bar signal
2. TP501(REC.Y) & VR603(CARRIER), VR602(DEVIATION)
3. * Connect an oscilloscope to TP501 (REC.Y)
- * VR603(CARRIER), 0.263 µs (3.8 MHz)
- * VR602(DEVIATION), 0.208 µs (4.8 MHz)



4 VIDEO E-E LEVEL

1. "E-E" (stop mode), PAL color bar signal
2. VIDEO OUT & VR605(E-E LEVEL)
3. * Connect an oscilloscope to VIDEO OUT.
- * 1.0 ± 0.05 Vp-p



6-2.

Precautionary items prior to adjustments
 1. All adjustment should be performed without DOLBY (DOLBY OFF).
 2. Unless otherwise specified, set AUDIO SIGNAL GENERATOR to 1 kHz.

Required following test tapes.

| Test tape | Parts No. |
|-----------|-----------|
| TF-527BL | AT-711880 |

| STEP | ADJUSTMENT ITEM |
|------|---------------------------------|
| 1. | MODE and INPUT SIGNAL/TEST TAPE |
| 2. | TEST POINT and ADJ part |
| 3. | RESULT & REMARKS |

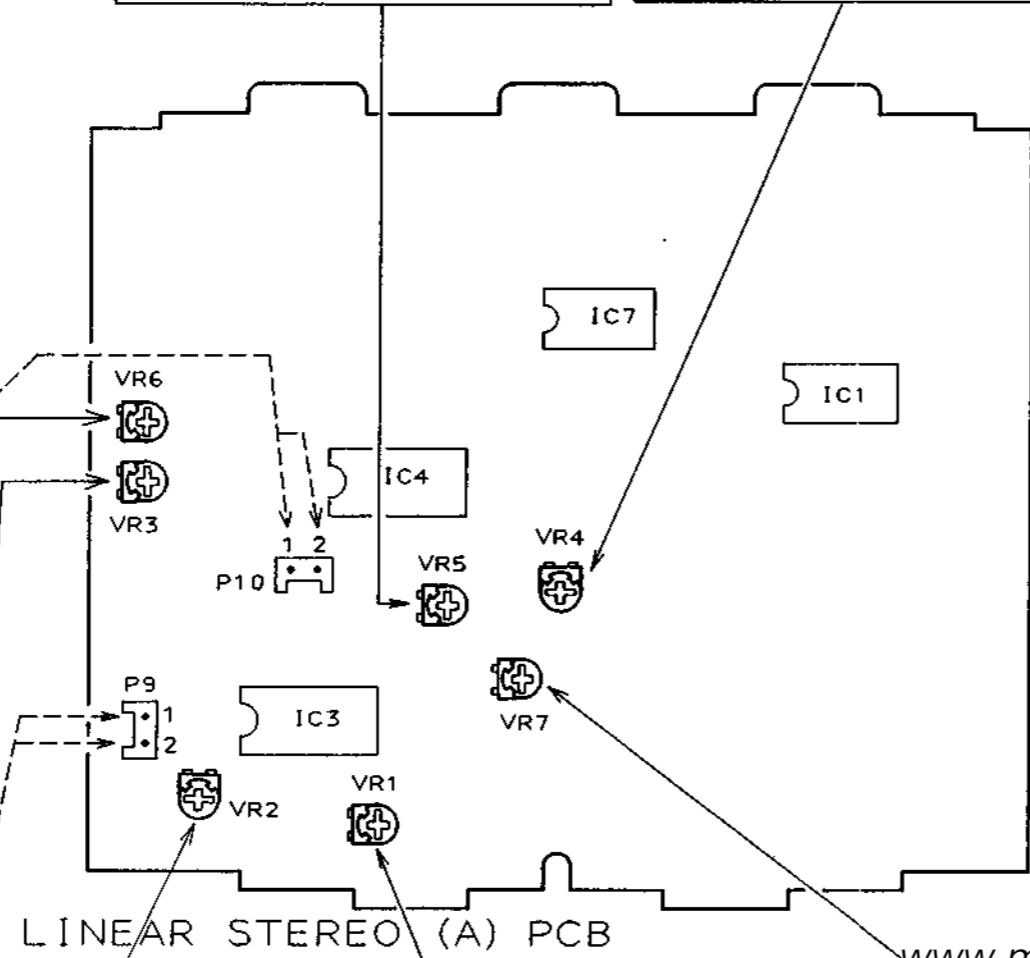
5 L-CH REC BIAS
 1. "REC", no signal input
 2. P10(TP-BIAS) ① pin, ② pin & VR6(L-CH REC BIAS)
 3. * Connect AC voltmeter to P10 ① pin (ground side) and ② pin.
 * Adjust VR6(L-CH REC BIAS) so that reading on the AC voltmeter becomes 4.2 ± 0.1 mV.
 * Make some recording (Input -26 dBs 1 kHz and 10 kHz alternately) then play it back. Check frequency response whether it is within ± 3 dB or not.
 If the comparison of the 10 kHz level is over than $+3$ dB, readjust VR6 so that reading is 4.4 mV.
 If 10 kHz level is lower than -3 dB, readjust VR6 so that reading is 4.0 mV.

6 R-CH REC BIAS
 1. "REC", no signal input
 2. P9(TP-BIAS) ① pin, ② pin & VR3(R-CH REC BIAS)
 3. * Connect AC voltmeter to P9 ① pin (ground side) and ② pin.
 * Adjust VR3(R-CH REC BIAS) so that reading on the AC voltmeter becomes 4.4 ± 0.1 mV.
 * Check frequency response in the same manner as 5.(L-CH REC BIAS).
 * If the result is not satisfactory, readjust VR3 so that the reading is 4.6 mV or 4.2 mV.

4 R-CH PB LEVEL
 1. "PB", test tape TF-527BL
 2. R-CH AUDIO OUT & VR2(R-CH PB LEVEL)
 3. * Connect an AC voltmeter to R-CH AUDIO OUT.
 * Adjust VR2(R-CH PB LEVEL) so that the output level becomes -5.0 ± 0.1 dBs.

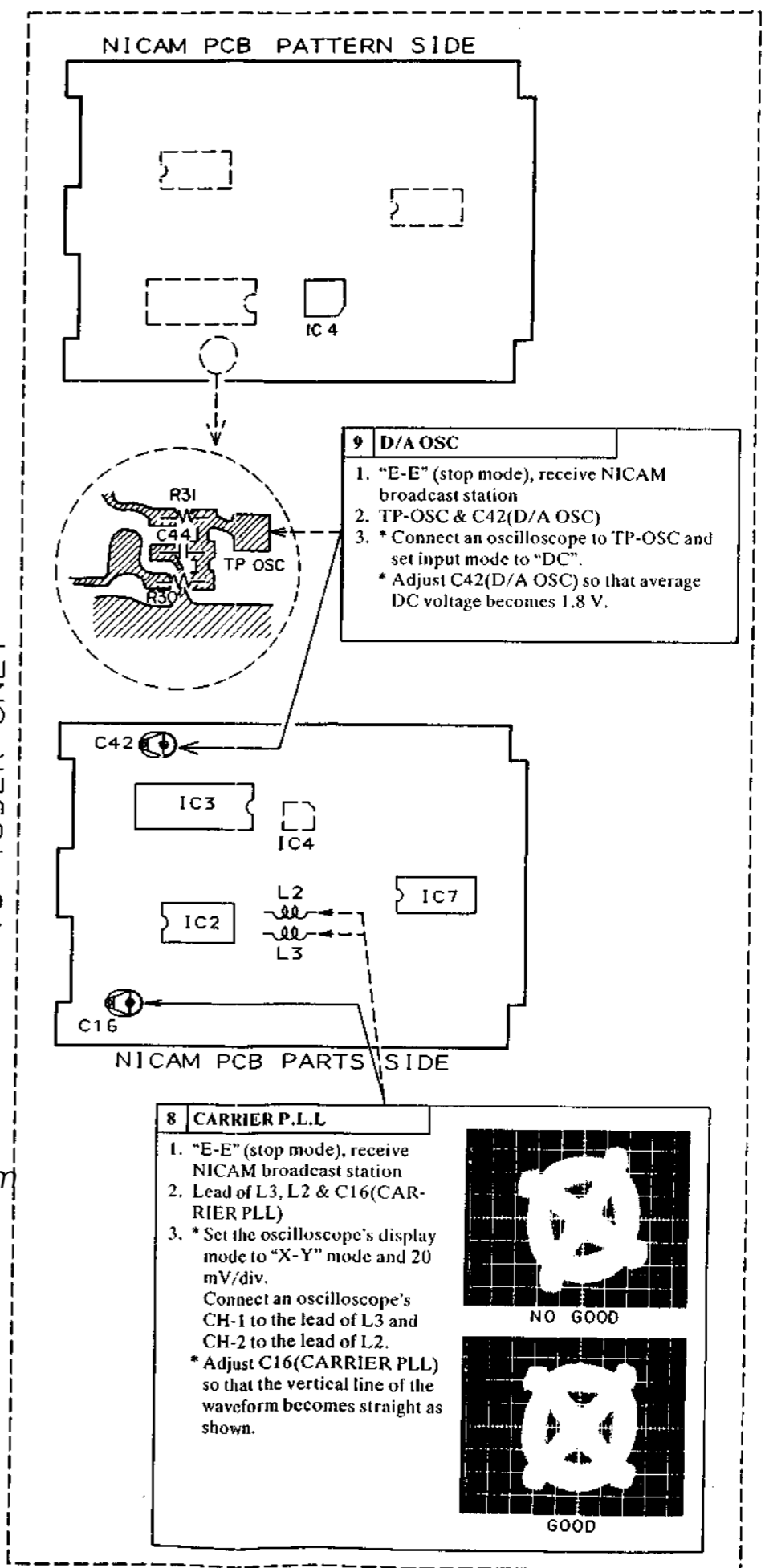
3 L-CH PB LEVEL
 1. "PB", test tape TF-527BL
 2. L-CH AUDIO OUT & VR5(L-CH PB LEVEL)
 3. * Connect an AC voltmeter to L-CH AUDIO OUT.
 * Adjust VR5(L-CH PB LEVEL) so that the output level becomes -5.0 ± 0.1 dBs.

1 L-CH EE LEVEL
 1. "E-E"(stop mode), AUDIO SIGNAL GENERATOR(-6 dBs 1 kHz)
 2. L-CH AUDIO OUT & VR4(L-CH EE LEVEL)
 3. * Adjust an AUDIO SIGNAL GENERATOR's output to -6 dBs (0 dBs = 0.775 V).
 Then connect the AUDIO SIGNAL GENERATOR to L-CH AUDIO IN terminal.
 * Connect an AC voltmeter to L-CH AUDIO OUT.
 * Adjust VR4 (L-CH EE LEVEL) so that the output level of L-CH becomes -6 ± 0.1 dBs.



2 R-CH EE LEVEL
 1. "E-E"(stop mode), AUDIO SIGNAL GENERATOR(-6 dBs 1 kHz)
 2. R-CH AUDIO OUT & VR1(R-CH EE LEVEL)
 3. * Connect an AUDIO SIGNAL GENERATOR to R-CH AUDIO IN terminal (The same situation as L-CH EE LEVEL adjustment).
 * Connect an AC voltmeter to R-CH AUDIO OUT.
 * Adjust VR1 (R-CH EE LEVEL) so that the output level of R-CH becomes -6 ± 0.1 dBs.

7 R-CH REC LEVEL
 1. "REC"-PB, AUDIO SIGNAL GENERATOR (-6 dBs, 1 kHz)
 2. L-CH, R-CH AUDIO OUT & VR7(R-CH REC LEVEL)
 3. * Connect an AUDIO SIGNAL GENERATOR (-6 dBs, 1 kHz) to L-CH and R-CH AUDIO INPUT
 * Make some recording then play it back and check the level difference between L-CH and R-CH. If the difference is higher than 2 dB, adjust VR7(R-CH REC LEVEL) so that R-CH level is ± 2 dB of L-CH PB(REC-PB)level.



V.II PARTS LIST

ATTENTION

- When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
- Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
- Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

- This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
- The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
- Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
- How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

| REF. NO. | PART NO. | DESCRIPTION |
|----------|---------------|--------------------|
| 1 | BH-T2023A320A | HEAD BASE BLOCK |
| 2 | HP-H2206A010A | HEAD R/P PR4-8FU C |
| 3 | ZS-477876 | PAN20X03STL CMT |
| 4 | ZS-536488 | BID20X08STL CMT |
| 5 | ZG-402895 | SP CS ANGLE ADJUST |

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

| REF. NO. | PART NO. | DESCRIPTION |
|----------|-----------|------------------------------|
| IC1 | EI-324536 | IC HD14049BP |
| IC2 | EI-336801 | IC MB8841-564M |
| C1A | EC-338399 | C MMY V 223M 250AC [U,E,B,S] |
| C1B | EC-350949 | C MMY V 223M 250DC [J] |
| C1C | EC-338397 | C MMY V 223M 125AC [C,A] |
| X1 | EI-318384 | OSC X'TAL NC-18C |

Symbols for primary destination

[A]: AAL (U.S.A) [S]: SAA (Australia)
 [B]: BEAB (England) [U]: U/T (Universa Area)
 [C]: CSA (Canada) Area)
 [E]: CEE (Europe) [V]: VDE (W. Germany)
 [J]: JPN (Japan) [Y]: Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

- When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

Δ(*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

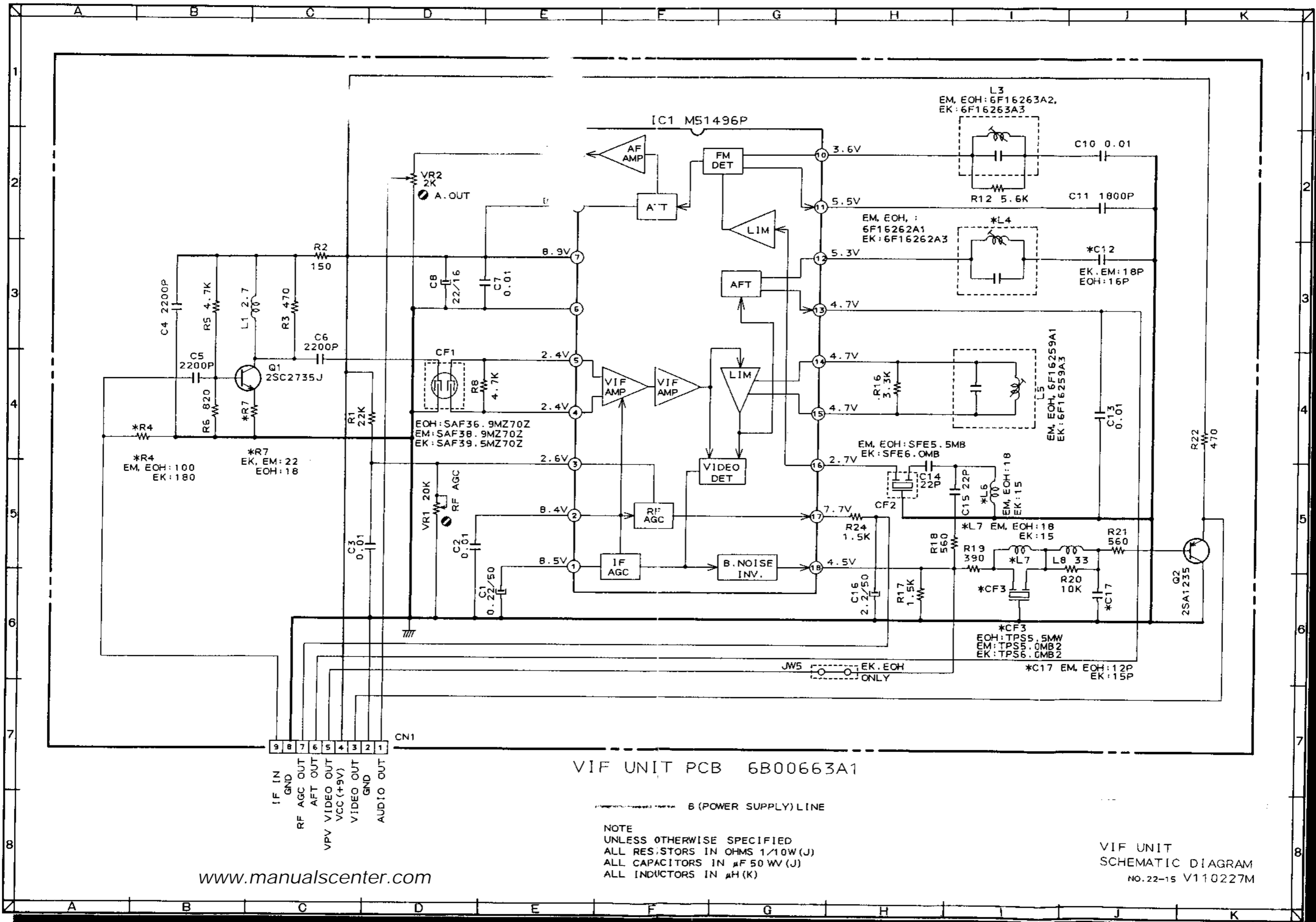
Δ(*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

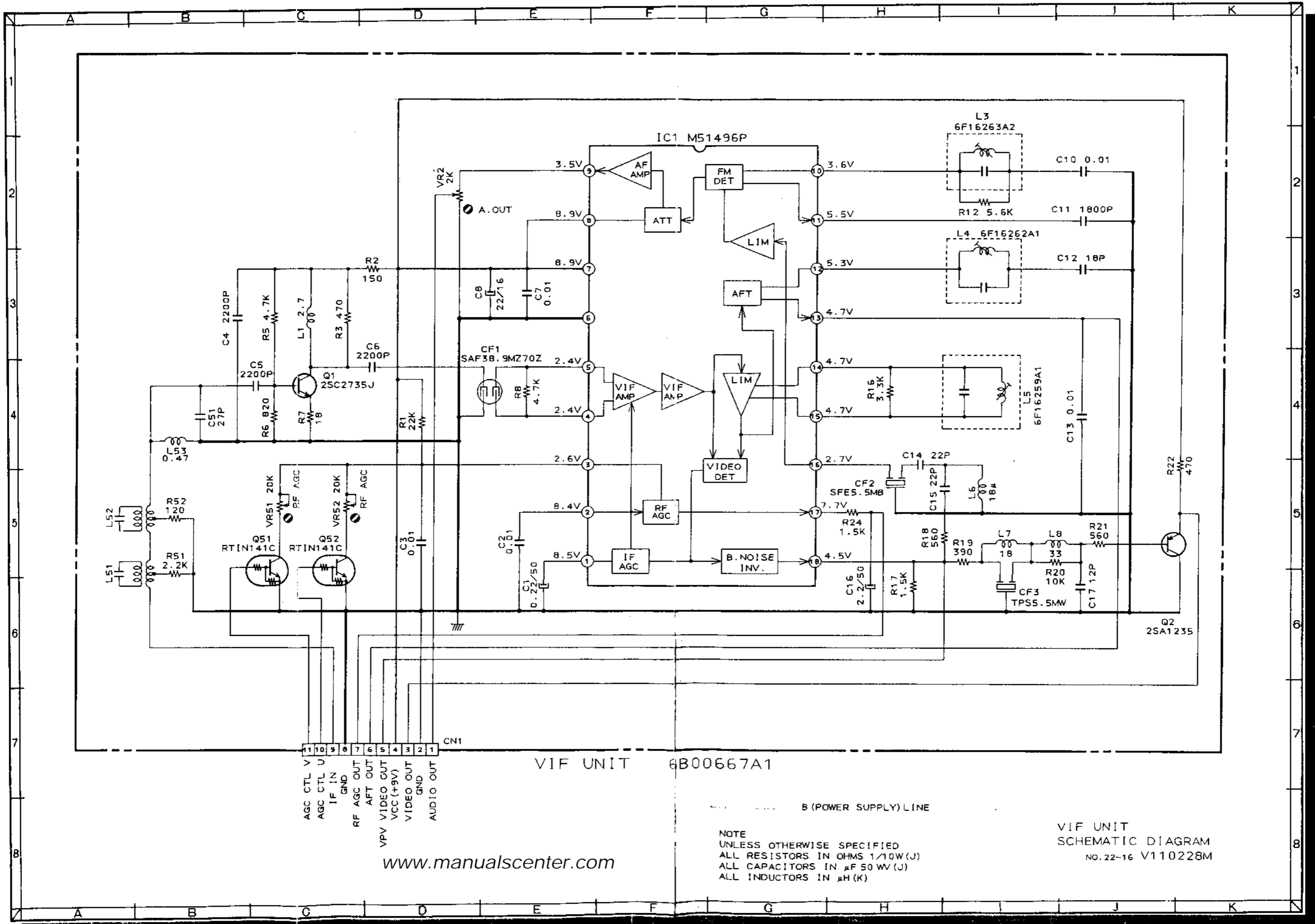
We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|---------------|----------------------------------------|----------|---------------|----------------------------------------|
| | BB-V1102A020A | MECHA DECK BLK 425EA [EOH-E,EOG,EM-E] | 61 | ET-370310 | TR DTC144TS |
| | BB-V1102A020C | MECHA DECK BLK 427EK [EK-B] | 62 | ET-361490 | TR PHOTO PN268 R,S [PTR1] |
| 2 | BL-V1102A140A | ARM LOADING BLK 425EA | 63 | ET-390010J | TR PHOTO PT4800 [PTR2] |
| 3 | BL-387458J1 | CAPSTAN BRAKE PART | 64 | ET-390009J | TR PHOTO PT493F [PTR4] |
| 4 | BL-387501J | HOLDER PINCH PART | 65 | ET-353899 | TR 2SA1317 S,T,U |
| 5 | BL-V1102A050A | TENSION ARM BLK 425EA | 66 | ET-366365 | TR 2SB1185 E,F |
| 6 | BM-386236J | MOTOR DFX-67B3VWA1 | 67 | ET-356817 | TR 2SB891 Q,R |
| 7 | BM-387503J | MOTOR PART | 68 | ET-302502 | TR 2SC2001 K |
| 8 | BM-M3225A020A | PC MOTOR BLK SM-250 | 69 | *ET-389415J | TR 2SC3169 |
| 9 | *BT-389239J | TRANS POW V1102 EK [EK-B] | 70 | ET-360137 | TR 2SC3330 U,V F05 |
| 10 | *BT-391109J | TRANS POW V1105 EO [EOH-E,EOG] | 71 | ET-380685J | TR 2SD1761 E,F,G |
| 11 | *BT-389240J | TRANS POW V1105-EM | 72 | ET-373025 | TR 2SD1944 J1,J2,K |
| 12 | BV-V1102A150A | CASSETTE LOAD BLK 425EA | 73 | ET-391025J | TR 2SD2012 |
| 13 | BV-V1102A070A | LEADER S BLK 425EA | 74 | ET-390826J | TR.CHIP 2SD1619 T,U TC T08 |
| 14 | BV-V1102A080A | LEADER T BLK 425EA | 75 | HE-361456 | HEAD E HVFMD0015B |
| 15 | BV-V1102A410A | LOWER DRUM BLK 425EA [422/425/427/485] | 76 | HR-390015J | HEAD COMBO HVMZA1045C [EOH-E,EOG,EM-E] |
| 16 | BV-V1102A410B | LOWER DRUM BLK 465EA [467] | 77 | HR-389866J | HEAD COMBO HVSMC1017A [EK-B] |
| 17 | BV-V1102A420A | UPPER DRUM BLK [422/425/427/485] | 78 | MA-387474J | BASE DRUM |
| 18 | BV-V1102A420C | UPPER DRUM BLK [467] | 79 | MB-387289J | BELT CAPSTAN |
| 19 | ED-390011J | D LED GL451 INFRARED [D1] | 80 | MI-387294J | IDLER PART |
| 20 | ED-390012J | D LED GL4800 INFRARED [D2] | 81 | ML-391745J1 | ARM DAMPER |
| 21 | ED-390686J | D LED TLN105B INFRARED | 82 | ML-387350J1 | ARM LID OPENER |
| 22 | ED-386226J | D SCHOTTKY RB100AT-32T26 40/1 | 83 | ML-387423J | ARM LOADING BRAKE |
| 23 | *ED-389296J | D SILICON BR31-B-D-80 100/3.0A | 84 | ML-387277J | ARM REVIEW PART |
| 24 | ED-380089J | D SILICON DFC15TC-FD1 200/1.5A | 85 | ML-387402J | LEVER TRIGGER |
| 25 | *ED-378455 | D SILICON DSA12TG 600/1.2A | 86 | ML-387316J | MAIN BRAKE(S) PART |
| 26 | *ED-385935J | D SILICON ERA22-04V3 T26 400/5 | 87 | ML-387318J | MAIN BRAKE(T) PART |
| 27 | ED-307572 | D SILICON H 1SS131 | 88 | ML-387321J | REVIEW BRAKE PART |
| 28 | ED-624903 | D SILICON H 1S2473 | 89 | ML-387324J | SLIDER BRAKE PART |
| 29 | *ED-511907 | D SILICON 1N4002 100/1.0A | 90 | ML-387327J | SLIDER TRIGGER |
| 30 | ED-391103J | D ZENER H HZ512B2 | 91 | MR-387406J | HOLDER THRUST WORM |
| 31 | ED-343996 | D ZENER H HZ12 B1 | 92 | MR-391968J | PULLEY TRIGGER(2) |
| 32 | ED-346618 | D ZENER H HZ15 1 | 93 | MR-387286J | ROLLER IMPEDANCE |
| 33 | ED-322046 | D ZENER H HZ18 1 | 94 | MT-390954J1 | DISK (2)PART |
| 34 | ED-346526 | D ZENER H HZ6B1L | 95 | MZ-387298J1 | DISK CLUTCH PART |
| 35 | ED-346541 | D ZENER H HZ9B2L | 96 | MZ-387331J | GEAR CAM SLIDER |
| 36 | *EF-601942 | FUSE SEMKO T 250V 630MA | 97 | MZ-387335J | GEAR EJECT |
| 37 | *EI-376794J1 | IC BA10393 | 98 | MZ-387333J | GEAR FRONT LOADING |
| 38 | *EI-368152 | IC BA707 | 99 | MZ-V1102A090A | GEAR TOGGLE (S) BLK 425EA |
| 39 | EI-387586J | IC BA7244BS | 100 | MZ-V1102A100A | GEAR TOGGLE (T) BLK 425EA |
| 40 | EI-387598J | IC BA7252S | 101 | MZ-387330J | GEAR WORM PART |
| 41 | EI-380090J | IC NJM2352D | 102 | MZ-387332J | GEAR WORM WHEEL |
| 42 | EI-390825J | IC S-8052ANB-NE T1 | | | |
| 43 | EI-376112 | IC UPD6122G | | | |
| 44 | EI-390822J | IC UPD75304G-057-3B9 SXREMA1 | | | |
| 45 | EI-390687J | OSC CE CSU455PL 455KHZ | | | |
| 46 | EI-389972J | OSC CE W/C FCR2.2MC3 2.2MHZ | | | |
| 47 | EI-368825 | OSC X'TAL MX-38T 32.768KHZ | | | |
| 48 | *EQ-389298J | RELAY POW AJV12442 1NO 100V | | | |
| 49 | *ER-392819J | R FUSE H S10 RF25SC 1/4W R10K | | | |
| 50 | *ER-392807J | R FUSE H S10 RF25SC 1/6W R12K | | | |
| 51 | *ER-391043J | R FUSE H S10 RF25SC 1/6W R47K | | | |
| 52 | *ER-391044J | R FUSE H S10 RF25SC 1/6W R68K | | | |
| 53 | ER-389875J | R OMF H S10 FS 1/2W R68J | | | |
| 54 | ES-373099 | SW LEAF MTS10110MPC1 | | | |
| 55 | ES-387465J | SW MODE SELECT MMS00070ZLBO | | | |
| 56 | ET-356336 | TR DTA114ES | | | |
| 57 | ET-360646 | TR DTA143ES | | | |
| 58 | ET-354364 | TR DTC143TS | | | |
| 59 | ET-354414 | TR DTC144ES | | | |

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10
 9
 8
 7
 6
 5
 4
 3
 2
 1
 CN1
 AGC CTL V
 AGC CTL U
 IF IN
 GND
 RF AGC OUT
 AFT OUT
 VPV VIDEO OUT
 VCC (+9V)
 VIDEO OUT
 GND
 AUDIO OUT

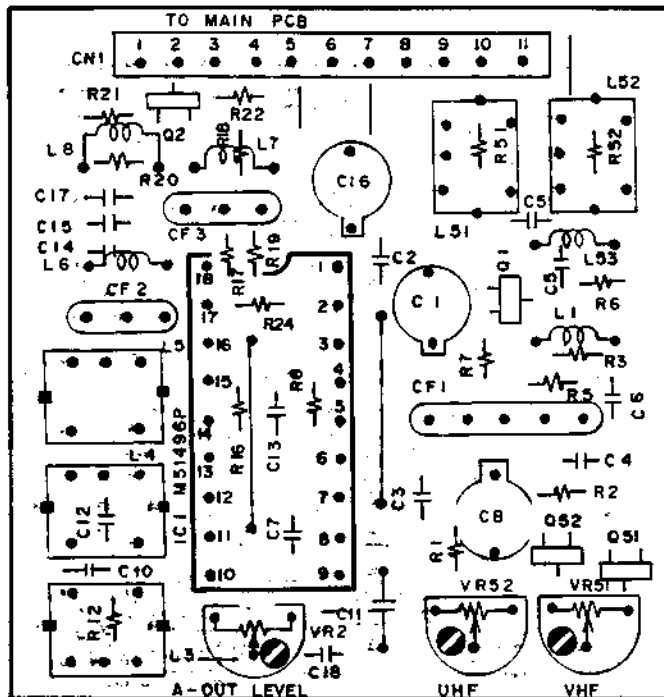
VIF UNIT 6B00667A1

B (POWER SUPPLY) LINE

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/10W(J)
 ALL CAPACITORS IN μ F 50 WV(J)
 ALL INDUCTORS IN μ H(K)

VIF UNIT
 SCHEMATIC DIAGRAM
 NO. 22-16 V110228M

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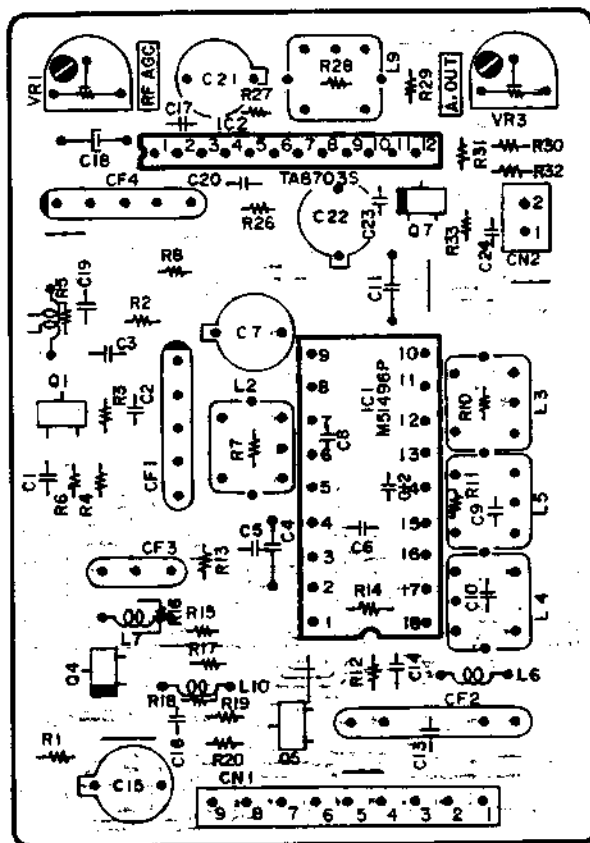


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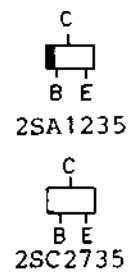
CHIP TRANSISTOR

C MF : 2SA1235F
 NI : RTINI41C
 JC : 2SC2735

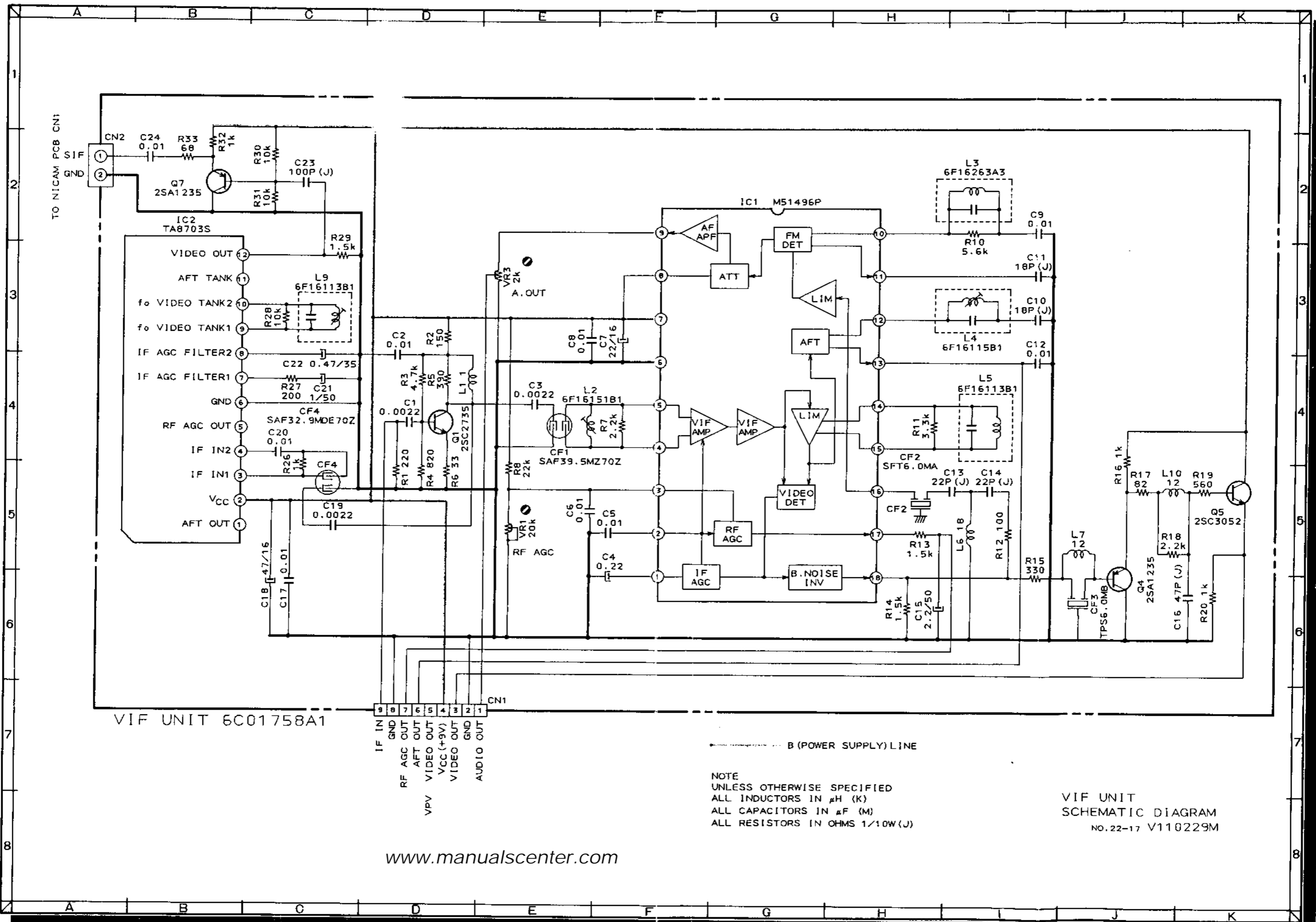




VIF UNIT(EKN) 6C01758A1



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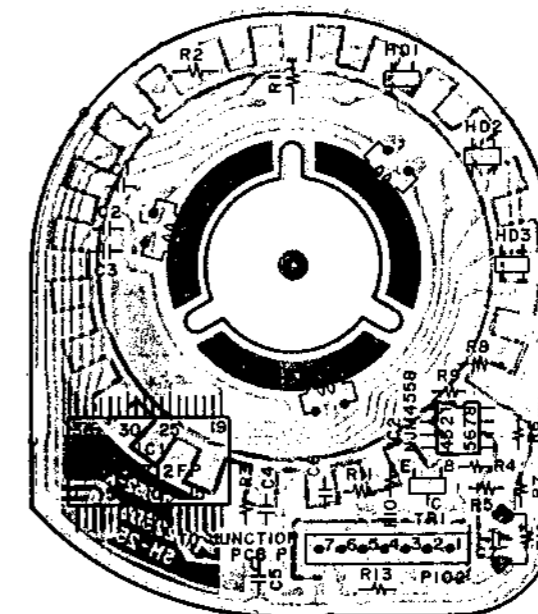
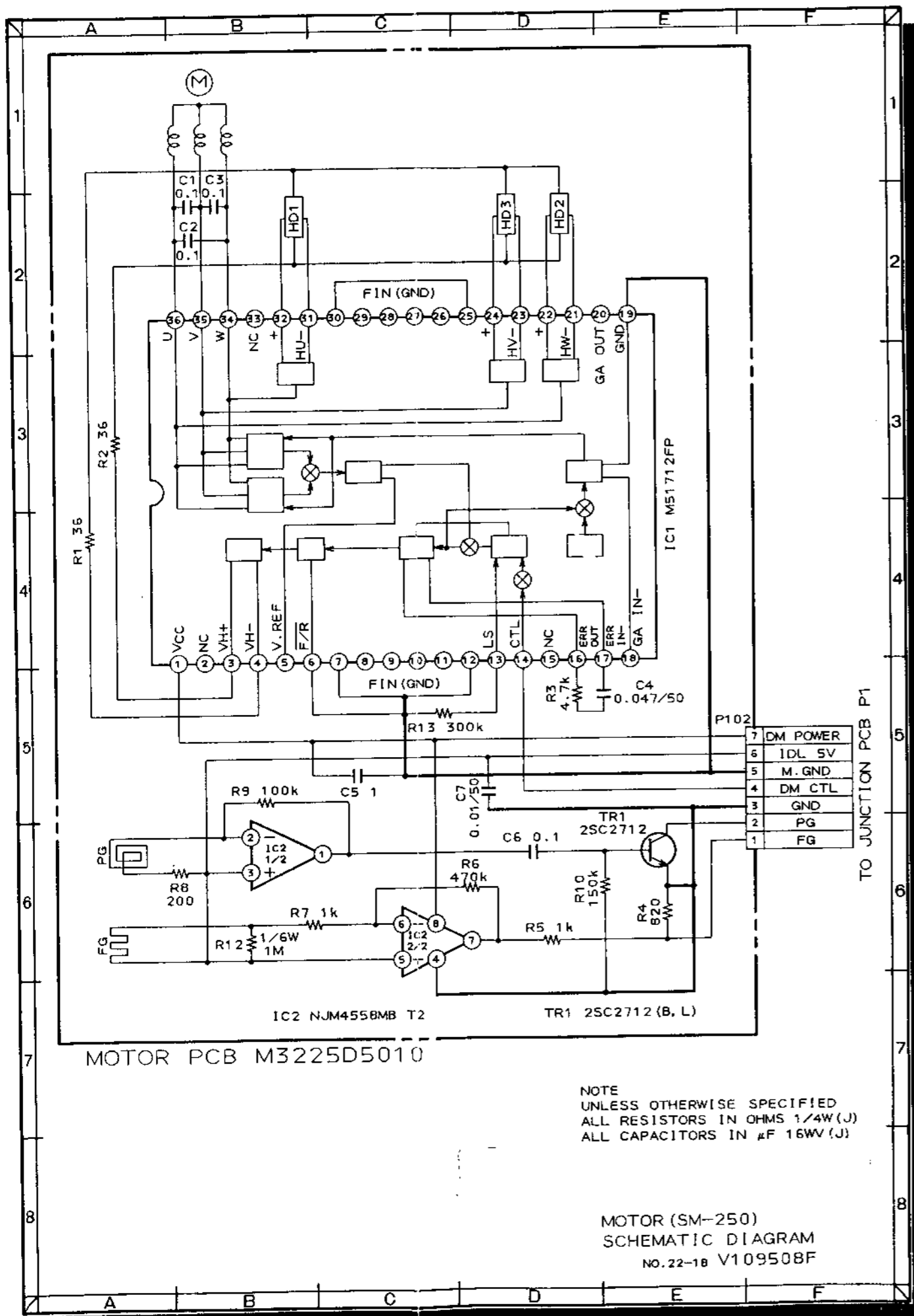
VIF UNIT 6C01758A1

9 8 7 6 5 4 3 2 1
 IF IN GND OUT
 RF AGC OUT
 AFT OUT
 VIDEO OUT
 VCC (+9V)
 VIDEO OUT
 GND
 AUDIO OUT
 VPV

----- B (POWER SUPPLY) LINE

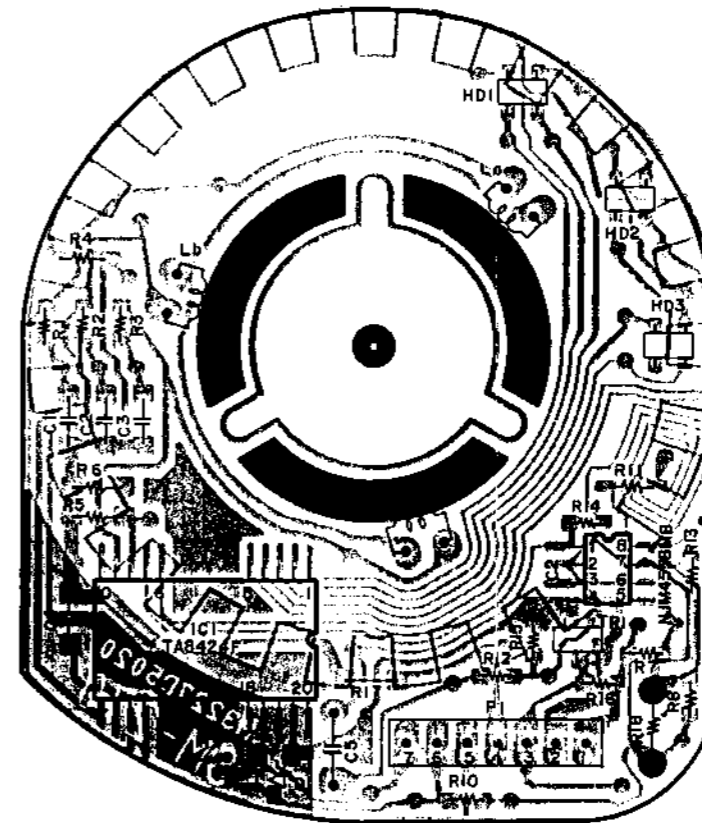
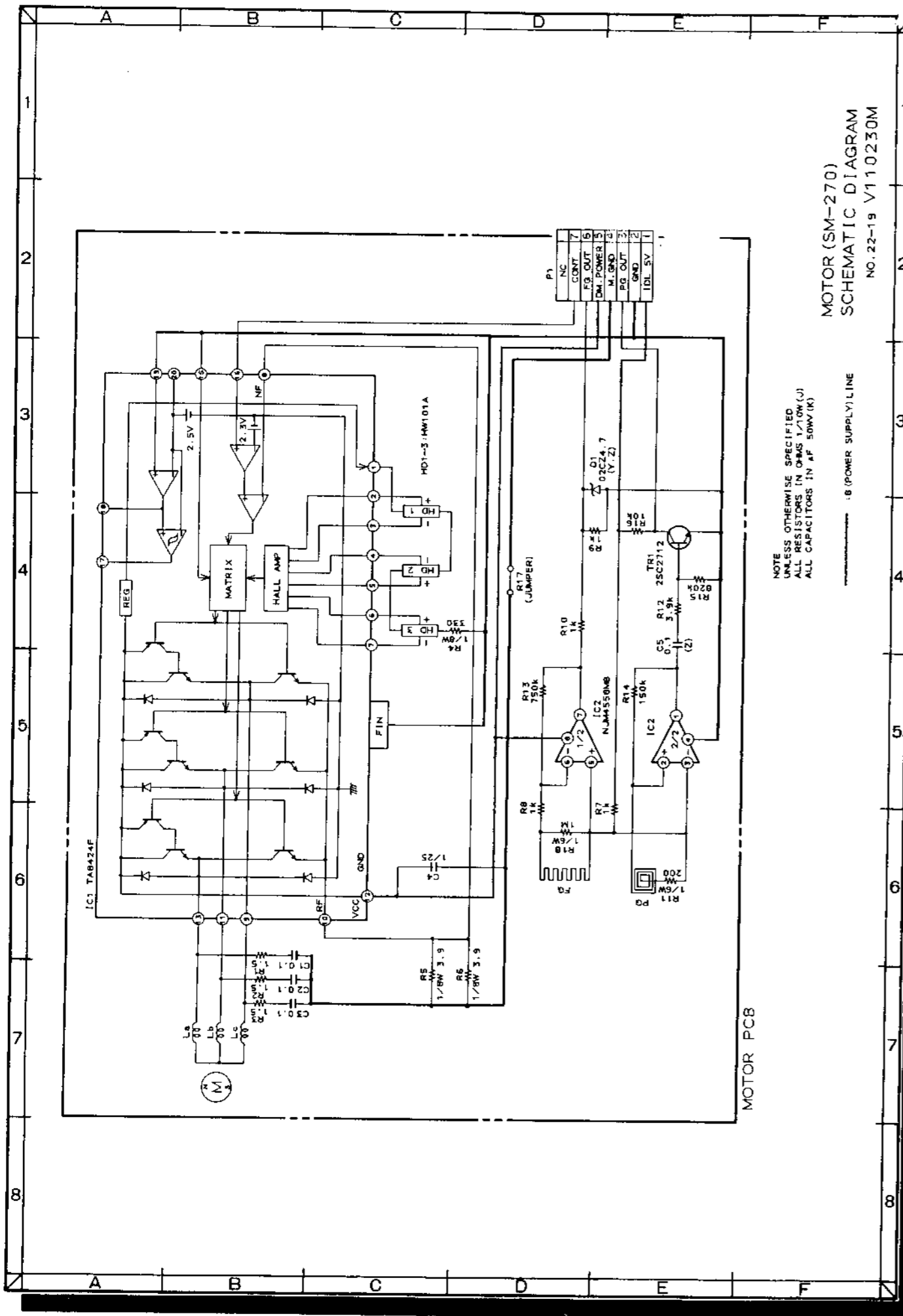
NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL INDUCTORS IN μH (K)
 ALL CAPACITORS IN μF (M)
 ALL RESISTORS IN OHMS 1/10W(J)

VIF UNIT
 SCHEMATIC DIAGRAM
 NO. 22-17 V110229M



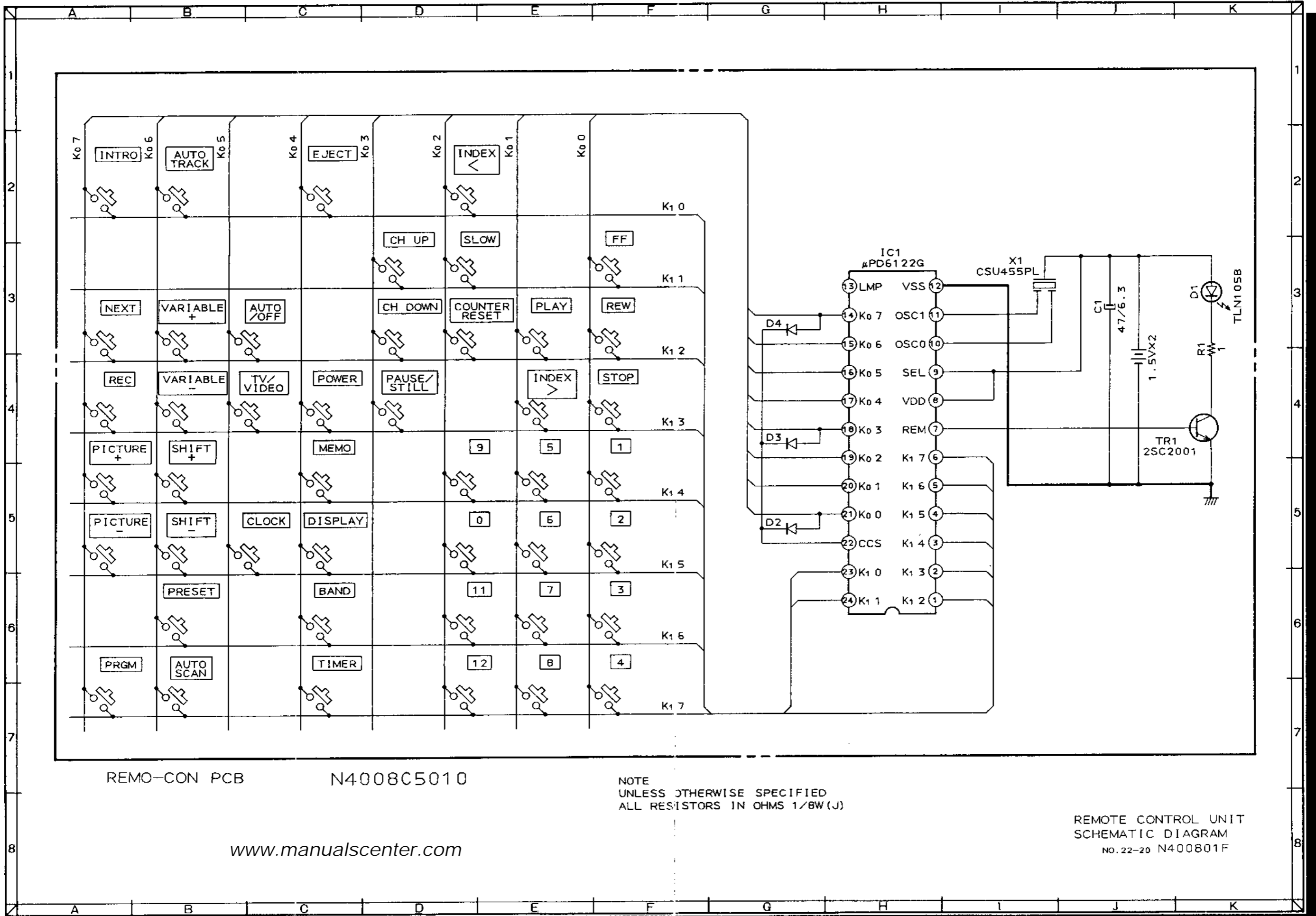
DRUM MOTOR M3225D5010
(P02)

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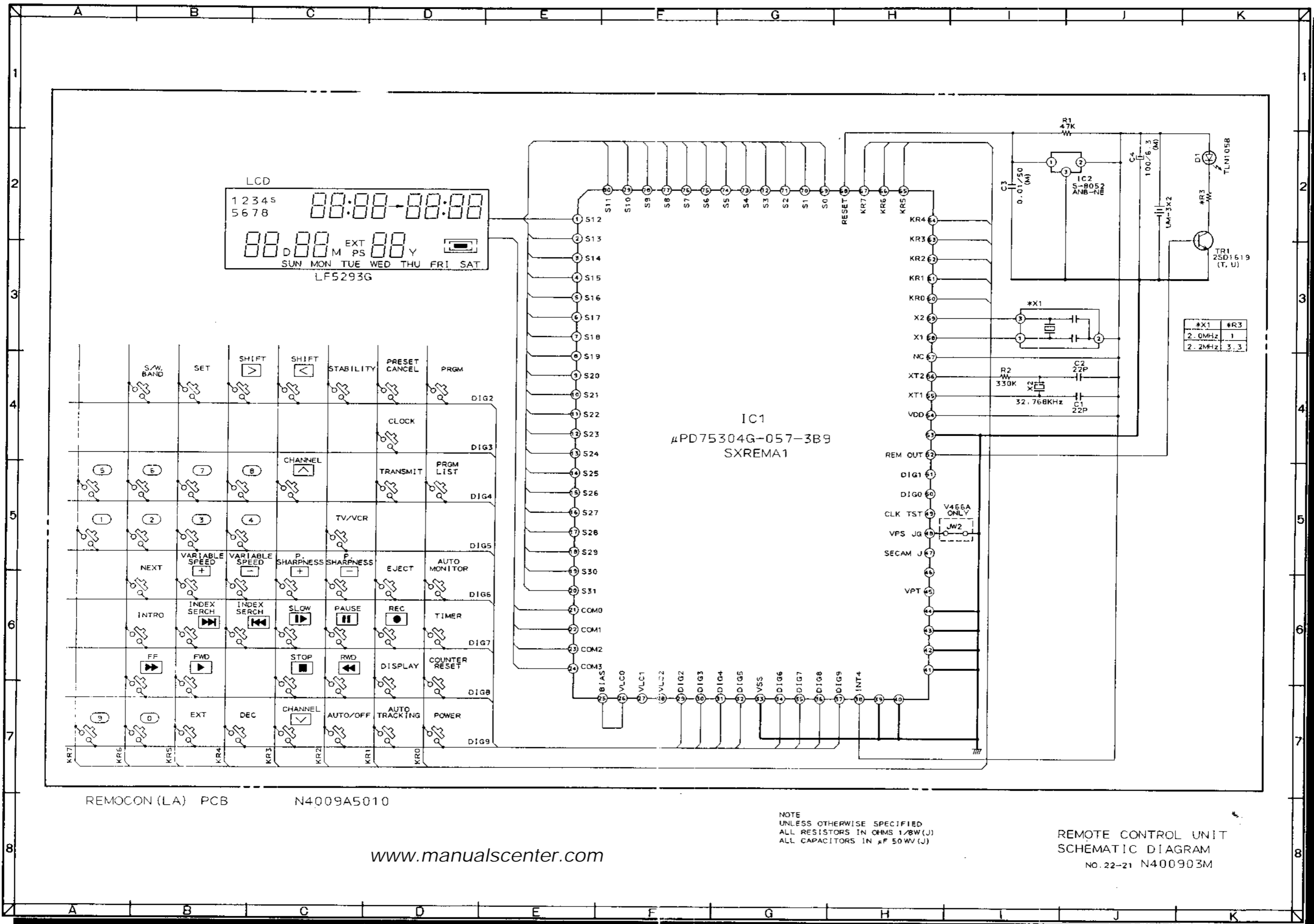


DRUM MOTOR PCB(SM-270)
M3227D5020J1

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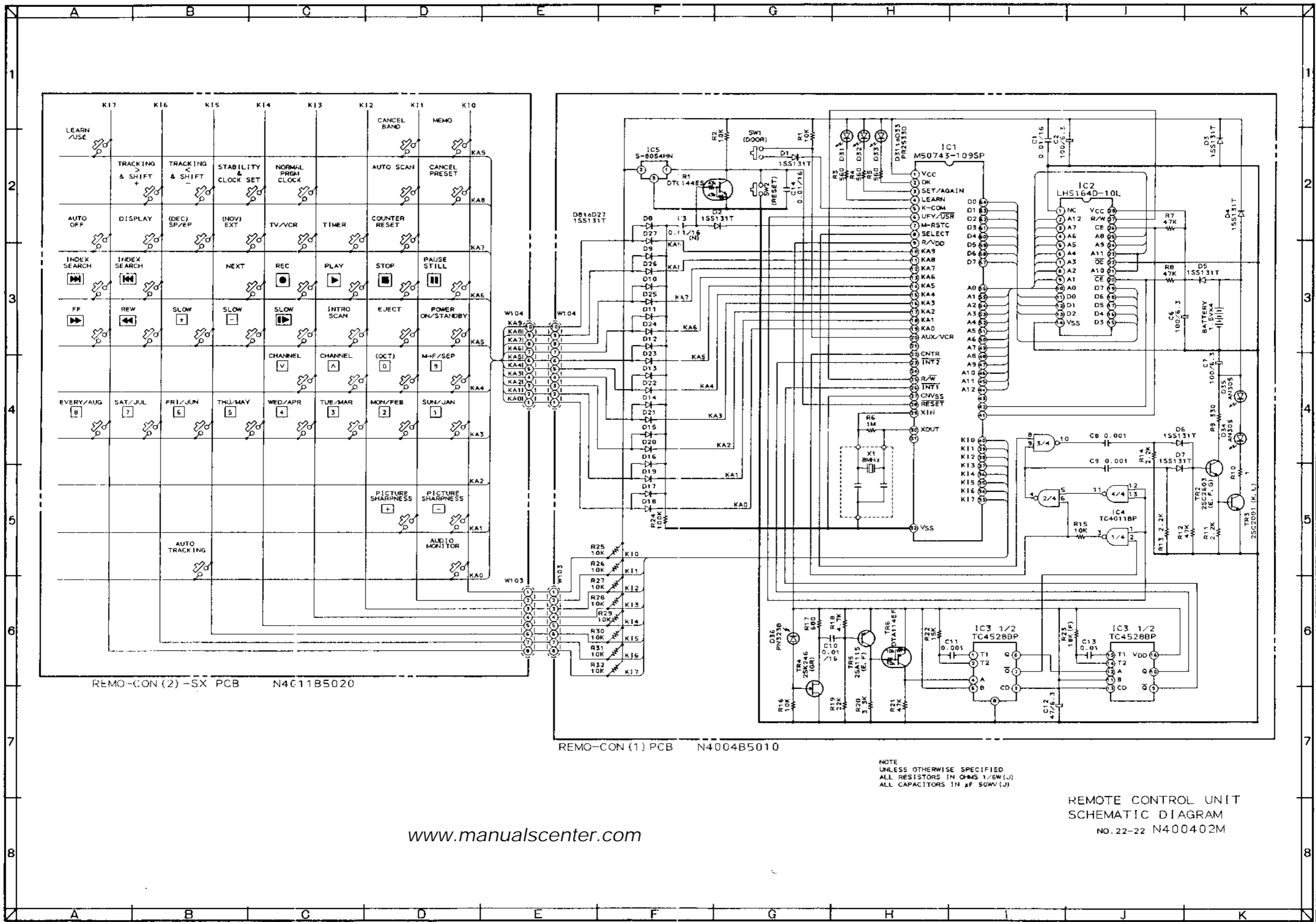


REMOCON (LA) PCB N4009A5010

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NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W(J)
ALL CAPACITORS IN μF 50WV(J)

REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO. 22-21 N400903M



NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/5W(J)
 ALL CAPACITORS IN µF 50WV(J)

REMOTE CONTROL UNIT
 SCHEMATIC DIAGRAM
 NO. 22-22 N400402M

AKAI

MODEL VS-422^{EOH}
MODEL VS-425^{EM/EOG/EOH}
MODEL VS-427^{EK}, 467^{EK}, 485^{EK}

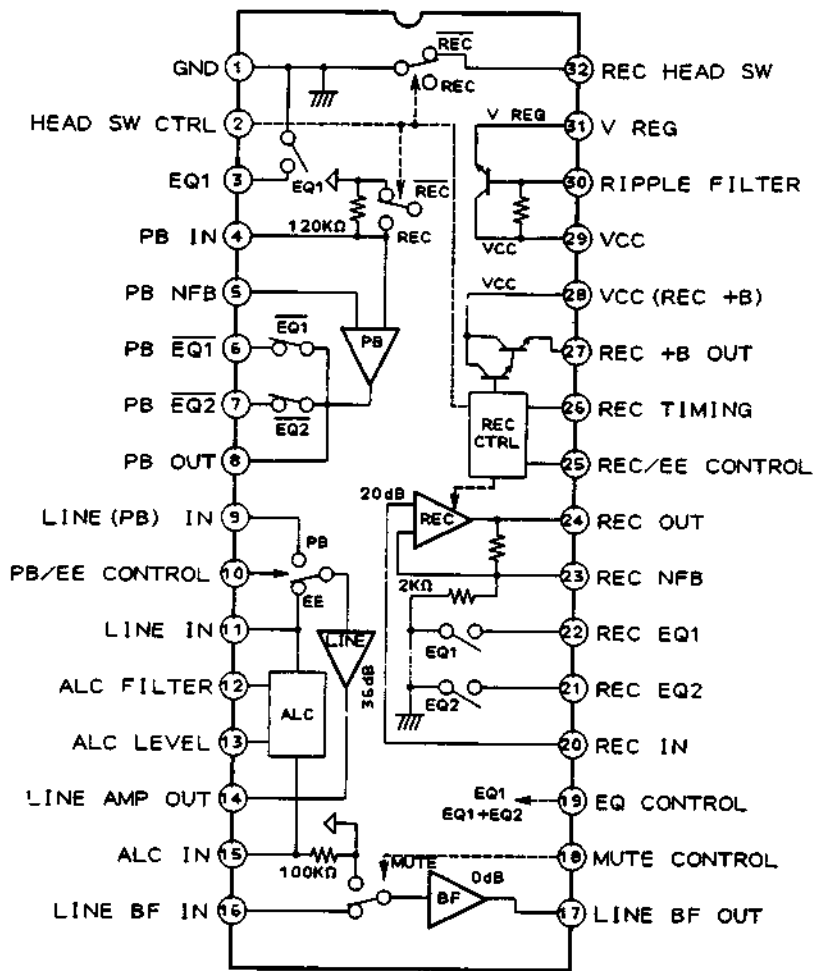
SCHEMATIC DIAGRAMS AND PC BOARDS

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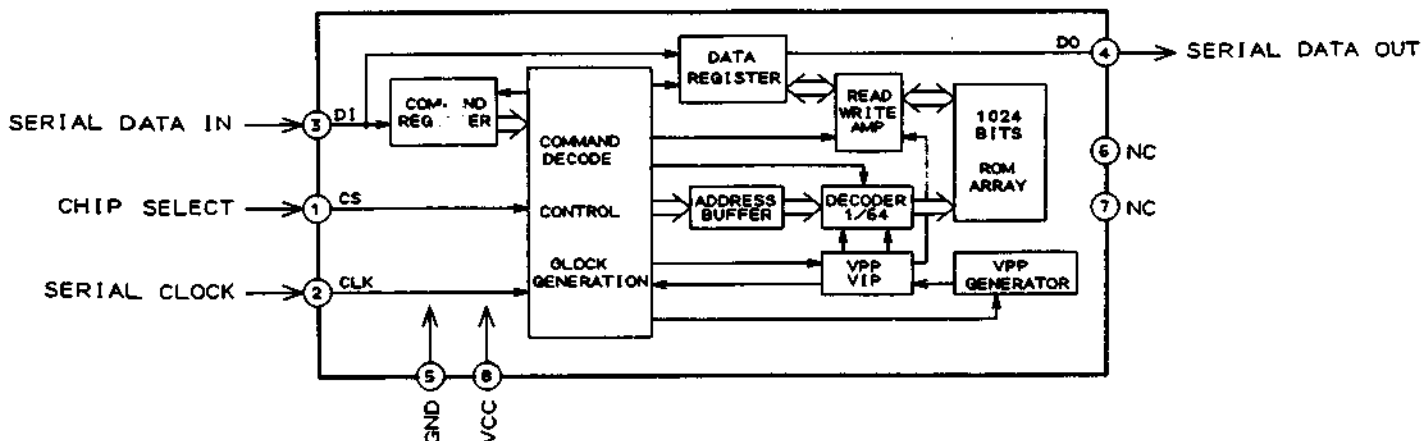
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BA7765AS (AUDIO SIGNAL REC/PB AMPLIFIER)



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BR93C46 (64x16BIT EEP ROM)



★ INFORMATION

SYMBOLS OF MODEL NAME FOR PRIMARY DESTINATION

Symbol indicates the destination of the units as listed below.

| Symbol | Classification | Principal Destination | System | |
|--------|----------------|---------------------------------------|------------|-----------|
| | | | Color | Broadcast |
| EA | S | Australia | PAL | B, G |
| ED | E | China | PAL | D |
| EDG | E | East Europe | PAL | D, K |
| EDI | E | China, Hong Kong | PAL | D, K, I |
| EG | E | Spain, Northern Europe, Other | PAL | B, G |
| | Y7 | Saudi Arabia | | |
| EK | B | U.K. | PAL | I |
| | Y1 | Hong kong | | |
| EM | E | Middle East | PAL | B, G |
| | Y7 | Saudi Arabia | | |
| EO | E | Holland, Switzerland, Northern Europe | PAL | B, G |
| | V | Italy | | |
| EOH | E | Holland, Belgium | PAL | B, G |
| | V | Italy | | |
| EOG | V | W. Germany | PAL | B, G |
| ES | E | South Africa, Ireland, Hong kong | PAL | I |
| EV | E | South-East Asia | PAL | B, G |
| | U | Middle East, South-East Asia | | |
| | Y1 | New Zealand | | |
| | Y7 | Saudi Arabia | | |
| EZ | S | New Zealand | PAL | B, G |
| EGN | E | Middle East | PAL, NTSC | B, G |
| | Y7 | Saudi Arabia | | |
| S | E | France | SECAM | L |
| SK | E | Latin America, Oceania, SECAM-OIRT | SECAM | K, K1 |
| SEG | E | France, Switzerland | SECAM, PAL | L, B, G |
| U | A | U.S.A. | NTSC | M |
| | C | Canada | | |
| UM | U | Latin America | NTSC | M |
| J | J | Japan | NTSC | M |

Quick start function

This VCR contains the quick start function.

When a video tape is inserted into this VCR, the QUICK START indicator will automatically light on the front panel. This indicates that the VCR is in the quick start mode and that any function button pressed will operate immediately. If a function button is not pressed within 5 minutes, the indicator will disappear and the VCR will be released from the quick start mode. If the play or record button is pressed after the indicator has disappeared, there will be a short time before the VCR responds.

Automatic functions

This VCR contains the following auto functions.

1. Auto power on

The VCR power is automatically turned on when the tape is inserted.

2. Auto play

If the video tape's recording defeat tab has been removed, playback will begin automatically when the tape is inserted into the VCR.

3. Auto tape reject

If a video tape with its recording defeat tab removed is loaded, the VCR will automatically eject it when the REC or TIMER button is pressed.

4. Power off eject

Even when the VCR's power is off, pressing the EJECT button will turn the power on and eject the tape. Once ejected the power will be turned off automatically.

5. Auto counter display

When the display mode is on, the tape counter will be displayed on the TV screen automatically during fast forward or rewind.

6. Auto rewind

The video tape is automatically rewound when the end of the tape is reached during the play, recording or quick finder forward mode. (Auto rewind will not function during the next mode when it has been set after the timer recording, fast forward or recording mode.)

7. Auto dimmer display

Between the hours of 23:00 and 6:00, if the VCR is not in use, the FL display is automatically dimmed to a lower light level.

Safety lock system (Remote control only)

This VCR's PLAY button can be locked to prevent access by small children.

This feature can be operated by the remote control only.

To lock: With the VCR POWER ON, press and hold the remote control's stop button for approx. 8 seconds. The safety lock indicator \rightarrow will appear on the FL display to indicate that the VCR is locked.

To unlock: Press and hold the remote control's play button for approx. 8 seconds. The safety lock indicator will flash and disappear from the display.

Multi-language display

The language of your choice can be selected for the on-screen display. You can choose any one of the following languages: English, German, Spanish, French, Italian, Dutch, Finnish or Swedish. If a language is not selected, the VCR will select English automatically.

- 1) Press the AUTO/OFF button on the remote control unit. The language list will be displayed on the TV screen.
- 2) Select the desired number with the multi-function buttons.

Variable speed playback (Remote control only)

The VARIABLE SPEED +, - buttons make playback speed increase or decrease possible with the remote control.

The tape speed can be increased up to 15 times the normal playback speed in the forward or reverse directions. In the forward direction, the speed can also be decreased to 1/12 of the normal playback speed.

Press the remote control's VARIABLE SPEED + or - button repeatedly during playback until you reach the desired speed.

During this mode, no sound will be heard.

Playback picture sharpness adjustment (Remote control only)

Playback picture sharpness adjustment is now possible with the remote control.

Press the PICTURE SHARPNESS + button repeatedly to sharpen the picture or press the - button to soften the picture.

INTRO SCAN system (Remote control only)

This VCR is capable of quickly fast forwarding (or rewinding) to the beginning of each recorded segment on a tape, briefly playing back that segment, and then fast forwarding (or rewinding) to the next segment.

This system works in combination with the control signal which is recorded at the beginning of each recorded segment.

Press the INTRO SCAN button on the remote control during the "play", "stop", "fast forward" or "rewind" mode. The VCR will immediately fast forward (or rewind) the tape to the beginning of the program and play back about the first 8 seconds. The VCR will then again fast forward (or rewind) the tape to the beginning of the next recorded segment and again play back the first 8 seconds of the program.

This operation continues until the end of the tape (or the beginning of the tape) or another mode (such as PLAY or STOP) is chosen. During the INTRO SCAN mode, the index number will be displayed on the TV screen and flash on the FL display. This number will advance each time an index code is found. The INDX indicator will light on the FL display during the intro scan mode.

While intro scan is searching for the beginning of the program, the fast forward (or rewind) indicator lights and the play indicator flashes. During the 8 seconds of playback, the play indicator lights and the fast forward (or the rewind) indicator flashes.

INDEX SEARCH System (Remote control only)

Use the index search mode to jump directly to the beginning of any recorded segment, within 99 segments of your starting point, in either the forward or reverse direction. Using the index code (automatically added when tapes are recorded on this VCR) as a guide, The VCR forwards or rewinds the video tape to the segment you have chosen and begins playback automatically. Because the index search feature uses the index code that is added to the tape when programmes are originally recorded, this feature will only operate with tapes that include this index code.

Press the INDEX SEARCH forward or reverse button the number of index codes you wish to skip on the remote control.

The tape will be fast forwarded or quickly rewound to the desired segment and playback will begin automatically. During the index search mode the index number will be displayed on the TV screen and flash on the FL display. This number will decrease each time an index code is found.

TEST MODE

To set the VCR to the TEST MODE, press and hold both the "POWER" and "EJECT" buttons on the front panel, then plug in the AC power cord. The TEST MODE can also be set by pressing the SYSTEM RESET button while pressing both the "POWER" and "EJECT" buttons.

When the TEST MODE has been engaged, the QUICK START indicator turns on even when the POWER is turned OFF.

The TEST MODE can be cancelled by disconnecting the AC power cord or simply by pressing the SYSTEM RESET button.

1) TRACKING POSITION DISPLAY

In the SP play mode, pressing the manual TRACKING buttons during playback or when the auto tracking system is operating displays tracking position data. Data is displayed in 64 steps (in hexadecimal numbers from "00" to "3F") in the channel number indicator segment on the FL display.

Pressing the PICTURE SHARPNESS + button sets tracking to the maximum "3F" tracking position directly during playback and pressing the - button sets it to the minimum "00" position.

Pressing the PLAY button during playback sets tracking to the center position automatically.

Pressing the MEMO button will change the FL display's tracking indication to the center of the tracking range. (This tracking data will be kept in EP-ROM IC even when the TEST MODE has been reset. Therefore, do not forget to return to the original center position "1F". Press the manual TRACKING buttons to set the indication to "1F", then press the MEMO button.)

2) FL DISPLAY CONFIRMATION

By pressing the QUICK TIMER "M" button on the front panel, all indicator segments in the FL display will light up.

3) TIMER FUNCTION CONFIRMATION

During the TEST MODE, the clock's minute display will advance by one every second to facilitate quick timer function confirmation.

4) SUSPENSION OF THE TAPE PROTECTION SYSTEM

When the VCR is not in the TEST MODE, the REC PAUSE mode will be released after 30 minutes in order to protect the tape. The "STILL" mode will also be released after 5 minutes. During the TEST MODE however, the tape protection system will not operate.

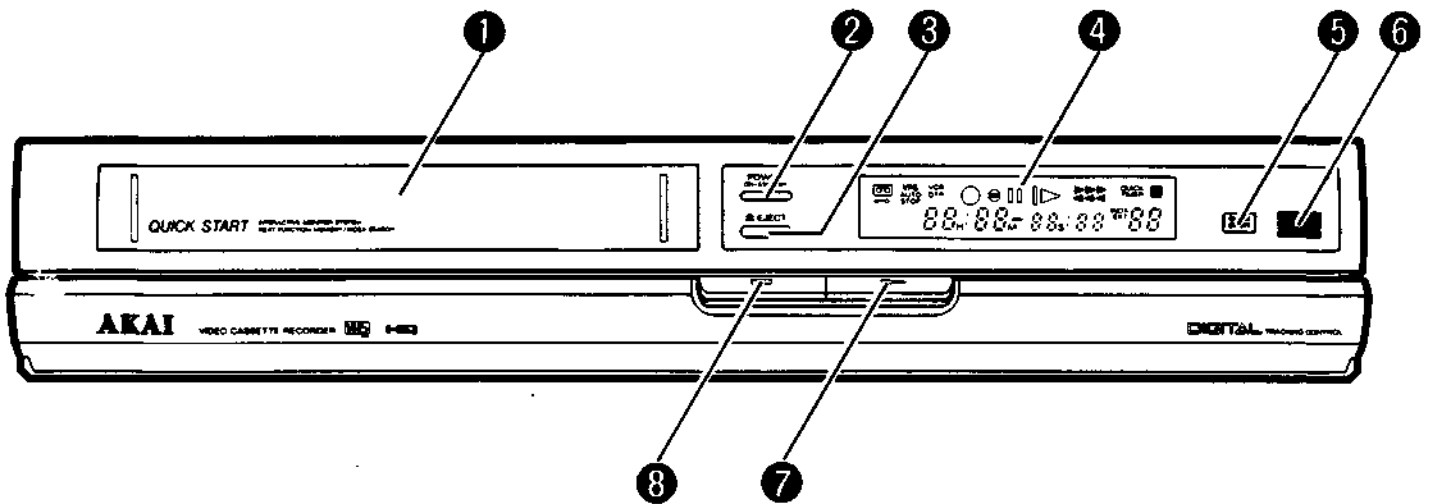
5) AUTO PRESETTING OF THE TV STATIONS

Once you have pressed the "PRESET" and "AUTO SCAN" buttons during the TEST MODE, TV stations will be memorized automatically when the system finds TV stations.

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I. CONTROLS

1-1. FRONT PANEL (VS-422EOH)



1 Cassette loading slot

Load the VHS video tape here.

2 POWER ON/STANDBY button

To turn the VCR on or off (standby mode).

3 ▲ EJECT button

To eject the video tape. The tape can be ejected even when the VCR's power is off.

4 FL (Fluorescent) display

Provides visual reference of the VCR's operating modes.

5 QUICK START indicator

Lights when the VCR is in the quick start mode.

6 Remote sensor window

For reception of the remote control's signal.

7  Play button

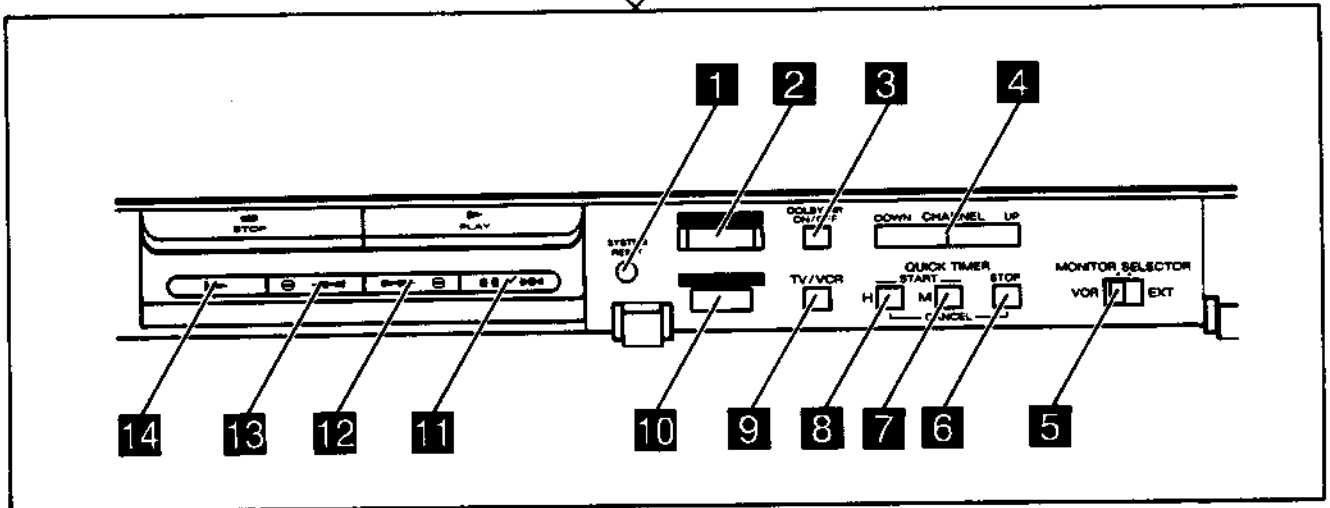
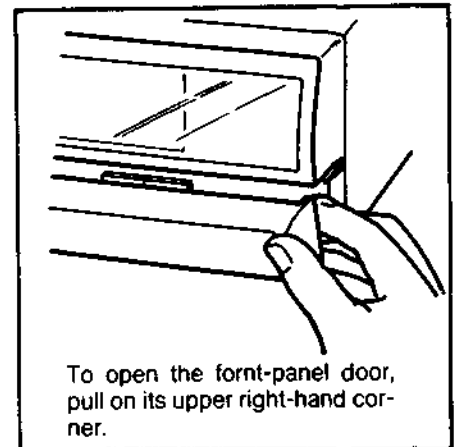
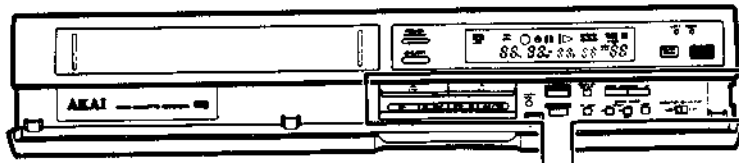
To start video tape playback.


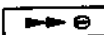
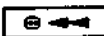

8  Stop button

To stop the video tape.

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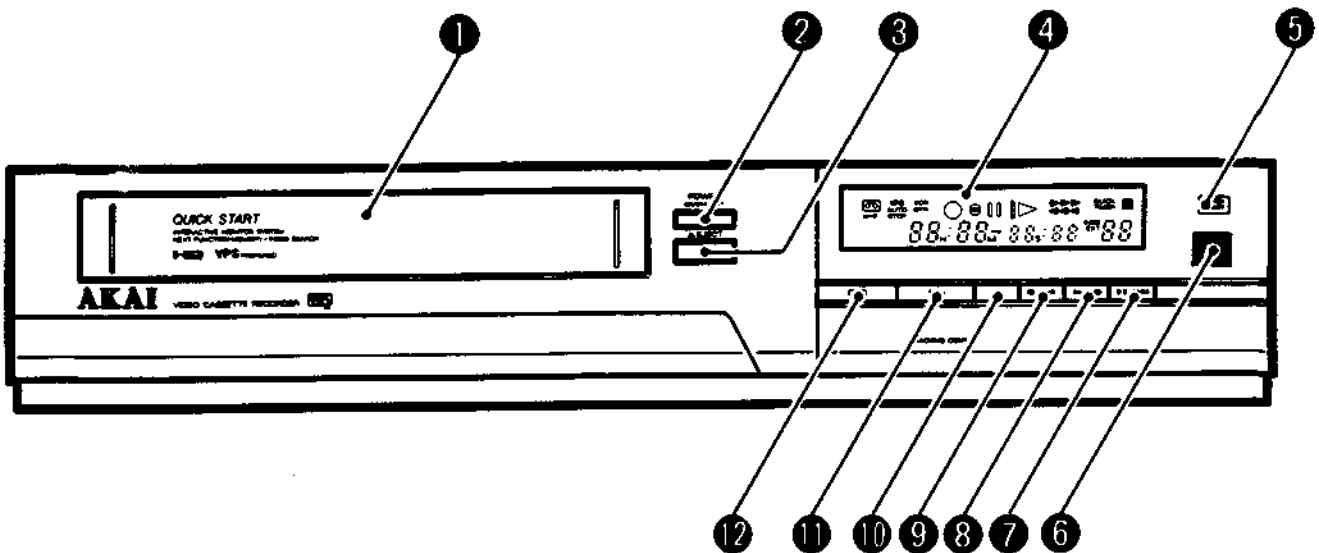
1-2. SUB PANEL (VS-422EOH)



- 1 SYSTEM RESET button**
To reset the VCR if malfunction has occurred. Clock and programme data will be cancelled when the SYSTEM RESET button is pressed.
- 2 REC (Record) button**
To start recording.
- 3 DOLBY NR ON/OFF button**
To turn the Dolby NR system (B-type) on or off for recording or playback.
- 4 CHANNEL buttons**
To select channels.
- 5 MONITOR SELECTOR switch**
To set the VCR for output of the VCR's internal signal (VCR position) or for output of a signal received externally (EXT position). When this selector is set to the EXT position, only the signal received from an external source connected to the external input (VIDEO IN/AUDIO IN) terminals will be output by the VCR. For audio and picture output when using the VCR, this selector must be set to the VCR position.
- 6 QUICK TIMER STOP button**
To set the stop time for quick timer recording. Also used to cancel programmes preset for quick timer recording.
- 7 QUICK TIMER M (Minute) button**
To set the start time minutes for quick timer recording.
- 8 QUICK TIMER H (Hour) button**
To set the start time hour for quick timer recording. Also used to cancel programmes preset for quick timer recording.
- 9 TV/VCR button**
To watch a programme on a different TV channel than the one you are recording.
- 10 TIMER button**
To set or cancel the timer recording mode.
- 11  Pause/still button**
To set the VCR to the recording pause mode or the recording or stop mode, or to set it to the still mode from the playback mode.
- 12  Fast forward button**
To fast forward the video tape. Also to start quick finder forward during playback.
- 13  Rewind button**
To rewind the video tape. Also to start quick finder reverse during playback.
- 14  Slow button**
To start slow motion playback.

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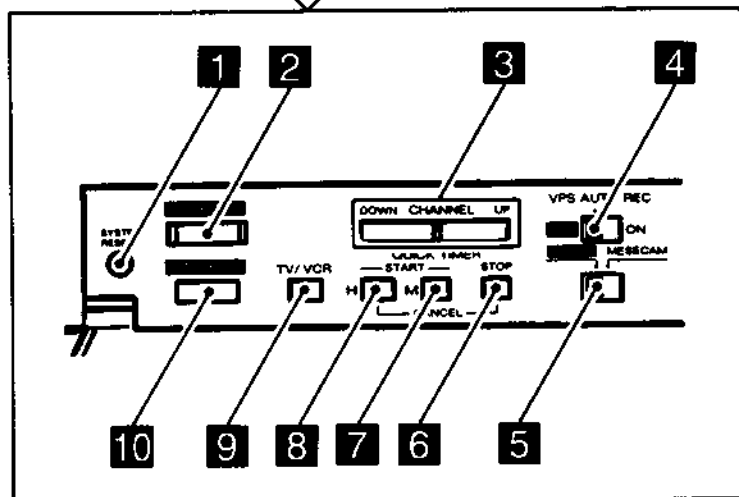
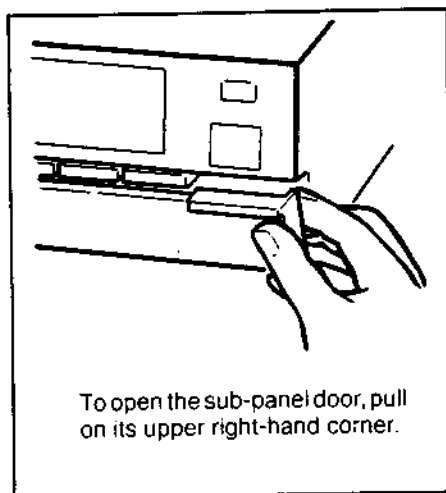
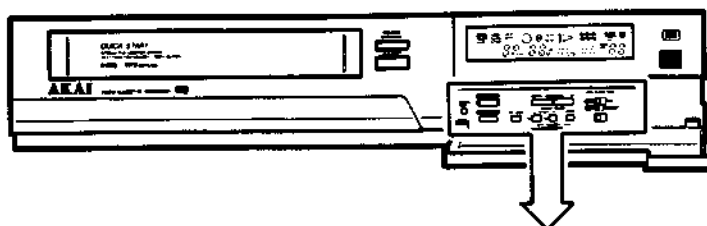
1-3. FRONT PANEL (VS-425EM,EOG,EOH)



- 1** **Cassette loading slot**
Load the VHS video tape here.
- 2** **POWER ON/STANDBY button**
To turn the VCR on or off (standby mode).
- 3** **EJECT button**
To eject the video tape. The tape can be ejected even when the VCR's power is off.
- 4** **FL (Fluorescent) display**
Provides visual reference of the VCR's operating modes.
- 5** **QUICK START indicator**
Lights when the VCR is in the quick start mode.
- 6** **Remote sensor window**
For reception of the remote control's signal.
- 7** **Pause/still button**
To set the VCR to the recording pause mode from the recording or stop mode, or to set it to the still mode from the playback mode.
- 8** **Fast forward button**
To fast forward the video tape. Also to start quick finder forward during playback.
- 9** **Rewind button**
To rewind the video tape. Also to start quick finder reverse during playback.
- 10** **Slow button**
To start slow motion playback.
- 11** **Play button**
To start video tape playback.
- 12** **Stop button**
To stop the video tape.

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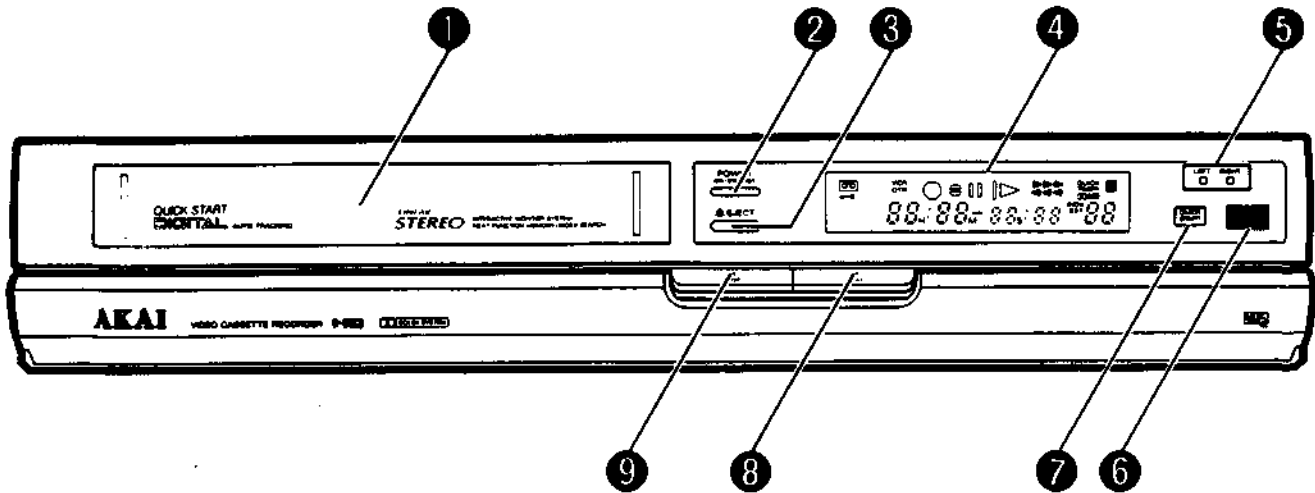
1-4. SUB PANEL (VS-425EM,EOG,EOH)





- 1 SYSTEM RESET button**
To reset the VCR if malfunction has occurred. Clock and programme data will be cancelled when the SYSTEM RESET button is pressed.
- 2 REC (Record) button**
To start recording.
- 3 CHANNEL buttons**
To select channels.
- 4 VPS AUTO REC switch (except VS-425EM)**
To set the VPS video programme system on or off. (This feature is optional and requires a VPS adapter available from your video dealer.)
- 5 Video mode switch (VS-425EOH ONLY)**
To select the type of signal to be played back or recorded.
PAL: Set to this position for PAL color system playback or recording. (This switch should normally be set to this position).
MESECAM: Set to this position for MESECAM color system playback or recording. (MESECAM: Middle East SECAM system B/G.)
- 6 QUICK TIMER STOP button**
To set the stop time for quick timer recording. Also used to cancel programmes preset for quick timer recording.
- 7 QUICK TIMER M (Minute) button**
To set the start time minutes for quick timer recording.
- 8 QUICK TIMER H (Hour) button**
To set the start time hour for quick timer recording. Also used to cancel programmes preset for quick timer recording.
- 9 TV/VCR button**
To watch a programme on a different TV channel than the one you are recording.
- 10 TIMER button**
To set or cancel the timer recording mode.

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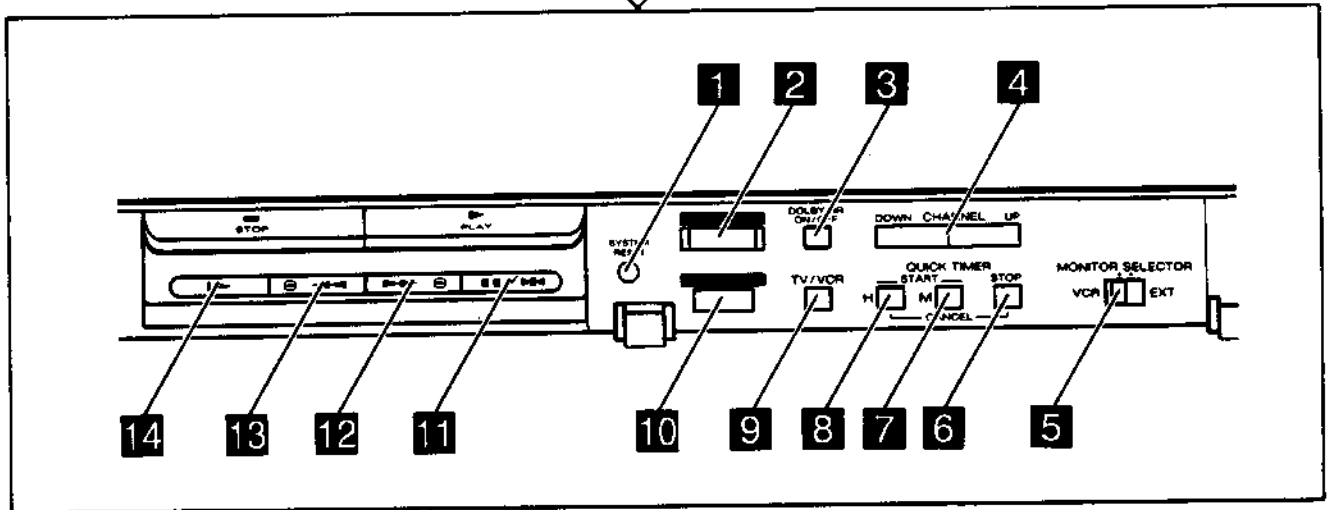
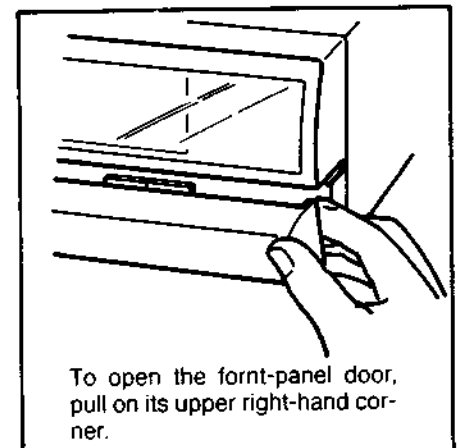
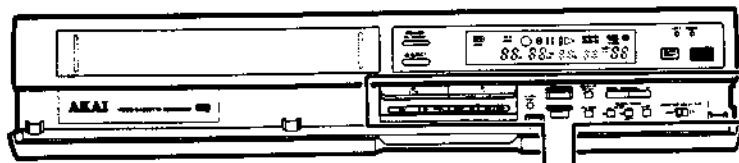
1-5. FRONT PANEL (VS-427EK, 467EK)







- 1 Cassette loading slot**
Load the VHS video tape here.
- 2 POWER ON/STANDBY button**
To turn the VCR on or off (standby mode).
- 3 ▲ EJECT button**
To eject the video tape. The tape can be ejected even when the VCR's power is off.
- 4 FL (Fluorescent) display**
Provides visual reference of the VCR's operating modes.
- 5 Audio output indicators**
Indicate audio output mode.
- 6 Remote sensor window**
For reception of the remote control's signal.
- 7 QUICK START indicator**
Lights when the VCR is in the quick start mode.
- 8  Play button**
To start video tape playback
- 9  Stop button**
To stop the video tape.

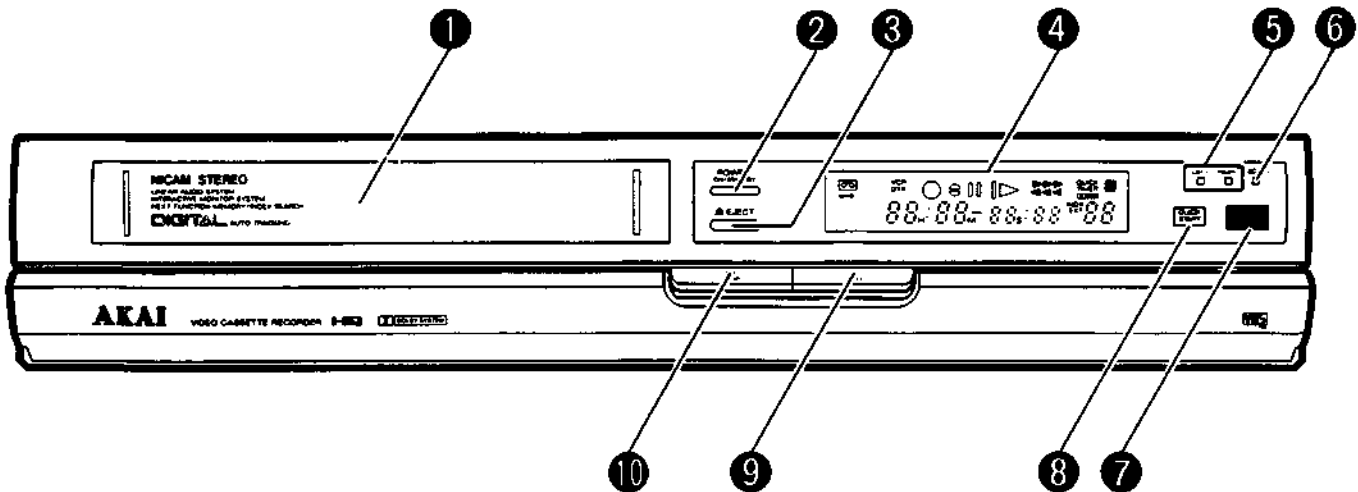
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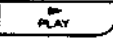
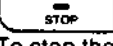
1-6. SUB PANEL (VS-427EK, 467EK)



- 1 SYSTEM RESET button**
To reset the VCR if malfunction has occurred. Clock and programme data will be cancelled when the SYSTEM RESET button is pressed.
- 2 REC (Record) button**
To start recording.
- 3 DOLBY NR ON/OFF button**
To turn the Dolby NR system (B-type) on or off for recording or playback.
- 4 CHANNEL buttons**
To select channels.
- 5 MONITOR SELECTOR switch**
To set the VCR for output of the VCR's internal signal (VCR position) or for output of a signal received externally (EXT position). When this selector is set to the EXT position, only the signal received from an external source connected to the external input (VIDEO IN/AUDIO IN) terminals will be output by the VCR. For audio and picture output when using the VCR, this selector must be set to the VCR position.
- 6 QUICK TIMER STOP button**
To set the stop time for quick timer recording. Also used to cancel programmes preset for quick timer recording.
- 7 QUICK TIMER M (Minute) button**
To set the start time minutes for quick timer recording.
- 8 QUICK TIMER H (Hour) button**
To set the start time hour for quick timer recording. Also used to cancel programmes preset for quick timer recording.
- 9 TV/VCR button**
To watch a programme on a different TV channel than the one you are recording.
- 10 TIMER button**
To set or cancel the timer recording mode.
- 11  Pause/still button**
To set the VCR to the recording pause mode from the recording or stop mode, or to set it to the still mode from the playback mode.
- 12  Fast forward button**
To fast forward the video tape. Also to start quick finder forward during playback.
- 13  Rewind button**
To rewind the video tape. Also to start quick finder reverse during playback.
- 14  Slow button**
To start slow motion playback.

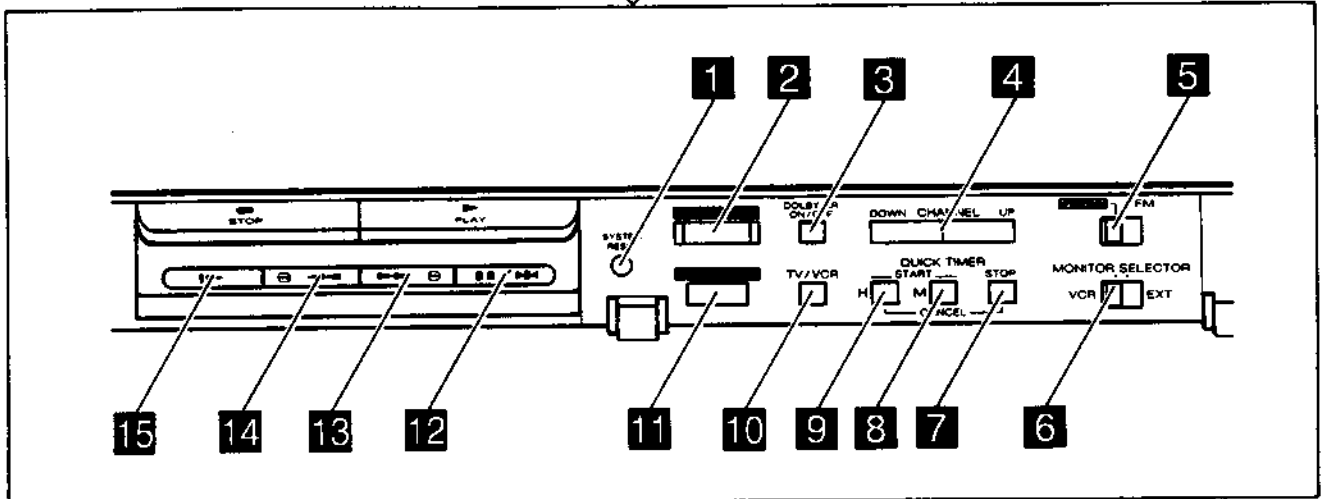
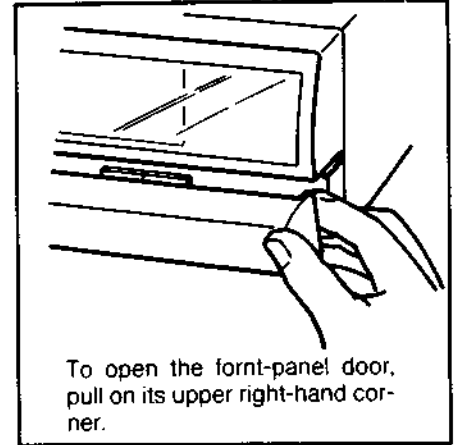
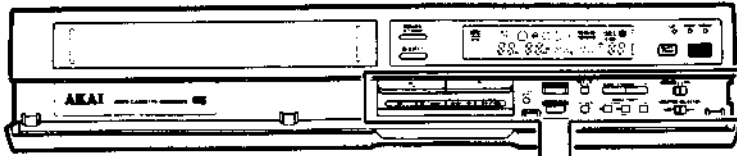
1-7. FRONT PANEL (VS-485EK)



- 1 Cassette loading slot**
Load the VHS video tape here.
- 2 POWER ON/STANDBY button**
To turn the VCR on or off (standby mode).
- 3 ▲ EJECT button**
To eject the video tape. The tape can be ejected even when the VCR's power is off.
- 4 FL (Fluorescent) display**
Provides visual reference of the VCR's operating modes.
- 5 Audio output indicators**
Indicate audio output mode.
- 6 NICAM indicator**
Lights when a NICAM broadcast is received.
- 7 Remote sensor window**
For reception of the remote control's signal.
- 8 QUICK START indicator**
Lights when the VCR is in the quick start mode.
- 9  Play button**
To start video tape playback
- 10  Stop button**
To stop the video tape.

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1-8. SUB PANEL (VS-485EK)



1 SYSTEM RESET button

To reset the VCR if malfunction has occurred. Clock and programme data will be cancelled when the SYSTEM RESET button is pressed.

2 REC (Record) button

To start recording.

3 DOLBY NR ON/OFF button

To turn the Dolby NR system (B-type) on or off for recording or playback.

4 CHANNEL buttons

To select channels.

5 NICAM switch

To select VCR audio reception NICAM or regular TV sound (FM).

6 MONITOR SELECTOR switch

To set the VCR for output of the VCR's internal signal (VCR position) or for output of a signal received externally (EXT position). When this selector is set to the EXT position, only the signal received from an external source connected to the external input (VIDEO IN, AUDIO IN) terminals will be output by the VCR.

For audio and picture output when using the VCR, this selector must be set to the VCR position.

7 QUICK TIMER STOP button

To set the stop time for quick timer recording. Also used to cancel programmes preset for quick timer recording.

8 QUICK TIMER M (Minute) button

To set the start time minutes for quick timer recording.

9 QUICK TIMER H (Hour) button

To set the start time hour for quick timer recording. Also used to cancel programmes preset for quick timer recording.

10 TV/VCR button

To watch a programme on a different TV channel than the one you are recording.

11 TIMER button

To set or cancel the timer recording mode.

12 Pause/still button

To set the VCR to the recording pause mode from the recording or stop mode, or to set it to the still mode from the playback mode.

13 Fast forward button

To fast forward the video tape. Also to start quick finder forward during playback.

14 Rewind button

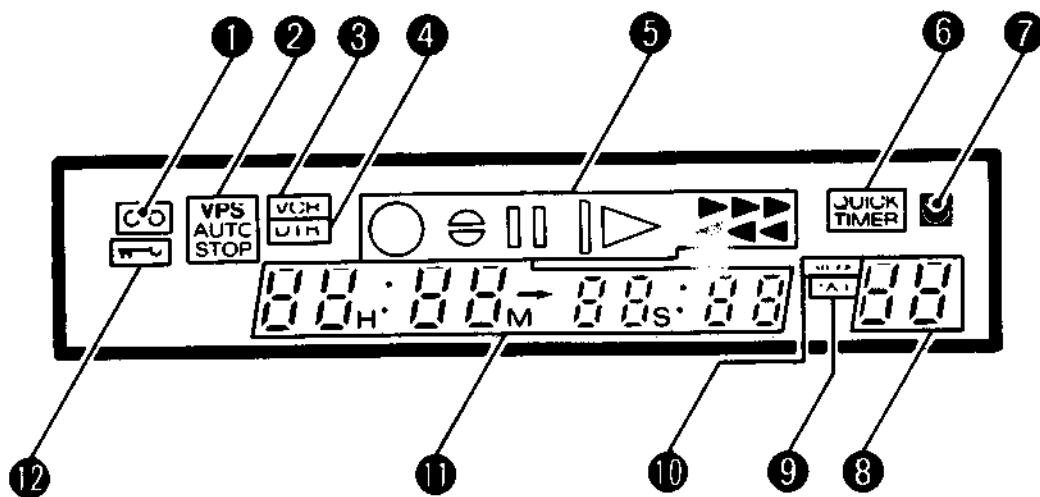
To rewind the video tape. Also to start quick finder reverse during playback.

15 Slow button

To start slow motion playback.

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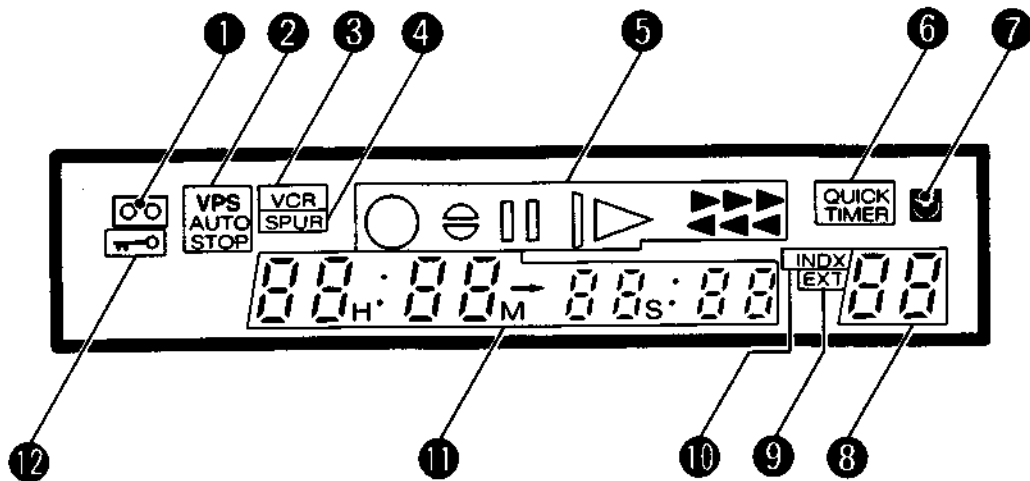
1-9. FL DISPLAY (VS-422EOH, 425EM, 425EOH)



- 1 Tape load indicator**
Lights when the video tape has been loaded.
- 2 VPS AUTO STOP indicator (except VS-425EM)**
VPS lights when the VPS AUTO REC switch is ON and a VPS signal is received.
AUTO STOP lights during the VPS auto stop mode.
(This feature is optional and requires a VPS adapter available from your video dealer.)
- 3 VCR mode indicator**
Lights when the TV/VCR button is set to VCR.
- 4 DTR (Digital Tracking) Indicator**
Lights when digital auto tracking is operating.
- 5 Tape mode indicators**
Indicate what operation mode the video tape is in.
- 6 QUICK TIMER indicator**
Lights when the VCR is in the quick timer mode.
- 7 Timer indicator**
Lights when the VCR is in the timer recording mode.
- 8 Channel indicator**
Indicates the selected channel number. Also indicates the index number during index search, and programme number during intro scan.
- 9 EXT (External) indicator**
Indicates that the VCR is set for external input.
- 10 INDX (Index) indicator**
Lights during index search, intro scan and when index codes are added to the tape during recording.
- 11 Time/counter display**
Indicates the time and real time counter. Also indicates the tuning position during station tuning.
- 12 Safety lock indicator**
Lights when the VCR's play button has been locked.

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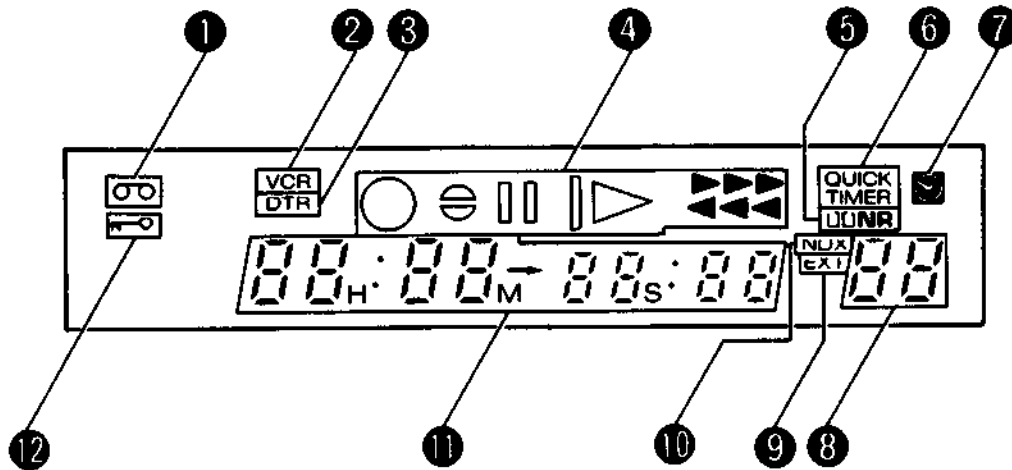
1-10.FL DISPLAY (VS-425EOG)



- 1 Tape load indicator**
Lights when the video tape has been loaded.
- 2 VPS AUTO STOP indicator**
VPS lights when the VPS AUTO REC switch is ON and a VPS signal is received.
AUTO STOP lights during the VPS auto stop mode.
(This feature is optional and requires a VPS adapter available from your video dealer.)
- 3 VCR mode indicator**
Lights when the TV/VCR button is set to VCR.
- 4 SPUR (Digital Tracking) indicator**
Lights when digital auto tracking is operating.
- 5 Tape mode indicators**
Indicate what operation mode the video tape is in.
- 6 QUICK TIMER indicator**
Lights when the VCR is in the quick timer mode.
- 7 Timer indicator**
Lights when the VCR is in the timer recording mode.
- 8 Channel indicator**
Indicates the selected channel number. Also indicates the index number during index search, and programme number during intro scan.
- 9 EXT (External) indicator**
Indicates that the VCR is set for external input.
- 10 INDX (Index) indicator**
Lights during index search, intro scan and when index codes are added to the tape during recording.
- 11 Time/counter display**
Indicates the time and real time counter. Also indicates the tuning position during station tuning.
- 12 Safety lock indicator**
Lights when the VCR's play button has been locked.

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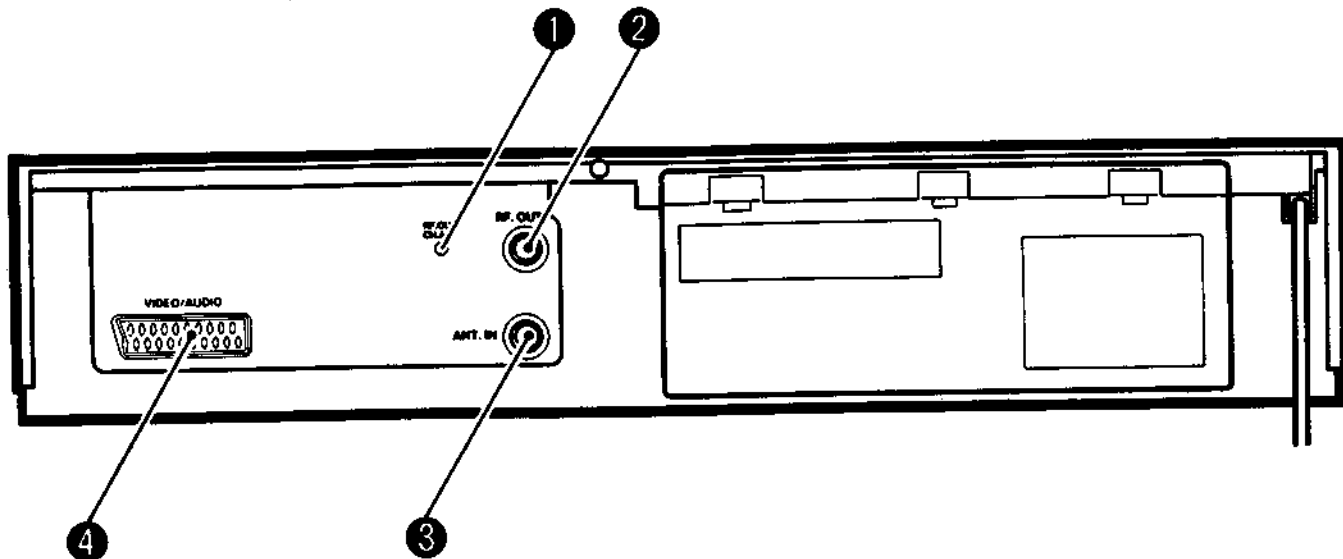
1-11. FL DISPLAY (VS-427EK, 467EK, 485EK)



- 1 Tape load indicator**
Lights when the video tape has been loaded.
- 2 VCR mode indicator**
Lights when the TV/VCR button is set to VCR.
- 3 DTR (Digital Tracking) indicator**
Flashes when digital auto tracking is operating.
- 4 Tape mode indicators**
Indicate what operation mode the video tape is in.
- 5 Dolby NR indicator**
Lights when the Dolby NR button is set to on.
- 6 QUICK TIMER indicator**
Lights when the VCR is in the quick timer mode.
- 7 Timer indicator**
Lights when the VCR is in the timer recording mode.
- 8 Channel indicator**
Indicates the selected channel number. Also indicates the index number during index search, and programme number during intro scan.
- 9 EXT (External) indicator**
Indicates that the VCR is set for external input.
- 10 INDX (Index) indicator**
Lights during index search, intro scan and when index codes are added to the tape during recording.
- 11 Time/counter display**
Indicates the time, real time counter. Also indicates the tuning position during station tuning.
- 12 Safety lock indicator**
Lights when the VCR's play button has been locked.

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1-12. REAR PANEL (VS-422EOH, 425EOG, 425EOH)



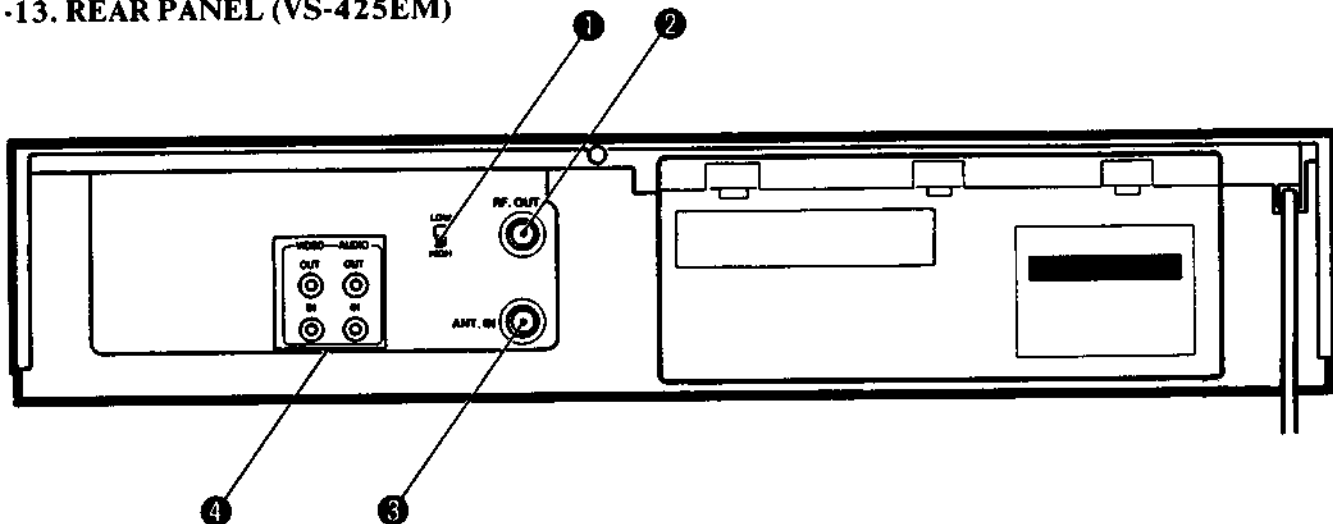
1 RF OUT CH. ADJ (Channel adjustment) screw
To select the output channel of the VCR.

2 RF. OUT terminal
To connect the VCR to the TV's ANTENNA IN terminal.

3 ANT. IN terminal
For TV antenna connection.

4 VIDEO/AUDIO connector
For connection of a TV or second VCR when using a video/audio connection cord.

1-13. REAR PANEL (VS-425EM)



1 RF out switch
To select the output channel of the VCR.

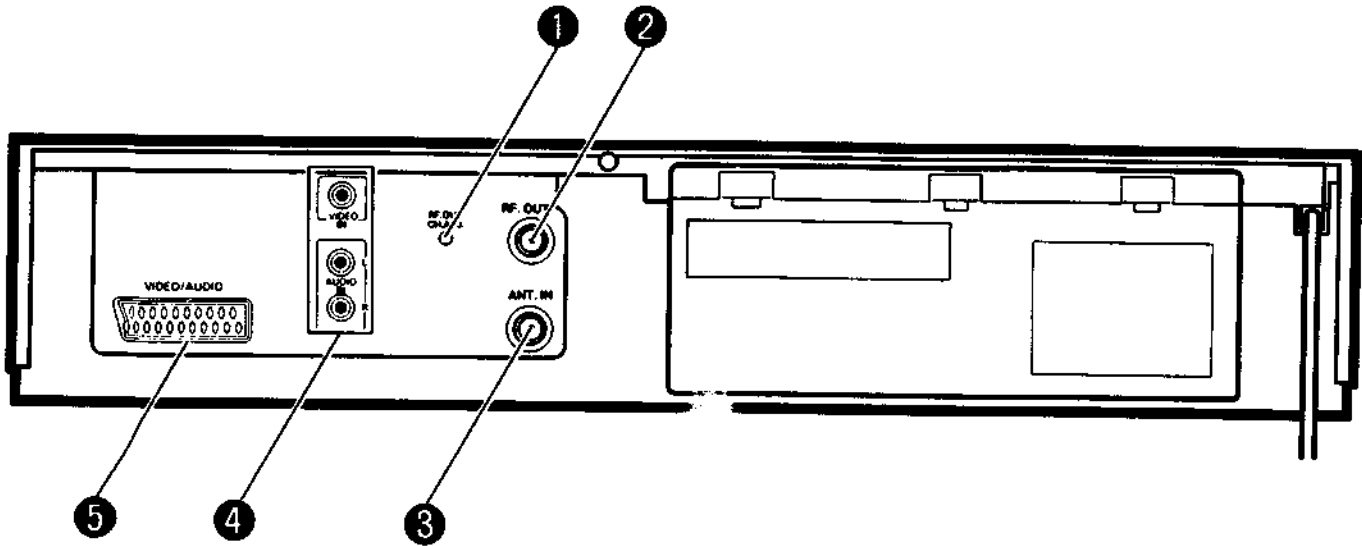
2 RF. OUT terminal
To connect the VCR to the TV's ANTENNA IN terminal.

3 ANT. IN terminal
For TV antenna connection.

4 VIDEO/AUDIO IN/OUT terminals
For connection of a TV or second VCR.

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1-14. REAR PANEL (VS-427EK, 467EK, 485EK)



1 RF OUT CH. ADJ (Channel adjustment) screw
To adjust the output channel of the VCR.

2 RF. OUT terminal
To connect the VCR to the TV's ANTENNA IN terminal.

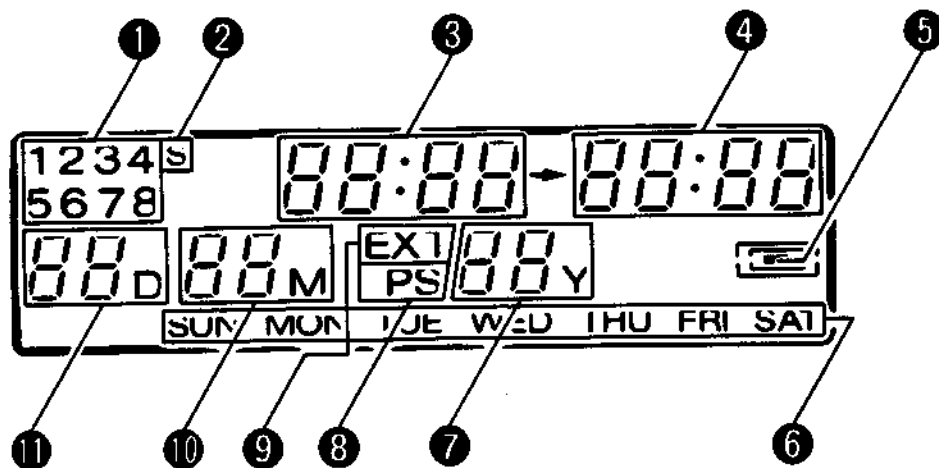
3 ANT. IN terminal
For TV antenna connection.

4 External input (VIDEO IN, AUDIO IN) terminals
For connector of an external source such as a TV or TV tuner.

5 VIDEO/AUDIO connector
For connection of a TV or second VCR when using a video/audio connection cord.

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LC (Liquid Crystal) display



- 1 Programme number indicator**
Indicates the programme number.
- 2 S (Daylight saving time) indicator**
Indicates that the clock's time is set to the daylight saving time.
- 3 Clock, Start time indicator**
Indicates the present time or start time of a programme set for timer recording.
- 4 Stop time indicator**
Indicates the stop time of a programme set for timer recording.
- 5 Transmit indicator**
Lights when data in the remote control is transmitted to the VCR or ready to be transmitted.
- 6 Weekday indicator**
Indicates the weekday.
- 7 Year indicator**
Indicates the year.
Indicates the preset channel number.
- 8 PS (Preset) indicator**
- 9 EXT (External) indicator**
Indicates that the VCR is set to the external mode.
- 10 Month indicator**
Indicates the month.
- 11 Date indicator**
Indicates the date.

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1-17. REMOTE CONTROL UNIT

1 AUTO SCAN, STABILITY button

To start automatic station scan when presetting TV stations. Also used to correct vertical picture shake.

2 CANCEL, PRESET, NORMAL button

To set the VCR to the station presetting mode. Also used to set the cancel mode for preset stations.

3 CLOCK button

To set the VCR to the clock setting mode.


4 PRGM (Programme) button

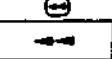
To display the programme, clock screen on the TV screen.

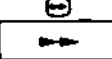
5 POWER ON/STANDBY button


To turn the VCR's power on or off (standby mode).

6 Tape transport buttons

 Record button


 Rewind button

 Fast forward button

 PAUSE/STILL button

 Stop button

 Play button

 SLOW button

 VARIABLE SPEED buttons

 INDEX SEARCH reverse, forward buttons

7 NEXT button

To display the next-mode patterns.

8 COUNTER RESET button

To reset the tape counter.

9 Multi-function buttons

Used for clock and programme setting. Also used to select channels

10 AUDIO MONITOR button

To set the VCR for stereo, left channel or right channel audio output.

11 PICTURE SHARPNESS buttons

To sharpen or soften the playback picture.

12 MEMO, CLOCK SET button

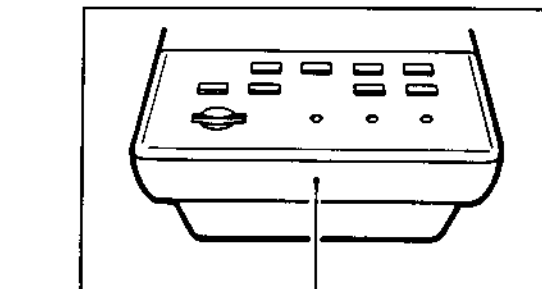
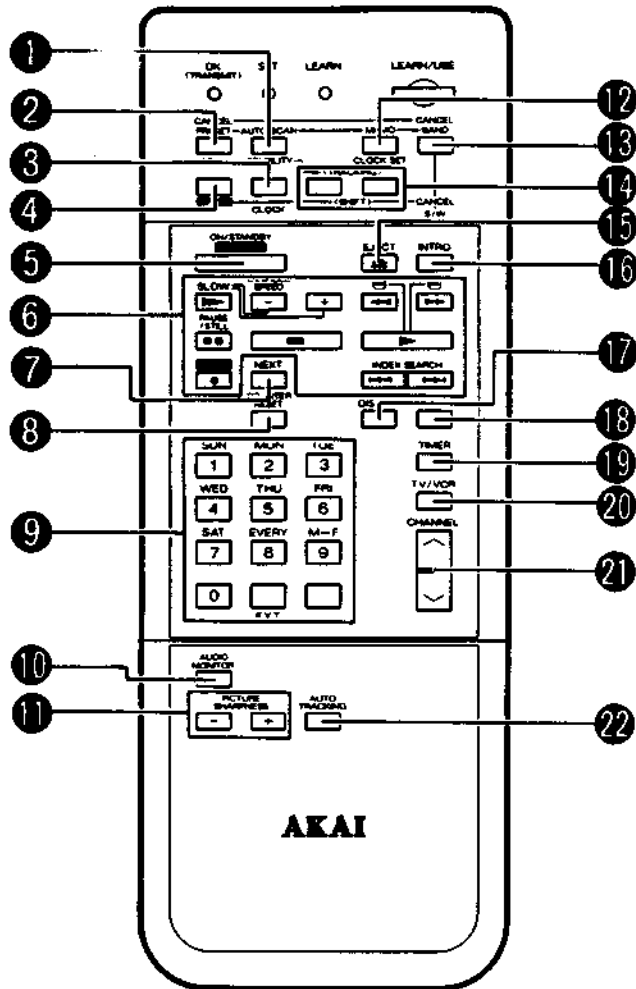
To memorize clock data during clock setting. Also used to memorize stations during station presetting.

13 CANCEL, BAND button

To cancel preset timer programmes or TV stations.

14 TRACKING, SHIFT buttons

To correct preset data during clock or programme setting. Also used to adjust tracking manually during playback.



15 EJECT button

To eject the video tape from the VCR.

16 INTRO button

To set the VCR to the intro scan mode.

17 DISPLAY button

To display the clock and tape counter on the TV screen

18 AUTO/CLF button

To turn the language list screen on or off.

19 TIMER button

To set or reset the timer recording mode.

20 TV/VCR button

To watch a programme on a different TV channel than the one you are recording.

21 CHANNEL button

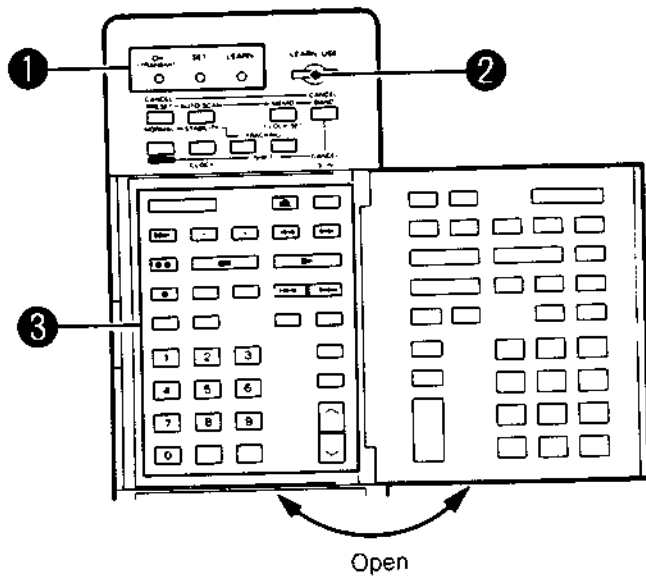
To select channels.

22 AUTO TRACKING button

To correct tracking automatically.

The universal buttons

Opening the remote control cover switches 36 of the regular control buttons to universal buttons that are capable of learning and reproducing up to 36 different function control signals from other remote control units.



- 1 Universal function indicators**
Light when the remote control's universal function is being used. The OK (TRANSMIT) indicator also lights when the regular remote control buttons are used.
- 2 LEARN/USE button**
Used to set the remote control to the learn and use modes.
- 3 Universal buttons**
Used for control of other components after function control signals of other remote controls have been "learned" at these buttons.

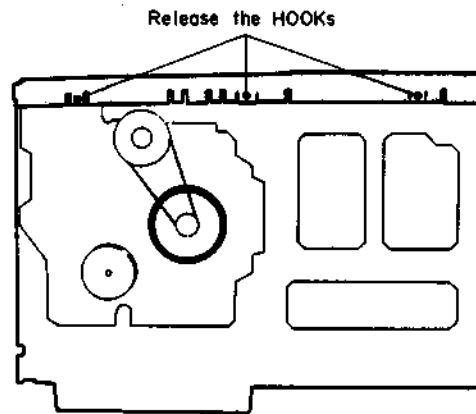
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II. DISASSEMBLY

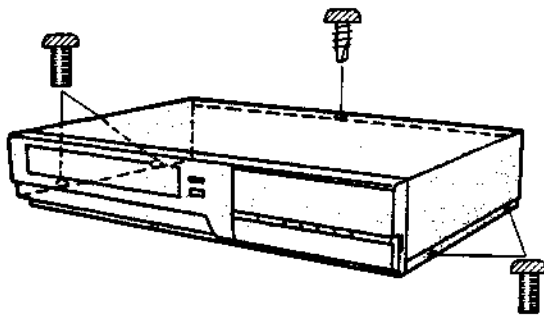
In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in reverse order.

When re-attaching the FRONT PANEL, hold the cassette loading slot door in the upright (open) position.

3. Removal of FRONT PANEL

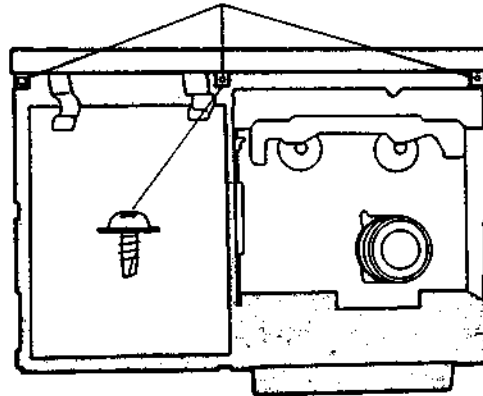


1. Removal of UPPER COVER

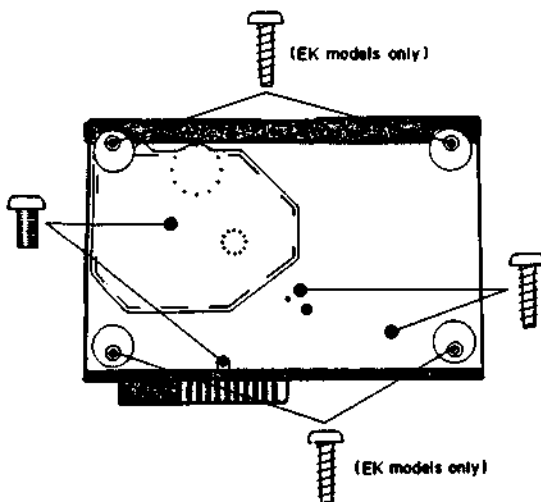


※ Illustration employed on this paragraph is of model VS-425EOH.

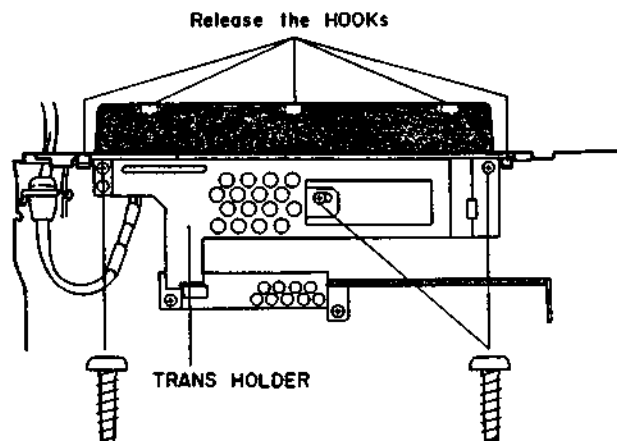
Release the HOOKs



2. Removal of BOTTOM COVER



4. Removal of TRANS COVER



III. PRINCIPAL PARTS LOCATION

※ Photograph employed on this page is of model VS-485EK.

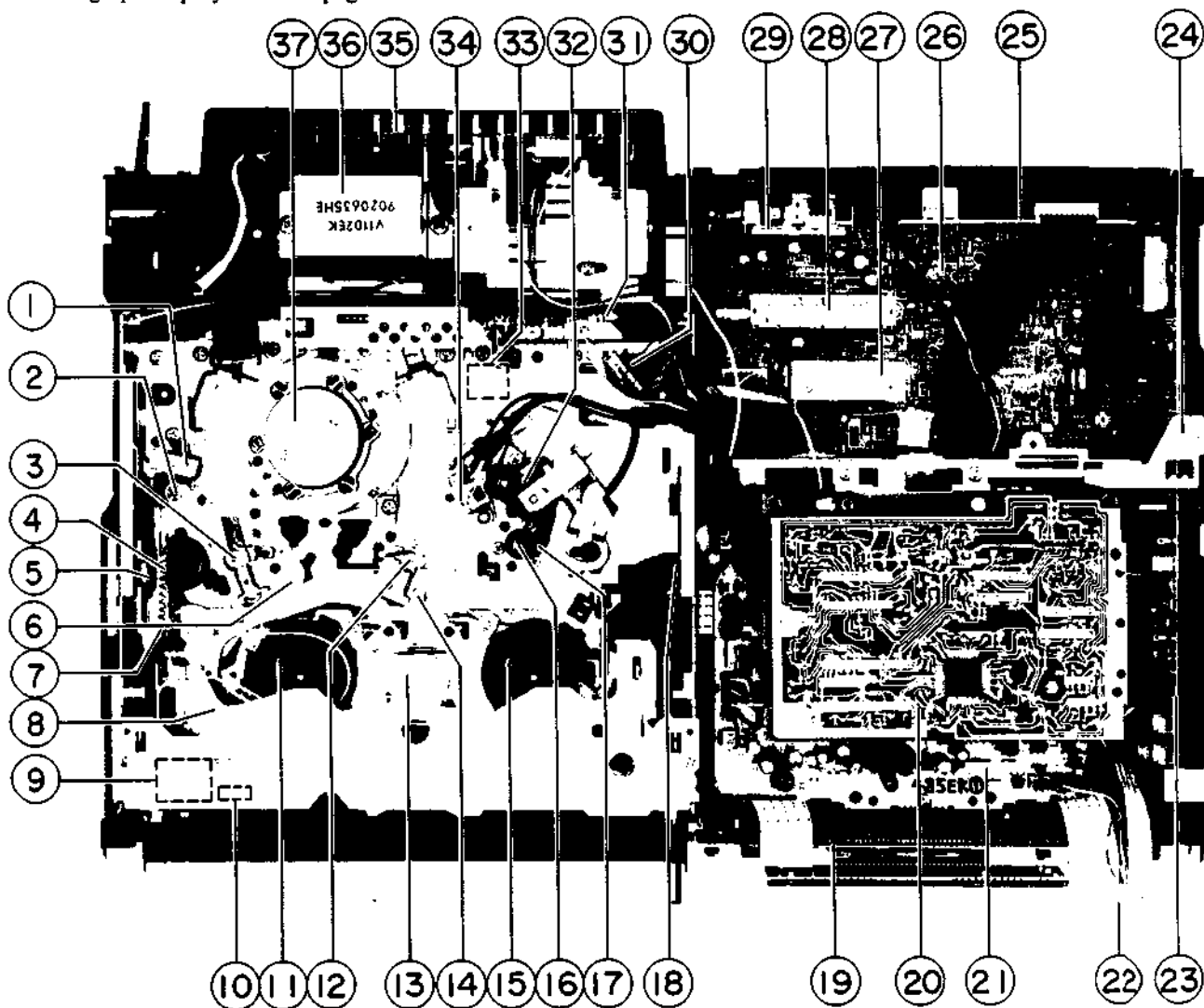


Fig.3-1 Top view

- | | |
|-------------------------------------------------------|--------------------------------|
| 1. FULL TRACK ERASE HEAD | 20. NICAM PCB (VS-485EK only) |
| 2. SUPPLY TAPE GUIDE | 21. LINEAR STEREO(A) PCB |
| 3. SUPPLY LOADING LEADER | 22. LINEAR STEREO(B) PCB |
| 4. FRONT LOADING GEAR | 23. VIDEO PCB |
| 5. SENSOR(S) PCB (END SENSOR) | 24. PC ANGLE |
| 6. TENSION ARM | 25. REAR PIN JACK PCB |
| 7. FRONT LOADING SLIDER | 26. MAIN PCB |
| 8. CASSETTE LOAD BLK | 27. VIF UNIT |
| 9. LOADING MOTOR | 28. TUNER UNIT |
| 10. REC SAFETY SWITCH | 29. RF CONVERTOR UNIT |
| 11. SUPPLY REEL TABLE | 30. JUNCTION PCB |
| 12. TAKE UP LOADING LEADER | 31. PRE AMP PCB |
| 13. IDLER PART | 32. PINCH ROLLER |
| 14. SENSOR LED | 33. DIODE PCB |
| 15. TAKE UP REEL TABLE | 34. AUDIO/CONTROL/S.ERASE HEAD |
| 16. CAPSTAN MOTOR | 35. POWER PCB |
| 17. REVIEW ARM | 36. POWER TRANSFORMER |
| 18. SENSOR(T) (START SENSOR) | 37. VIDEO HEAD DRUM BLOCK |
| 19. OPERATION(A) PCB (VS-422EOH, 427EK, 467EK, 485EK) | |
| OPERATION(B) PCB (VS-425EM, 425EOG, 425EOH) | |

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Fig.3-2 Bottom view

- 1. CAPSTAN MOTOR BLOCK
- 2. SENSOR PCB
- 3. CAPSTAN BELT
- 4. CLUTCH DISK PART
- 5. LOADING MOTOR
- 6. LOADING DRIVE BLOCK

- 7. CAM SLIDER GEAR
- 8. MODE SELECT SWITCH
- 9. FRONT LOADING GEAR
- 10. TOGGLE (S) GEAR BLOCK
- 11. TOGGLE (T) GEAR BLOCK
- 12. DRUM MOTOR BLOCK

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IV. MAIN COMPONENTS REPLACEMENT

4-1. REMOVAL OF THE EJECTOR BLOCK

*Set the loading mechanism to the "EJECT" position by pressing the EJECT button. Then disconnect the AC power plug from the AC socket before proceeding.

4-1-1. Removal of the CASSETTE LOAD BLK

- 1) Remove the two (A) screws on the UPPER PLATE as shown in Fig.4-1 then remove the UPPER PLATE.
- 2) Lift up the FRONT GUIDE while pushing the CASSETTE LOAD BLK backward, then remove the FRONT GUIDE.
- 3) Lift up the front side of the CASSETTE LOAD BLK gently then remove it. To avoid damaging the pins of the CASSETTE LOAD BLK and the groove of the MECHA.FRAME, do not add excessive force to the CASSETTE LOAD BLK when removing it.

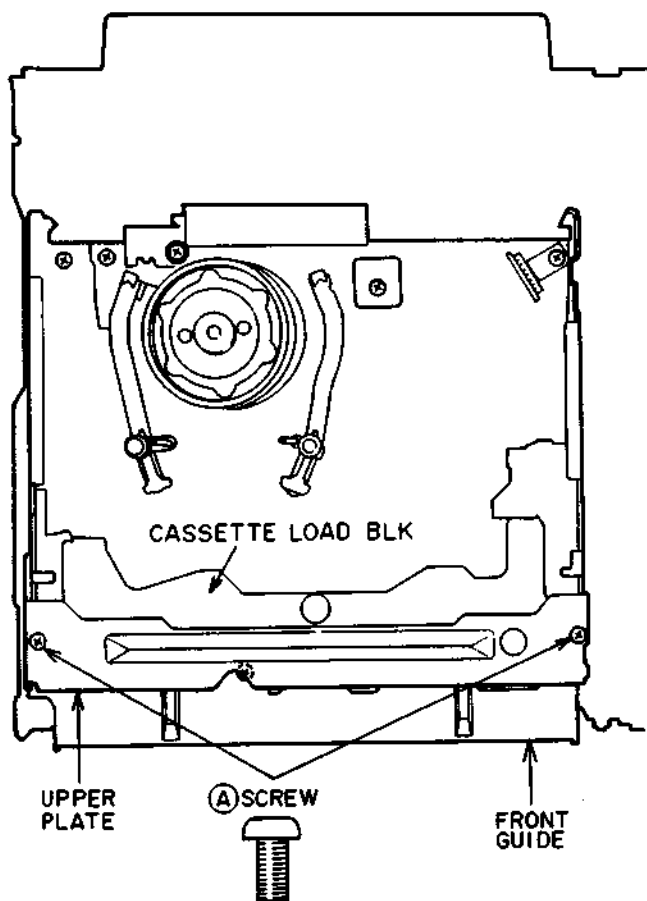


Fig. 4-1

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4-1-2. Removal of the LOADING ARM BLK

- 1) Release the stopper on the right side end of the LOADING ARM BLK's shaft (Refer Fig.4-2) by pressing the stopper tab with a flat head (—) screwdriver. Then remove the shaft's right end from the bracket.

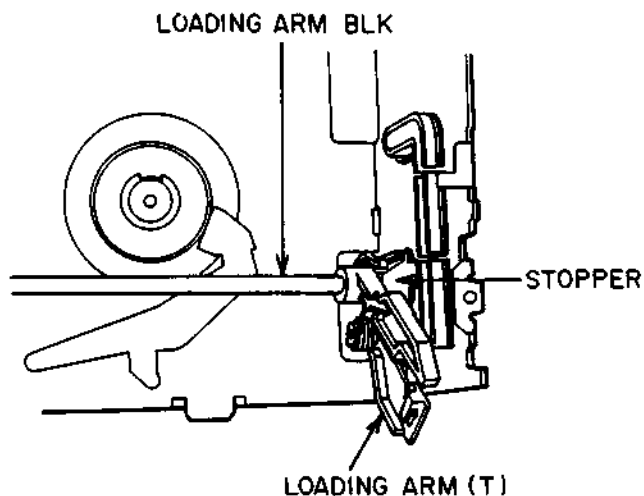


Fig. 4-2

- 2) Hold the LOADING ARM (T) and turn it 30 degrees clockwise, then pull out the shaft's left end from the bracket. To avoid damaging the JOINT GEAR and EJECT GEAR, take special care when removing. (Refer Fig.4-3)

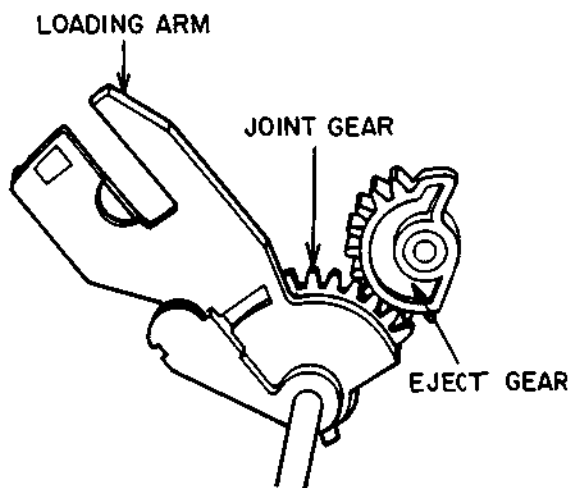


Fig. 4-3

4-2. REMOVAL OF THE SENSOR PC BOARD

*Before proceeding with removal of the SENSOR PCB the loading mechanism must be set to the "unloaded" position (the position where the CAM SLIDER GEAR's groove mark is visible through the hole of the MODE SELECT SW.) as shown in Fig.4-4.

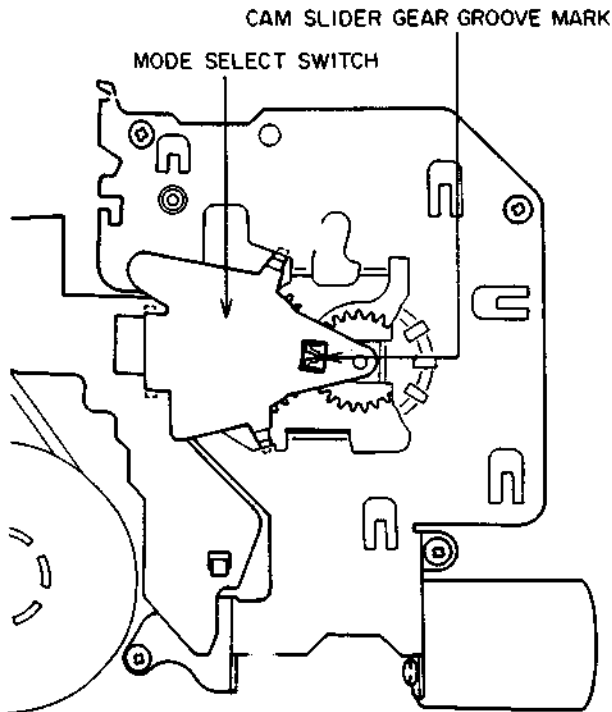


Fig. 4-4

To set the loading mechanism to the "unloaded" position, proceed with one of the following (1) or (2) procedures.

(1) Insert a video cassette tape which you no longer need. Once the tape has been loaded or entered "play" mode, press the POWER button to turn the power off. Disconnect the AC power plug from the AC socket after the cassette tape has been unloaded.

(2) Remove the UPPER PLATE, FRONT GUIDE and CASSETTE LOAD BLK. (Refer to 4-1-1. Removal of the CASSETTE LOAD BLK.)

Plug in the AC power cord. The LOADING ARM BLK will move backward (the cassette load BLK will be in the down position) and forward (the cassette load BLK will be in the eject position) continuously.

With your fingers, cover and hold both SENSOR (S) and SENSOR (T) at the same time when the LOADING ARM BLK is in the backward position. The unit will enter the "play" mode without the cassette tape. While covering both sensors, press the "POWER" button. The unit will now enter the "tape unloaded" position. Release your fingers from the sensors, and disconnect the AC power plug from the AC power socket.

4-2-1. Removal of the MODE SELECT SWITCH

1) Release the two (A) stoppers as shown in Fig.4-5.

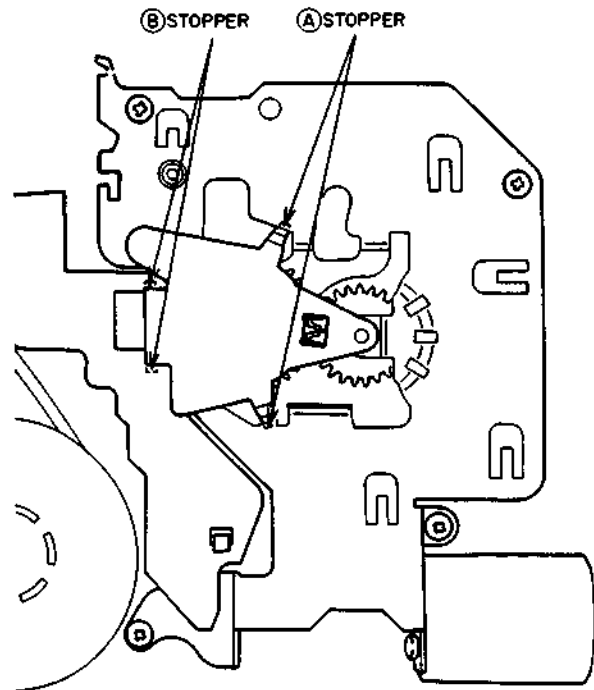


Fig. 4-5

2) Release the two (B) stoppers carefully while pulling up the MODE SELECT SWITCH. Then remove the MODE SELECT SWITCH. (Do not damage the pins of the MODE SELECT SWITCH or the connector P1 on the SENSOR PCB)

4-2-2. Removal of the SENSOR PC Board

1) Disconnect the connector P409 on the MAIN PCB.

2) Remove the capstan belt.

3) Release the (A), (B), and (C) stoppers as shown in Fig.4-6. Then remove the SENSOR PCB.

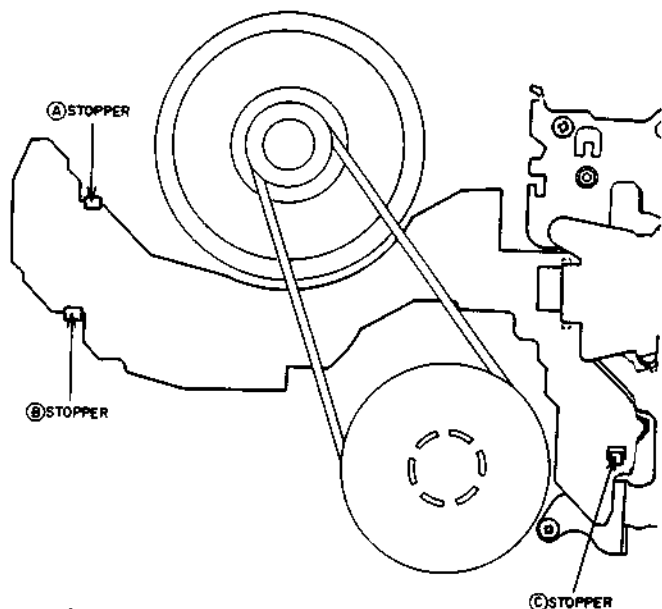


Fig. 4-6

4-3. REMOVAL OF THE LOADING DRIVE BLK

Set the loading mechanism at the "unloaded" position as well as 4-2 (REMOVAL OF THE SENSOR PC BOARD). However this time, to avoid damaging the tape and mechanical parts, refer to 4-2, *(2) only.

- 1) Remove the MODE SELECT SWITCH in the same manner as 4-2-1 (Removal of the MODE SELECT SWITCH).
- 2) Unhook the five wires from each tab. Two wires from the SENSOR(S), two wires from the LOADING MOTOR and one wire from the REC SAFETY SWITCH.
- 3) Remove the (A), (B), (C), and (D) screws, then remove the LOADING DRIVE BLK as shown in Fig.4-7.

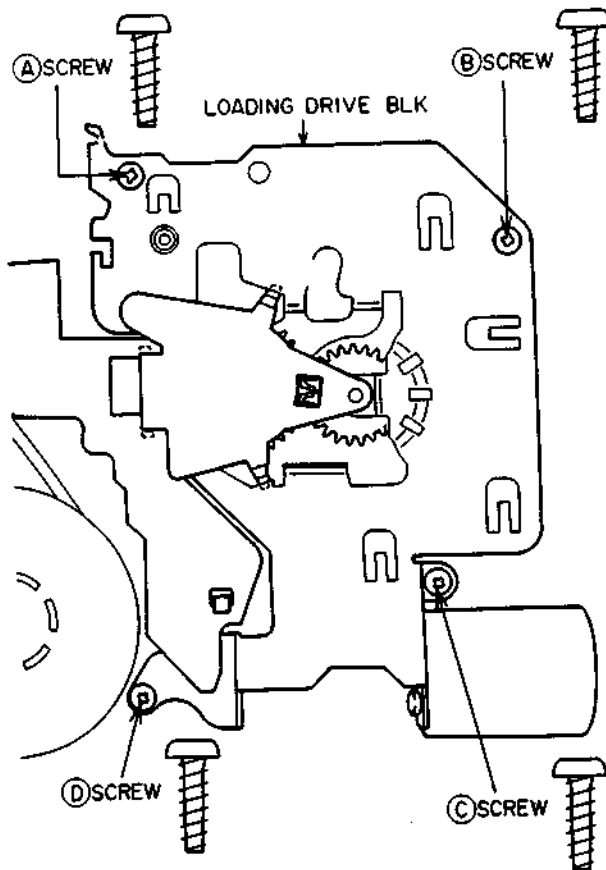


Fig. 4-7

4-4. REPLACEMENT OF THE PINCH HOLDER PART

- 1) Release the stopper of the PINCH ARM and remove the PINCH ARM BLK as shown in Fig 4-8.

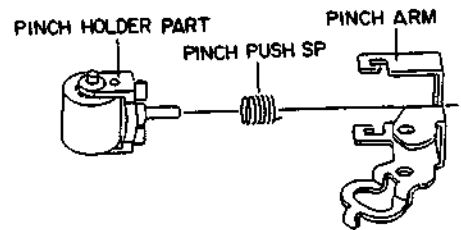
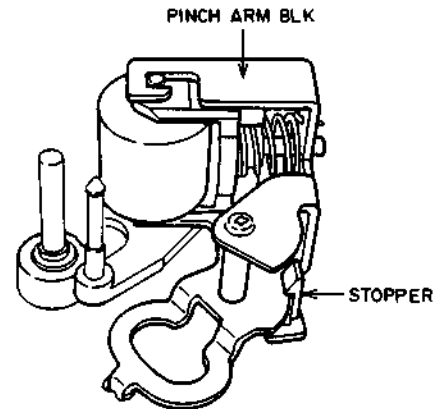


Fig 4-8

- 2) Turn the PINCH HOLDER PART 30 degrees clockwise while pushing it backward and remove the PINCH HOLDER PART from the PINCH ARM.
- 3) Reassemble the PINCH ROLLER ARM BLK in the reverse order of 1) to 2).

4-5. REPLACEMENT OF THE IDLER PART AND REVIEW BRAKE PART

- 1) Remove the CASSETTE LOAD BLK & ARM LOADING BLK. (Refer to 4-1, REMOVAL OF THE EJECTOR BLK.)
- 2) Release the stopper of the IDLER PART as shown in Fig.4-9, then remove it.

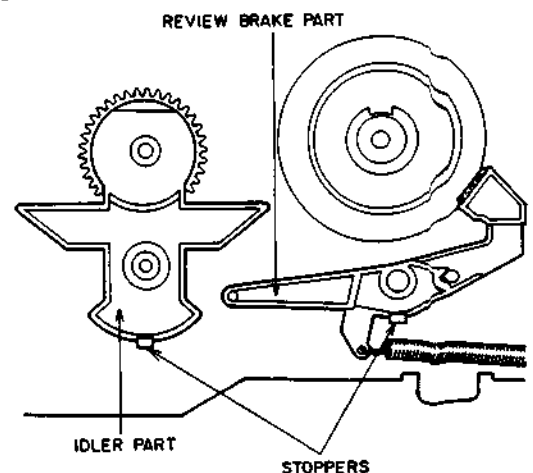


Fig. 4-9

- 3) Take off the review brake part spring, then release the stopper of the REVIEW BRAKE PART and remove it.
- 4) Reassemble these parts in the reverse order of 1) to 3).

4-6. REASSEMBLY OF THE LOADING MECHANISM BLK

4-6-1. Position of the TOGGLE GEARS (T) and (S)

- 1) Set the TOGGLE GEAR (T) and TOGGLE GEAR (S) to the unloaded position with your fingers. Align the (A) mark on the TOGGLE GEAR (S) with the (A) hole of the TOGGLE GEAR (T) as shown in Fig.4-10.

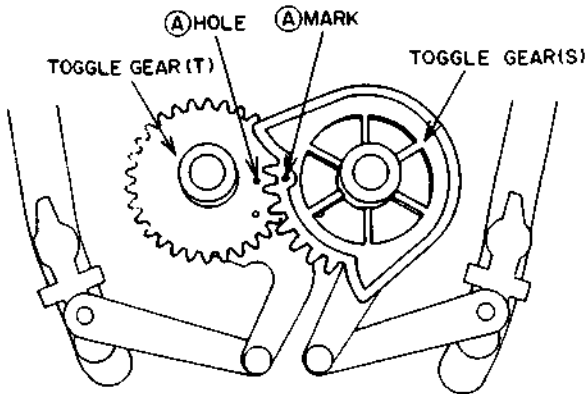


Fig. 4-10

4-6-2. Installation of the CAM SLIDER GEAR & FRONT LOADING GEAR

- 1) Attach the WORM WHEEL GEAR as shown in Fig.4-11.

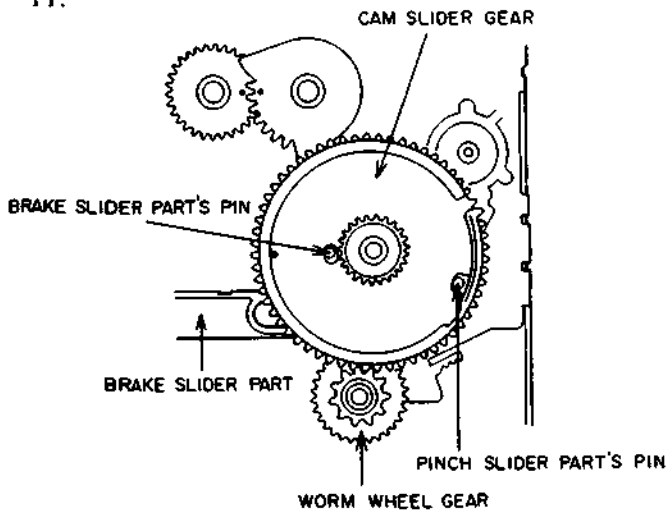


Fig 4-11

- 2) Set the CAM SLIDER GEAR. At this time, adjust the position of the BRAKE SLIDER PART and PINCH SLIDER PART so that both pins appear through the holes on the CAM SLIDER GEAR as shown in Fig.4-11.

- 3) Attach the FRONT LOADING GEAR as shown in Fig.4-12. At this time, align the (B) mark on the FRONT LOADING GEAR with the (B) hole of the FRONT LOADING SLIDER as shown in Fig.4-13.

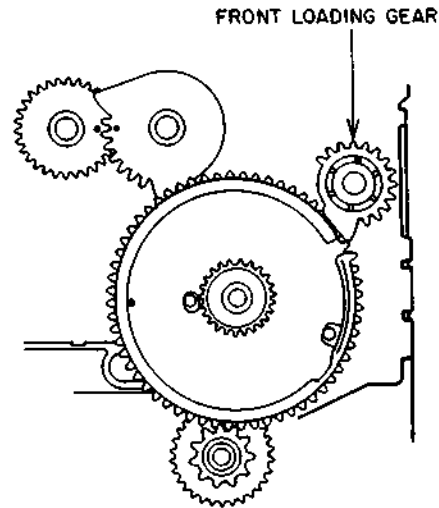


Fig. 4-12

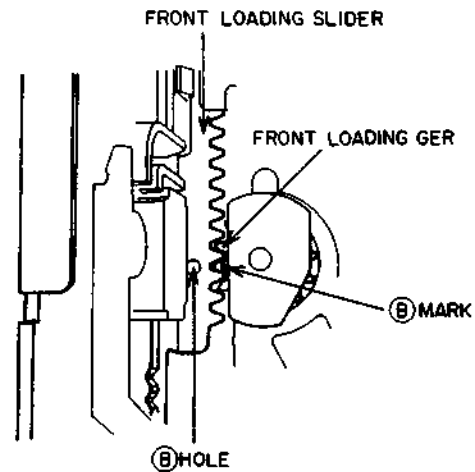


Fig. 4-13

4-6-3. Confirmation of the position of the EJECT GEAR

- 1) Confirm that the EJECT GEAR is in the correct position as shown in Fig.4-14.

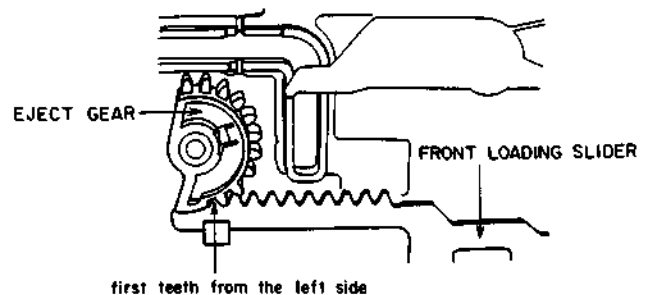


Fig. 4-14

- 2) Install the **LOADING DRIVE BLK** as shown in Fig.4-15.

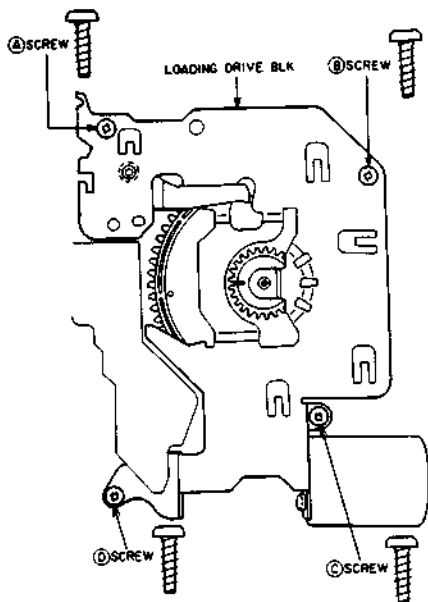


Fig. 4-15

4-6-4. Installation of the **MODE SELECT SWITCH**

- 1) Set the **MODE SELECT SWITCH**'s gear so that the © mark is in the center of the © hole as shown in Fig.4-16.

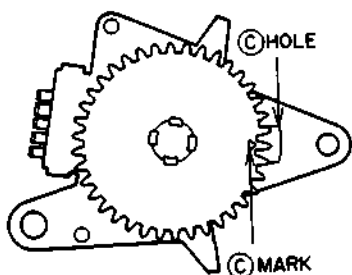


Fig. 4-16

- 2) Attach the **MODE SELECT SWITCH** to the **LOADING DRIVE BLK**. At this time, align the hollow of the gear's tooth (reverse side of the © mark) with the © groove of the **CAM SLIDER GEAR** as shown in Fig.4-17.

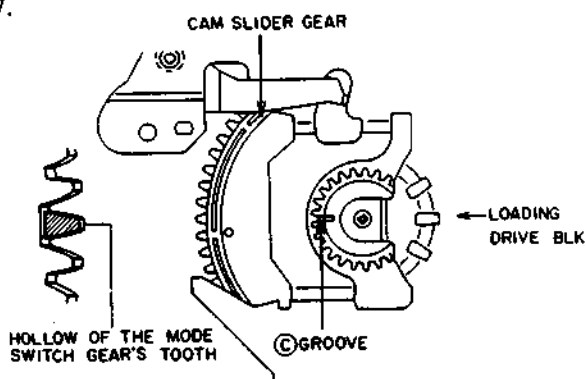


Fig. 4-17

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4-6-5. Installation of the **LOADING ARM BLK**

- 1) While covering the **SENSOR (S)** with your fingers, connect the AC power plug to the AC socket. The **FRONT LOADING SLIDER** will reach the "EJECT" position. Then disconnect the AC power plug from the AC socket before you release your fingers from the **SENSOR (S)**.
- 2) Install the **LOADING ARM BLK** in the reverse order of 4-1-2 (Removal of the **LOADING ARM BLK**). Set the position between both the **EJECT GEAR** and the **JOINT GEAR** as shown in Fig.4-18.

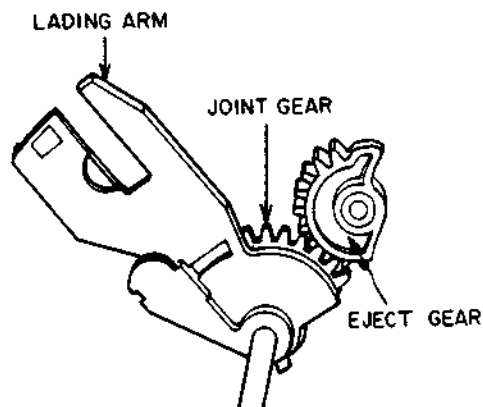


Fig. 4-18

4-6-6. Installation of the **CASSETTE LOAD BLK, FRONT GUIDE** and **UPPER PLATE**

- 1) Attach the **CASSETTE LOAD BLK, FRONT GUIDE** and **UPPER PLATE** in the reverse order of 4-1-1 (Removal of the **CASSETTE LOAD BLK**).
- 2) Insert a video cassette tape and confirm that the loading mechanism will operate properly.

4-7. REPLACEMENT OF THE **UPPER DRUM**

4-7-1. Removal of the **UPPER DRUM**

- 1) Unsolder the four or six (**VS-467EK** only) relay leads and remove the two upper drum fixing screws as shown in Fig.4-19.
- 2) Gently lift and remove the **UPPER DRUM**.

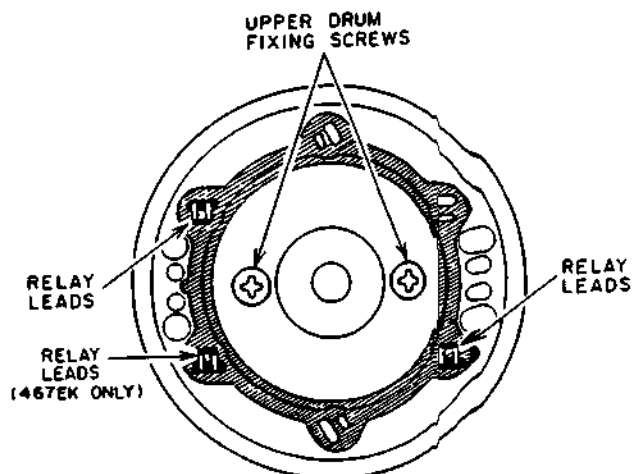


Fig. 4-19

4-7-2. Installation of the UPPER DRUM

1) Except VS-467EK model

Attach the UPPER DRUM to the LOWER DRUM ROTOR so that the upper drum convex (A) and lower drum rotor's white PCB side are in the same direction as shown in Fig. 4-20.

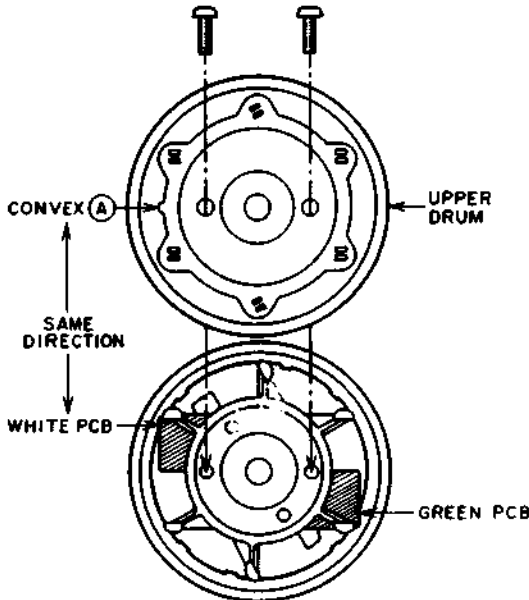


Fig. 4-20

2) VS-467EK model

Attach the UPPER DRUM to the LOWER DRUM ROTOR so that upper drum convex (A) and lower drum rotor's white mark are in the same direction as shown in Fig. 4-21.

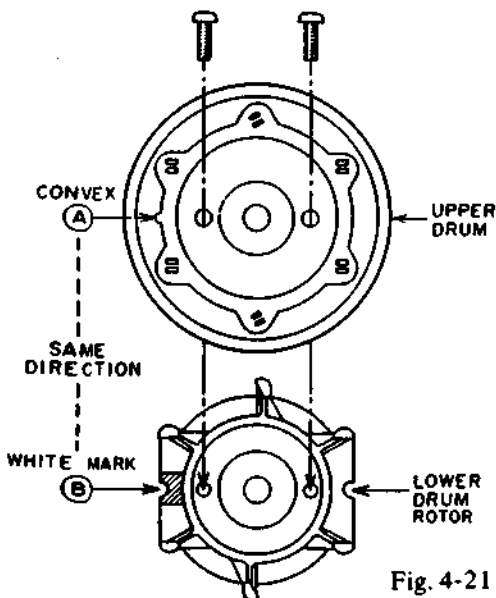


Fig. 4-21

NOTE: Because height precision is required for proper performance, and because head tips are fragile, the following points should be noted when replacing the UPPER DRUM BLOCK.

- Do not loosen the set screw on the collar preload.
- Before fixing, use alcohol to clean both surfaces where the upper drum and the rotary transformer meet.
- If the UPPER DRUM can not be inserted on to the shaft easily during installation, clean the hole in the UPPER DRUM with alcohol and put a little oil on the shaft.
- Make sure that the upper drum fixing screw holes on the rotary transformer part and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.
- Tighten the two upper drum fixing screws alternately and gradually.

4-7-3. After replacement

After replacement, the following adjustments are necessary for proper performance.

- Control head phase adjustment. (Tape transport adj. 5-3-3)
- PB switching point adjustment. (Electrical adj.6-1-1)
- Video head REC current adjustment. (Electrical adj.6-1-7)

4-8. DRUM MOTOR PC BOARD REPLACEMENT

- Remove the two (A) screws then remove the ROTARY PLATE.

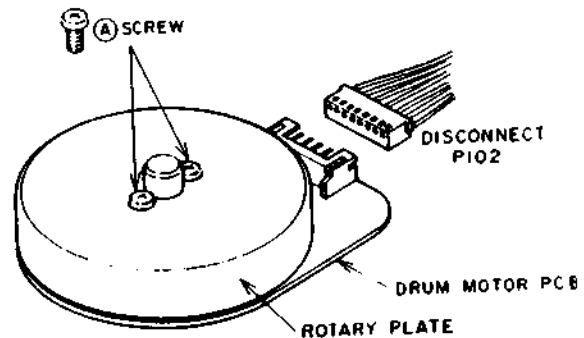


Fig. 4-22

- Remove the three (B) screws and disconnect the connector P102 from the DRUM MOTOR PCB. Then replace the DRUM MOTOR PCB.

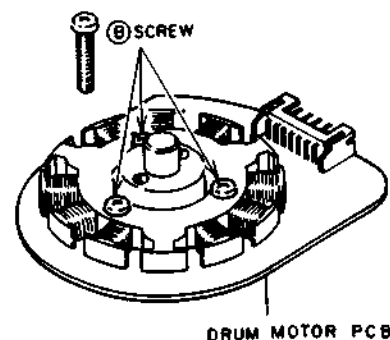


Fig. 4-23

- 3) Attach the ROTARY PLATE to the collar preload so that the rotary plate (A) hole and collar preload (B) hole are in the same direction.

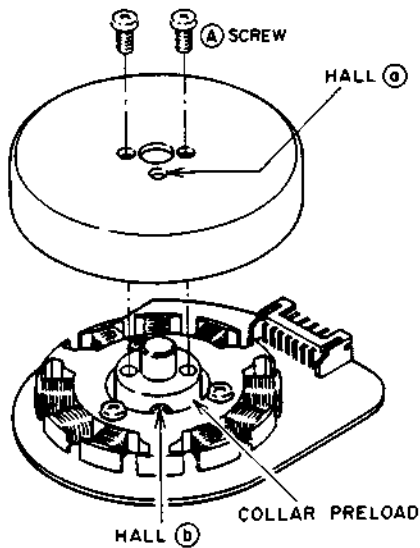


Fig. 4-24

4-9. REMOVAL OF THE MECHANISM BLOCK

4-9-1. Removal of the PRE AMP PCB

- 1) Remove the two (A) screws then pull up the PRE AMP PCB as shown in Fig. 4-25

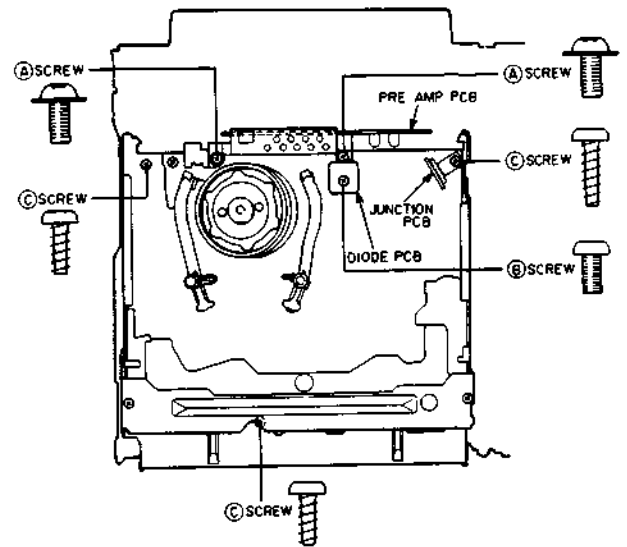


Fig. 4-25.

4-9-2. Removal of the MECHANISM BLK (MECHA.FRAME)

- 1) Disconnect the connectors P302, P401, P408, P409 on the MAIN PCB and P1, P2 on the A/C HEAD(2) PCB.
- 2) Remove the (B) screw on the DIODE PCB and remove the DIODE PCB. (Except VS-425EM and 485EK models)
- 3) Remove the three (C) screws from the MECHA. FRAME as shown in Fig. 4-25.
- 4) Hold the rear side of the MECHA. FRAME then remove by pulling up backward.
- 5) Reassemble in the reverse order for installation.

V. MECHANICAL ADJUSTMENT

5-1. BACK TENSION ADJUSTMENT

- 1) Set the color bar on tape TF-532CBS (AT-751360) in the VCR and play it back.
- 2) Observe the TV screen and adjust the V-HOLD for TV so that the switching point appears on the TV screen in Fig. 5-1.

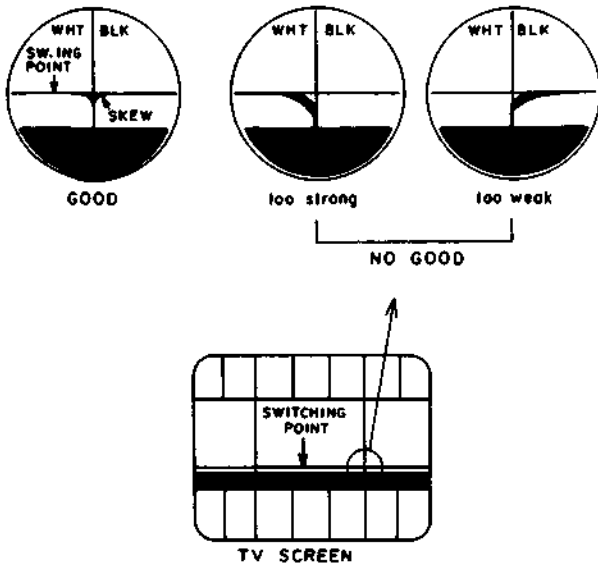


Fig. 5-1

5-2. TAPE TRANSPORT ADJUSTMENTS

NOTE: The following adjustments are required only when an irregularity is found since these adjustment are performed precisely at the factory.

5-2-1. Tape curl adjustment at the TAKE-UP TAPE GUIDE

- 1) Play back a recorded tape which is no longer need.
- 2) Turn the (a) screw on the A/C HEAD BLK until the edge of the tape barely touches the lower part of TAKE UP TAPE GUIDE without any curl or wrinkle.
- 3) Once the (a) screw is adjusted, A/C HEAD height and azimuth adjustment is required. (Refer to 5-3. A/C HEAD POSITION ADJUSTMENT)

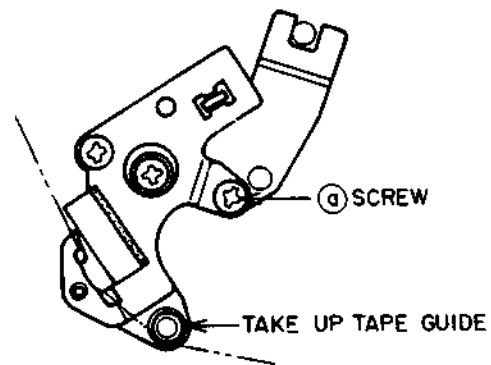


Fig. 5-3

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- 3) Check the skew near the switching point on the TV screen and if the back tension is too much or too weak, eject the tape and select the hook position of the TENSION SPRING where the smallest skew should be obtained.

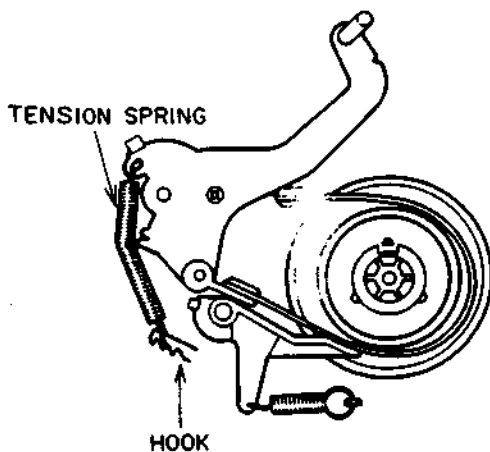


Fig. 5-2

(TAKE-UP TAPE GUIDE)

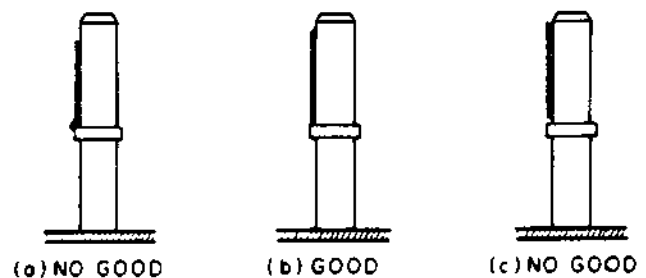


Fig. 5-4

5-2-2. Confirmation of tape curl at the SUPPLY TAPE GUIDE

Confirm that the edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE without any curl or wrinkle as shown in Fig. 5-5.

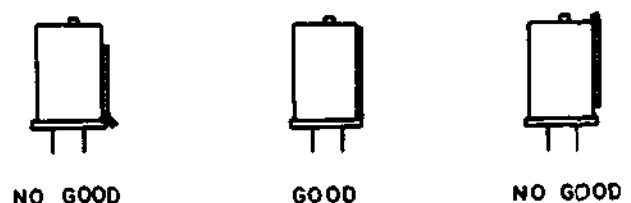
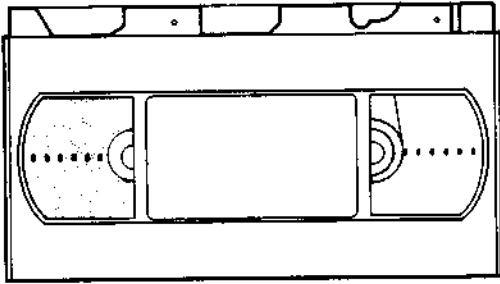


Fig. 5-5

5-2-3. REVIEW ARM height adjustment

- 1) Play back the beginning part of an E-240 (T-160) tape and set the unit in the REVIEW mode by pressing the REW button.
(Remove the tape protection cover to make the adjustment easy.)



- 2) Turn the REVIEW ARM height nut (a) so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig.5-6 to Fig.5-8.

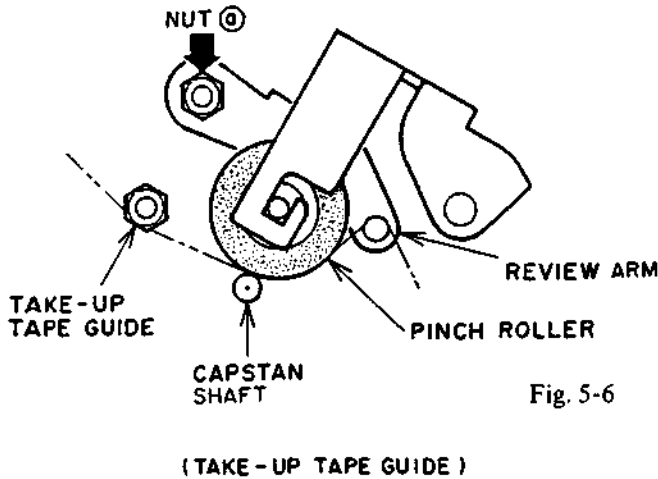


Fig. 5-6

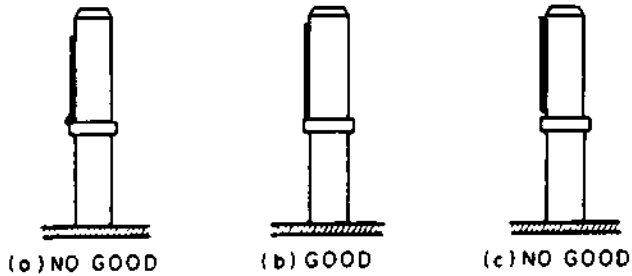


Fig. 5-7

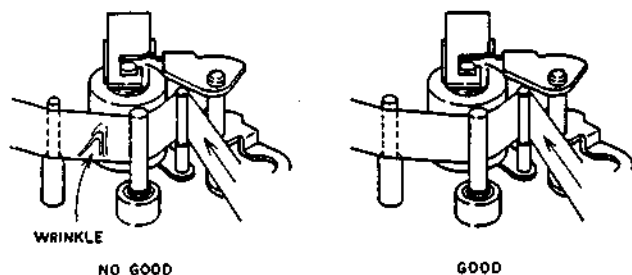


Fig. 5-8

- 3) Play back the beginning part of an E-240 (T-160) tape and this time set the unit in the CUE mode by pressing the F.FWD button.
- 4) Confirm that there is no curl or wrinkle at REVIEW ARM's guide.
If a curl or wrinkle of the tape has occurred, slightly turn the (a) nut (shown in Fig.5-6) until it disappears.

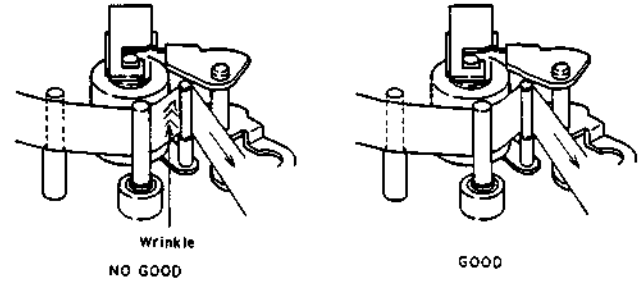


Fig. 5-9

- 5) Set the unit in REVIEW mode again. Then confirm that there is no curl or wrinkle at the TAKE-UP TAPE GUIDE.
(A small gap may appear after this adjustment, but it is allowable.)

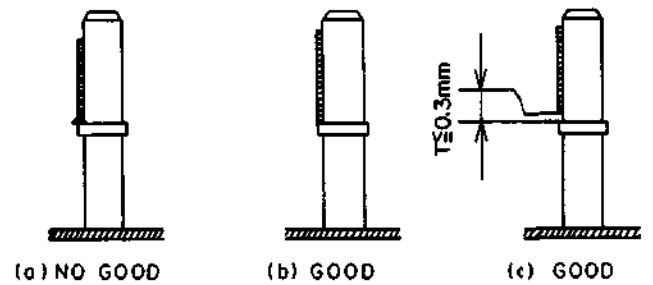


Fig. 5-10

Note

1. If the result is not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Since E-240 (T-160) tape can easily be damaged because of its thinness, a pre-adjustment with E-180 (T-120) tape is recommended.

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5-2-4. LOADING LEADER height adjustments

- 1) Slightly loosen the set screw at the lower part of the LOADING LEADERS (L), (R) so that the LOADING LEADER can be adjusted with reasonable tightness. (Refer Fig.5-11)
- 2) Play back the reference tape TF-530RFS (AT-751775).
- 3) Connect an oscilloscope to TP606 (ENVE) on the VIDEO PCB.
- 4) Turn the LOADING LEADER heads with a flat head (—) screw driver to obtain flat RF envelope as ideal envelope as shown in Fig.5-12.
- 5) After the adjustment is completed, tighten the loading leader set screws.

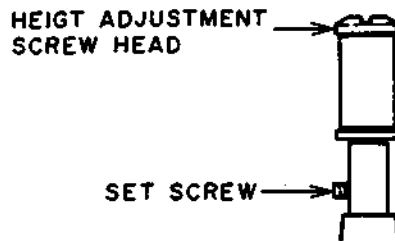


Fig. 5-11

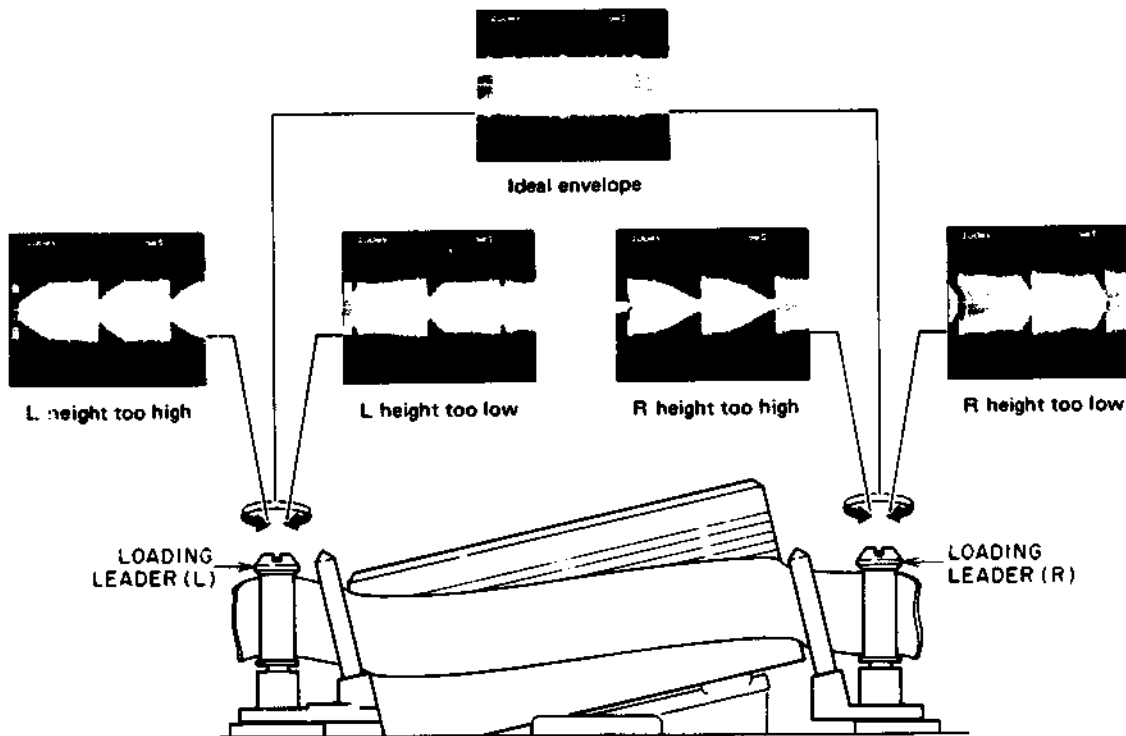
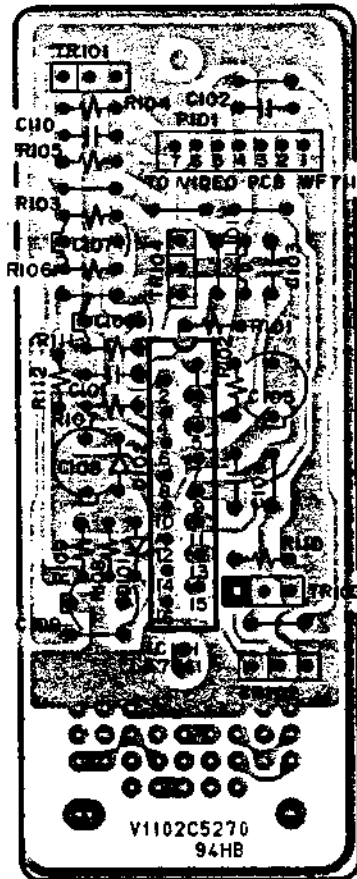


Fig. 5-12

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P/S AUTO PCB
V1102C5270

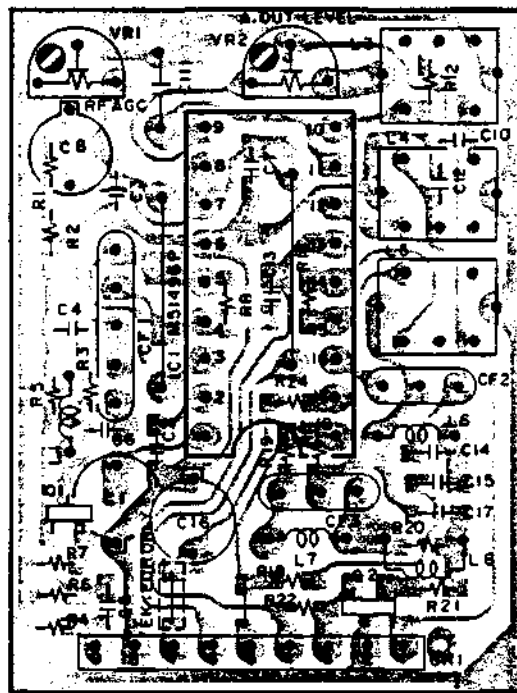


DTA114ES
DTC114ES
2SC3330

B C E
 = PNP TRANSISTOR

B C E
 = NPN TRANSISTOR

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VIF UNIT 6B00663A1

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2. HEAD DRUM BLOCK

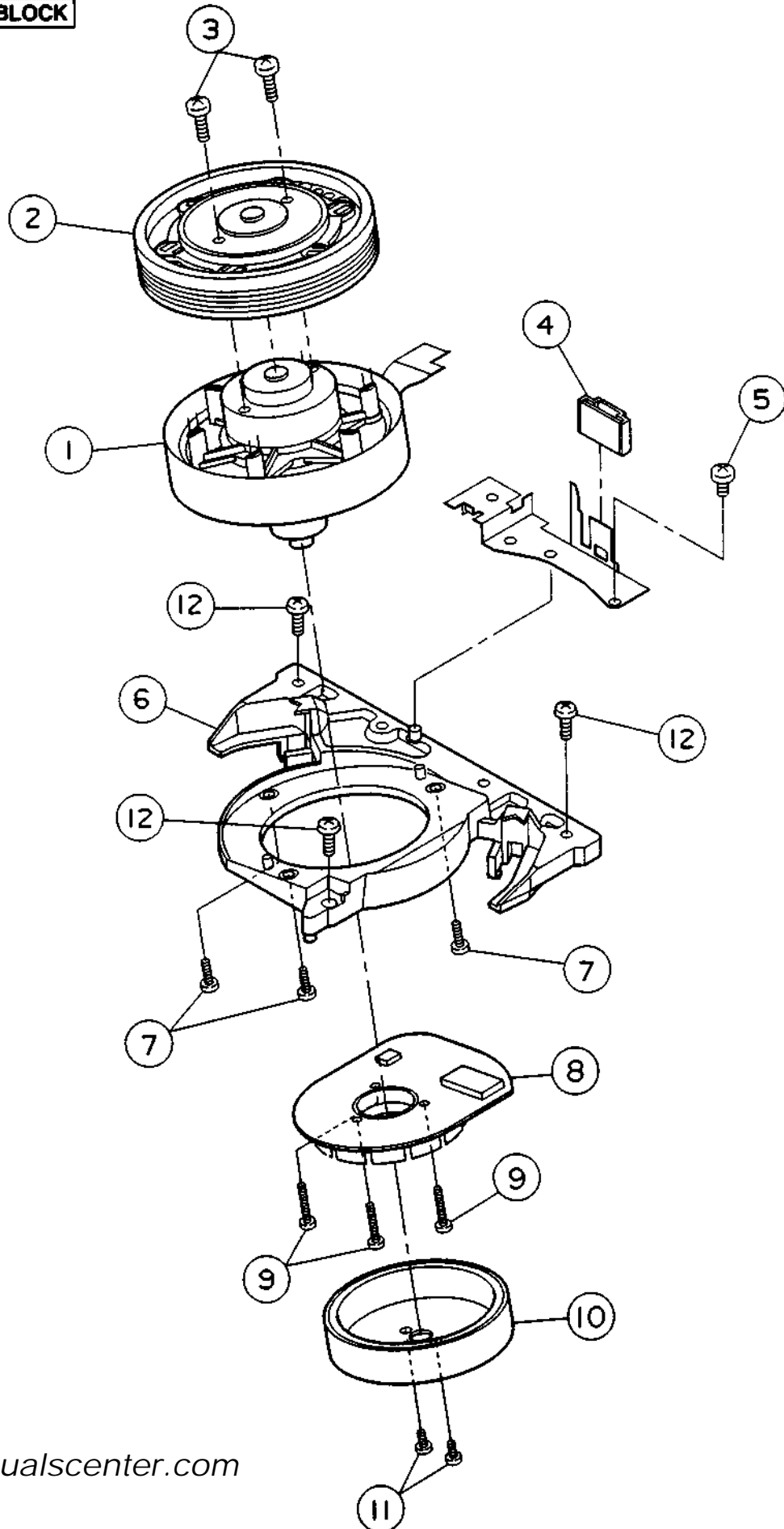
| Ref. No. | Part No. | Description |
|----------|---------------|-------------------------------------------|
| 1A | BV-V1102A410A | LOWER DRUM BLK 425EA [422/425/427/485] |
| 1B | BV-V1102A410B | LOWER DRUM BLK 465EA [467] |
| 2A | BV-V1102A420A | UPPER DRUM BLK [422/425/427/485] |
| 2B | BV-V1102A420C | UPPER DRUM BLK [467] |
| 3 | ZS-321298 | BID30X08STL CMT |
| 4 | SZ-387388J | HOLDER FPC |
| 5 | ZS-379405 | BID30X06STL CMT |
| 6 | MA-387474J | BASE DRUM |
| 7 | ZS-563444 | BID26X08STL CMT |
| 8A | BM-M3225A020A | PC MOTOR BLK SM-250 |
| 8B | BM-M3227A020A | PC MOTOR BLK SM-270 |
| 9 | ZS-467796 | PAN26X12STL CMT |
| 10 | BV-B373848 | YOKE MAGNET PART |
| 11 | ZS-479474 | PAN26X05STL CMT |
| 12 | ZS-370047 | DT BID30X12STL CMT |

NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

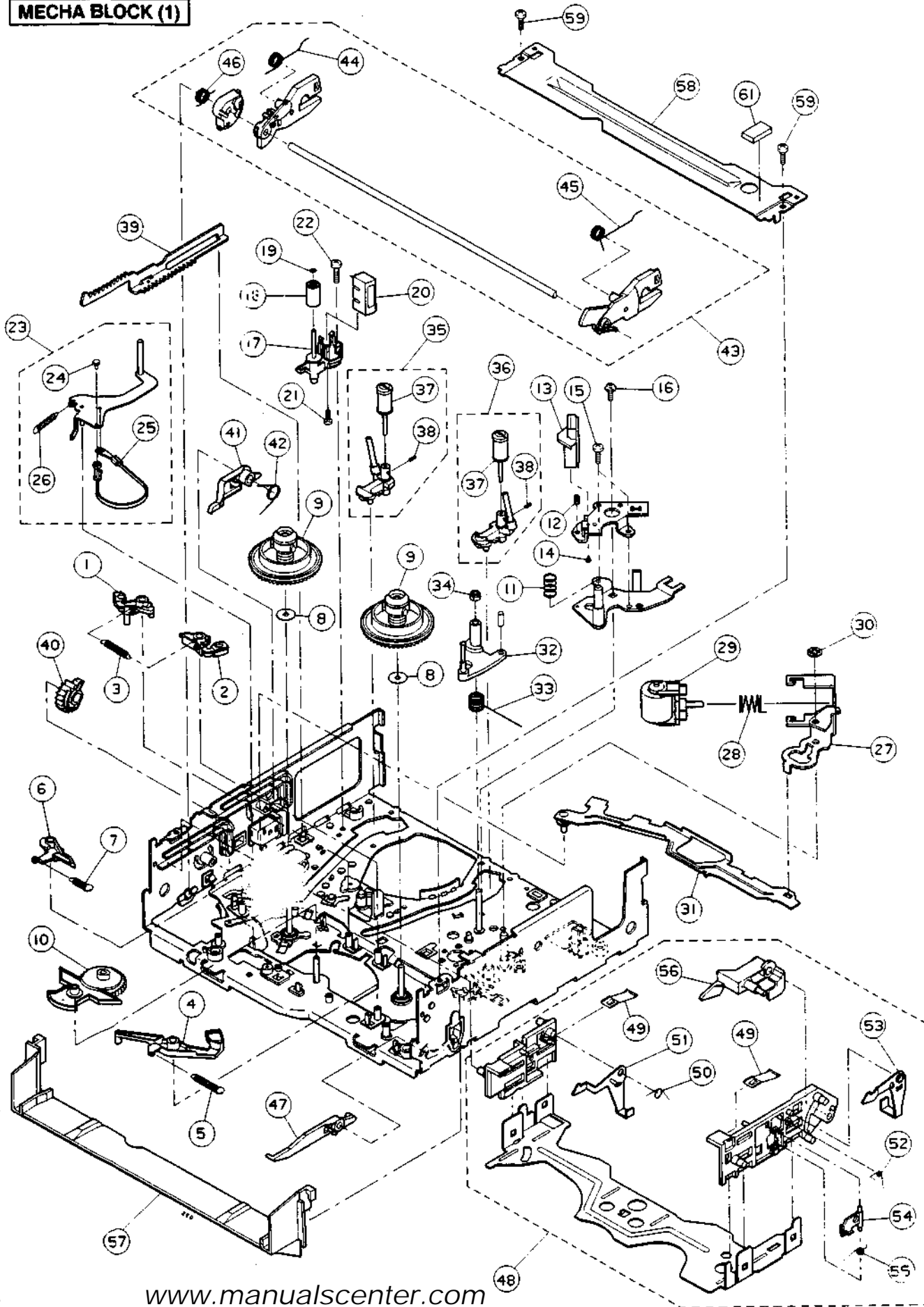
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HEAD DRUM BLOCK



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MECHA BLOCK (1)



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3. MECHA BLOCK (1)

| Ref. No. | Part No. | Description |
|----------|---------------|-------------------------------------------|
| 1 | ML-387316J | MAIN BRAKE(S) PART |
| 2 | ML-387318J | MAIN BRAKE(T) PART |
| 3 | ZG-387320J | SP PULL MAIN BRAKE |
| 4 | ML-387321J | REVIEW BRAKE PART |
| 5 | ZG-387323J | SP PULL REVIEW BRAKE |
| 6 | ML-387423J | ARM LOADING BRAKE |
| 7 | ZG-387467J | SP PULL LOADING BRAKE |
| 8 | ZW-389814J | PW31X110X050PSL |
| 9 | MT-390954J1 | DISK (2)PART |
| 10 | MI-387294J | IDLLER PART |
| 11 | ZG-387438J | SP PUSH A/C |
| 12 | ZG-373900 | 6SET30X080SCM PKR CP |
| 13A | HR-390015J | HEAD COMBO HVMZA1045C [EOH-E,EOG,EM-E] |
| 13B | HR-389866J | HEAD COMBO HVSMC1017A [EK-B] |
| 14 | ZS-373899 | PAN20X2.5STL BDY PS1 |
| 15 | ZS-321298 | BID30X08STL CMT |
| 16 | ZS-389853J | DT BID30X08STL CMT C080 |
| 17 | MZ-387495J | HOLDER FE HEAD PART |
| 18 | MR-387286J | ROLLER IMPEDANCE |
| 19 | ZW-374445 | SLIT W17X032X025PSL |
| 20 | HE-361456 | HEAD E HVFMD0015B |
| 21 | ZS-477876 | PAN20X03STL CMT |
| 22 | ZS-370047 | DT BID30X12STL CMT |
| 23 | BL-V1102A050A | TENSION ARM BLK 425EA |
| 24 | SZ-387263J | HOLDER LEVER TENSION |
| 25 | ML-390768J | TENSION BAND PART |
| 26 | ZG-387272J | SP PULL TENSION |
| 27 | ML-387433J2 | ARM PINCH |
| 28 | ZG-387276J | SP PUSH PINCH |
| 29 | BL-387501J | HOLDER PINCH PART |
| 30 | ZW-332843 | RETAINING RING GRIP 380STL ACP |
| 31 | ML-387431J | SLIDER PINCH PART |
| 32 | ML-387277J | ARM REVIEW PART |
| 33 | ZG-387282J | SP TORSION REVIEW |
| 34 | ZW-350839 | N30 NYLON |
| 35 | BV-V1102A070A | LEADER S BLK 425EA |
| 36 | BV-V1102A080A | LEADER T BLK 425EA |
| 37 | VT-387394J | GUIDE ROLLER D8 PART |
| 38 | ZS-374458 | 6SET20X030SCM PKR FP |
| 39 | ML-387428J | SLIDER FRONT LOADING |
| 40 | MZ-387335J | GEAR EJECT |
| 41 | ML-391745J1 | ARM DAMPER |
| 42 | ZG-391744J | SP TORSION ARM DAMPER |
| 43 | BL-V1102A140A | ARM LOADING BLK 425EA |
| 44 | ZG-387417J | SP TORSION LOAD(S) |
| 45 | ZG-387418J | SP TORSION LOAD(T) |
| 46 | ZG-392831J | SP TORSION JOINT(2) |
| 47 | ML-387350J1 | ARM LID OPENER |
| 48 | BV-V1102A150A | CASSETTE LOAD BLK 425EA |
| 49 | ZG-387348J | SP PLATE HOLDER |
| 50 | ZG-387421J | SP TORSION DAMPER(S) |
| 51 | ML-387345J | LEVER DAMPER(S) |
| 52 | ZG-388290J | SP TORSION DAMPER(T) |
| 53 | ML-387346J | LEVER DAMPER(T) |
| 54 | ML-387344J | LEVER LOCK RELEASE |
| 55 | ZG-387420J | SP TORSION RELEASE |
| 56 | ML-387349J | ARM SHUTTER |
| 57 | SE-387343J | GUIDE FRONT |
| 58 | MZ-387351J | PLATE UPPER |
| 59 | ZS-364543 | DT BID30X08STL CMT |
| 60A | BB-V1102A020A | MECHA DECK BLK 425EA [EOH-E,EOG,EM-E] |
| 60B | BB-V1102A020C | MECHA DECK BLK 427EK [EK-B] |
| 61 | SZ-391866J1 | CUSHION COVER |

NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

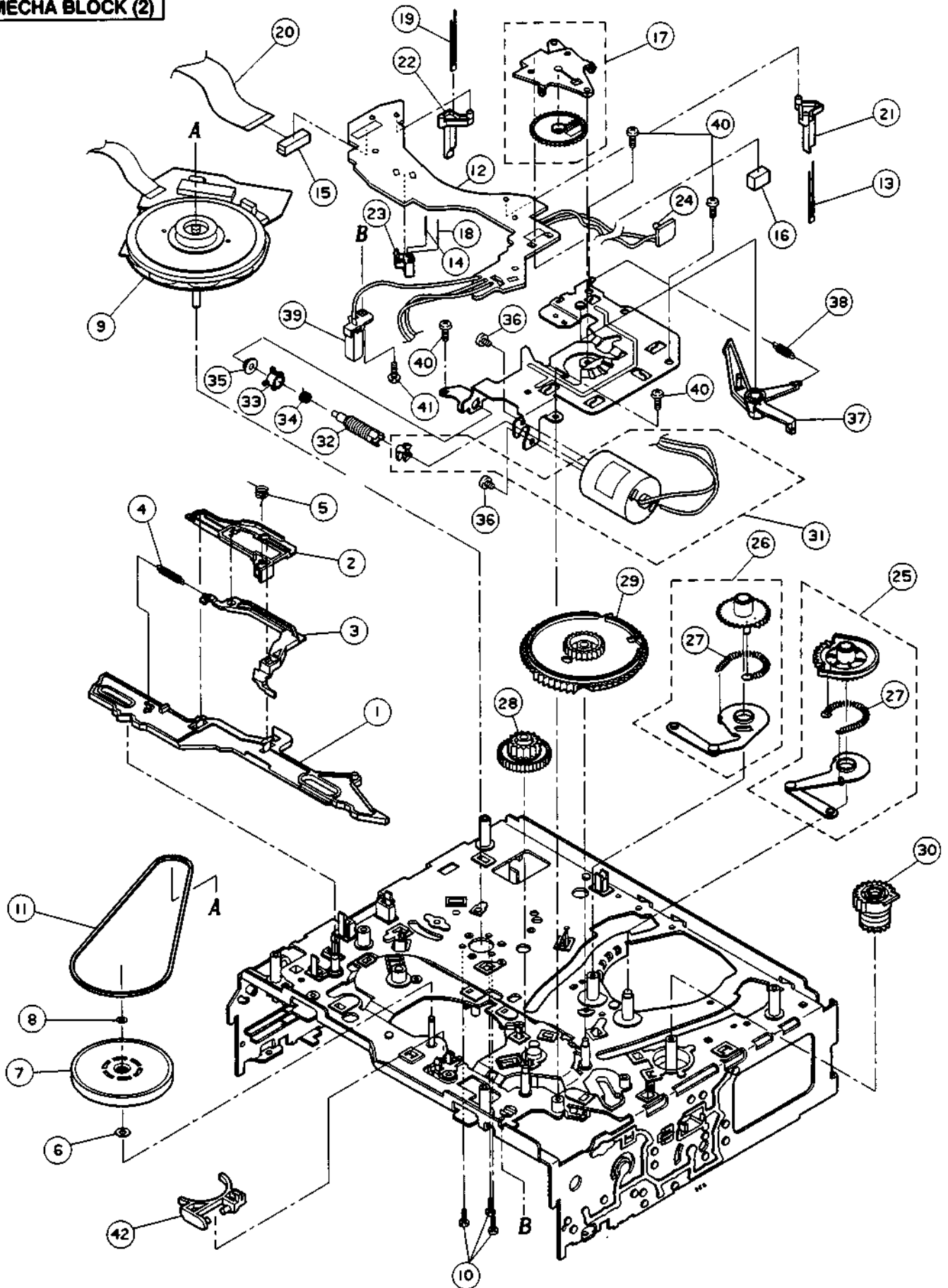
4. MECHA BLOCK (2)

| Ref. No. | Part No. | Description |
|----------|---------------|-------------------------------|
| 1 | ML-387324J | SLIDER BRAKE PART |
| 2 | ML-387327J | SLIDER TRIGGER |
| 3 | ML-387402J | LEVER TRIGGER |
| 4 | ZG-387468J | SP PULL SLIDER |
| 5 | ZG-387403J | SP TORSION COUPLING |
| 6 | ZW-389923J | PW26X060X050PSL |
| 7 | MZ-387298J1 | DISK CLUTCH PART |
| 8 | ZW-387492J | SLIT W21X040X050PSL |
| 9 | 9M-386236J | MOTOR DFX-67B3VWA1 |
| 10 | ZS-365149 | PT BID26X06STL CMT |
| 11 | MB-387289J | BELT CAPSTAN |
| 12 | EA-387496J | PC(#)SENSOR |
| 13 | ED-390011J | D LED GL451 INFRARED [D1] |
| 14 | ED-390012J | D LED GL4800 INFRARED [D2] |
| 15 | EJ-387497J | SOCKET HOUSING 5062-30-10-13 |
| 16 | EJ-381837J | SOCKET 174074-5 5P |
| 17 | ES-387486J | SW MODE SELECT MMS00070ZLBO |
| 18 | ET-390010J | TR PHOTO PT4800 [PTR2] |
| 19 | ET-390009J | TR PHOTO PT493F [PTR4] |
| 20 | EW-389313J | CORD FFC P1.25 L=120 13P |
| 21 | MZ-387430J | HOLDER D-LED |
| 22 | MZ-387445J | HOLDER S SENSOR |
| 23 | MZ-387446J | HOLDER PHOTO SENSOR |
| 24 | ET-361490 | TR PHOTO PN268 R,S [PTR1] |
| 25 | MZ-V1102A090A | GEAR TOGGLE (S) BLK 425EA |
| 26 | MZ-V1102A100A | GEAR TOGGLE (T) BLK 425EA |
| 27 | ZG-387413J | SP PULL TOGGLE |
| 28 | MZ-387332J | GEAR WORM WHEEL |
| 29 | MZ-387331J | GEAR CAM SLIDER |
| 30 | MZ-387333J | GEAR FRONT LOADING |
| 31 | BM-387503J | MOTOR PART |
| 32 | MZ-387330J | GEAR WORM PART |
| 33 | MR-391968J | PULLEY TRIGGER(2) |
| 34 | ZG-387443J | SP TRIGGER |
| 35 | MR-387406J | HOLDER THRUST WORM |
| 36 | ZS-432674 | PAN30X03STL CMT |
| 37 | BL-387458J1 | CAPSTAN BRAKE PART |
| 38 | ZG-387502J | SP PULL CAPSTAN BRAKE |
| 39 | ES-373099 | SW LEAF MTS10110MFC1 |
| 40 | ZS-389950J | PT BID26X10STL CMT |
| 41 | ZS-364543 | DT BID30X06STL CMT |
| 42 | ML-387311J1 | ARM COUPLING |

NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHA BLOCK (2)



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5. P.C BOARD BLOCK

| Ref. No. | Part No. | Description |
|----------|---------------|-----------------------------------------------------|
| 1A | BA-V1102D605A | PC(#) MAIN(PAL) BLK 422EOH(E) [EOH-E] [422] |
| 1B | BA-V1102A605E | PC(#) MAIN(PAL) BLK 425EOG [EOG] |
| 1C | BA-V1102D605B | PC(#) MAIN(PAL) BLK 425EOH(E) [EOH-E] [425] |
| 1D | BA-V1102A600G | PC(#) MAIN(PAL) BLK 425EM [EM-E] |
| 1E | BA-V1102D600C | PC(#) MAIN(PAL) BLK 427EK [EK-B] [427] |
| 1F | BA-V1102A600M | PC(#) MAIN(PAL) BLK 467EK [EK-B] [467] |
| 1G | BA-V1102D600D | PC(#) MAIN(PAL) BLK 485EK [EK-B] [485] |
| 2A | BA-V1102D500C | PC(#) POWER BLK 425EOH [EOH-E] |
| 2B | BA-V1102A500G | PC(#) POWER BLK 425EOG [EOG] |
| 2C | BA-V1102A510A | PC(#) POWER EM BLK 425EM [EM-E] |
| 2D | BA-V1102D500F | PC(#) POWER BLK 467EK [EK-B] |
| 3A | BA-V1110D630F | PC OPERATION(A) BLK 422EOH [EOH-E] [422] |
| 3B | BA-V1102A630E | PC OPERATION(B) BLK 425EOG [EOG] |
| 3C | BA-V1102D630D | PC OPERATION(B) BLK 425EOH [EOH-E] [425] |
| 3D | BA-V1102A630B | PC OPERATION(B) BLK 425EM [EM-E] |
| 3E | BA-V1110D630B | PC OPERATION(A) BLK 427EK [EK-B] [427] |
| 3F | BA-V1110A630D | PC OPERATION(A) BLK 467EK [EK-B] [467] |
| 3G | BA-V1110D630C | PC OPERATION(A) BLK 485EK [EK-B] [485] |
| 4A | BA-V1102A610A | PC PRE AMP(1) BLK 425EA [EXCEPT 467EK] |
| 4B | BA-V1102A620A | PC PRE AMP(2) BLK 467EK [EK-B] [467] |
| 5 | BA-V1102A670A | PC VPT BLK VPS [EOG] |
| 6A | BA-V1110D680A | PC(#) LINEAR STEREO BLK 427EK [EK-B] [427/467] |
| 6B | BA-V1110D680B | PC(#) LINEAR STEREO BLK 485EK [EK-B] [485] |
| 7 | BA-389398J | NICAM UNIT [EK-B] [485] |
| 8 | BA-N4009A020C | PC REMOCON BLK RC-V766A-EB [EOH-E,EOG] [425] |

PC(#) MAIN BLK CONSISTS OF FOLLOWING P.C BOARD

- MAIN P.C BOARD
- VIDEO P.C BOARD

PC(#) POWER BLK CONSISTS OF FOLLOWING P.C BOARD (EXCEPT EM)

- POWER SUPPLY P.C BOARD
- DIODE P.C BOARD

PC(#) POWER BLK CONSISTS OF FOLLOWING P.C BOARD (EM ONLY)

- POWER SUPPLY (1) P.C BOARD
- POWER SUPPLY (2) P.C BOARD
- TR P.C BOARD

PC(#) LINEAR STEREO BLK CONSISTS OF FOLLOWING P.C BOARD

- LINEAR STEREO (A) P.C BOARD
- LINEAR STEREO (B) P.C BOARD

6. MAIN P.C BOARD

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|-------------|-------------------------------------------------------|----------|-------------|--------------------------------------------------------|
| C480 | EC-391843J | C DOUBLE FYDOH 223Z 5.5DC | IC102 | EI-388996J | IC M50455-142SP |
| D1 | ED-387766J | D ZENER H HZS12A2L F05 [EOH-E,EOG,EK-B] | IC201 | EI-346071 | IC M5218L-771 |
| D3 | ED-307572 | D SILICON H 1SS131 [EOH-E,EOG] | IC301 | EI-388360J | IC BA7785AS [EOH-E,EOG,EM-E] |
| D4 | ED-307572 | D SILICON H 1SS131 [EOH-E,EOG] | IC401 | EI-388380J1 | IC SX2777AS |
| D10 | ED-307572 | D SILICON H 1SS131 | IC402 | EI-373980 | IC BA15218N |
| D11 | ED-307572 | D SILICON H 1SS131 | IC403 | EI-385956J | IC UPD75108CW-A54 SXSYP2 |
| D21 | ED-307572 | D SILICON H 1SS131 [EOG] | IC404 | EI-373981J1 | IC BA10393N |
| D22 | ED-307572 | D SILICON H 1SS131 [EOG] | IC405 | EI-353421 | IC BA6229 |
| D40 | ED-307572 | D SILICON H 1SS131 [EOH-E,EOG,EK-B] | L70A | EO-390998J | COIL FIX 1 LAP02 F05 R68K [EOH,EK][422/425/427/467] |
| D41 | ED-388368J | D ZENER H HZS9B3L F05 [EOH-E,EOG,EK-B] | L70B | EO-388803J | COIL FIX 1 LAP02 F05 R47K [EK-B] [485] |
| D90 | ED-367502 | D ZENER H HZS9A1L F05 [EOH-E] | L71 | EO-373260 | COIL FIX 1 LAP02 F05 1R0K [EM-E] |
| D91 | ED-307572 | D SILICON H 1SS131 [EOH-E] | L101 | EO-351869 | COIL FIX 1 LAP02 F05 820K [EOH-E,EOG,EM-E] |
| D101 | ED-307572 | D SILICON H 1SS131 | L102 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101M |
| D102 | ED-307572 | D SILICON H 1SS131 [EOH-E,EOG,EM-E] | L103 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101 |
| D103 | ED-307572 | D SILICON H 1SS131 [EOH-E] | L104 | EO-387782J | COIL FIX 1 EL0405SKI 2R2K |
| D106 | ED-307572 | D SILICON H 1SS131 | L105 | EO-387782J | COIL FIX 1 EL0405SKI 2R2K |
| D107 | ED-307572 | D SILICON H 1SS131 | L106 | EO-351866 | COIL FIX 1 LAP02 F05 330K [EOH-E,EOG,EM-E] |
| D203 | ED-389418J | D ZENER H HZS5.1B3S T26 | L301 | EO-390717J | COIL FIX 1 LHL06TB T05 103J [EOH-E,EOG,EM-E] |
| D204 | ED-624903 | D SILICON H 1S2473 | L302 | EO-390716J | COIL FIX 1 LHL06TB T05 272J [EOH-E,EOG,EM-E] |
| D206 | ED-389840J | D SILICON 1SR139-100HS F10 | L401 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| D207 | ED-388359J | D ZENER H HZS4B2 | L402 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| D211 | ED-307572 | D SILICON H 1SS131 | L403 | EO-351862 | COIL FIX 1 LAP02 F05 100K |
| D212 | ED-307572 | D SILICON H 1SS131 | L404 | EO-375471 | COIL OSC 1 S033344 |
| D301 | ED-624903 | D SILICON H 1S2473 | L405A | EO-391267J | COIL FIX 1 LHL06TB T05 182J [EOH-E,EOG,EM-E] |
| D302 | ED-307572 | D SILICON H 1SS131 | L405B | EO-392829J | COIL FIX 1 TL-8 182J [EK-B] |
| D306 | ED-307572 | D SILICON H 1SS131 [EOH-E,EOG,EM-E] | L407 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| D402 | ED-307572 | D SILICON H 1SS131 | L482 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| D403 | ED-307572 | D SILICON H 1SS131 | L483 | EO-345927 | COIL FIX 1 LAL03KH 101K |
| D404 | ED-307572 | D SILICON H 1SS131 | PJ101 | EJ-387614J | PIN J T6353-ABCB YL BK 4P [EM-E] |
| D405 | ED-624903 | D SILICON H 1S2473 | PJ103 | EJ-387613J | SOCKET M1812 21P [EOH-E,EOG] |
| D406 | ED-624903 | D SILICON H 1S2473 | R452A | ER-336756 | R OMF H FS 1W R47J [EXCEPT 425EM/485EK] |
| D407 | ED-346417 | D ZENER H HZ2C3FA F10 | R452B | ER-391043J | R FUSE H S10 RF25SC 1/6W R47K [EM-E,EK-B] [425/485] |
| D408 | ED-307572 | D SILICON H 1SS131 | TR1 | ET-353899 | TR 2SA1317 S.T.U [EOH-E,EOG,EM-E] |
| D409 | ED-387763J | D ZENER H HZS7B3L F05 | TR2 | ET-354415 | TR DTA144ES [EOH-E,EOG,EK-B] |
| D410 | ED-388368J | D ZENER H HZS9B3L F05 | TR3 | ET-354414 | TR DTC144ES |
| D411 | ED-307572 | D SILICON H 1SS131 | TR10 | ET-375777 | TR 2SC2926S P.O |
| D412 | ED-307572 | D SILICON H 1SS131 | TR11 | ET-353899 | TR 2SA1317 S.T.U |
| D413 | ED-307572 | D SILICON H 1SS131 | TR30 | ET-353899 | TR 2SA1317 S.T.U |
| D414 | ED-307572 | D SILICON H 1SS131 | TR31 | ET-360137 | TR 2SC3330 U.V F05 |
| D416 | ED-366684 | D SILICON H 1SS136 F05 | TR32A | ET-360137 | TR 2SC3330 U.V F05 [EOH-E] |
| D417 | ED-366684 | D SILICON H 1SS136 F05 | TR32B | ET-353899 | TR 2SA1317 S.T.U [EOG,EM-E,EK-B] |
| D418 | ED-389688J | D ZENER H HZS5B2 | TR33 | ET-353897 | TR DTC114ES |
| D419 | ED-307572 | D SILICON H 1SS131 | TR40A | ET-355669 | TR 2SC3246 G.H.J F05 [EOH-E,EOG] |
| D420 | ED-307572 | D SILICON H 1SS131 | TR40B | ET-385916J | TR 2SD2159 U.V F05 [EK-B] |
| D421 | ED-307572 | D SILICON H 1SS131 | TR90 | ET-356236 | TR FET 2SK363 GR,BL [EOH-E] |
| D422 | ED-388387J | D ZENER H HZS30-2L T26 | TR101 | ET-360137 | TR 2SC3330 U.V F05 |
| D423 | ED-307572 | D SILICON H 1SS131 | TR102 | ET-360137 | TR 2SC3330 U.V F05 [EOH-E,EOG,EM-E] |
| D424 | ED-387919J | D ZENER H HZS6A1L F05 | TR103 | ET-353899 | TR 2SA1317 S.T.U |
| D425 | ED-307572 | D SILICON H 1SS131 | TR104 | ET-356336 | TR DTA114ES [EOH-E,EOG,EM-E] |
| D481 | ED-307572 | D SILICON H 1SS131 | TR105 | ET-354414 | TR DTC144ES [EOH-E,EOG,EM-E] |
| FL301 | EO-388362J | COIL OSC 1 V1102 [EOH-E,EOG,EM-E] | TR106 | ET-354364 | TR DTC143TS |
| FR498 | *ER-393219J | R FUSE H S10 RF25S 1/4W 4R7J [EXCEPT 427EK/467EK] | TR107 | ET-360137 | TR 2SC3330 U.V F05 [EOH-E,EOG,EM-E] |
| FR523A | *ER-393220J | R FUSE H S10 RF25S 1/4W 220J [EM-E,EK-B] [425/485] | | | |
| FR523B | *ER-393222J | R FUSE H S10 RF25S 1/4W 100J [EOH-E,EOG] [422/425] | | | |
| IC10 | EI-337530 | IC UPC574J | | | |
| IC20 | EI-390053J | IC LA7910 [EOH-E,EOG,EM-E] | | | |
| IC101 | EI-310036 | IC TC40688P [EOH-E,EOG,EM-E] | | | |

| Ref. No. | Part No. | Description |
|----------|------------|----------------------------------------------------|
| TR109 | ET-353897 | TR DTC114ES |
| TR110 | ET-360137 | TR 2SC3330 U,V F05 |
| TR111 | ET-354414 | TR DTC144ES |
| TR112 | ET-356336 | TR DTA114ES |
| TR113 | ET-353899 | TR 2SA1317 S,T,U |
| TR114 | ET-354414 | TR DTC144ES |
| TR203 | ET-388338J | TR 2SB1425 S,E |
| TR204 | ET-354414 | TR DTC144ES |
| TR205 | ET-366168 | TR 2SD1292 Q,R |
| TR206 | ET-353899 | TR 2SA1317 S,T,U |
| TR207 | ET-360137 | TR 2SC3330 U,V F05 |
| TR301 | ET-360137 | TR 2SC3330 U,V F05 [EOH-E,EOG,EM-E] |
| TR303 | ET-388338J | TR 2SB1425 S,E |
| TR304 | ET-388338J | TR 2SB1425 S,E |
| TR305 | ET-354414 | TR DTC144ES [EXCEPT 467EK] |
| TR306 | ET-353899 | TR 2SA1317 S,T,U |
| TR401 | ET-354414 | TR DTC144ES |
| TR402 | ET-354414 | TR DTC144ES |
| TR403 | ET-354414 | TR DTC144ES |
| TR404 | ET-363953 | TR DTA114TS |
| TR405 | ET-354414 | TR DTC144ES |
| TR406 | ET-354414 | TR DTC144ES |
| TR408 | ET-366168 | TR 2SD1292 Q,R |
| TR409 | ET-360137 | TR 2SC3330 U,V F05 |
| TR410 | ET-360137 | TR 2SC3330 U,V F05 |
| TR411 | ET-360137 | TR 2SC3330 U,V F05 |
| TR412 | ET-353899 | TR 2SA1317 S,T,U |
| VR101 | EV-390141J | R S-FIX H T05 RH0634C 0.1W 332 |
| VR301 | EV-390869J | R S-FIX H T05 RH0634C 0.1W 103 [EOH-E,EOG,EM-E] |
| VR302 | EV-390874J | R S-FIX H T05 RH0634C 0.1W 473 [EOH-E,EOG,EM-E] |
| VR401 | EV-390872J | R S-FIX H T05 RH0634C 0.1W 223 |
| X101 | EI-389974J | OSC X'TAL HC-49/U 17.734475MHZ |
| X401 | EI-385940J | OSC CE CST4.19MGWTF 4.194MHZ |
| 1A | EE-390143J | TV TUNER TERE3-001A HYP.EO [EOH-E] |
| 1B | EE-387604J | TV TUNER TERE1-007A EOG [EOG] |
| 1C | EE-387602J | TV TUNER VTSB6CZ EV [EM-E] |
| 1D | EE-387607J | TV TUNER TERB1-008A EK [EK-B] |
| 2A | BV-390052J | RF CONVERTER ENC-87975 EO [EOH-E,EOG] |
| 2B | BV-387635J | RF CONVERTER MDLK6B063A EK [EK-B] |
| 2C | BV-387611J | RF CONVERTER YAA21-0454 EV [EM-E] |
| 3A | SP-387357J | PANEL REAR JACK EK [EOH-E] |
| 3B | SP-388305J | PANEL REAR JACK EOG [EOG] |
| 3C | SP-388307J | PANEL REAR JACK EA [EM-E] |
| 3D | SP-389825J | PANEL REAR JACK EK(S) [EK-B] |

7. VIDEO P.C BOARD

| Ref. No. | Part No. | Description |
|----------|------------|-----------------------------------------------|
| D601 | ED-307572 | D SILICON H 1SS131 |
| D604 | ED-392779J | D SCHOTTKY 1SS198 T26 |
| D605 | ED-307572 | D SILICON H 1SS131 |
| D675 | ED-307572 | D SILICON H 1SS131 |
| D701 | ED-307572 | D SILICON H 1SS131 |
| D702 | ED-307572 | D SILICON H 1SS131 |
| DL701 | EH-390730J | DL EFD-JF124A13J |
| FL601 | EH-368821 | FILTER LC LP MYV-23R |
| FL602 | EH-392816J | FILTER LC LP SEL-4801 |
| FL701 | EH-364045 | FILTER LC FF-78P |
| IC601 | EI-373966 | IC MSM6965-3RS |
| IC602 | EI-388347J | IC AN3247K |
| IC701 | EI-381630J | IC LA7330 |
| L601 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| L602 | EO-387782J | COIL FIX 1 EL0405SKI 2R2K |
| L603 | EO-387782J | COIL FIX 1 EL0405SKI 2R2K |
| L604 | EO-357508 | COIL FIX 1 LAP02 F05 151K |
| L605 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L606 | EO-351862 | COIL FIX 1 LAP02 F05 100K |
| L607 | EO-360555 | COIL FIX 1 LAP02 F05 180K |
| L608 | EO-351868 | COIL FIX 1 LAP02 F05 470K |
| L609 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| L701 | EO-388087J | COIL FIX 1 LF-5.0S F05 331K |
| L702 | EO-388353J | COIL FIX 1 LF-5.0S F05 471K |
| L703 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L704 | EO-351867 | COIL FIX 1 LAP02 F05 390K |
| L705 | EO-353900 | COIL FIX 1 LAP02 F05 150K |
| L706 | EO-345871 | COIL FIX 1 EL0606SKI 180J |
| L707 | EO-368619 | COIL FIX 1 LAP02 F05 3R3K |
| L708 | EO-351868 | COIL FIX 1 LAP02 F05 470K |
| L709 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L710 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L771 | EO-364966 | COIL FIX 1 LAP02 F05 120K [EOH-E,EOG,EM-E] |
| TR601 | ET-353899 | TR 2SA1317 S,T,U |
| TR602 | ET-353899 | TR 2SA1317 S,T,U |
| TR603 | ET-360137 | TR 2SC3330 U,V F05 |
| TR671 | ET-360137 | TR 2SC3330 U,V F05 [EOH-E,EOG,EK-B] |
| TR701 | ET-353897 | TR DTC114ES |
| TR702 | ET-354414 | TR DTC144ES |
| TR703 | ET-353899 | TR 2SA1317 S,T,U |
| TR704 | ET-360137 | TR 2SC3330 U,V F05 |
| TR705 | ET-360137 | TR 2SC3330 U,V F05 |
| TR707 | ET-360137 | TR 2SC3330 U,V F05 |
| TR708 | ET-360137 | TR 2SC3330 U,V F05 |
| TR710 | ET-360137 | TR 2SC3330 U,V F05 |
| TR711 | ET-360137 | TR 2SC3330 U,V F05 |
| TR712 | ET-353899 | TR 2SA1317 S,T,U |
| TR771A | ET-353897 | TR DTC114ES [EOH-E] |
| TR771B | ET-364060 | TR DTC143ES [EOG,EM-E] |
| TR772A | ET-356336 | TR DTA114ES [EOH-E] |
| TR772B | ET-354370 | TR DTA124ES [EOG,EM-E] |
| VR601 | EV-390869J | R S-FIX H T05 RH0634C 01W 103 |
| VR602 | EV-390873J | R S-FIX H T05 RH0634C 01W 472 |
| VR603 | EV-389868J | R S-FIX H T05 RH0634C 01W 682 |
| VR604 | EV-390141J | R S-FIX H T05 RH0634C 01W 332 |
| VR605 | EV-390871J | R S-FIX H T05 RH0634C 01W 153 |
| VR606 | EV-390871J | R S-FIX H T05 RH0634C 01W 153 |
| X701 | EI-381632J | OSC X'TAL(86686) 4.43369M HZ |

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8. PRE-AMP P.C BOARD (EXCEPT 467EK)

| Ref. No. | Part No. | Description |
|----------|------------|------------------------------|
| D1 | ED-307572 | D SILICON H 1SS131 |
| IC1 | EI-387586J | IC BA7252S |
| L1 | EO-376857 | COIL FIX 1 LF-5.0S F05 5R6K |
| L3 | EO-376858 | COIL FIX 1 LF-5.0S F05 560K |
| L4 | EO-376606 | COIL FIX 1 LF-5.0S F05 180K |
| L5 | EO-381193J | COIL FIX 1 EL0405SKI 271K |
| L6 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L8 | EO-376859 | COIL FIX 1 LF-5.0S F05 8R2K |
| L9 | EO-376603 | COIL FIX 1 LF-5.0S F05 150K |
| L11 | EO-376612 | COIL FIX 1 LF-5.0S F05 680K |
| L12 | EO-381191J | COIL FIX 1 EL0405SKI 181K |
| L13 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L14 | EO-376610 | COIL FIX 1 LF-5.0S F05 330K |
| L15 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| P2 | EJ-387587J | SOCKET 8370-67-800 6P |
| PS3 | EJ-389318J | SOCKET HOUSING 5062-30-10-09 |
| TR1 | ET-353899 | TR 2SA1317 S.T,U |
| TR2 | ET-360137 | TR 2SC3330 U,V F05 |
| TR4 | ET-360137 | TR 2SC3330 U,V F05 |
| TR6 | ET-360137 | TR 2SC3330 U,V F05 |
| TR7 | ET-360137 | TR 2SC3330 U,V F05 |
| VR1 | EV-390157J | R S-FIX V KV5F639A 0.10W 102 |
| VR2 | EV-391042J | R S-FIX V KV5F639A 0.10W 501 |
| WP3 | EW-389312J | CORD FFC P1.25 L=180 9P |

9. PRE-AMP P.C BOARD (467EK ONLY)

| Ref. No. | Part No. | Description |
|----------|------------|------------------------------|
| D1 | ED-307572 | D SILICON H 1SS131 |
| D2 | ED-307572 | D SILICON H 1SS131 |
| D3 | ED-307572 | D SILICON H 1SS131 |
| D5 | ED-307572 | D SILICON H 1SS131 |
| D8 | ED-307572 | D SILICON H 1SS131 |
| D10 | ED-307572 | D SILICON H 1SS131 |
| IC1 | EI-387586J | IC BA7244BS |
| L1 | EO-376858 | COIL FIX 1 LF-5.0S F05 560K |
| L2 | EO-376603 | COIL FIX 1 LF-5.0S F05 150K |
| L3 | EO-381193J | COIL FIX 1 EL0405SKI 271K |
| L4 | EO-376614 | COIL FIX 1 LF-5.0S F05 220K |
| L5 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L6 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L7 | EO-376607 | COIL FIX 1 LF-5.0S F05 181K |
| L8 | EO-376612 | COIL FIX 1 LF-5.0S F05 680K |
| L10 | EO-380734J | COIL FIX 1 LF-5.0S F05 6R8K |
| L11 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L12 | EO-376610 | COIL FIX 1 LF-5.0S F05 330K |
| L14 | EO-376857 | COIL FIX 1 LF-5.0S F05 5R6K |
| L15 | EO-376859 | COIL FIX 1 LF-5.0S F05 8R2K |
| P1 | EJ-387587J | SOCKET 8370-67-800 6P |
| PS1 | EJ-389815J | SOCKET HOUSING 5062-30-10-15 |
| TR1 | ET-360137 | TR 2SC3330 U,V F05 |
| TR2 | ET-360137 | TR 2SC3330 U,V F05 |
| TR4 | ET-360137 | TR 2SC3330 U,V F05 |
| TR10 | ET-354414 | TR DTC144ES |
| TR11 | ET-353899 | TR 2SA1317 S.T,U |
| TR12 | ET-360137 | TR 2SC3330 U,V F05 |
| VR1 | EV-391042J | R S-FIX V KV5F639A 0.10W 501 |
| VR2 | EV-390157J | R S-FIX V KV5F639A 0.10W 102 |
| WP1 | EW-389317J | CORD FFC P1.25 L=180 15P |

10. OPERATION P.C BOARD

| Ref. No. | Part No. | Description |
|----------|-------------|------------------------------|
| D1 | ED-307572 | D SILICON H 1SS131 |
| D2 | ED-387765J | D ZENER H HZS9C1L F05 |
| D3 | ED-307572 | D SILICON H 1SS131 |
| D4 | ED-382620J | D LED PG5562X GREEN |
| D5 | ED-307572 | D SILICON H 1SS131 |
| | | [EOH-E,EOG] |
| | ED-307572 | D SILICON H 1SS131 |
| | ED-307572 | D SILICON H 1SS131 |
| D8 | ED-307572 | D SILICON H 1SS131 |
| D9 | ED-307572 | D SILICON H 1SS131 |
| D10 | ED-307572 | D SILICON H 1SS131 |
| D11 | ED-307572 | D SILICON H 1SS131 |
| D12 | ED-307572 | D SILICON H 1SS131 |
| D13 | ED-307572 | D SILICON H 1SS131 |
| D14 | ED-307572 | D SILICON H 1SS131 |
| D15 | ED-307572 | D SILICON H 1SS131 |
| D16 | ED-307572 | D SILICON H 1SS131 |
| | | [EK-B] |
| D18 | ED-307572 | D SILICON H 1SS131 |
| | | [EK-B] [467] |
| D21 | ED-307572 | D SILICON H 1SS131 |
| | | [EK-B] |
| D24 | ED-307572 | D SILICON H 1SS131 |
| | | [EOH-E] |
| D25 | ED-307572 | D SILICON H 1SS131 |
| | | [EK-B] |
| D26 | ED-307572 | D SILICON H 1SS131 |
| | | [EK-B] [485] |
| D27 | ED-307572 | D SILICON H 1SS131 |
| | | [EK-B] [485] |
| D28 | ED-307572 | D SILICON H 1SS131 |
| | | [EOH,EOG,EK][422/425/485] |
| D30 | ED-307572 | D SILICON H 1SS131 |
| | | [EOG] |
| FL1A | EM-387624J | IND FL FV345G CHARACTER |
| | | [EOH-E,EM-E] |
| FL1B | EM-387625J | IND FL FV374G CHARACTER |
| | | [EOG] |
| FL1C | EM-389833J | IND FL FV392G CHARACTER |
| | | [EK-B] |
| IB1 | EH-387619J | COMP R RGLE14X 103J |
| IB2 | EH-383083J | COMP R RGLE3X 103J |
| IB4 | EH-378541J | COMP R RGLE3X 473J |
| IC1 | EI-385955J | IC UPD75216A-268 SXOPP2 |
| IC2 | EI-387620J | IC BR93C46 |
| IC3 | EI-373955 | IC S-8053ALR |
| PH1 | ET-381637J1 | DETECTOR GP1U521X |
| PS1 | EJ-389815J | SOCKET HOUSING 5062-30-10-15 |
| PS2 | EJ-387497J | SOCKET HOUSING 5062-30-10-13 |
| SW1 | ES-349474 | SW TACT SKHHAM004A |
| SW2 | ES-349474 | SW TACT SKHHAM004A |
| SW3 | ES-349474 | SW TACT SKHHAM004A |
| SW4 | ES-349474 | SW TACT SKHHAM004A |
| SW5 | ES-349474 | SW TACT SKHHAM004A |
| SW7 | ES-349474 | SW TACT SKHHAM004A |
| SW8 | ES-349474 | SW TACT SKHHAM004A |
| SW9 | ES-349474 | SW TACT SKHHAM004A |
| SW10 | ES-349474 | SW TACT SKHHAM004A |
| SW11 | ES-349474 | SW TACT SKHHAM004A |
| SW12 | ES-349474 | SW TACT SKHHAM004A |
| SW13 | ES-349474 | SW TACT SKHHAM004A |
| SW14 | ES-349474 | SW TACT SKHHAM004A |
| | | [EK-B] |
| SW15 | ES-349474 | SW TACT SKHHAM004A |
| SW16 | ES-349474 | SW TACT SKHHAM004A |
| SW17 | ES-349474 | SW TACT SKHHAM004A |
| SW18 | ES-349474 | SW TACT SKHHAM004A |
| SW19 | ES-349474 | SW TACT SKHHAM004A |
| SW20 | ES-390156J | SW SLIDE SSSS91690A 1-01-02N |
| | | [EOH,EOG,EK][422/425/485] |
| SW21 | ES-390156J | SW SLIDE SSSS91690A 1-01-02N |
| | | [EOH-E,EK-B] |
| TR1 | ET-354414 | TR DTC144ES |
| TR2 | ET-360137 | TR 2SC3330 U,V F05 |
| TR3 | ET-354414 | TR DTC144ES |

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| Ref. No. | Part No. | Description |
|----------|------------|------------------------------------------|
| TR4 | ET-360137 | TR 2SC3330 U,V F05 |
| TR5 | ET-360137 | TR 2SC3330 U,V F05 |
| TR6 | ET-373985 | TR DTA144TS [EK-B] [485] |
| TR7 | ET-373985 | TR DTA144TS [EK-B] [485] |
| TR8 | ET-373985 | TR DTA144TS [EOH,EOG,EK][422/425/485] |
| WP1 | EW-389315J | CORD FFC P1.25 L=120 15P |
| WP2 | EW-389314J | CORD FFC P1.25 L=170 13P |
| X1 | EI-388110J | OSC CE CST4.19MG 4.194MHZ |
| X2 | EI-368825 | OSC X'TAL MX-38T 32.768KHZ |

11. VIF UNIT

| Ref. No. | Part No. | Description |
|----------|------------|-------------------------------------------------|
| CF1A | EH-373914 | FILTER CE SAF38.9MZ70Z [EOH-E,EM-E] |
| CF1B | EH-373917 | FILTER CE SAF39.5MZ70Z [EK-B] [427/467] |
| CF1C | EH-725826J | FILTER CE SAF38.9MZY71Z [EOG] |
| CF1D | EH-714628 | FILTER SAW SAF39.5MZ70Z [EK-B] [485] |
| CF2A | ER-373620 | R CB H F10 HQ RDS 1/4W 330J [EOH-E,EM-E,EOG] |
| CF2B | EH-373921 | FILTER CE SFE6.0MB [EK-B] [427/467] |
| CF2C | EH-725829J | FILTER CE SFT6.0MA [EK-B] [485] |
| CF3A | EH-368948 | FILTER CE TPS5.5MW 5.5000MHZ [EOH-E,EOG] |
| CF3B | EH-373918 | FILTER CE TPS5.5MB [EM-E] |
| CF3C | EH-373919 | FILTER CE TPS6.0MB [EK-B] |
| CF4 | EH-725827J | FILTER CE SAF32.9MDE70Z [EK-B] [485] |
| IC1 | EI-368809 | IC M51496P |
| IC2 | EI-730158J | IC TA8703S [EK-B] [485] |
| L1A | EO-387800J | COIL FIX 1 EL0405SKI 2R7K [EXCEPT 485EK] |
| L1B | EO-381188J | COIL FIX 1 EL0405SKI 1R0K [EK-B] [485] |
| L2 | EO-717495 | COIL RF 7KL 6F16151B1 [EK-B] [485] |
| L3A | EO-725953J | COIL SIF DET 6F16263A2 [EOH-E,EM-E,EOG] |
| L3B | EO-725954J | COIL SIF DET 6F16263A3 [EK-B] |
| L4A | EO-725956J | COIL AFT 6F16262A1 [EOH-E,EM-E,EOG] |
| L4B | EO-725958J | COIL AFT 6F16262A3 [EK-B] [427/467] |
| L4C | EO-714614 | COIL RF 6F16115B1 [EK-B] [485] |
| L5A | EO-725960J | COIL TANK 6F16259A1 [EOH-E,EM-E,EOG] |
| L5B | EO-725962J | COIL TANK 6F16259A3 [EK-B] [427/467] |
| L5C | EO-714610 | COIL RF 6F16113B1 [EK-B] [485] |
| L6A | EO-387799J | COIL FIX 1 EL0405SKI 180K [EXCEPT 427/467EK] |
| L6B | EO-387798J | COIL FIX 1 EL0405SKI 150K [EK-B] [427/467] |

| Ref. No. | Part No. | Description |
|----------|------------|-----------------------------------------------|
| L7A | EO-387799J | COIL FIX 1 EL0405SKI 180K [EOH-E,EOG,EM-E] |
| L7B | EO-387798J | COIL FIX 1 EL0405SKI 150K [EK-B] [427/467] |
| L7C | EO-387781J | COIL FIX 1 EL0405SKI 120K [EK-B] [485] |
| L8 | EO-387802J | COIL FIX 1 EL0405SKI 330K [EXCEPT 485EK] |
| L9 | EO-714610 | COIL RF 6F16113B1 [EK-B] [485] |
| L10 | EO-387781J | COIL FIX 1 EL0405SKI 120K [EK-B] [485] |
| L51 | EO-725964J | COIL TRAP 6F16222A1 [EOG] |
| L52 | EO-725965J | COIL TRAP 6F16223A1 [EOG] |
| L53 | EO-391141J | COIL FIX 1 EL0405SKI R47M [EOG] |
| Q1 | ET-725820J | TR CHIP 2SC2735J |
| Q2 | ET-713614 | TR CHIP 2SA1235 E,F [EXCEPT 485EK] |
| Q4 | ET-713614 | TR CHIP 2SA1235 E,F [EK-B] [485] |
| Q5 | ET-713615 | TR CHIP 2SC3052 E,F [EK-B] [485] |
| Q7 | ET-713614 | TR CHIP 2SA1235 E,F [EK-B] [485] |
| Q51 | ET-724885J | TR CHIP RT1N141C [EOG] |
| Q52 | ET-724885J | TR CHIP RT1N141C [EOG] |
| VR1 | EV-725966J | R S-FIX V RVF6W01 203K [EOH-E,EM-E,EK-B] |
| VR2 | EV-388163J | R S-FIX V RVF6W01 0.10W 202 [EXCEPT 485EK] |
| VR3 | EV-388163J | R S-FIX V RVF6W01 0.10W 202 [EK-B] [485] |
| VR51 | EV-725966J | R S-FIX V RVF6W01 203K [EOG] |
| VR52 | EV-725966J | R S-FIX V RVF6W01 203K [EOG] |

12. POWER SUPPLY P.C BOARD (EXCEPT EM)

| Ref. No. | Part No. | Description |
|----------|-------------|-------------------------------------|
| C1 | *EC-389414J | C CE V DE7 B102K 400AC |
| C2 | EC-363490 | C EC V CUT SME 222M 16.00C |
| C3 | EC-364958 | C EC V CUT SME 222M 35.00C |
| D1 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D2 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D3 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D4 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D5 | ED-624903 | D SILICON H 1S2473 |
| D8 | ED-322046 | D ZENER H HZ18 1 |
| D10 | ED-343996 | D ZENER H HZ12 B1 |
| FR1 | *ER-392819J | R FUSE H S10 RF25SC 1/4WR 10K |
| FR3 | *ER-391044J | R FUSE H S10 RF25SC 1/6WR 8K |
| FR4 | *ER-392807J | R FUSE H S10 RF25SC 1/6WR 12K |
| L1 | EO-389410J | COIL LF RR03R212A10 10.0UH [EOG] |
| L2 | EO-389410J | COIL LF RR03R212A10 10.0UH [EOG] |
| R6 | ER-389875J | R OMF H S10 FS 1/2W R68J |
| TR1 | ET-373025 | TR 2SD1944 J1,J2,K |
| TR2 | ET-360137 | TR 2SC3330 U,V F05 |
| TR3 | ET-391025J | TR 2SD2012 |
| TR4 | ET-391025J | TR 2SD2012 |
| TR5 | ET-380685J | TR 2SD1761 E,F,G |
| T1A | *BT-391109J | TRANS POW V1105 EO [EOH-E,EOG] |
| T1B | *BT-389239J | TRANS POW V1102 EK [EK-B] |

13. DIODE P.C BOARD (EXCEPT EM)

| Ref. No. | Part No. | Description |
|----------|-------------|--------------------------------|
| D9 | *ED-389296J | D SILICON BR31-B-D-80 100/3.0A |

14. POWER SUPPLY (1) P.C BOARD(EM ONLY)

| Ref. No. | Part No. | Description |
|----------|-------------|--------------------------------|
| C1 | EC-363491 | C EC V CUT SME 222M 25.0DC |
| C2 | EC-364958 | C EC V CUT SME 222M 35.0DC |
| C104 | *EC-378327 | C EC V SM 2R2M 450DC |
| D1 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D2 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D3 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D4 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D5 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D6 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D7 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D8 | *ED-511907 | D SILICON 1N4002 100/1.0A |
| D9 | ED-346618 | D ZENER H HZ15 1 |
| D10 | ED-380089J | D SILICON DFC15TC-FD1 200/1.5A |
| D11 | ED-307572 | D SILICON H 1SS131 |
| D12 | ED-386226J | D SCHOTTKY RB100AT-32T26 40/1 |
| D13 | ED-346541 | D ZENER H HZ9B2L |
| D14 | ED-346541 | D ZENER H HZ9B2L |
| D103 | ED-346526 | D ZENER H HZ6B1L |
| D104 | ED-624903 | D SILICON H 1S2473 |
| D105 | ED-346526 | D ZENER H HZ6B1L |
| FR2 | *ER-391043J | R FUSE H S10 RF25SC 1/6W R47K |
| FR3 | *ER-391043J | R FUSE H S10 RF25SC 1/6W R47K |
| FR4 | *ER-391043J | R FUSE H S10 RF25SC 1/6W R47K |
| FR6 | *ER-392807J | R FUSE H S10 RF25SC 1/6W R12K |
| FR7 | *ER-392819J | R FUSE H S10 RF25SC 1/4W R10K |
| IC1 | EI-380090J | IC NJM2352D |
| IC102 | *EI-368152 | IC BA707 |
| L1 | EO-392805J | COIL FIX 2 C-5327-01 240K |
| L2 | EO-3928 | COIL FIX 2 C-5327-01 240K |
| L3 | EO-382 | COIL FIX 2 EF1950 560K |
| L4 | EO-3926 | COIL FIX 2 C-5328-01 560K |
| L5 | EO-392806 | COIL FIX 2 C-5328-01 560K |
| L6 | EO-382264T | COIL FIX 2 EF1950 560K |
| R16 | ER-389675J | R OMF H S10 FS 1/2W R68J |
| R106 | ER-376864 | R OMF H S12 SPR1 1W 274J |
| TR1 | ET-380685J | TR 2SD1761 E,F,G |
| TR2 | ET-366365 | TR 2SB1185 E,F |
| TR3 | ET-391025J | TR 2SD2012 |
| TR4 | ET-353899 | TR 2SA1317 S,T,U |
| TR6 | ET-360646 | TR DTA143ES |
| TR7 | ET-356817 | TR 2SB891 Q,R |
| TR8 | ET-354364 | TR DTC143TS |
| TR9 | ET-391025J | TR 2SD2012 |
| TR11 | ET-360137 | TR 2SC3330 U,V F05 |
| TR101 | *ET-389415J | TR 2SC3169 |
| TR102 | ET-360137 | TR 2SC3330 U,V F05 |
| TR103 | *ET-389415J | TR 2SC3169 |
| T1 | *BT-389240J | TRANS POW V1105-EM |

15. POWER SUPPLY (2) P.C BOARD(EM ONLY)

| Ref. No. | Part No. | Description |
|----------|--------------|--------------------------------|
| C101 | *EC-389414J | C CE V DE7 B102K 400AC |
| D101 | *ED-385935J | D SILICON ERA22-04V3 T26 400/5 |
| D102 | ED-624903 | D SILICON H 1S2473 |
| D106 | ED-385935J | D SILICON ERA22-04V3 T26 400/5 |
| D107 | *ED-378455 | D SILICON DSA12TG 600/1.2A |
| D108 | *ED-385935J | D SILICON ERA22-04V3 T26 400/5 |
| F101 | *EF-601942 | FUSE SEMKO T 250V 630MA |
| IC101 | *EI-376794J1 | IC BA10393 |
| RL101 | *EQ-389298J | RELAY POW AJV12442 1NO 100V |

16. TR P.C BOARD (EM ONLY)

| Ref. No. | Part No. | Description |
|----------|-----------|--------------------|
| TR10 | ET-373025 | TR 2SD1944 J1,J2,K |

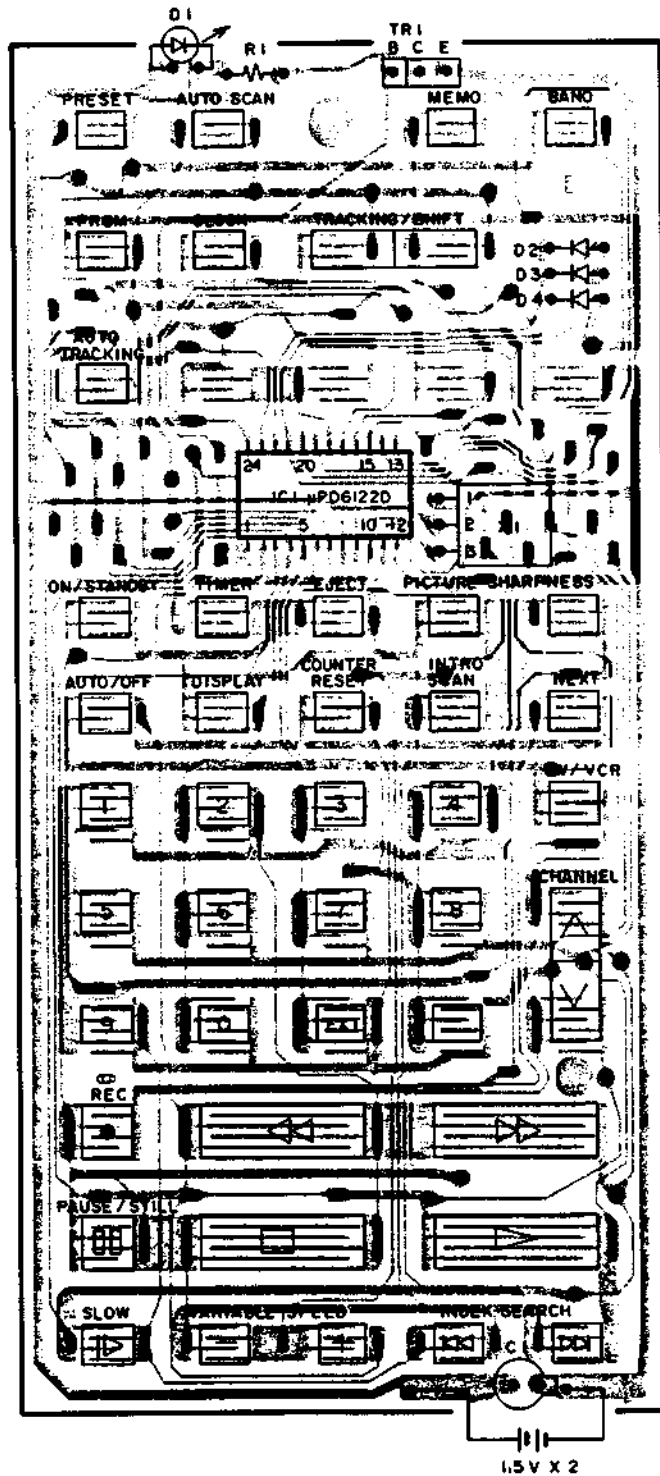
17. JUNCTION P.C BOARD

| Ref. No. | Part No. | Description |
|----------|------------|-------------------|
| D1 | ED-391103J | D ZENER H HZS12B2 |
| TR1 | ET-380685J | TR 2SD1761 E,F,G |

18. P/S AUTO P.C BOARD (EM/EOG ONLY)

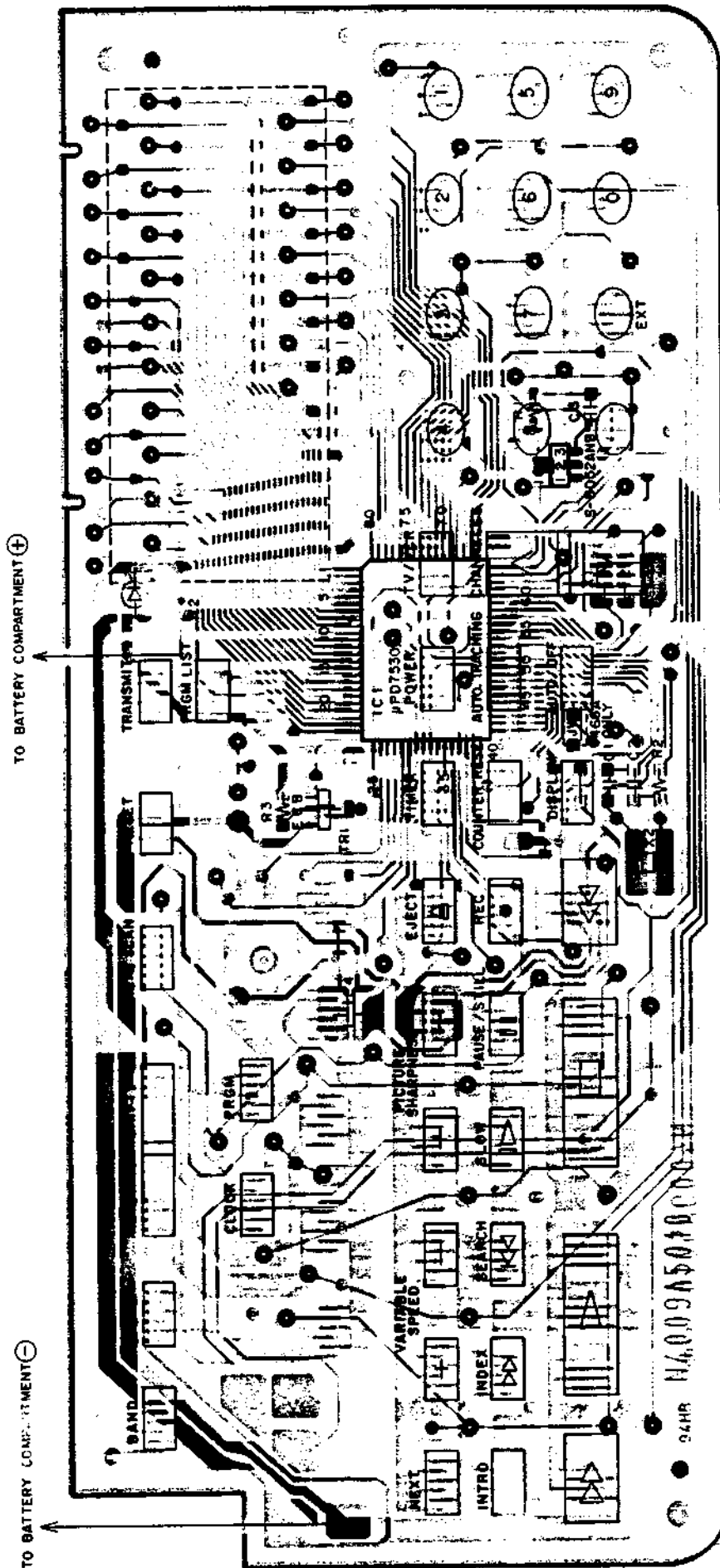
| Ref. No. | Part No. | Description |
|----------|------------|------------------------------|
| D101 | ED-307572 | D SILICON H 1SS131 |
| D102 | ED-307572 | D SILICON H 1SS131 |
| IC101 | EI-388342J | IC LA7311 |
| L101 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| TR101 | ET-360137 | TR 2SC3330 U,V F05 |
| TR102 | ET-353899 | TR DTC114ES |
| TR103 | ET-356336 | TR DTA114ES |
| TR104 | ET-360137 | TR 2SC3330 U,V F05 |

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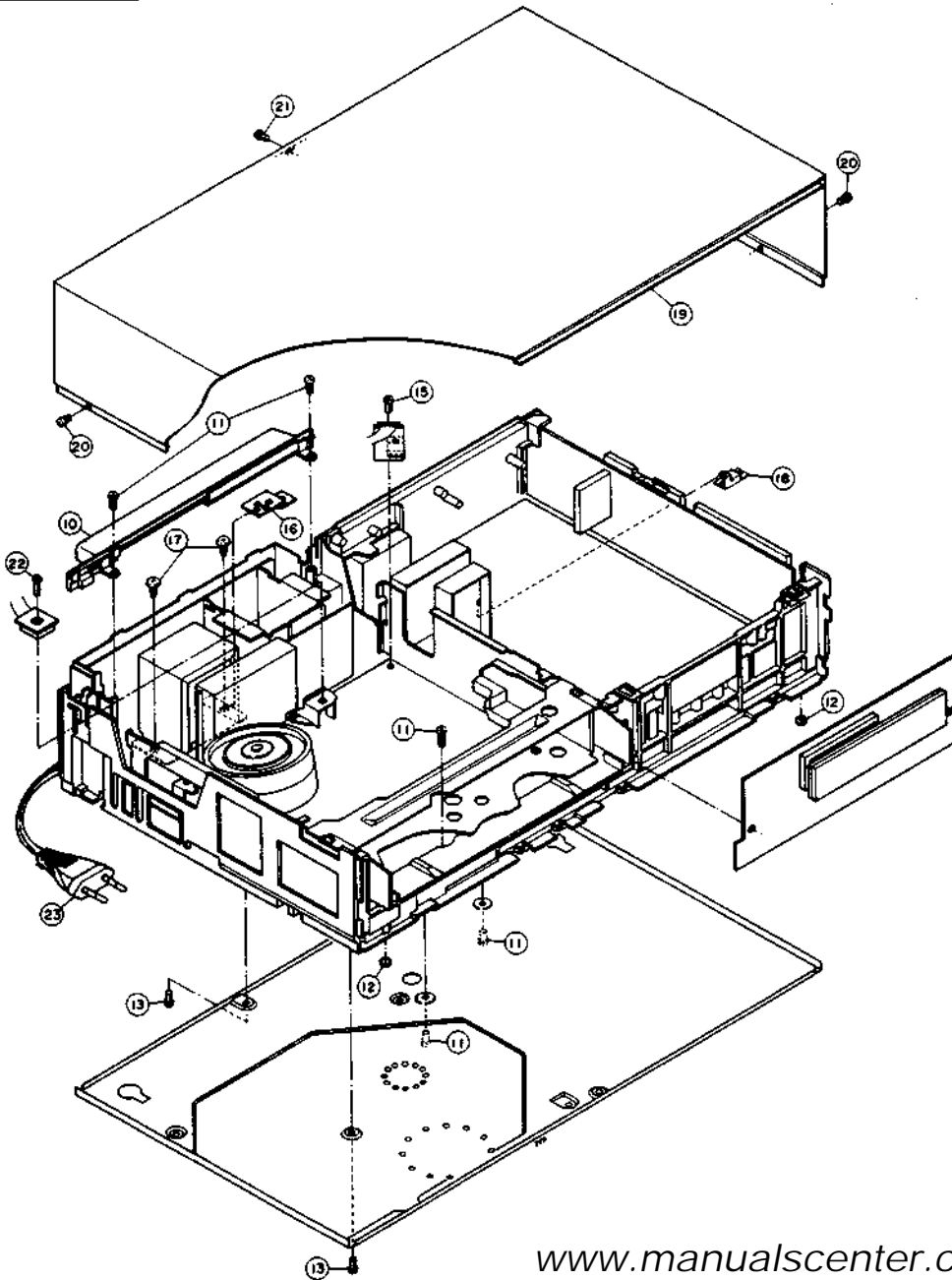
REMO-CON PCB N4008C5010

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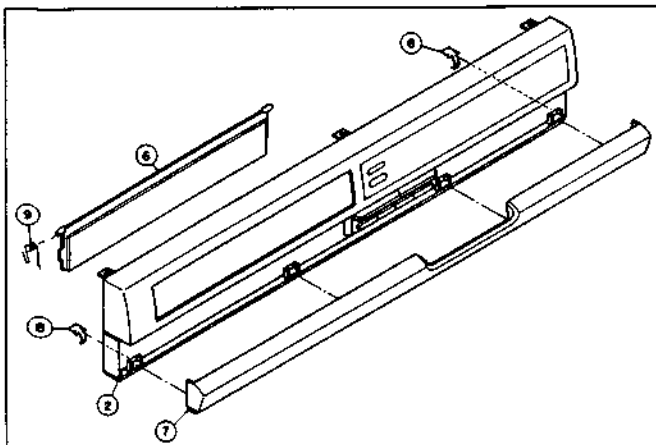


REMO-CON PCB N4009A5010

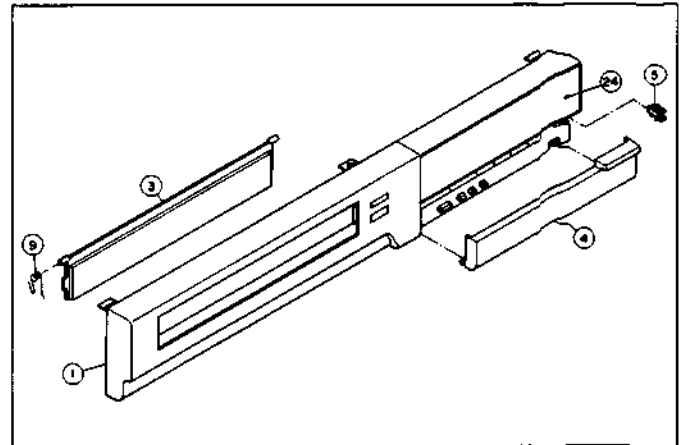
FINAL ASSEMBLY BLOCK



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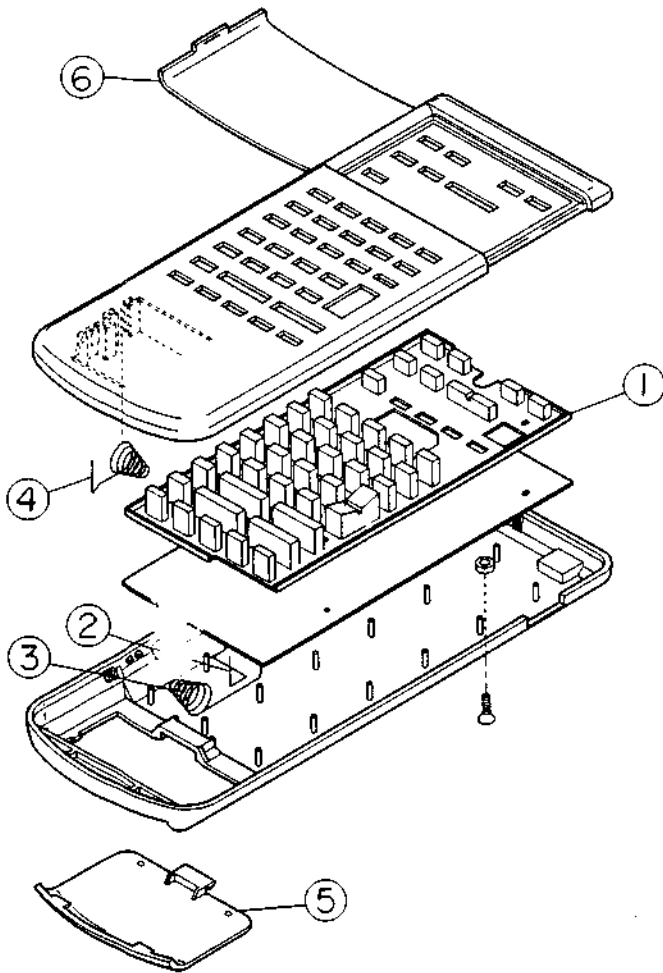


VS-422E0H, VS-427EK, 467EK, 485EK



VS-425E0H, E0G, EM

REMOCON UNIT RC-V425A-EB/V426A-EB



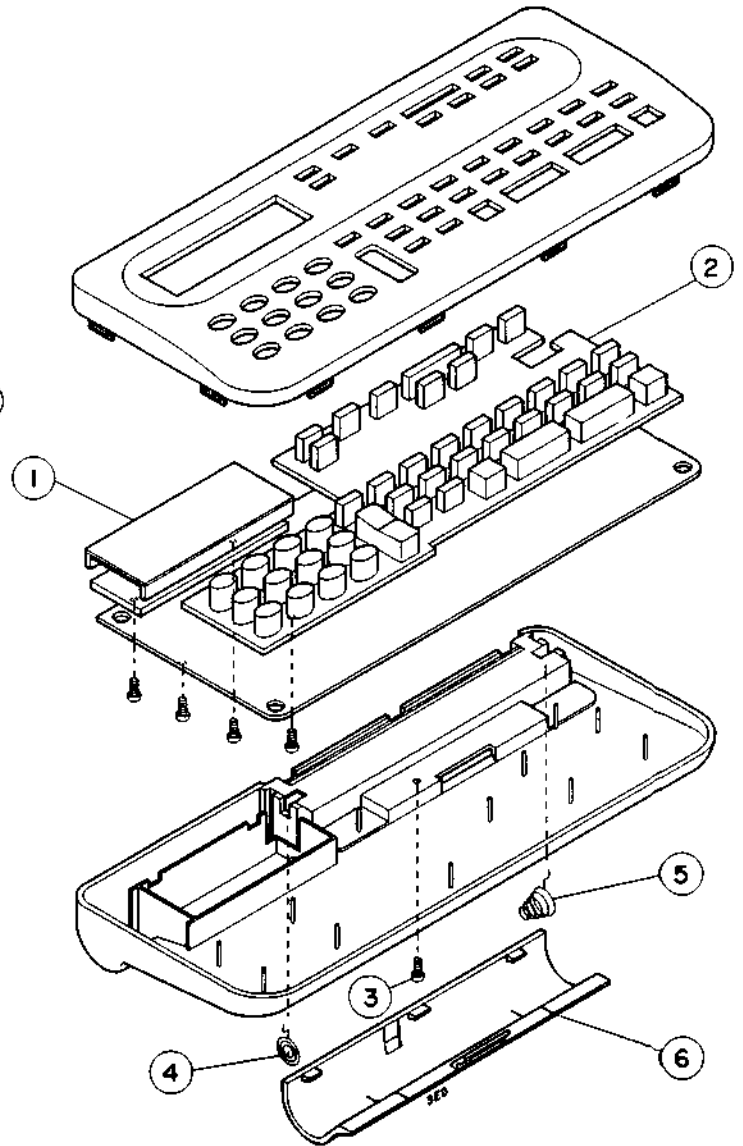
25. ACCESSORY

| Ref. No. | Part No. | Description |
|----------|---------------|-------------------------------------------|
| 1 | EW-348414 | CORD PAL |
| 2A | AV-N4008B010A | REMOCON BLK RC-V425A-EB [EOH-E] [422] |
| 2B | AV-N4008B010C | REMOCON BLK RC-V426A-EB [EM-E] |
| 2C | AV-N4009B010C | REMOCON BLK RC-V466A-EB [EOH-E.EOG] [425] |
| 2D | AV-N4011B010B | REMOCON BLK RC-V468A-EB [EK-B] |

26. REMOCON UNIT RC-V425A-EB/V426A-EB

| Ref. No. | Part No. | Description |
|----------|------------|------------------------|
| D1 | ED-390686J | D LED TLN105B INFRARED |
| D2 | ED-307572 | D SILICON H 1SS131 |
| D3 | ED-307572 | D SILICON H 1SS131 |
| D4 | ED-307572 | D SILICON H 1SS131 |
| IC1 | EI-376112 | IC UPD6122G |
| TR1 | ET-302502 | TR 2SC2001 K |
| X1 | EI-390687J | OSC CE CSU455PL 455KHZ |
| 1 | MB-390673J | KEY RUBBER(N) |
| 2 | ZG-390683J | TERMINAL BATTERY(A) |
| 3 | ZG-390684J | TERMINAL BATTERY(B) |
| 4 | ZG-390676J | TERMINAL BATTERY(C) |
| 5 | SC-390678J | COVER BATTERY(N) |
| 6 | SP-390681J | DOOR PANEL(N) |

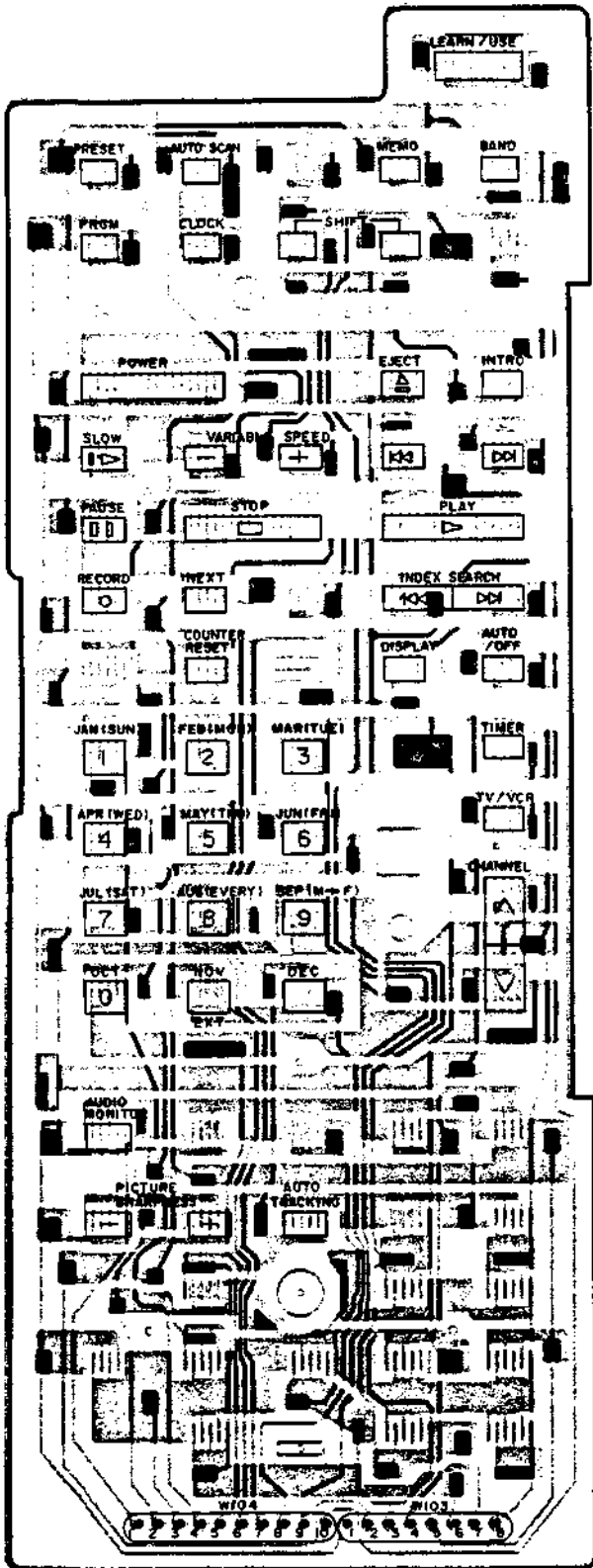
REMOCON UNIT RC-V466A-EB



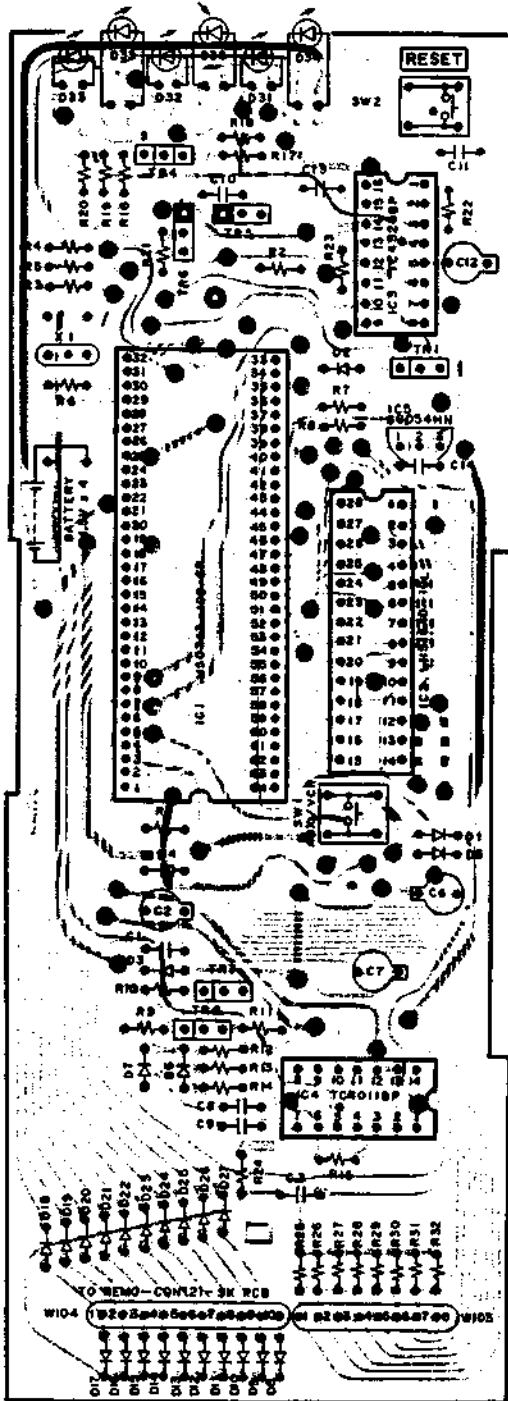
27. REMOCON UNIT RC-V466A-EB

| Ref. No. | Part No. | Description |
|----------|------------|------------------------------|
| D1 | ED-390686J | D LED TLN105B INFRARED |
| IC1 | EI-390622J | IC UPD75304G-057-3B9 SXREMA1 |
| IC2 | EI-390825J | IC S-8052ANB-NE T1 |
| TR1 | ET-390826J | TR.CHIP 2SD1619 T,U TC T08 |
| X1 | EI-389972J | OSC CE W/C FOR2.2MC3 2.2MHZ |
| X2 | EI-368825 | OSC XTAL MX-38T 32.768KHZ |
| 1 | EM-390786J | IND LCD LF5293G ENGLISH |
| 2 | MB-391417J | KEY RUBBER(A) |
| 3 | ZS-374389 | PT BID20X06STL BNI |
| 4 | ZG-385136J | TERMINAL BATTERY B |
| 5 | ZG-391411J | TERMINAL BATTERY(I) |
| 6 | SC-391422J | COVER BATTERY |

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REMO-CON(2)-SX PCB N4011B5020



REMO-CON(1) PCB
N4004B5010 (J2)

- S D FET
- PNP TRANSISTOR
- NPN TRANSISTOR

19. LINEAR STEREO(A) P.C BOARD(EK ONLY)

| Ref. No. | Part No. | Description |
|----------|------------|--------------------------------|
| D1 | ED-307572 | D SILICON H 1SS131 |
| D2 | ED-307572 | D SILICON H 1SS131 |
| D3 | ED-307572 | D SILICON H 1SS131 [485] |
| D4 | ED-307572 | D SILICON H 1SS131 [485] |
| D5 | ED-307572 | D SILICON H 1SS131 [485] |
| D6 | ED-307572 | D SILICON H 1SS131 [485] |
| D7 | ED-307572 | D SILICON H 1SS131 [485] |
| D8 | ED-307572 | D SILICON H 1SS131 |
| D9 | ED-307572 | D SILICON H 1SS131 |
| D11 | ED-307572 | D SILICON H 1SS131 |
| D12 | ED-307572 | D SILICON H 1SS131 |
| D13 | ED-307572 | D SILICON H 1SS131 |
| D14 | ED-307572 | D SILICON H 1SS131 |
| D17 | ED-307572 | D SILICON H 1SS131 |
| D18 | ED-307572 | D SILICON H 1SS131 |
| D19 | ED-307572 | D SILICON H 1SS131 |
| D20 | ED-307572 | D SILICON H 1SS131 |
| D22 | ED-307572 | D SILICON H 1SS131 |
| D23 | ED-307572 | D SILICON H 1SS131 |
| D24 | ED-307572 | D SILICON H 1SS131 |
| FL1 | EO-389983J | COIL TUN1 79-5297-12 15.625KHZ |
| FL2 | EO-389982J | COIL TUN 1 79-5298-12 70.00KHZ |
| FL3 | EO-389983J | COIL TUN1 79-5297-12 15.625KHZ |
| FL4 | EO-389982J | COIL TUN 1 79-5298-12 70.00KHZ |
| IC1 | EI-310036 | IC TC4066BP |
| IC2 | EI-310036 | IC TC4066BP |
| IC3 | EI-388360J | IC BA7765AS |
| IC4 | EI-388360J | IC BA7765AS |
| IC5 | EI-389322J | IC CXA1101P |
| IC6 | EI-332259 | IC TC4052BP |
| IC7 | EI-200573 | IC TC4053BP |
| L1 | EO-390717J | COIL FIX 1 LHL06TB T05 103J |
| L2 | EO-390717J | COIL FIX 1 LHL06TB T05 103J |
| L4 | EO-393202J | COIL FIX 1 LHL06NB F05 472J |
| L5 | EO-393202J | COIL FIX 1 LHL06NB F05 472J |
| L6 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| L7 | EO-354600 | COIL FIX 1 LAP02 F05 101K |
| OSC1 | EO-391143J | COIL OSC 1 V1110-N 70.0KHZ |
| TR1 | ET-360137 | TR 2SC3330 U,V F05 [485] |
| TR2 | ET-388338J | TR 2SB1425 S,E |
| TR3 | ET-360137 | TR 2SC3330 U,V F05 [485] |
| TR4 | ET-354414 | TR DTC144ES |
| TR5 | ET-356336 | TR DTA114ES |
| TR6 | ET-357162 | TR FET 2SJ74 GR,BL,V |
| TR7 | ET-357162 | TR FET 2SJ74 GR,BL,V |
| TR8 | ET-354415 | TR DTA114ES [485] |
| TR9 | ET-354415 | TR DTA114ES |
| TR10 | ET-354415 | TR DTA114ES |
| TR11 | ET-360137 | TR 2SC3330 U,V F05 |
| TR12 | ET-353899 | TR 2SA1317 S,T,U |
| TR13 | ET-353899 | TR 2SA1317 S,T,U [485] |
| TR14 | ET-353899 | TR 2SA1317 S,T,U |
| TR15 | ET-353899 | TR 2SA1317 S,T,U |
| TR16 | ET-360137 | TR 2SC3330 U,V F05 |
| TR17 | ET-360137 | TR 2SC3330 U,V F05 |
| TR18 | ET-360137 | TR 2SC3330 U,V F05 |
| TR19 | ET-360137 | TR 2SC3330 U,V F05 |
| TR20 | ET-360137 | TR 2SC3330 U,V F05 [485] |
| TR21 | ET-353899 | TR 2SA1317 S,T,U |
| TR22 | ET-353899 | TR 2SA1317 S,T,U |
| TR23 | ET-360137 | TR 2SC3330 U,V F05 |
| TR24 | ET-370310 | TR DTC144TS |
| TR25 | ET-370310 | TR DTC144TS |
| TR26 | ET-356336 | TR DTA114ES |
| VR2 | EV-362128 | R S-FIX H RH0615C 0.10W 152 |
| VR3 | EV-356582 | R S-FIX H RH0615C 0.10W 473 |

| Ref. No. | Part No. | Description |
|----------|-----------|-----------------------------|
| VR4 | EV-358860 | R S-FIX H RH0615C 0.10W 101 |
| VR5 | EV-362128 | R S-FIX H RH0615C 0.10W 152 |
| VR6 | EV-356582 | R S-FIX H RH0615C 0.10W 473 |

20. LINEAR STEREO(B) P.C BOARD(EK ONLY)

| Ref. No. | Part No. | Description |
|----------|------------|-------------------------|
| D60 | ED-389422J | D LED PG3432SY [485] |
| D70 | ED-389422J | D LED PG3432SY |
| D80 | ED-389422J | D LED PG3432SY |

21. REAR PINJUCK P.C BOARD (EK ONLY)

| Ref. No. | Part No. | Description |
|----------|------------|----------------------------|
| J1 | EJ-389914J | PIN J YKB11-0177 YELLOW 1P |
| J2 | EJ-389979J | PIN J YKB11-0175 RED 1P |
| J3 | EJ-389980J | PIN J YKB11-0176 WHITE 1P |
| J4 | EJ-389864J | SOCKET M1817 21P |

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22. NICAM UNIT (485EK ONLY)

| Ref. No. | Part No. | Description |
|----------|------------|--------------------------------|
| C16 | EV-729779J | C S-FIX H TZ03T200FR |
| C46 | EV-729779J | C S-FIX H TZ03T200FR |
| D2 | ED-730114J | D VARACTOR 1SV111A |
| D3 | ED-730115J | D SILICON CHIP MC2836 |
| D4 | ED-724694J | D SILICON CHIP MC2838 |
| D5 | ED-730115J | D SILICON CHIP MC2836 |
| IC2 | EI-382827J | IC TA8662N |
| IC3 | EI-730116J | IC CF7D123C |
| IC4 | EI-730117J | IC SAA7320GP |
| IC5 | EI-349719 | IC M5218P |
| IC6 | EI-356049 | IC TC74HC139P |
| IC7 | EI-332259 | IC TC4052BP |
| IC8 | EI-365957 | IC M5278L05 |
| L1 | EO-714055 | COIL RF EL0606RA-101K |
| L2 | EO-351184 | COIL FIX 1 EL0606SKI 821J |
| L3 | EO-351184 | COIL FIX 1 EL0606SKI 821J |
| L4 | EO-714055 | COIL RF EL0606RA-101K |
| L5 | EO-714055 | COIL RF EL0606RA-101K |
| L6 | EO-714055 | COIL RF EL0606RA-101K |
| L7 | EO-714055 | COIL RF EL0606RA-101K |
| L8 | EO-714055 | COIL RF EL0606RA-101K |
| L11 | EH-382829J | FILTER LC BP TH316BQM-2110QDAF |
| Q5 | ET-713615 | TR CHIP 2SC3052 E,F |
| Q6 | ET-713615 | TR CHIP 2SC3052 E,F |
| Q7 | ET-713615 | TR CHIP 2SC3052 E,F |
| Q8 | ET-713615 | TR CHIP 2SC3052 E,F |
| Q9 | ET-730111J | TR CHIP DTC124EK |
| Q10 | ET-730111J | TR CHIP DTC124EK |
| Q11 | ET-716958 | TR CHIP DTC144EK |
| Q12 | ET-713615 | TR CHIP 2SC3052 E,F |
| Q13 | ET-713615 | TR CHIP 2SC3052 E,F |
| X1 | EI-382831J | OSC X'TAL NR-18 6.552MHZ |
| X2 | EI-382833J | OSC X'TAL NR-18 5.824MHZ |
| X3 | EI-730420J | OSC X,TAL NR-18 16.384MHZ |

23. VPS P.C BOARD (EOG ONLY)

| Ref. No. | Part No. | Description |
|----------|------------|------------------------------|
| D101 | EO-307572 | D SILICON H 1SS131 |
| IØ101 | EM-383056J | COMP R RGL4X 103J |
| IC1 | EI-390147J | IC MØØØ505H-1097M SXVPS1 |
| IC101 | EI-385958J | IC SAA4700 |
| L101 | EO-376179 | COIL FIX 1 ALF-7.5F F05 101K |
| TR101 | ET-360137 | TR 2SC3330 U,V F05 |
| X1 | EI-388110J | OSC CE CST4.19MG 4.194MHZ |

24. FINAL ASSEMBLY BLOCK

| Ref. No. | Part No. | Description |
|----------|-------------|-------------------------------------------------|
| 1A | BD-389782J | PANEL FRONT-425EOH-B PART [EOH-E] [425] |
| 1B | BD-389390J | PANEL FRONT-425EOG-B PART [EOG] |
| 1C | BD-389781J | PANEL FRONT-425EM-B PART [EM-E] |
| 2A | BD-391016J | PANEL FRONT-422EOH PART [EOH-E] [422] |
| 2B | BD-391019J | PANEL FRONT-427EK PART [EK-B] [427] |
| 2C | BD-391020J | PANEL FRONT-467EK PART [EK-B] [467] |
| 2D | BD-391021J | PANEL FRONT-485EK PART [EK-B] [485] |
| 3A | SE-389741J | MASK CASSETTE(D)-E2 [EOH-E] [425] |
| 3B | SE-389841J | MASK CASSETTE(D)-G3 [EOG] |
| 3C | SE-387368J | MASK CASSETTE(D)-E1 [EM-E] |
| 4A | SP-389743J | DOOR FRONT(D)-E2 [EOH-E,EM-E] [425] |
| 4B | SP-389342J | DOOR FRONT(D) G1 [EOG] |
| 5 | SZ-390032J | LATCH DOOR 3550-1 [EOH-E,EOG,EM-E] [425] |
| 6A | SE-391793J | MASK CASSETTE(A)E2 [EOH-E] [422] |
| 6B | SE-391795J | MASK CASSETTE(A)E4 [EK-B] [427] |
| 6C | SE-392574J | MASK CASSETTE(A)E10 [EK-B] [467] |
| 6D | SE-392575J | MASK CASSETTE(A)E11 [EK-B] [485] |
| 7A | SP-387384J | DOOR(B)E1-B [EOH-E] [422] |
| 7B | SP-391560J | DOOR(B)E2-B [EK-B] |
| 8 | ZG-386833J1 | SP PLATE DOOR(D) [EOH,EK][422/427/467/485] |
| 9 | ZG-387370J | SP MASK |
| 10 | SC-387353J | COVER TRANS |
| 11 | ZS-362378 | PLX BID30X10STL CMT |
| 12 | SA-387507J | FOOT SX |
| 13 | ZS-364543 | DT BID30X06STL CMT |
| 15 | ZS-378341 | PLX BID30X12STL CMT |
| 16 | ZG-387505J | PLATE EARTH |
| 17 | ZS-373962 | PLX BID40X10STL CMT |
| 18 | ZG-387354J | PLATE EARTH(2) |
| 19 | SP-387386J1 | COVER UPPER B |
| 20 | ZS-385611J | DT BID26X06STL BNI |
| 21 | ZS-389965J | PLX BID26X08STL BNI |
| 22 | ZS-357946 | PLX PAN30X10STL CMT CØØ0 |
| 23A | EW-385900M | AC CORD 200 SE-1H03VV B130 A E [EOH-E,EOG,EM-E] |
| 23B | EW-389300J | AC CORD200 NRASBS LC2 B140 A B [EK-B] |
| 24 | SE-389723J | WINDOW FLD(D)-425EM [EM-E] |

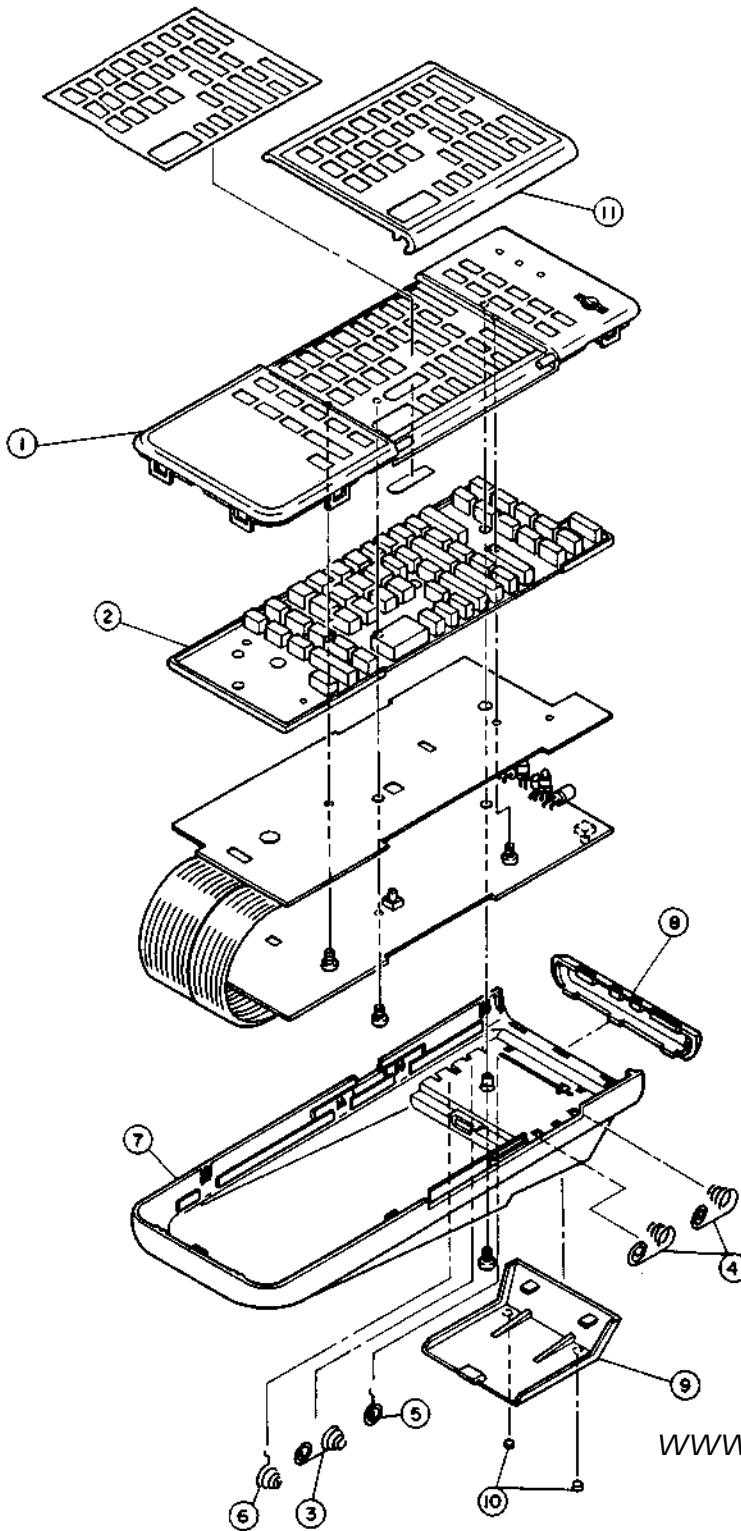
NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

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REMOCON UNIT RC-V468A-EB

28. REMOCON UNIT RC-V468A-EB



| Ref. No. | Part No. | Description |
|----------|-------------|----------------------------|
| D1 | ED-307572 | D SILICON H 1SS131 |
| D2 | ED-307572 | D SILICON H 1SS131 |
| D3 | ED-307572 | D SILICON H 1SS131 |
| D4 | ED-307572 | D SILICON H 1SS131 |
| D5 | ED-307572 | D SILICON H 1SS131 |
| D6 | ED-307572 | D SILICON H 1SS131 |
| D7 | ED-307572 | D SILICON H 1SS131 |
| D8 | ED-307572 | D SILICON H 1SS131 |
| D9 | ED-307572 | D SILICON H 1SS131 |
| D10 | ED-307572 | D SILICON H 1SS131 |
| D11 | ED-307572 | D SILICON H 1SS131 |
| D12 | ED-307572 | D SILICON H 1SS131 |
| D13 | ED-307572 | D SILICON H 1SS131 |
| D14 | ED-307572 | D SILICON H 1SS131 |
| D15 | ED-307572 | D SILICON H 1SS131 |
| D16 | ED-307572 | D SILICON H 1SS131 |
| D17 | ED-307572 | D SILICON H 1SS131 |
| D18 | ED-307572 | D SILICON H 1SS131 |
| D19 | ED-307572 | D SILICON H 1SS131 |
| D20 | ED-307572 | D SILICON H 1SS131 |
| D21 | ED-307572 | D SILICON H 1SS131 |
| D22 | ED-307572 | D SILICON H 1SS131 |
| D23 | ED-307572 | D SILICON H 1SS131 |
| D24 | ED-307572 | D SILICON H 1SS131 |
| D25 | ED-307572 | D SILICON H 1SS131 |
| D26 | ED-307572 | D SILICON H 1SS131 |
| D27 | ED-307572 | D SILICON H 1SS131 |
| D31 | ED-384424J | D LED PR2533D RED |
| D32 | ED-384424J | D LED PR2533D RED |
| D33 | ED-384424J | D LED PR2533D RED |
| D34 | ED-376111 | D LED SE303AC INFRARED |
| D35 | ED-376111 | D LED SE303AC INFRARED |
| D36 | ED-360409 | D PHOTO PN323B |
| IC1 | EI-391695J | IC M50743-109SP SXUNI1 |
| IC2 | EI-389184J | IC LH5164D-10L |
| IC3 | EI-332203 | IC TC4528BP |
| IC4 | EI-304657 | IC TC4011BP |
| IC5 | EI-360396 | IC S-8054HN |
| SW1 | ES-385174J | SW TACT SKHHBV |
| SW2 | ES-385174J | SW TACT SKHHBV |
| TR1 | ET-354414 | TR DTC144ES |
| TR2 | ET-308141 | TR 2SC2603 G F05 |
| TR3 | ET-302502 | TR 2SC2001 K |
| TR4 | ET-337759 | TR FET 2SK246 GR |
| TR5 | ET-308472 | TR 2SA1115 E,F,G F05 |
| TR6 | ET-356336 | TR DTA114ES |
| X1 | EI-372031 | OSC CE W/C FCR0.0MC 8.0MHZ |
| 1 | SC-391675J | CASE UPPER(U)-E |
| 2 | MB-391678J | KEY RUBBER(B) |
| 3 | ZG-384485J | TERMINAL BATTERY A(R) |
| 4 | ZG-385135J | TERMINAL BATTERY A(L) |
| 5 | ZG-385136J | TERMINAL BATTERY B |
| 6 | ZG-385138J | TERMINAL BATTERY C |
| 7 | SC-384435J | CASE BOTTOM |
| 8 | SE-384446J | FILTER |
| 9 | SC-384444J | COVER BATTERY |
| 10 | SA-384484J | FOOT RUBBER |
| 11 | SP-384447J1 | DOOR PANEL |

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| AV-N4008B010C | 25-2B | EC-364958 | 12-C3 | ED-307572 | 19-D6 | ED-387765J | 10-D2 |
| AV-N4009B010C | 25-2C | EC-364958 | 14-C2 | ED-307572 | 19-D7 | ED-387766J | 6-D1 |
| AV-N4011B010B | 25-2D | EC-378327 | 14-C104 | ED-307572 | 19-D8 | ED-387919J | 6-D424 |
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| BA-N4009A020C | 5-8 | EC-389414J | 15-C101 | ED-307572 | 19-D11 | ED-388368J | 6-D41 |
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| BA-V1102A605E | 5-1B | ED-307572 | 6-D10 | ED-307572 | 19-D18 | ED-389418J | 6-D203 |
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| BA-V1102A620A | 5-4B | ED-307572 | 6-D21 | ED-307572 | 19-D20 | ED-389422J | 20-D70 |
| BA-V1102A630B | 5-3D | ED-307572 | 6-D22 | ED-307572 | 19-D22 | ED-389422J | 20-D80 |
| BA-V1102A630E | 5-3B | ED-307572 | 6-D40 | ED-307572 | 19-D23 | ED-389688J | 6-D418 |
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| BA-V1102D500C | 5-2A | ED-307572 | 6-D101 | ED-307572 | 26-D101 | ED-390011J | 1-20 |
| BA-V1102D500F | 5-2D | ED-307572 | 6-D102 | ED-307572 | 26-D2 | ED-390011J | 4-13 |
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| BA-V1102D600D | 5-1G | ED-307572 | 6-D106 | ED-307572 | 26-D4 | ED-390012J | 4-14 |
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| BA-V1110D630C | 5-3G | ED-307572 | 6-D402 | ED-307572 | 28-D6 | ED-392779J | 7-D604 |
| BA-V1110D630F | 5-3A | ED-307572 | 6-D403 | ED-307572 | 28-D7 | ED-511907 | 1-30 |
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| BA-V1110D680B | 5-6B | ED-307572 | 6-D408 | ED-307572 | 28-D9 | ED-511907 | 12-D2 |
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| BB-V1102A020C | 1-2 | ED-307572 | 6-D413 | ED-307572 | 28-D12 | ED-511907 | 14-D1 |
| BB-V1102A020C | 3-60B | ED-307572 | 6-D414 | ED-307572 | 28-D13 | ED-511907 | 14-D2 |
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| BD-389782J | 24-1A | ED-307572 | 6-D421 | ED-307572 | 28-D16 | ED-511907 | 14-D5 |
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| EC-363490 | 12-C2 | ED-307572 | 19-D4 | ED-386226J | 14-D12 | EI-310036 | 19-IC1 |

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| EI-332259 | 19-IC6 | EJ-389980J | 21-J3 | EO-388353J | 7-L702 | ES-349474 | 10-SW16 |
| EI-332259 | 22-IC7 | EM-387624J | 10-FL1A | EO-388362J | 6-FL301 | ES-349474 | 10-SW17 |
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| EI-373966 | 7-IC601 | EO-354600 | 6-L401 | EO-392805J | 14-L1 | ET-337759 | 28-TR4 |
| EI-373980 | 6-IC402 | EO-354600 | 6-L402 | EO-392805J | 14-L2 | ET-353897 | 6-TR33 |
| EI-373981J1 | 6-IC404 | EO-354600 | 6-L407 | EO-392806J | 14-L4 | ET-353897 | 6-TR109 |
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| EI-382831J | 22-X1 | EO-375471 | 6-L404 | EO-714055 | 22-L8 | ET-353899 | 6-TR113 |
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| EI-385955J | 10-IC1 | EO-376179 | 7-L605 | EO-714614 | 11-L4C | ET-353899 | 6-TR412 |
| EI-385956J | 6-IC403 | EO-376179 | 7-L703 | EO-717495 | 11-L2 | ET-353899 | 7-TR601 |
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| EI-388110J | 23-X1 | EO-376179 | 9-L11 | EO-725965J | 11-L52 | ET-353899 | 19-TR13 |
| EI-388342J | 18-IC101 | EO-376179 | 18-L101 | EQ-389298J | 1-49 | ET-353899 | 19-TR14 |
| EI-388347J | 7-IC602 | EO-376179 | 19-L6 | EQ-389298J | 15-RL101 | ET-353899 | 19-TR15 |
| EI-388360J | 6-IC301 | EO-376179 | 23-L101 | ER-336756 | 6-R452A | ET-353899 | 19-TR21 |
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| EI-388996J | 6-IC102 | EO-376607 | 9-L7 | ER-389875J | 12-R6 | ET-354364 | 14-TR6 |
| EI-389184J | 28-IC2 | EO-376610 | 8-L14 | ER-389875J | 14-R16 | ET-354370 | 7-TR772B |
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| EI-389972J | 27-X1 | EO-376612 | 9-L8 | ER-391043J | 14-FR2 | ET-354414 | 6-TR105 |
| EI-389974J | 6-X101 | EO-376614 | 9-L4 | ER-391043J | 14-FR3 | ET-354414 | 6-TR111 |
| EI-390053J | 6-IC20 | EO-376857 | 8-L1 | ER-391043J | 14-FR4 | ET-354414 | 6-TR114 |
| EI-390147J | 23-IC1 | EO-376857 | 9-L14 | ER-391044J | 1-53 | ET-354414 | 6-TR204 |
| EI-390687J | 1-46 | EO-376858 | 8-L3 | ER-391044J | 12-FR3 | ET-354414 | 6-TR305 |
| EI-390687J | 26-X1 | EO-376858 | 9-L1 | ER-392807J | 1-51 | ET-354414 | 6-TR401 |
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| EI-730116J | 22-IC3 | EO-381193J | 8-L5 | ER-393219J | 6-FR498 | ET-354414 | 9-TR10 |
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