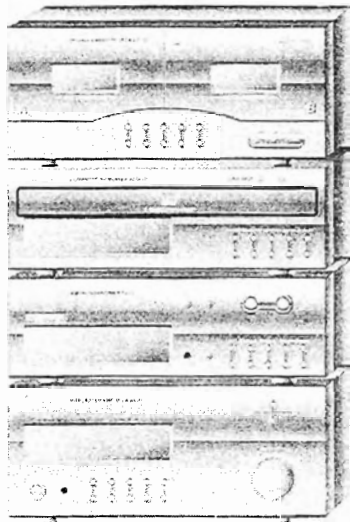


SERVICE MANUAL

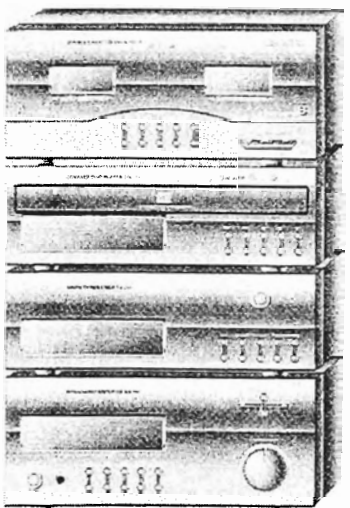
AUDIO & VIDEO MINI COMPONENT SYSTEM

P-757



- AV-757
STEREO INTEGRATED AMPLIFIER
- TX-757
FM/AM STEREO TUNER & TIMER
- CDC-757/ VCDC-757
MULTI COMPACT DISC PLAYER
/ VIDEO COMPACT DISC PLAYER
- DD-757
STEREO DOUBLE CASSETTE DECK

P-747



- AX-747
STEREO INTEGRATED AMPLIFIER
- TX-747
FM/AM STEREO TUNER & TIMER
- CDC-757/ VCDC-757
MULTI COMPACT DISC PLAYER
/ VIDEO COMPACT DISC PLAYER
- DD-757
STEREO DOUBLE CASSETTE DECK

 **Sherwood®**

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■ AV-757/AX-747 ■

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▪ AV-757/AX-747 ▪

SAFETY PRECAUTION

WARNING

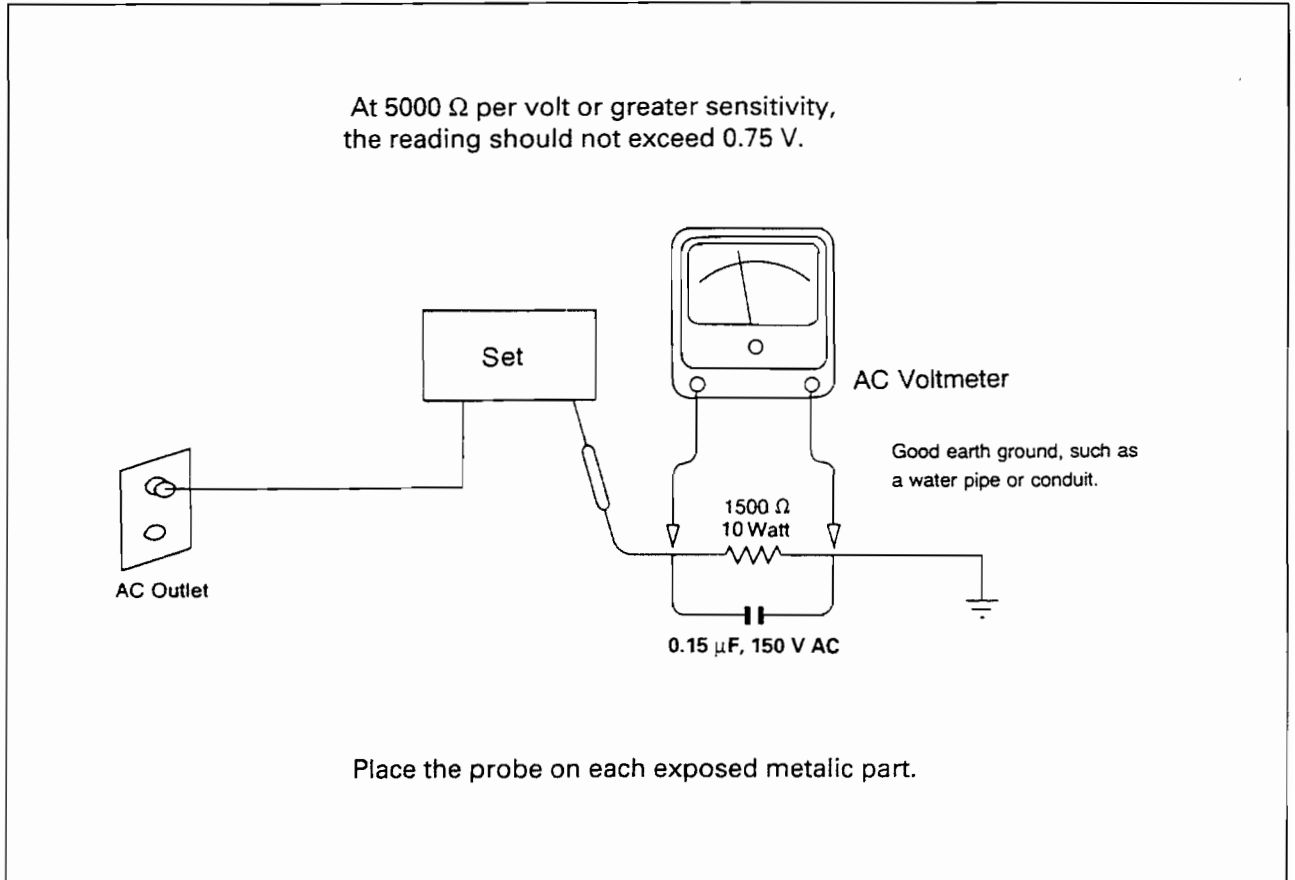
Before servicing this unit, familiarize yourself with the following precautions:

1. Many electrical and mechanical parts in this chassis have special safety characteristics that often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements: electrical components having such features are identified by  in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

2. Before returning the set to the customer, always do an AC leakage current check on the

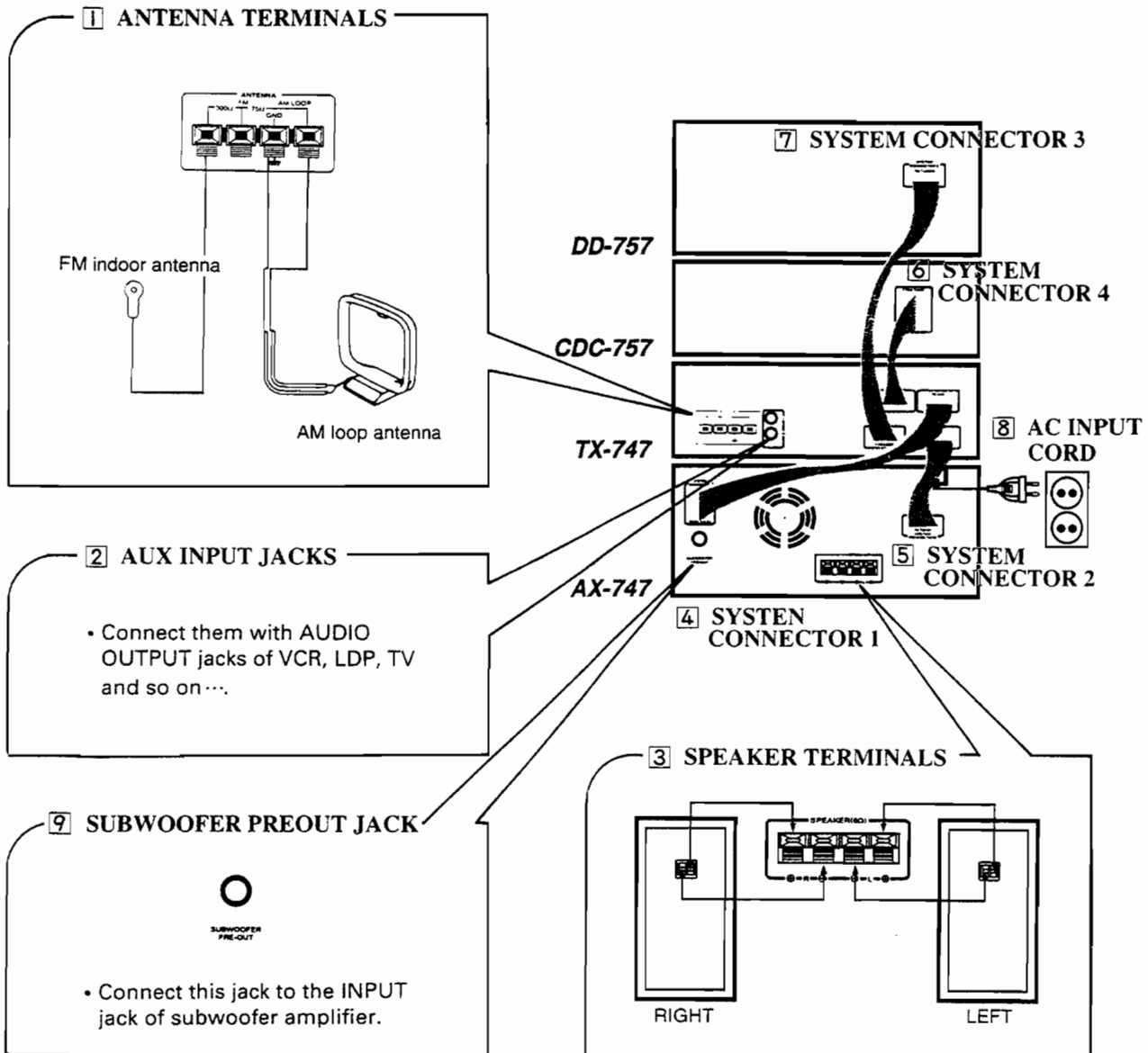
exposed metal parts of the cabinet, such as terminals, screw heads, and metal overlays, to be sure the set is safe to operate danger of electrical shock. Plug the AC line cord directly into a 120 V AC outlet (120 V AC version only). (Do not use a line isolation transformer during this check.) Be sure your AC voltmeter has a sensitivity of 5000Ω per volt or greater. Then connect a 1500Ω 10 watt resistor, paralleled by a $0.15 \mu\text{F}$ 150 V AC capacitor, between a known good earth ground (such as a water pipe, or conduit) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of a 1500Ω resistor and a $0.15 \mu\text{F}$ capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 V RMS. This corresponds to 0.2 mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



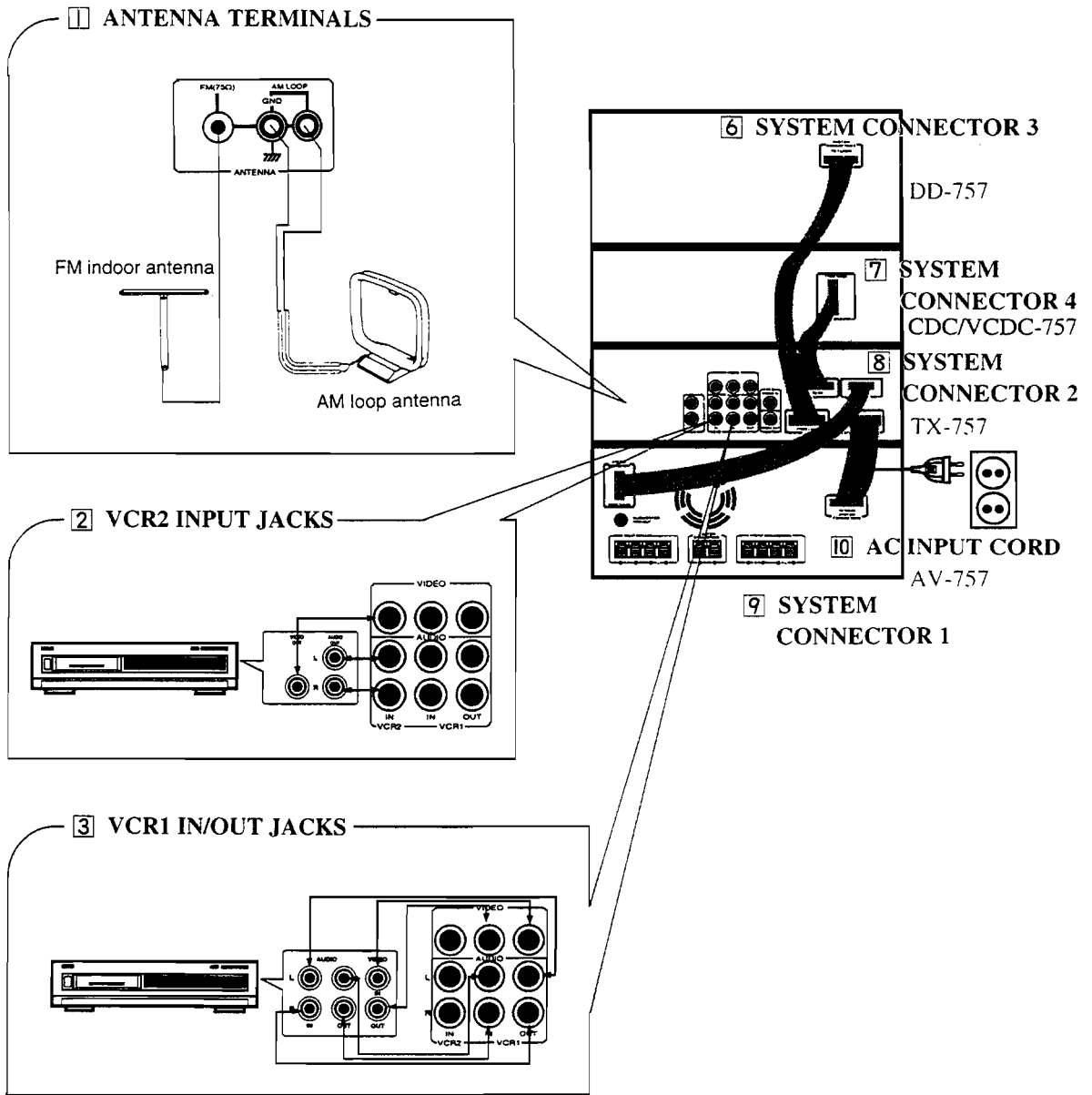
SYSTEM CONNECTIONS

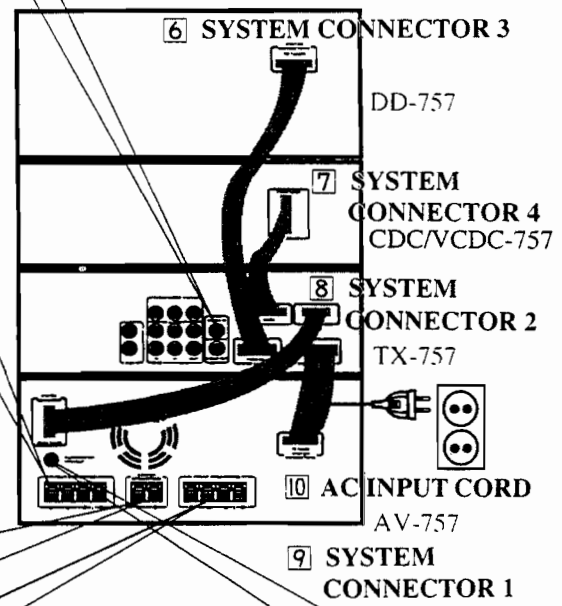
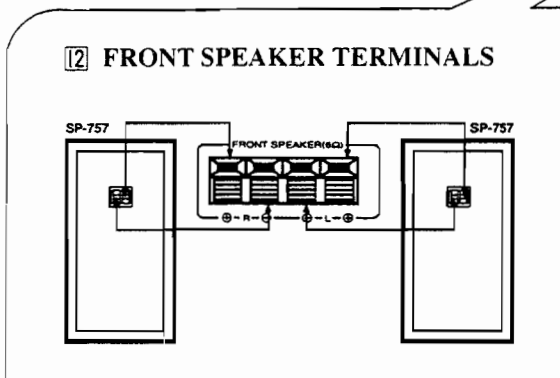
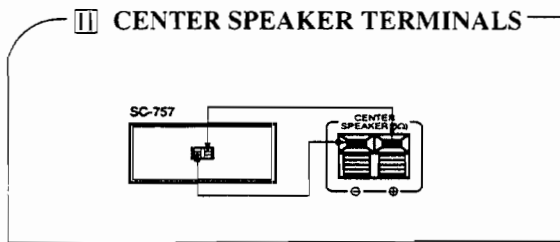
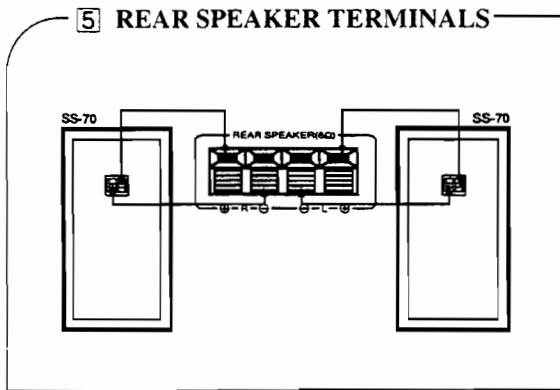
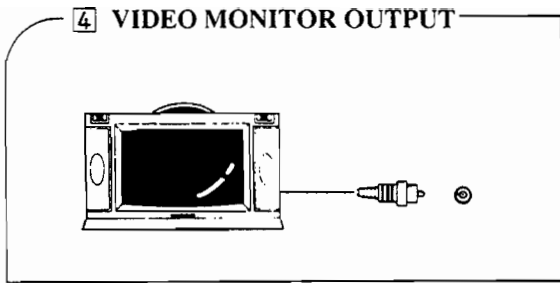
- Do not plug the AC input cord the AC outlet when plugging and unplugging connection cords.
- Make connections firmly and correctly according to the channel (Left and Right), polarity (+ and -) and connector(system 1 to 4). If not, it can cause loss of sound, noise or damage to unit.
- Be sure to use speakers of impedance 6 Ω .
- Place the AM loop antenna as far as possible from this system, TV, speaker cords and AC input cord and set it to a direction for the best reception.
- If the reception is poor with the AM loop antenna, an AM outdoor antenna can be used without the AM loop antenna.
- If the sound quality is poor with the FM indoor antenna, connect an FM outdoor antenna instead of the FM indoor antenna.
- If the electricity fails or the AC input cord is leaved unplugged for more then 15 days, the memorized contents are all cleared. So you should memorize them again.

■ P-747 ■



■ P-757 ■





13 SUBWOOFER PREOUT JACK

Connect it to the input jack of subwoofer amplifier.

SPECIFICATIONS

FRONT SECTION

| Description | Unit | Nominal | Limit |
|--|------|------------|------------|
| RMS. output power <stereo mode> Input: VIDEO, THD < 0.5%, 6 ohms load both channels driven at 1 kHz | W | ≥ 53 | ≥ 50 |
| <surround mode: AV-757 only> THD < 0.5%, 6 ohms load single channels driven at 1 kHz | W | ≥ 33 | ≥ 30 |
| Total Harmonic Distortion | % | ≤ 0.2 | ≤ 0.2 |
| Signal to Noise Ratio (IHF-A WTD), Input shorted | dB | ≥ 85 | ≥ 80 |
| Channel Separation with 4.7 kohms terminated. Input: VIDEO, 1 kHz | dB | ≥ 50 | ≥ 50 |
| Channel Unbalance, Input: VIDEO, 1 kHz | dB | ≤ 1 | ≤ 2 |
| Frequency Response at -3 dB | Hz | 10 ~ 60 k | 20 ~ 40 k |
| X-Bass compensation at 80 Hz | dB | 8 ± 2 | 8 ± 3 |
| EQ Control (60, 150, 400, 1 k, 2.4 k, 6 k, 15 k) Hz | dB | 10 ± 2 | 10 ± 3 |
| Headphone Output at Rated PWR, 50 W Headphone Impedance: 68 ohms | mV | 1200 ± 200 | 1200 ± 300 |

CENTER SECTION (AV-757 ONLY)

| Description | Unit | Nominal | Limit |
|--|------|-----------|-----------|
| RMS. output power THD < 0.5%, 6 ohms, 1 kHz Only center channel driven | W | ≥ 33 | ≥ 30 |
| Signal to Noise Ratio (IHF-A WTD), Input shorted Input: 350 mV | dB | ≥ 78 | ≥ 73 |
| Frequency Response at -3 dB, Wide mode | Hz | 20 ~ 18 k | 50 ~ 15 k |

REAR SECTION (AV-757 ONLY)

| Description | Unit | Nominal | Limit |
|--|------|----------|-----------|
| RMS output power THD < 0.7%, 12 ohms load Only rear channel driven at 1 kHz | W | ≥ 18 | ≥ 15 |
| Signal to Noise Ratio (IHF-A WTD), Input shorted Input: 350 mV, Delay time: 20 ms | dB | ≥ 85 | ≥ 80 |
| Frequency Response at -3 dB | Hz | 80 ~ 7 k | 100 ~ 6 k |

General

Power consumption

| Model \ Version | A | D | PT INDO | KS |
|-----------------|-------|-------|---------|-------|
| P-747 | | 230 W | 260 W | 230 W |
| P-757 | 140 W | 350 W | 380 W | 240 W |

Dimensions (HxWxD)

AV-757/AX-747: 274 × 117 × 280 mm (10-3/4 × 4-11/18 × 11 inches)
 DD-757: 274 × 117 × 280 mm (10-3/4 × 4-11/18 × 11 inches)
 TX-757/TX-747: 274 × 87 × 280 mm (10-3/4 × 3-3/7 × 11 inches)
 CDC-757/CDC-757: 274 × 87 × 320 mm
 (10-3/4 × 3-3/7 × 12-10/16 inches)

Weight (Net)

(AV-757+DD-757+TX-757+CDC-757/VCDC-757): 14.7 kg (32.407 lbs)
(AX-747+DD-757+TX-747+CDC-757/VCDC-757): 14.7 kg (32.407 lbs)

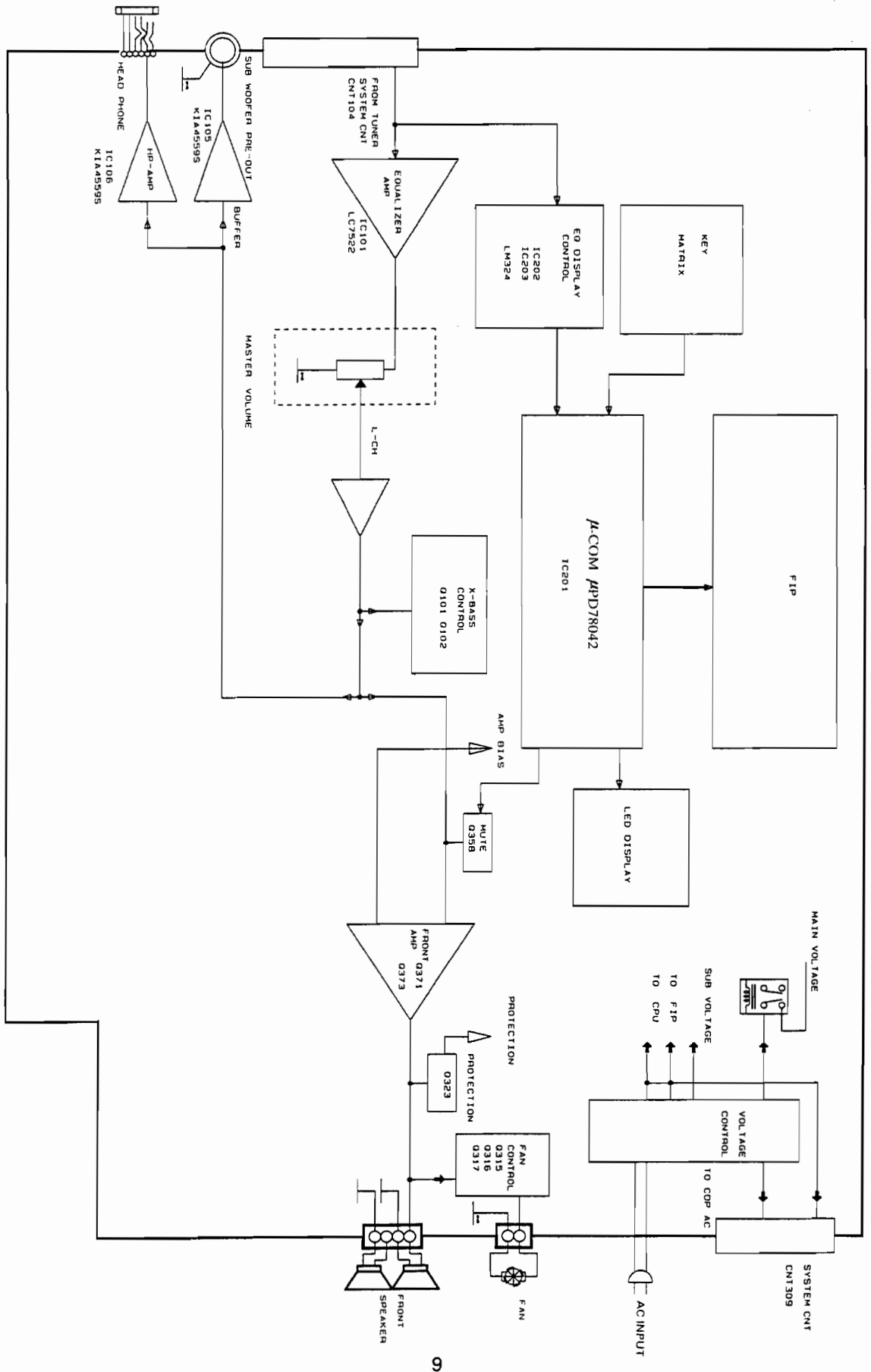
Power Supplies

A: 120 V 60 Hz, USA & Canada version
D: 230 V 50 Hz, Europe version
B: 110/220 V 50/60 Hz, Multi area version (PT INDO)
KS: 220 V 60 Hz, Korea version

Note : Nominal specs represent the design specs. All units should be able to approximate these. Some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable ; in no case should a unit fail to meet limit specs. This manual is based on the EUROPE Standard wiring diagram, and information on regional component variations through use of parts list. Design and specifications are subject to change without notice for improvement.

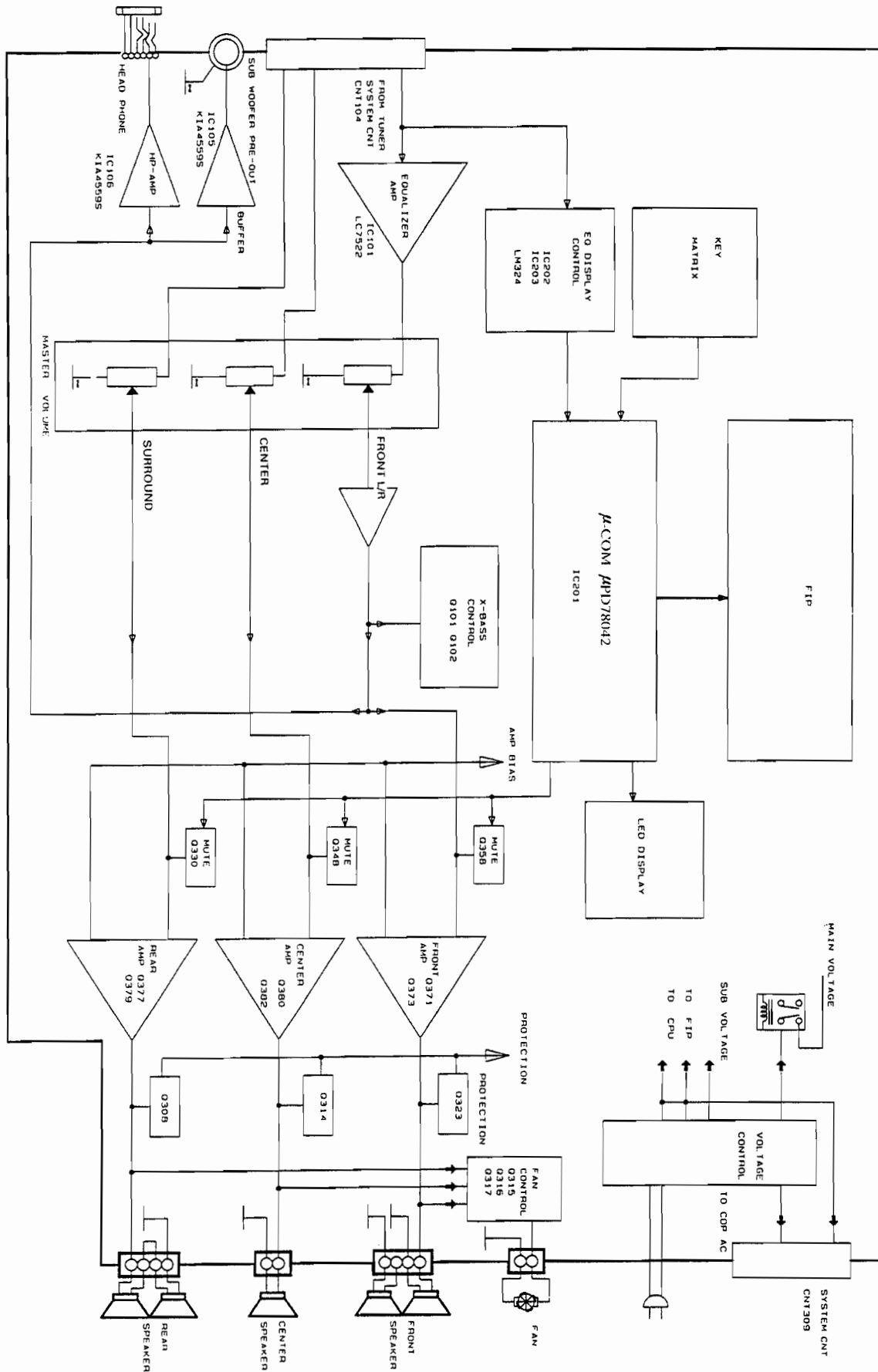
BLOCK DIAGRAM I

Model No. : AX-747



BLOCK DIAGRAM II

Model No. : AV-757



DISASSEMBLY PROCEDURES

REFER TO PAGES 17 AND 24.

1 COVER TOP REMOVAL

Remove 6 screws **a** and then remove the Cover Top **2**.

2 FRONT PANEL ASSEMBLY REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Remove the Card Cable from wafer (CNT303) on the Main P.C.Board (PCB3).
3. Remove the Card Cable from wafer (CNT101) on the Volume P.C.Board (PCB4).
4. Disconnect (CNT102) from the EQ P.C.Board (PCB1).
5. Remove 7 screws **b** and then remove the Front Panel Assembly **AA**.

3 VOLUME P.C.BOARD (PCB4) REMOVAL.

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Remove the Front Panel Assembly **AA**, referring to the previous step **2**.
3. Disconnect (CNT501) from the Volume P.C. Board (PCB4).
4. Pull out the Volume Knob **12** with Volume LED P.C.Board (PCB6).
5. Remove 2 screws **c** and then remove the Volume P.C.Board (PCB4).

4 FRONT P.C.BOARD (PCB2) REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Do steps **2** and **3**.
3. Remove 7 screws **d** and then remove the Front P.C.Board (PCB2) by pressing the hooks around it outward.

5 HEADPHONE P.C.BOARD (PCB5) REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Remove the Front Panel Assembly **AA**, referring to the previous step **2**.
3. Remove a screw **e** and then remove the Headphone P.C.Board (PCB5).

6 EQ P.C.BOARD (PCB1) REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Remove the Card Cable from wafer (CNT101) on the EQ P.C.Board (PCB1).

3. Disconnect (CNT102) from the EQ P.C.Board (PCB1).

4. Remove a screw **f** and then remove the EQ P.C.Board (PCB1).

7 VOLTAGE SELECTOR P.C.BOARD (PCB7) REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Disconnect (CNT801 and CNT802) from the Voltage Selector P.C.Board (PCB7).
3. Remove a screw **g** and then remove the Voltage Selector P.C.Board (PCB7).

8 CHASSIS BACK REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Disconnect (CNT306 and CNT309) from the Main P.C.Board (PCB3).
3. Remove 12 screws **h** and then remove the Chassis Back **27**. (at AV-757)
Remove 8 screws **h** and then remove the Chassis Back **27**. (at AX-747)

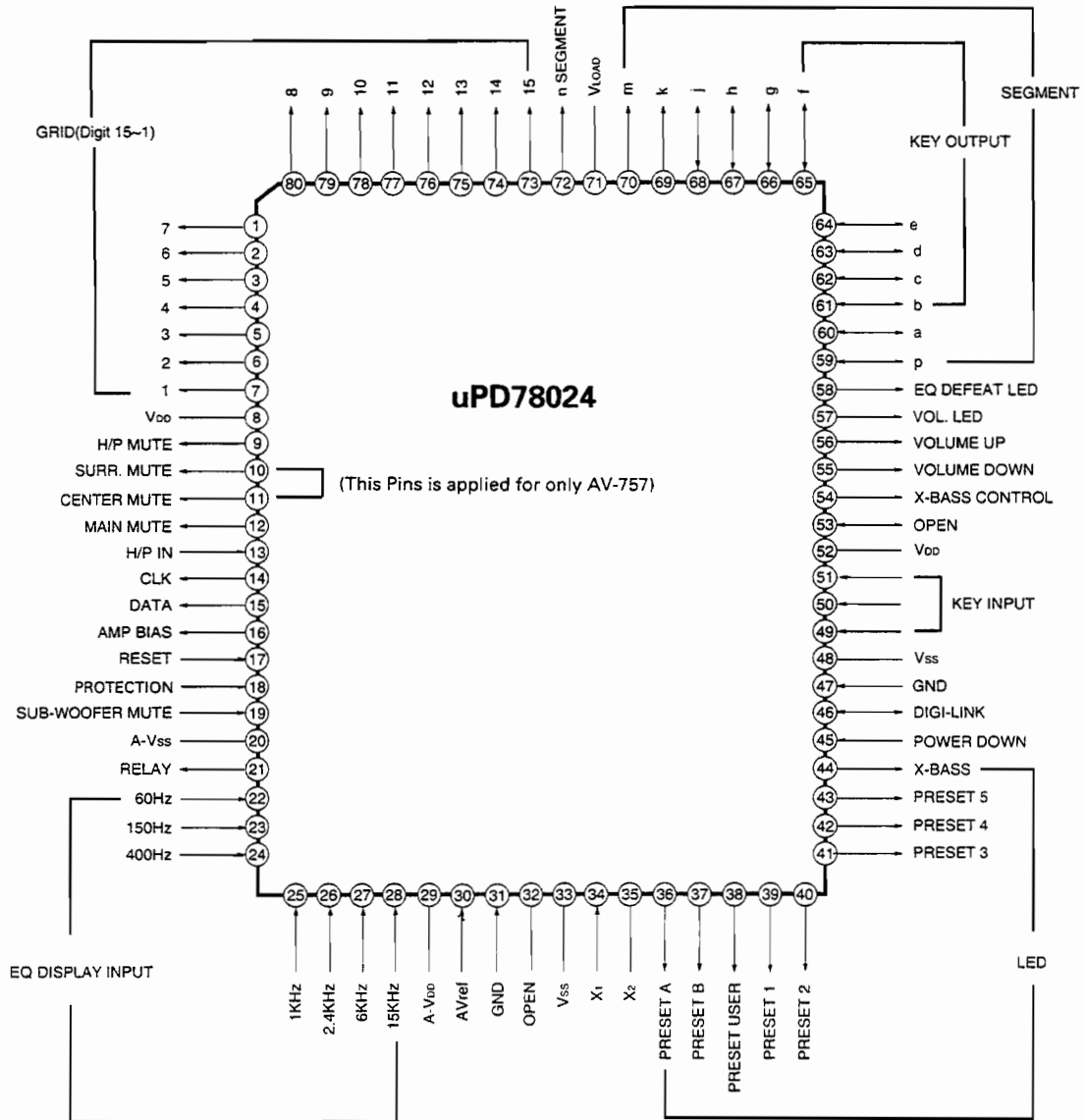
9 MAIN P.C.BOARD (PCB3) REMOVAL

1. Remove the Cover Top **2**, referring to the previous step **1**.
2. Do steps **6** and **8**.
3. Remove Card cable from wafer (CNT308) on the Main P.C.Board (PCB3).
4. Disconnect (CNT301 and CNT302) from the Main P.C.Board (PCB3).
5. Remove 3 screws **1**.
6. Remove the Fastener **22** and then remove the Main P.C.Board (PCB3).

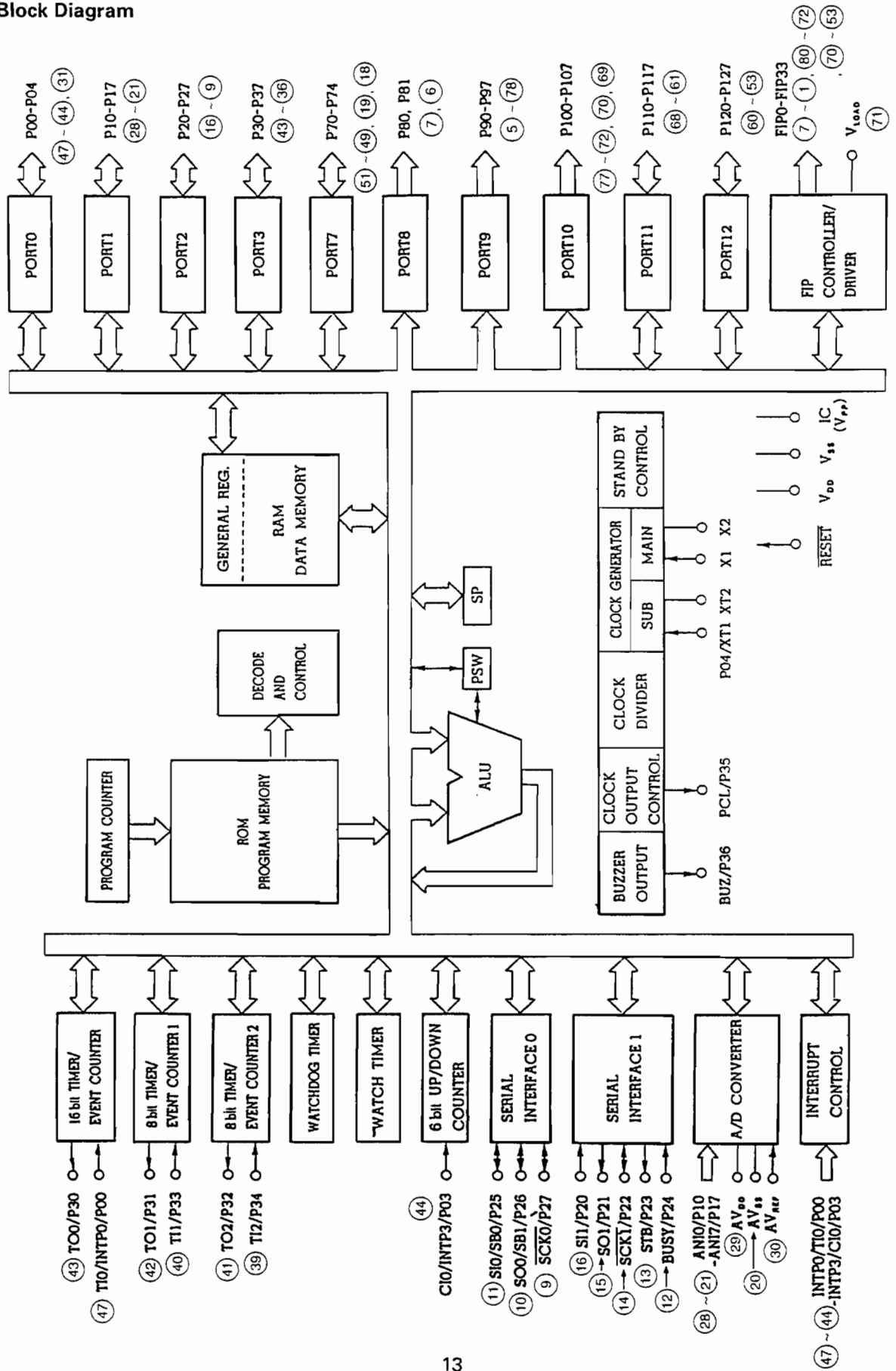
CIRCUIT DESCRIPTION

CPU(IC201): μ PD78042

1. Pin Description



2. Block Diagram



3. Input and Output Terminal Functions

| Pin No. | Symbol | Description |
|---------|------------------------------|---|
| 1~7 | DIGIT 7 ~ DIGIT 1 | Output for grid. |
| 8 | Vdd | +5 V power supply. |
| 9 | H/P MUTE | Output for headphone mute. Output, high level under the following conditions. 1. When power is turned on or off. 2. When headphone plug is inserted. 3. When "-∞ mute signal" is received from the commander. 4. When function is changed. |
| 10 | SURR. MUTE <AV-757 ONLY> | Output for surround mute. Output, low level under the following conditions. 1. When power is turned off. 2. When headphone plug is inserted. 3. When "-∞ mute signal" is received from the commander. 4. When function is changed. 5. When surround mode is turned off. |
| 11 | CENTER MUTE <AV-757 ONLY> | Output for center mute. Output, low level under the following conditions. 1. When power is turned off. 2. When headphone plug is inserted. 3. When "-∞ mute signal" is received from the commander. 4. When function is changed. 5. When center mode is turned off. |
| 12 | MAIN MUTE | Output for left and right channels mute. Output, low level under the following conditions. 1. When power is turned off. 2. When headphone plug is inserted. 3. When "-∞ mute signal" is received from the commander. 4. When function is changed. |
| 13 | H/P IN | Input for detecting headphone. When headphone is plugged or unplugged, input is high or low level. |
| 14/15 | CLK/DATA | CLK/DATA output to LC7522. |
| 16 | AMP BIAS | Output for bias control. When 3 seconds elapses after "power on", "H" and at "power off", "L". |
| 17 | RESET | Input to reset u-com. |
| 18 | PROTECTION | Input for protection. At "protection on", "L" and at "protection off", "H". |
| 19 | SUBWOOFER MUTE | Output for subwoofer preout mute. Output, low level under the following conditions. 1. When power is turned on or off. 2. When function is changed. 3. When "-∞ mute signal" is received from the commander. 4. When headphone plug is inserted. |
| 20 | A-Vss | This pin provides the analog ground potential. |
| 21 | RELAY | Output for relay control. At "power on", "H" and at "power off", "L". |
| 22~28 | EQ DISPLAY INPUT | Input for EQ display. |
| 29 | A-Vdd | +5 V power supply. |
| 30 | A-Vref | Reference voltage. |
| 31 | GND | Ground |

| Pin No. | Symbol | Description |
|---------|-------------------------|---|
| 32 | OPEN | Not used ! |
| 33 | Vss | This pin provides the ground potential. |
| 34/35 | X1/X2 | Input and output for crystal oscillator. |
| 36 ~ 38 | PRESET A,B USER LED | Output to light up preset A, B or user LED. When selecting the desired mode, the corresponding output is "H". |
| 39 ~ 43 | PRESET 1,2,3,4,5 LED | Output to light up preset 1, 2, 3, 4 or 5 LED. When selecting the desired mode, the corresponding output is "H". |
| 44 | X-BASS LED | Output to light up X-BASS LED. At "x-bass on", "H" and at "x-bass off", "L". |
| 45 | P/D | Input for power down. (At "L", it is active) |
| 46 | DIGI-LINK | Input/Output for controlling digi-link. |
| 47 | GND | Ground |
| 48 | Vss | This pin provides the ground potential. |
| 49 ~ 51 | KEY INPUT | Input data for key scan. |
| 52 | Vdd | +5 V power supply. |
| 53 | OPEN | Not used ! |
| 54 | X-BASS CONTROL | Output for X-BASS control. At "x-bass on", "L" and "x-bass off", "H". |
| 55/56 | VOL. UP/DOWN | Output to control volume motor. |
| 57 | VOL. LED | Output to light up volume LED. At "power on", "H", and at "power off", "L". |
| 58 | EQ DEFEAT LED | Output to light up EQ defeat LED. At "EQ defeat on", "H" and at "EQ defeat off", "L". |
| 59 | SEG p | Output for segment. |
| 60 | SEG a | Output for segment. |
| 61 ~ 65 | SEG b ~ SEG f | Output, for segment, and data output for key scan. |
| 66 ~ 70 | SEG g ~ SEG m | Output for segment. |
| 71 | Vload | -30 V power supply of the FL controller. |
| 72 | SEG n | Output for segment. |
| 73 ~ 80 | DIGIT 15 ~ DIGIT 8 | Output for grid. |

MECHANICAL PARTS LIST

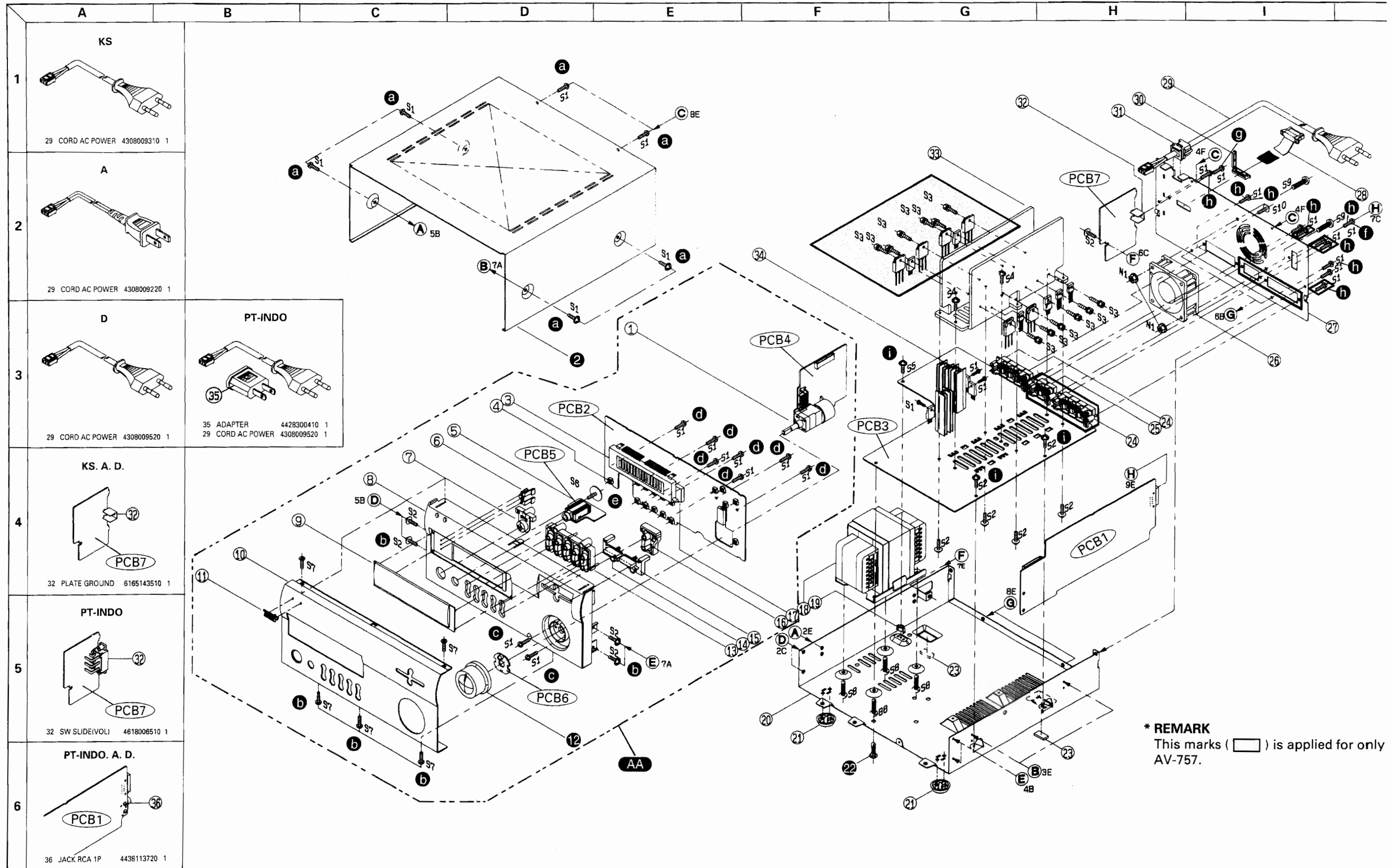
| Ref. No. | Description | Part No. | Q'ty | Version | Ref. No. | Description | Part No. | Q'ty | Version |
|------------------------------|--|--------------|------|--------------|----------------------|------------------------|------------------|------------|---------|
| PACKAGE | | | | | MISCELLANEOUS | | | | |
| | Box Carton (AV-757) | 049605258201 | 1 | KS | | Card Cable, 21P, 220mm | 4118621225 | 1 | |
| | Box Carton (AX-747) | 049605258202 | | KS | | Card Cable, 21P, 120mm | 4118621129 | 1 | |
| | Box Carton (AV-757) | 049605258206 | 1 | A,D,PT,INDO | PCB1 | P.C.Board EQ | 4005012710 | 1 | |
| | Box Carton (AX-747) | 049605258205 | 1 | A,D,PT,INDO | PCB2 | P.C.Board Front | 4005012700 | 1 | |
| | Cushion Poly | 9722041210 | 1 | | PCB3 | P.C.Board Main | 4001002800 | 1 | |
| | Film Soft PE | 9715000120 | 1 | | PCB4 | P.C.Board Headphone | 4001002820 | 1 | |
| CABINET & CHASSIS | | | | | | PCB5 | P.C.Board Volume | 4001002840 | 1 |
| 1 | Volume, Motor | 3228020010 | 1 | | PCB6 | P.C.Board Volume LED | 4001002830 | 1 | |
| 2 | Cover, Top | 046123017811 | 1 | | PCB7 | P.C.Board Voltage | 4001002810 | 1 | |
| 3 | FIP, 15BW16Y | 2328130931 | 1 | | | | | | |
| 4 | Switch, Tact | 4658003710 | 16 | | | | | | |
| 5 | Jack, Phone | 4438005510 | 1 | | | | | | |
| 6 | Indicator, LED | 8555051310 | 3 | | | | | | |
| 7 | Button, Power | 048545181011 | 1 | | | | | | |
| 8 | Body, Front | 048521009711 | 1 | | | | | | |
| 9 | Window, Display | 048553023511 | 1 | | | | | | |
| 10 | Panel, Front (AV-757) | 048602019811 | 1 | | | | | | |
| (10) | Panel, Front (AX-747) | 048602019812 | 1 | | | | | | |
| 11 | Badge, INKEL | 048535045411 | 1 | KS | | | | | |
| (11) | Badge, SHERWOOD | 048535045421 | 1 | A,D,PT,INDO | | | | | |
| 12 | Knob, Volume | 048643007611 | 1 | | | | | | |
| 13 | Button, Function | 048543070011 | 1 | | | | | | |
| 14 | Button, EQ, Left | 048545131111 | 1 | | | | | | |
| 15 | Button, EQ, Right | 048545131121 | 1 | | | | | | |
| 16 | Button, EQ, Up/Down | 048543070111 | 1 | | | | | | |
| 17 | Rubber Sponge | 6715012010 | 1 | | | | | | |
| 18 | ⚠ Power Transformer, 220 V, 60 Hz | 2828100851 | 1 | KS | | | | | |
| (18) | ⚠ Power Transformer, 230 V, 50 Hz | 2828100931 | 1 | D | | | | | |
| (18) | ⚠ Power Transformer, 110/220V, 50/60Hz | 2828100921 | 1 | PT,INDO | | | | | |
| (18) | ⚠ Power Transformer, 120 V, 60 Hz | 2828100951 | 1 | A | | | | | |
| 19 | Spacer, PCB | 6705004220 | 1 | | | | | | |
| 20 | Chassis, Main | 6121614910 | 1 | | | | | | |
| 21 | Rubber Foot | 6035104410 | 2 | | | | | | |
| 22 | Fastener | 6528301710 | 1 | | | | | | |
| 23 | Cushion, Foot | 6715021230 | 2 | | | | | | |
| 24 | Terminal, Speaker, 4P (AV-757 ONLY) | 4408105410 | 2 | | | | | | |
| 25 | Terminal, Speaker, 2P (AV-757 ONLY) | 4408107010 | 1 | | | | | | |
| 26 | Fan, DC Brushless | 5518103310 | 1 | | | | | | |
| 27 | Chassis, Back (AV-757) | 046102044511 | 1 | KS | | | | | |
| (27) | Chassis, Back (AX-747) | 046102044411 | 1 | KS | | | | | |
| (27) | Chassis, Back (AV-757) | 046102044521 | 1 | A | | | | | |
| (27) | Chassis, Back (AX-747) | 046102044421 | 1 | A | | | | | |
| (27) | Chassis, Back (AV-757) | 046102044551 | 1 | D | | | | | |
| (27) | Chassis, Back (AX-747) | 046102044451 | 1 | D | | | | | |
| (27) | Chassis, Back (AV-757) | 046102044591 | 1 | PT,INDO | | | | | |
| (27) | Chassis, Back (AX-747) | 046102044491 | 1 | PT,INDO | | | | | |
| 28 | Connector, Lead Assy | 4358615503 | 1 | | | | | | |
| 29 | ⚠ Cord, AC Power | 4308009310 | 1 | KS | | | | | |
| (29) | ⚠ Cord, AC Power | 4308009220 | 1 | A | | | | | |
| (29) | ⚠ Cord, AC Power | 4308009520 | 1 | D,PT,INDO | | | | | |
| 30 | Stopper, Connector | 6518002210 | 1 | | | | | | |
| 31 | Stopper, Cord AC power | 6518002310 | 1 | | | | | | |
| 32 | Plate, Ground | 6165143510 | 1 | A,D,KS | | | | | |
| (32) | Switch, Slide | 4618006510 | 1 | PT,INDO | | | | | |
| 33 | Heatsink, Power | 7503067220 | 1 | | | | | | |
| 34 | Heatsink, Regulator | 7505206230 | 3 | | | | | | |
| 35 | Adapter | 4428300410 | 1 | PT,INDO | | | | | |
| (35) | Not Used ! | | | A,D,KS | | | | | |
| 36 | Jack RCA, 1P | 4438113720 | 1 | A,D,PT,INDO | | | | | |
| (36) | Not Used ! | | | KS | | | | | |
| Hardware Kit | | | | | | | | | |
| S1 | Screw, #B BTT 3x8B (AV-757) | 8179130063 | 30 | | | | | | |
| (S1) | Screw, #B BTT 3x8B (AX-747) | 8179130063 | 26 | | | | | | |
| S2 | Screw, #B WPTT 3x6Y | 8179230061 | 11 | | | | | | |
| S3 | Screw, Heatsink AV-757 | 8195000310 | 12 | | | | | | |
| (S3) | Screw, Heatsink AX-747 | 8195000310 | 6 | | | | | | |
| S4 | Screw, #2 WPTC 3x10Y | 8159230101 | 2 | | | | | | |
| S5 | Screw, #2 WPTC 3x16Y | 8159230161 | 1 | | | | | | |
| S6 | Screw, Mecha | 8155001210 | 1 | | | | | | |
| S7 | Screw, #2 FTC 3x8B | 8129230083 | 5 | | | | | | |
| S8 | Screw, BSAM 4x8B | 8109440083 | 4 | | | | | | |
| S9 | Screw, BM 4x30B | 8009140303 | 2 | | | | | | |
| S10 | Screw, Ground | 8155000710 | 2 | D | | | | | |
| (S10) | Not Used ! | | | A,KS,PT,INDO | | | | | |
| N1 | Nut, HEX Flanged M4Y | 8209540011 | 1 | | | | | | |

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list are of special significance to safety. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

EXPLODED VIEW

Model No. : AX-747/AV-757

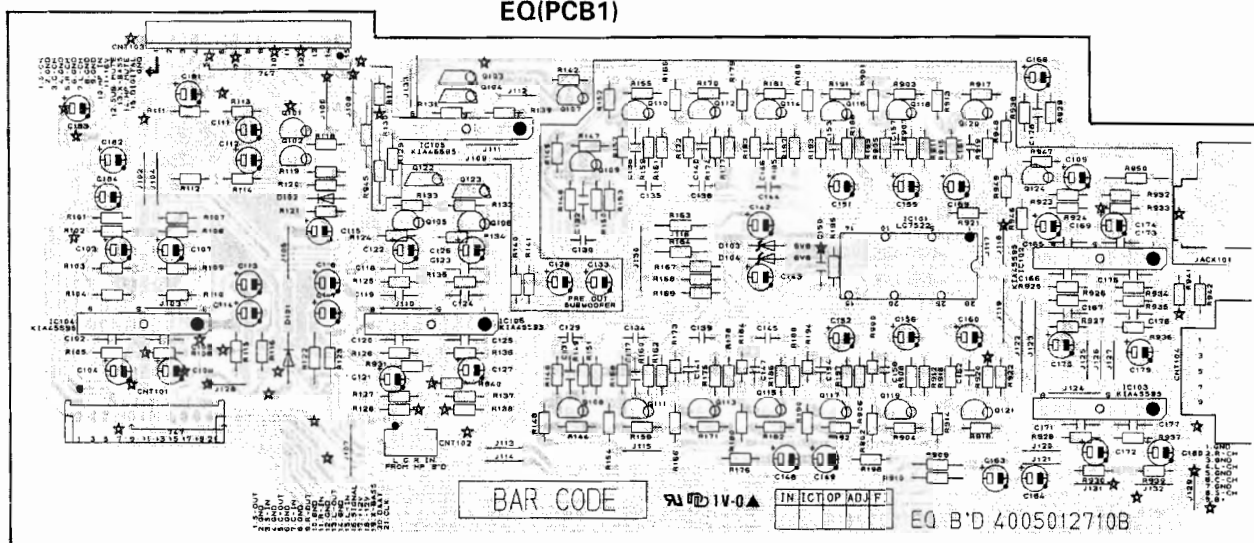


*** REMARK**
This marks () is applied for only AV-757.

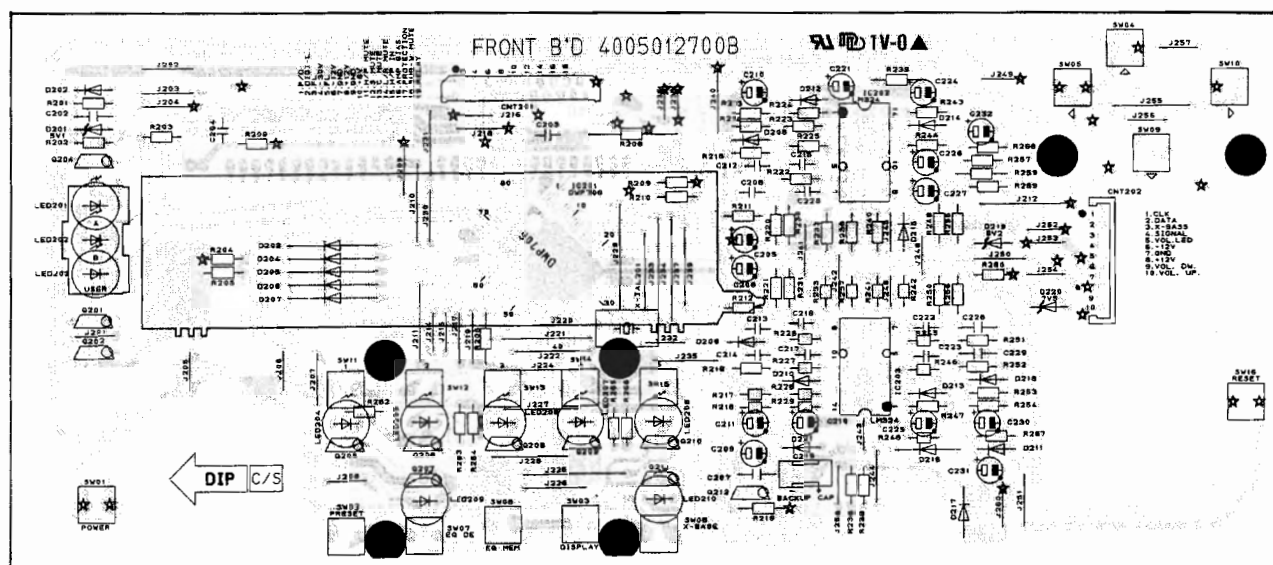
PRINTED CIRCUIT BOARDS

Model No. : AX-747/AV-757

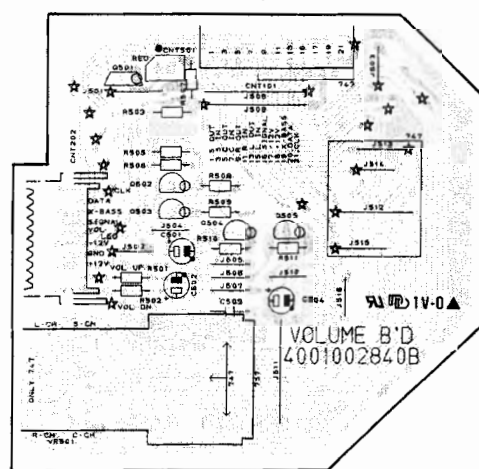
EQ(PCB1)



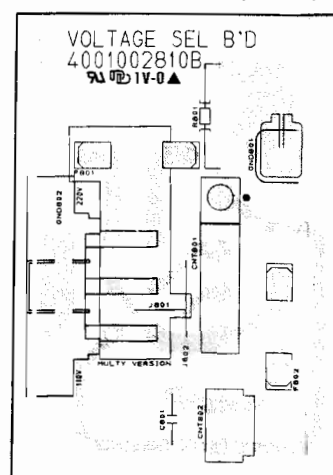
FRONT(PCB2)



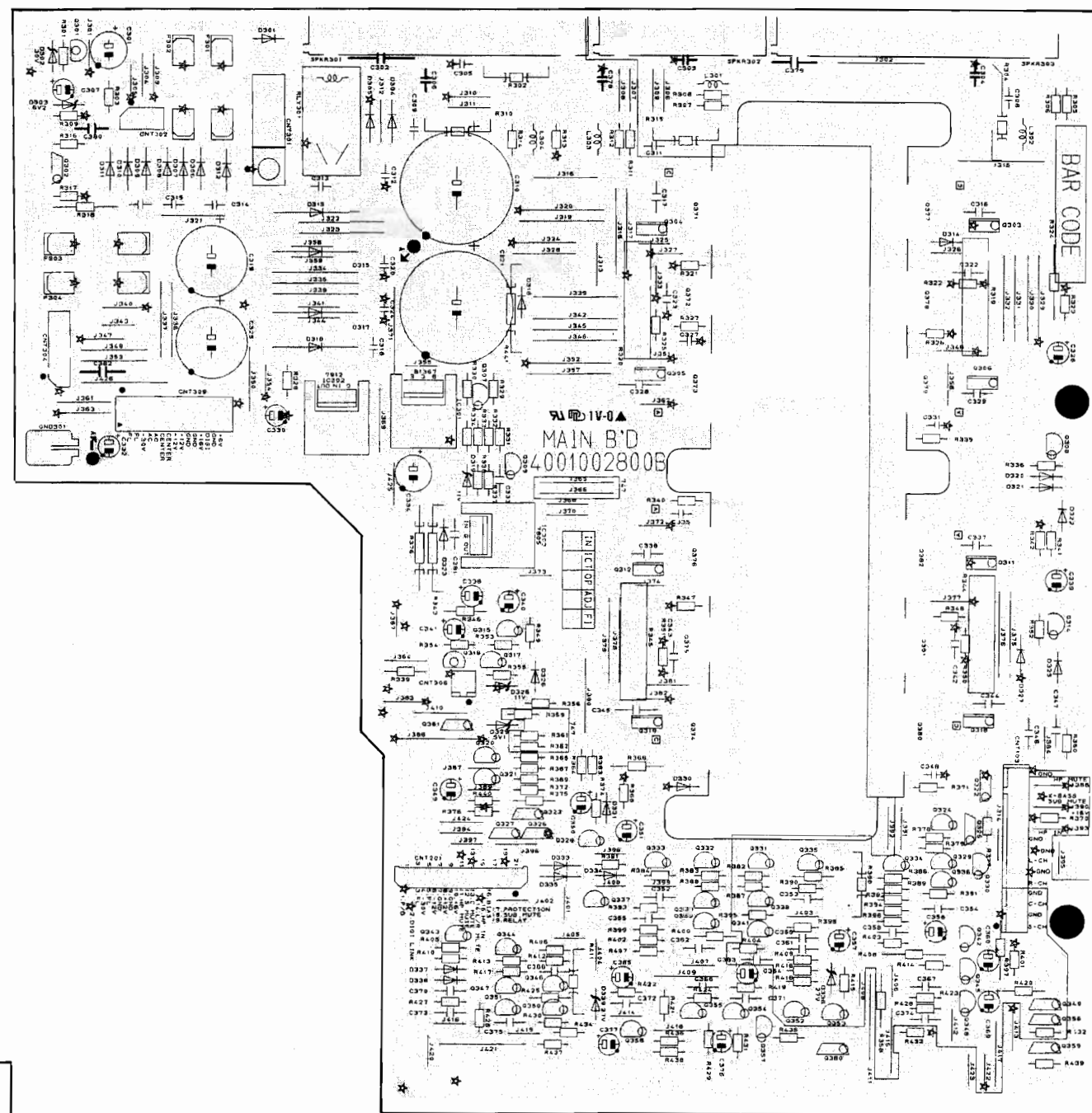
VOLUME(PCB4)



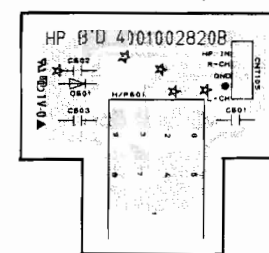
VOLTAGE SEL. (PCB7)



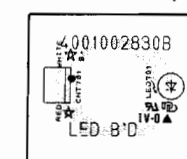
MAIN(PCB3)



HEADPHONE(PCB5)



VOLUME LED(PCB6)



ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE : Products marked with Δ have special characteristics important to safety. If you replace any of these components, read carefully the product safety notice in this manual. Don't degrade the safety of the product through improper servicing.
Resistor/Capacitor tolerance - D : ($\pm 0.5\%$), J : ($\pm 5\%$), K : ($\pm 10\%$), M : ($\pm 20\%$), Z : +80, - 20%

| Ref. No. | Description | Part No. | Q'ty | Version | Ref. No. | Description | Part No. | Q'ty | Version | Ref. No. | Description | Part No. | Q'ty | Version | | | | | |
|------------------------------------|--------------------|----------|------|---------|------------|-------------|--------------------|--------------------|------------|----------|-------------|----------|--------------------|------------|-------------|----------|---------|------------|---|
| PCB1 ASSEMBLY P.C. BOARD EQ | | | | | | | | | | | | | | | | | | | |
| CAPACITORS | | | | | | | | | | | | | | | | | | | |
| C102 | Ceramic Tubular | 100 | pF | 50 V M | 3519101935 | 1 | IC105 | KIA4559S/KIA75559S | 2168206103 | 1 | A,D,PT INDO | IC105 | KIA4559S/KIA75559S | 2168206103 | 1 | | | | |
| C103/C104 | Electrolytic SG | 4.7 | uF | 50 V M | 3479347971 | 2 | (IC105) | Not Used ! | | | KS | | | | | | | | |
| C105 | Ceramic Tubular | 100 | pF | 50 V M | 3519101935 | 1 | IC106 | KIA4559S/KIA75559S | 2168206103 | 1 | | | | | | | | | |
| C107-C109 | Electrolytic SG | 4.7 | uF | 50 V M | 3479347971 | 3 | TRANSISTORS | | | | | | | | | | | | |
| C111/C112 | Electrolytic SG | 0.33 | uF | 50 V M | 3479333871 | 2 | Q101/Q102 | KTC3198Y, NPN | 2208606104 | 2 | | | | | | | | | |
| C113/C114 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 2 | Q103 | DTC114YS | 2208622106 | 1 | A,D,PT INDO | Q103 | Not Used ! | | | | | | |
| C115 | Electrolytic SG | 22 | uF | 25 V M | 3479222041 | 1 | (Q103) | Not Used ! | | | KS | | | | | | | | |
| C116/C117 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 2 | Q104 | DTA114YS/KRM107M | 2238006103 | 1 | A,D,PT INDO | Q104 | DTA114YS/KRM107M | 2238006103 | 1 | | | | |
| C118 | Ceramic Tubular | 820 | pF | 50 V J | 3519821935 | 1 | (Q104) | Not Used ! | | | KS | | | | | | | | |
| C119 | Ceramic Tubular | 100 | pF | 50 V M | 3519101935 | 1 | Q105/Q106 | KTC3198Y, NPN | 2208606104 | 2 | | | | | | | | | |
| C120 | Ceramic Tubular | 470 | pF | 50 V J | 3519471935 | 1 | Q107 | KTD1302, NPN | 2208606112 | 1 | A,D,PT INDO | Q107 | Not Used ! | | | | | | |
| C121 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 1 | (Q107) | Not Used ! | | | KS | | | | | | | | |
| C122 | Electrolytic SG | 4.7 | uF | 50 V M | 3479347971 | 1 | Q108-Q121 | KTC3198Y, NPN | 2208606104 | 4 | | | | | | | | | |
| C123 | Ceramic Tubular | 820 | pF | 50 V J | 3519821935 | 1 | Q122 | DTA114YS/KRM107M | 2238006103 | 1 | | | | | | | | | |
| C124 | Ceramic Tubular | 100 | pF | 50 V M | 3519101935 | 1 | Q123 | DTC114YS | 2208622106 | 1 | | | | | | | | | |
| C125 | Ceramic Tubular | 470 | pF | 50 V J | 3519471935 | 1 | Q124 | KTC3198Y, NPN | 2208606104 | 1 | | | | | | | | | |
| C126 | Electrolytic SG | 4.7 | uF | 50 V M | 3479347971 | 1 | RESISTORS | | | | | | | | | | | | |
| C127 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 1 | R101 | Carbon Film | 6.2 kohm | 1/5 W J | 3069622970 | 1 | | | | | | | |
| C128 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 1 | R102 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 | A,D,PT INDO | R102 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 |
| (C128) | Not Used ! | | | | | | R103 | Metal Film | 270 ohm | 1/5 W J | 3029271970 | 1 | KS | R103 | Metal Film | 270 ohm | 1/5 W J | 3029271970 | 1 |
| C129/C130 | Mylar | 0.0033 | uF | 100 V J | 3679332120 | 2 | R104 | Carbon Film | 6.8 kohm | 1/5 W J | 3069682970 | 1 | | R104 | Carbon Film | 6.8 kohm | 1/5 W J | 3069682970 | 1 |
| C131/C132 | Ceramic Tubular | 330 | pF | 50 V J | 3519331935 | 2 | R105/R106 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 2 | | R105/R106 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 2 |
| C133 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 1 | R107 | Carbon Film | 6.2 kohm | 1/5 W J | 3069622970 | 1 | A,D,PT INDO | R107 | Carbon Film | 6.2 kohm | 1/5 W J | 3069622970 | 1 |
| (C133) | Not Used ! | | | | | | R108 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 | KS | R108 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 |
| C134/C135 | Mylar | 0.0082 | uF | 100 V J | 3679822120 | 2 | R109 | Metal Film | 270 ohm | 1/5 W J | 3029271970 | 1 | | R109 | Metal Film | 270 ohm | 1/5 W J | 3029271970 | 1 |
| C136/C137 | Ceramic Tubular | 820 | pF | 50 V J | 3519821935 | 2 | R110 | Carbon Film | 6.8 kohm | 1/5 W J | 3069682970 | 1 | | R110 | Carbon Film | 6.8 kohm | 1/5 W J | 3069682970 | 1 |
| C138/C139 | Mylar | 0.02 | uF | 100 V J | 3679203120 | 2 | R111/R112 | Metal Film | 1.5 kohm | 1/5 W J | 3029152970 | 2 | | R111/R112 | Metal Film | 1.5 kohm | 1/5 W J | 3029152970 | 2 |
| C140/C141 | Mylar | 0.0022 | uF | 100 V J | 3679222120 | 2 | R113/R114 | Carbon Film | 47 kohm | 1/5 W J | 3069473970 | 2 | | R113/R114 | Carbon Film | 47 kohm | 1/5 W J | 3069473970 | 2 |
| C142/C143 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 2 | R115/R116 | Metal Film | 100 ohm | 1/5 W J | 3029101970 | 2 | | R115/R116 | Metal Film | 100 ohm | 1/5 W J | 3029101970 | 2 |
| C144/C145 | Mylar | 0.0047 | uF | 100 V J | 3679472120 | 2 | R117 | Metal Film | 4.7 kohm | 1/5 W J | 3029472970 | 1 | A,D,PT INDO | R117 | Metal Film | 4.7 kohm | 1/5 W J | 3029472970 | 1 |
| C146/C147 | Mylar | 0.047 | uF | 100 V J | 3679473120 | 2 | (R117) | Not Used ! | | | KS | | | | | | | | |
| C148/C149 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 2 | R118/R119 | Metal Film | 3.3 kohm | 1/5 W J | 3029332970 | 2 | | R118/R119 | Metal Film | 3.3 kohm | 1/5 W J | 3029332970 | 2 |
| C150 | Ceramic Tubular | 100 | pF | 50 V M | 3519101935 | 1 | R120 | Metal Film | 220 ohm | 1/5 W J | 3029221970 | 1 | | R120 | Metal Film | 220 ohm | 1/5 W J | 3029221970 | 1 |
| C151/C152 | Electrolytic SG | 0.1 | uF | 50 V M | 3479310871 | 2 | R121 | Carbon Film | 470 kohm | 1/5 W J | 3069474970 | 1 | | R121 | Carbon Film | 470 kohm | 1/5 W J | 3069474970 | 1 |
| C153/C154 | Mylar | 0.015 | uF | 100 V J | 3679153120 | 2 | R122/R123 | Metal Film | 10 ohm | 1/5 W J | 3029100970 | 2 | | R122/R123 | Metal Film | 10 ohm | 1/5 W J | 3029100970 | 2 |
| C155/C156 | Electrolytic SG | 0.22 | uF | 50 V M | 3479322871 | 2 | R124 | Carbon Film | 8.2 kohm | 1/5 W J | 3069822970 | 1 | | R124 | Carbon Film | 8.2 kohm | 1/5 W J | 3069822970 | 1 |
| C157/C158 | Mylar | 0.0047 | uF | 100 V J | 3679472120 | 2 | R125 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 | | R125 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 |
| C159/C160 | Electrolytic SG | 0.68 | uF | 50 V M | 3479368871 | 2 | R126 | Metal Film | 3.9 kohm | 1/5 W J | 3029392970 | 1 | | R126 | Metal Film | 3.9 kohm | 1/5 W J | 3029392970 | 1 |
| C161/C162 | Mylar | 0.1 | uF | 63 V K | 3679104297 | 2 | R127 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 | | R127 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 |
| C163/C164 | Electrolytic SG | 47 | uF | 16 V M | 3479347031 | 2 | R128 | Metal Film | 4.7 ohm | 1/5 W J | 3029479970 | 1 | | R128 | Metal Film | 4.7 ohm | 1/5 W J | 3029479970 | 1 |
| C165/C166 | Ceramic Tubular | 330 | pF | 50 V J | 3519331935 | 2 | R129-R131 | Metal Film | 1 kohm | 1/5 W J | 3029102970 | 3 | A,D,PT INDO | R129-R131 | Not Used ! | | | | |
| C167 | Ceramic Tubular | 150 | pF | 50 V J | 3519151935 | 1 | (R129-R131) | Not Used ! | | | KS | | | | | | | | |
| C168 | Electrolytic SG | 22 | uF | 25 V M | 3479222041 | 1 | R132/R133 | Metal Film | 3.3 kohm | 1/5 W J | 3029332970 | 2 | A,D,PT INDO | R132/R133 | Metal Film | 3.3 kohm | 1/5 W J | 3029332970 | 2 |
| (C168) | Not Used ! | | | | | | R134 | Carbon Film | 8.2 kohm | 1/5 W J | 3069822970 | 1 | KS | R134 | Carbon Film | 8.2 kohm | 1/5 W J | 3069822970 | 1 |
| C169 | Electrolytic SG | 1 | uF | 50 V M | 3479310971 | 1 | R135 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 | | R135 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 |
| C170 | Electrolytic SG | 2.2 | uF | 50 V M | 3479322971 | 1 | R136 | Metal Film | 3.9 kohm | 1/5 W J | 3029392970 | 1 | | R136 | Metal Film | 3.9 kohm | 1/5 W J | 3029392970 | 1 |
| C171 | Ceramic Tubular | 47 | pF | 50 V J | 3519470935 | 1 | R137 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 | | R137 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 1 |
| C172 | Electrolytic SG | 2.2 | uF | 50 V M | 3479322971 | 1 | R138 | Metal Film | 4.7 ohm | 1/5 W J | 3029479970 | 1 | | R138 | Metal Film | 4.7 ohm | 1/5 W J | 3029479970 | 1 |
| C173 | Ceramic Tubular | 330 | pF | 50 V J | 3519331935 | 1 | R139 | Metal Film | 1 kohm | 1/5 W J | 3029102970 | 1 | A,D,PT INDO | R139 | Not Used ! | | | | |
| C174 | Electrolytic SG | 1 | uF | 50 V M | 3479310971 | 1 | (R139) | Not Used ! | | | KS | | | | | | | | |
| C175 | Ceramic Tubular | 330 | pF | 50 V J | 3519331935 | 1 | R140/R141 | Metal Film | 100 ohm | 1/5 W J | 3029101970 | 2 | A,D,PT INDO | R140/R141 | Not Used ! | | | | |
| C176 | Ceramic Tubular | 150 | pF | 50 V J | 3519151935 | 1 | (R140/R141) | Not Used ! | | | KS | | | | | | | | |
| C177 | Ceramic Tubular | 47 | pF | 50 V J | 3519470935 | 1 | R142 | Metal Film | 3.3 kohm | 1/5 W J | 3029332970 | 1 | A,D,PT INDO | R142 | Metal Film | 3.3 kohm | 1/5 W J | 3029332970 | 1 |
| C178 | Ceramic Tubular | 100 | pF | 50 V M | 3519101935 | 1 | (R142) | Not Used ! | | | KS | | | | | | | | |
| (C178) | Not Used ! | | | | | | R143 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 | | R143 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 |
| C179/C180 | Electrolytic SG | 2.2 | uF | 50 V M | 3479322971 | 2 | R144 | Metal Film | 390 ohm | 1/5 W J | 3029391970 | 1 | | R144 | Metal Film | 390 ohm | 1/5 W J | 3029391970 | 1 |
| C181-C184 | Electrolytic SG | 4.7 | uF | 50 V M | 3479347971 | 4 | R145 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 | | R145 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 |
| C185-C187 | Ceramic Tubular | 0.047 | uF | 50 V F | 3519473935 | 3 | R146 | Metal Film | 1 kohm | 1/5 W J | 3029102970 | 1 | | R146 | Metal Film | 1 kohm | 1/5 W J | 3029102970 | 1 |
| CONNECTORS | | | | | | | | | | | | | | | | | | | |
| CNT102 | Wafer, 4P | | | | 4428516310 | 1 | R147 | Metal Film | 390 ohm | 1/5 W J | 3029391970 | 1 | | R147 | Metal Film | 390 ohm | 1/5 W J | 3029391970 | 1 |
| CNT103 | Wafer, 15P | | | | 4428561520 | 1 | R148 | Metal Film | 1 kohm | 1/5 W J | 3029102970 | 1 | | R148 | Metal Film | 1 kohm | 1/5 W J | 3029102970 | 1 |
| CNT104 | Wafer, 9P | | | | 4428509820 | 1 | R149/R150 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 2 | | R149/R150 | Carbon Film | 100 kohm | 1/5 W J | 3069104970 | 2 |
| DIODES | | | | | | | | | | | | | | | | | | | |
| D101/D102 | 1N4148, Switching | | | | 2058322101 | 2 | R151 | Carbon Film | 820 kohm | 1/5 W J | 3069824970 | 1 | | R151 | Carbon Film | 820 kohm | 1/5 W J | 3069824970 | 1 |
| D103/D104 | Zener, UZ 6.8 BSC | | | | 2258599121 | 2 | R152 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 | | R152 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 |
| INTEGRATED CIRCUITS | | | | | | | | | | | | | | | | | | | |
| IC101 | LC7522 | | | | 2168017122 | 1 | R153 | Carbon Film | 820 kohm | 1/5 W J | 3069824970 | 1 | | R153 | Carbon Film | 820 kohm | 1/5 W J | 3069824970 | 1 |
| IC102-IC104 | KIA4559S/KIA75559S | | | | 2168206103 | 3 | R154 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 | | R154 | Carbon Film | 15 kohm | 1/5 W J | 3069153970 | 1 |
| IC105 | | | | | | | | | | | | | | | | | | | |
| IC106 | | | | | | | | | | | | | | | | | | | |
| IC107 | | | | | | | | | | | | | | | | | | | |

| Ref. No. | Description | Part No. | Q'ty | Version | Ref. No. | Description | Part No. | Q'ty | Version |
|-------------|--------------------|------------------|------------|---------|-----------|--------------------|------------------|------------|---------|
| (R361/R362) | Not Used! (AX-747) | | | | (R420) | Not Used! (AX-747) | | | |
| R363 | Metal Film | 330 ohm 1/5 W J | 3029331970 | 1 | R421 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 1 |
| R364 | Metal Film | 4.7 kohm 1/5 W J | 3029472970 | 1 | R422 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 |
| R365 | Carbon Film | 12 kohm 1/5 W J | 3069123970 | 1 | R423 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 |
| R366 | Metal Film | 330 ohm 1/5 W J | 3029331970 | 1 | (R423) | Not Used! (AX-747) | | | |
| R367 | Carbon Film | 12 kohm 1/5 W J | 3069123970 | 1 | R424 | Metal Film | 390 ohm 1/5 W J | 3029391970 | 1 |
| R368 | Metal Film | 4.7 kohm 1/5 W J | 3029472970 | 1 | R425 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 |
| R369 | Carbon Film | 6.8 kohm 1/5 W J | 3069682970 | 1 | R426/R427 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 2 |
| R370 | Metal Film | 4.7 kohm 1/5 W J | 3029472970 | 1 | R428 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 |
| R371 | Metal Film | 220 ohm 1/5 W J | 3029221970 | 1 | (R428) | Not Used! (AX-747) | | | |
| (R371) | Not Used! (AX-747) | | | | R429 | Metal Film | 1.8 kohm 1/5 W J | 3029182970 | 1 |
| R372 | Carbon Film | 6.8 kohm 1/5 W J | 3069682970 | 1 | R430 | Metal Film | 390 ohm 1/5 W J | 3029391970 | 1 |
| R374 | Carbon Film | 15 kohm 1/5 W J | 3069153970 | 1 | R431 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 |
| R375 | Carbon Film | 10 kohm 1/5 W J | 3069103970 | 1 | R432 | Metal Film | 4.7 kohm 1/5 W J | 3029472970 | 1 |
| R376/R377 | Metal Film | 3.3 kohm 1/5 W J | 3029332970 | 2 | (R432) | Not Used! (AX-747) | | | |
| R378 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 1 | R433 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 |
| (R378) | Not Used! (AX-747) | | | | R434 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 |
| R379 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | R435/R436 | Metal Film | 3.3 kohm 1/5 W J | 3029332970 | 2 |
| (R379) | Not Used! (AX-747) | | | | R437 | Metal Film | 1.8 kohm 1/5 W J | 3029182970 | 1 |
| R380 | Metal Film | 2.2 kohm 1 W J | 3029222470 | 1 | R438 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 |
| (R380) | Not Used! (AX-747) | | | | R439 | Metal Film | 4.7 kohm 1/5 W J | 3029472970 | 1 |
| R381 | Carbon Film | 15 kohm 1/5 W J | 3069153970 | 1 | R440 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 |
| R382 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 1 | | | | | |
| (R382) | Not Used! (AX-747) | | | | | | | | |
| R383 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 1 | | | | | |
| R384 | Metal Film | 3.3 kohm 1/5 W J | 3029332970 | 1 | | | | | |
| R385/R386 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 2 | | | | | |
| (R385/R386) | Not Used! (AX-747) | | | | | | | | |
| R387 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| (R387) | Not Used! (AX-747) | | | | | | | | |
| R388 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| R389/R390 | Metal Film | 3.3 kohm 1/5 W J | 3029332970 | 2 | | | | | |
| (R389/R390) | Not Used! (AX-747) | | | | | | | | |
| R391 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| (R391) | Not Used! (AX-747) | | | | | | | | |
| R392 | Carbon Film | 10 kohm 1/5 W J | 3069103970 | 1 | | | | | |
| (R392) | Not Used! (AX-747) | | | | | | | | |
| R393 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 | | | | | |
| R394 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 | | | | | |
| (R394) | Not Used! (AX-747) | | | | | | | | |
| R395 | Carbon Film | 10 kohm 1/5 W J | 3069103970 | 1 | | | | | |
| (R395) | Not Used! (AX-747) | | | | | | | | |
| R396 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 | | | | | |
| (R396) | Not Used! (AX-747) | | | | | | | | |
| R397 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| (R397) | Not Used! (AX-747) | | | | | | | | |
| R398 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 | | | | | |
| (R398) | Not Used! (AX-747) | | | | | | | | |
| R399 | Carbon Film | 10 kohm 1/5 W J | 3069103970 | 1 | | | | | |
| R400 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| R401 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| (R401) | Not Used! (AX-747) | | | | | | | | |
| R402 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 | | | | | |
| R403 | Metal Film | 390 ohm 1/5 W J | 3029391970 | 1 | | | | | |
| (R403) | Not Used! (AX-747) | | | | | | | | |
| R404 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| (R404) | Not Used! (AX-747) | | | | | | | | |
| R405 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 1 | | | | | |
| R406 | Carbon Film | 10 kohm 1/5 W J | 3069103970 | 1 | | | | | |
| R407 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 | | | | | |
| R408 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 | | | | | |
| (R408) | Not Used! (AX-747) | | | | | | | | |
| R409 | Metal Film | 390 ohm 1/5 W J | 3029391970 | 1 | | | | | |
| (R409) | Not Used! (AX-747) | | | | | | | | |
| R410 | Metal Film | 3.3 kohm 1/5 W J | 3029332970 | 1 | | | | | |
| R411 | Metal Film | 2.2 kohm 1 W J | 3029222470 | 1 | | | | | |
| R412 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| R413 | Metal Film | 120 ohm 1/5 W J | 3029121970 | 1 | | | | | |
| R414/R415 | Metal Film | 1.2 kohm 1/5 W J | 3029122970 | 2 | | | | | |
| (R414/R415) | Not Used! (AX-747) | | | | | | | | |
| R416 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 | | | | | |
| (R416) | Not Used! (AX-747) | | | | | | | | |
| R417 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 1 | | | | | |
| R418 | Carbon Film | 2 kohm 1/5 W J | 3069202970 | 1 | | | | | |
| (R418) | Not Used! (AX-747) | | | | | | | | |
| R419 | Carbon Film | 33 kohm 1/5 W J | 3069333970 | 1 | | | | | |
| R420 | Metal Film | 3.3 kohm 1/5 W J | 3029332970 | 1 | | | | | |

| Ref. No. | Description | Part No. | Q'ty | Version |
|------------|-------------------|------------|------|-------------|
| F301/302 | △ T 1.6 A, 250 V | 5508302335 | 2 | A,D,PT INDO |
| (F301/302) | △ NB 1.5 A, 250 V | 5508202230 | 2 | KS |
| F303/304 | △ T 1 A, 250 V | 5508302035 | 2 | A,D,PT INDO |
| (F303/304) | △ NB 1 A, 250 V | 5508100851 | 2 | KS |

| Ref. No. | Description | Part No. | Q'ty | Version |
|----------|------------------------|------------|------|---------|
| RLY301 | △ Relay, OSA-SS-212DM3 | 5528001750 | 1 | |
| GND301 | Terminal Ground | 4235007310 | 1 | |
| 24 | Terminal, Speaker, 4P | 4408105410 | 2 | |
| 25 | Terminal, Speaker, 2P | 4408107010 | 1 | |
| 34 | Heatsink, Regulator | 7505206230 | 3 | |

| Ref. No. | Description | Part No. | Q'ty | Version |
|----------|-----------------|----------------|------------|---------|
| C501 | Electrolytic SG | 100 uF 16 V M | 3479310131 | 1 |
| C502 | Electrolytic SG | 47 uF 16 V M | 3479347031 | 1 |
| C503 | Ceramic Tubular | 0.01 uF 16 V M | 3519103915 | 1 |
| C504 | Electrolytic SG | 47 uF 16 V M | 3479347031 | 1 |

| Ref. No. | Description | Part No. | Q'ty | Version |
|----------|-------------|------------|------|---------|
| CNT501 | Wafer, 2P | 4428508210 | 1 | |
| CNT202 | Wafer, 10P | 4428810995 | 1 | |
| CNT101 | Wafer, 21P | 4428526750 | 1 | |

| Ref. No. | Description | Part No. | Q'ty | Version |
|-----------|------------------------|------------|------|---------|
| Q501 | DTC114YS | 2208622106 | 1 | |
| Q502/Q503 | KTA1015Y/BKTA1266, PNP | 2208206105 | 2 | |
| Q504/Q505 | KTC3198Y, NPN | 2208606104 | 2 | |

| Ref. No. | Description | Part No. | Q'ty | Version |
|-----------|-------------|------------------|------------|---------|
| R501/R502 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 2 |
| R503 | Metal Film | 220 ohm 1/5 W J | 3029221970 | 1 |
| R505/R506 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 2 |
| R507 | Metal Film | 1.5 kohm 1/5 W J | 3029152970 | 1 |
| R508/R509 | Metal Film | 1 kohm 1/5 W J | 3029102970 | 2 |
| R510/R511 | Metal Film | 4.7 kohm 1/5 W J | 3029472970 | 2 |

| Ref. No. | Description | Part No. | Q'ty | Version |
|----------|------------------------------|------------|------|---------|
| VR501 | Semi Fixed Resistor, 50 k(B) | 3248050353 | 1 | |
| 1 | Volume, Motor | 3228020010 | 1 | |

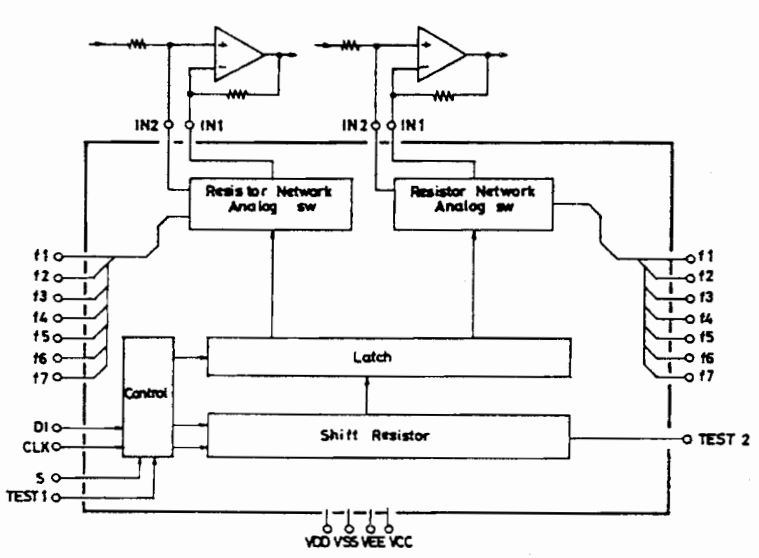
| Ref. No. | Description | Part No. | Q'ty | Version |
|-----------|---------------------------------|-----------------|------------|---------|
| C601-C603 | CAP, Ceramic Tu | 0.022 pF 25 V J | 3519223520 | 3 |
| CNT105 | Connector, Lead Assy, 4P, 300mm | 436204303332 | 1 | |
| D601 | Diode, 1N4148, Switching | 2058322101 | 1 | |
| 5 | Jack, Phone | 4438005510 | 1 | |

| Ref. No. | Description | Part No. | Q'ty | Version |
|----------|---------------------------------|--------------|------|---------|
| CNT701 | Connector, Lead Assy, 2P, 140mm | 435102143481 | 1 | |
| LED701 | LED, SLH-34K-3 | 2308220142 | 1 | |

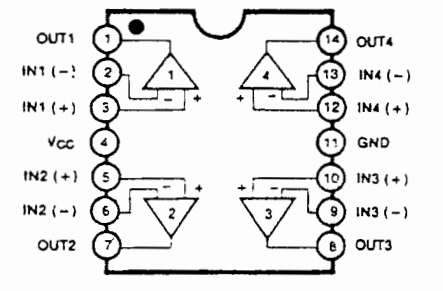
| Ref. No. | Description | Part No. | Q'ty | Version |
|----------|-----------------------------|------------|------|-------------|
| PCB7 | ASSEMBLY P.C. BOARD VOLTAGE | | | |
| C801 | Not Used! | | | |
| CNT801 | Connector, Wafer LV, 4P | 4428525780 | 1 | A,D,PT INDO |
| (CNT801) | Connector, Wafer LV, 2P | 4428525800 | 1 | PT INDO |
| CNT802 | Connector, Wafer LV, 2P | 4428100291 | 1 | |
| F801 | △ Fuse, T 2A, 250V | 5508302435 | 1 | PT INDO |
| (F801) | Not Used! | | | |
| F802 | △ Fuse, T 3.15A, 250V | 5508302735 | 1 | A,D,KS |
| (F802) | △ Fuse, NB 3.5A, 250V | 5508202830 | 1 | PT INDO |
| 32 | Plate, Ground | 6165143510 | 1 | A,D,KS |
| (32) | Switch, Slide | 4618006510 | 1 | PT INDO |

IC FUNCTIONAL BLOCK DIAGRAM

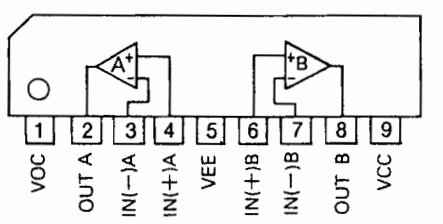
IC101 : LC7522



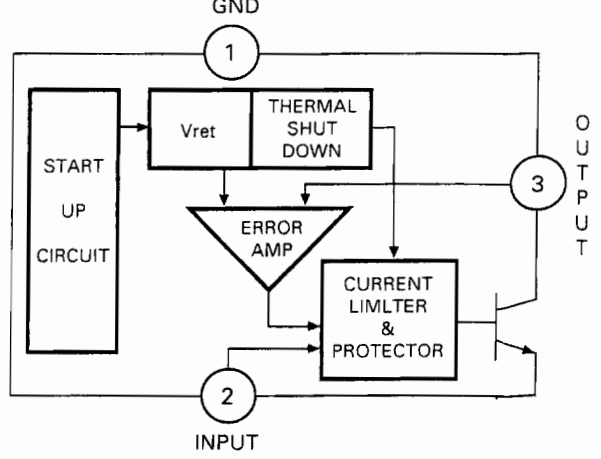
IC102/IC103 : KA324



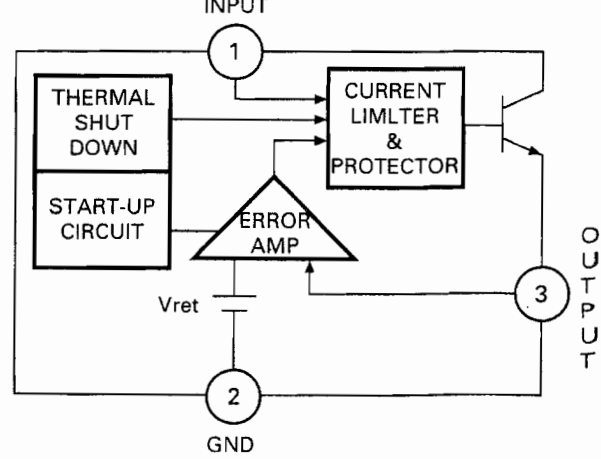
IC102, IC103, IC104, IC105, IC106 : KIA4559S/KIA7559S



IC302 : KA7912

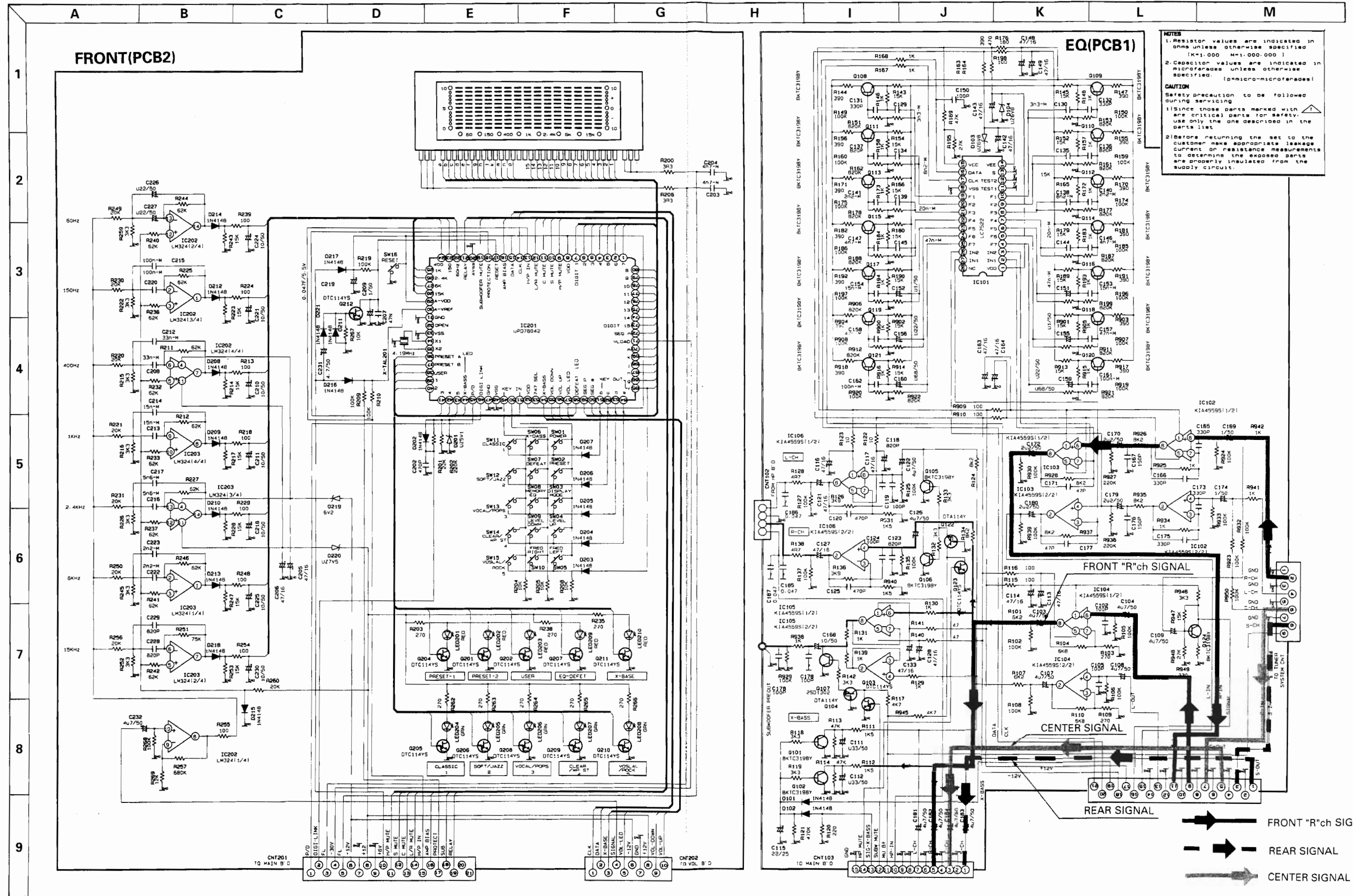


IC303 : KA7805

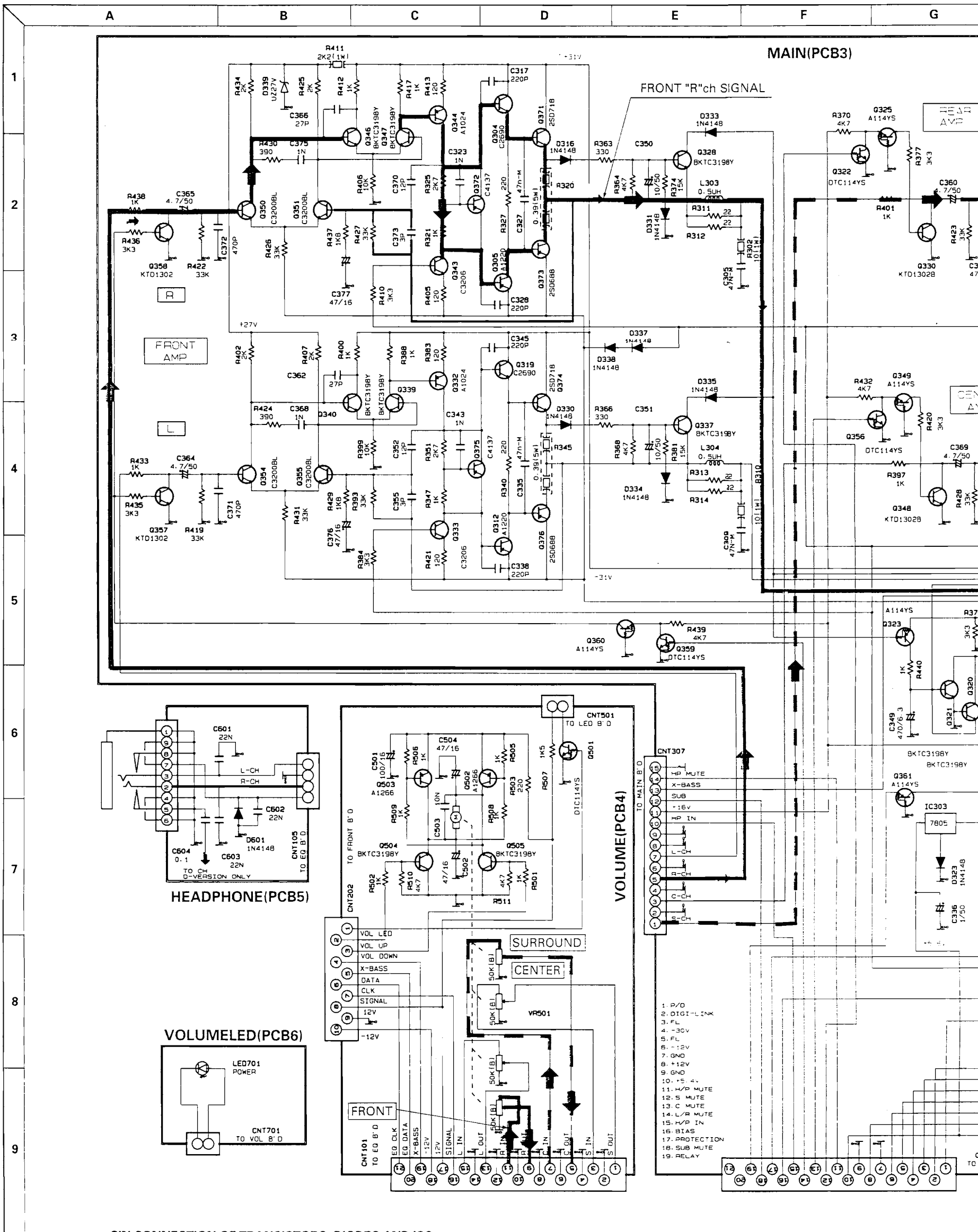


SCHEMATIC DIAGRAM I

Model No. : AX-747/AV-757



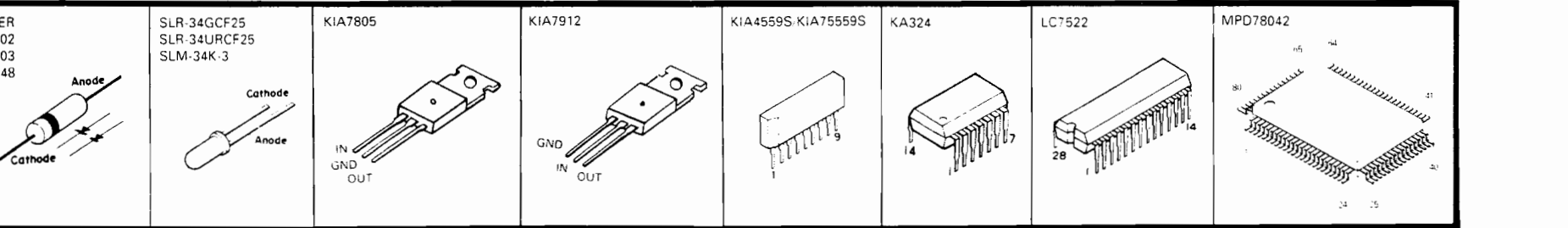
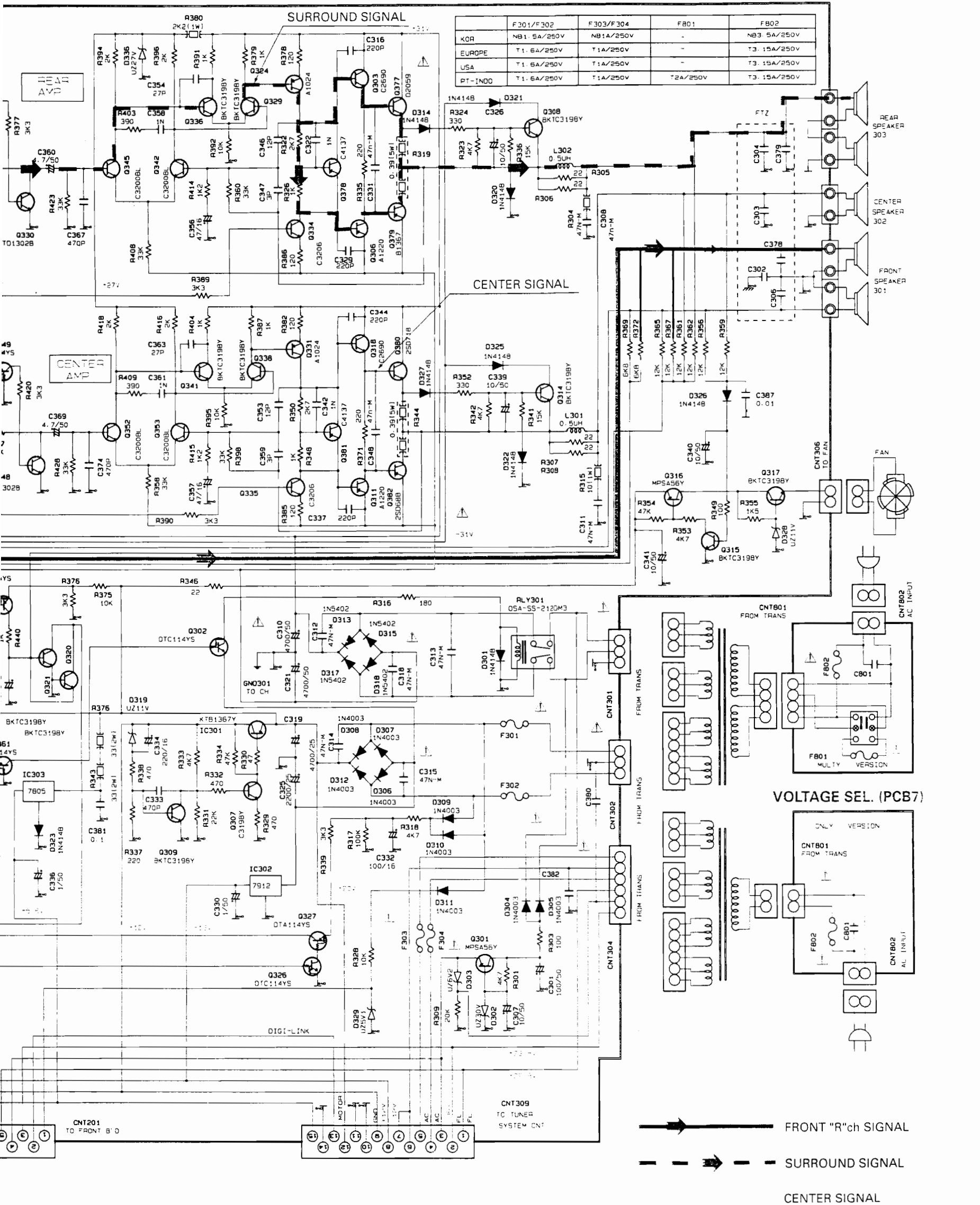
SCHEMATIC DIAGRAM II



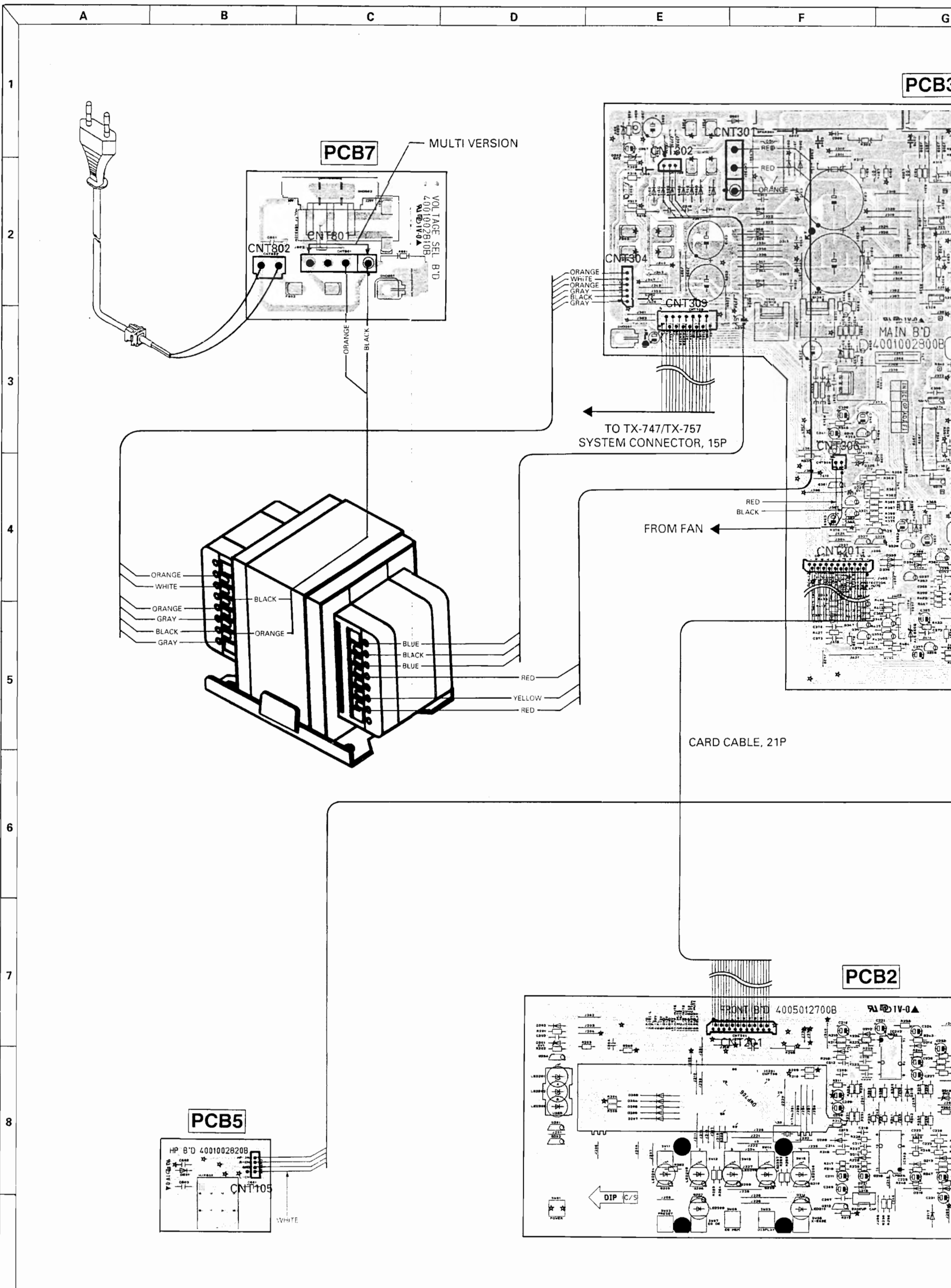
PIN CONNECTION OF TRANSISTORS, DIODES AND ICs.

| | | | | | | | |
|---|----------------|------------------------------|-----------------------|--|--------------------------|----------------------------|---|
| <p>KTD1302 KTC2240/KTC3200 KTC3198/KTC1815 KTA1266/KTA1015Y</p> | <p>MPSA56Y</p> | <p>DTA114YS DTC114YS</p> | <p>KTA949/KTA1024</p> | <p>2SC4137 KSC2690A KSA1220A</p> | <p>KTB688 KTD718</p> | <p>2SB1367 2SD2059</p> | <p>ZENER IN5402 IN4003 IN4148</p> |
|---|----------------|------------------------------|-----------------------|--|--------------------------|----------------------------|---|

G H I J K L M

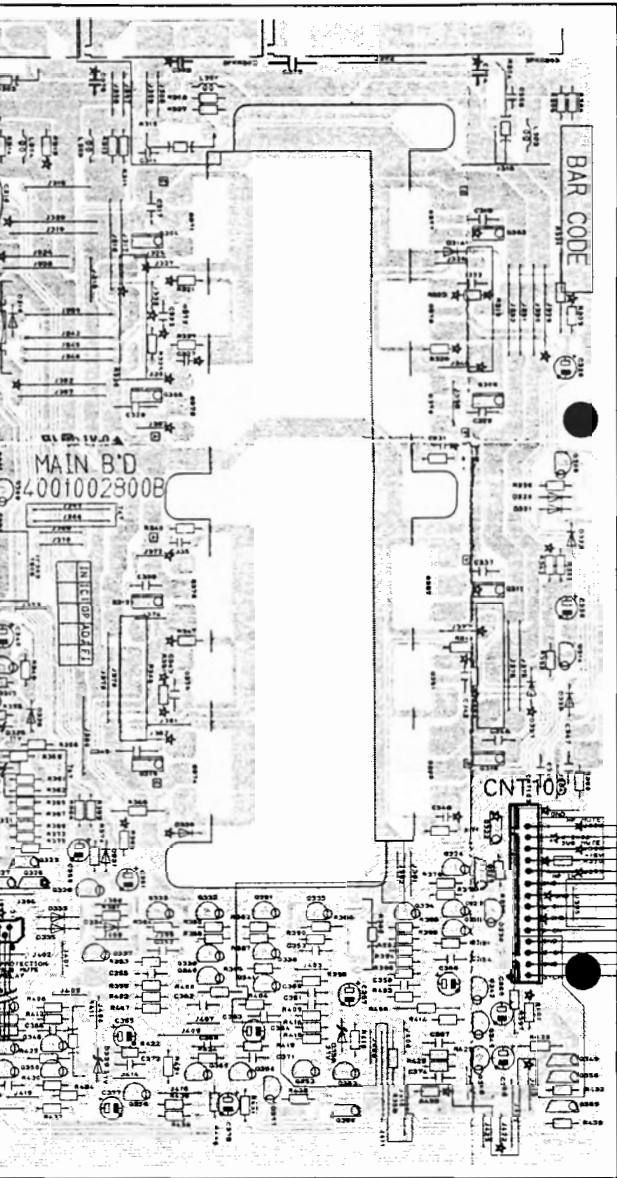


WIRING DIAGRAM



G H I J K L

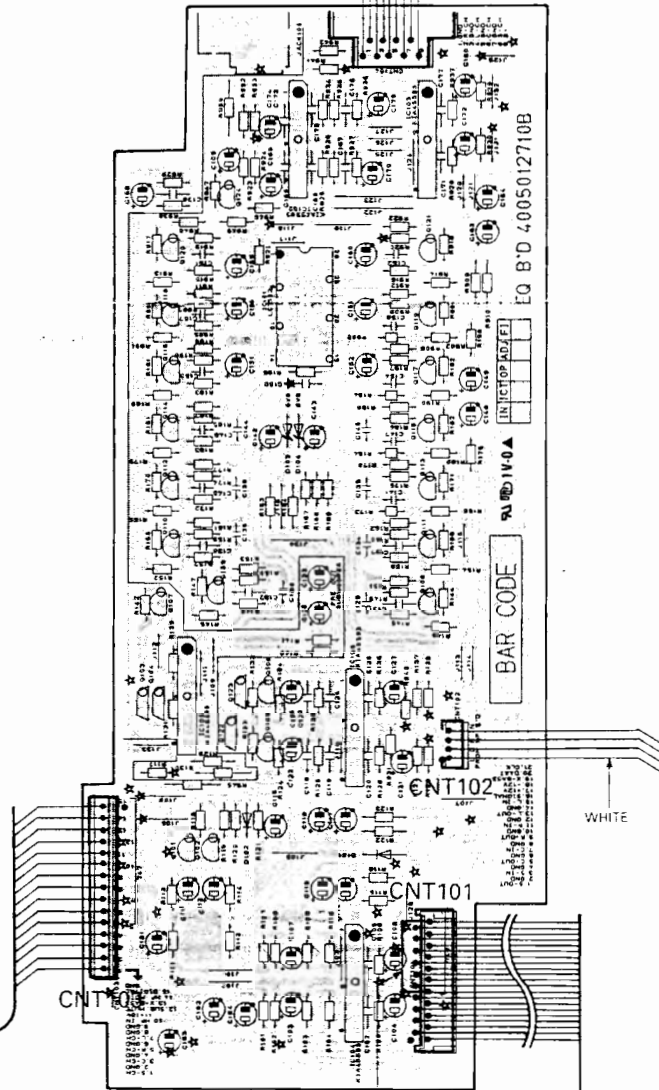
PCB3



CNT104

FROM TX-747/TX-757
SYSTEM CONNECTOR, 9P

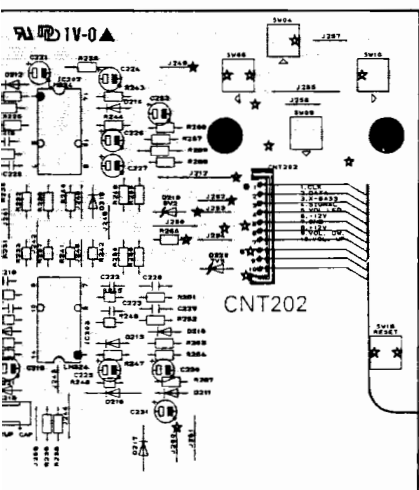
PCB1



B'D TO B'D
CONNECTOR

AX747

PCB2

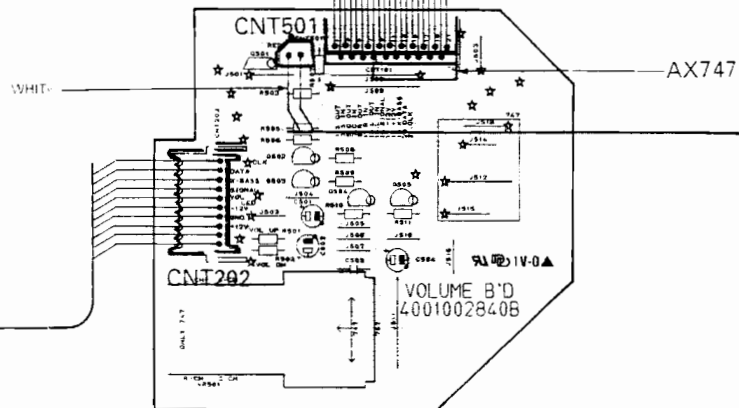


B'D TO B'D
CONNECTOR

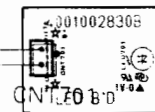
CNT101

CARD CABLE, 21P(AV-757)
CARD CABLE, 14P(AX-747)

PCB4



PCB6



WHITE

■ TX-757/747 ■

SPECIFICATIONS

* **Preparation** : Output voltage setting at speaker terminal for measurement is 2 V (Input : VIDEO, 1kHz, 250mV)

FM SECTION

* Measurement Condition

- Antenna input impedance: 75 ohms

| Version | USA/Canada ("A") | Europe ("D") | Korea ("KS") | Multi ("PT INDO") |
|-----------|------------------|--------------|--------------|-------------------|
| RF Signal | 98.1 MHz | 98.0 MHz | 98.1 MHz | 98.0 MHz |

| No. | Description | Unit | Nominal | Limit | |
|-----|--|----------------------|---------|------------------------------|----------------|
| 1 | Tuning Frequency Range | KS, A D, PT INDO | MHz | 87.5 - 107.9 87.5 - 108.0 | |
| 2 | Scanning Frequency Interval | KS, A D, PT INDO | kHz | 200 50 | |
| 3 | FM De-emphasis | KS, A D, PT INDO | uS | 75 50 | |
| 4 | Usable Sensitivity 90.1/106.1 MHz, Stereo Mode, S/N=30 dB | | uV | ≤ 1.5 | ≤ 3 |
| 5 | 50 dB Quieting Sensitivity S/N=50 dB (IHF BPF) | | uV | ≤ 50 | |
| 6 | Signal to Noise Ratio, 75 kHz Dev. | MONO STEREO (BPF) | dB | ≥ 73 ≥ 70 | ≥ 67 ≥ 64 |
| 7 | Total Harmonic Distortion at 1 kHz, 75 kHz Dev. | MONO STEREO (BPF) | % | ≤ 0.2 ≤ 0.4 | ≤ 0.4 ≤ 0.8 |
| 8 | Stereo Threshold | | uV | 10 ± 2 | 10 ± 4 |
| 9 | Muting Threshold | | uV | 10 ± 2 | 10 ± 4 |
| 10 | Output Voltage with 1 kHz, DOLBY Tape (TCC-130) (Reference voltage setting: speaker output 2 V) | | mV | 4000 ± 400 | 4000 ± 600 |
| 11 | Memory Holding Time | | week | ≥ 4 | |
| 12 | Stereo Separation at 1 kHz, 98 MHz (IHF BPF) | | dB | ≥ 45 | ≥ 40 |

AM SECTION

* Measurement Condition

- RF Signal: 999 kHz, 5 mV/m or 207 kHz, 5 mV/m

- MOD.: 400 Hz, 30%

| No. | Description | Unit | Nominal | Limit | |
|-----|--|------------------------------------|---------|--|------------------|
| 1 | Tuning Frequency Range | KS A PT INDO D | kHz | 522 ~ 1611 520 ~ 1710 520/522 ~ 1710/1611 522 ~ 1611, 153 ~ 279 | |
| 2 | Scanning Frequency Interval | KS, D A PT INDO | kHz | 9 10 9/10 | |
| 3 | Usable Sensitivity, S/N=20 dB, 30% Mod. | 600/1400 kHz 162/252 kHz | uV/m | ≤ 600 ≤ 1000 | ≤ 1000 ≤ 1300 |
| 4 | Signal to Noise Ratio, 30% Mod. | 999 kHz, 400 Hz 207 kHz, 400 Hz | dB | ≥ 40 ≥ 35 | ≥ 36 ≥ 30 |
| 5 | Output Voltage, 400 Hz, 30% Mod., 5mV/m (Reference voltage setting: speaker output 2 V) | DOLBY Tape TCC-130 | mV | 1500 ± 400 | 1500 ± 600 |
| 6 | Search Level | | uV/m | 600 ± 100 | 600 ± 200 |

VIDEO SECTION (TX-757 ONLY)

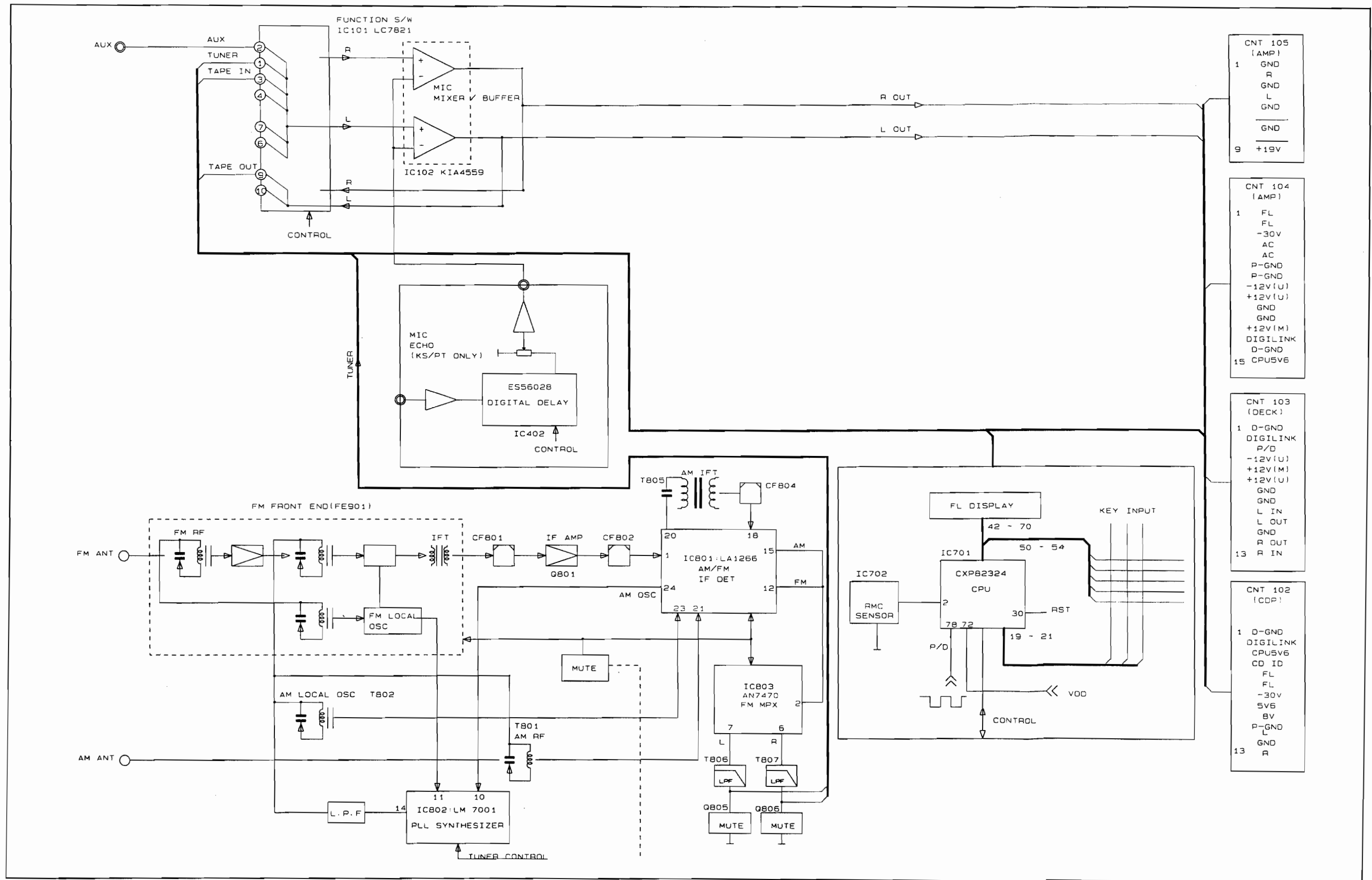
| No. | Description | Unit | Nominal | Limit |
|-----|---|------|-----------------|---------------|
| 1 | Input Sensitivity/Impedance (75 Ω) | dB | 1Vp-p \pm 0.5 | 1Vp-p \pm 1 |
| 2 | Output Voltage/Impedance (75 Ω) | dB | 1Vp-p \pm 0.5 | 1Vp-p \pm 1 |
| 3 | Frequency Response at \mp 3 dB | Hz | 10~6M | 20~5M |
| 4 | Crosstalk at 1.0 MHz | dB | \geq 50 | \geq 45 |
| 5 | Signal to Noise Ratio at 1 MHz, Input shorted | dB | \geq 50 | \geq 45 |

INPUT SECTION

| No. | Description | Unit | Nominal | Limit |
|-----|--|------|-------------------------------|-------------------------------|
| 1 | Input Sensitivity TV/AUX etc. (Impedance : 47 kohms) TX-757 AUX (Impedance : 49 kohms) TX-747 MIC (Impedance: 600 ohms) | mV | 250 \pm 20 2.5 \pm 0.2 | 250 \pm 40 2.5 \pm 0.5 |
| 2 | Output Voltage at TAPE REC | mV | 250 \pm 20 | 250 \pm 40 |

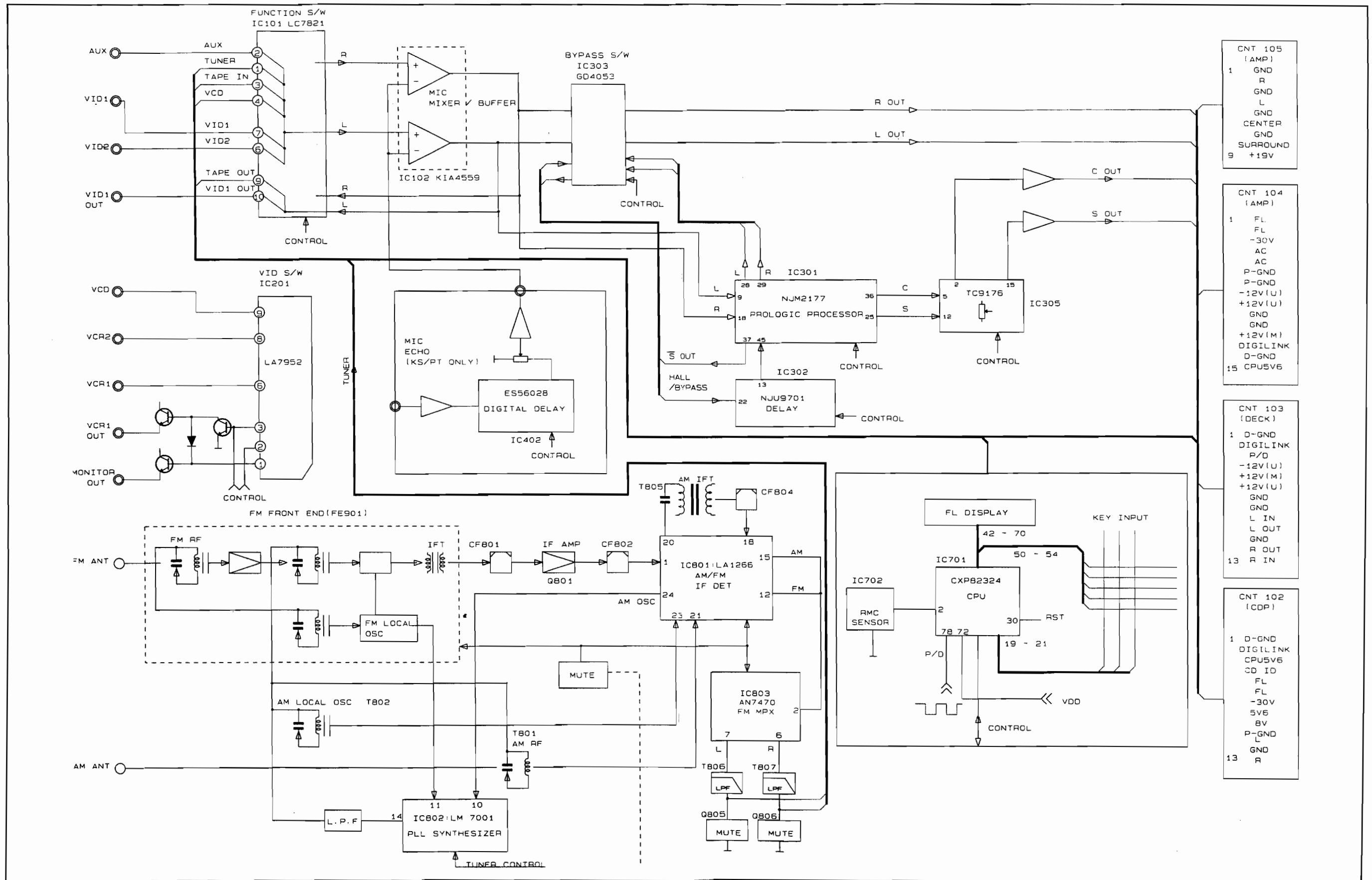
BLOCK DIAGRAM I

Model No : TX-747



BLOCK DIAGRAM II

Model No : TX-757



DISASSEMBLY PROCEDURES

REFER TO PAGES 39 AND 52.

1 COVER TOP REMOVAL.

Remove 5 screws S2 (05 to 09) and then remove the Cover Top 30.

2 FRONT PANEL ASSEMBLY REMOVAL

1. Remove the Cover Top 30, referring to then previous step 1.
2. Remove the Card Cable from wafer (CNT701) on the Main P.C.Board (PCB1)
3. Disconnect (CNT401) from the Main P.C.Board (PCB5).
4. Remove 7 screws S2 (01 to 04), S1 (01 to 03) and then remove the Front Panel Assembly AA.

3 MIC P.C.BOARD (PCB3) REMOVAL

1. Remove the Cover Top 30, referring to the previous step 1.
2. Remove the Front Panel Assembly AA, referring to the previous step 2.
3. Remove 2 screw S3 (01, 02) and then remove the Mic PC.Board (PCB3)

4 FRONT P.C.BOARD (PCB2) REMOVAL

1. Remove the Cover Top 30, referring to the previous step 1.
2. Remove the Front Panel Assembly AA, referring to the previous step 2.
3. Remove 9 screws S2 (23 to 31) and then remove the Front P.C.Board (PCB2).

5 RMC P.C.BOARD (PCB5) REMOVAL

1. Remove the Cover Top 30, referring to the previous step 1.
2. Remove the Front Panel Assembly AA, referring to the previous step 2.
3. Remove screw S2 (22) and then remove (PCB5) by pressing the hooks around it outward.

6 MAIN P.C.BOARD (PCB1) REMOVAL

1. Remove the Cover Top 30, referring to the previous step 1.
2. Remove the Card Cable from wafer(CNT701) on the Main P.C.Board(PCB1).
3. Disconnect (CNT401, CNT102, CNT105) from the Main P.C.Board(PCB1).
4. Disconnect (CP501) from the Voltage P.C.Board (PCB4).

5. Remove 2 screw S4 (03), S5 (01) on the Main P.C.Board(PCB1).

6. Remove 9 screws S2 (14 to 20, 11, 21) from the Chassis Back 25 (TX-757).

Remove 6 screw S2 (14, 15, 19, 20, 21,11) from the Chassis Back 25 (TX-747).

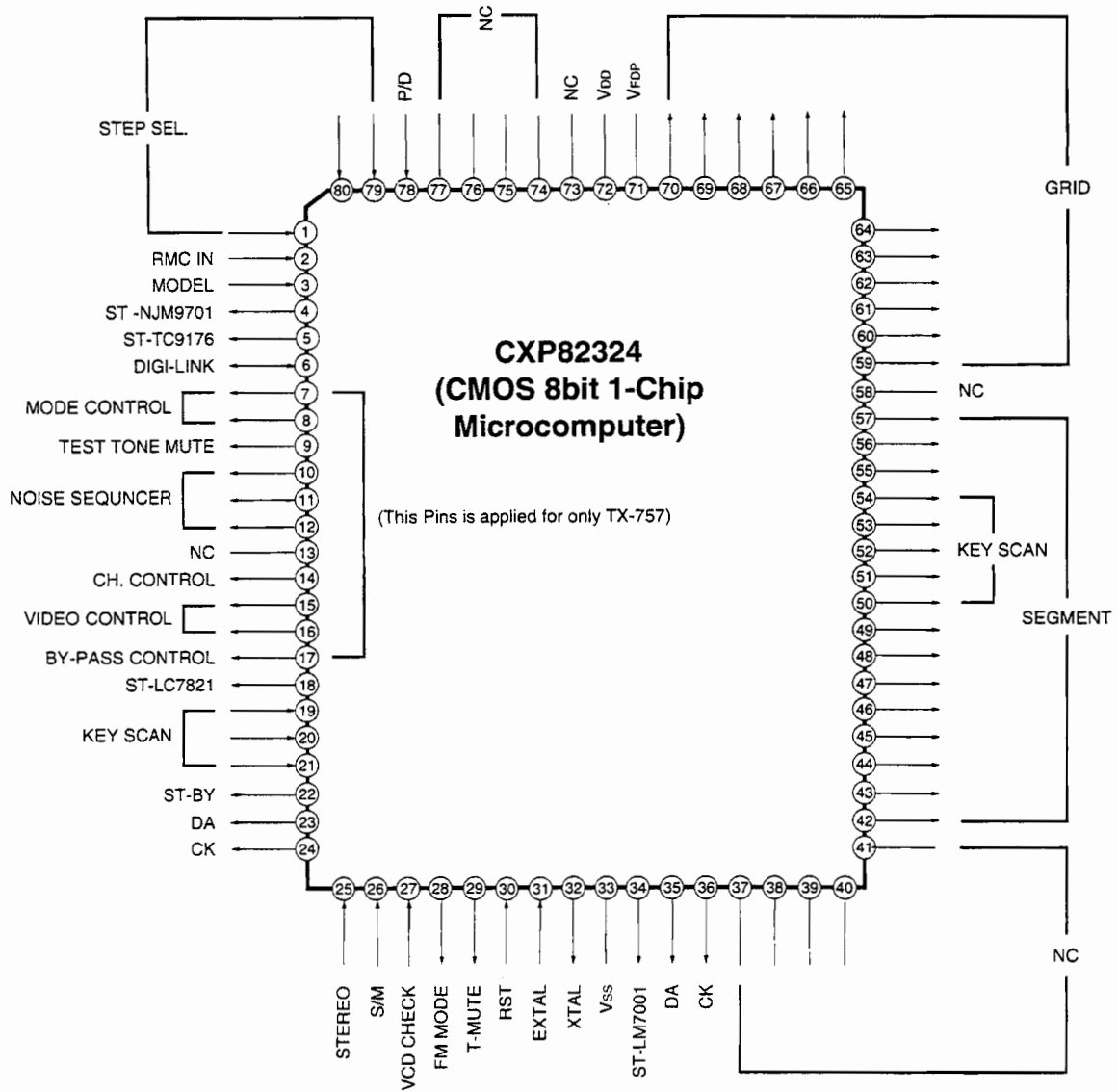
7 VOLTAGE P.C.BOARD(PCB4) REMOVAL

1. Remove the Cover Top 30, referring to the previous step 1.
2. Disconnect (CP501) from the Voltage P.C.Board(PCB4).
3. Remove 2 screws S4 (01, 02).
4. Remove the Fastener 13 and then remove the Voltage P.C.Board(PCB4).

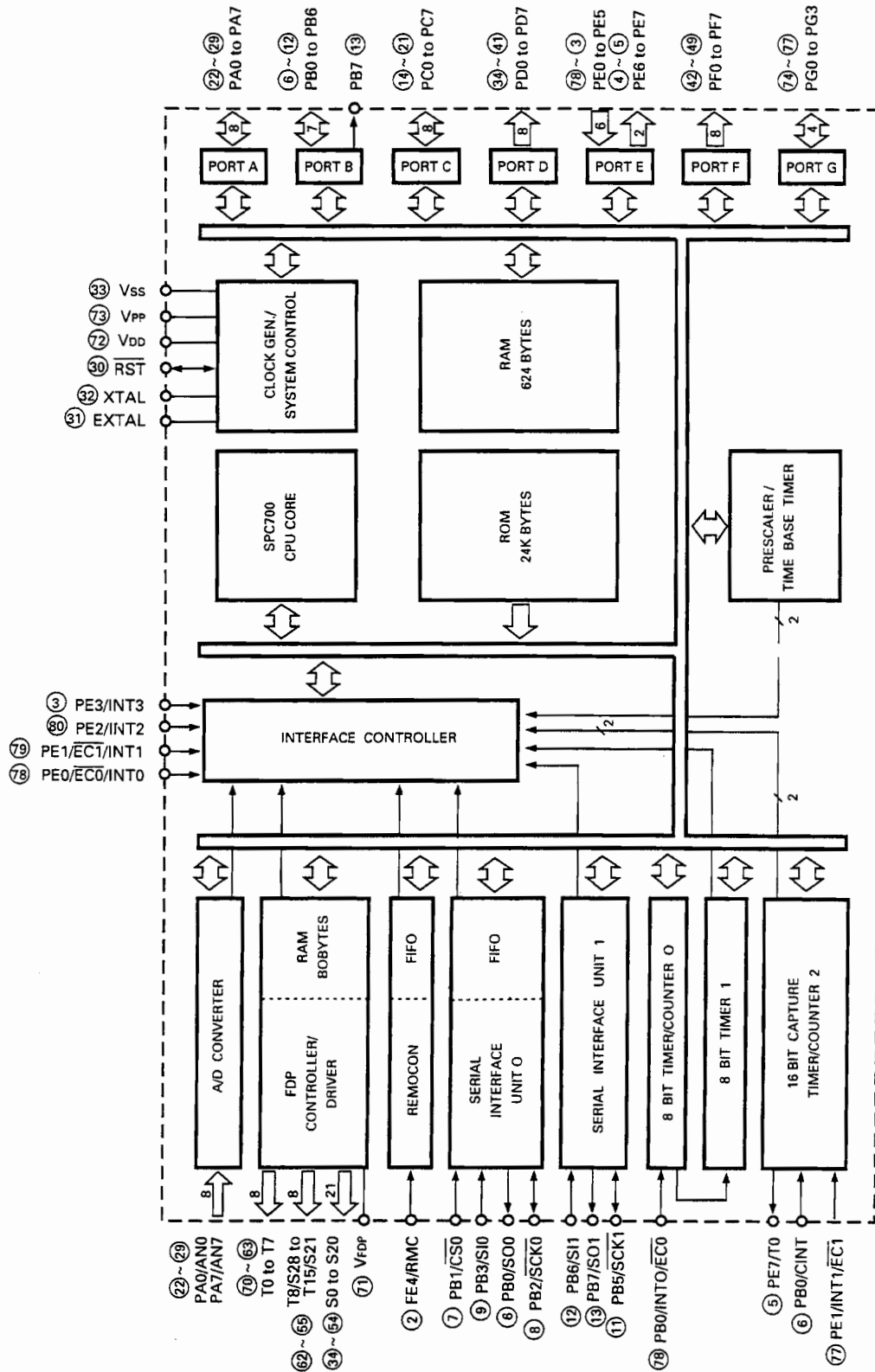
CIRCUIT DESCRIPTION

IC701 : CXP82324 (CMOS 8bit 1-Chip Microcomputer)

1. Pin Connection Diagram



2. Block Diagram



3. Input and Output Terminal Functions

| Pin No. | Symbol | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------------|---|---------|-----------|------|---------|----|---|-------|----------------------|---------|---|---|---|--------------------|-------|--|--|--|---------|--------------------|--------|---|---|---|--------------------|-------|--|--|--|----------------|--------|--|--|--|--------|--------------------|--------|---|---|---|--------------------|-------|--|--|--|---------------|-------|--|--|--|------------|----------------------|---------|---|---|---|--------------------|--------|--|--|--|
| 79, 80, 1 | STEP SEL | Input to select frequency band and step according to regions. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Region</th> <th>Frequency</th> <th>Step</th> <th>79</th> <th>80</th> <th>1</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Korea</td> <td>FM: 87.5 ~ 107.9 MHz</td> <td>200 kHz</td> <td>L</td> <td>H</td> <td>H</td> </tr> <tr> <td>AM: 522 ~ 1611 kHz</td> <td>9 kHz</td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="3">PT INDO</td> <td>FM: 87.5 ~ 108 MHz</td> <td>50 kHz</td> <td>L</td> <td>L</td> <td>H</td> </tr> <tr> <td>AM: 522 ~ 1611 kHz</td> <td>9 kHz</td> <td></td> <td></td> <td></td> </tr> <tr> <td>520 ~ 1710 kHz</td> <td>10 kHz</td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="3">Europe</td> <td>FM: 87.5 ~ 108 MHz</td> <td>50 kHz</td> <td>L</td> <td>L</td> <td>L</td> </tr> <tr> <td>AM: 522 ~ 1611 kHz</td> <td>9 kHz</td> <td></td> <td></td> <td></td> </tr> <tr> <td>153 ~ 279 kHz</td> <td>9 kHz</td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="2">USA/Canada</td> <td>FM: 87.5 ~ 107.9 MHz</td> <td>200 kHz</td> <td>L</td> <td>H</td> <td>L</td> </tr> <tr> <td>AM: 520 ~ 1710 kHz</td> <td>10 kHz</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | Region | Frequency | Step | 79 | 80 | 1 | Korea | FM: 87.5 ~ 107.9 MHz | 200 kHz | L | H | H | AM: 522 ~ 1611 kHz | 9 kHz | | | | PT INDO | FM: 87.5 ~ 108 MHz | 50 kHz | L | L | H | AM: 522 ~ 1611 kHz | 9 kHz | | | | 520 ~ 1710 kHz | 10 kHz | | | | Europe | FM: 87.5 ~ 108 MHz | 50 kHz | L | L | L | AM: 522 ~ 1611 kHz | 9 kHz | | | | 153 ~ 279 kHz | 9 kHz | | | | USA/Canada | FM: 87.5 ~ 107.9 MHz | 200 kHz | L | H | L | AM: 520 ~ 1710 kHz | 10 kHz | | | |
| Region | Frequency | Step | 79 | 80 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Korea | FM: 87.5 ~ 107.9 MHz | 200 kHz | L | H | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AM: 522 ~ 1611 kHz | 9 kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PT INDO | FM: 87.5 ~ 108 MHz | 50 kHz | L | L | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AM: 522 ~ 1611 kHz | 9 kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 520 ~ 1710 kHz | 10 kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Europe | FM: 87.5 ~ 108 MHz | 50 kHz | L | L | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AM: 522 ~ 1611 kHz | 9 kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 153 ~ 279 kHz | 9 kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USA/Canada | FM: 87.5 ~ 107.9 MHz | 200 kHz | L | H | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AM: 520 ~ 1710 kHz | 10 kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | RMC IN | Input for remote control signal. (At "L", it is active) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | MODEL | Input to segment, and data output for key scan. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | ST-NJU9701 | Chip enable output for NJM9701. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | ST-TC9176 | Chip enable output for TC9176. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | DIGI-LINK | Output/Input for communication with other sets. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7, 8 | MODE CONTROL | Output to select prologic mode. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Pin No.</th> <th>Normal</th> <th>Wide</th> <th>Phantom</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>H</td> <td>L</td> <td>L</td> </tr> <tr> <td>8</td> <td>L</td> <td>H</td> <td>L</td> </tr> </tbody> </table> | Pin No. | Normal | Wide | Phantom | 7 | H | L | L | 8 | L | H | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pin No. | Normal | Wide | Phantom | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | H | L | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | L | H | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | TEST TONE MUTE | Output is "H" when the test tone mode is being activated. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 ~ 12 | NOISE SEQUENCER | Output to select noise sequence in prologic mode. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | NC | Not Used ! | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | CH. CONTROL | Output to select the channel mode in NJM2177. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15, 16 | VIDEO CONTROL | Output to select the video signal in LA7952. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Pin No.</th> <th>VCR1</th> <th>VCR2</th> <th>VCD</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>H</td> <td>L</td> <td>L</td> </tr> <tr> <td>16</td> <td>L</td> <td>H</td> <td>H</td> </tr> </tbody> </table> | Pin No. | VCR1 | VCR2 | VCD | 15 | H | L | L | 16 | L | H | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pin No. | VCR1 | VCR2 | VCD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | H | L | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | L | H | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | BY-PASS CONTROL | Output to allow the audio signal to by-pass dolby decoder IC NJM2177. At "L" the signal is by-passed. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | ST-LC7821 | Chip enable output for LC7821. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 ~ 21 | KEY INPUT | Data input for key scan. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | ST-BY | When power is on, control data output is "H". When power is off, control data output is "L". | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23/24 | DA/CK | Data/Clock output for LC7821, NJM9701 and TC9176. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | STEREO | Input to light "STEREO" indicator. (At "L", it is active) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | S/M | Input to detect RF level of station during tuning. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | VCD CHECK | Input to detect CDC ("H") or VCDC ("L"). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | FM MODE | Output to select FM MONO or STEREO. At "H", FM MONO is selected and at "L", FM STEREO is selected. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | T-MUTE | Output for tuner mute. (At "H", it is active) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | RST | Input to reset CPU. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | EXTAL | Input for crystal oscillator. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Pin No. | Symbol | Description |
|---------|----------------------|---|
| 32 | XTAL | Output for crystal oscillator. |
| 33 | Vss | Ground |
| 34 | ST-LM7001 | Chip enable output for LM7001. |
| 35/36 | DA/CK | Data/Clock output for LM7001. |
| 37~41 | NC | Not Used ! |
| 42~49 | SEGMENT | Segment signal output for FIP. |
| 50~54 | SEGMENT/ KEY SCAN | Segment signal output for FIP and Data output for key scan. |
| 55~57 | SEGMENT | Segment signal output for FIP. |
| 58 | NC | Not Used ! |
| 59~70 | GRID | Grid signal output for FIP. |
| 71 | Vfdp | Power supply for FIP controller. |
| 72 | Vdd | +5V Power supply. |
| 73 | NC | Not Used ! (Connected to Vdd) |
| 74~77 | NC | Not Used ! |
| 78 | P/D | Input to detect power down.(At "H", it is active) |

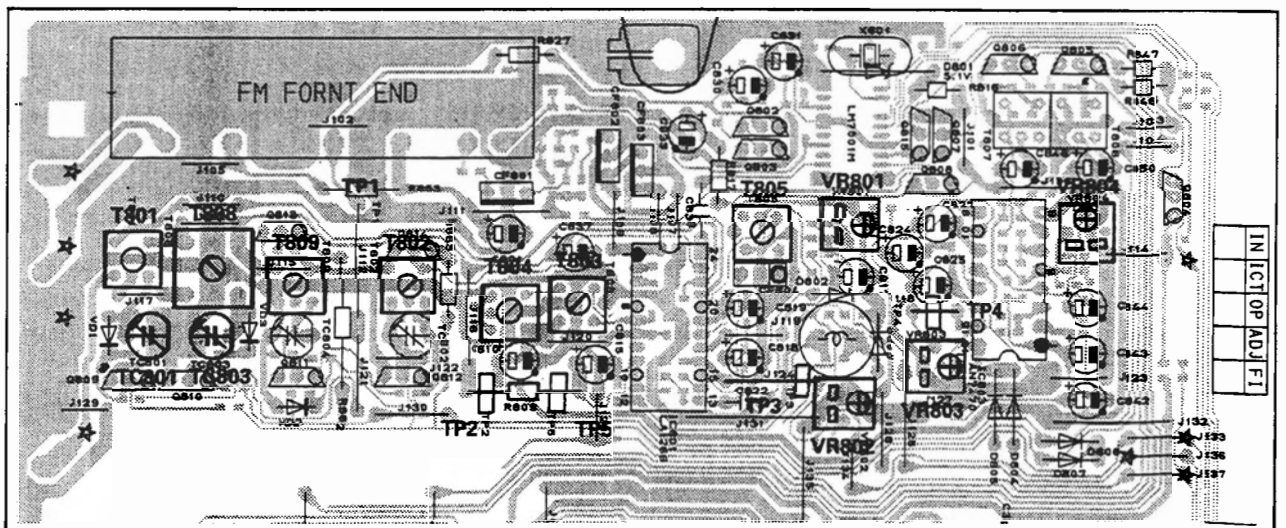
ALIGNMENT PROCEDURES

1. Equipment Required

- AM Standard Signal Generator (AM SSG)
- Oscilloscope
- AC Voltmeter
- FM Standard Signal Generator (FM SSG)
- Stereo Modulator
- Audio Generator
- Distortion Meter
- DC Voltmeter
- Frequency Counter

Note: Disconnect external FM antenna prior to alignment.

2. Alignment and Test Points (PCB1)

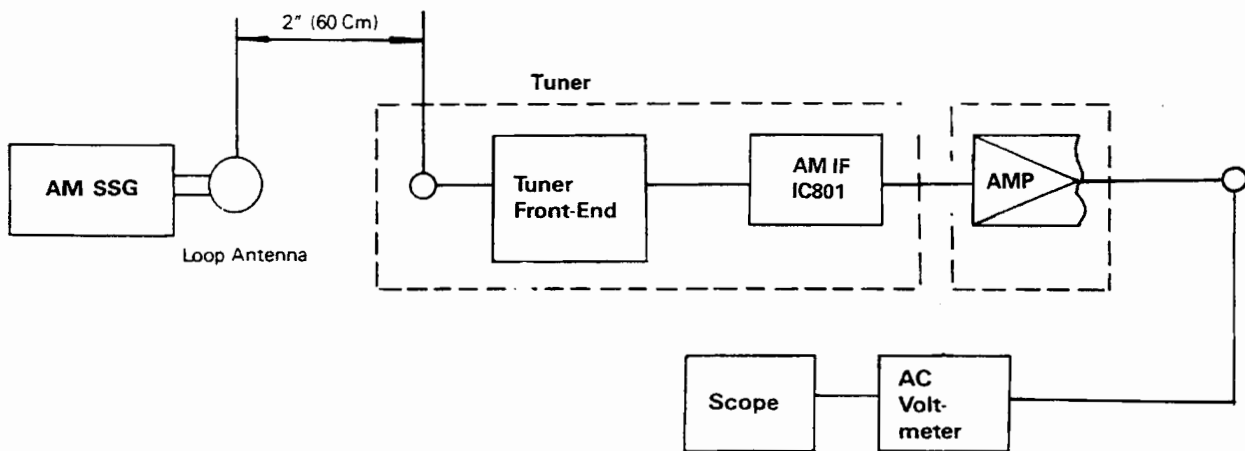


3. AM IF and RF Alignment

Preparation

1. Output of Signal Generator should not be higher than necessary to obtain an optimum output reading.

| Step | Signal Generator Frequency | Receiver Frequency on the Display | Equipment Connection | Adjustment point | Adjust for |
|------|----------------------------|-----------------------------------|-------------------------------------|-----------------------|--|
| 1 | 999 kHz (400 Hz, Mod.) | 522 kHz | DC Voltmeter TP1 | T802 | 1.1 V reading |
| | 207 kHz (400 Hz, Mod.) | 153 kHz | DC Voltmeter TP1 | T809 | 1.8 V reading |
| 2 | 594 kHz (400 Hz, Mod.) | 594 kHz | AC Voltmeter to speaker terminal | T801 (ANT Coil) | Maximum reading |
| 3 | 1404 kHz (400 Hz, Mod.) | 1404 kHz | AC Voltmeter to speaker terminal | T801 (ANT Trimmer) | Maximum reading |
| 4 | 450 kHz (400 Hz, Mod.) | 999 kHz | AC Voltmeter to speaker terminal | T805 (IFT) | Maximum reading |
| 5 | 999 kHz (400 Hz, Mod.) | 999 kHz | DC Voltmeter TP3 | VR801 | FL display 'TUNED' Indication on receiver with AM SSG output level of 800 μ V/m 1.4V reading |
| 6 | 162 kHz (400 Hz, Mod.) | 162 kHz | speaker terminal | T808 | Maximum reading |
| 7 | 252 kHz (400 Hz, Mod.) | 252 kHz | speaker terminal | TC803 | Maximum reading |



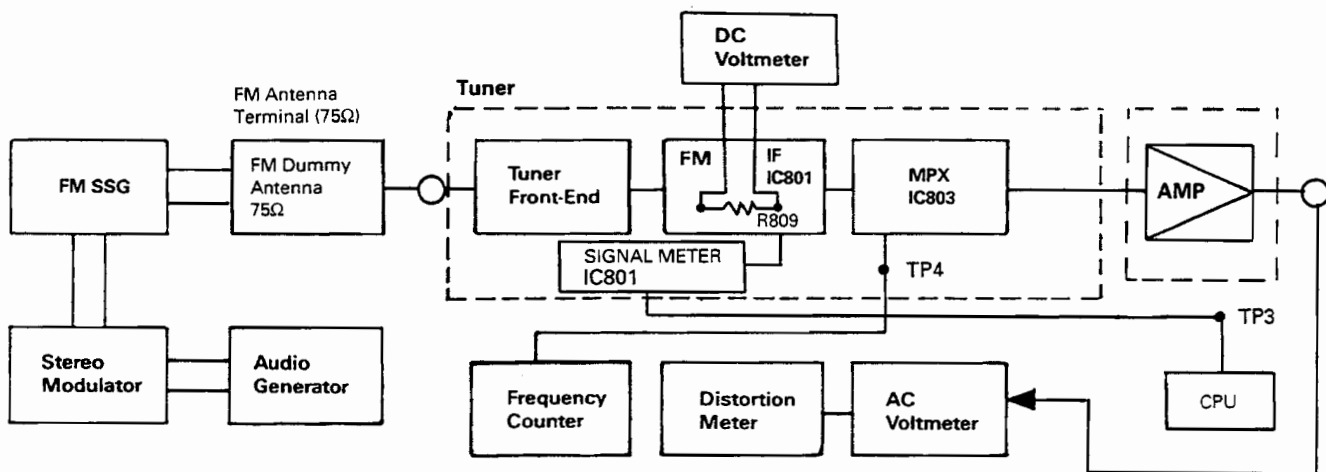
AM Alignment Connection

4. FM IF Alignment

Preparation

1. Signal Generator output should be no higher than necessary to obtain an optimum output reading.
2. Switch Press to FM.
3. Signal generator deviation : 40 kHz (D, PT Version) or 75kHz (A, KS Version)

| Step | Signal Generator Frequency | Receiver Frequency on the Display | Equipment Connection | Adjustment point | Adjust for |
|------|----------------------------|-----------------------------------|--------------------------------------|------------------|--|
| 1 | 98.0 MHz (1 kHz, Mod.) | 98.0 MHz | Distortion meter to speaker terminal | T804 | Maximum distortion |
| 2 | 98.0 MHz (1 kHz, Mod.) | 98.0 MHz | DC Voltmeter to TP3 | VR802 | FL display 'TUNED' Indication on receiver with FM SSG output level of $10\mu V$ 1.3V reading |
| 3 | 98.0 MHz (1 kHz, Mod.) | 98.0 MHz | DC Voltmeter to TP2 & TP5 | T803 | Zero reading on DC voltmeter. |



FM RF/IF and MPX Alignment Connection

5. MPX Alignment

Preparation

1. Switch: Press to FM.
2. Tuner for 98 MHz on band.
3. Signal Generator output level: $1000\mu V$.
4. Deviation: 40 kHz (D, PT Version) or 75kHz (A, KS Version) at 100% modulation of composite signal.
5. Connect Signal Generator to FM antenna terminal through FM dummy antenna (75Ω).

| Step | 19 kHz Modulation Level | Signal Generator Frequency Setting | Equipment Connection | Adjustment point | Adjust for |
|--|-------------------------|------------------------------------|--|------------------|--|
| 1 | Pilot off | Carrier only | Frequency counter connect to TP4 | VR803 | $76\text{ kHz} \pm 50\text{ Hz}$ |
| 2 | 8% Mod. | Composite to channel 1 kHz R | AC voltmeter to R channel speaker terminal | - | Setting 0dB reference |
| 3 | 8% Mod. | Composite to channel 1 kHz L | AC voltmeter to R channel speaker terminal | VR804 | AC voltmeter reading should be at least 40 dB below. |
| 4 | 8% Mod. | Composite to channel 1 kHz R | AC voltmeter to R channel speaker terminal | VR804 | Same as Step 3. |
| If you could not obtain -40 dB readings in Steps 3 and 4 (compared with Step 2), readjust VR804 until you obtain -40 dB readings for both Steps 3 and 4. Nominal is -45dB. | | | | | |

TROUBLESHOOTING

| Symptom | Cause and Remedy |
|---|---|
| Unit inoperative (FL indicator does not light) | <p>A) Filament resistor R723 or R722 is Blown. Replace the resistor.</p> <p>B) Check the CNT104 (Pin No. 1, 2, 3) and CNT701 (Pin No. 1, 2, 3).</p> |
| FM inoperative | <p>A) Defective front-end. Replace.</p> <p>B) Defective FM switch. Replace the switch.</p> <p>C) PLL IC(LM7001) Malfunction. Replace the IC(LM7001).</p> <p>D) Defective coil T803 or T804. Replace the coil(s).</p> <p>E) Defective lead-in. Repair or replace the lead-in.</p> <p>F) Ceramic filter CF801, CF802 defective. Replace the defective ceramic filter(s).</p> <p>G) Defective controller circuit component. Replace.</p> |
| Poor multiplex separation | <p>A) Improper adjustment. Readjust VR803 and VR804. (Refer to MPX Alignment.)</p> <p>B) IC803 defective. Replace.</p> <p>C) Variable resistor VR803 or VR804 defective. Replace the variable resistor(s).</p> |
| STEREO indicator does not light | <p>A) Defective indicator in FL. Replace.</p> <p>B) Improper adjustment of VR803 of tuner board. Make readjustment.</p> <p>C) Defective IC803 Replace the defective component.</p> |
| FM volume not sufficient | <p>A) If volume from both L and R channels is not loud enough: Front - end section defective. Faulty C801, Coil T803. Defective C838 of tuner Board.</p> <p>If sound of one channel is not loud enough: Defective T806, T807</p> |
| FM Mono has no effect | <p>A) Defective FM MODE switch. Replace.</p> |

| Symptom | Cause and Remedy |
|--|--|
| AM inoperative | <p>A) Damaged IC801 of tuner board. Replace.</p> <p>B) Defective T801, T802, T805 or CF804 of tuner board. Replace the defective component(s).</p> <p>C) Resistor R829, R822 defective. Replace the defective component(s).</p> <p>D) Capacitor C857, C818, C822 defective. Replace the defective capacitor(s).</p> <p>E) Defective AM switch. Replace.</p> <p>F) Defective varicap diode VD1, VD2. Replace Varicap diode(s).</p> <p>G) Damaged AM loop antenna. Repair or replace.</p> <p>H) Defective controller circuit component. Replace.</p> |
| Auto tune inoperative (UP/DOWN) | <p>A) Poor contact in Up/Down key. Repair or replace.</p> <p>B) Defective IC701. Replace.</p> <p>C) Defective tuner circuit component. Replace.</p> <p>D) In case of FM only, improper adjustment of FM front-end. Readjust.</p> |
| Manual tune inoperative(UP/DOWN) (AM or FM) | <p>A) Poor contact in Up/Down key. Replace.</p> <p>B) Defective IC701. Replace.</p> |
| Memory setting inoperative | <p>A) Poor contact in memory set key. Replace.</p> <p>B) Defective IC701. Replace the defective component.</p> |
| FL inoperative | <p>A) FL defective. Replace.</p> <p>B) Defective IC701. Replace.</p> <p>C) Defective X701. Replace.</p> |
| Remote Control Unit inoperative | <p>A) Weak Battery. Replace.</p> <p>B) Defective. Replace.</p> <p>C) Defective IC701(CPU). Replace.</p> |

MECHANICAL PARTS LIST

Model No. : TX-757

| Ref. No. | Description | Part No. | Q'ty | Version |
|------------------------------|---------------------------------------|--------------|------|--------------|
| PACKAGE | | | | |
| | Box Carton | 049605258301 | 1 | KS |
| | Box Carton | 049605258304 | 1 | D,PT INDO A |
| | Poly Bag | 9705001550 | 1 | |
| | Cushion Poly | 9722041410 | 1 | |
| | Film Soft PE | 9715000120 | 1 | |
| ACCESSORIES | | | | |
| | Assembly Commander | 541810127015 | 1 | KS |
| | Assembly Commander | 541810127025 | 1 | D,PT INDO A |
| | Battery 1.5V AA(R6M) | 5518001610 | 1 | KS |
| | FM Antenna Wire Dipole | 4348000320 | 1 | KS,PT INDO A |
| | FM Antenna Cord | 4348001110 | 1 | D |
| | Cord RCA, 1P | 4328206410 | 1 | KS,PT INDO |
| | Manual Instruction | 9007018440 | 1 | KS |
| | Manual Instruction | 9007018441 | 1 | PT INDO |
| | Manual Instruction | 9007018451 | 1 | D |
| | Manual Instruction | 9007018443 | 1 | A |
| | Antenna AM Loop Stand Strip Wire | 2608207361 | 1 | KS,PT INDO A |
| | Antenna AM Loop Stand Type | 2608207360 | 1 | D |
| CABINET & CHASSIS | | | | |
| 1 | Badge, INKEL | 048535045411 | 1 | KS |
| (1) | Badge, SHERWOOD | 048535045421 | 1 | A,D,PT INDO |
| 2 | Panel Front | 048602020111 | 1 | KS |
| (2) | Panel Front | 048602020131 | 1 | A,D,PT INDO |
| 3 | Window Display | 048553023512 | 1 | |
| 4 | Body Front | 048521009511 | 1 | |
| 5 | Button Function | 048543070012 | 1 | |
| 6 | Button Input, 1 key | 048545131311 | 2 | |
| 7 | Button Mode, 2 key | 048545131411 | 1 | |
| 8 | Jack Phone | 4438005510 | 1 | KS,PT INDO |
| (8) | Not Used ! | | | A,D |
| 9 | Shield Fence | 6165146110 | 1 | KS,PT INDO |
| (9) | Not Used ! | | | A,D |
| 10(VR401) | Volume Mic | 3208052410 | 1 | KS,PT INDO |
| (10) | Not Used ! | | | A,D |
| 11 | Foot & Rubber | 6035104310 | 2 | |
| 12 | Fastener, 12H | 6528301710 | 2 | KS,PT INDO |
| (12) | Fastener, 12H | 6528301710 | 1 | A,D |
| 13 | Fastener, 19H | 6528300210 | 2 | |
| 14 | Spacer PCB | 6705004220 | 1 | |
| 15 | Cushion Foot | 6715021230 | 2 | |
| 16 | Chassis Main | 6121614930 | 1 | |
| 17 | Heatsink Regulator TR. | 7505206210 | 1 | |
| 18 | Jack RCA, 2P | 4438103020 | 1 | |
| 19 | Jack RCA, 9P | 4438114510 | 1 | |
| 20 | Jack RCA, 2P | 4438103010 | 1 | |
| 21 | Terminal Antenna, 4P | 4408107120 | 1 | A,KS,PT INDO |
| (21) | Terminal Antenna, 4P | 4408108220 | 1 | D |
| 22 | Shield Plate | 6165151910 | 1 | A,KS,PT INDO |
| (22) | Not Used ! | | | D |
| 23 | Stopper Connector | 6518002210 | 1 | |
| 24 | Stopper Connector | 6518002110 | 1 | |
| 25 | Chassis Back | 046102045411 | 1 | KS |
| (25) | Chassis Back | 046102045491 | 1 | PT INDO |
| (25) | Chassis Back | 046102045421 | 1 | A |
| (25) | Chassis Back | 046102045451 | 1 | D |
| 26 | Cover Top | 046123018011 | 1 | |
| 27 | Shield Fence, Front-end | 6163115510 | 1 | A,KS,PT INDO |
| (27) | Not Used ! | | | D |
| 28 | Switch Tact | 4658003710 | 14 | |
| 29 | Switch Tact | 4658004010 | 1 | |
| 30 | Sponge Rubber | 6715012010 | 1 | |
| 31 | Knob Rotary | 048545131511 | 1 | KS,PT INDO |
| (31) | Not Used ! | | | A,D |
| HARDWARE KIT | | | | |
| S1 | Screw, #2FTC 3x8B | 8129230083 | 5 | |
| S2 | Screw, #BBTT 3x8B | 8179130083 | 32 | KS,PT INDO |
| (S2) | Screw, #BBTT 3x8B | 8179130083 | 31 | A,D |
| S3 | Screw, Mecha | 8155001210 | 2 | KS,PT INDO |
| (S3) | Not Used ! | | | A,D |
| S4 | Screw, #BWPTT 3x6Y | 8179230061 | 3 | |
| S5 | Screw, #2WPTC 3x14Y | 8159230141 | 1 | |
| MISCELLANEOUS | | | | |
| | Card Cable, 13P, 140mm | 4118613145 | 1 | |
| | Card Cable, 20P, 200mm | 4118620205 | 1 | |
| | Connector, System, 13P, 500mm | 4358613501 | 1 | |
| | Connector, System, 9P, 500mm | 4358609501 | 1 | |
| PCB1 | P.C.Board Main | 4004001500 | 1 | |
| PCB2 | P.C.Board Mic (KS, PT INDO AREA ONLY) | 4004001530 | 1 | |
| PCB3 | P.C.Board Power | 4005512700 | 1 | |
| PCB4 | P.C.Board Front | 4004001510 | 1 | |
| PCB5 | P.C.Board RMC | 4004001520 | 1 | |

Model No. : TX-747

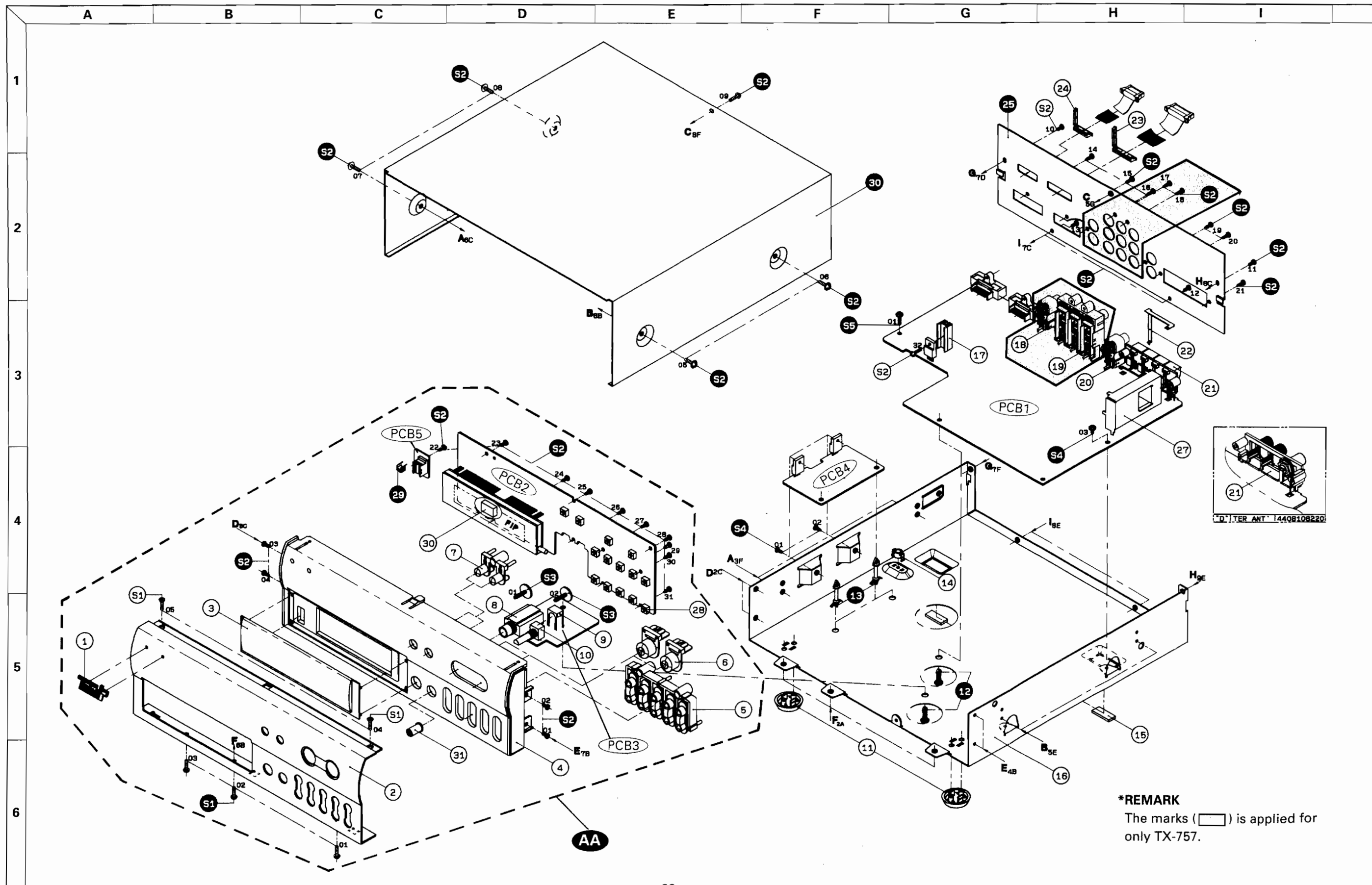
| Ref. No. | Description | Part No. | Q'ty | Version |
|------------------------------|---------------------------------------|--------------|------|--------------|
| PACKAGE | | | | |
| | Box Carton | 04960525830 | 1 | KS |
| | Box Carton | 04960525830 | 1 | D,PT INDO |
| | Poly Bag | 9705001550 | 1 | |
| | Cushion Poly | 9722041410 | 1 | |
| | Film Soft PE | 9715000120 | 1 | |
| ACCESSORIES | | | | |
| | Assembly Commander | 41810126015 | 1 | KS |
| | Assembly Commander | 41810126025 | 1 | D,PT INDO |
| | Battery 1.5V AA(R6M) | 5518001610 | 1 | KS |
| | FM Antenna Wire Dipole | 4348000320 | 1 | KS,PT INDO |
| | FM Antenna Cord | 4348001110 | 1 | D |
| | Cord RCA, 1P | 4328206410 | 1 | KS,PT INDO |
| | Manual Instruction | 9007018450 | 1 | KS |
| | Manual Instruction | 9007018452 | 1 | PT INDO |
| | Manual Instruction | 9007018451 | 1 | D |
| | Antenna AM Loop Stand Strip Wire | 2608207361 | 1 | KS,PT INDO |
| | Antenna AM Loop Stand Type | 2608207360 | 1 | D |
| CABINET & CHASSIS | | | | |
| 1 | Badge, INKEL | 04853504541 | 1 | KS |
| (1) | Badge, SHERWOOD | 04853504542 | 1 | A,D,PT INDO |
| 2 | Panel Front | 04860202012 | 1 | KS,PT INDO |
| (2) | Panel Front | 04860202014 | 1 | D |
| 3 | Window Display | 04855302351 | 1 | |
| 4 | Body Front | 04852100951 | 1 | |
| 5 | Button Function | 04854307001 | 1 | |
| 6 | Button Input, 1 key | 04854513131 | 2 | |
| 7 | Not Used ! | | | |
| 8 | Jack Phone | 4438005510 | 1 | |
| 9 | Shield Fence | 6165146110 | 1 | |
| 10 | Volume Mic | 3208052410 | 1 | |
| 11 | Foot & Rubber | 6035104310 | 2 | |
| 12 | Fastener, 12H | 6528301710 | 2 | KS,PT INDO |
| 13 | Fastener, 19H | 6528300210 | 2 | |
| 14 | Spacer PCB | 6705004220 | 1 | |
| 15 | Cushion Foot | 6715021230 | 2 | |
| 16 | Chassis Main | 6121614930 | 1 | |
| 17 | Heatsink Regulator TR | 7505206210 | 1 | |
| 18 | Jack RCA, 4P | 4408107120 | 1 | A,KS,PT INDO |
| (18) | Terminal Antenna, 4P | 4408108220 | 1 | D |
| 19 | Shield Plate | 6165151910 | 1 | A,KS,PT INDO |
| (19) | Not Used ! | | | D |
| 20 | Not Used ! | | | |
| 21 | Jack RCA, 2P | 4438103010 | 1 | |
| 22 | Terminal Antenna, 4P | 4408107120 | 1 | A,KS,PT INDO |
| (22) | Terminal Antenna, 4P | 4408108220 | 1 | D |
| 23 | Shield Plate | 6165151910 | 1 | A,KS,PT INDO |
| (23) | Not Used ! | | | D |
| 24 | Stopper Connector | 6518002210 | 1 | |
| 25 | Stopper Connector | 6518002110 | 1 | |
| 26 | Chassis Back | 046102045311 | 1 | KS,PT INDO |
| (26) | Chassis Back | 046102045391 | 1 | A |
| (26) | Chassis Back | 046102045351 | 1 | D |
| 27 | Cover Top | 046123018011 | 1 | |
| 28 | Shield Fence, Front-end | 6163115510 | 1 | A,KS,PT INDO |
| (28) | Not Used ! | | | D |
| 29 | Switch Tact | 4658003710 | 11 | |
| 30 | Switch Tact | 4658004010 | 1 | |
| 31 | Sponge Rubber | 6715012010 | 1 | |
| 32 | Knob Rotary | 048545131511 | 1 | A,KS,PT INDO |
| (32) | Not Used ! | | | D |
| HARDWARE KIT | | | | |
| S1 | Screw, #2FTC 3x8B | 8129230083 | 5 | |
| S2 | Screw, #BBTT 3x8B | 8179130083 | 29 | KS,PT INDO |
| (S2) | Screw, #BBTT 3x8B | 8179130083 | 28 | A,D |
| S3 | Screw, Mecha | 8155001210 | 2 | A,KS,PT INDO |
| (S3) | Not Used ! | | | D |
| S4 | Screw, #BWPTT 3x6Y | 8179230061 | 3 | |
| S5 | Screw, #2WPTC 3x14Y | 8159230141 | 1 | |
| MISCELLANEOUS | | | | |
| | Card Cable, 20P, 200mm | 4118620205 | | |
| | Connector, System, 13P, 500mm | 4358613501 | | |
| | Connector, System, 9P, 500mm | 4358609501 | | |
| PCB1 | P.C.Board Main | 4004001500 | | |
| PCB2 | P.C.Board Mic (KS, PT INDO AREA ONLY) | 4004001530 | | |
| PCB3 | P.C.Board Power | 4005512700 | | |
| PCB4 | P.C.Board Front | 4004001510 | | |
| PCB5 | P.C.Board RMC | 4004001520 | | |


PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol in the parts list are of special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

EXPLODED VIEW

Model No : TX-757/747

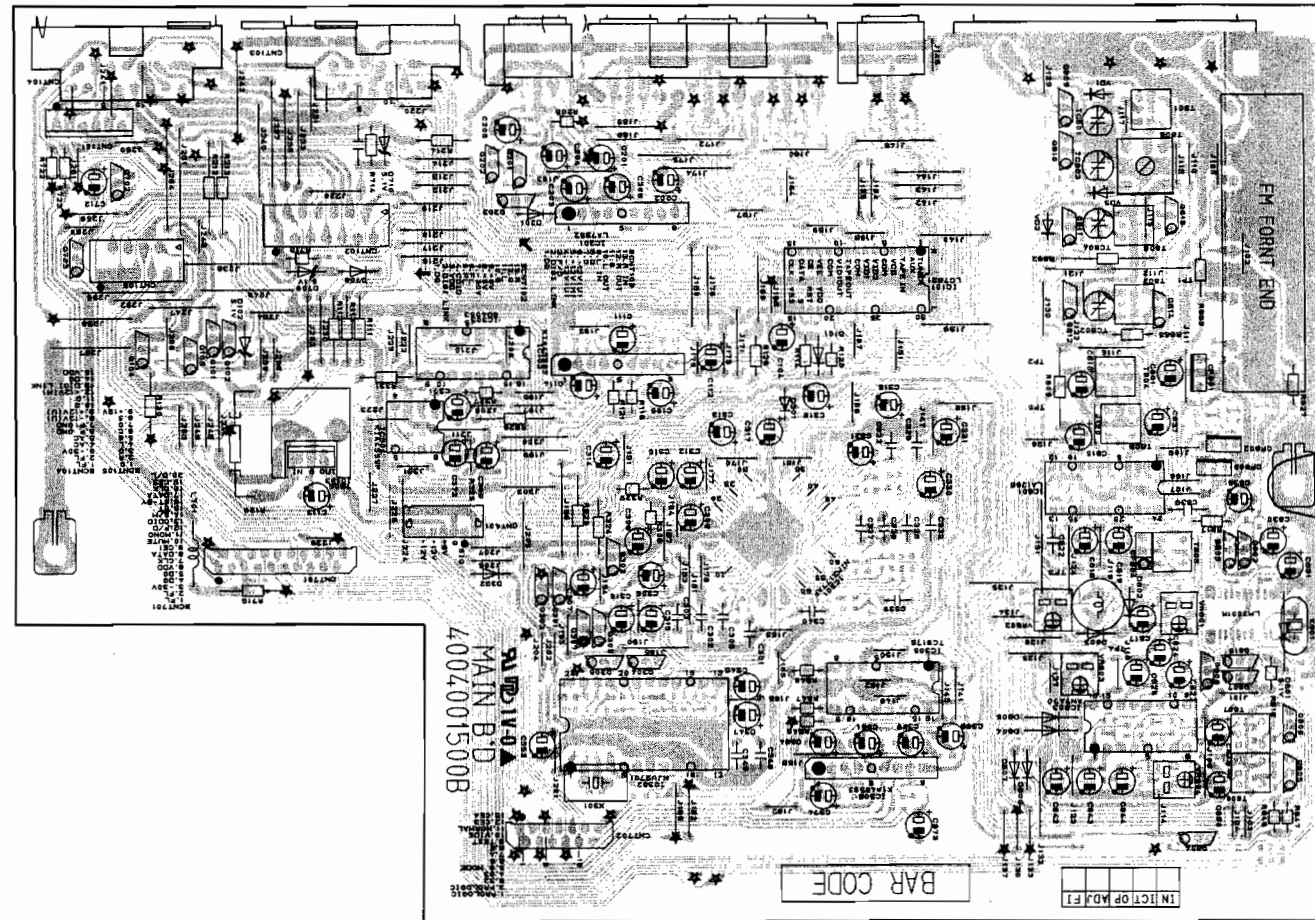


***REMARK**
The marks () is applied for only TX-757.

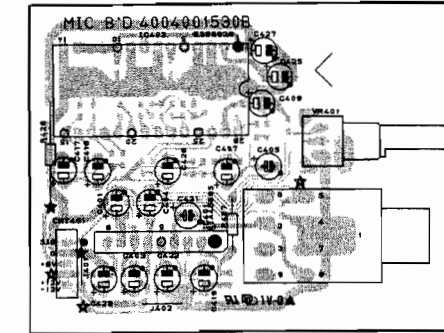
PRINTED CIRCUIT BOARDS

Model No : TX-757/747

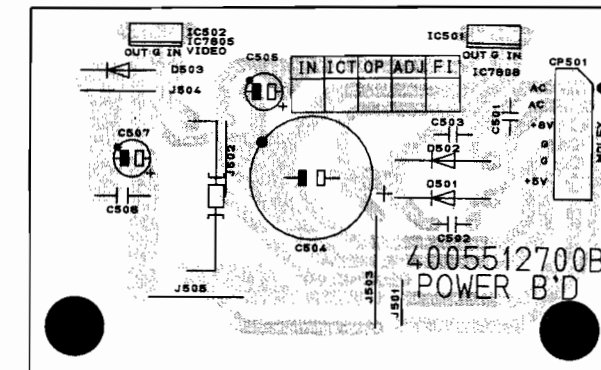
MAIN (PCB1)



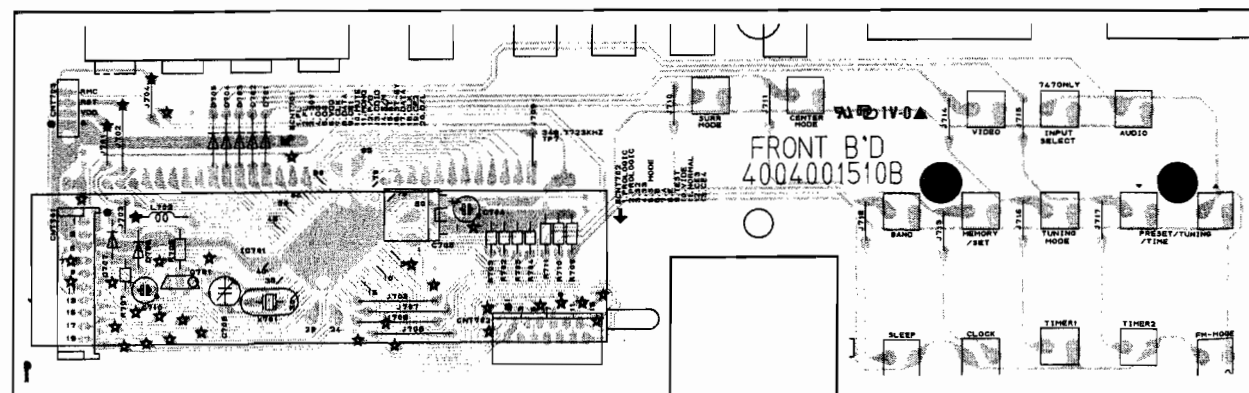
MIC (PCB3)



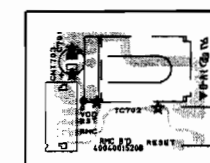
POWER (PCB4)



FRONT (PCB2)



RMC (PCB5)

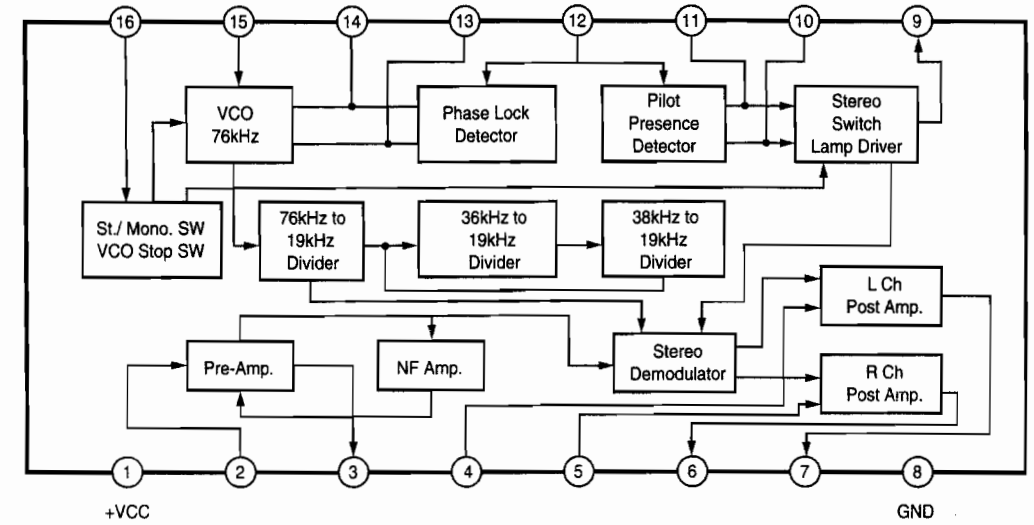


Model No. : TX-747

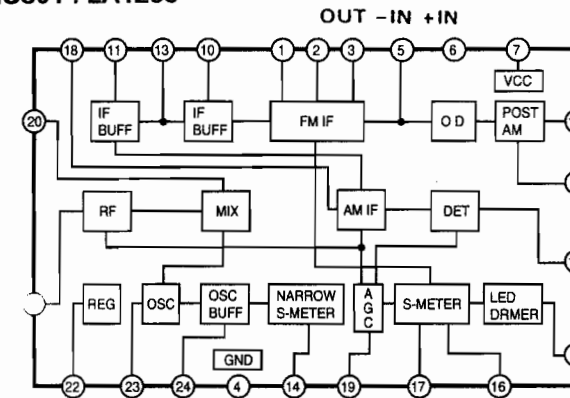
| Ref. No. | Description | Part No. | Q'ty | Version | Ref. No. | Description | Part No. | Q'ty | Version |
|-----------|--|-------------------|------------|------------|-----------|---------------------------------|-------------------|------------|---------|
| CNT401 | CONNECTOR Lead Ass'y, 5P, 180mm | 36405180732 | 1 | | Q701 | TRANSISTOR BKTC3199Y, NPN | 2208610109 | 1 | |
| IC401 | INTEGRATED CIRCUITS KIA4559S/KIA75559S | 2168206103 | 1 | | R701 | RESISTORS Chip | 100 kohm 1/10 W J | 3099104870 | 1 |
| IC402 | ES56028E, Digital Echo | 2138633001 | 1 | | R702-R706 | Carbon Film | 100 kohm 1/5 W J | 3069104970 | 5 |
| R401 | RESISTORS Chip | 0 ohm 1/10 W J | 3099000870 | 1 | R707 | Carbon Film | 10 kohm 1/5 W J | 3069103970 | 1 |
| R402 | Chip | 4.7 kohm 1/10 W J | 3099472870 | 1 | R708 | Chip | 10 kohm 1/10 W J | 3099103870 | 1 |
| R403 | Chip | 1 kohm 1/10 W J | 3099102870 | 1 | R709-R711 | Carbon Film | 100 kohm 1/5 W J | 3069104970 | 3 |
| R404 | Chip | 100 kohm 1/10 W J | 3099104870 | 1 | X701 | MISCELLANEOUS Crystal, 10MHz | 3978011001 | 1 | |
| R405 | Chip | 10 kohm 1/10 W J | 3099103870 | 1 | FL701 | FL Display, CM1361C | 2328002308 | 1 | |
| R406 | Chip | 15 kohm 1/10 W J | 3099153870 | 1 | 28 | Switch Tact | 4658003710 | 11 | |
| R407 | Chip | 8.2 kohm 1/10 W J | 3099822870 | 1 | PCB5 | ASSEMBLY P.C. BOARD RMC | | | |
| R408 | Chip | 12 kohm 1/10 W J | 3099123870 | 1 | C701 | CAP, Electrolytic SG | 10 uF 35 V | 3479310061 | 1 |
| R409 | Chip | 3.3 kohm 1/10 W J | 3099332870 | 1 | CNT703 | Connector, Wire Trap, 5P | | 4428531104 | 1 |
| R410 | Chip | 12 kohm 1/10 W J | 3099123870 | 1 | IC702 | TFMT4380, Remote Sensor | | 2408005001 | 1 |
| R411 | Chip | 15 kohm 1/10 W J | 3099153870 | 1 | 29 | Switch Tact | 4658004010 | 1 | |
| R412 | Chip | 10 kohm 1/10 W J | 3099103870 | 1 | | | | | |
| R413 | Chip | 15 kohm 1/10 W J | 3099153870 | 1 | | | | | |
| R414 | Chip | 6.8 kohm 1/10 W J | 3099682870 | 1 | | | | | |
| R415 | Chip | 68 kohm 1/10 W J | 3099683870 | 1 | | | | | |
| R416 | Chip | 6.8 kohm 1/10 W J | 3099682870 | 1 | | | | | |
| R417 | Chip | 68 kohm 1/10 W J | 3099683870 | 1 | | | | | |
| R418 | Chip | 27 kohm 1/10 W J | 3099273870 | 1 | | | | | |
| R419 | Chip | 560 ohm 1/10 W J | 3099561870 | 1 | | | | | |
| R420 | Chip | 15 kohm 1/10 W J | 3099153870 | 1 | | | | | |
| R421/R422 | Chip | 330 ohm 1/10 W J | 3099331870 | 2 | | | | | |
| R423 | Chip | 1 kohm 1/10 W J | 3099102870 | 1 | | | | | |
| R424 | Chip | 100 kohm 1/10 W J | 3099104870 | 1 | | | | | |
| R425 | Chip | 47 kohm 1/10 W J | 3099473870 | 1 | | | | | |
| R426 | Metal Film | 10 ohm 1/5 W J | 3029100970 | 1 | | | | | |
| R427 | Carbon Film | 15 kohm 1/5 W J | 3069153970 | 1 | | | | | |
| 8 | MISCELLANEOUS Jack Phone | 4438005510 | 1 | | | | | | |
| 9 | Shield Fence | 6165146110 | 1 | | | | | | |
| 10 | Volume Mic, 10 kohm | 3208052410 | 1 | | | | | | |
| PCB3 | ASSEMBLY P.C. BOARD POWER | | | | | | | | |
| C501-C503 | Mylar | 0.047 uF | 100 V J | 3679473120 | 3 | | | | |
| C504 | Electrolytic SD | 4700 uF | 25 V M | 3409347248 | 1 | | | | |
| C505 | Electrolytic SG | 1 uF | 50 V M | 3479310971 | 1 | | | | |
| C506 | Ceramic Tubular | 0.022 uF | 25 V Z | 3579223530 | 1 | KS,PT INDO | | | |
| (C506) | Not Used ! | | | | | D.A | | | |
| C507 | Electrolytic SG | 1 uF | 50 V M | 3479310971 | 1 | KS,PT INDO | | | |
| (C507) | Not Used ! | | | | | D.A | | | |
| D501/D502 | 1N4003, Rectifier | | | 2058512108 | 2 | | | | |
| D503 | 1N4148, Switching | | | 2058322101 | 1 | KS,PT INDO | | | |
| (D503) | Not Used ! | | | | | D.A | | | |
| IC501 | KIA7805PI, Regulator | | | 2168606116 | 1 | | | | |
| IC502 | KIA7805PI, Regulator | | | 2108499104 | 1 | KS,PT INDO | | | |
| (IC502) | Not Used ! | | | | | D.A | | | |
| R501 | Metal Film | 3.3 ohm | 2 W J | 3029339570 | 1 | KS,PT INDO | | | |
| (R501) | Not Used ! | | | | | D.A | | | |
| CP501 | Wafer, 6P | | | 4428505810 | 1 | | | | |
| PCB4 | ASSEMBLY P.C. BOARD FRONT | | | | | | | | |
| C702/C703 | Chip | 0.047 uF | 50 V Z | 3539473060 | 2 | | | | |
| C704 | Electrolytic SSE | 47 uF | 10 V M | 3479147025 | 1 | | | | |
| C705 | Electric Back-up | 0.047 F | 5.5 V | 3438247315 | 1 | | | | |
| C706 | Chip | 0.1 uF | 50 V Z | 3539104060 | 1 | | | | |
| C707 | Chip, CH | 22 pF | 50 V J | 3539220210 | 1 | | | | |
| C708 | Trimmer, CH | 10 pF | | 3838001140 | 1 | | | | |
| C709 | Chip, CH | 33 pF | 50 V J | 3539330210 | 1 | | | | |
| C710 | Electrolytic SSE | 10 uF | 16 V M | 3479110035 | 1 | | | | |
| C713/C714 | Chip | 0.1 uF | 50 V Z | 3539104060 | 2 | | | | |
| CNT701 | CONNECTORS Wafer, FPC, 20P | 4426001120 | 1 | | | | | | |
| CNT703 | Lead Ass'y, 4P, 80mm | 36404080732 | 1 | | | | | | |
| D701-D707 | DIODES 1N4148, Switching | 2058322101 | 7 | | | | | | |
| IC701 | INTEGRATED CIRCUIT CXP82324-331Q, CPU, DWP449 | 2139322704 | 1 | | | | | | |
| L702 | COIL Inductor, 1 mH 03 | 2648610283 | 1 | | | | | | |

IC FUNCTIONAL BLOCK DIAGRAM

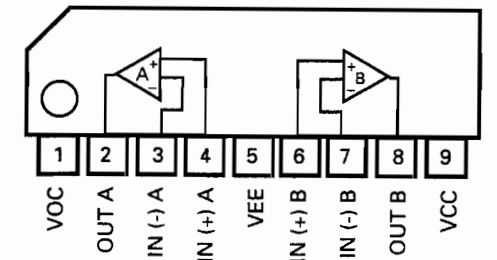
IC803 : AN7470



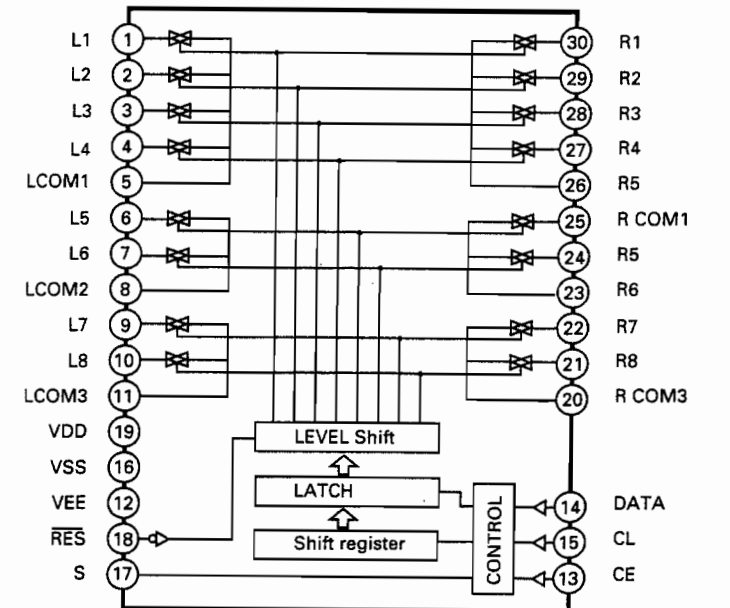
IC801 : LA1266



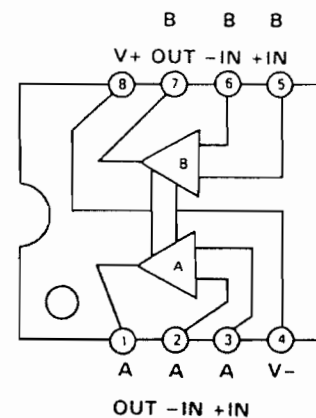
IC102, IC306, IC401 : KIA4559S/KIA75559S



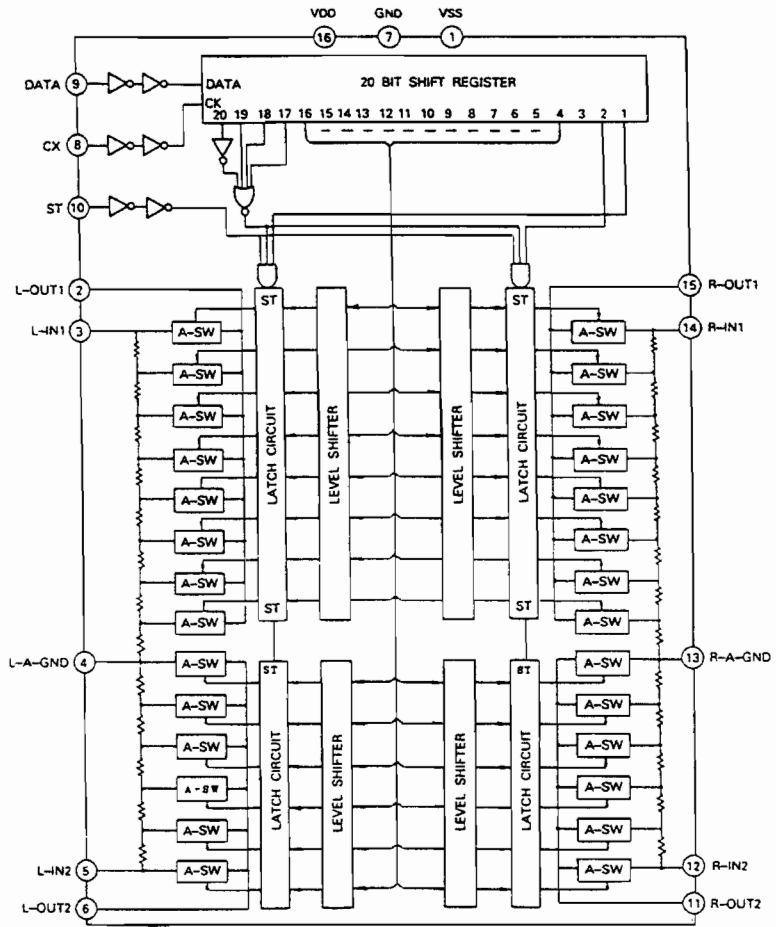
IC101 : LC7821



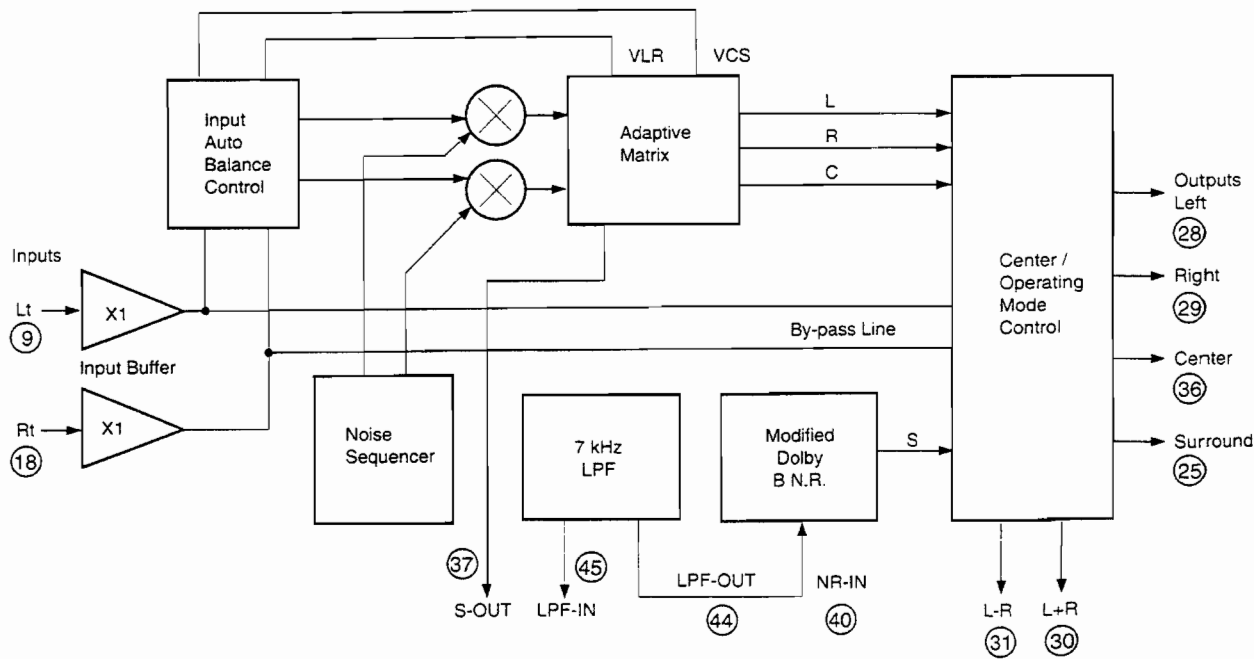
IC304 : KIA4559S/KIA75559P



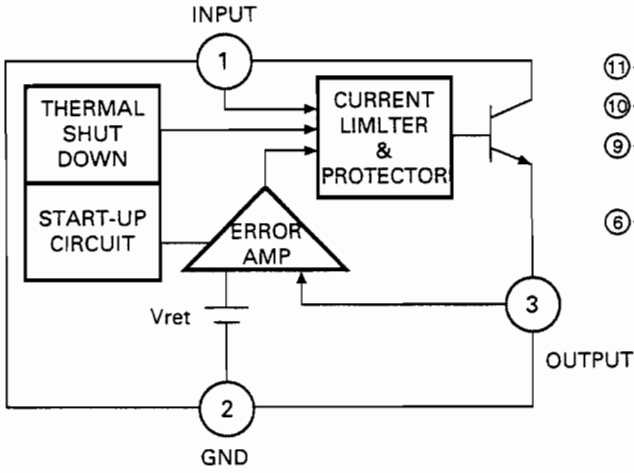
IC305 : TC9176P



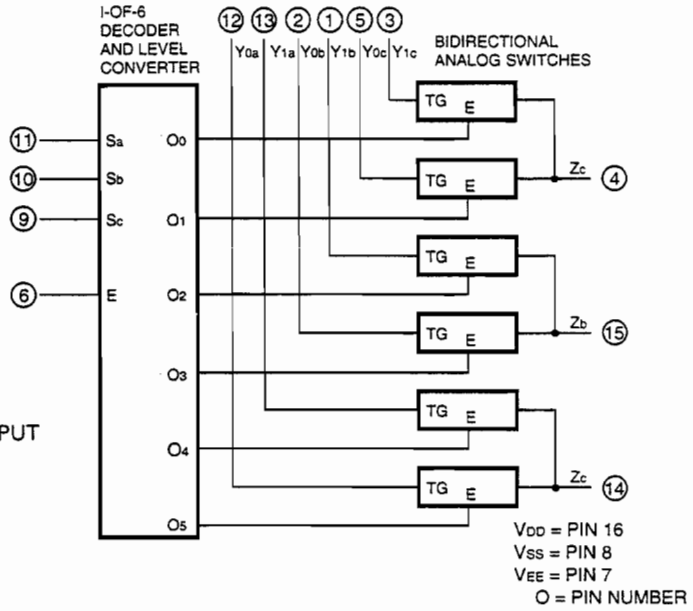
IC301 : NJM2177FB3



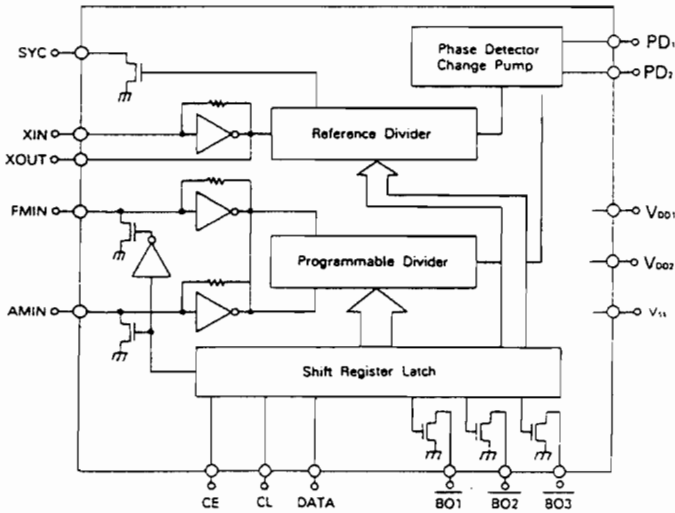
IC502 : KIA7805PI
 IC103 : KIA7806PI
 IC501 : KIA7808PI



IC303 : GD4053B

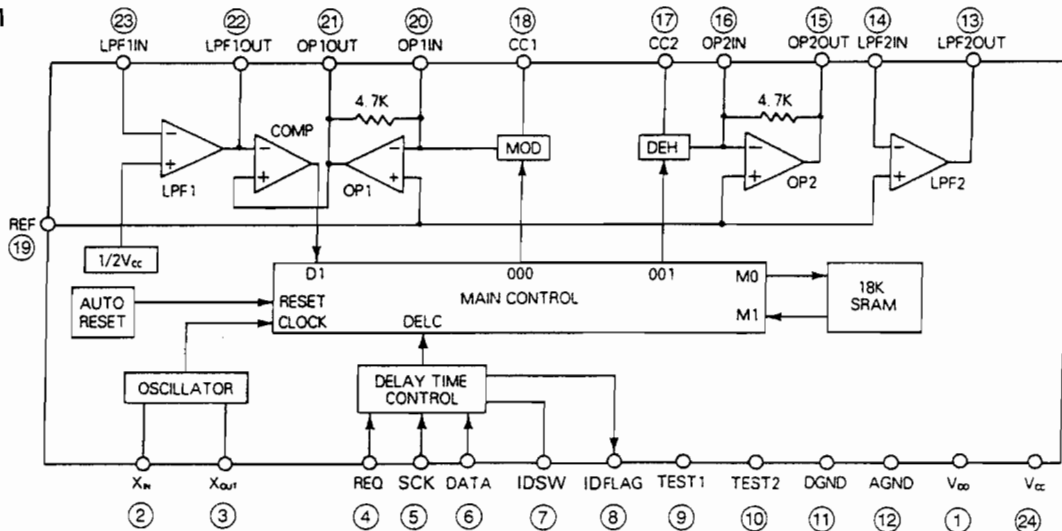


IC802 : LM7001M

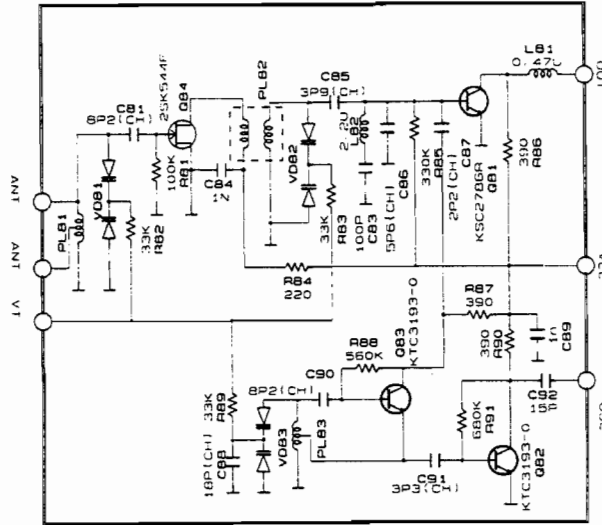


| Pin Name | | |
|----------|---------|---------|
| No | LM 7001 | LM7001M |
| 1 | XOUT | XOUT |
| 2 | XIN | XIN |
| 3 | CE | NC |
| 4 | CL | CE |
| 5 | DATA | CL |
| 6 | SYC | DATA |
| 7 | BO1 | SYC |
| 8 | BO2 | BO1 |
| 9 | BO3 | BO2 |
| 10 | AMIN | BO3 |
| 11 | FMIN | NC |
| 12 | VDD1 | AMIN |
| 13 | VDD2 | NC |
| 14 | PD1 | FMIN |
| 15 | PD2 | NC |
| 16 | VSS | VDD1 |
| 17 | | VDD2 |
| 18 | | PD1 |
| 19 | | PD2 |
| 20 | | VSS |

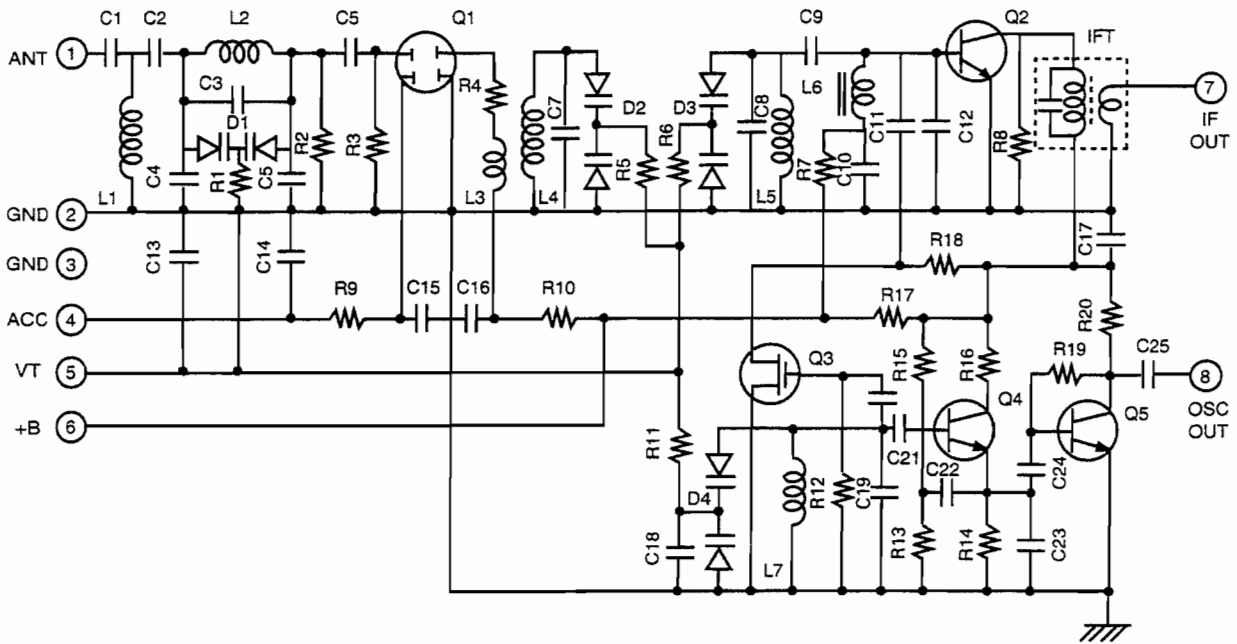
IC302 : NJU9701



FM FRONT - END (A, PT INDO, KS VERSION)



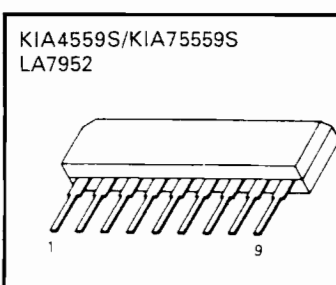
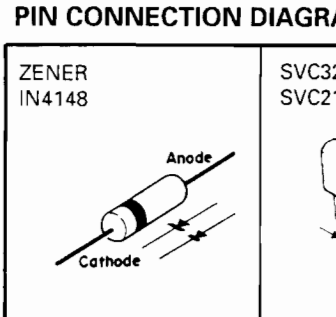
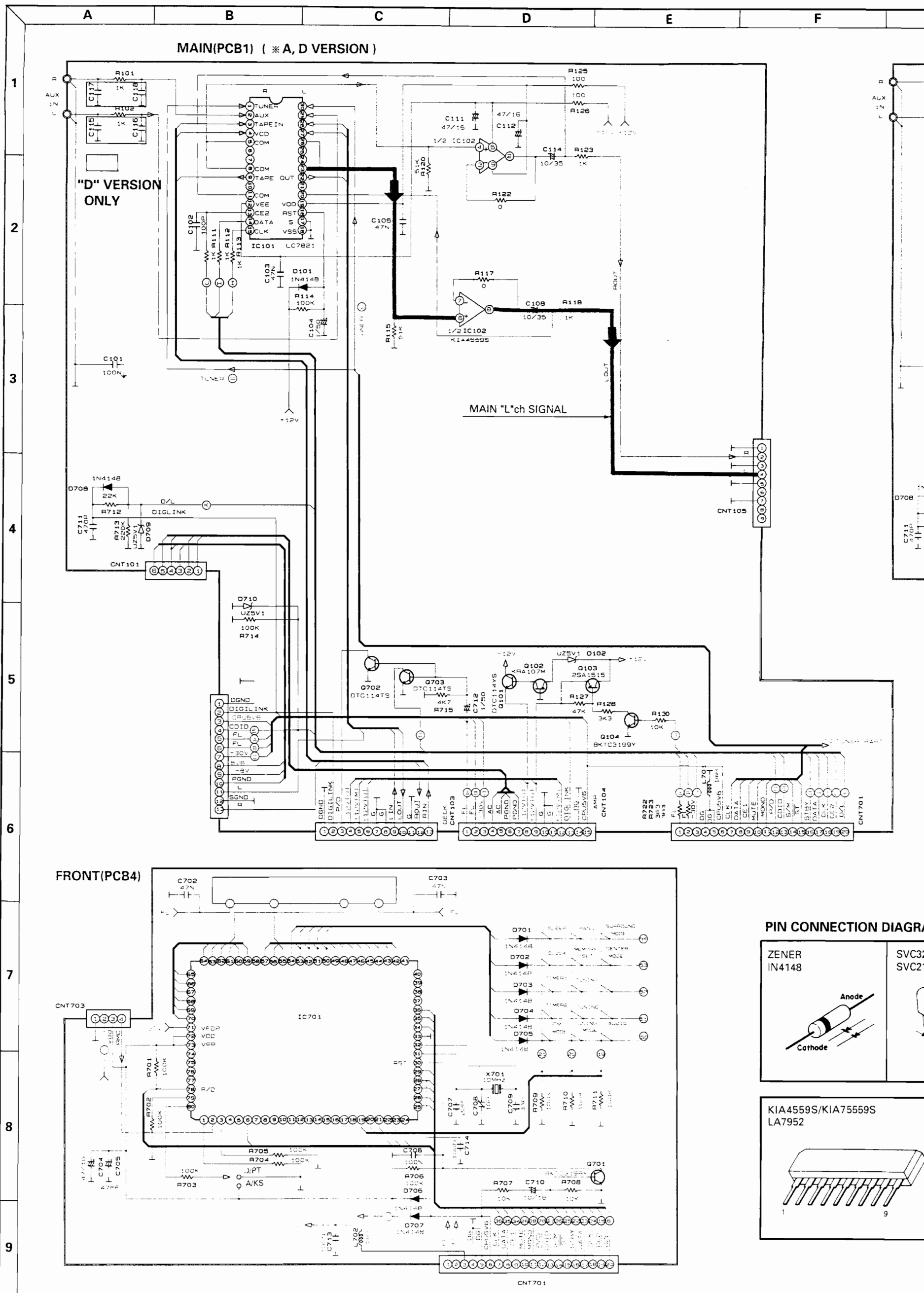
**FM FRONT - END
FTA4 - 460V (D Version)**



| Ref. No. | Content | Ref. No. | Content | Ref. No. | Content | Ref. No. | Content | Ref. No. | Content | Ref. No. | Content | Ref. No. | Content |
|-----------|--------------|----------|---------------|----------|----------|----------|---------|----------|----------|----------|----------|----------|---------|
| IFT | 10.7 MHz | C1 | 22 pF | C11 | 1 pF | C21 | 8 pF | R1 | 33 KΩ | R11 | 33 KΩ | Q1 | 3SK 180 |
| | | C2 | 15 pF | C12 | 22 pF | C22 | 27 pF | R2 | 100 KΩ | R12 | 10 KΩ | Q2 | 2SC3142 |
| L6 | 2.2 or 1 MHz | C3 | 0-5 pF | C13 | 22 pF | C23 | 20 pF | R3 | 100 KΩ | R13 | 10 KΩ | Q3 | 2SK 543 |
| | | C4 | 18 pF | C14 | 22 nF | C24 | 2 pF | R4 | 22-330 Ω | R14 | 1-1.8 KΩ | Q4 | 2SC2814 |
| L1-L5, L7 | AIR WIL | C5 | 7 pF | C15 | 0-22 nF | C25 | 15 pF | R5 | 33 KΩ | R15 | 10 KΩ | Q5 | 2SC2814 |
| | | C6 | 7 pF | C16 | 22 nF | | | R6 | 33 KΩ | R16 | 330 Ω | D1 | KV1440 |
| | | C7 | 4-10 pF | C17 | 22 nF | | | R7 | 1-3.3 KΩ | R17 | 100 Ω | D2 | KV1440 |
| | | C8 | 0-7 pF | C18 | 33-68 pF | | | R8 | - | R18 | 470 Ω | D3 | KV1440 |
| | | C9 | 5 pF | C19 | 0-5 pF | | | R9 | 10 KΩ | R19 | 330 KΩ | D4 | KV1440 |
| | | C10 | 100 or 220 pF | C20 | 2 pF | | | R10 | 100-1 KΩ | R20 | 330 Ω | | |

NOTE

SCHEMATIC DIAGRAM I



G

H

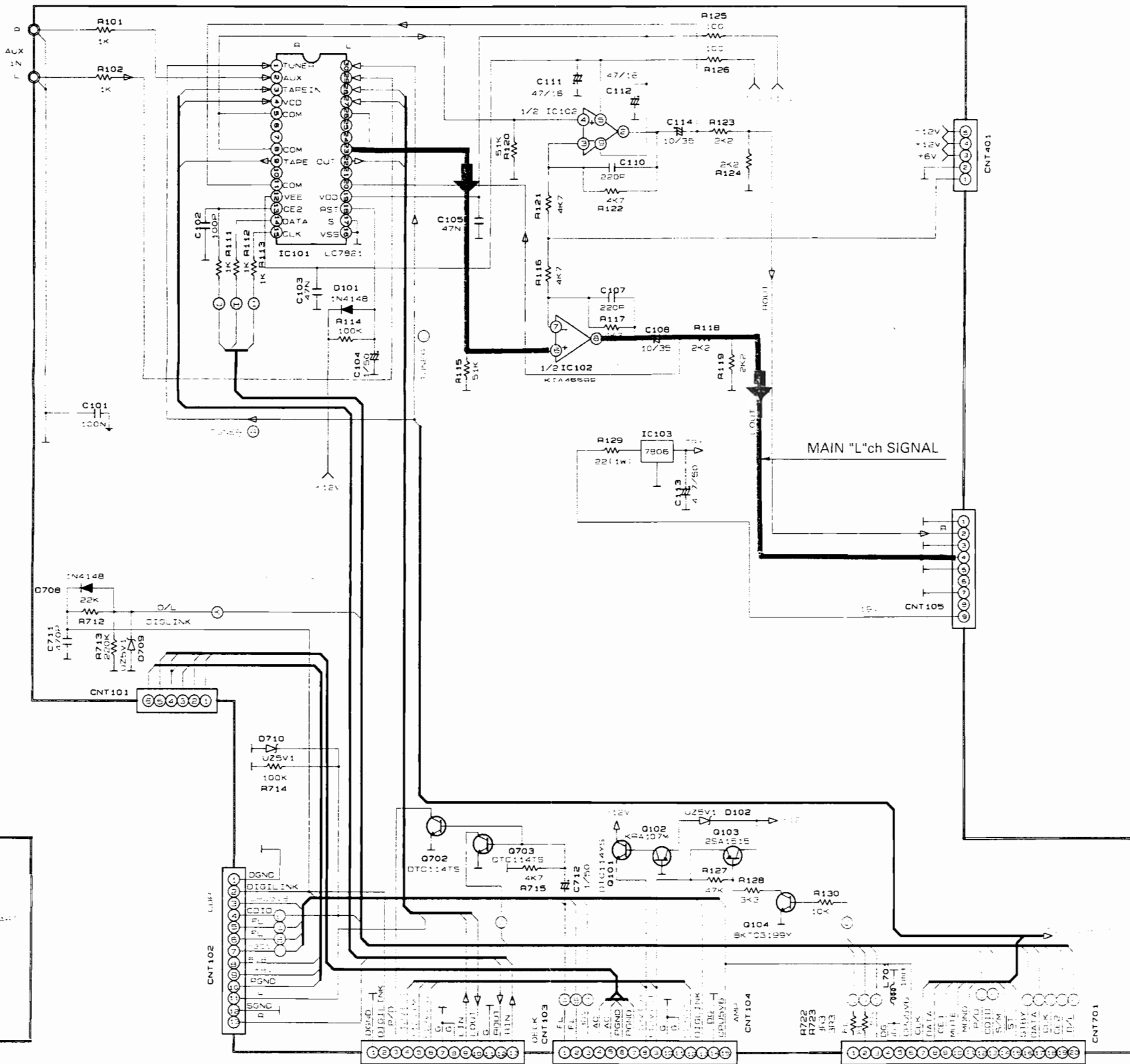
I

J

K

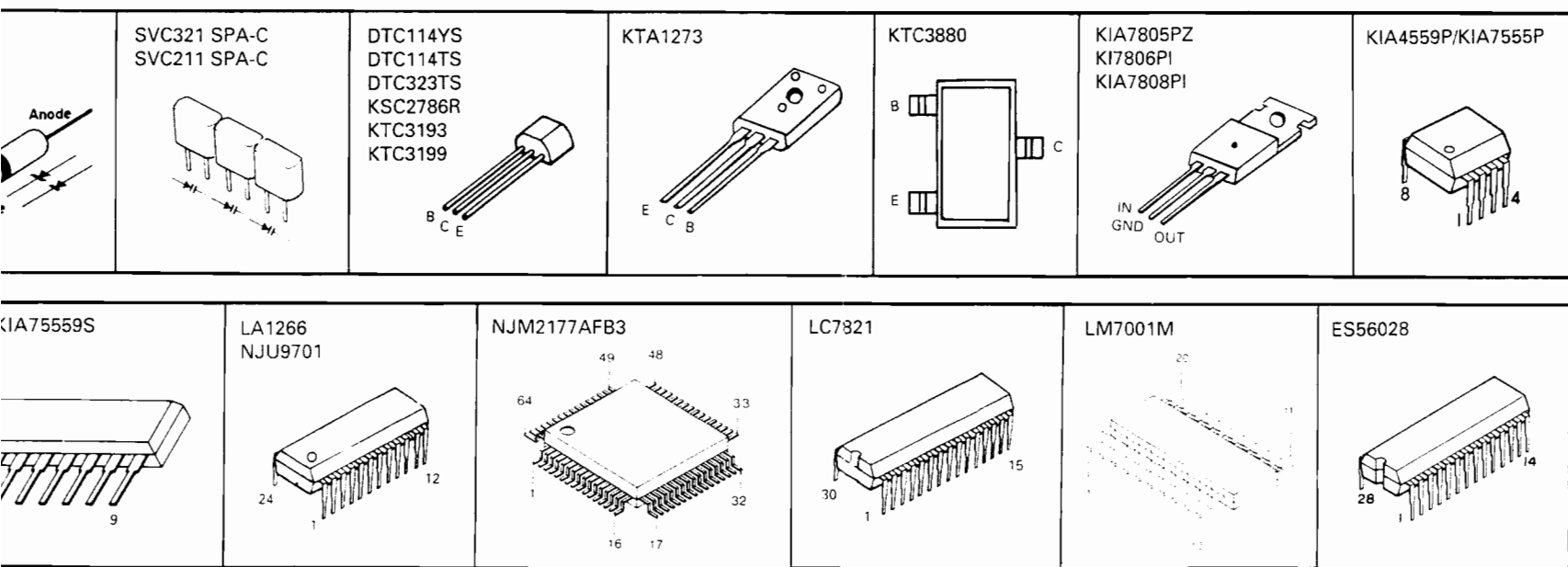
L

MAIN(PCB1) (*KS, PT INDO VERSION)

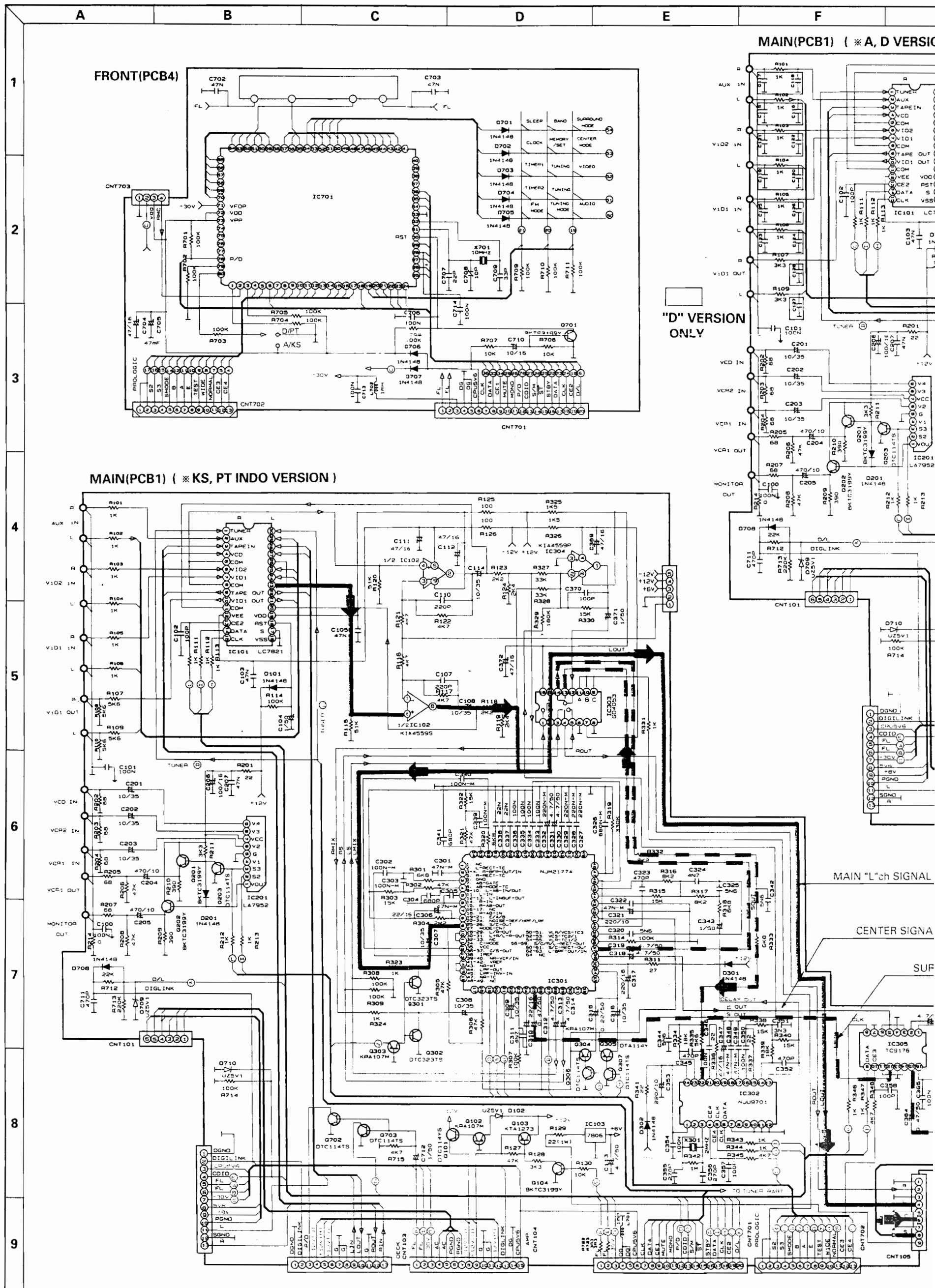


MAIN "L"ch. SIGNAL

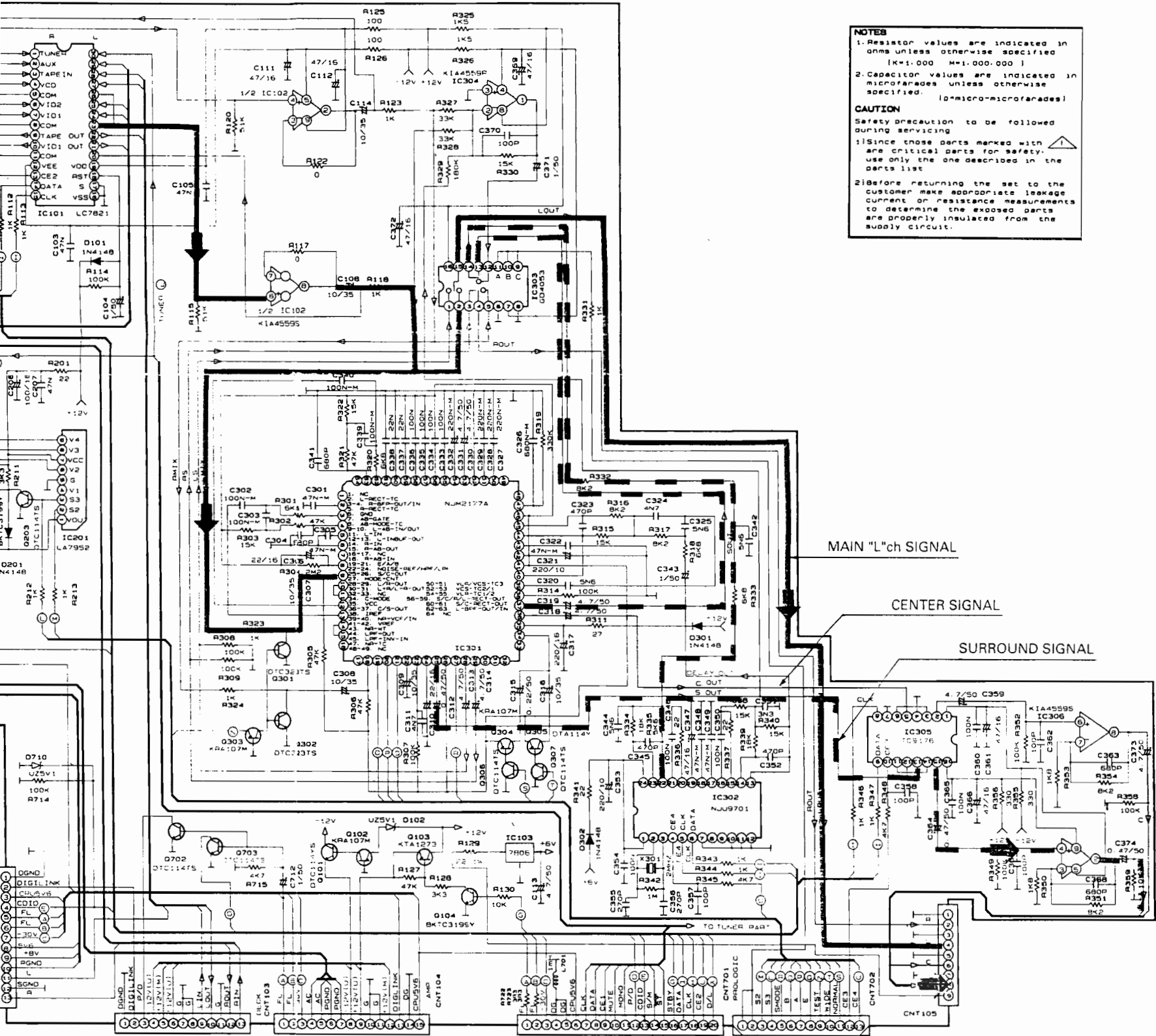
SECTION DIAGRAM DIODES, TRANSISTORS AND ICs



SCHEMATIC DIAGRAM II



(A, D VERSION)



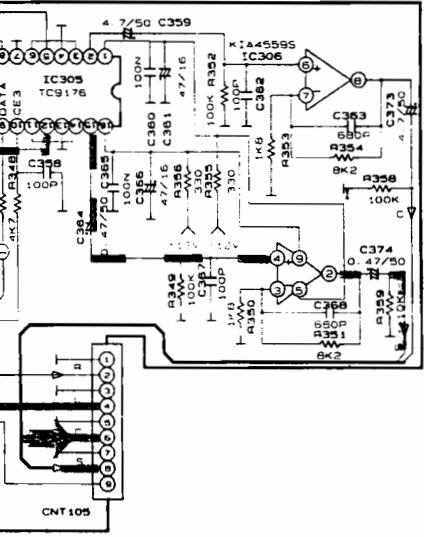
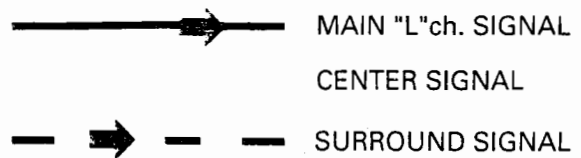
NOTES
 1. Resistor values are indicated in ohms unless otherwise specified (K=1,000 M=1,000,000)
 2. Capacitor values are indicated in microfarads unless otherwise specified (p=micro-microfarads)

CAUTION
 Safety precaution to be followed during servicing
 1) Since those parts marked with \triangle are critical parts for safety, use only the one described in the parts list.
 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

MAIN 'L'ch SIGNAL

CENTER SIGNAL

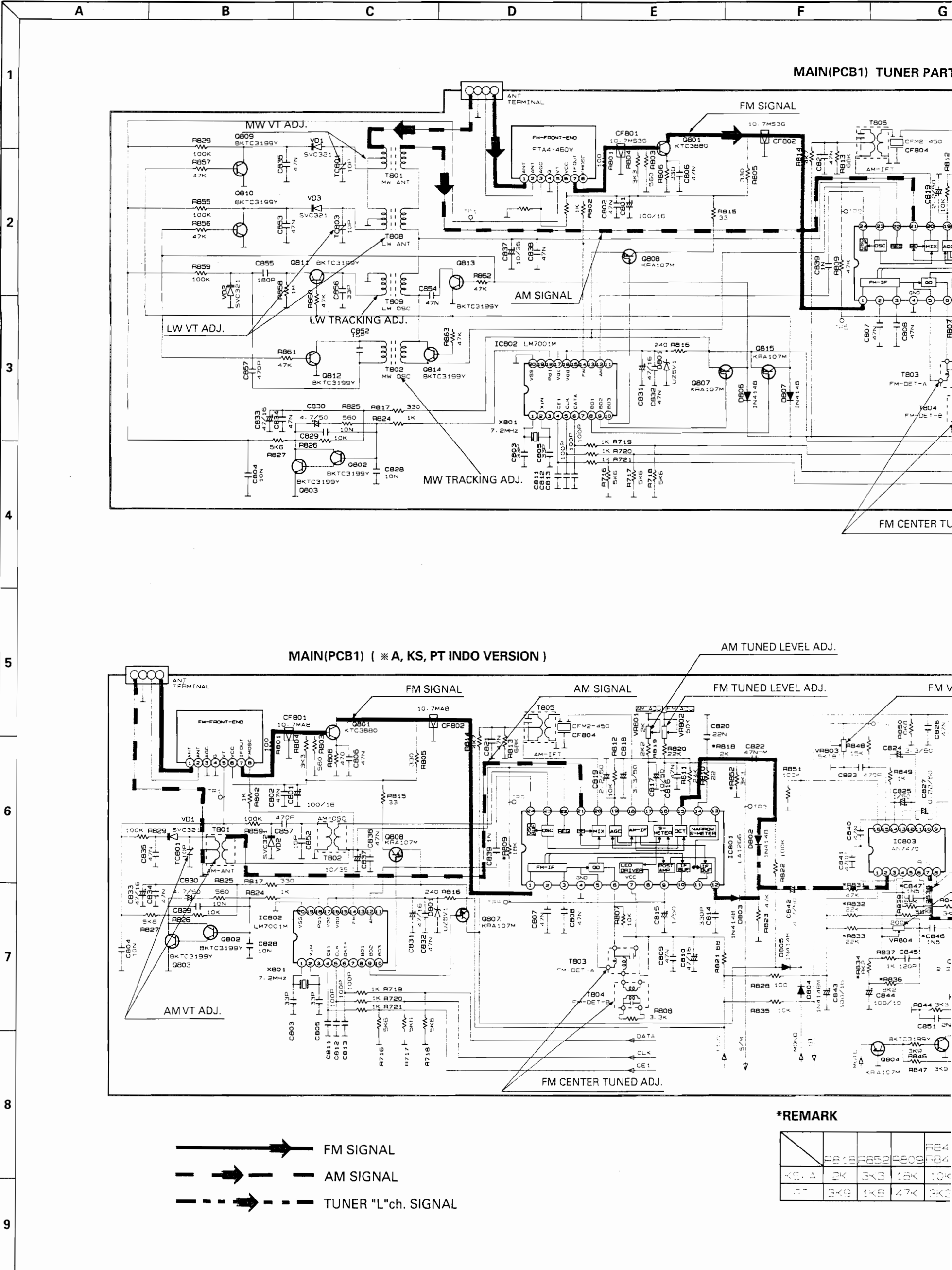
SURROUND SIGNAL



NOTES
 1. Resistor values are indicated in ohms unless otherwise specified (K=1,000 M=1,000,000)
 2. Capacitor values are indicated in microfarads unless otherwise specified (p=micro-microfarads)

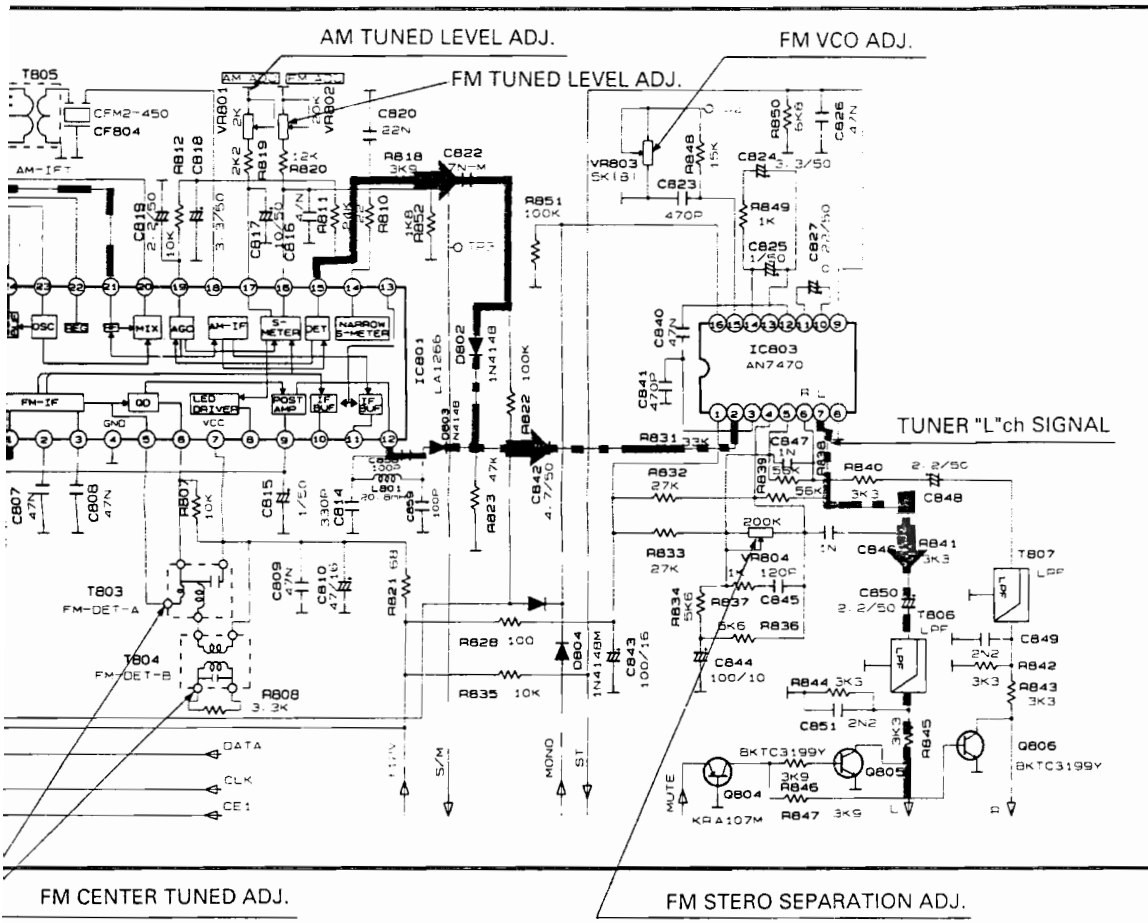
CAUTION
 Safety precaution to be followed during servicing
 1) Since those parts marked with \triangle are critical parts for safety, use only the one described in the parts list.
 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

SCHEMATIC DIAGRAM III



G H I J K L

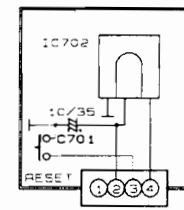
TUNER PART D VERSION



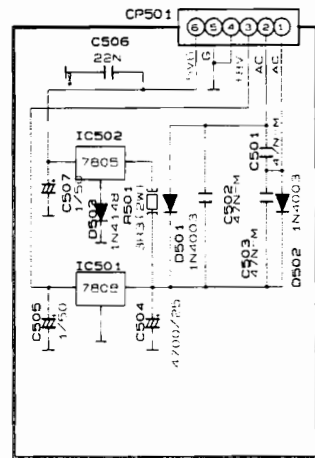
NOTES
 1. Resistor values are indicated in ohms unless otherwise specified [K=1,000 M=1,000,000]
 2. Capacitor values are indicated in microfarads unless otherwise specified [micro-microfarads]

CAUTION
 Safety precaution to be followed during servicing
 1) Since those parts marked with are critical parts for safety, use only the one described in the parts list
 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

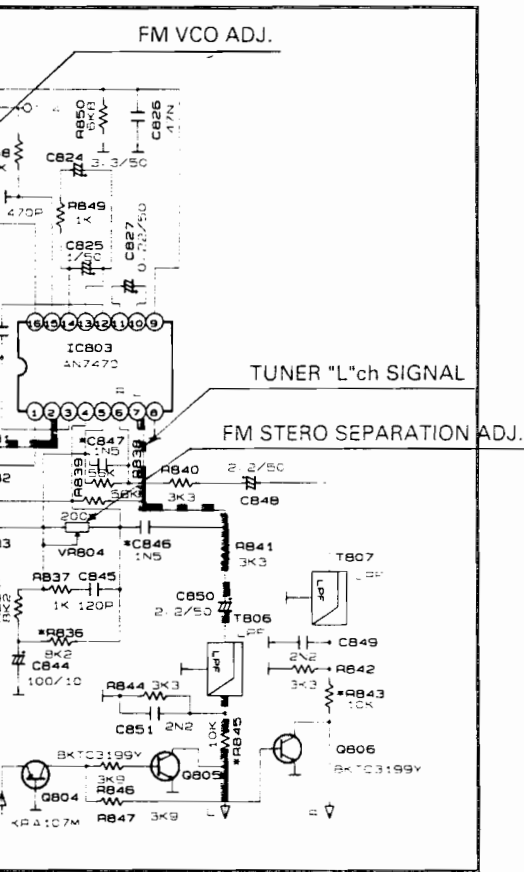
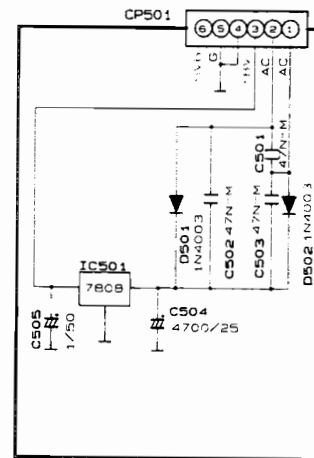
RMC(PCB5)



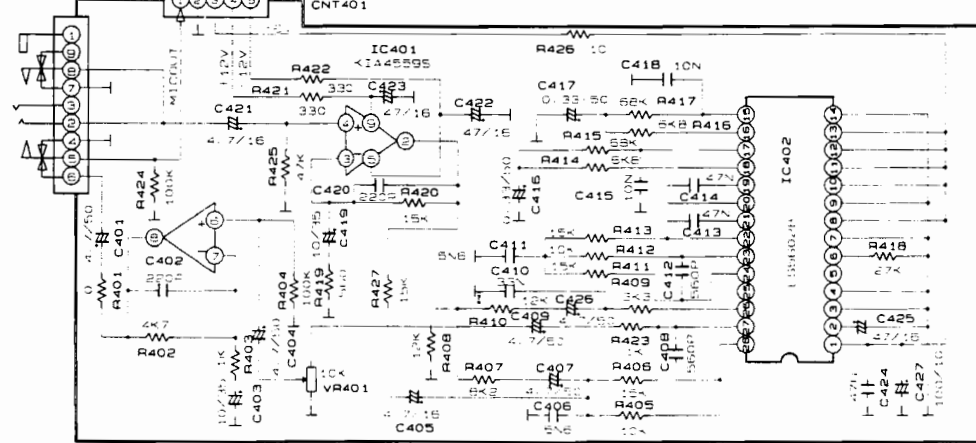
POWER(PCB3) (* KS, PT INDO VERSION)



POWER(PCB3) (* A/D VERSION)



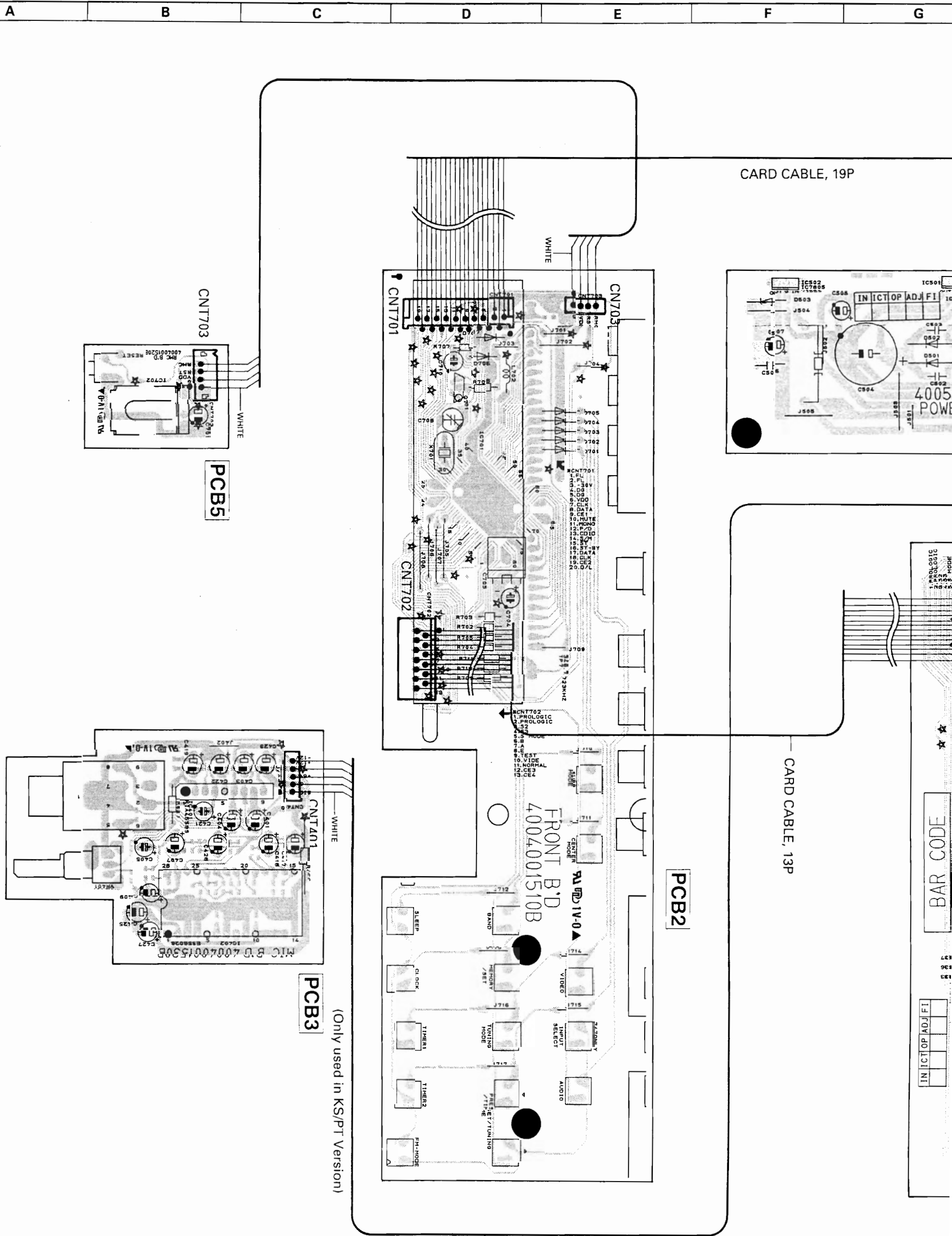
MIC(PCB2) (* KS, PT INDO VERSION ONLY)



| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K |
| 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K |
| 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K | 10K |

WIRING DIAGRAM

1
2
3
4
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6
7
8
9



G

H

I

J

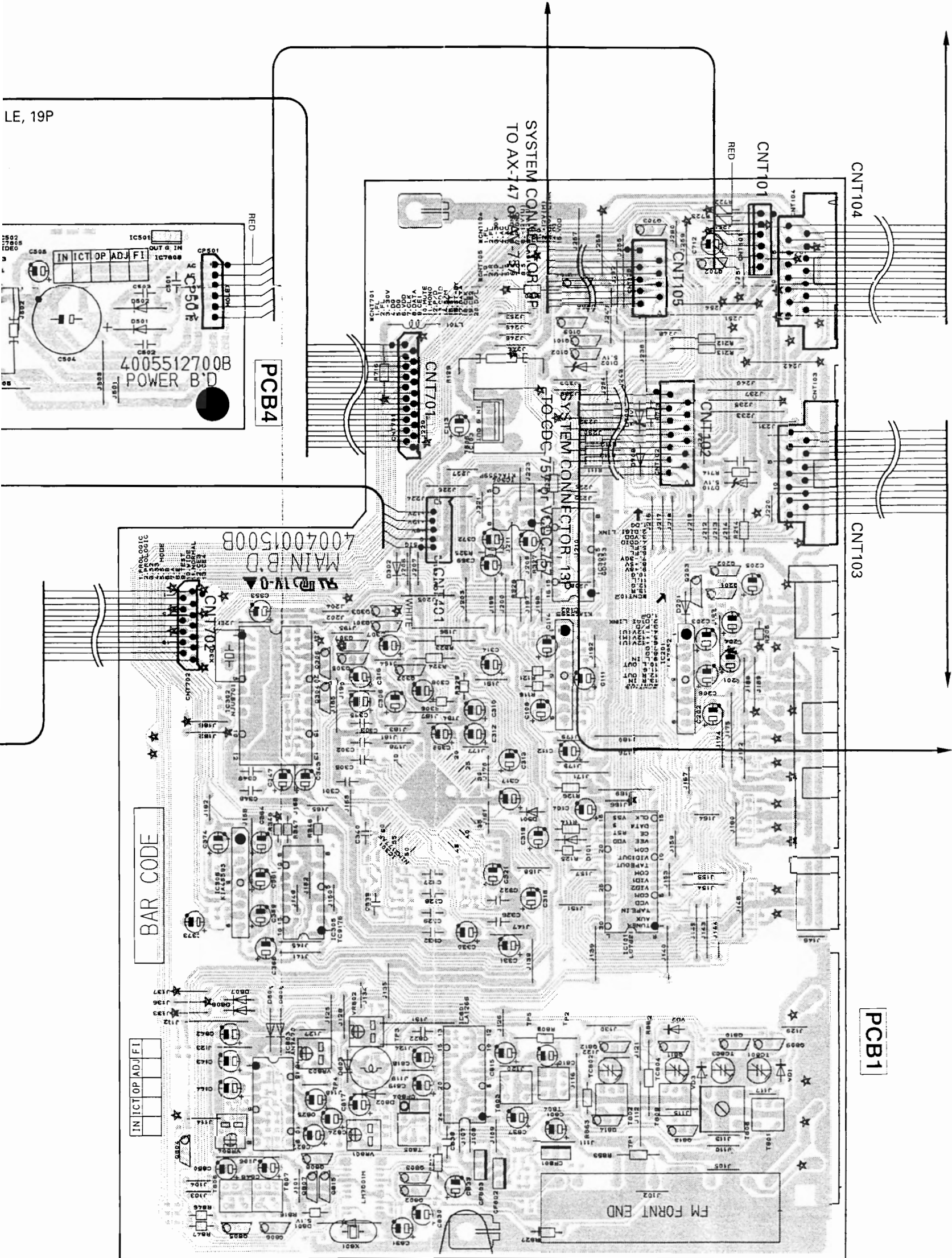
K

L

LE, 19P

SYSTEM CONNECTOR, 15P
FROM AX-747 or AV-757

SYSTEM CONNECTOR, 13P
FROM DD-757



BAR CODE

PCB1

PCB4

IN ICTOP ADJ.FI

FM FRONT END

MAIN B.D.
4004001500B

POWER B.D.
4005512700B

SYSTEM CONNECTOR, 15P
TO AX-747 or AV-757

SYSTEM CONNECTOR, 13P
TO DD-757

▪ VCDC-757/CDC-757 ▪

SPECIFICATIONS

GENERAL

| | |
|------------------------|--|
| Transmission bit ratio | 4.3218 Mbit/sec |
| Transmission on clock | 16.9344 MHz |
| Error correction | CIRC C1: Double correction C2: Quadruple correction |

PICK-UP

| | |
|--------------------------|-----------------------------------|
| System object lens type | Optical pick-up |
| Object lens drive system | 2 Dimensional parallel drive type |
| Optical source | Semiconductor laser |
| Wave length | 780 nm |
| Tracking system | 3 Beam tracking servo type |

OTHER

| | |
|---------------|--------------------------------|
| D/A Converter | 1 bit twin with digital filter |
|---------------|--------------------------------|

ELECTRICAL

- Measuring methods in conformity with EIAJ CP-307, CCIR 468-3
- Reference level: 0 dB
- Test disc: SONY CD-3 YEDS-7, A, BEX TCD725
- Filter: 30 kHz, 18 dB/oct low pass filter

| Description | Track | Nominal | Limit | |
|---|-------------|----------|----------|--------|
| Frequency Response at 20 Hz - 20 kHz | 2 - 13 | ± 1.0 dB | ± 2.0 dB | |
| Signal to Noise Ratio at 1 kHz (Weighted A) | 23 | 75 dB | 70 dB | |
| Dynamic Range at 1 kHz, 60 dB (Weighted A) | 20 | 75 dB | 70 dB | |
| Total Harmonic Distortion at 0 dB | 100 Hz | 4 | 0.06% | 0.1% |
| | 1 kHz | 7 | 0.06% | 0.1% |
| | 20 kHz | 13 | 0.08% | 0.1% |
| Channel Separation at 1 kHz (Selective) | 30, 34 | 55 dB | 50 dB | |
| Channel Unbalance at 1 kHz | 7 | ± 1.0 dB | ± 2.0 dB | |
| Access Time (Track to next track) | | 7 sec | 9 sec | |
| Disc Defects | Black dot | 10 - 15 | 700 μM | 700 μM |
| | Interrupt | 3 - 9 | 800 μM | 800 μM |
| | Fingerprint | 17 - 19 | ALL | ALL |
| De-emphasis | 39 | ± 0.2 dB | ± 0.3 dB | |
| | 40 | ± 0.3 dB | ± 0.5 dB | |
| | 41 | ± 0.5 dB | ± 1.0 dB | |

ENVIRONMENTAL

Test to specification

Temperature between 59°F (15°C) and 95°F (35°C) and relative humidity between 45% and 75%, with power supply voltage of 10% the normal supply voltage.

Test disc: SONY YEDS-7 or ABEX TCD784, TCD725.

Operation

Unit must work properly and correctly at the temperature range from 32°F (0°C) to 113°F (45°C) and the relative humidity from 40% to 80%, and with the supply voltage.

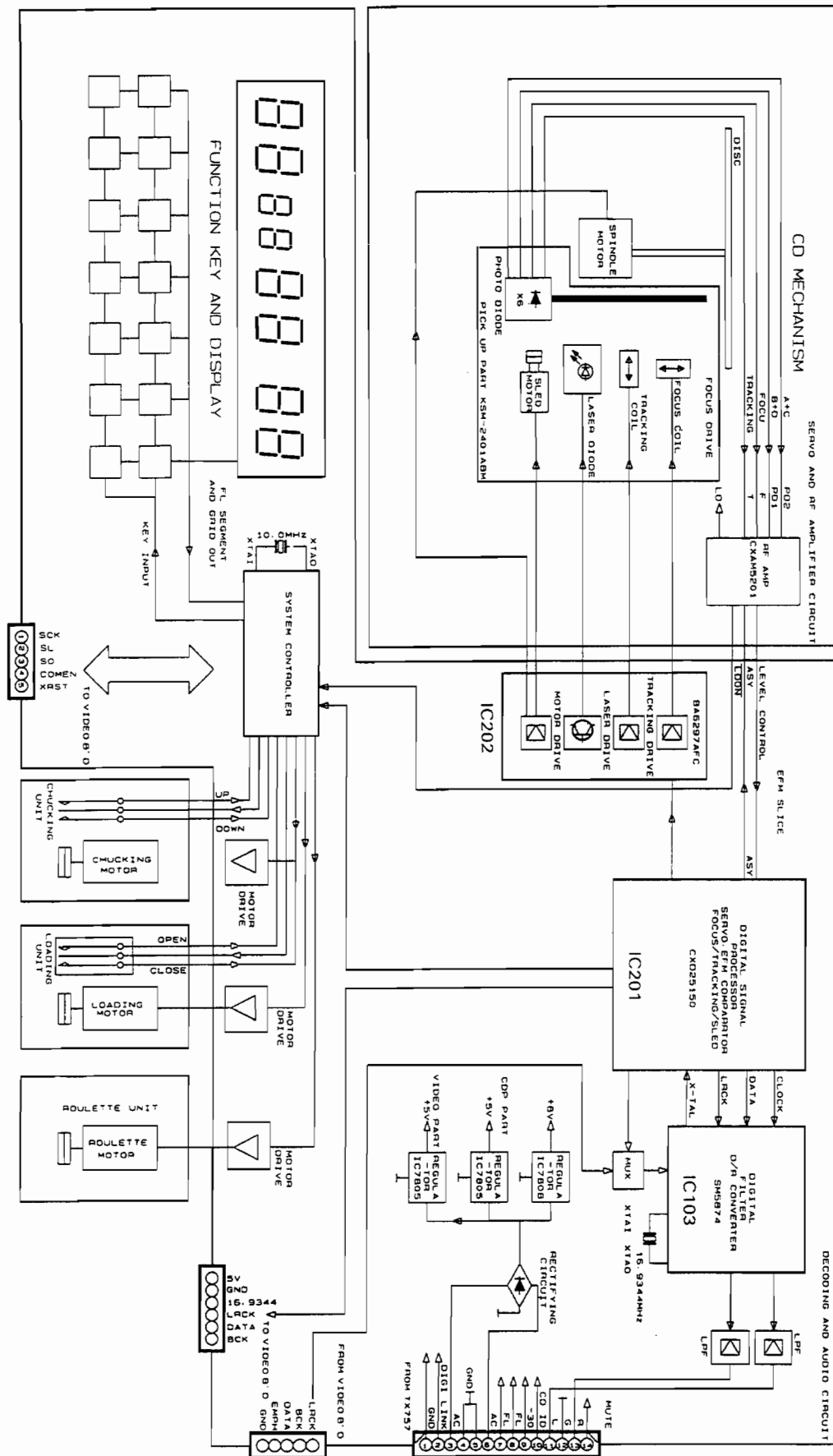
Storage

Temperature test: 48 hours each at -40°F (-40°C) and 149°F (65°C).

Humidity test: 40°C 95% relative humidity.

BLOCK DIAGRAM I

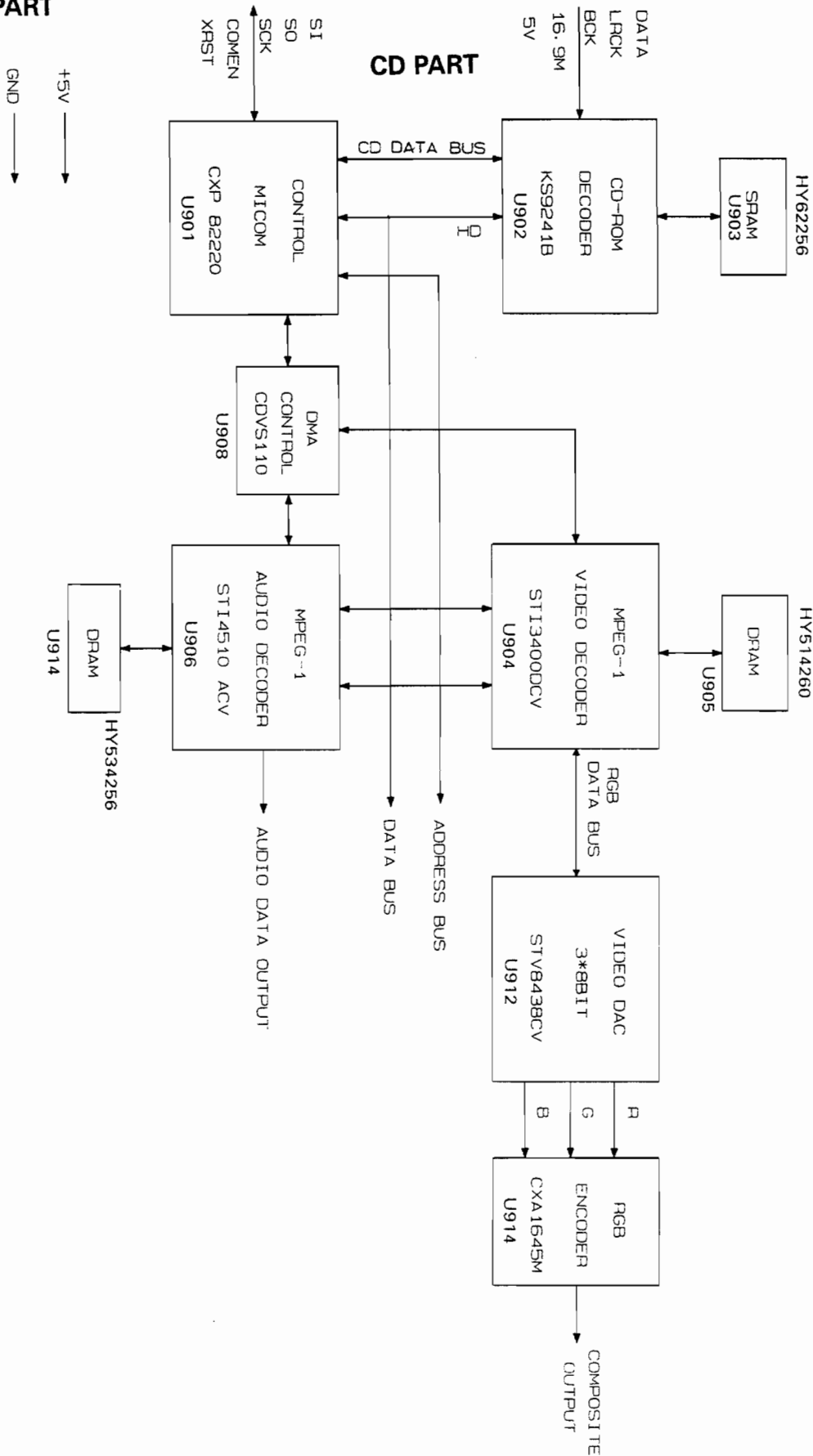
Model No : CDC-757/VCDC-757



BLOCK DIAGRAM II

Model No. : VCDC-757

MPEG PART



LASER BEAM SAFETY PRECAUTIONS

CLASS 1 LASER PRODUCT

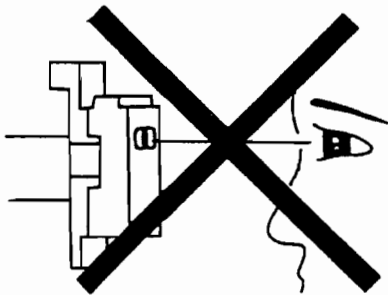


CAUTION

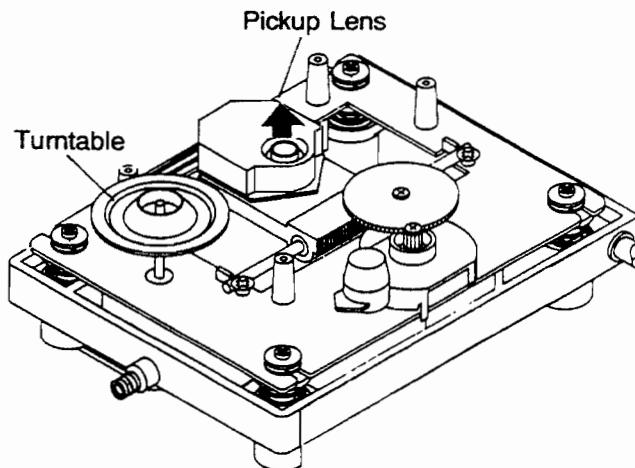
Invisible laser radiation when the unit is open. DO not stare into beam.

CAUTION: USE OF ANY CONTROLS, ADJUSTMENT, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.



This compact disc player uses a pickup that emits a laser beam. The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 1 foot away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.



CAUTION:

Using controls and adjustment, or doing procedures other than those specified herein, may result in hazardous radiation exposure.

SAFETY PRECAUTIONS



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

HANDLING LASER PICKUP

The laser diode in the optical system of this player can be damaged by electrostatic discharge from your clothes or your body. Proper electrostatic grounding for service personal is required during servicing.

BEFORE REPAIRING THE COMPACT DISC PLAYER

Preparation

• Human Body Grounding:

Many of the components used in this compact disc player, including the laser pickup, are sensitive to electrostatic discharge. Service personal should be grounded with an electrostatic armband (1 Mohm).

• Caution:

Static charge on clothing does not escape through a body grounding wrist band. Be careful not to contact the pickup or electrical components with your clothing.

• Workbench and Tool Grounding:

A properly-grounded electroconductive plate (1 Mohm) or metal sheet should be fitted to the workbench surface. Tools and instruments (such as soldering irons and scopes) should be grounded to prevent AC leakage.

Incorrect



Fig. 1

Correct

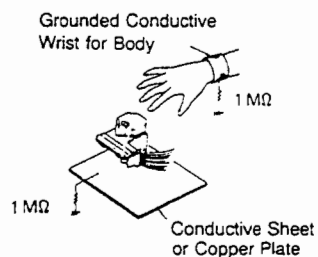


Fig. 2

Note: Laser diodes are so susceptible to damage from static electricity that, even if a static discharge does not ruin a diode, it can shorten its life or cause it to work improperly.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attention: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

PICKUP REPLACEMENT

Caution:

Laser diodes are extremely susceptible to damage from static electricity. Even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly. When replacing the pickup, take appropriate measures, such as using a conductive mat and a grounded soldering iron, to protect the laser diode from static damage.

1. Remove the CD mechanism assembly by referring to the "EXPLODED VIEW II" on page 72 (See Fig. 3).

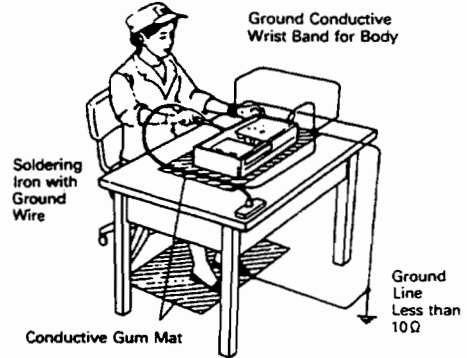


Fig. 3

2. Remove four screws S12 (See Fig. 4).

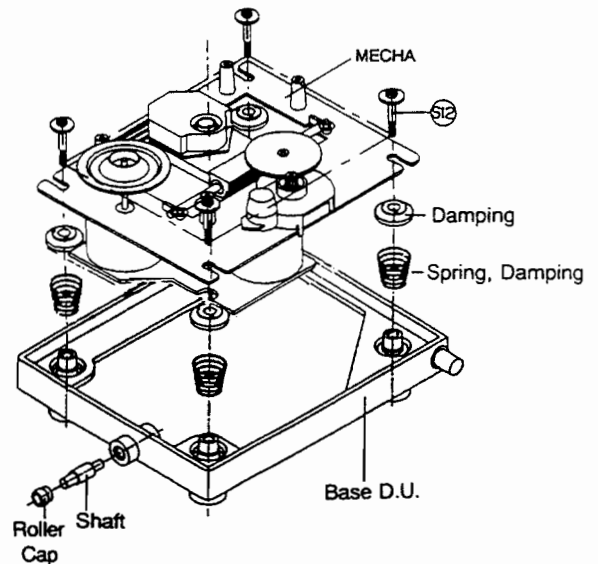


Fig. 4

3. Remove the gear A (See Fig. 5).
4. Pull out the slide shaft.

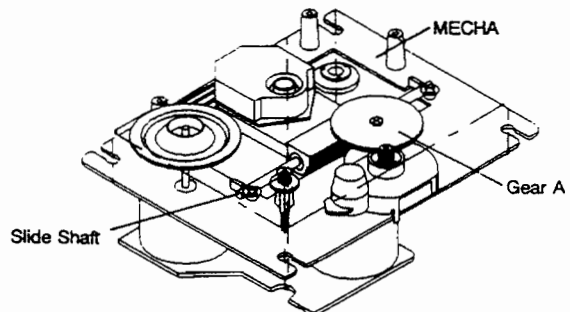


Fig. 5

5. Remove the pickup (See Fig. 6).

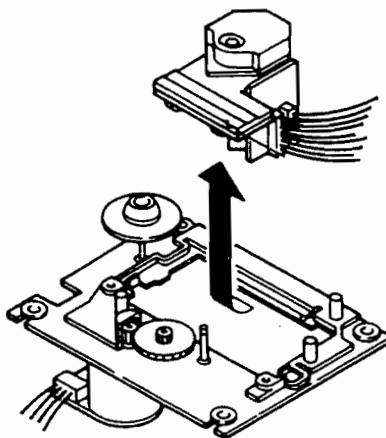


Fig. 6

6. Refer to the EXPLODED VIEW II of the compact disc mechanism on page 72 for detailed illustrations.

OPERATION CHECK

When the power switch is turned on after the chucking arm is removed, observe the objective lens and check the following. (The optical system block should be at the lead-in position when it is checked.)

1. The disc table should be at the innermost position after the chucking arm is removed.
2. The diffused light of the laser beam can be seen when the power switch is turned on.
3. Vertical (up and down) movement of the objective lens takes place (2 or 3 times).

DISASSEMBLY PROCEDURES

REFER TO PAGES 71 AND 82.

1 COVER TOP REMOVAL

Remove 5 screws **a** and then remove the Cover Top **7**.

2 FRONT PANEL ASSEMBLY REMOVAL

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Remove 8 screws **b**.
3. Disconnect (CP401) from Front1 P.C.Board (PCB4) and then remove the Front Panel Assembly **AA**.

3 FRONT1, 2 P.C.BOARD (PCB4, PCB5) REMOVAL

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Remove the Front Panel Assembly **AA**, referring to the previous step **2**.
3. Remove 6 screws **c** and then remove the Front1, 2 P.C.Board (PCB4, PCB5).

4 ASSEMBLY MECHANISM REMOVAL

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Remove the Front Panel Assembly **AA**, referring to the previous step **2**.
3. Remove 4 screws **d**.
4. Disconnect (CP301) from CNT P.C.Board (PCB3) and then remove the Assembly Mechanism **f**.

5 DSP P.C.BOARD (PCB2) REMOVAL

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Do steps **2** and **4**.
3. Remove the card cable from wafer (CP203 and CP202) on the DSP P.C.Board (PCB2)
4. Disconnect (CP201) from the DSP P.C.Board (PCB2).
5. Remove 3 screws **e** and then remove the DSP P.C.Board (PCB2).

6 MAIN P.C.BOARD (PCB1) REMOVAL

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Do steps **2** and **4**.
3. Remove 3 screws **f** and then remove the 2 taps (attached to the Main P.C.Board)

from the body mechanism.

4. Remove the card cable from wafer (CP109) on the Main P.C.Board (PCB1).
5. Disconnect (CP102, CP101, CN106 and CP103) from the Main P.C.Board (PCB1).
6. Disconnect (CP901, CP902, CP903 and CP904) from the MPEG P.C.Board (PCB7). (This step is applicable for only VCDC757)

7 MPEG P.C.BOARD (PCB7) REMOVAL

(This step is applicable for only VCDC757)

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Do steps **2** and **4**.
3. Disconnect (CP901, CP902, CP903 and CP904) from the MPEG P.C.Board (PCB7)
4. Remove 3 screws **g** and then remove the MPEG P.C.Board (PCB7).

8 VIDEO JACK P.C.BOARD (PCB6) REMOVAL

(This step is applicable for only VCDC757)

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Disconnect (CP601) from the MPEG P.C.Board (PCB7).
3. Remove a screw **h** and then remove the Video Jack P.C.Board (PCB6).

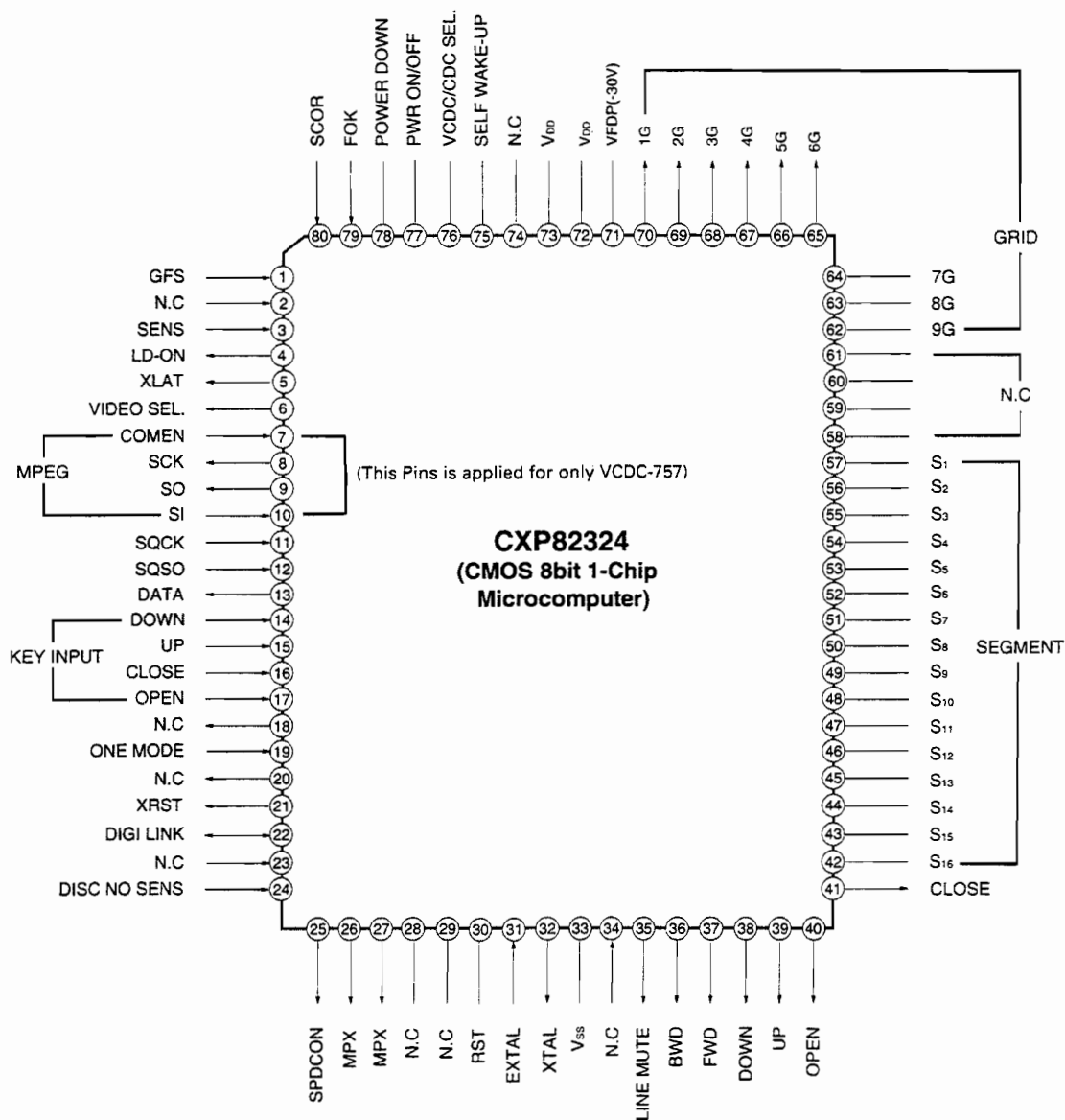
9 CNT P.C.BOARD (PCB3) REMOVAL

1. Remove the Cover Top **7**, referring to the previous step **1**.
2. Disconnect (CP301) from the CNT P.C.Board (PCB3).
3. Remove 2 screws **i** and then remove the CNT P.C.Board (PCB3).

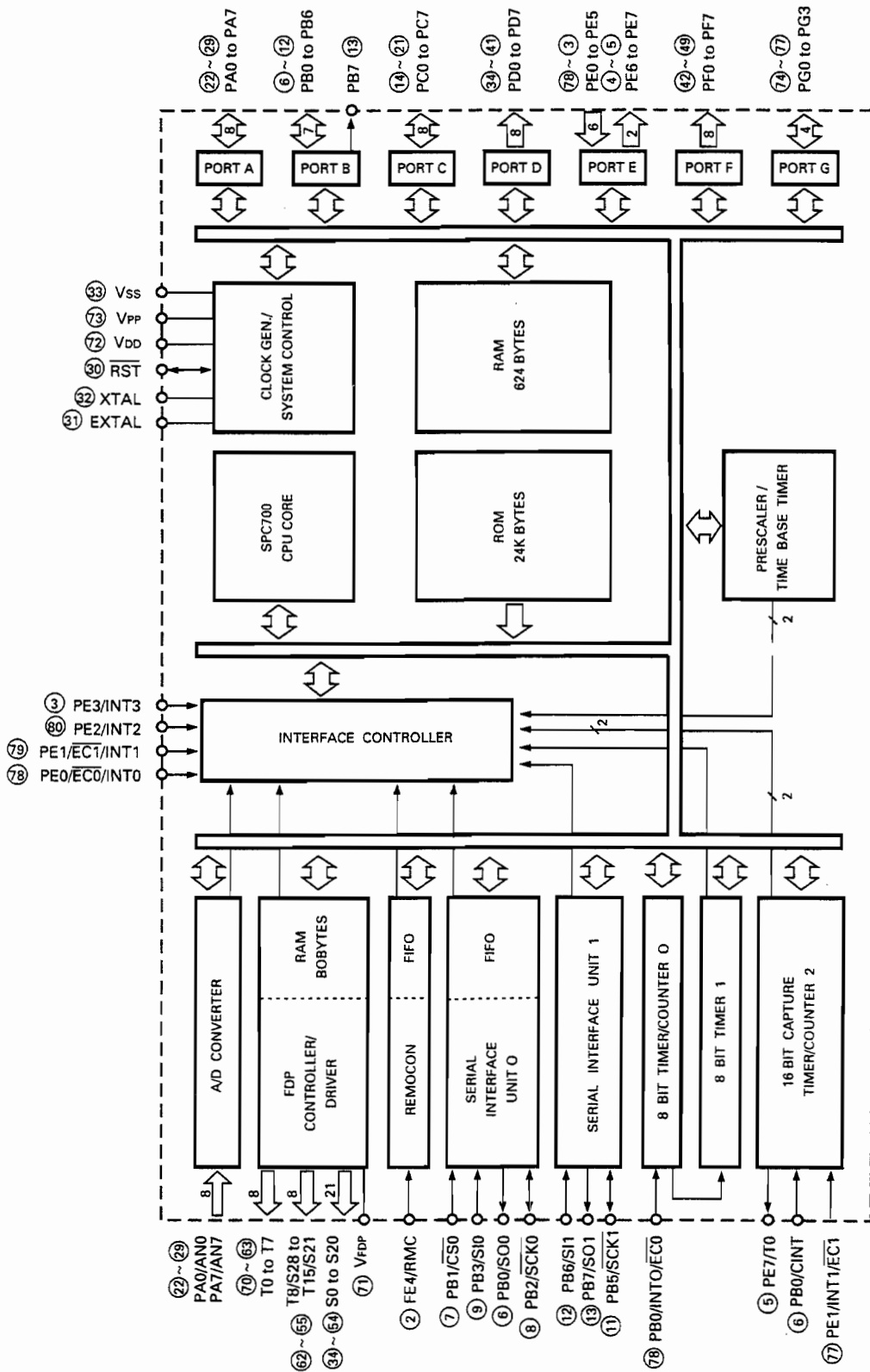
CIRCUIT DESCRIPTION

1. IC201 : CXP82324 (CMOS 8bit 1-Chip Microcomputer)

1-1. Pin Connection Diagram



1-2. Block Diagram



1-3. Input and Output Terminal Functions

| Pin No. | Symbol | Description | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|------------------|---|---------|--|---------------|--|----|----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-------|-----|-----|---------|---------|-----|-----|-------|-------|
| 1 | GFS | GFS signal input from CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | SENS | Sense signal output to pick-up unit (M-101). | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | LD-ON | LD-on signal output to pick-up unit (M-101). | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | XLAT | Serial latch data output to CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | VIDEO SEL | Output for controlling audio signal to 74HC157. If video CD, then "H" and if normal CD, then "L". | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | COMEN (MPEG) | Input for checking data transmission to MPEG CPU. | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | SCK (MPEG) | Clock data output to MPEG CPU. | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | SO (MPEG) | Serial data output to MPEG CPU. | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | SI (MPEG) | Serial data input from MPEG CPU. | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | SQCK | Clock data input for subcode-Q readout to CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | SQSO | Subcode-Q signal input from CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | DATA | Serial data output to CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |
| 14~17 | KEY INPUT | Data input for key scan. | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | ONE MODE | Input for test mode for production. | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | XRST | Output for resetting CXD2515Q. (At "L", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | DIGI-LINK | Input for remocon data. | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | DISC NO SENS | Roulette sensor data input from mecha. | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | SPDCON | Output for roulette motor to stop the disc roulette. | | | | | | | | | | | | | | | | | | | | | | | | |
| 26, 27 | MPX SEL | According to settings, each MPX mode operates as follows. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Pin No.</th> <th colspan="2">Signal Output</th> </tr> </thead> <tbody> <tr> <td>26</td> <td>27</td> <td>L-CH.</td> <td>R-CH.</td> </tr> <tr> <td>"L"</td> <td>"H"</td> <td>L-CH.</td> <td>L-CH.</td> </tr> <tr> <td>"H"</td> <td>"L"</td> <td>R-CH.</td> <td>R-CH.</td> </tr> <tr> <td>"H"</td> <td>"H"</td> <td>L+R-CH.</td> <td>L+R-CH.</td> </tr> <tr> <td>"L"</td> <td>"L"</td> <td>L-CH.</td> <td>L-CH.</td> </tr> </tbody> </table> | Pin No. | | Signal Output | | 26 | 27 | L-CH. | R-CH. | "L" | "H" | L-CH. | L-CH. | "H" | "L" | R-CH. | R-CH. | "H" | "H" | L+R-CH. | L+R-CH. | "L" | "L" | L-CH. | L-CH. |
| Pin No. | | Signal Output | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | 27 | L-CH. | R-CH. | | | | | | | | | | | | | | | | | | | | | | | |
| "L" | "H" | L-CH. | L-CH. | | | | | | | | | | | | | | | | | | | | | | | |
| "H" | "L" | R-CH. | R-CH. | | | | | | | | | | | | | | | | | | | | | | | |
| "H" | "H" | L+R-CH. | L+R-CH. | | | | | | | | | | | | | | | | | | | | | | | |
| "L" | "L" | L-CH. | L-CH. | | | | | | | | | | | | | | | | | | | | | | | |
| 28, 29 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | RST | Input for resetting CPU. (At "L", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | EXTAL | Input of 10.0 MHz oscillator crystal. | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | XTAL | Output of 10.0 MHz oscillator crystal. | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | Vss | Ground | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | LINE MUTE | Output for audio mute. (At "H", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | ROULETTE BWD(-) | Output for driving motor to rotate counter clockwise the roulette. | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | ROULETTE FWD(+) | Output for driving motor to rotate counter clockwise the roulette. | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | PICK-UP DOWN | Output for chucking motor to draw down the pick-up. | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | PICK-UP UP | Output for chucking motor to draw up the pick-up. | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | TRAY OPEN | Output for driving motor to open the tray. (At "H", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | TRAY CLOSE | Output for driving motor to close the tray. (At "H", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 42~57 | SEGMENT | Segment signal output for FIP. | | | | | | | | | | | | | | | | | | | | | | | | |
| 58~61 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 62~70 | GRID | Grid signal output of for FIP. | | | | | | | | | | | | | | | | | | | | | | | | |
| 71 | V _{FDP} | -30 V power supply for FIP controller. | | | | | | | | | | | | | | | | | | | | | | | | |
| 72, 73 | V _{dd} | +5 V power supply for CPU. | | | | | | | | | | | | | | | | | | | | | | | | |
| 74 | NC | Not used ! | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 | SELF WAKE-UP | Input for waking up CPU. | | | | | | | | | | | | | | | | | | | | | | | | |
| 76 | VCDC/CDC SEL | Input for selecting VCDC-757 or CDC-757. If "H", then VCDC-757 and if "L", then CDC-757. | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | PWR ON/OFF | Output for power off when function changed. (At "L", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 78 | POWER DOWN | Input for detecting power-down. (At "L", it is active) | | | | | | | | | | | | | | | | | | | | | | | | |
| 79 | FOK | FOK signal input from CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | SCOR | GFS signal input from CXD2515Q. | | | | | | | | | | | | | | | | | | | | | | | | |

2. APC CIRCUIT

A semiconductor laser is used as the light source for the optical pickup. As the laser diode has large negative temperature characteristics in its optical output when driven with a constant current, a circuit must be provided to stabilize this output. For this purpose, a monitor diode which detects the optical output of the laser diode is used in the semiconductor laser.

As the laser diode emits light from its bonded surface, light is emitted both in front and behind. The light emitted behind is monitored with the monitor diode installed on its rear surface, and the optical output is thus controlled. The light emitted in front becomes the light source for the pickup.

Fig. 7 shows the APC circuit.

When the temperature rises and the optical output decreases, the monitor diode current (I_s) decreases, the electric potential of OE-IC pin 24 rises, the base current of the driving transistor increases, and the laser diode current increases. This causes the reduced optical output to return to its former level.

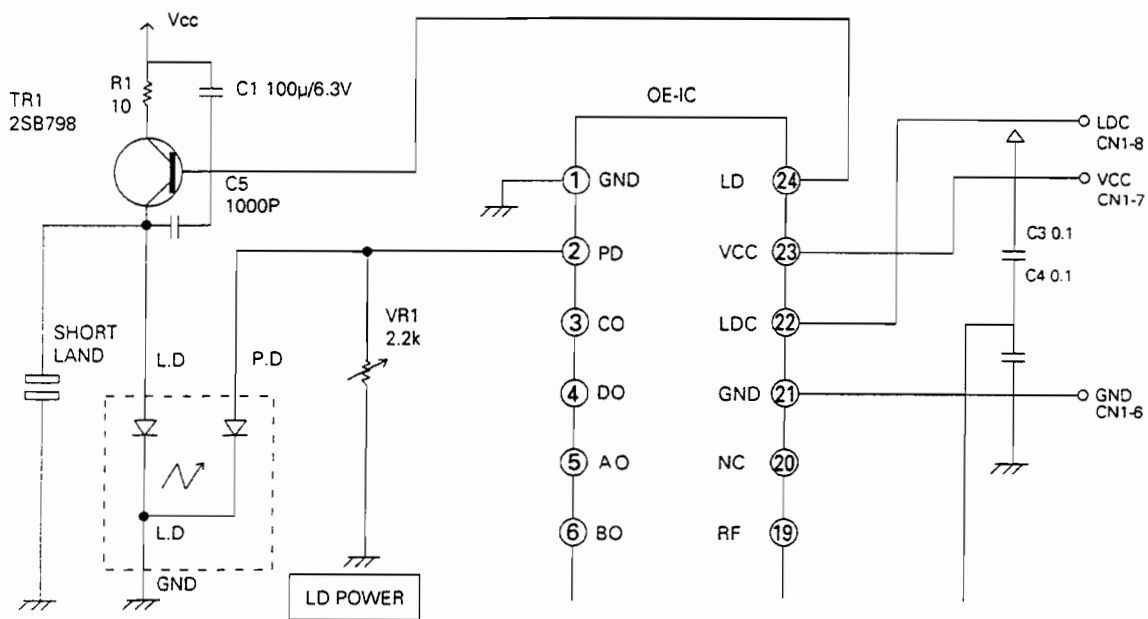


Fig. 7

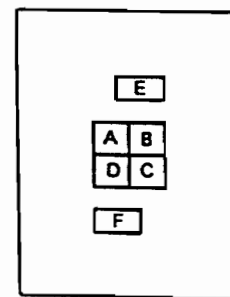
3. FOCUS SERVO

3-1. Optical pickup

This set employs a three-beam optical pickup comprised of six division photodiodes, A through F as shown in Fig. 8. The four photo diodes (A through D) at the center provide focus error detection by using their property to allow the beam to focus into a round image only at a certain point.

The sums of outputs from diagonal two elements of four division photo diodes (A+C and B+D) are compared by the differential amplifier in OE-IC to detect the shape of the beam image.

The remaining two diodes (E and F) provide tracking error detection by means of sub-beam spots.



Three spotted (six-division) photo diodes

Fig. 8

3-2. Focus error detecting operation

Fig. 9 shows the reflected laser beam from a disc is polarized 90° with the beam-splitter and sent to the cylindrical lens. The beam passed through this cylindrical lens is then sent to the four division photo diodes and focuses into an image whose shape varies with the distance between the disc and the objective lens. Such change in the beam shape causes the current flowing from the photo diodes to vary.

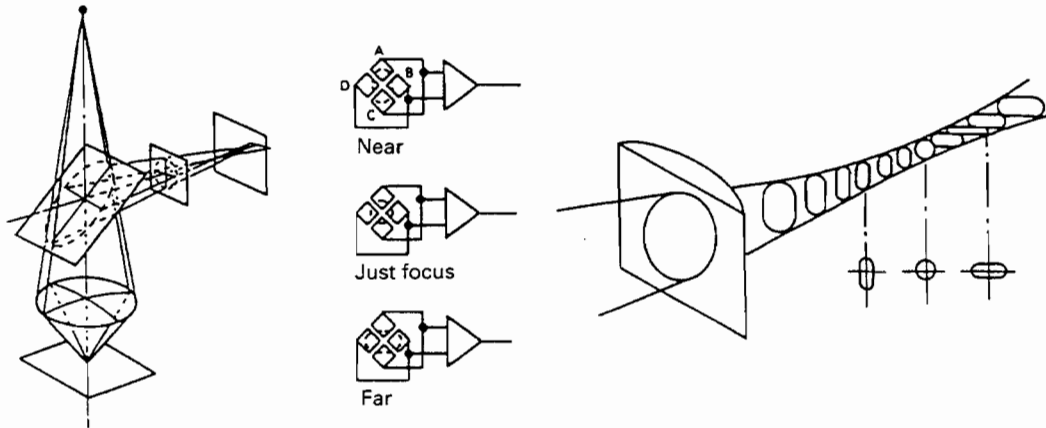


Fig. 9

3-3. Tracking error detection system

Fig. 10 shows the principle of the tracking error detection system which employs the three beam system.

The laser beam is divided into the main beam and two sub-beams by diffraction grating and they are arranged on one line. The center line connecting these three beams has a slight offset angle against the main beam. The main beam is received by photo diodes A, B, C and D and two sub-beams by E and F respectively.

Fig. 10-A shows the on-track state. As both auxiliary beams 1 and 2 are slightly on the track in this state, the outputs of photo diodes E and F are equal and the tracking signal is 0(zero). When the track is shifted to the left (Fig. 10-B), the auxiliary beam 1 is off the pit. This allows more light to be received by the photo diode E, resulting in positive (+) tracking signal output. On the other hand, when the track is shifted to the right (Fig. 10-C), the amount of light received by the photo diode F increases, resulting in negative (-) tracking signal output. And these extreme signals are detected as tracking error signals.

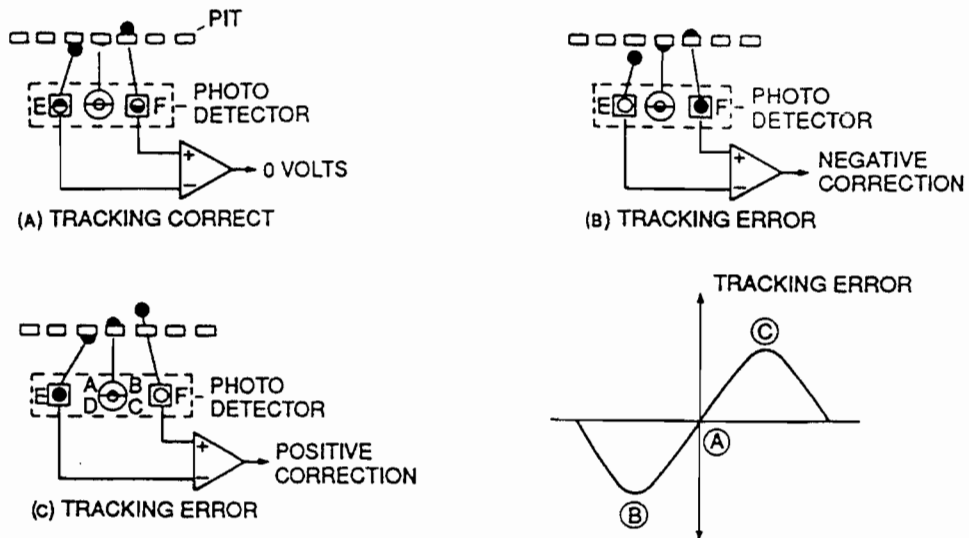
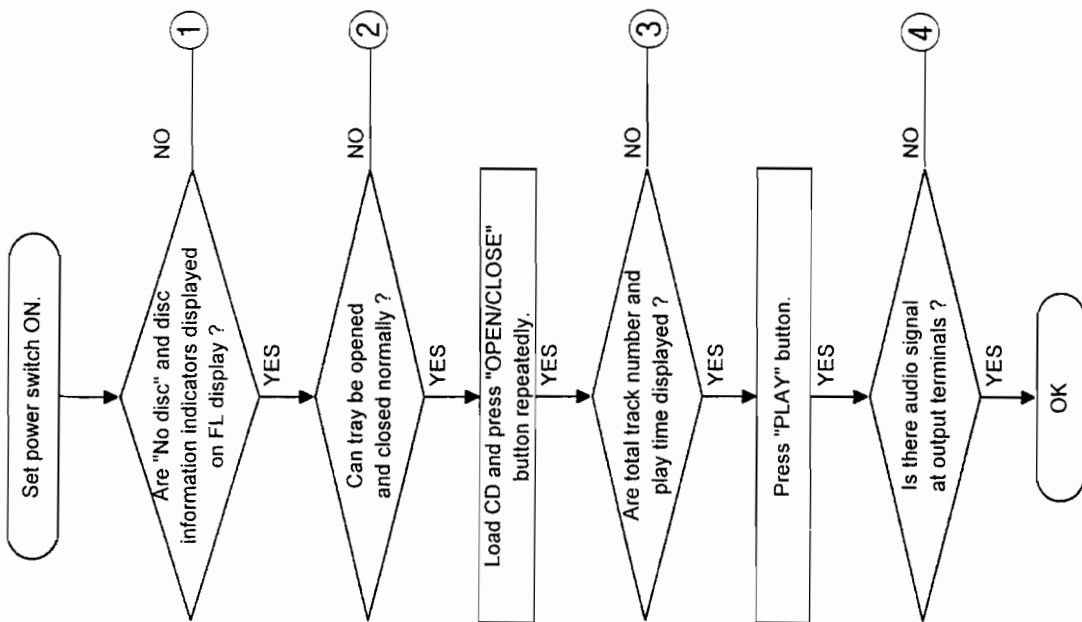
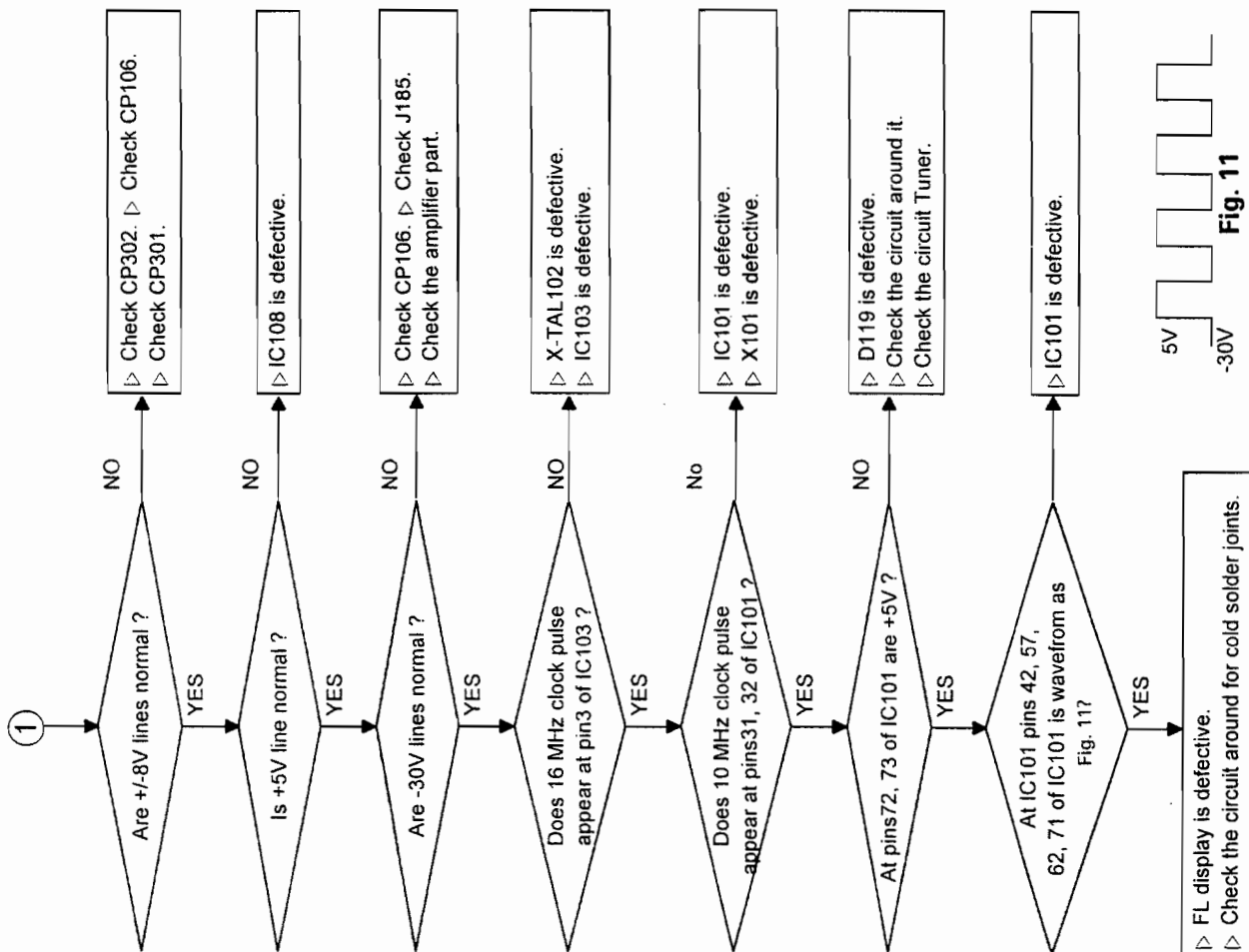


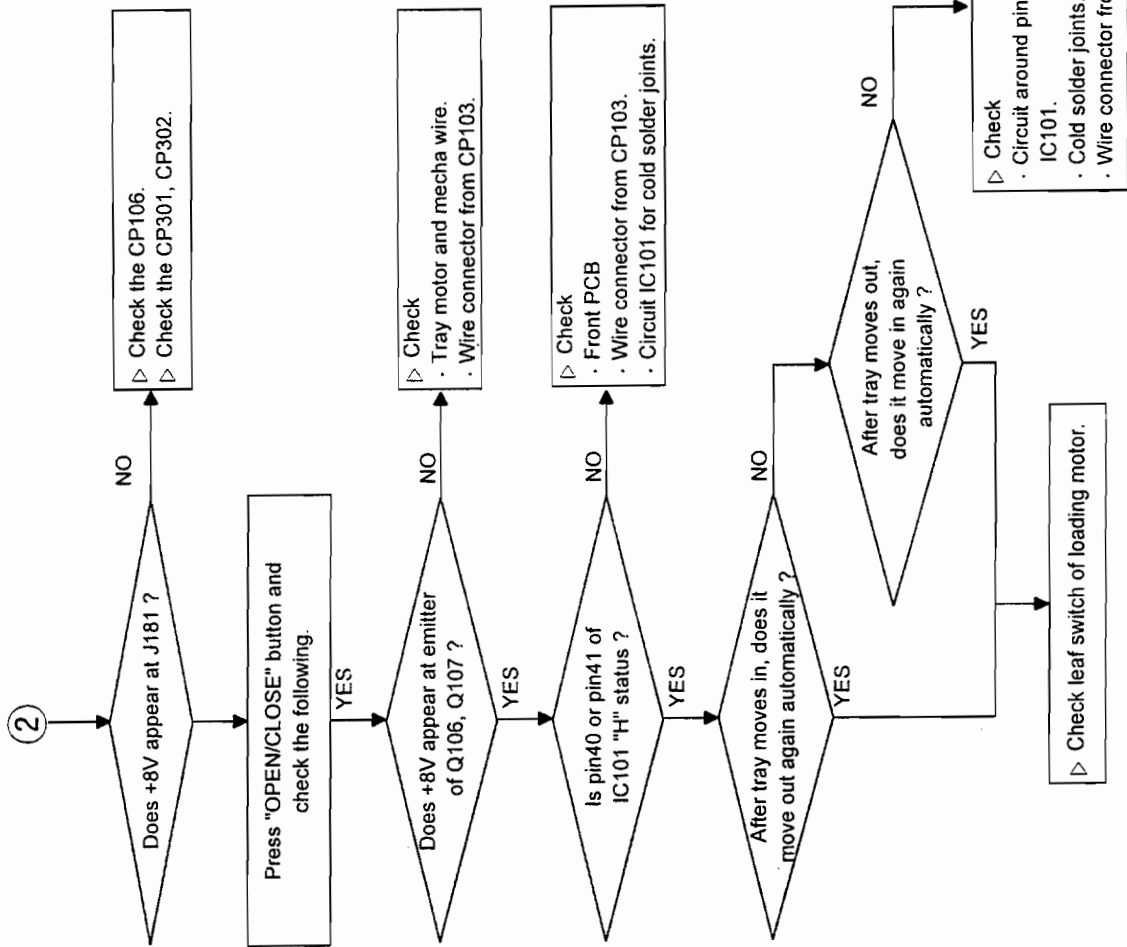
Fig. 10

TROUBLESHOOTING

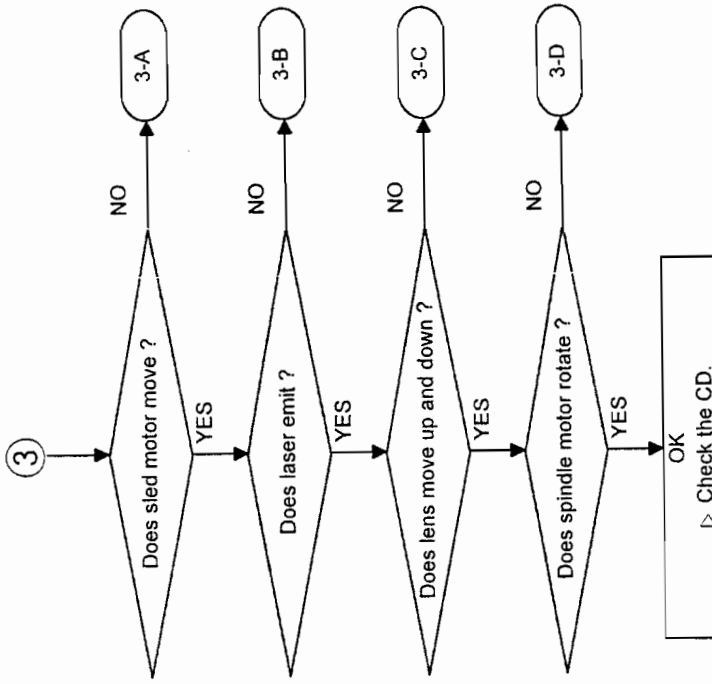
[Repair item 1] At power on, "0" and some parts are not displayed.



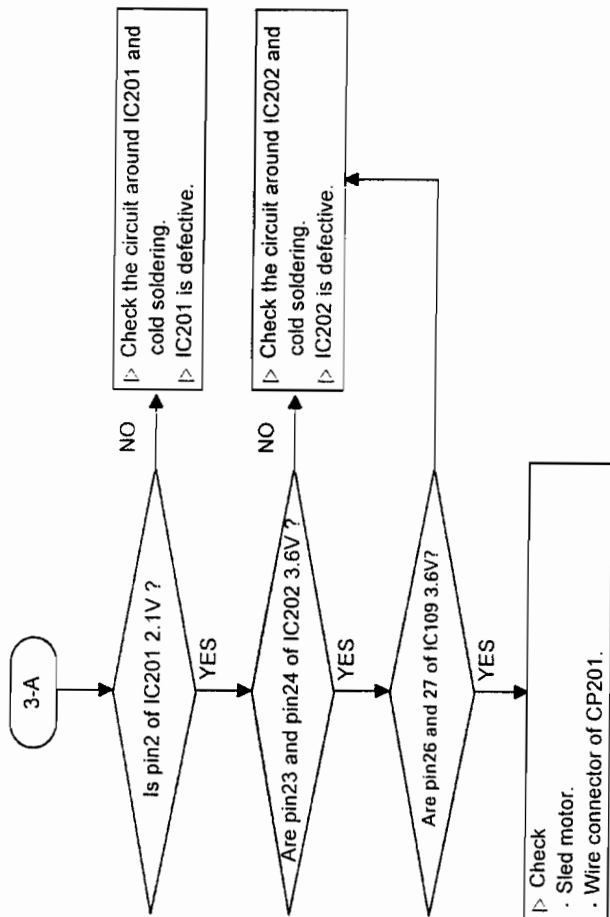
[repair item 2] Tray cannot be opened and closed by pressing "OPEN/CLOSE" button.



[Repair item 3] "0" is displayed instead of total playing time and track number.



[Repair item 3-A] Sled motor dose not move.



[Repair item 3-B] Laser does not emit.

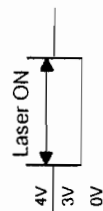
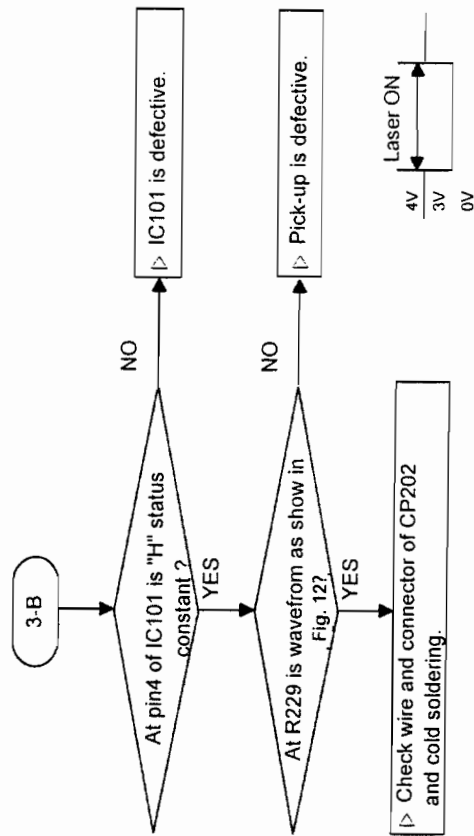


Fig. 12

[Repair item 3-C] Object lens of pickup unit does not move up and down.

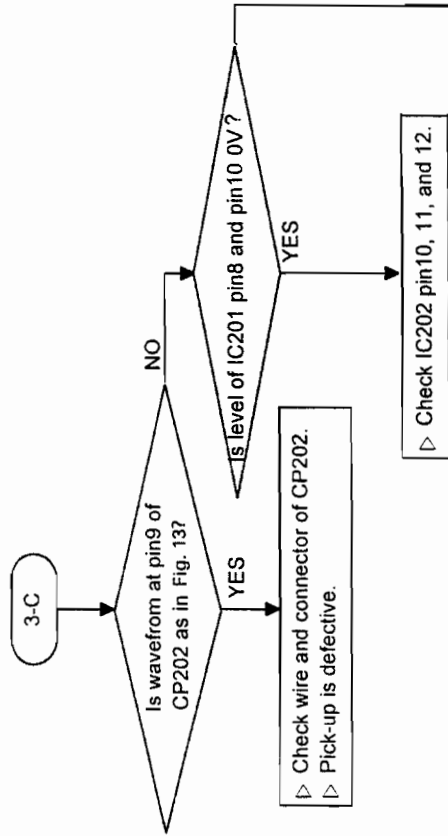
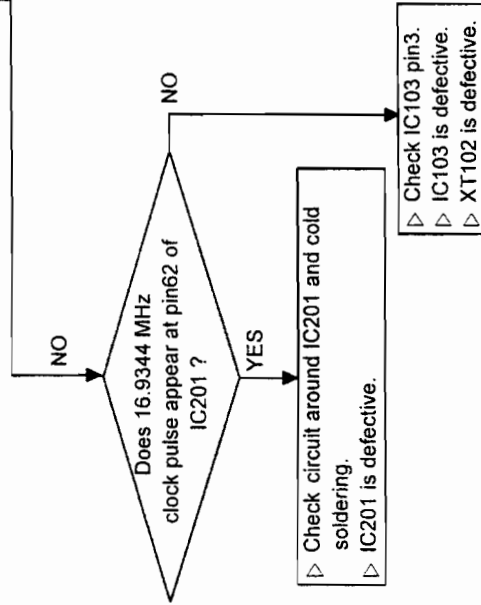


Fig. 13



[Repair item 3-D] Spindle motor does not rotate.

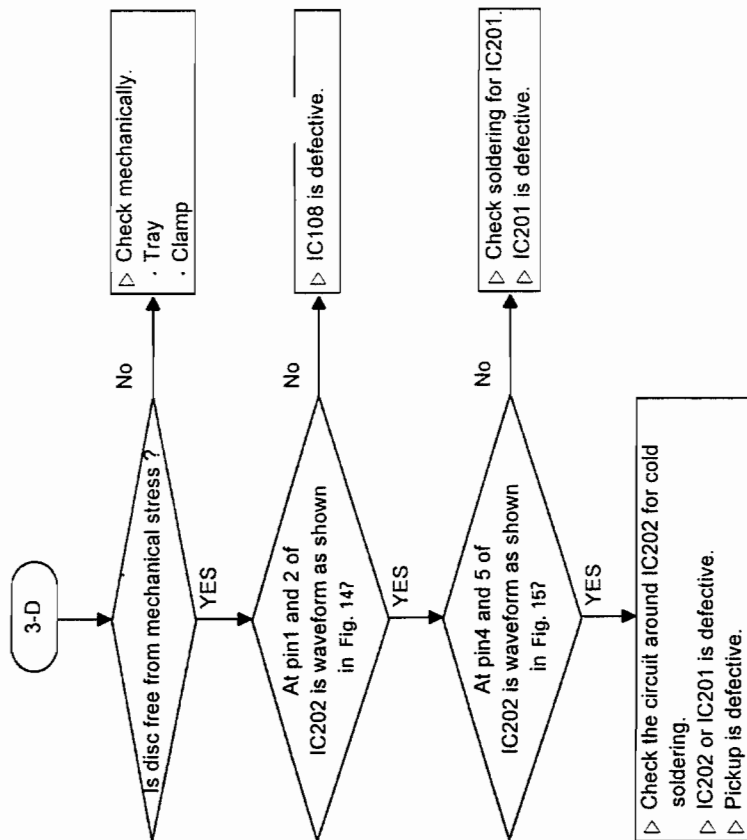
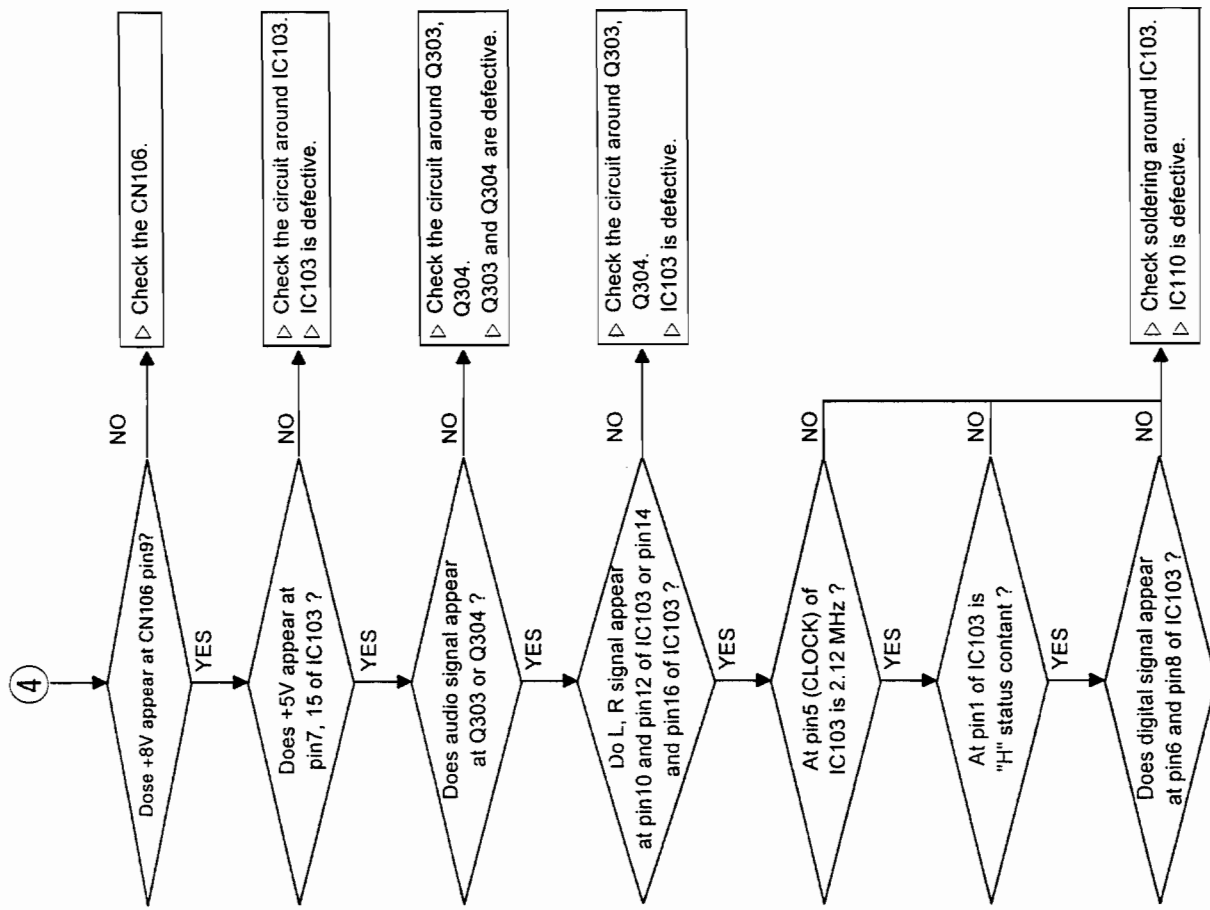


Fig. 15



[Repair item 4] No sound signal.



MECHANICAL PARTS LIST

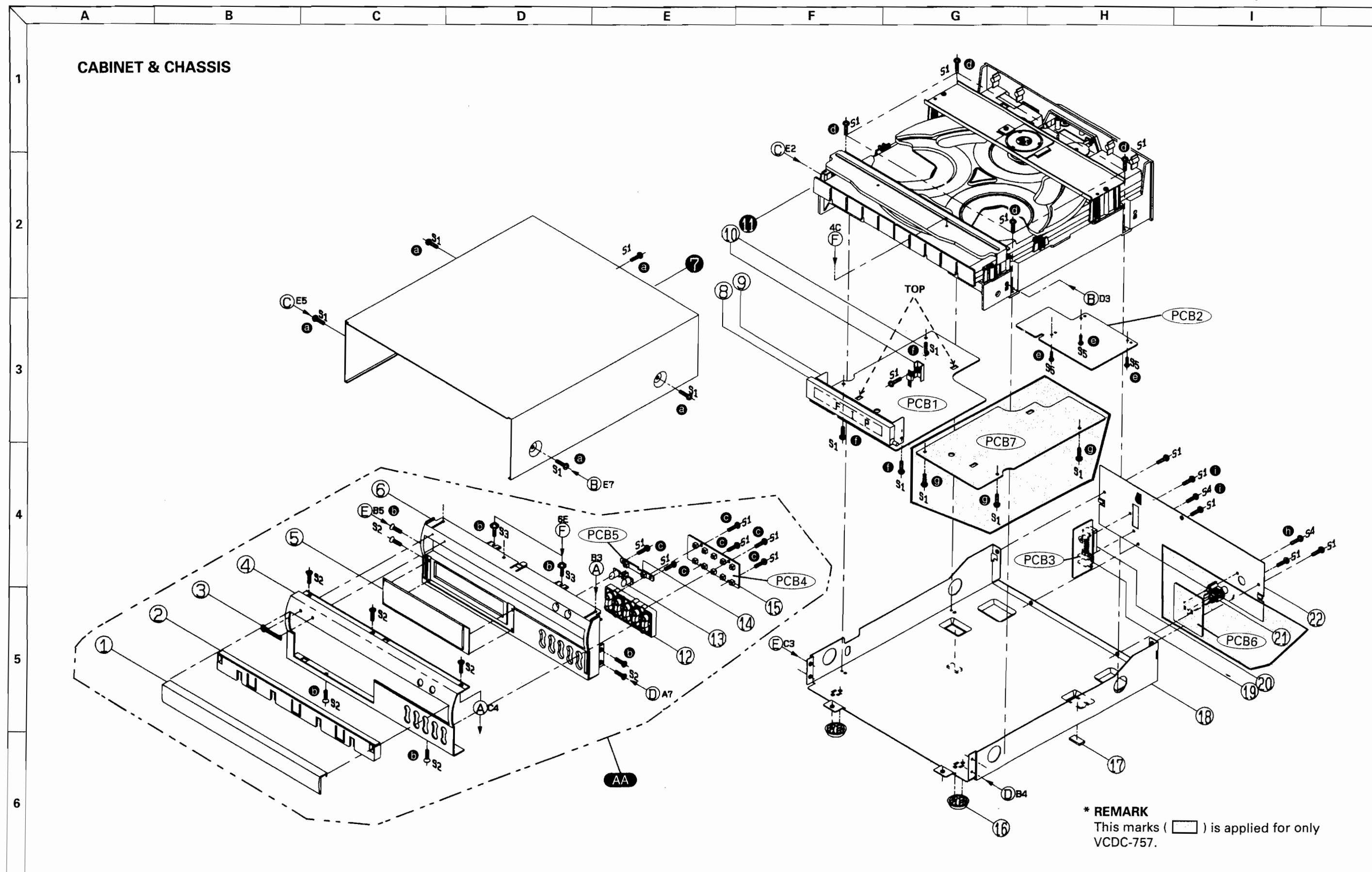
| Ref. No. | Description | Parts No. | Q'ty | Version | Ref. No. | Description | Parts No. | Q'ty | Version |
|-----------|------------------------------------|-------------------|------|-------------|----------|-----------------------------|--------------|------|---------|
| | PACKAGE | | | | 23 | Sheet Tapping | 6725003610 | 1 | |
| | Carton Box | 049605258410 | 1 | KS | 24 | Belt Loading | 7165002510 | 1 | |
| | Carton Box | 049605258403 | 1 | A,D,PT INDO | 25 | P.C.Board Sensor | 4009500500 | 1 | |
| | Cushion Poly | 9722041310 | 1 | | 26 | Base Magnet | 6063103010 | 1 | |
| | Film Soft PE | 9715000120 | 1 | | 27 | Cover Magnet | 6023408610 | 1 | |
| | | | | | 28 | Magnet | 5125000910 | 1 | |
| | ACCESSORIES | | | | 29 | Pulley Motor | 7113001310 | 1 | |
| | Cord Patch, 1P | 4328201910 | 1 | KS | 30 | Rubber Damping | 6715024510 | 4 | |
| | Demo Disc, Video CD | 5058001210 | 1 | KS | 31 | Spring Damping | 6555014010 | 4 | |
| | | | | | 32 | Poly Washer (C 2.1) | 8338300710 | 1 | |
| | CABINET & CHASSIS | | | | 33 | Poly Washer (C 4.1) | 8338301310 | 1 | |
| | Door (CDC757) | 048663001412 | 1 | | 34 | Poly Washer (C 5.2) | 8338301410 | 1 | |
| (1) | Door (VCDC757) | 048663001411 | 1 | KS | 35 | Poly Washer (C 3.1) | 8338301210 | 1 | |
| 2 | Base Door | 6043010510 | 1 | | 36 | Screw Mecha | 8155001210 | 3 | |
| 3 | Badge, INKEL | 048535045411 | 1 | KS | 37 | Screw Damping | 8155001610 | 4 | |
| (3) | Badge, SHERWOOD | 048535045421 | 1 | A,D,PT INDO | 38 | Screw BM 2x3Y | 8009120031 | 2 | |
| 4 | Panel Front (CDC757) | 048602019912 | 1 | | 39 | Screw BM 2.6x4Y | 8009126041 | 4 | |
| (4) | Panel Front (VCDC757) | 048602019911 | 1 | KS | 40 | Screw #1 WPT 2.6x8Y | 8159126081 | 2 | |
| 5 | Window | 8553023510 | 1 | | 41 | Screw #1 BT 2.6x8Y | 8109126080 | 2 | |
| 6 | Body Front | 048521009811 | 1 | | 42 | Screw #1 BT 3x8Y | 8109130081 | 3 | |
| 7 | Cover Top | 046123017911 | 1 | | 43 | Screw #1 BT 3x10B | 8109130101 | 6 | |
| 8 | FIP, 9CEM6 | 2328130322 | 1 | | 44 | Screw #1 WPT 3x15Y | 8159130151 | 1 | |
| 9 | Shield Fence | 6163115610 | 1 | | 45 | Screw BTTS 3x4Y | 8109430051 | 1 | |
| 10 | Heatsink | 7505202410 | 1 | | 46 | Connector, Lead Ass'y, 5P | 436105080121 | 1 | |
| 11 | Assembly Mechanism | 5728000840 | 1 | | 47 | Connector, Lead Ass'y, 5P | 436105080121 | 1 | |
| 12 | Button Function | 048543070211 | 1 | | 48 | Connector, Wafer, 5P | 5798100307 | 1 | |
| 13 | Button Skip | 048543070311 | 1 | | 49 | Connector, Lead Ass'y, 2P | 436202070132 | 1 | |
| 14 | Switch Tact | 4658004410 | 2 | | 50 | Connector, Wafer, 2P | | 1 | |
| 15 | Switch Tact | 4658003710 | 10 | | 51 | Resistor, 150 ohm, 1/5 W, J | 3069151970 | 1 | |
| 16 | Foot | 6035104310 | 2 | | 52 | Resistor, 10 kohm, 1/5 W, J | 3069103970 | 1 | |
| 17 | Rubber Foot | 6715021230 | 2 | | 53 | Drive Unit, KSM-2401ABM) | 5728001110 | 1 | |
| 18 | Chassis Main | 6121615010 | 1 | | 54 | Motor, RF-500TB-12560 | 5558001810 | 1 | |
| 19 | Plate Ground | 6165143510 | 1 | | 55 | Motor, FF-130SH-14230 | 5558200410 | 1 | |
| 20(CP302) | Connector, System | 4428513820 | 1 | | 56 | Switch Lever, SSCF-21004A | 4638003410 | 2 | |
| 21 | Jack RCA | 4438113810 | 1 | | 57 | Photo Sensor, SG-23F1 | 78001111 | 1 | |
| 22 | Chassis Back (VCDC757) | 046102045111 | 1 | KS | | | | | |
| (22) | Chassis Back (CDC757) | 046102045211 | 1 | KS | | | | | |
| (22) | Chassis Back | 046102045221 | 1 | A | | | | | |
| (22) | Chassis Back | 046102045251 | 1 | D | | | | | |
| (22) | Chassis Back | 046102045291 | 1 | PT INDO | | | | | |
| | HARDWARE KIT | | | | | | | | |
| S1 | Screw, #8 BTT 3x8B (VCDC757) | 8179130083 | 27 | KS | | | | | |
| (S1) | Screw, #8 BTT 3x8B (CDC757) | 8179130083 | 24 | | | | | | |
| S2 | Screw, #2 FTC 3x10B | 8129230083 | 9 | | | | | | |
| S3 | Screw, #8 WTT 3x6Y | 8179230061 | 2 | | | | | | |
| S4 | Screw Gurond, 3x10B (VCDC757) | 8155000710 | 2 | KS | | | | | |
| (S4) | Screw Gurond, 3x10B (CDC757) | 8155000710 | 1 | | | | | | |
| S5 | Screw, #2 BTC 2.6x8B | 8109260083 | 3 | | | | | | |
| | MISCELLANEOUS | | | | | | | | |
| | Connector, Lead Ass'y, 6P, 80mm | 435206082042 | 1 | | | | | | |
| | Connector, Lead Ass'y, 14P, 420mm | 435214422022 | 1 | | | | | | |
| | Card Cable, 12P | 4118512100 | 1 | | | | | | |
| | Card Cable, 19P | 4118619085 | 1 | | | | | | |
| PCB1 | P.C.Board Main | 4004000700 | 1 | | | | | | |
| PCB2 | P.C.Board DSP | 4004000710 | 1 | | | | | | |
| PCB3 | P.C.Board CNT | 4004000730 | 1 | | | | | | |
| PCB4 | P.C.Board Front 1 | 4004000720 | 1 | | | | | | |
| PCB5 | P.C.Board Front 2 | 4004000750 | 1 | | | | | | |
| PCB6 | P.C.Board Video Jack (VCDC757) | 4004000740 | 1 | KS | | | | | |
| (PCB6) | Not Used ! (CDC757) | | | | | | | | |
| PCB7 | P.C.Board MPEG (VCDC757) | 4009000100 | 1 | A,D,PT INDO | | | | | |
| (PCB7) | Not Used ! (CDC757) | | | | | | | | |
| 11 | ASSEMBLY MECHANISM (ICM02D) | 5728000840 | | | | | | | |
| 1 | Gear Center | 7105000410 | 2 | | | | | | |
| 2 | Gear Pulley | 7105000510 | 1 | | | | | | |
| 3 | Gear Roulette | 7105000610 | 1 | | | | | | |
| 4 | Gear Motor | 7105000710 | 1 | | | | | | |
| 5 | Gear Worm | 7105000810 | 1 | | | | | | |
| 6 | Bracket Side | 6505133510 | 4 | | | | | | |
| 7 | Chuck Chassis | 6023408710 | 1 | | | | | | |
| 8 | Bracket Motor | 6023801010 | 1 | | | | | | |
| 9 | Frame Front | 6023601320 | 1 | | | | | | |
| 10 | Guide Chuck | 6063103110 | 1 | | | | | | |
| 11 | Gear Loading | 7103001910 | 1 | | | | | | |
| 12 | Base D.U | 6062101520 | 1 | | | | | | |
| 13 | Cam Gear | 7142000510 | 1 | | | | | | |
| 14 | Cover Cam | 7142000610 | 1 | | | | | | |
| 15 | Roulette | 7121400320 | 1 | | | | | | |
| 16 | Tray Roulette | 6021800410 | 1 | | | | | | |
| 17 | Body Mecha | 6021601310 | 1 | | | | | | |
| 18 | Rubber Limit | 6715022810 | 2 | | | | | | |
| 19 | Rubber Bracket | 6715023310 | 3 | | | | | | |
| 20 | Shaft Gear Roulette | 7005007910 | 1 | | | | | | |
| 21 | Cover Roulette | 6735011410 | 1 | | | | | | |
| 22 | Sheet Tray | 6705022510 | 1 | | | | | | |

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list are of special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

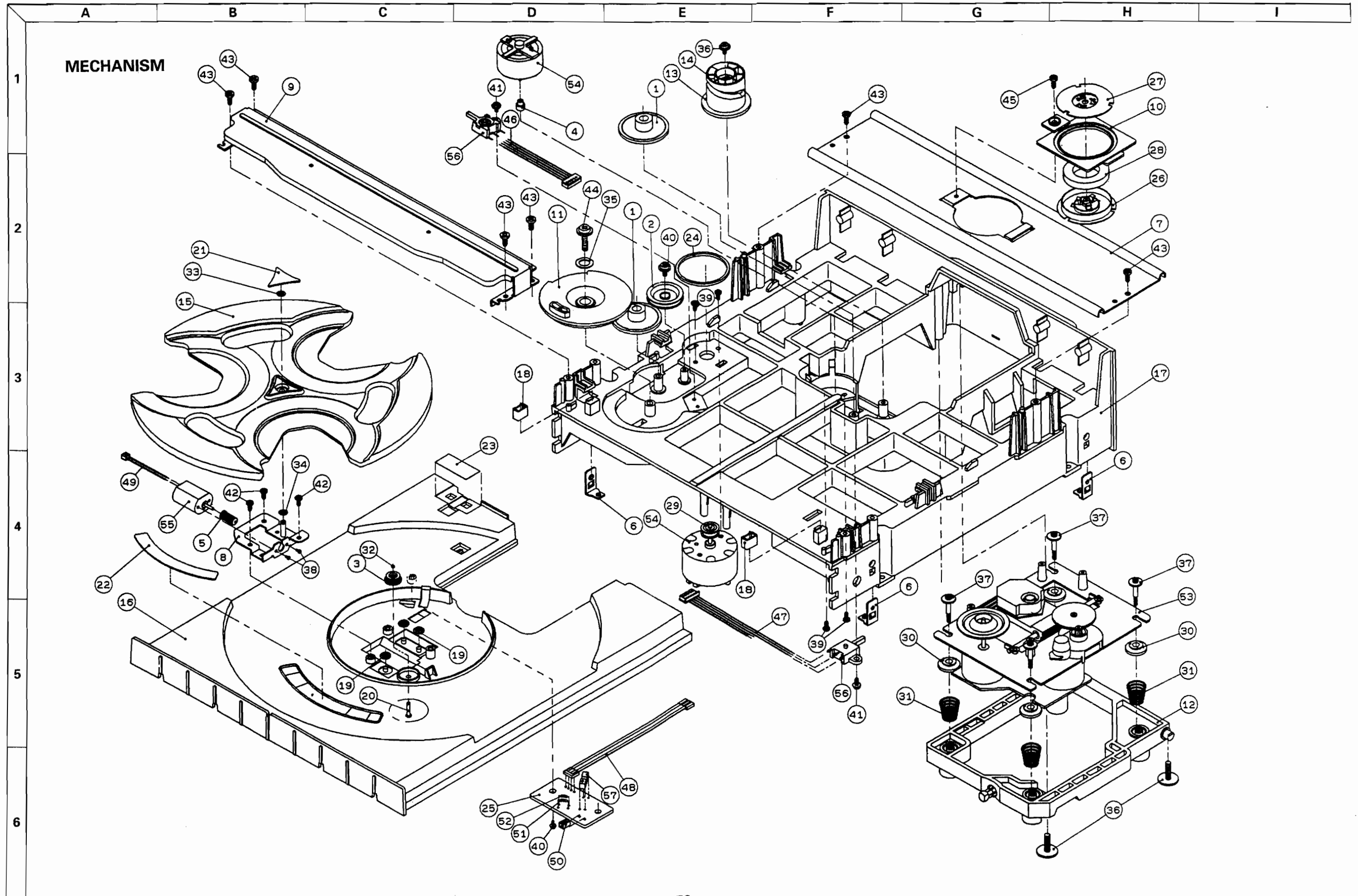
EXPLODED VIEW I

Model No : CDC-757/VCDC-757



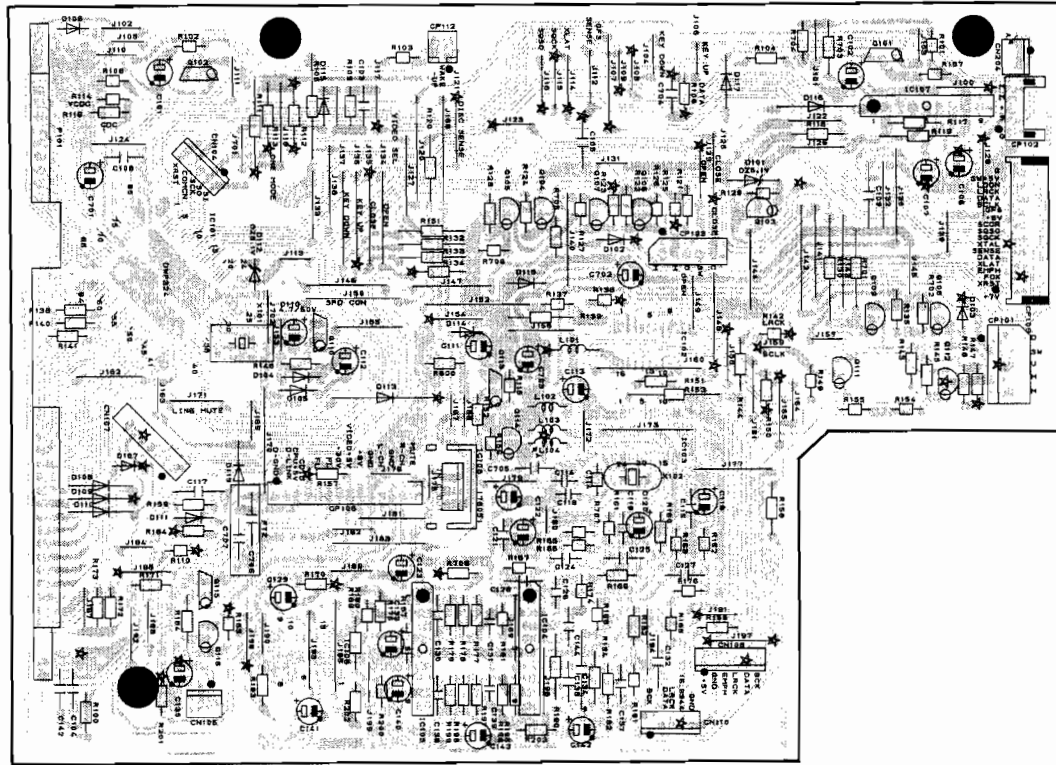
EXPLODED VIEW II

Model No : CDC-757/VCDC-757



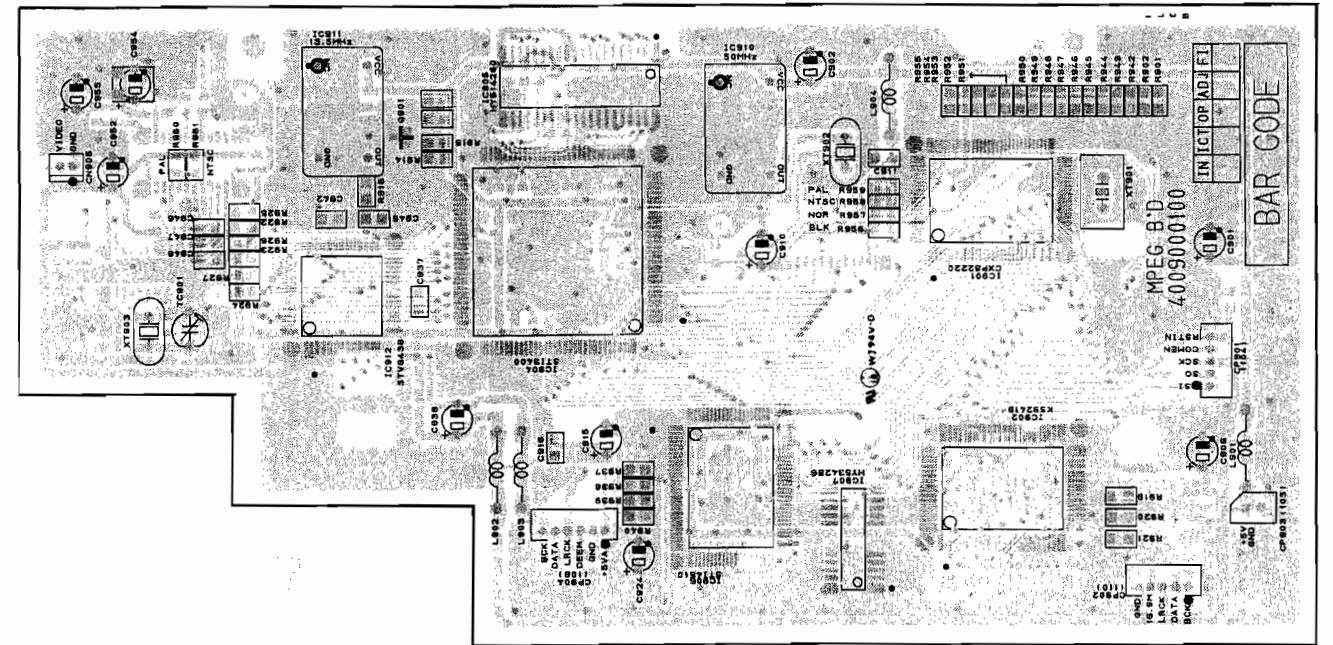
PRINTED CIRCUIT BOARDS

MAIN(PCB1)

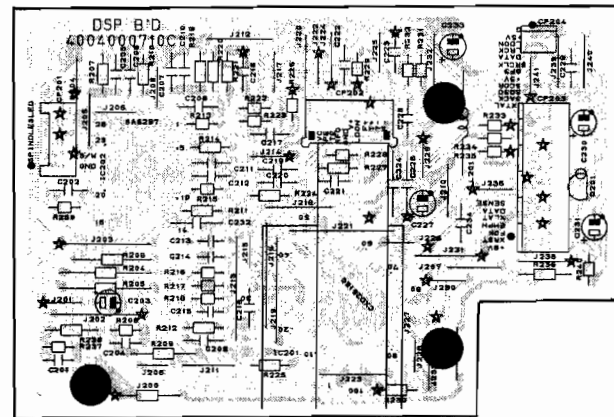


MPEG(PCB7) : VCDC757 ONLY

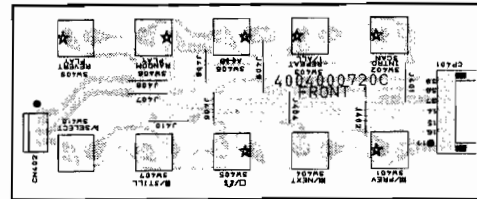
- Top View -



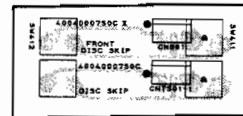
DSP(PCB2)



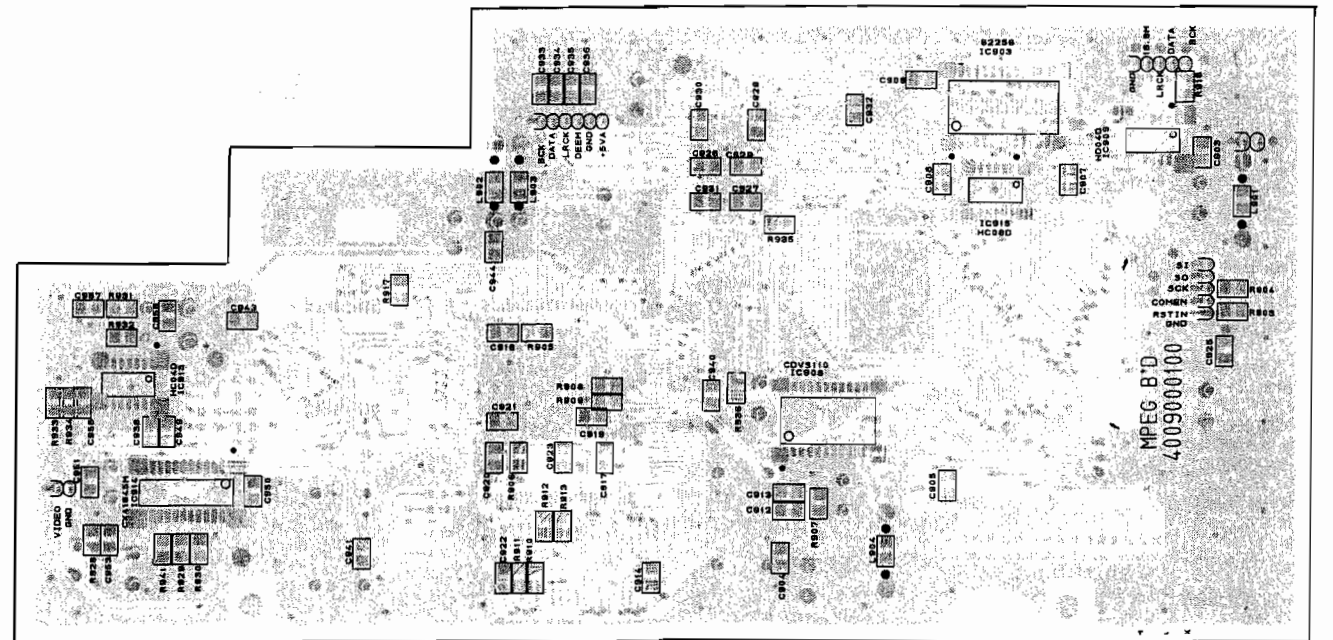
FRONT 1(PCB4)



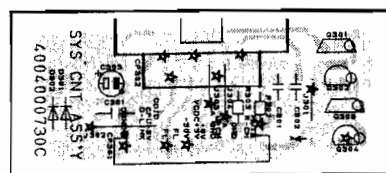
FRONT 2(PCB5)



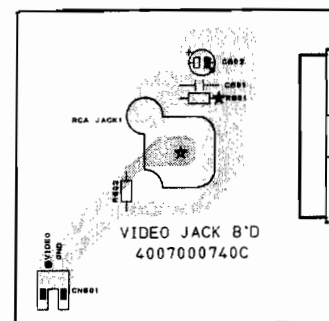
-Bottom View -



CNT(PCB3)

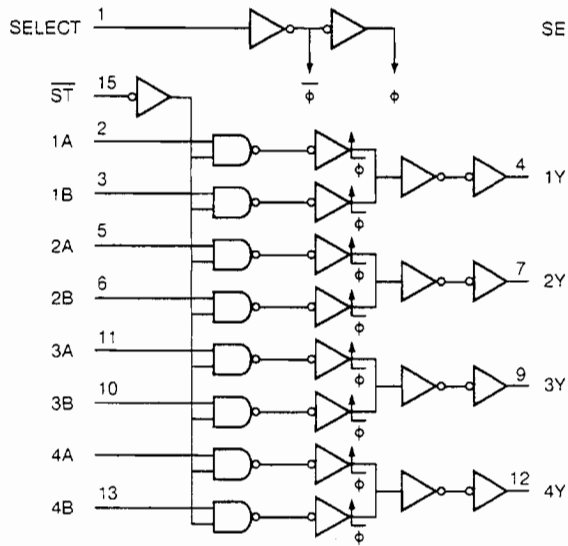


VIDEO JACK(PCB6) : VCDC757 ONLY

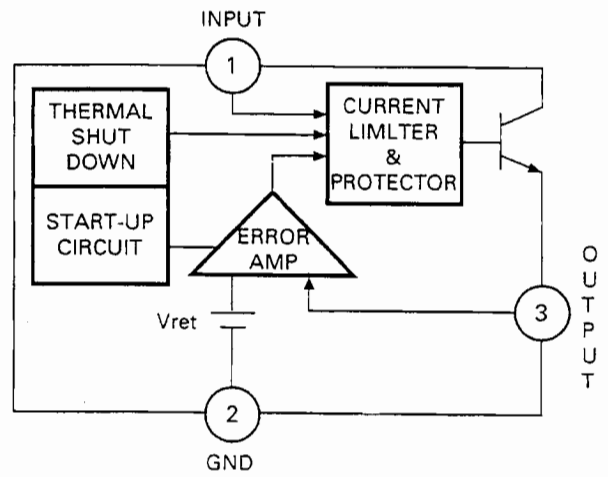


IC FUNCTIONAL BLOCK DIAGRAM

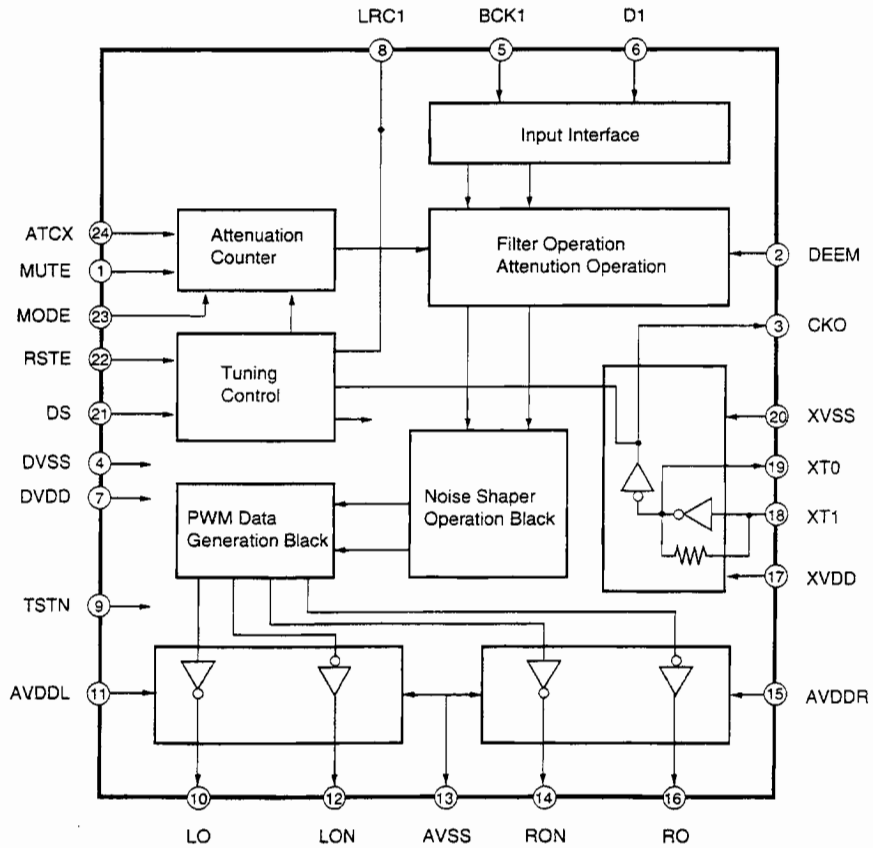
IC102 : GD74HC157



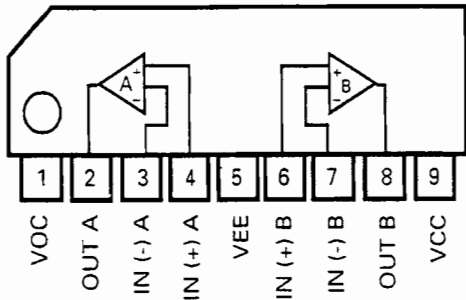
IC108 : KA7805



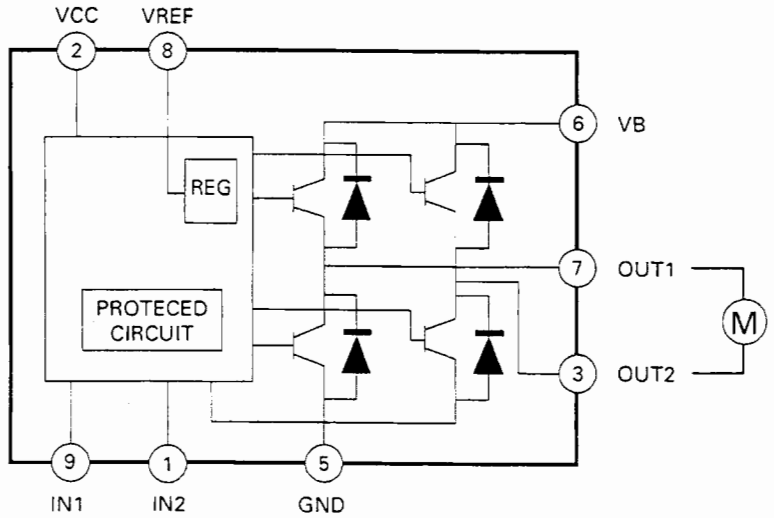
IC103 : SM5874AM



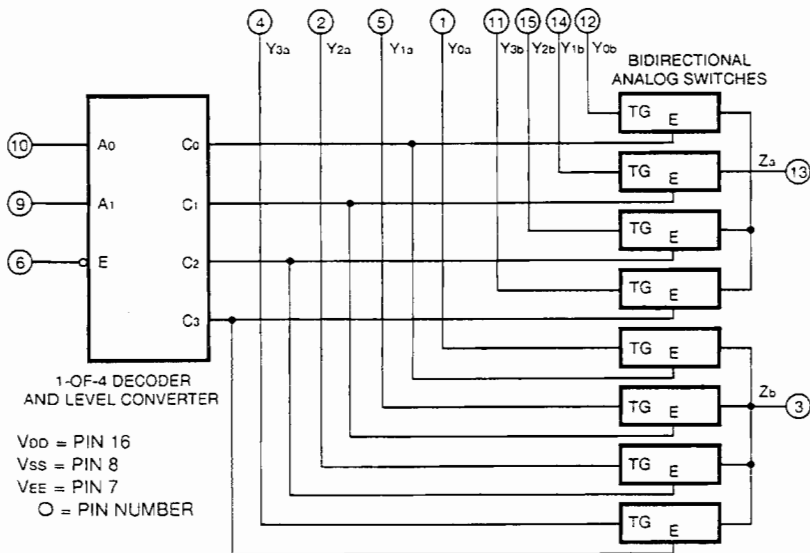
IC104/IC105
: KIA4559S/KIA75559S



IC107 : TA7291S



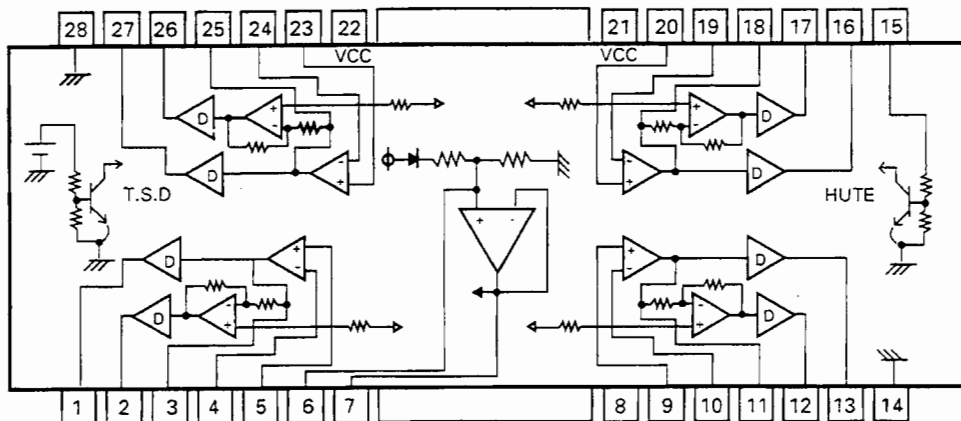
IC106 : NJM4052 BCF



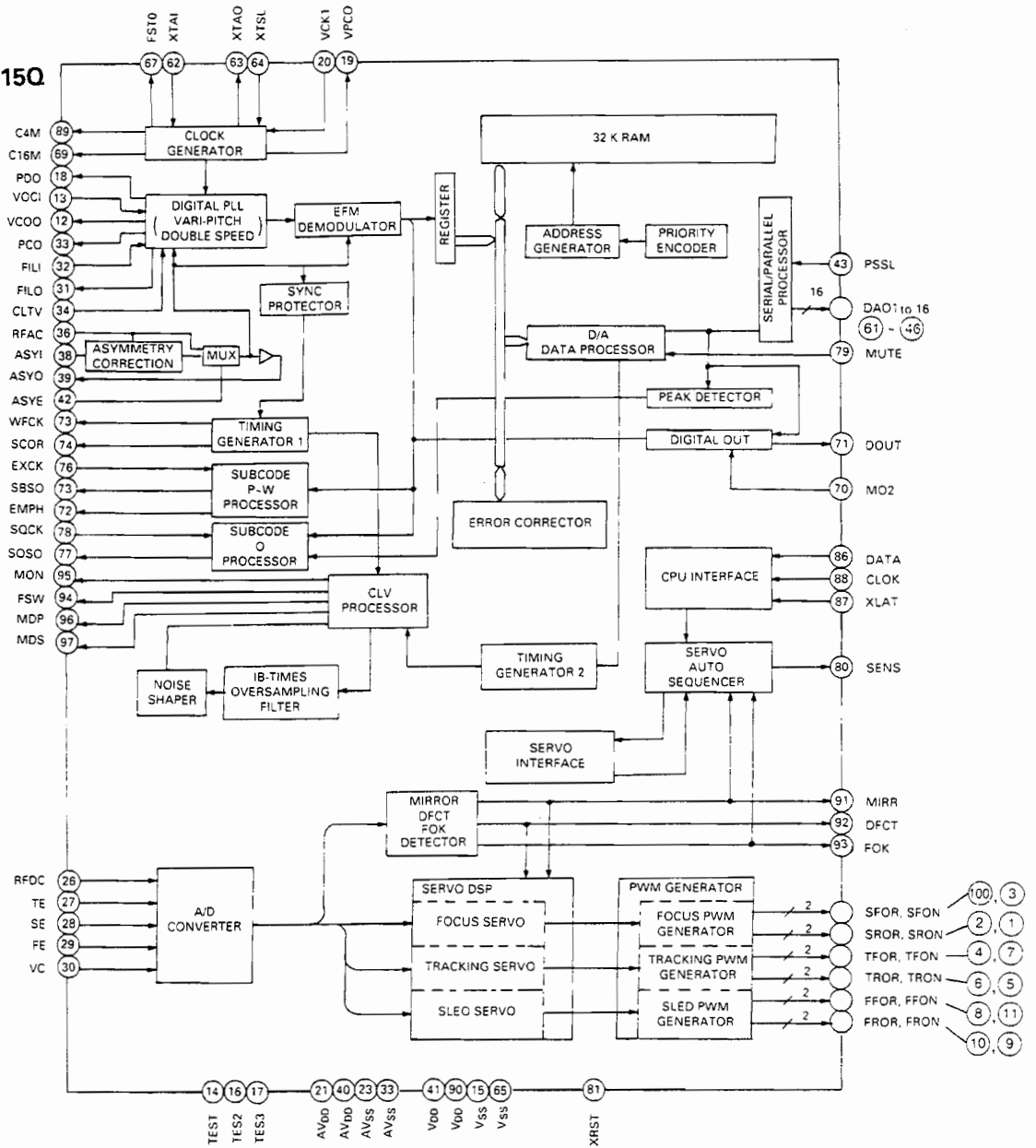
TRUTH TABLE

| INPUT | | | CHANNELS | | | |
|-------|----------------|----------------|-------------------|-------------------|-------------------|-------------------|
| E | A ₁ | A ₀ | Y ₀ -Z | Y ₁ -Z | Y ₂ -Z | Y ₃ -Z |
| L | L | L | ON | OFF | OFF | OFF |
| L | L | H | OFF | ON | OFF | OFF |
| L | H | L | ON | OFF | ON | OFF |
| L | H | H | ON | OFF | OFF | ON |
| H | X | X | ON | OFF | OFF | OFF |

IC202 : BA6297

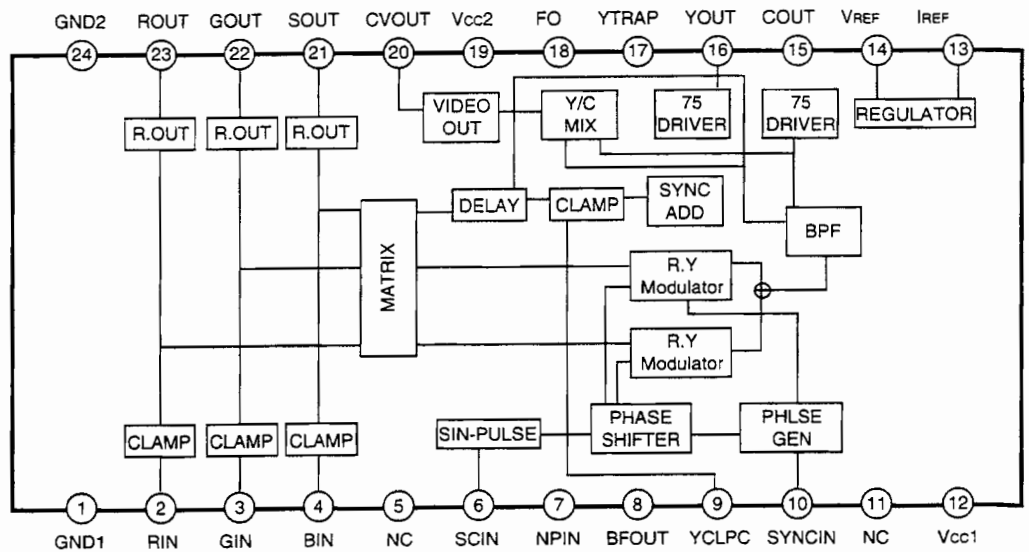


IC201 : CXD2515Q

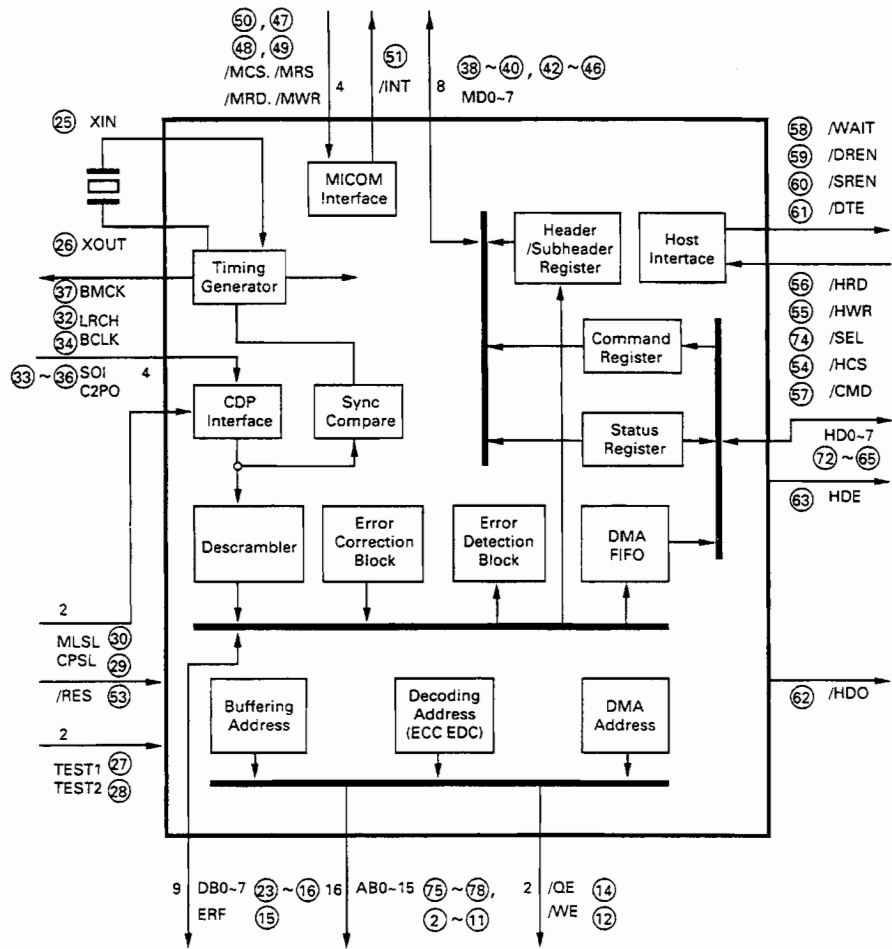


MPEG PART

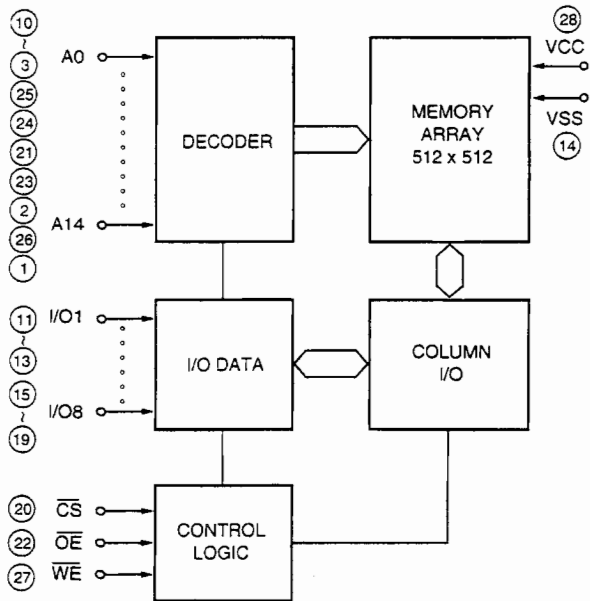
U914 : CXD1645N - T6



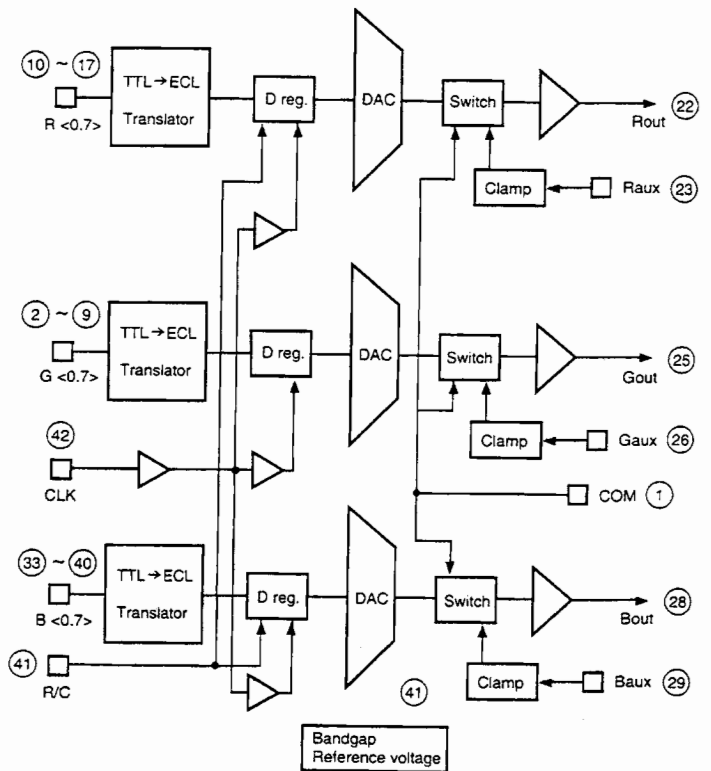
U902 : KS9241B



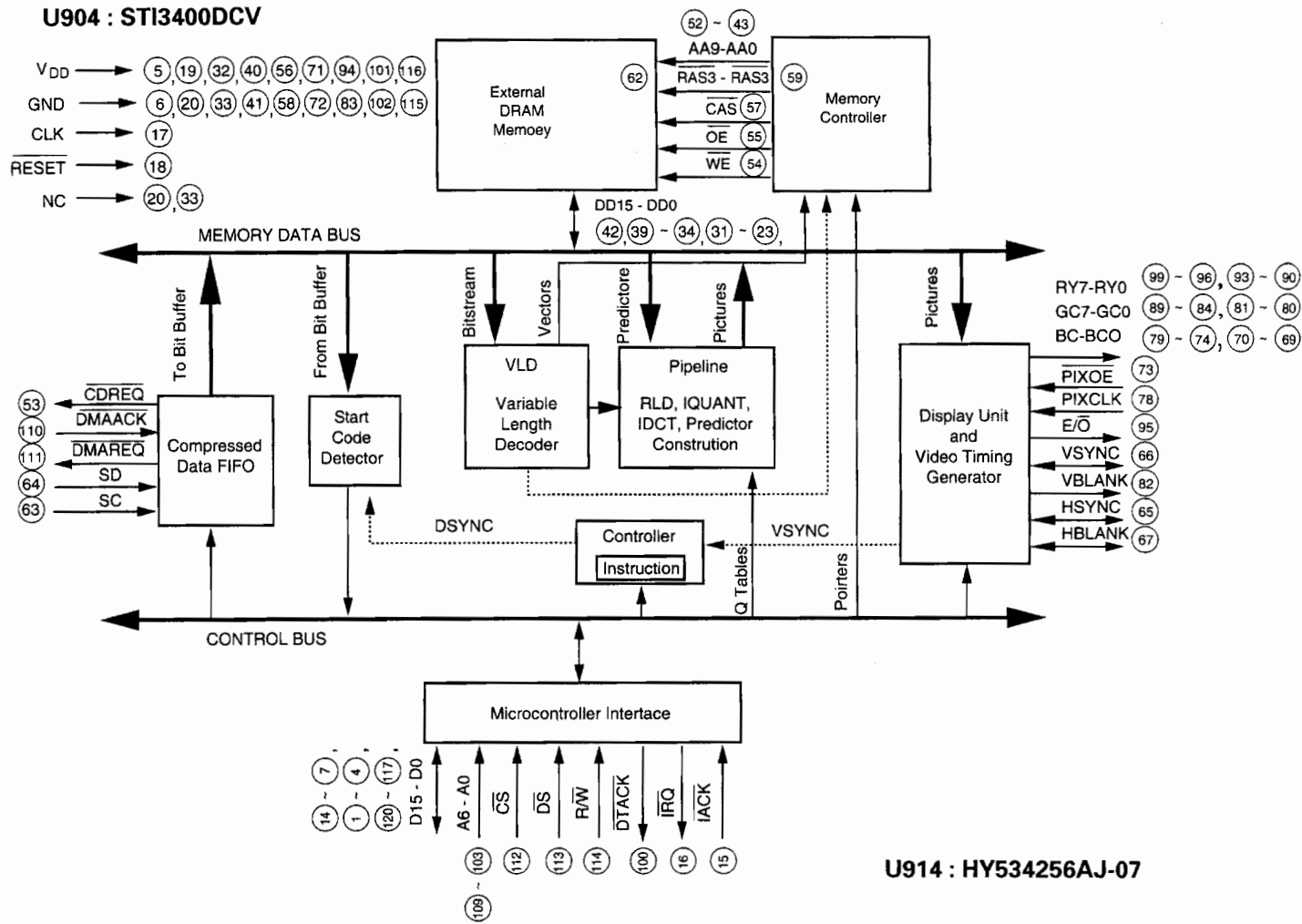
U903 : HY62256ALJ



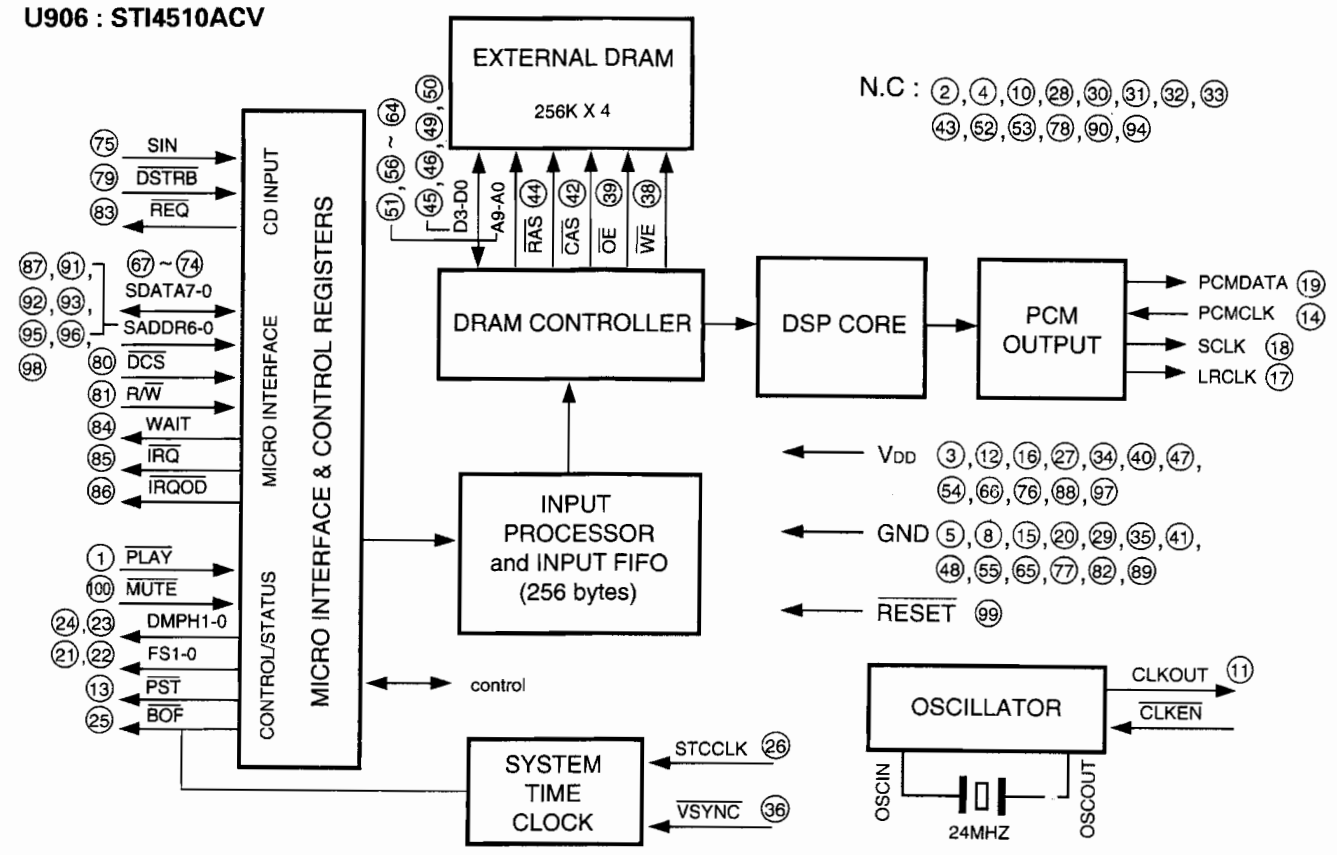
U912 : STV8438CV



U904 : STI3400DCV

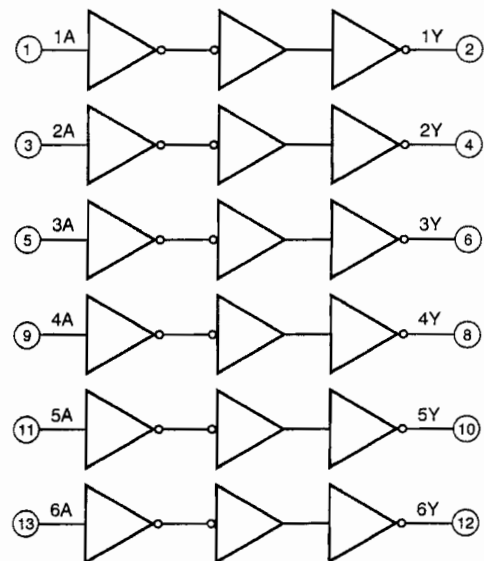


U906 : STI4510ACV

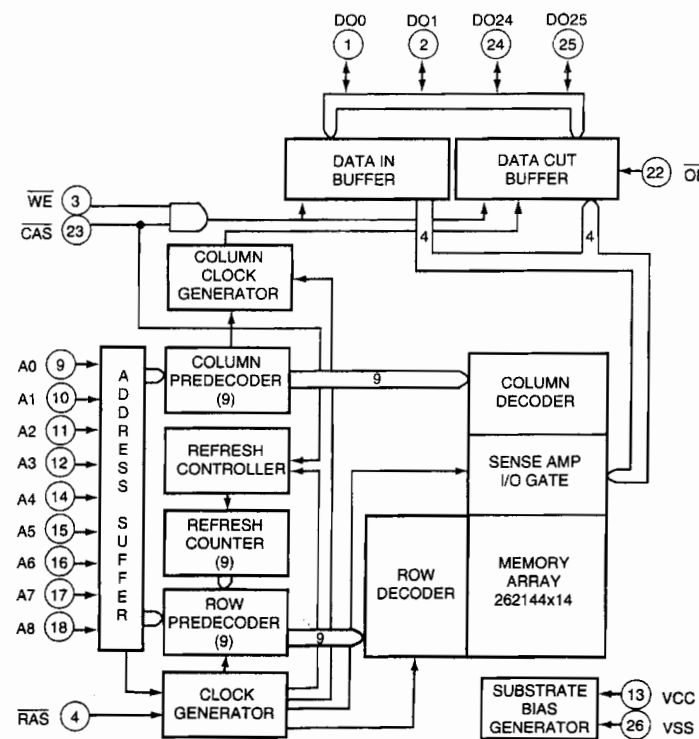


N.C : 2, 4, 10, 28, 30, 31, 32, 33, 43, 52, 53, 78, 90, 94

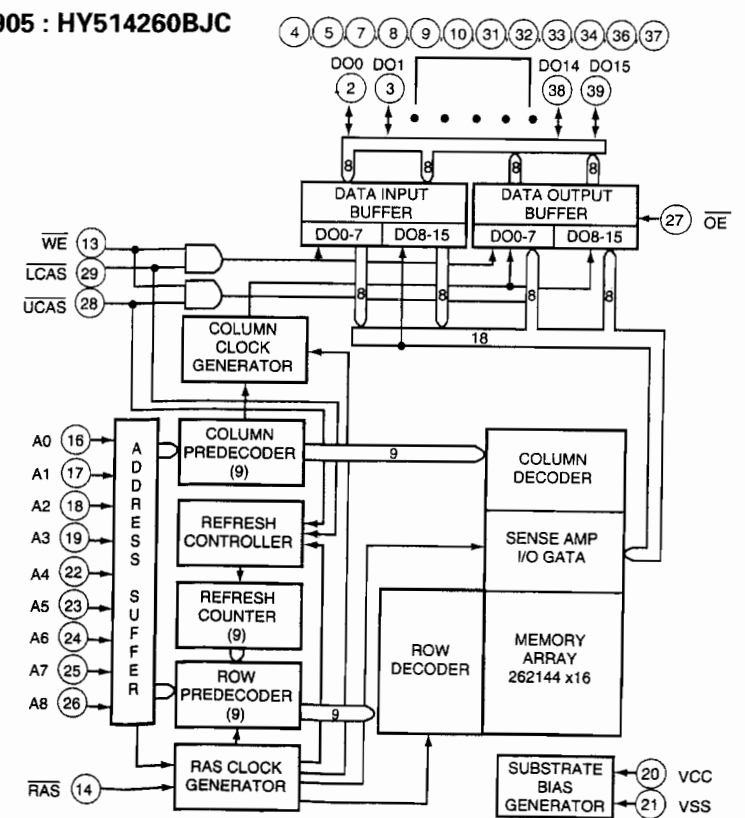
U909A/U913C/U913D : GD74HC04D



U914 : HY534256AJ-07

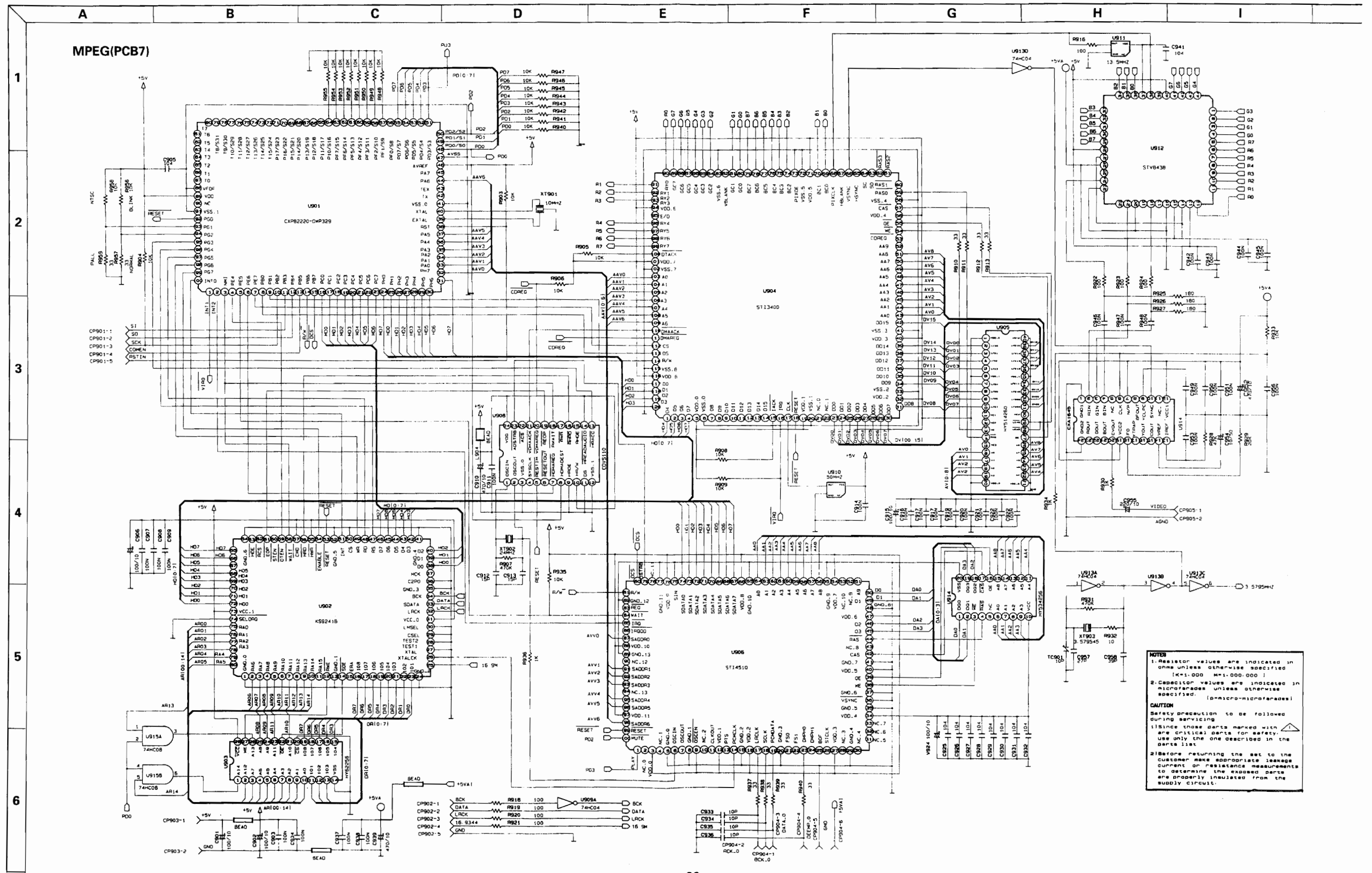


U905 : HY514260BJC



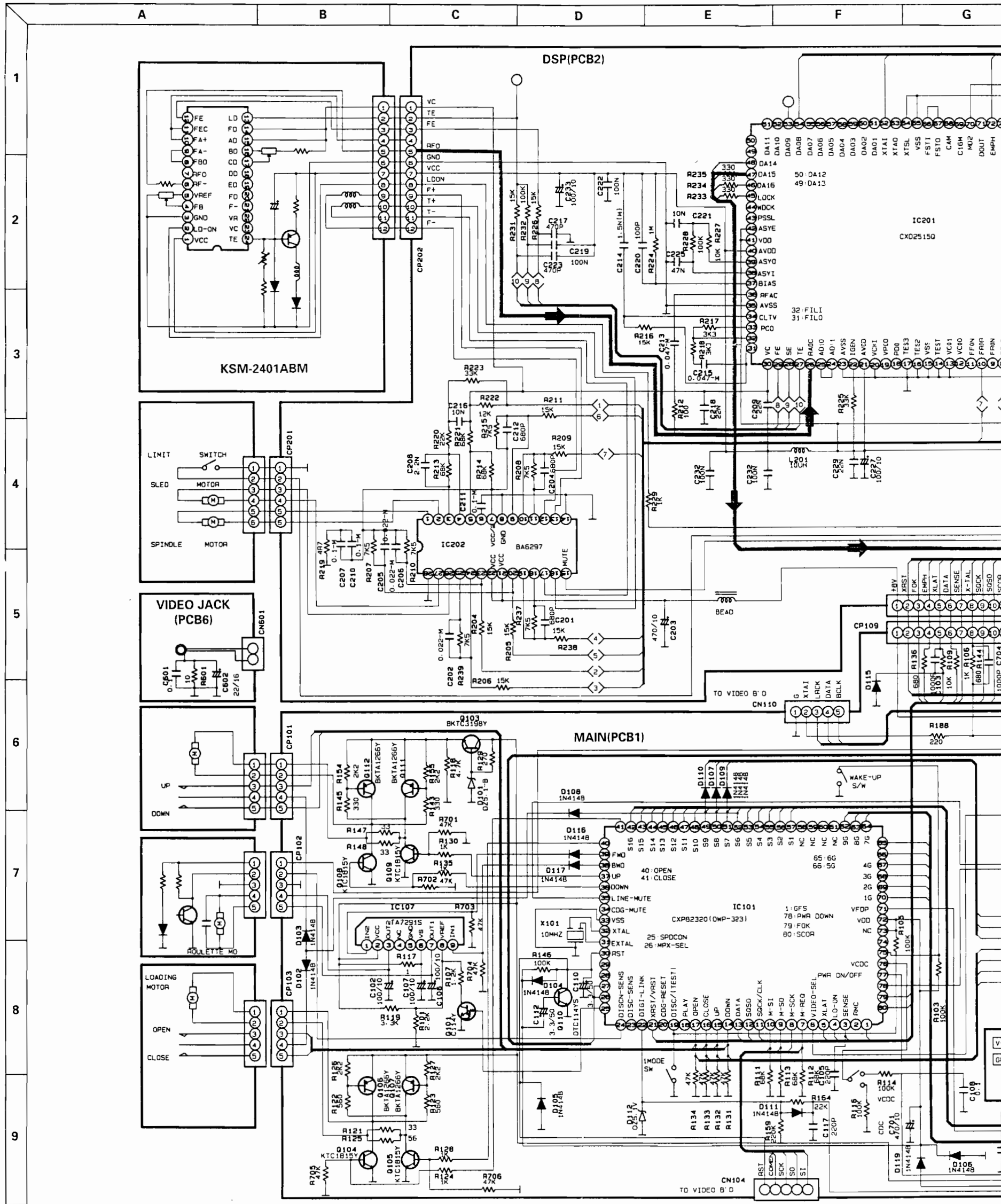
SCHEMATIC DIAGRAM I

Model No. : VCDC-757

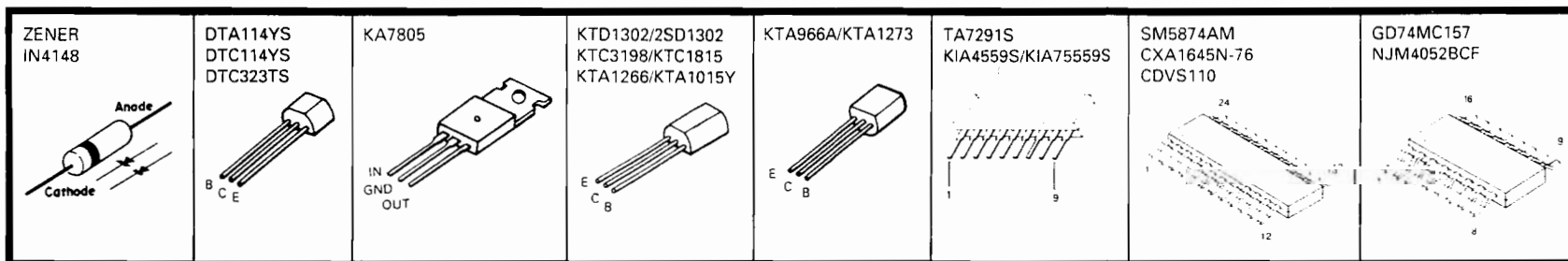


NOTES
 1. Resistor values are indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
 2. Capacitor values are indicated in microfarads unless otherwise specified. (p=micro-microfarads)
CAUTION
 Safety precaution to be followed during servicing:
 1) Since those parts marked with a triangle are critical parts for safety, use only the one described in the parts list.
 2) Before returning the set to the customer, make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

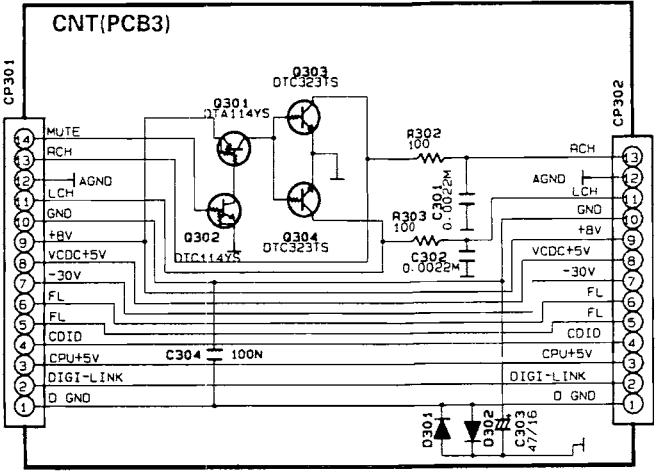
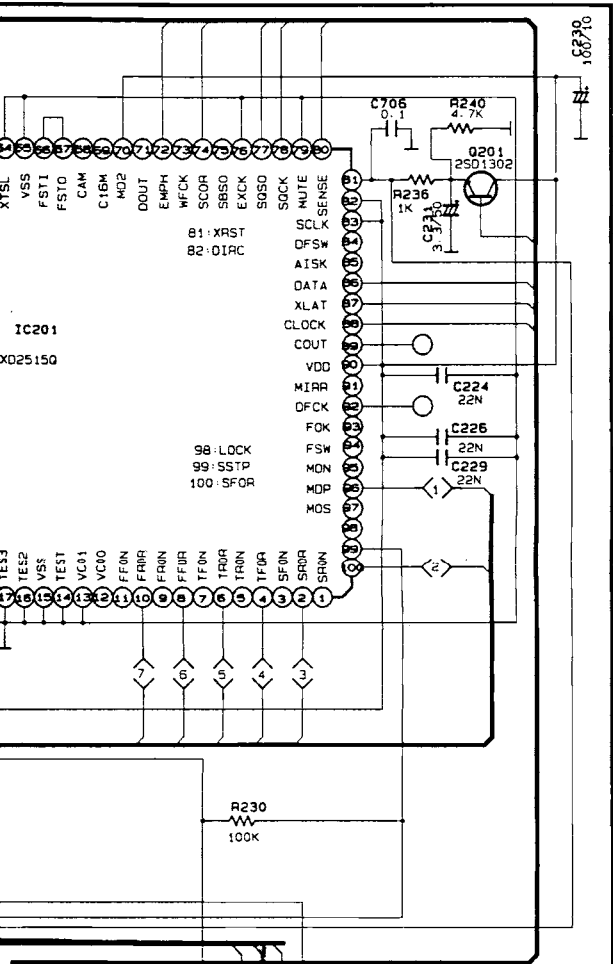
SCHEMATIC DIAGRAM II



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

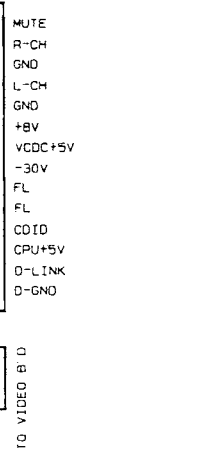
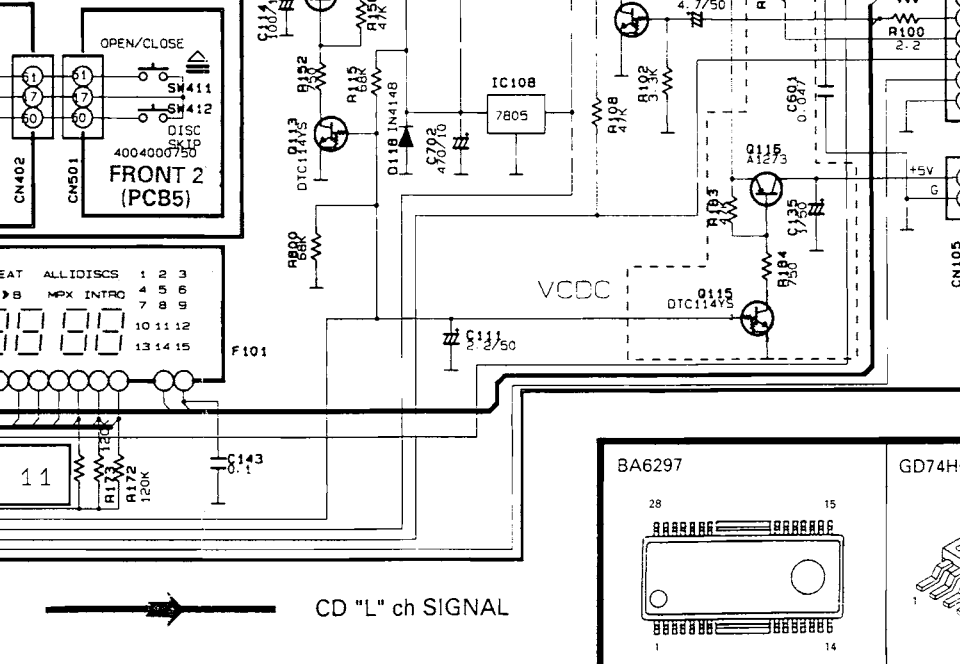
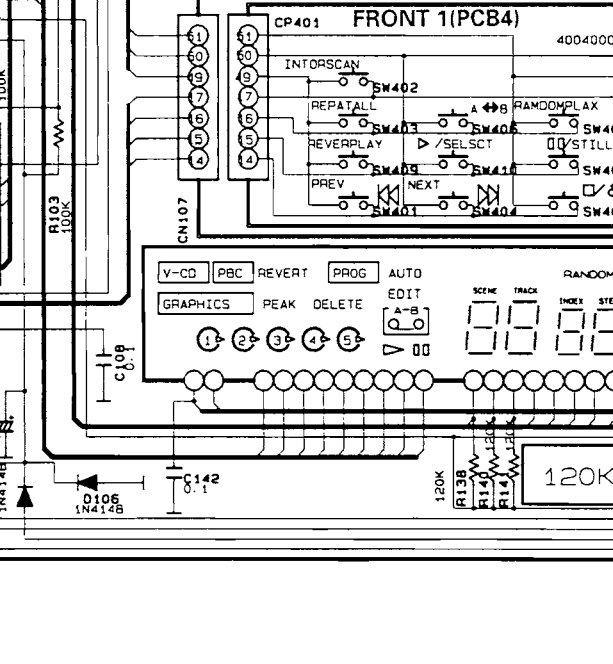
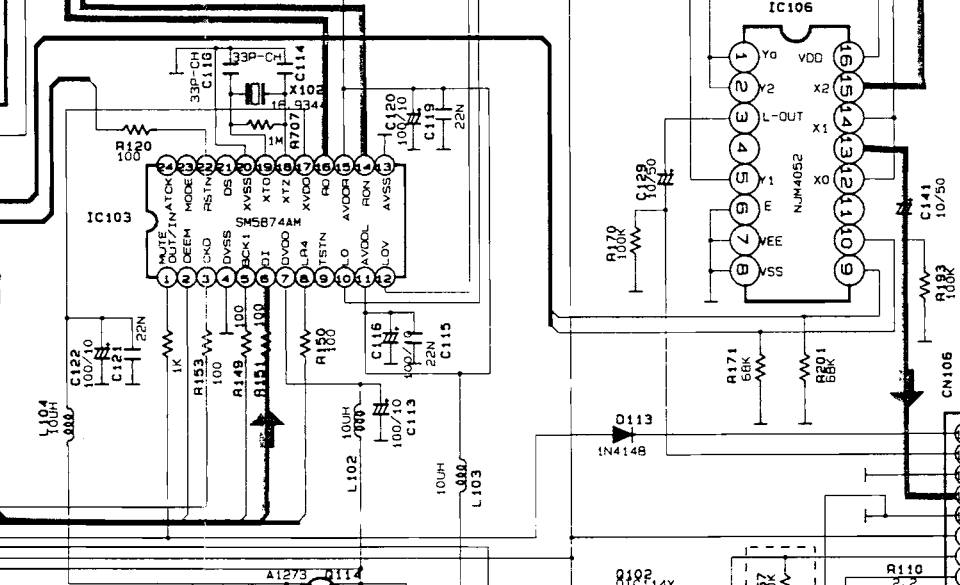
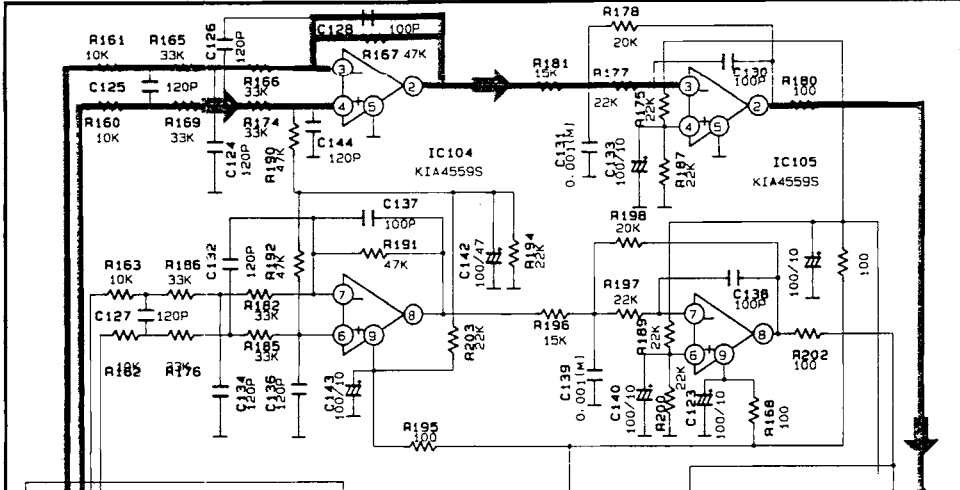
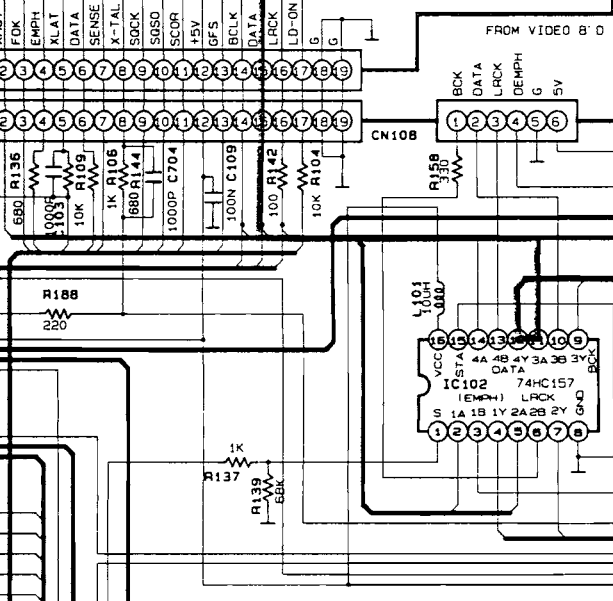


G H I J K L M

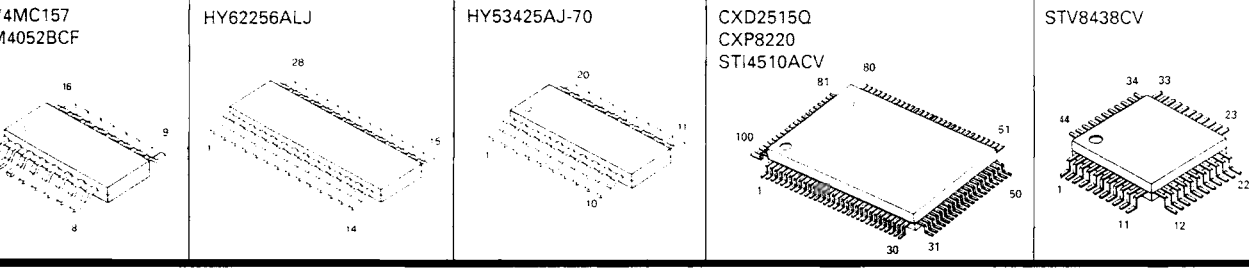
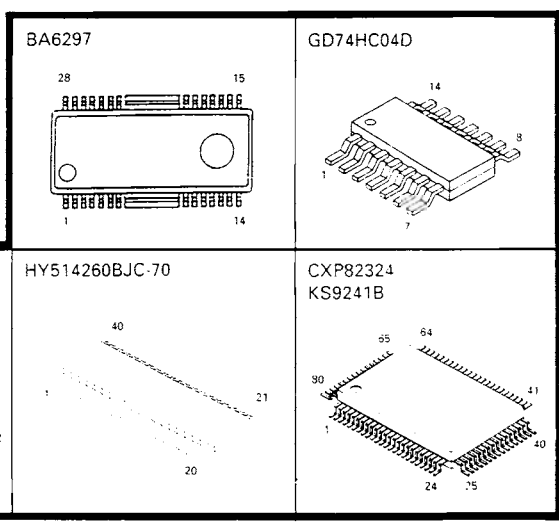


NOTES
 1. Resistor values are indicated in ohms unless otherwise specified [k=1,000 M=1,000,000]
 2. Capacitor values are indicated in microfarads unless otherwise specified. [p=micro-microfarads]

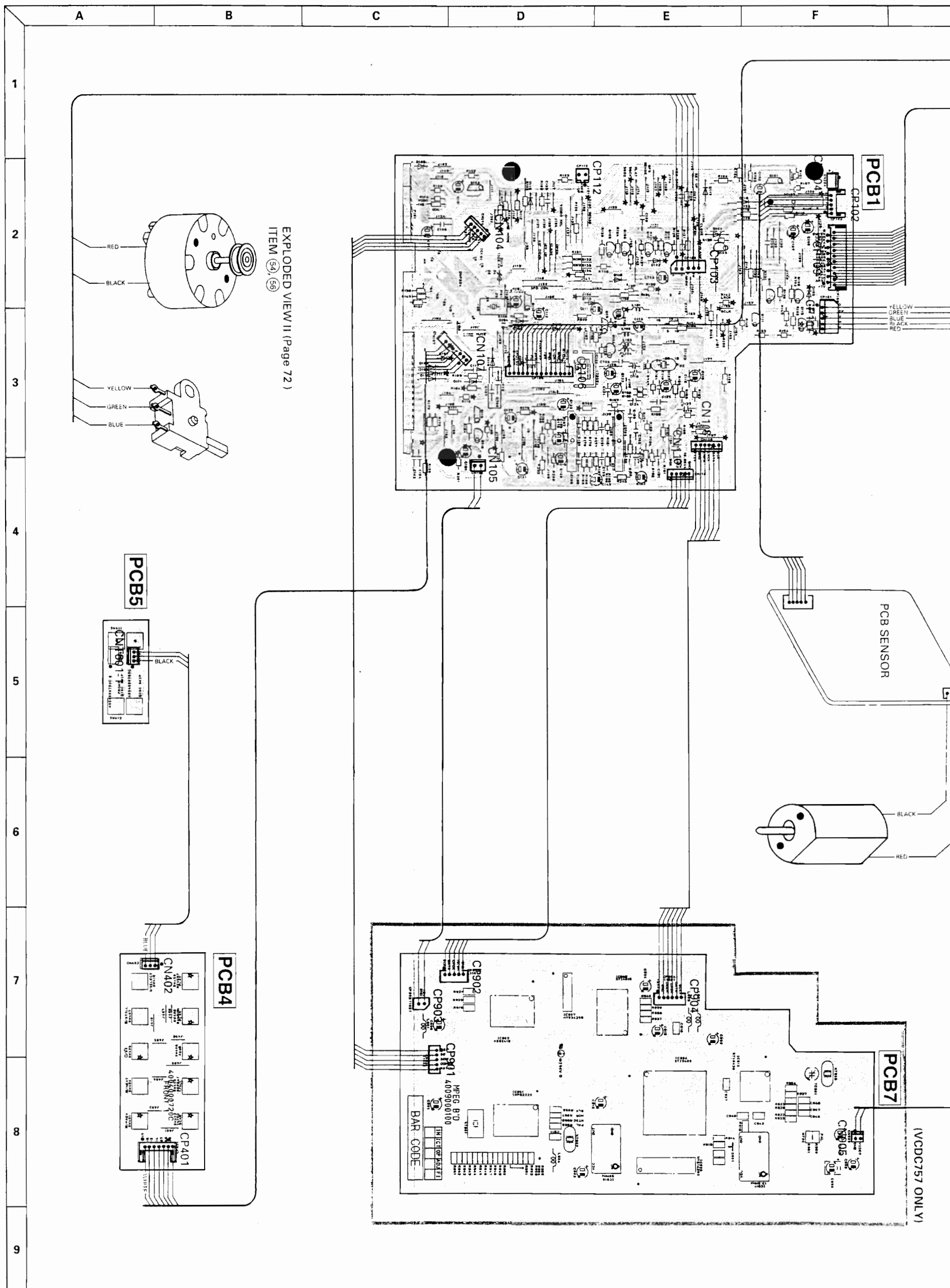
CAUTION
 Safety precaution to be followed during servicing
 1) Since those parts marked with a triangle are critical parts for safety, use only the one described in the parts list.
 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.



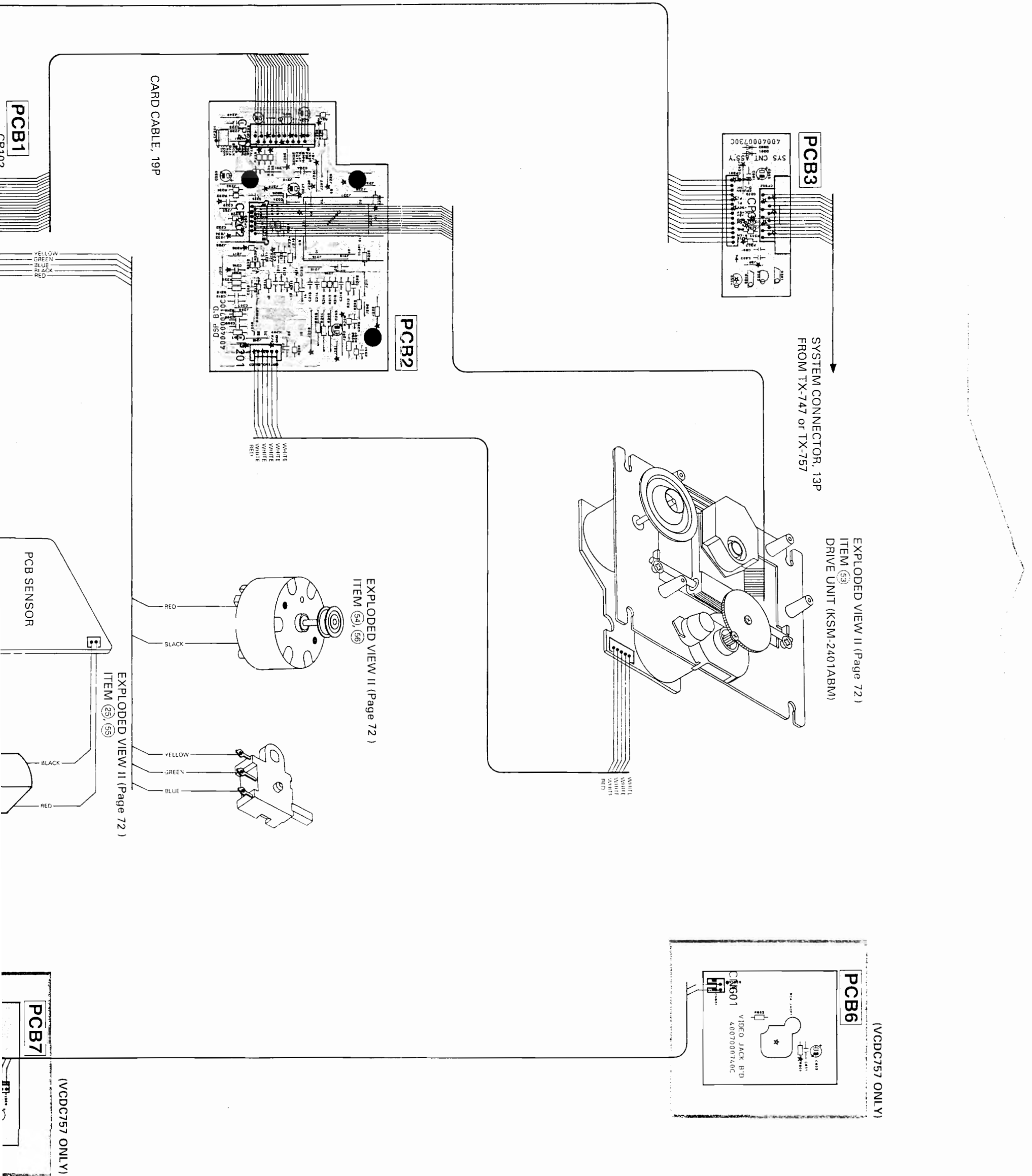
CD "L" ch SIGNAL



WIRING DIAGRAM



G H I J K L



▪ DD-757 ▪

SPECIFICATIONS

Track Configuration

The 4-track, 2-channels and a rotary reverse type head stereo cassette deck motors

1-Electronic governor

1-High torque DC motor (Reel)

Mechanism

1-Motor, 1-Solenoid mechanism

Heads

Rec/Playback head

Hard permalloy

Eraser head

Double gap ferrite

Tape Speed 1-7/8 IPS (4.76 cm/sec) (FWD/REV)

$\pm 1.0/\pm 1.0\%$

Wow/Flutter (CCIR Unweighted)

No more than 0.35%

Fast Winding Time (C-60)

About 120 sec

Input Sensitivity Impedance

REC IN

400 mV/51 k Ω

Output Level/Load Impedance

PLAY OUT

400 mV/1.5 k Ω

Signal to Noise Ratio (W.CCIR/ARM)

CrO₂ Tape with Dolby B/C NR

More than 66/76 dB

CrO₂ Tape without Dolby B/C NR

More than 56 dB

Frequency Response (-20 dB REC Dolby NR off)

Normal Tape

20 Hz - 17.5 kHz, ± 3 dB

CrO₂ Tape

20 Hz - 17.5 kHz, ± 3 dB

Metal Tape

20 Hz - 17.5 kHz, ± 3 dB

Total Harmonic Distortion (3rd, 333 Hz, 0 dB, Normal Tape)

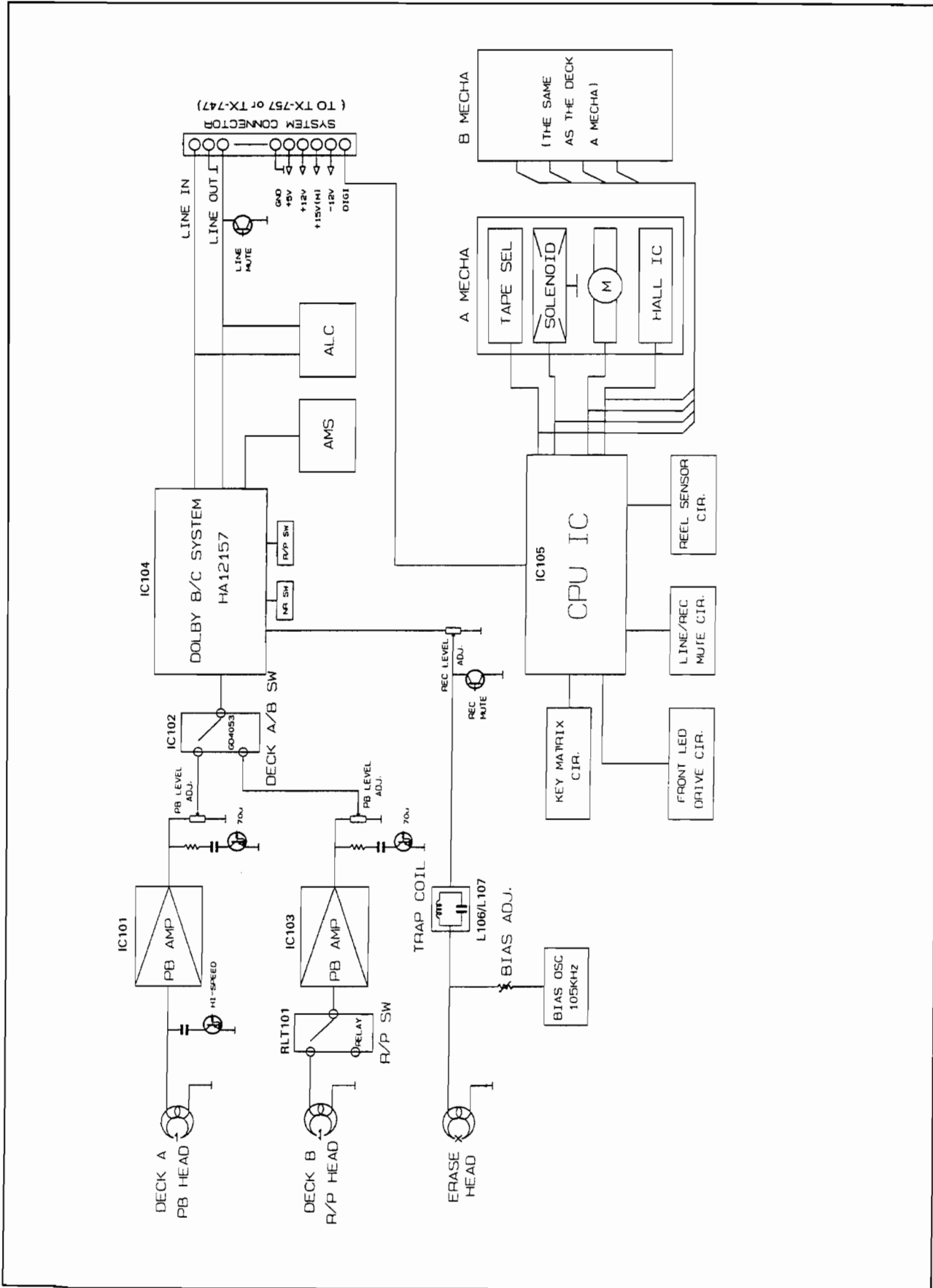
No more than 1.0%

Channel Separation

No more than 38 dB

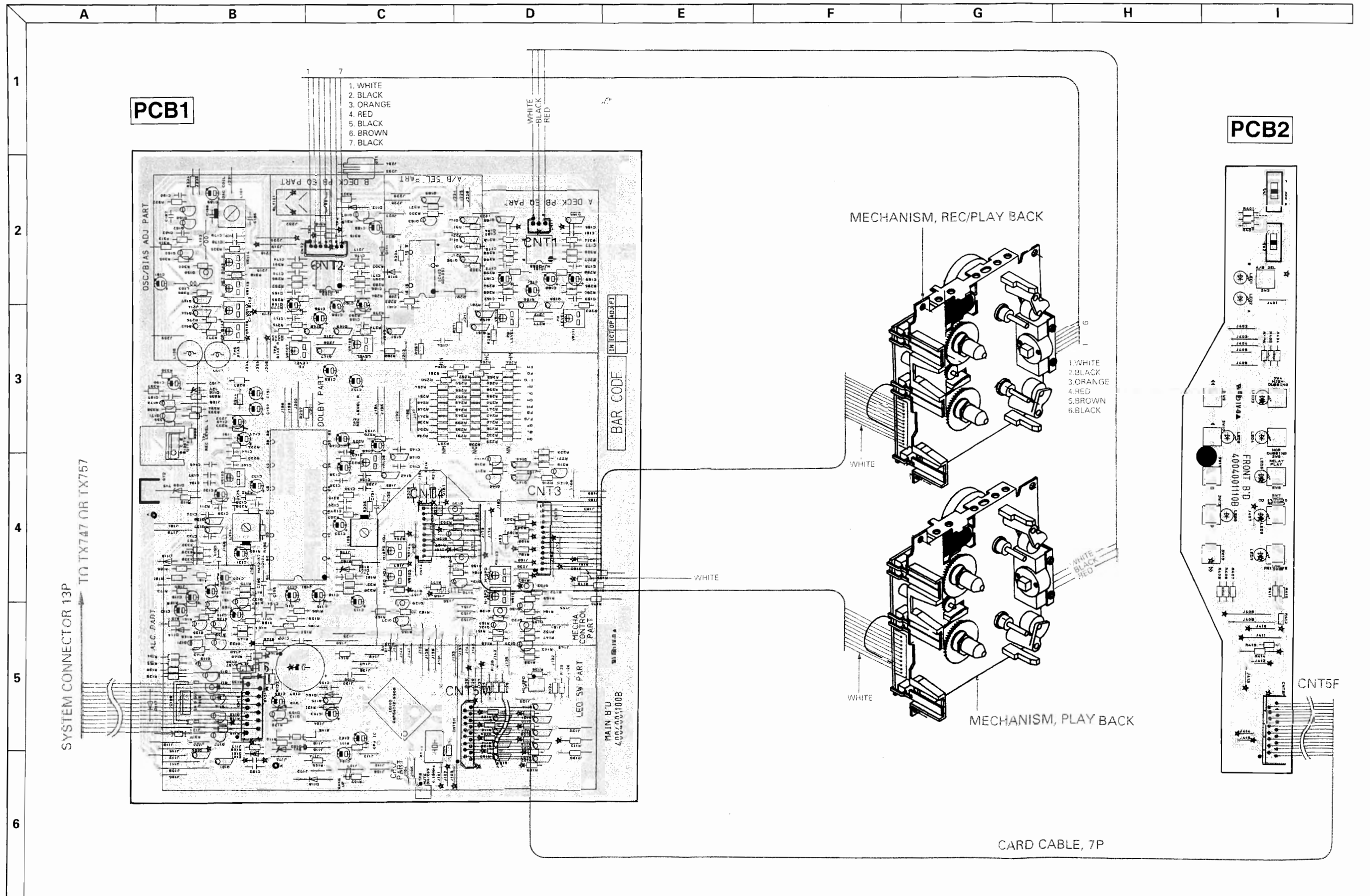
BLOCK DIAGRAM

Model No. : DD-757



WIRING DIAGRAM

Model No. : DD-757



DISASSEMBLY PROCEDURES

REFER TO PAGES 85 AND 95.

1 COVER TOP REMOVAL

Remove 6 screws **a** and then remove the Cover Top **39**.

2 FRONT PANEL ASSEMBLY REMOVAL

1. Remove the Cover Top **39**, referring to the previous step **1**.
2. Remove the card cable from wafer (CNT5M) on the Main P.C.Board (PCB1).
3. Disconnect (CNT1, CNT2, CNT3 and CNT4) from Main P.C.Board (PCB1).
4. Remove 7 screws **b** and then remove the Front Panel Assembly **AA**.

3 MECHANISM ASSEMBLY REMOVAL

1. Remove the Cover Top **39**, referring to the previous step **1**.
2. Remove the Front Panel Assembly **AA**, referring to the previous step **2**.
3. Remove Base Door **7** and **8** by pressing the hooks of both sides and pulling it toward you gently.
4. Remove 8 screws **c** and then remove the Mechanism **25** and **26**.
5. Remove the Lid Cassette **9** right and left.
6. Remove 4 screws **d** and then remove the Guide Door **19**.

4 FRONT P.C.BOARD (PCB2) REMOVAL

1. Remove the Cover Top **39**, referring to the previous step **1**.
2. Do steps **2** and **3**.
3. Remove 2 screws **e** and then remove the Front P.C.Board (PCB2).

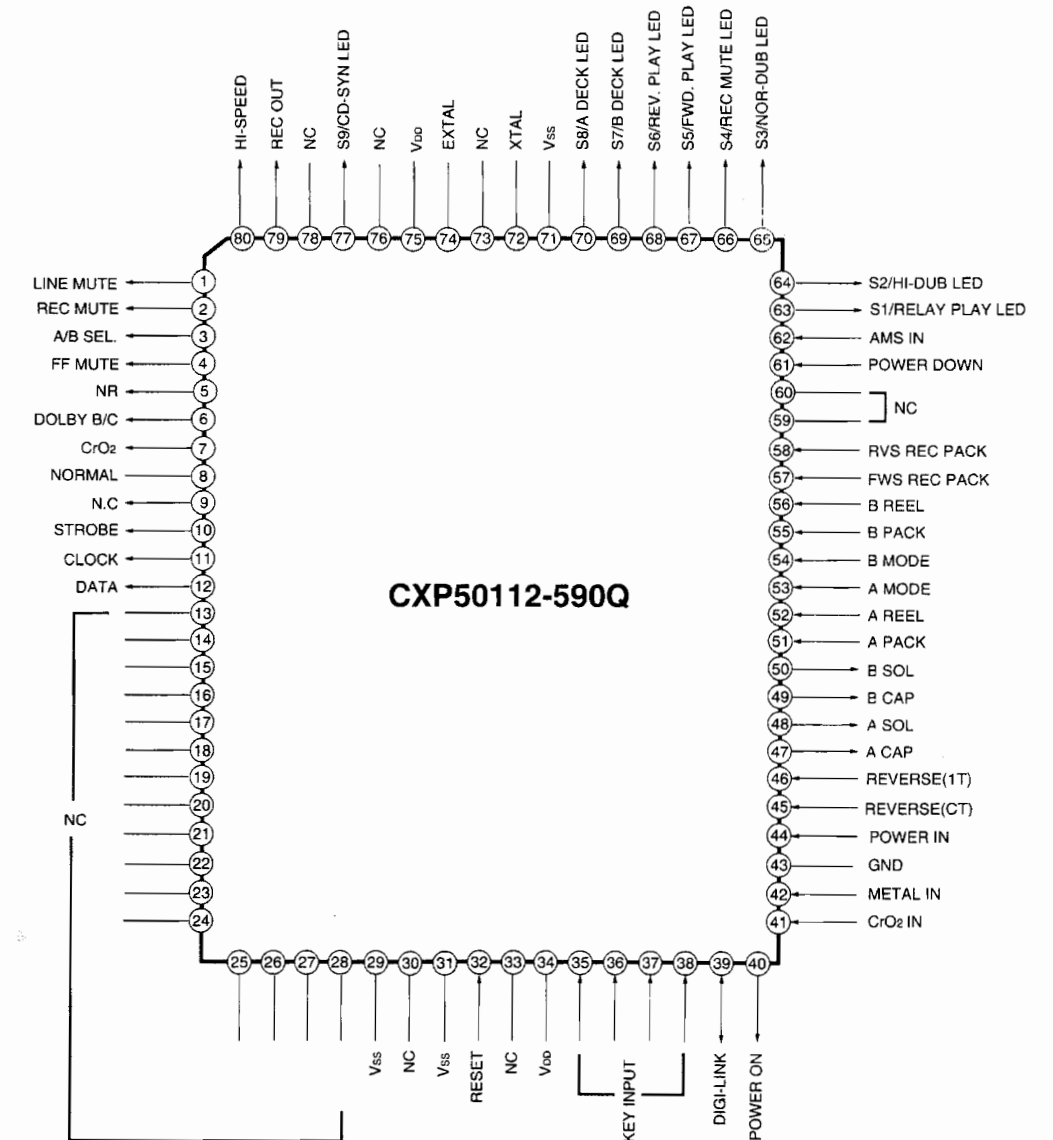
5 MAIN P.C.BOARD (PCB1) REMOVAL

1. Remove the Cover Top **39**, referring to the previous step **1**.
2. Remove the card cable from wafer (CNT5M) on the Main P.C.Board (PCB1).
3. Disconnect (CNT1, CNT2, CNT3, CNT4 and CNT6) from the Main P.C.Board (PCB1).
4. Remove 2 screws **f** and then Main P.C.Board (PCB1).

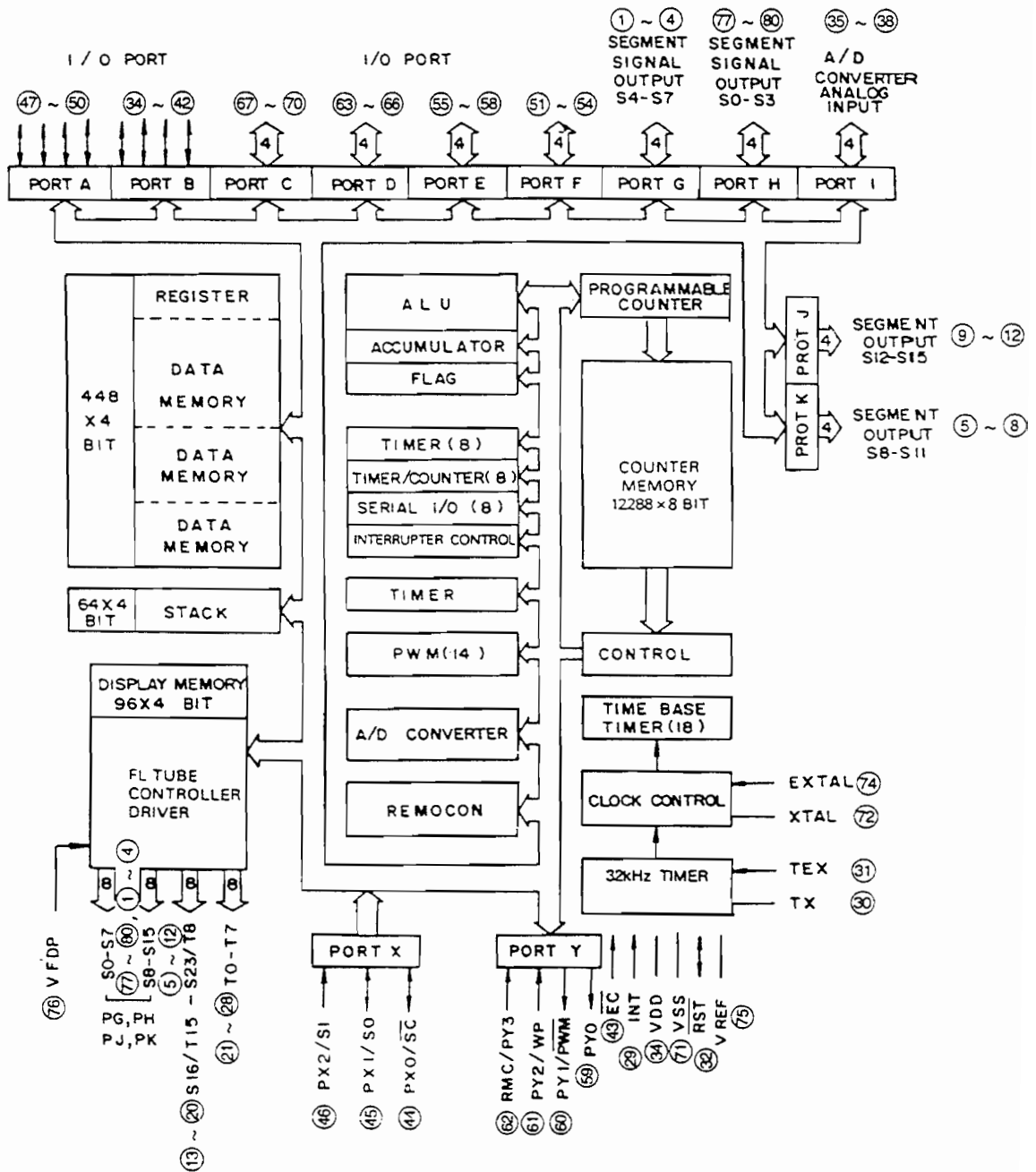
CIRCUIT DESCRIPTION

CPU(IC105):CXP50112-590Q

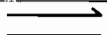


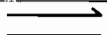


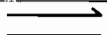


1. Pin Description



2. Block Diagram



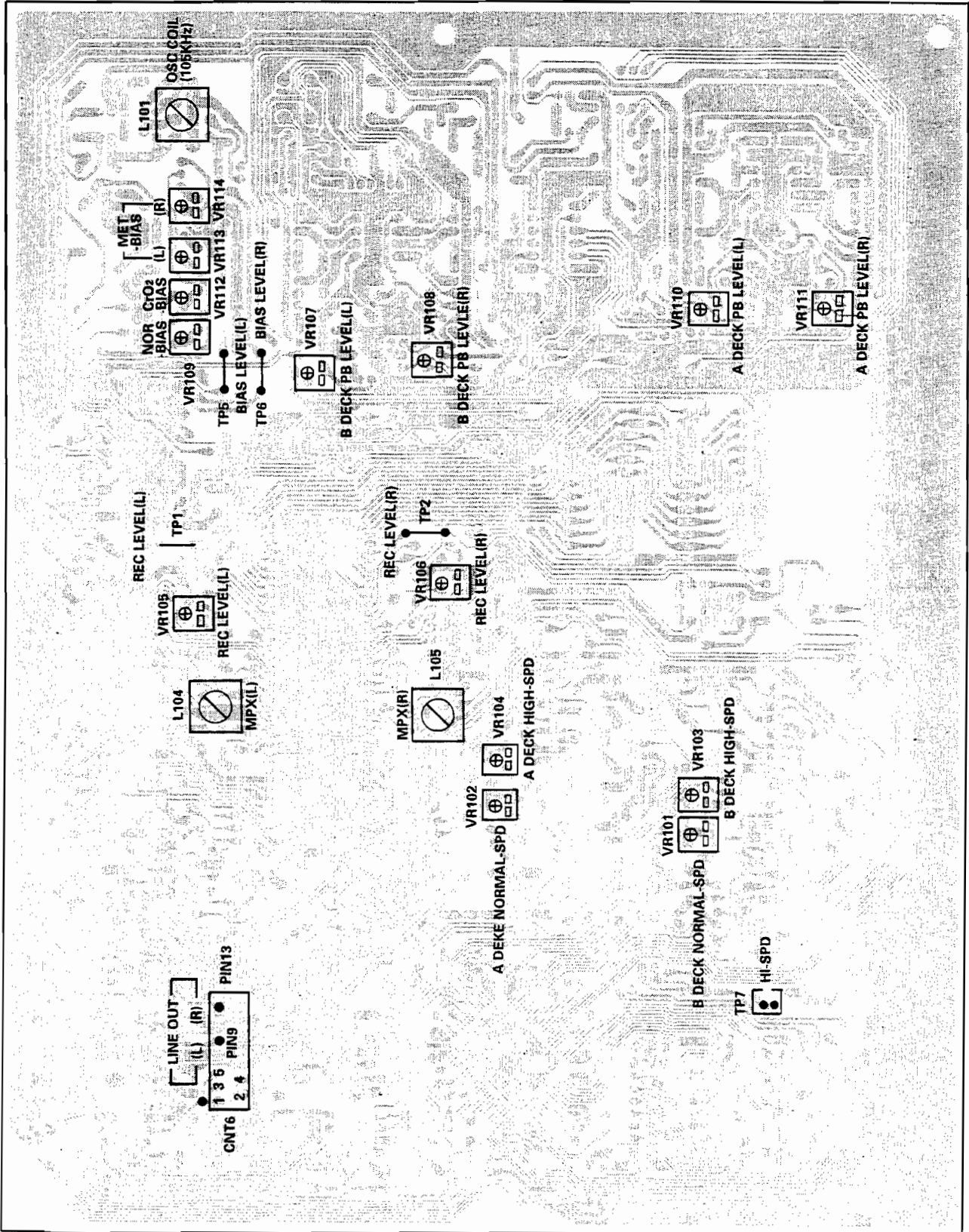
3. Input and Output Terminal Function

| Pin No. | Symbol | Description | | | | | | | | | | | | |
|---|-------------------------------|--|--------------|------------|------------|---|---|---|---|---|---|---|---|---|
| 1 | LINE MUTE | Output for muting the line output. Except play or recording (dubbing), output is "H". | | | | | | | | | | | | |
| 2 | REC MUTE | Output for muting recording output. (If recording, then "L") | | | | | | | | | | | | |
| 3 | A/B SEL. | Output for controlling to select Deck A or B. (If Deck B, then "H") | | | | | | | | | | | | |
| 4 | FF MUTE | Output for muting line output during FF or REW. (If FF or REW, then "H") | | | | | | | | | | | | |
| 5 | NR | Output for controlling the noise reduction. (If the NR mode, then "H") | | | | | | | | | | | | |
| 6 | B/C | Output for controlling the DOLBY B/C. (If the DOLBY B, then "H") | | | | | | | | | | | | |
| 7 | C _r O ₂ | Output for checking a C _r O ₂ mode on Deck B. (If C _r O ₂ tape, then "H".) | | | | | | | | | | | | |
| 8 | NORMAL | Output for checking a Nor. mode on Deck B. (If Nor. tape, then "H".) | | | | | | | | | | | | |
| 9 | NC | Not Used ! | | | | | | | | | | | | |
| 10 | STROBE | Strobe output to IC104 (HA12157). | | | | | | | | | | | | |
| 11 | CLK | Clock output to IC104 (HA12157). | | | | | | | | | | | | |
| 12 | DATA | Data output to IC104 (HA12157). | | | | | | | | | | | | |
| 13~28 | NC | Not Used ! | | | | | | | | | | | | |
| 29 | Vss | This pin provides the ground potential. | | | | | | | | | | | | |
| 30 | NC | Not Used ! | | | | | | | | | | | | |
| 31 | Vss | This pin provides the ground potential. | | | | | | | | | | | | |
| 32 | RESET | Input for the resetting system. | | | | | | | | | | | | |
| 33 | NC | Not Used ! | | | | | | | | | | | | |
| 34 | Vdd | +5 V power supply for CPU (IC105). | | | | | | | | | | | | |
| 35~38 | KEY INPUT | Data input for key scan. | | | | | | | | | | | | |
| 39 | DIGI-LINK | Input/Output for controlling DIGI-LINK. | | | | | | | | | | | | |
| 40 | POWER ON | Output for power on. (If power on, then "H") | | | | | | | | | | | | |
| 41 | CrO ₂ IN | Input for checking a C _r O ₂ tape on Deck B. (If C _r O ₂ tape, then "H") | | | | | | | | | | | | |
| 42 | METAL IN | Input for checking a metal tape on Deck B. (If metal tape, then "H") | | | | | | | | | | | | |
| 43 | GND | Ground | | | | | | | | | | | | |
| 44 | POWER IN | Input for power on for itself. (If power on itself, then "L") | | | | | | | | | | | | |
| 45/46 | REVERSE CT/1T | According to reverse mode switch setting, input for selecting the desired reverse mode. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Reverse mode</th> <th>Reverse CT</th> <th>Reverse 1T</th> </tr> </thead> <tbody> <tr> <td></td> <td>L</td> <td>H</td> </tr> <tr> <td></td> <td>H</td> <td>L</td> </tr> <tr> <td></td> <td>H</td> <td>H</td> </tr> </tbody> </table> | Reverse mode | Reverse CT | Reverse 1T |  | L | H |  | H | L |  | H | H |
| Reverse mode | Reverse CT | Reverse 1T | | | | | | | | | | | | |
|  | L | H | | | | | | | | | | | | |
|  | H | L | | | | | | | | | | | | |
|  | H | H | | | | | | | | | | | | |
| 47 | A CAP. | Output for driving the capstan of Deck A. | | | | | | | | | | | | |
| 48 | A SOL. | Output for driving the solenoid of Deck A. | | | | | | | | | | | | |
| 49 | B CAP. | Output for driving the capstan of Deck B | | | | | | | | | | | | |
| 50 | B. SOL. | Output for driving the solenoid of Deck B | | | | | | | | | | | | |
| 51 | A PACK | Input for checking a tape on Deck A. (If there's a tape, then "L") | | | | | | | | | | | | |
| 52 | A REEL | Input for detecting the reel pulse from Deck A. | | | | | | | | | | | | |
| 53 | A MODE | Input for detecting the play state on Deck A. | | | | | | | | | | | | |
| 54 | B MODE | Input for detecting the play state on Deck B. | | | | | | | | | | | | |
| 55 | B PACK | Input for checking a tape on Deck B. (If there's a tape, then "L") | | | | | | | | | | | | |
| 56 | B REEL | Input for detecting the reel pulse from Deck B. | | | | | | | | | | | | |
| 57 | FWD REC PACK | Input for checking the forward tap of tape. (If there's the tape, then "L") | | | | | | | | | | | | |
| 58 | RVS REC PACK | Input for checking the reverse tap of tape. (If there's the tape, then "L") | | | | | | | | | | | | |
| 59/60 | NC | Not Used ! | | | | | | | | | | | | |

| Pin No. | Symbol | Description |
|---------|---------------|--|
| 61 | POWER DOWN | Input for checking the power down. (If power down, then "L") |
| 62 | AMS IN | Input for checking the blank space during AMS (Automatic Music Searching) (If on the blank space, then "H"). |
| 63 | S1 RL-PLAY | Output for lighting on the LED at relay play mode. (If relay play, then "H") |
| 64 | S2 HI-DUB | Output for lighting on the LED at high dubbing mode. (If high dubbing, then "H"). |
| 65 | S3 NOR-DUB | Output for lighting on the LED at normal dubbing mode. (If normal dubbing, then "H"). |
| 66 | S4 REC MUTE | Output for lighting on the LED at recording mute mode. (If recording must, then "H"). |
| 67 | S5 FWD PLAY | Output for lighting on the LED at forward play mode. (If forward play, then "H") |
| 68 | S6 REV PLAY | Output for lighting on the LED at reverse play mode. (If reverse play, then "H") |
| 69 | S7 B DECK | Output for lighting on the LED at deck B mode. (If deck B play, then "H") |
| 70 | S8 A DECK | Output for lighting on the LED at deck A mode. (If deck A play, then "H") |
| 71 | Vss | This pin provides the ground potential. |
| 72 | XTAL | Output for crystal oscillator. |
| 73 | NC | Not Used ! |
| 74 | EXTAL | Input for crystal oscillator. |
| 75 | Vdd | +5 V power supply for CPU (IC105). |
| 76 | NC | Not Used ! |
| 77 | S9 CD-SYN LED | Output for lighting on the LED at CD synchro mode. (If CD synchro, then "L") |
| 78 | NC | Not Used ! |
| 79 | REC OUT | Output for controlling the record. |
| 80 | HI-SPEED | Output for controlling the tape speed. (If hi-speed, then "H") |

ALIGNMENT PROCEDURES

Adjustment and Test Points (PCB2)



Before Measurements and Adjustments

The following general conditions apply to the electrical measurements and adjustments unless especially stated otherwise.

- Dolby NR switch off.
- Use 400mV(200 nwb/m) for 0 dB as the standard level of the unit.

1. Test tape

- TCC-155 Azimuth (14kHz, -24 dB)
- TCC-114 Tape speed (3.15 kHz, -10 dB)
- TCC-130 Playback level (Dolby NR ref. tape 400 Hz, 0 dB)
- TCC-185C Playback frequency response

- Reference Blank Tape.

- Normal TDK AC-224
- CrO₂ TDK AC-513
- Metal TDK AC-712

2. Instruments required

- Audio frequency oscillator
- ACVM or dual channel mV-meter
- Wow/Flutter meter
- Oscilloscope

Playback Section

| Adjustments | Test tape | Mode | Apply Signal to | Measure on | Read on | Adjust with | Adjust to | |
|--|--|--------------------------|-----------------|-------------|------------------------------------|------------------------------------|--|-----------------|
| Head Azimuth | TCC-155 14 kHz (A.BEX) | FWD Play (A & B Deck) | | Line output | AC mV-meter Oscilloscope | Adjusting a right screw of head | Max • Lissajous wave from become a straight, line with an angle 45 deegrees | |
| | | REW Play (A & B Deck) | | | | Adjusting a left screw of head | | |
| Playback at normal speed | TCC-114 3.15 kHz -10 dB(A. Bex) | Play (A & B Deck) | | | Wow and Flutter Meter | | A Deck VR102 & B Deck VR101 | 3150 Hz ± 30 Hz |
| Playback at hi-speed (TP7 short) | TCC-114 3.15 kHz -10 dB(A.Bex) | | | | | | A Deck VR104 & B Deck VR103 | 4725 Hz ± 45 Hz |
| Playback Level | TCC-130 400 Hz, 0 dB(A. Bex) | | | | | | A Deck VR110,111 | 400 mV |
| | | | | | | | B Deck VR107,VR108 | 400 mV |
| Playback Frequency Response | TCC-185C 12.5 kHz, 1 kHz, 60 Hz (A. Bex) | | AC mV-meter | | See graph Fig. 2 freq. response | | | |

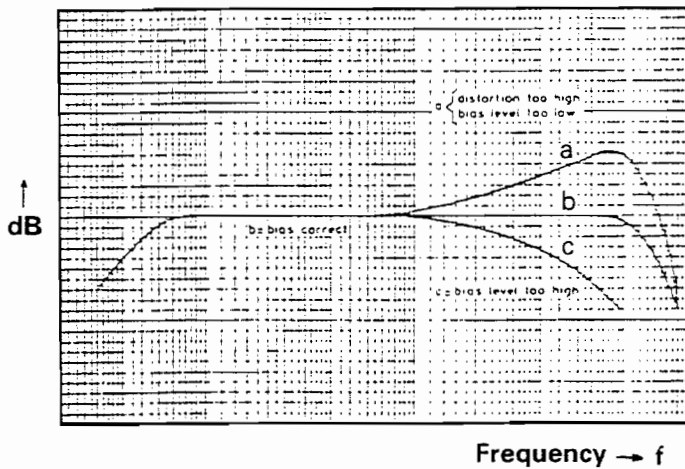
Recording Section

| Adjustments | Test tape | Mode | Apply Signal to | Measure on | Read on | Adjust with | Adjust to |
|-----------------------|-------------|-----------|-----------------|------------|----------------------|-------------|------------------|
| Bias OSC Frequency | AC-712(TDK) | Rec/Pause | | TP5 | Frequency Counter | L101 | 105 kHz ± 400 Hz |

| Adjustments | Test tape | Mode | Apply Signal to | Measure on | Read on | Adjust with | Adjust to |
|-------------------|----------------------------------|-----------|--|------------|---|-----------------------|---|
| Target Value Bias | Metal, AC-712 | | | TP5, TP6 | | VR113, VR114 | AC 10.9 V |
| | CrO ₂ , AC-513 | | | | | VR112 | AC 6.8 V |
| | Normal, AC-224 | | | | | VR109 | AC 6 V |
| Recording Level | AC-712 (TDK) | | 400 Hz, 80 mV to Line in | TP1, TP2 | | VR105, VR106 | About 6.7mV |
| Bias | AC-712 AC-513 AC-224 (TDK) | Rec/Pause | 400 Hz to Line | Line out | AC mV-meter | See Target Value Bias | If necessary repeat bias adjustment See graph fig. 1 |
| | | | 4 kHz - 6.3 kHz 10 kHz - 12 kHz 14 kHz - 16 kHz to Line in | | Recording number of frequency with the same input voltage and play them back. | | |
| 19kHz Suppression | Arbitrary Tape | Rec/Pause | 19 kHz to Line | Line out | AC mV-meter | LF Generator | 100mV |
| | | | | Line out | AC mV-meter Oscilloscope | L104/105 | Minimize the reading on ACVM. |

Note:

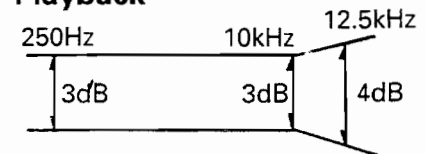
- *a. Prior to any measurement or adjustment with the tape running, heads and tape guides should be degaussed and cleaned. Reference below the figuer.
- *b. The maximum permissible speed variation $\pm 1.0\%$. Moerover the Wow and Flutter can be read. This value on line out should exceed 0.2%.
- *c. The voltage on line out should be 400 mV \pm 20 mV. If not, it reduce the LF signal (bias disabled) as many as the reading was too low or too high by VR107/108, VR110/111.
- *d. When the channel is adjsted, this may slightly affect the adjustment of the other channel. If the adjustment is correct, the frequency response curve will be similar to curve b in figuer 1, distrortion below 3%.



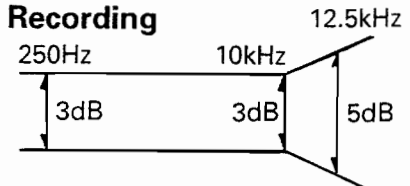
REC Bias & THD Graph

Fig. 1

Playback



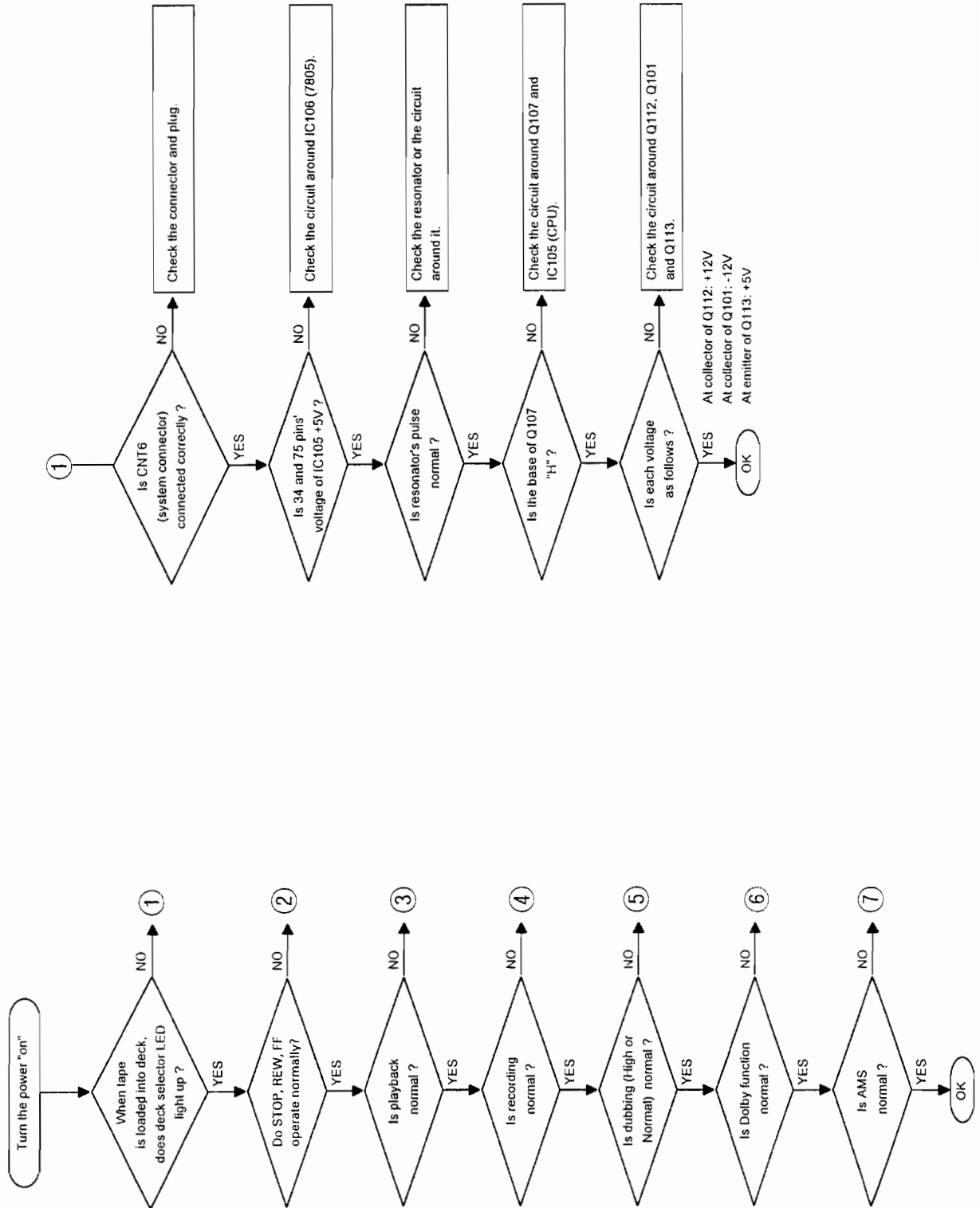
Recording

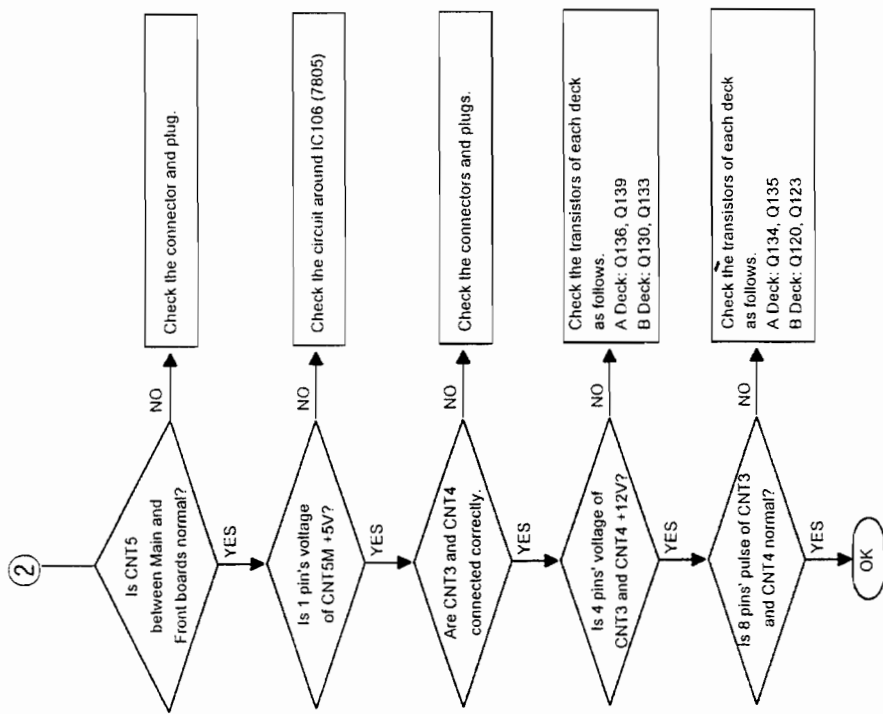
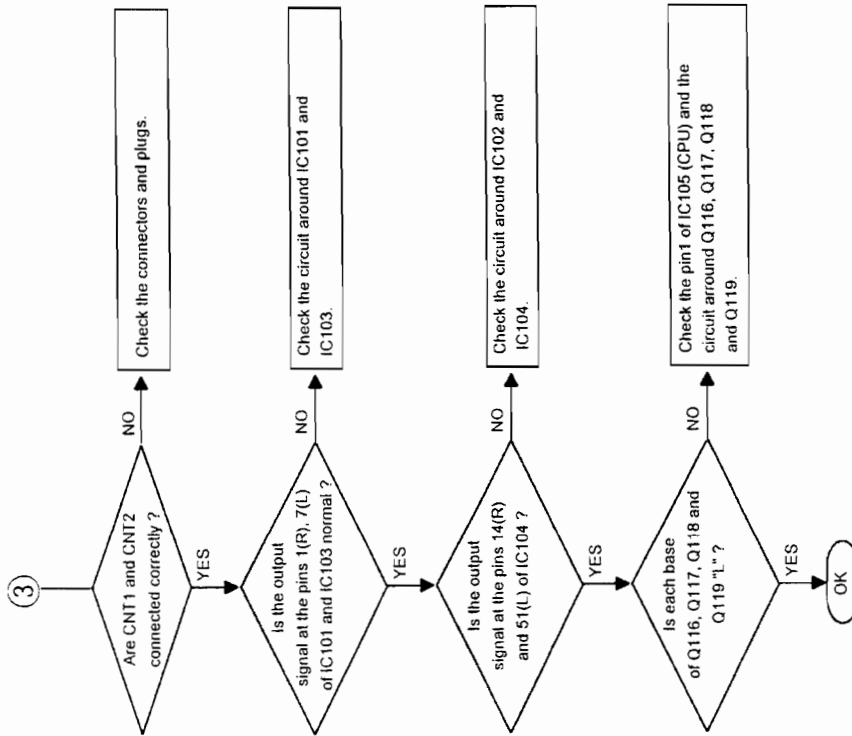


Allowable Playback/Recording Frequency Response Zone

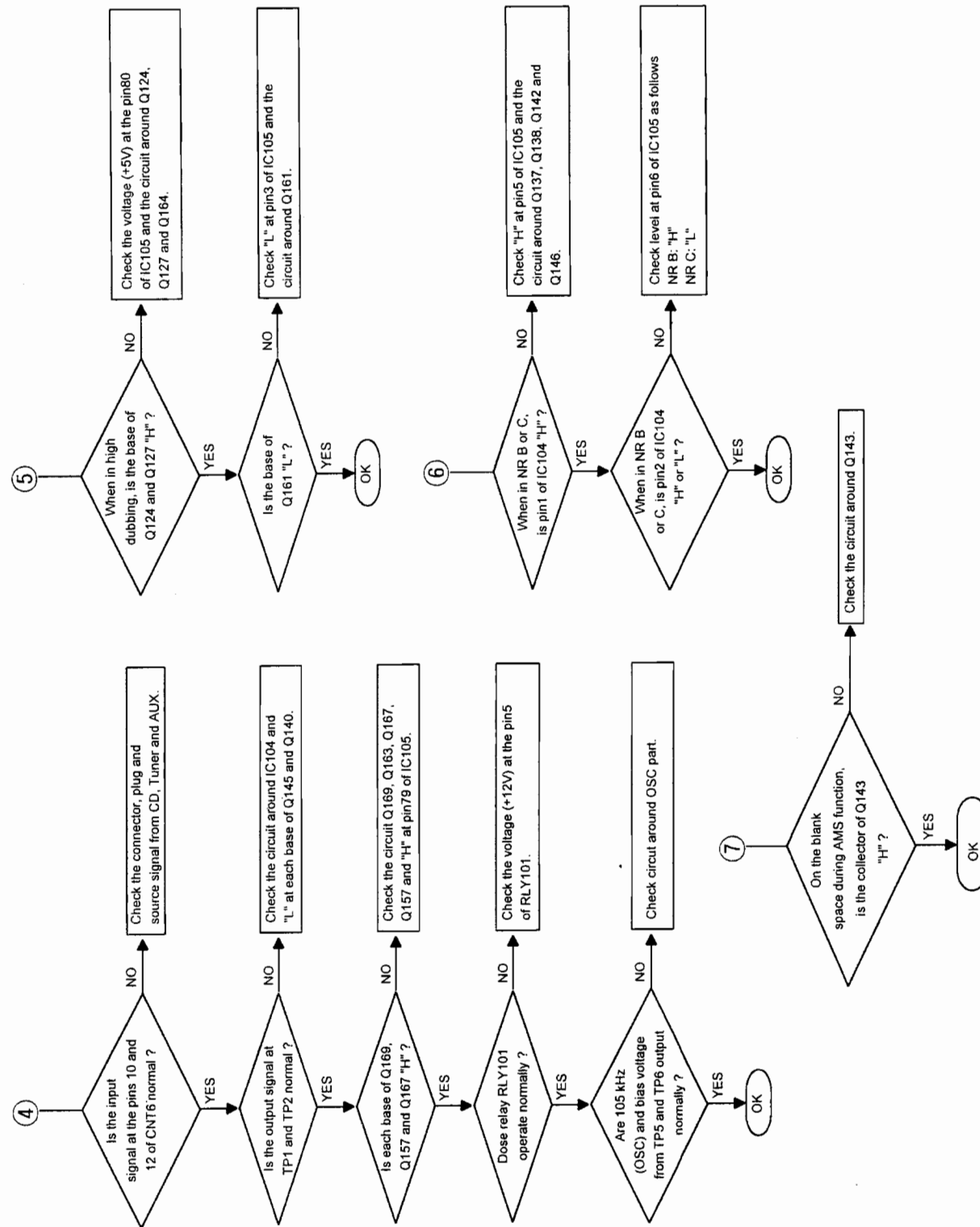
Fig. 2

TROUBLESHOOTING





MECHANICAL PARTS LIST



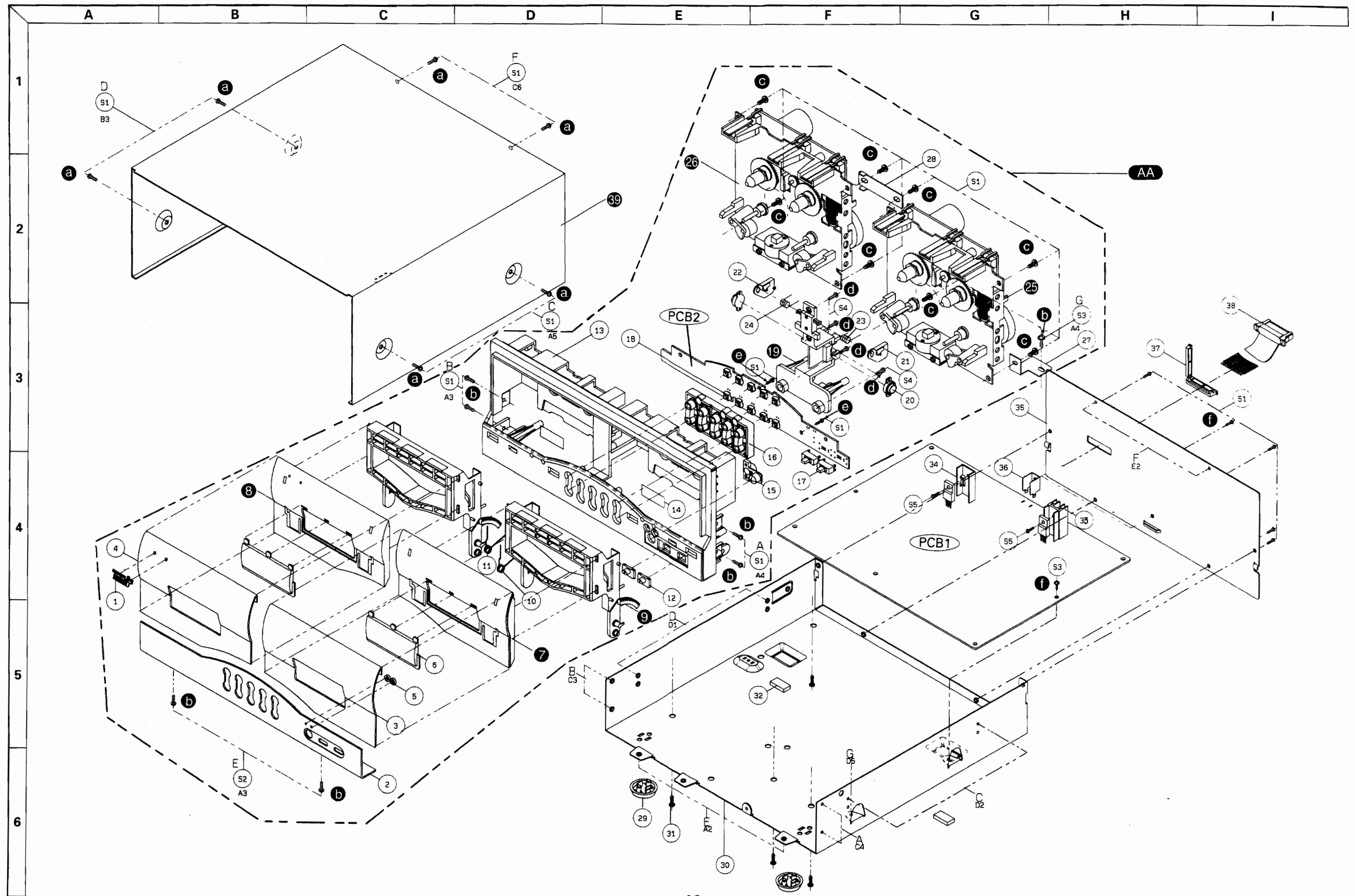
| Ref. No. | Description | Parts No. | Q'ty | Version |
|------------------------------|--|--------------|------|-------------|
| PACKAGE | | | | |
| | Carton Box | 049605258203 | 1 | KS |
| | Carton Box | 049605258204 | 1 | A,D,PT INDO |
| | Cushion Poly | 9722041210 | 1 | |
| | Film Soft PE | 9715000120 | 1 | |
| CABINET & CHASSIS | | | | |
| 1 | Badge, INKEL | 048535045411 | 1 | KS |
| (1) | Badge, SHERWOOD | 048535045421 | 1 | A,D,PT INDO |
| 2 | Panel Front | 048602020011 | 1 | |
| 3 | Door, Right | 048663001511 | 1 | |
| 4 | Door, Left | 048663001521 | 1 | |
| 5 | Indicator LED | 8555052610 | 2 | |
| 6 | Window Door | 048555052711 | 2 | |
| 7 | Base Door, Right | 046512001911 | 1 | |
| 8 | Base Door, Left | 046512001921 | 1 | |
| 9 | Lid Cassette | 8562006610 | 1 | |
| 10 | Door Spring | 6555610210 | 1 | |
| 11 | Door Spring | 6555610220 | 1 | |
| 12 | Knob Slide | 048545131611 | 2 | |
| 13 | Body Front | 048521009611 | 1 | |
| 14 | Label Mirror | 9057095396 | 2 | |
| 15 | Button Selector | 048545131211 | 1 | |
| 16 | Button Function | 048543070212 | 1 | |
| 17 | Switch Slide | 4618008310 | 2 | |
| 18(SW3-13) | Switch Tact | 4658004410 | 11 | |
| 19 | Guide Door | 8523013410 | 1 | |
| 20 | Damper Oil | 6308002310 | 2 | |
| 21 | Lever Eject, Right | 7143104220 | 1 | |
| 22 | Lever Eject, Left | 7143104210 | 1 | |
| 23 | Spring Lever "A" | 6555013510 | 1 | |
| 24 | Spring Lever "B" | 6555013520 | 1 | |
| 25 | Deck Mecha, R/P | 5708015110 | 1 | |
| 26 | Deck Mecha, CMAL2Z035A | 5708014710 | 1 | |
| 27 | Bracket Shield | 6165151310 | 1 | |
| 28 | Bracket Shield | 6165151210 | 1 | |
| 29 | Foot | 6035104310 | 2 | |
| 30 | Chassis Main | 6121614920 | 1 | |
| 31 | Fastener | 6528301710 | 4 | |
| 32 | Cushion Foot | 6715021230 | 1 | |
| 33 | Heatsink | 7505202410 | 1 | |
| 34 | Heatsink | 7505202410 | 1 | |
| 35 | Chassis Back | 046102044611 | 1 | KS |
| (35) | Chassis Back | 046102044613 | 1 | PT INDO |
| (35) | Chassis Back | 046102044612 | 1 | D |
| (35) | Chassis Back | | 1 | A |
| 36 | Plate Ground | 6165143510 | 1 | |
| 37 | Stopper Connector | 6518002210 | 1 | |
| 38 | Connector, System, 13P | 4358613501 | 1 | |
| 39 | Cover Top | 046123017821 | 1 | |
| HARDWARE KIT | | | | |
| S1 | Screw, #2BTT 3x8B | 8179130083 | 25 | |
| S2 | Screw, #2FTC 3x8B | 8129230083 | 2 | |
| S3 | Screw, #2WPTT 3x6Y | 8159230061 | 2 | |
| S4 | Screw, #2BTC 3x10B | 8109230103 | 4 | |
| S5 | Screw, #2BTC 3x6B | 8109230063 | 2 | |
| MISCELLANEOUS | | | | |
| | Connector, Lead Ass'y, 3P, 220mm, Shield | 436203227032 | 1 | |
| | Connector, Lead Ass'y, 10P, 200mm | 436210200532 | 1 | |
| | Connector, Lead Ass'y, 7P, 200mm, Shield | 435207208002 | 1 | |
| | Connector, Lead Ass'y, 13P, 200mm | 436213200532 | 1 | |
| | Card Cable, YS=1.25-17-180-C | 4118617185 | 1 | |
| PCB1 | P.C.Board Main | 4004001100 | 1 | |
| PCB2 | P.C.Board Front | 4004001110 | 1 | |

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list are of special significance to safety. When replacing a component identified with Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

EXPLODED VIEW

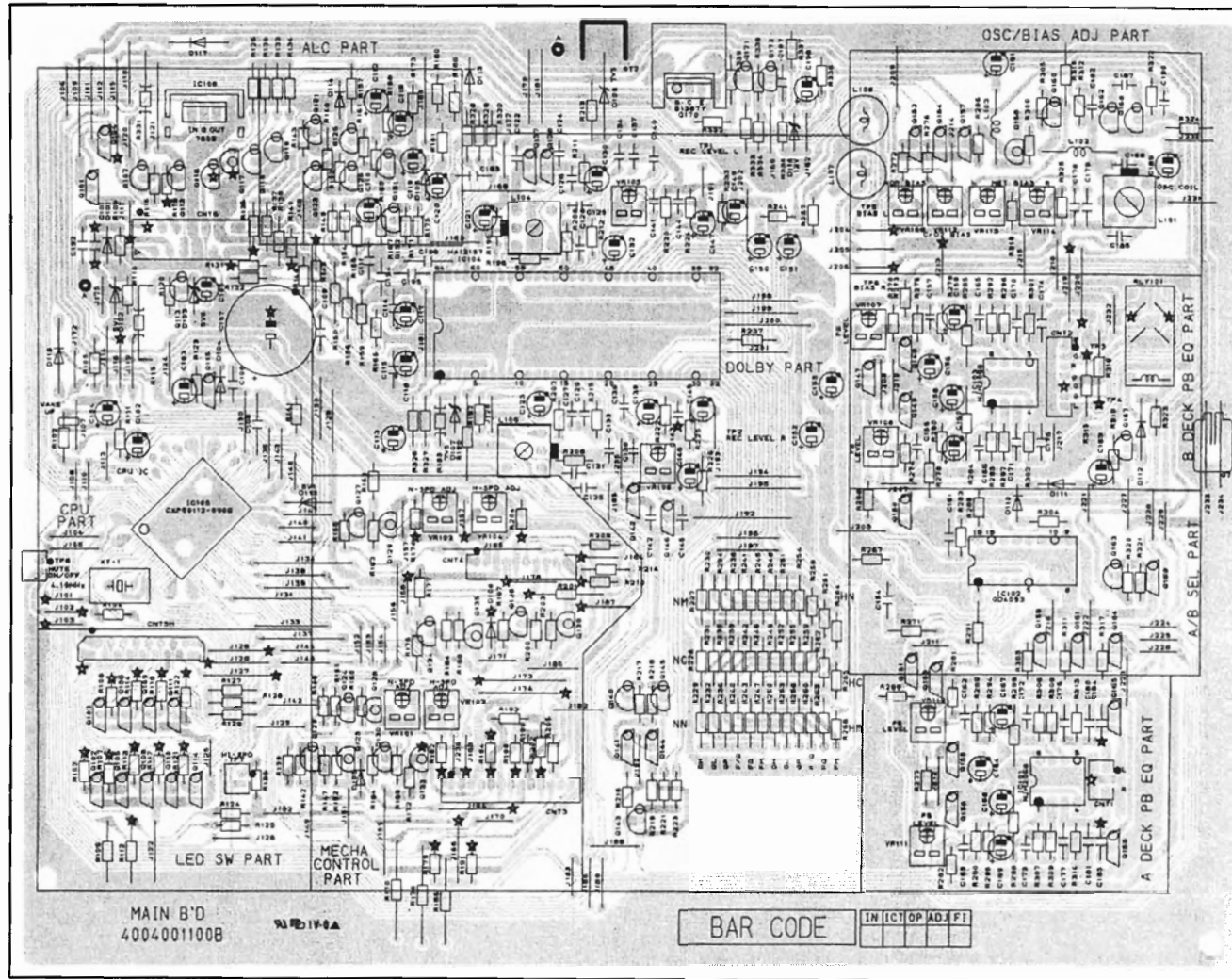
Model No. : DD-757



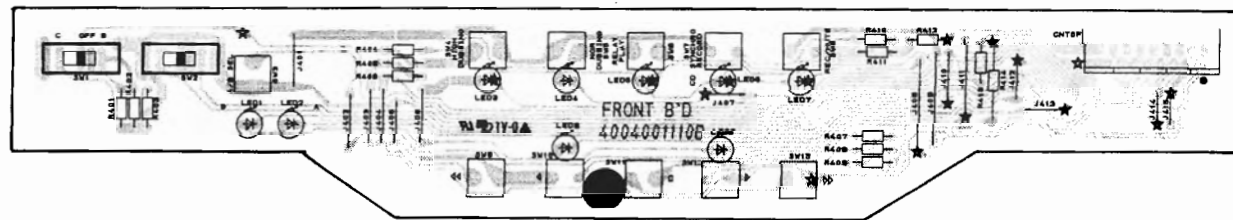
PRINTED CIRCUIT BOARDS

Model No. : DD-757

MAIN(PCB2)



FRONT(PCB1)



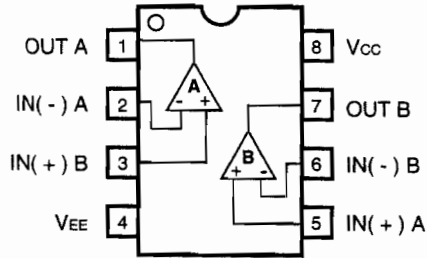
ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE : Products marked with Δ have special characteristics important to safety. If you replace any of these components, read carefully the product safety notice in this manual. Don't degrade the safety of the product through improper servicing. Resistor/Capacitor tolerance - D : ($\pm 0.5\%$), J : ($\pm 5\%$), K : ($\pm 10\%$), M : ($\pm 20\%$), Z : +80, - 20%

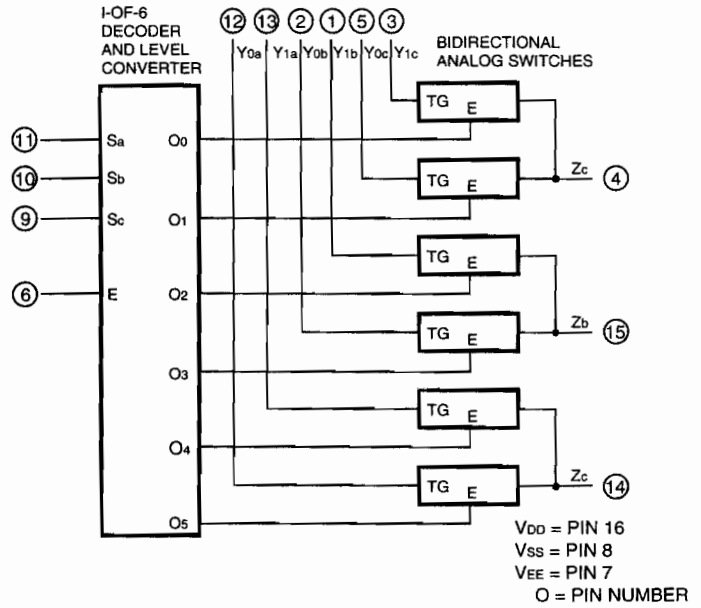
| Ref. No. | Description | Parts No. | Q'ty | Version | Ref. No. | Description | Parts No. | Q'ty | Version |
|-----------|--------------------------|-----------|------------|--------------|-----------|----------------------------|------------|-----------|--------------|
| PCB1 | ASSEMBLY P.C. BOARD MAIN | | | | C195/C196 | Ceramic Tubular | 100 | pF 50 V J | 3519101935 2 |
| | CAPACITORS | | | | C197 | Ceramic Tubular | 470 | pF 50 V J | 3519471935 1 |
| C101 | Ceramic Tubular | 220 | pF 50 V J | 3519221935 1 | C198 | Electrolytic SG | 10 | uF 50 V M | 3479310071 1 |
| C102 | Electrolytic SG | 1 | uF 50 V M | 3479310971 1 | | CONNECTORS | | | |
| C103 | Electrolytic SG | 4.7 | uF 50 V M | 3479347971 1 | CNT1 | Wafer, 3P | 4428516210 | 1 | |
| C104/C105 | Electrolytic SG | 10 | uF 50 V M | 3479310071 2 | CNT2 | Wafer, 7P | 4428516610 | 1 | |
| C106 | Ceramic Tubular | 0.1 | uF 50 V Z | 3519104935 1 | CNT3 | Wafer, 13P | 4428517210 | 1 | |
| C107 | Electrolytic SG | 2200 | uF 25 V M | 3409322249 1 | CNT4 | Wafer, 10P | 4428516910 | 1 | |
| C108/C109 | Ceramic Tubular | 0.1 | uF 50 V Z | 3519104935 2 | CNT5M | Wafer, FFC, 17P | 4428509015 | 1 | |
| C110 | Electrolytic SG | 1 | uF 50 V M | 3479310971 1 | CNT6 | Wafer, 13P | 4428513800 | 1 | |
| C111 | Ceramic Tubular | 0.1 | uF 50 V Z | 3519104935 1 | | DIODES | | | |
| C112 | Electrolytic SG | 220 | uF 10 V M | 3479322121 1 | D101 | 1N4148, Switching | 2058322101 | 1 | |
| C113 | Electrolytic SG | 100 | uF 16 V M | 3479310131 1 | D102 | Zener, UZ 5.1 BSB | 2258599103 | 1 | |
| C114/C115 | Ceramic Tubular | 270 | pF 50 V J | 3519271935 2 | D103 | Zener, UZ 5.6 BSB | 2258599104 | 1 | |
| C116-C118 | Electrolytic SG | 2.2 | uF 50 V M | 3479322971 3 | D104-D106 | 1N4148, Switching | 2058322101 | 3 | |
| C119 | Electrolytic SG | 0.1 | uF 50 V M | 3479310871 1 | D107 | Zener, UZ 7.5 BSC | 2258599130 | 1 | |
| C120 | Electrolytic SG | 10 | uF 50 V M | 3479310071 1 | D108 | 1N4148, Switching | 2058322101 | 1 | |
| C121 | Electrolytic SG | 100 | uF 16 V M | 3479310131 1 | D109 | Zener, UZ 7.5 BSC | 2258599130 | 1 | |
| C122 | Mylar | 0.001 | uF 100 V J | 3519102120 1 | D110/D111 | 1N4148, Switching | 2058322101 | 2 | |
| C123 | Electrolytic SG | 10 | uF 50 V M | 3479310071 1 | D112 | 1N4003, Rectifier | 2258128002 | 1 | |
| C124 | Mylar | 0.001 | uF 100 V J | 3519102120 1 | D113/D114 | 1N4148, Switching | 2058322101 | 2 | |
| C125 | Mylar | 0.0022 | uF 100 V J | 3679222120 1 | D115 | Zener, UZ 5.1 BSB | 2258599103 | 1 | |
| C126 | Mylar | 0.0047 | uF 100 V J | 3679472120 1 | D116 | Zener, UZ 12.0 BSC | 2258599116 | 1 | |
| C127-C129 | Mylar | 0.0022 | uF 100 V J | 3679222120 3 | D117/D118 | 1N4003, Rectifier | 2258128002 | 2 | |
| C130 | Electrolytic SG | 10 | uF 50 V M | 3479310071 1 | | INTEGRATED CIRCUITS | | | |
| C131 | Mylar | 0.0047 | uF 100 V J | 3679472120 1 | IC101 | NJM2068D | 2168020106 | 1 | |
| C132 | Electrolytic SG | 10 | uF 50 V M | 3479310071 1 | IC102 | GD4053 | 2138001117 | 1 | |
| C133/C134 | Mylar | 0.0022 | uF 100 V J | 3679222120 2 | IC103 | NJM2068D | 2168020106 | 1 | |
| C135-C138 | Mylar | 0.1 | uF 63 V K | 3679104297 4 | IC104 | HA12157 | 2168011135 | 1 | |
| C139 | Electrolytic SG | 10 | uF 50 V M | 3479310071 1 | IC105 | CXP50112-590Q | 2139322702 | 1 | |
| C140/C141 | Mylar | 0.1 | uF 63 V K | 3679104297 2 | IC106 | KIA7805P, Regulator | 2168606103 | 1 | |
| C142 | Mylar | 0.001 | uF 100 V J | 3519102120 1 | | COILS | | | |
| C143/C144 | Mylar | 0.022 | uF 100 V J | 3679223120 2 | L101 | OSC Bias, CQN-K5174 | 2638601350 | 1 | |
| C145 | Mylar | 0.001 | uF 100 V J | 3519102120 1 | L102/L103 | Inductor, 10 uH | 2648610082 | 2 | |
| C146 | Electrolytic SG | 1 | uF 50 V M | 3479310971 1 | L104/L105 | Filter, MPX, FB-10D | 2658301120 | 2 | |
| C147/C148 | Electrolytic SG | 10 | uF 50 V M | 3479310071 2 | L106/L107 | Trap Bias, 389AC-K5049 | 2658501150 | 2 | |
| C149 | Electrolytic SG | 1 | uF 50 V M | 3479310971 1 | | TRANSISTORS | | | |
| C150/C151 | Electrolytic SG | 10 | uF 50 V M | 3479310071 2 | Q101 | DTC114YS | 2208622106 | 1 | |
| C152/C153 | Electrolytic SG | 1 | uF 50 V M | 3479310971 2 | Q102/Q103 | DTC114TS | 2208622108 | 2 | |
| C154 | Ceramic Tubular | 220 | pF 50 V J | 3519221935 1 | Q104 | KRA107M/DTA114YS | 2238006103 | 1 | |
| C155 | Mylar | 0.022 | uF 100 V J | 3679223120 1 | Q105/Q106 | DTC114TS | 2208622108 | 2 | |
| C156 | Electrolytic SG | 47 | uF 16 V M | 3479347031 1 | Q107 | KTC3198Y, NPN | 2208606105 | 1 | |
| C157 | Mylar | 0.022 | uF 100 V J | 3679223120 1 | Q108-Q111 | DTC114TS | 2208622108 | 3 | |
| C158 | Electrolytic SG | 47 | uF 16 V M | 3479347031 1 | Q112 | MPSA56, PNP | 2208206113 | 1 | |
| C159/C160 | Electrolytic SG | 4.7 | uF 50 V M | 3479347971 2 | Q113 | MPSA06Y, NPN | 2208606114 | 1 | |
| C161 | Ceramic Tubular | 220 | pF 50 V J | 3519221935 1 | Q114 | DTC114TS | 2208622108 | 1 | |
| C162/C163 | Mylar | 0.022 | uF 100 V J | 3679223120 2 | Q115 | DTC114YS | 2208622106 | 1 | |
| C164 | Electrolytic SG | 47 | uF 16 V M | 3479347031 1 | Q116-Q119 | KTD1302, NPN | 2208606112 | 4 | |
| C165/C166 | Mylar | 0.022 | uF 100 V J | 3679223120 2 | Q120-Q122 | KTC3198Y, NPN | 2208606105 | 3 | |
| C167 | Electrolytic SG | 4.7 | uF 50 V M | 3479347971 1 | Q123 | MPSA56, PNP | 2208206113 | 1 | |
| C168 | Electrolytic SG | 47 | uF 16 V M | 3479347031 1 | Q124-Q127 | KTC3198Y, NPN | 2208606105 | 4 | |
| C169 | Electrolytic SG | 4.7 | uF 50 V M | 3479347971 1 | Q128/Q129 | MPSA56, PNP | 2208206113 | 2 | |
| C170/C171 | Ceramic Tubular | 100 | pF 50 V J | 3519101935 2 | Q130-Q132 | KTC3198Y, NPN | 2208606105 | 3 | |
| C172/C173 | Mylar | 0.022 | uF 100 V J | 3679223120 2 | Q133 | MPSA56, PNP | 2208206113 | 1 | |
| C174 | Ceramic Tubular | 560 | pF 50 V J | 3519681935 1 | Q134 | KTC3198Y, NPN | 2208606105 | 1 | |
| C175 | Ceramic Tubular | 680 | pF 50 V J | 3519681935 1 | Q135 | MPSA56, PNP | 2208206113 | 1 | |
| C176/C177 | Ceramic Tubular | 100 | pF 50 V J | 3519101935 2 | Q136 | KTC3198Y, NPN | 2208606105 | 1 | |
| C178-C181 | Ceramic Tubular | 560 | pF 50 V J | 3519561935 4 | Q137/Q138 | DTC114TS | 2208622108 | 2 | |
| C182 | Mylar | 0.0056 | uF 100 V J | 3679562120 1 | Q139 | MPSA56, PNP | 2208206113 | 1 | |
| C183 | Electrolytic SG | 47 | uF 16 V M | 3479347031 1 | Q140 | KTD1302, NPN | 2208606112 | 1 | |
| C184/C185 | Ceramic Tubular | 220 | pF 50 V J | 3519221935 2 | Q141 | KRA107M/DTA114YS | 2238006103 | 1 | |
| C186 | Mylar | 0.0022 | uF 100 V J | 3679222120 1 | Q142 | DTC114TS | 2208622108 | 1 | |
| C187 | Mylar | 0.033 | uF 100 V J | 3679333120 1 | Q143 | KTC3198Y, NPN | 2208606105 | 1 | |
| C188 | Mylar | 0.0022 | uF 100 V J | 3679222120 1 | Q144 | DTC114YS | 2208622106 | 1 | |
| C189 | Electrolytic SG | 100 | uF 16 V M | 3479310131 1 | Q145 | KTD1302, NPN | 2208606112 | 1 | |
| C190 | Mylar | 0.0056 | uF 100 V J | 3679562120 1 | | | | | |
| C191 | Electrolytic SG | 100 | uF 25 V M | 3479310141 1 | | | | | |
| C192 | Ceramic Tubular | 0.1 | uF 50 V Z | 3519104935 1 | | | | | |
| C193 | Ceramic Tubular | 100 | pF 50 V J | 3519101935 1 | | | | | |
| C194 | Ceramic Tubular | 0.1 | uF 50 V Z | 3519104935 1 | | | | | |

IC FUNCTIONAL BLOCK DIAGRAM

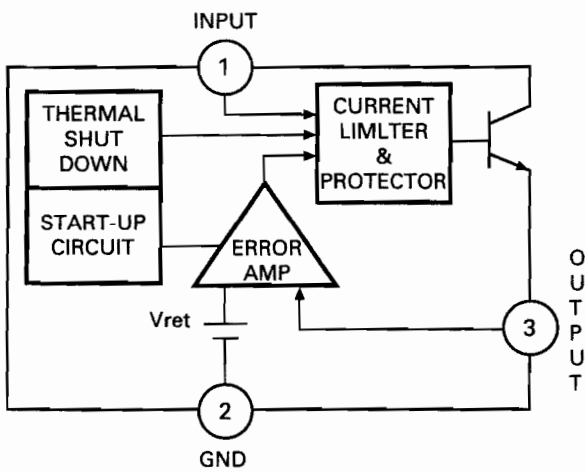
IC101, IC103 : NJM2068D



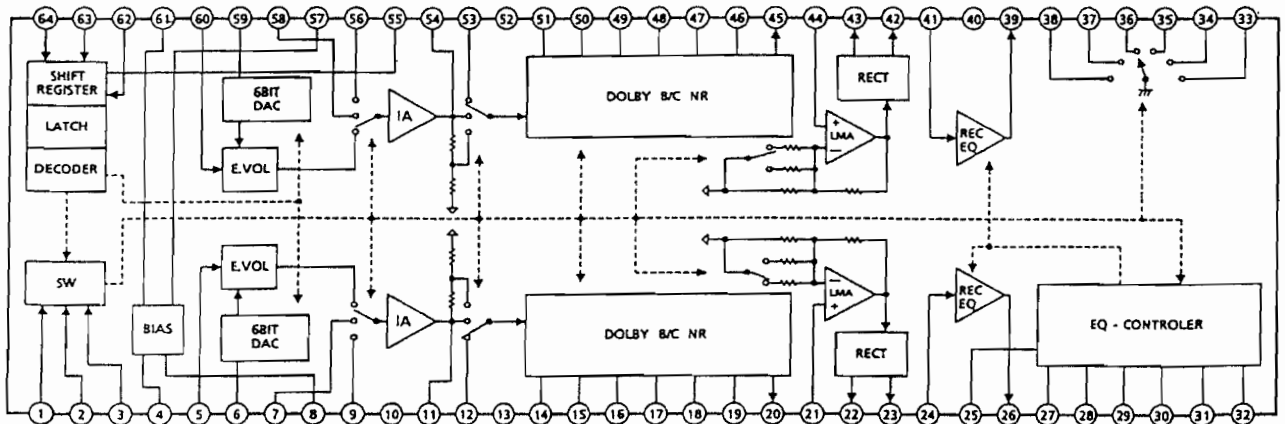
IC102 : GD4053B



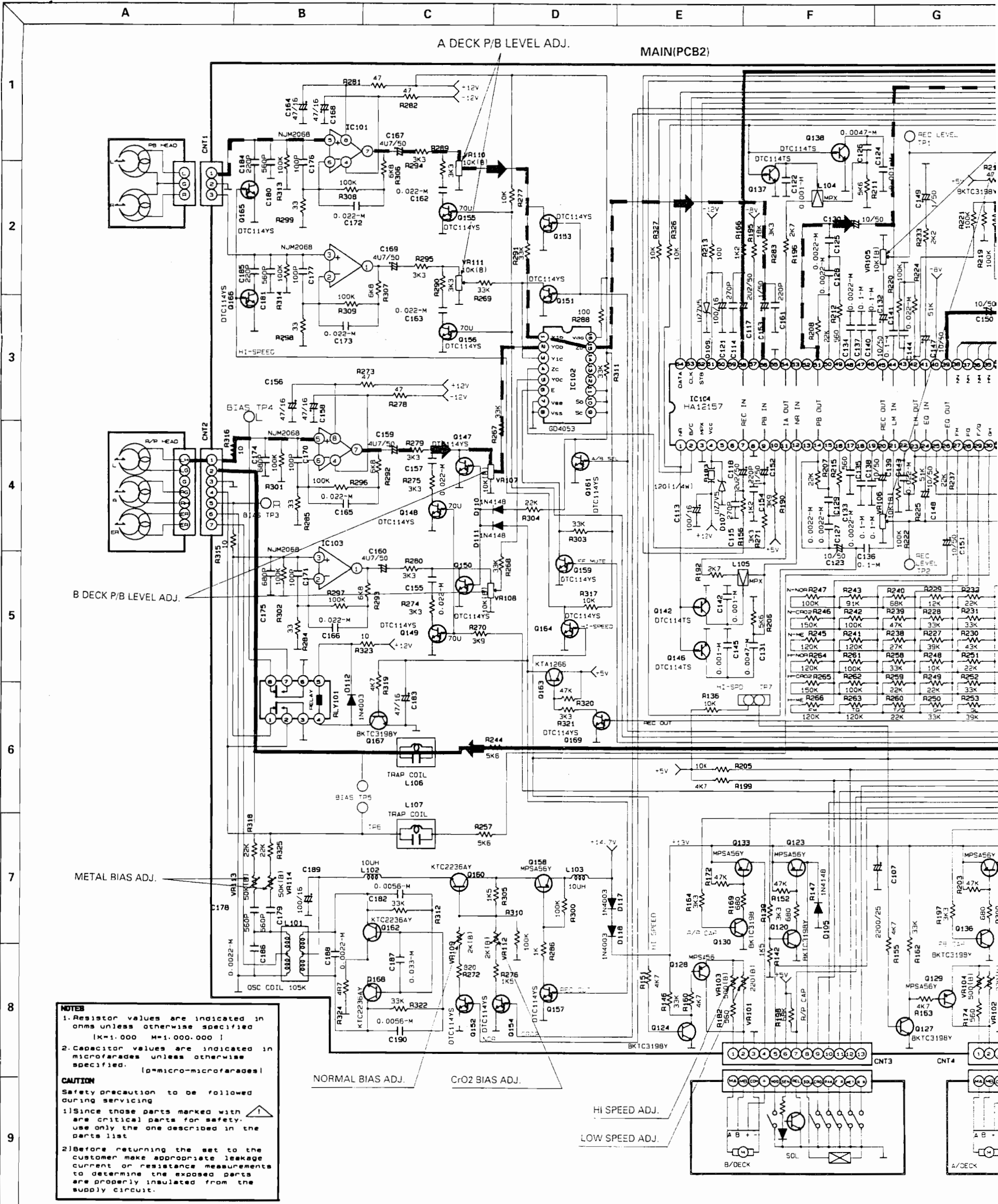
IC106 : KIA7806P



IC104 : HA12157NT



SCHEMATIC DIAGRAM



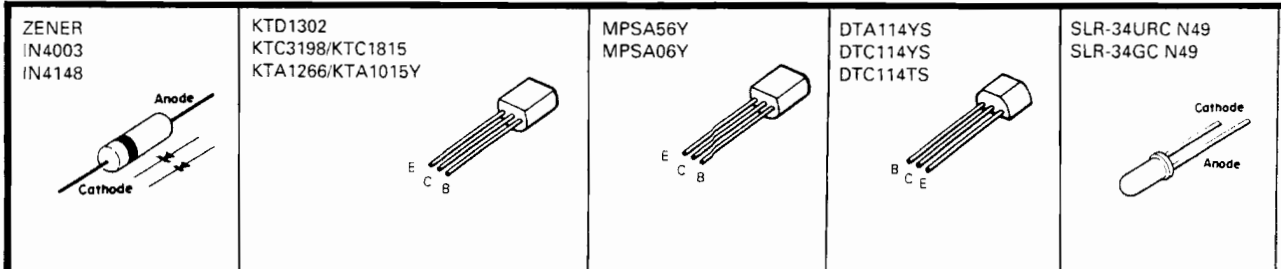
NOTES

1. Resistor values are indicated in ohms unless otherwise specified
 (K=1,000 M=1,000,000)
2. Capacitor values are indicated in microfarads unless otherwise specified.
 (p=micro-microfarads)

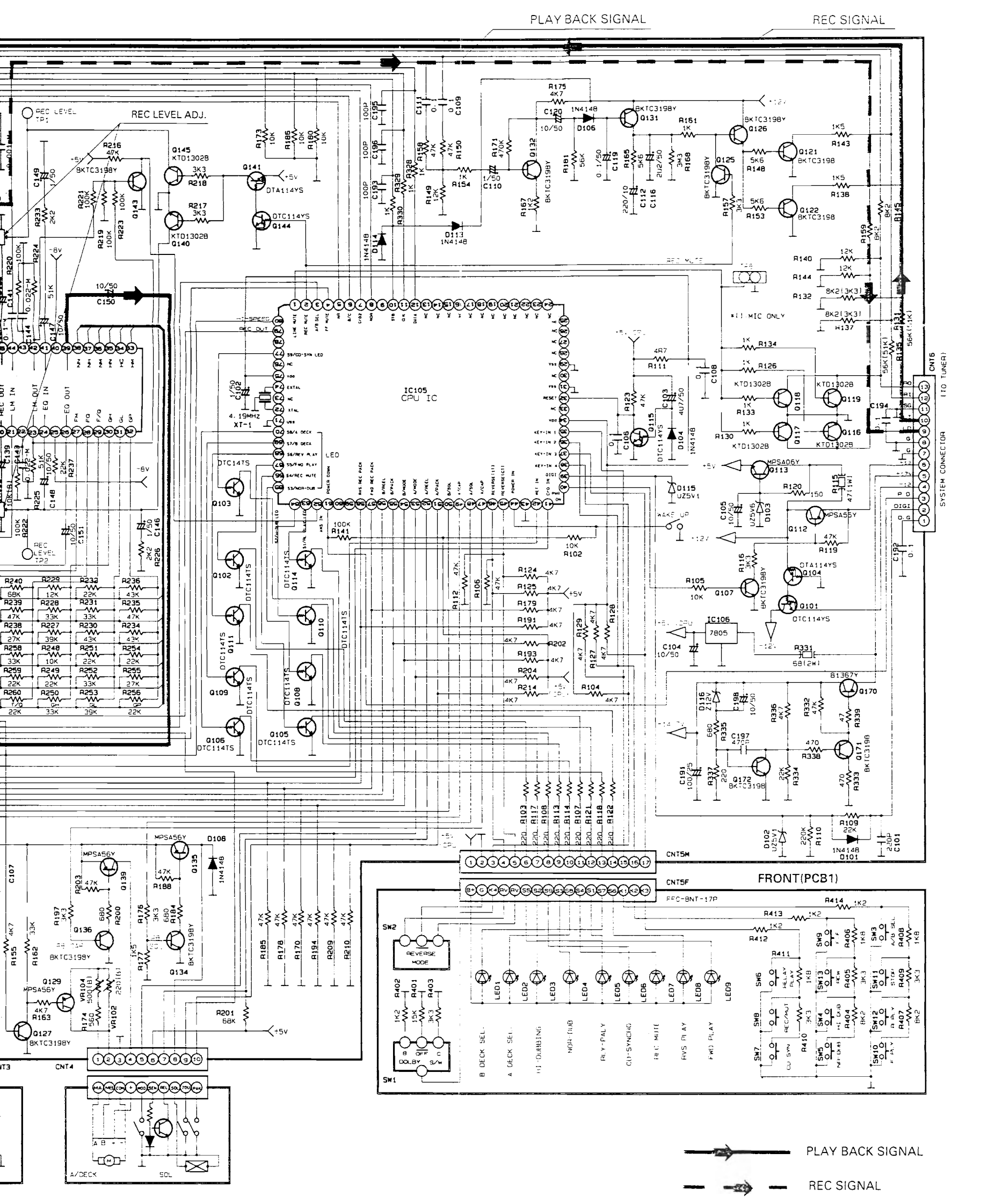
CAUTION
 Safety precaution to be followed during servicing

- 1) Since those parts marked with a triangle are critical parts for safety, use only the one described in the parts list.
- 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

PIN CONNECTION OF DIODES, TRANSISTORS AND ICs



G H I J K L M



PLAY BACK SIGNAL
REC SIGNAL

