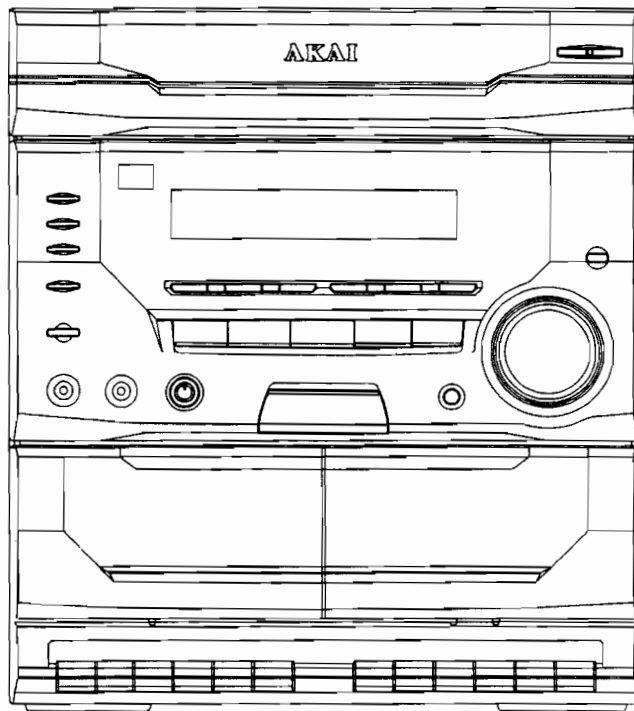


TX-220/320  
(AC-220/SR-225)  
(AC-320/SR-425)

# AKAI SERVICE MANUAL



COMPACT  
**disc**  
DIGITAL AUDIO

MINI STEREO COMPONENT SYSTEM

MODEL **AC-220/SR-225**

MODEL **AC-320/SR-425**

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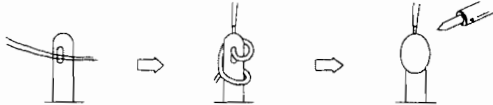
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# SAFETY INSTRUCTIONS

## PRECAUTIONS DURING SERVICING

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



6. Make sure that wires do not contact heat generating parts (heat sinks, oxide metal film resistors, fusible resistors, etc.)
7. Check if replaced wires do not contact sharply edged or pointed parts.
8. Also check areas surrounding repaired parts.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

## MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.



Please leave them at an appropriate depot.

## SAFETY CHECK AFTER SERVICING

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

The leakage-current measurement should be done between accessible metal parts, (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohm paralleled with a 0.15  $\mu$ F capacitor, under the unit's normal working condition.

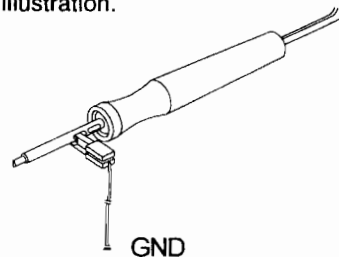
The leakage-current should be less the 0.5mA rms AC. The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch "ON" (if included). The

resistance should be more than 2.2Mohms.

## PRECAUTIONS IN REPAIRING

When repairing or adjusting the unit, please note the following points

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair or adjustment. Make sure that there are no metal objects between the P.C board or the mecha parts and the base.
3. The Micro-Computer and the CD signal processing ICs may be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.

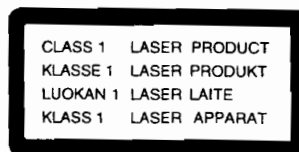


4. Do not loosen any screws in the pick-up block. Please refer to NOTE when replacing the pick up block.
5. To avoid hazardous invisible Laser Radiation, do not look at the Laser Beam (Objective lens) directly.
6. On model for some countries, laser warning labels are affixed on and inside of the unit as shown below. For your safety, read these labels carefully before repairing or adjusting the unit.

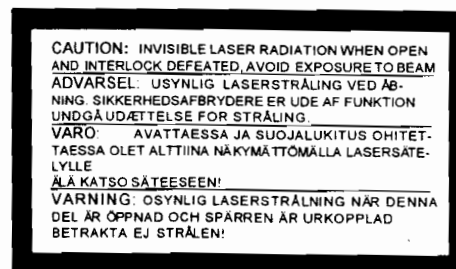
## CAUTION

The use of controls or adjustments or the performance of procedures other than those specified herein may result in hazardous radiation.

[ EUROPE, SCANDINAVIA, UK and AUSTRALIA ]



Label affixed on the rear panel of the unit



Label affixed on the CD MECHA BLOCK

# INFORMATION

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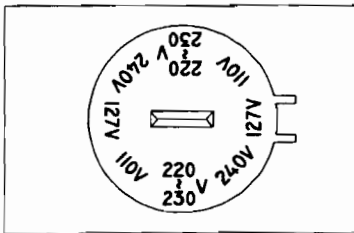
## SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbol	Prinnipal Destination
A	USA
B	UK
E	Europe (except, UK)
S	Australia
V	Germany
U	Universal
Y*	Custom version

## VOLTAGE CONVERSION( U Y Model only)

Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel of the AC-220/320 so that the correct voltage for your area is indicated.



[U5,U8, Y6, Y7 ]

# SPECIFICATIONS

---

## [Tuner Section]

Frequency range  
FM ..... 87.5-108MHz(50KHz step)  
MW ..... 530-1710KHz(U8)  
..... 531-1602KHz (except U8)  
LW ..... 144-288KHz(1KHz step) (E1/E2/E3/B1 only)  
SW ..... 3.8-12.5MHz(5KHz step) (Y7 only)

## USABLE SENSITIVITY

FM ..... (E1/E2/E3/B1) 20.2dBf(IHF,3%THD)  
..... (S1/U5/U8/Y6/Y7) 16.2dBf(IHF,3%THD)  
MW ..... 500 $\mu$ Vm  
LW ..... 800 $\mu$ Vm  
SW ..... 800 $\mu$ Vm

## S/N Ratio(IHF)

FM ..... (MONO 75dB, STEREO 65dB)  
MW ..... 40dB  
LW ..... 30dB  
SW ..... 30dB  
Stereo separation ..... 40dB(at 1KHz)

## [AMPLIFIER Section]

Power output ..... (AC-220) 14W+14W (6ohms,10%THD,EIAJ)  
..... 10W+10W (6ohms,1%THD,DIN)  
..... (AC-320) 27W+27W (6ohms,10%THD,EIAJ)  
..... 20W+20W (6ohms,1%THD,DIN)

## Input sensitivity

Line input(AUX IN) ..... 350mV/47K $\Omega$   
channel separation ..... 53dB  
Frequency response ..... 30Hz-60KHz (-3dB)

## [DECK SECTION]

Track system ..... 4track, 2channel system  
Frequency response ..... 40Hz-15KHz (Normal Tape, +3dB/-7dB)  
Wow & Flutter ..... 0.1%(WRMS)  
S/N ratio ..... 53dB  
Total harmonic distortion ..... less than 1%(at 315Hz)  
Channel separation ..... 43dB

**[CD SECTION]**

Pick up system .....	3Beam Laser
Sampling frequency .....	44.1KHz
Error correction system .....	Cross interleave read solomon
Number of channels .....	2Channel
Frequency response .....	20Hz-20KHz
Wow & Flutter .....	Below measurable limits
S/N ratio .....	83dB
Total harmonic distortion .....	0.035% (at 1KHz)
Channel separation .....	73dB(at 1KHz)
Dynamic range .....	82dB (at 1KHz)

**[GENERAL]**

Power requirement	
E1/E2/E3/B1/S1 .....	AC 220-230V/50Hz
U5/U8/Y6/Y7 .....	AC110/127/220-230/240V, 50/60Hz
Power consumption .....	40W/AC-220, 50W/AC-320
Weight .....	6.6Kg/AC-220, 7.1Kg/AC-320

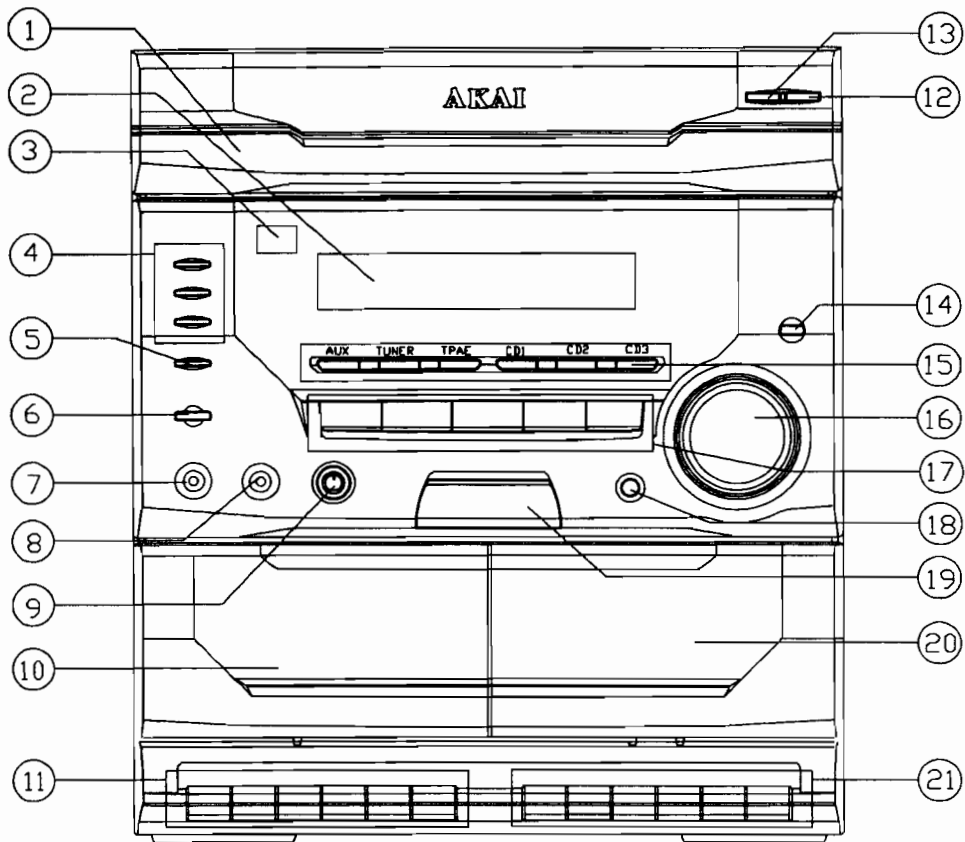
**[SPEAKER SECTION]**

<b>ITEM</b>	<b>SR-425</b>	<b>SR-225</b>
System Constructions .....	3-way 3-speakers	3-way 3-speakers
Woffler Unit .....	135mm Cone type	135mm Cone type
Midrange Unit .....	65mm Cone type	65mm Cone type
Tweeter Unit .....	20mm dome type (piezo)	20mm dome type (piezo)
System Impedance .....	6Ω	6Ω
Maxium Power Input .....	80w	30w
Sensitivity .....	more than 87dB/w/m	more than 87dB/w/m
Frequency Response .....	60Hz-20KHz	60Hz-20KHz
Harmonic Distortion .....	less than 3%	less than 3%
Enclosure Type .....	bass reflex type	bass reflex type
Units Layout .....	L/R mirror layout	L/R mirror layout
Dimensison .....	200(W)X305(H)X265(D)	200(w)X305(H)X235(D)
Net Weight .....	3.6Kg/pc	2.8Kg/pc

For improvement purposes, specifications and design are subject to change without notice.

# CONTROLS

## A MAIN UNIT



1. Disc tray
2. System FL display
3. Remote sensor
4. TIMER operation buttons
5. CH MEMO button
6. DUBBINGx1/x2 button
7. PHONES jack
8. MIC jack
9. Mixing control
10. Tape deck I cassette compartment
11. Tape deck I operation buttons

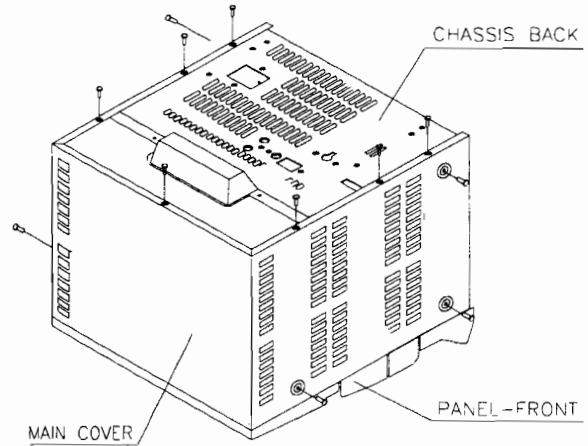
12. TRAY OPEN/CLOSE button
13. DISC CHANGE button
14. BALANCE button
15. Input source select buttons
16. Volume control
17. Multi-function buttons
18. DYNAMIC SUPER BASS button
19. POWER ON/STANDBY button
20. Tape deck II cassette compartment
21. Tape deck II operation buttons

# I. DISASSEMBLY

## 1-1. REMOVE OF MAIN COVER

- 1) Remove the seven screws on back and six screws on both sides.
- 2) Remove the MAIN COVER

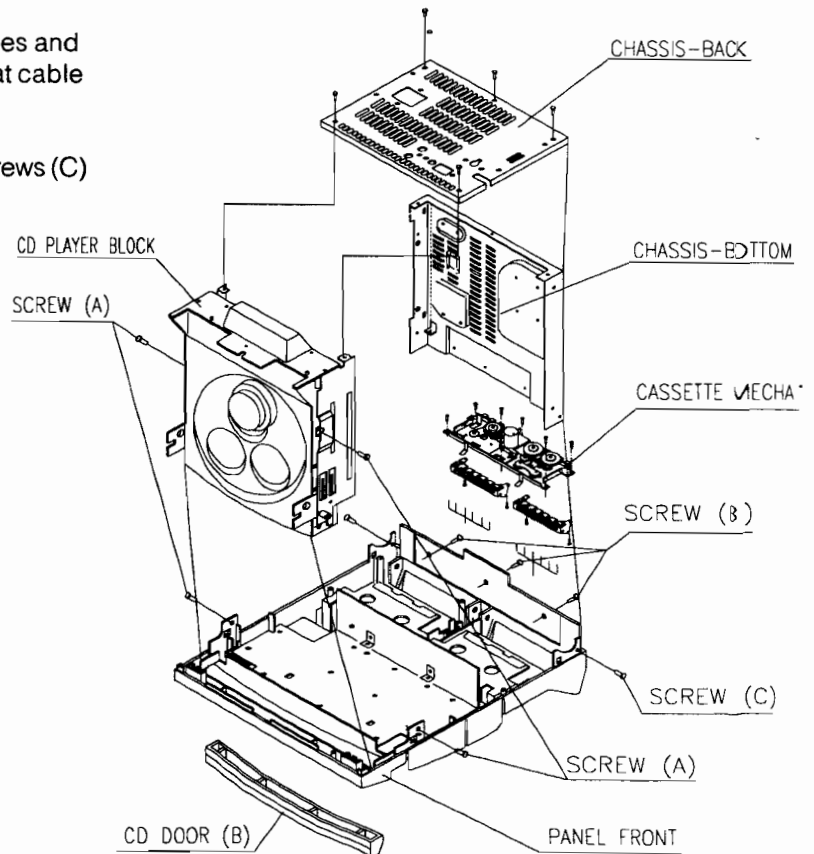
Fig. 1-1



## 1-2. REMOVE OF CD MECHA & FRONT PANEL

- 1) Remove the CD door (B)
- 2) Remove the four screws (A) on both sides and disconnect three connectors and the flat cable from the CD/TUNER/TAPE P.C.B.
- 3) Remove the CD player block
- 4) Remove the three screws (B) and two screws (C) on both sides.
- 5) Remove the FRONT PANEL

Fig. 1-2





## II. PRINCIPAL PARTS LOCATION

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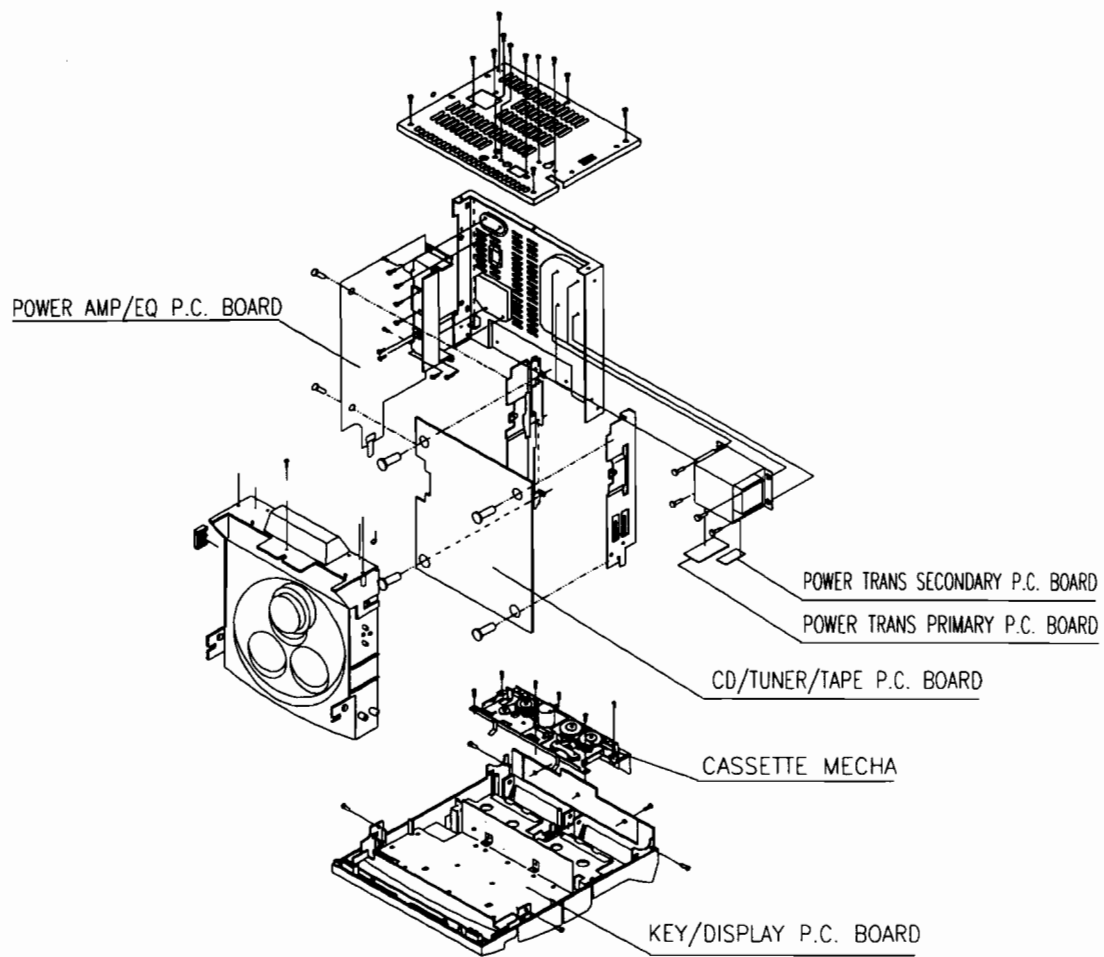


Fig. 2-1

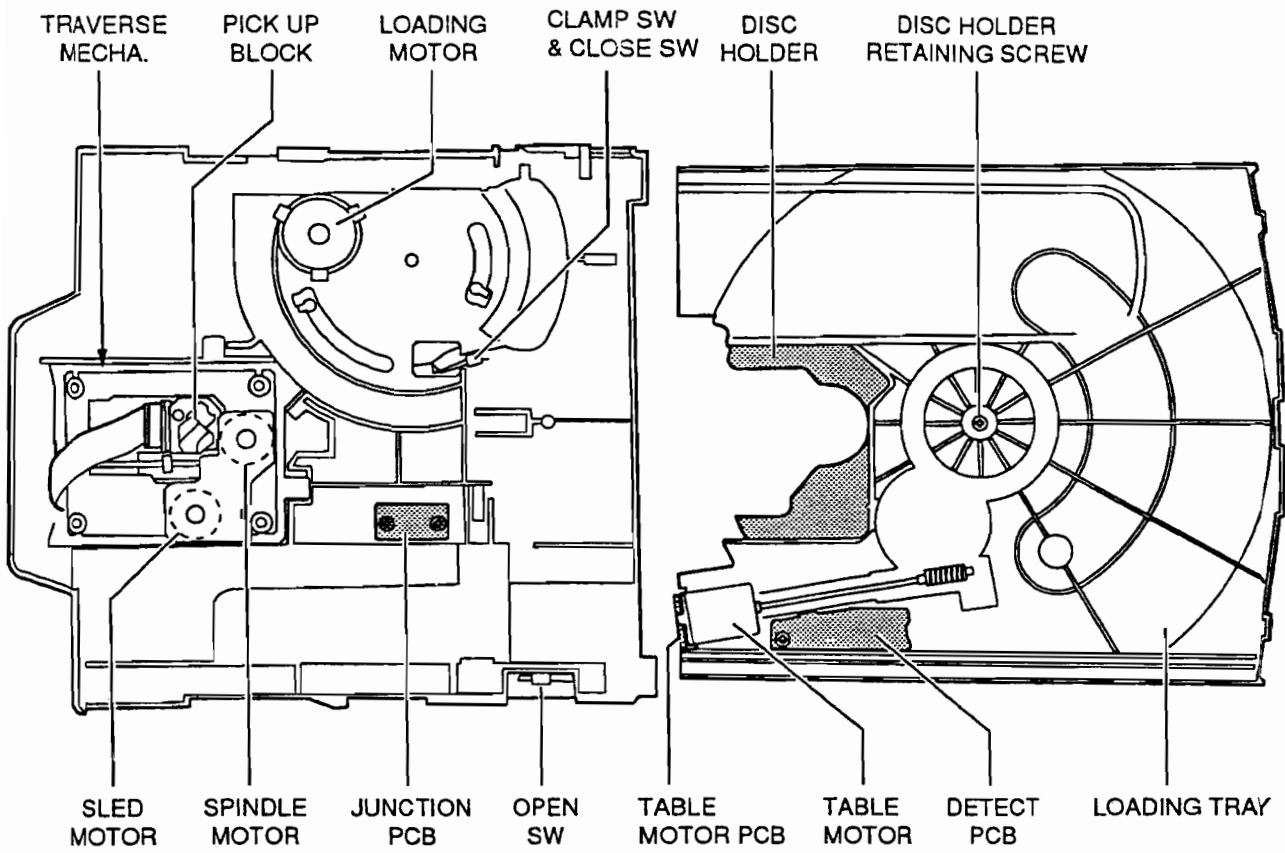


Fig. 2-2 CD PLAYER BLOCK

# III CD PLAYER BLOCK

## 3-1. DISASSEMBLY

\* Remove the CD PLAYER BLOCK before proceeding.

### 3-1-1. Removal of the TRAVERSE MECHA.

1) Remove the TRAVERSE COVER by releasing the two tabs in the direction of the arrow as shown in Fig. 3-1.

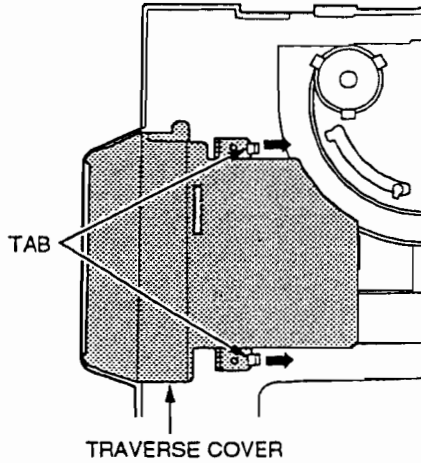


Fig. 3-1

2) Short the circuit on the PICK UP BLOCK with solder as shown in Fig. 3-2.

**Note:** To protect the laser diode from damage caused by high voltage static electricity, a part of the PCB on the PICK UP BLOCK has to be shorted before disconnecting the connectors. After replacement, be sure to connect the two connectors and then remove the solder of the shorted circuit before turning the power ON.

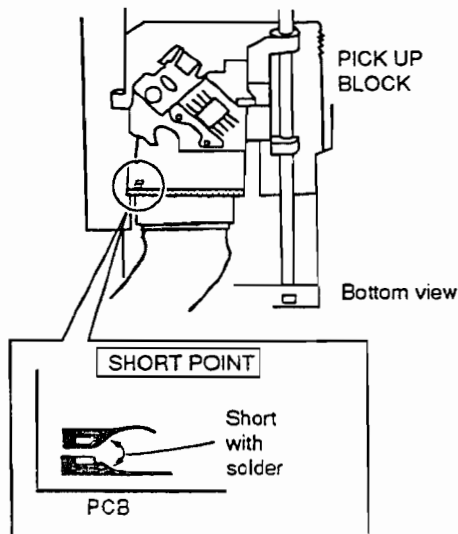


Fig. 3-2

3) Disconnect the two connectors carefully.

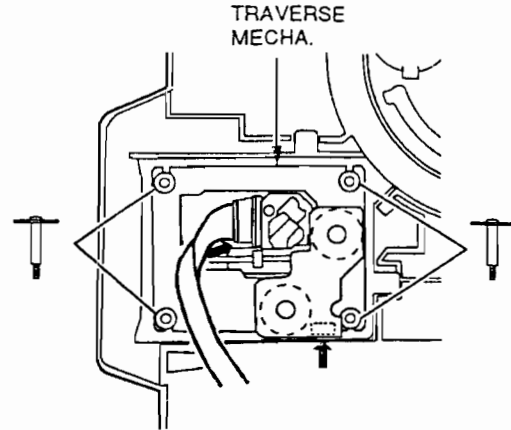


Fig. 3-3

4) Remove the four retaining screws, then remove the TRAVERSE MECHA.

5) Proceed in the reverse order for installation but never unsolder the shorted circuit before connecting the three connectors.

### 3-1-2. Replacement of the SLED MOTOR

1) Remove the TRAVERSE MECHA (refer to section 3-1-1).

2) Unsolder the leads of the SLED and SPINDLE MOTORS then remove the MOTOR PCB.

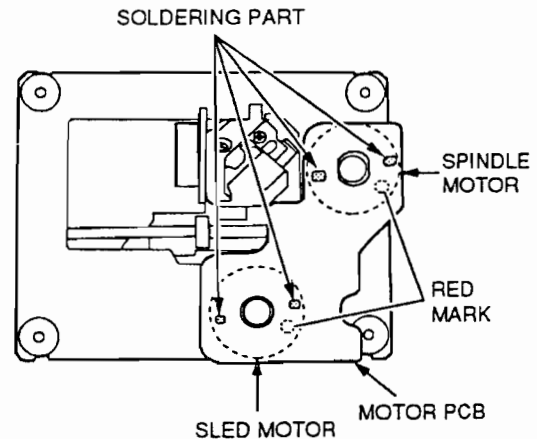


Fig. 3-4

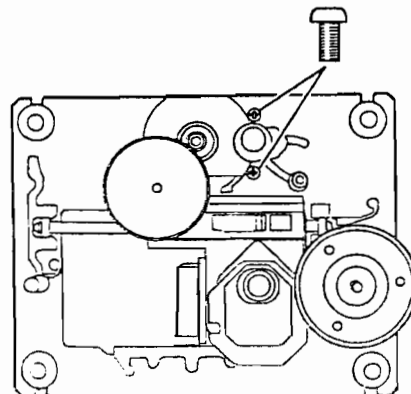


Fig. 3-5

3) Remove the two retaining screws, then remove the SLED MOTOR.

Next, extract the plastic gear from the motor shaft and attach it onto the new motor's shaft.

4) Reassemble in the reverse order.

**About the SPINDLE MOTOR:**

Replacement of the SPINDLE MOTOR itself is not recommended, because adjustment of the TURN TABLE height is quite critical and requires the use of a special jig.

**3-1-3. Replacement of the PICK UP BLOCK**

- 1) Remove the TRAVERSE MECHA (refer to section 3-1-1).
- 2) While pressing the Ⓐ stopper upwards, pull the SLIDE SHAFT to the right to remove the PICK UP BLOCK, then replace the PICK UP BLOCK.

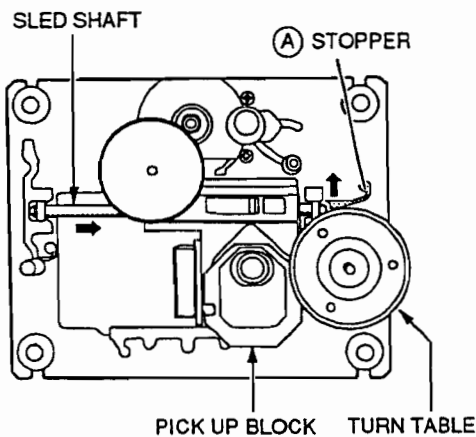


Fig. 3-6

3) Reassemble in the reverse order.

**3-1-4. Replacement of the LOADING MOTOR**

- 1) Slide the protruding part of the GEAR HOLDER PART in the direction of the arrow, then pull out the TRAY BLOCK.

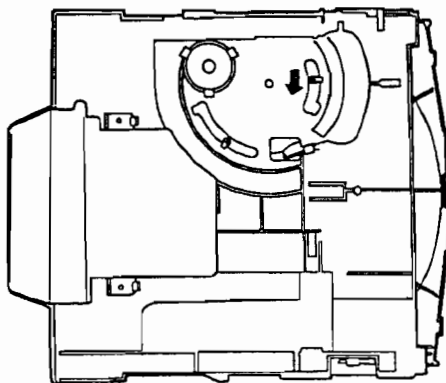


Fig. 3-7

- 2) Unhook the LOADING BELT with tweezers.

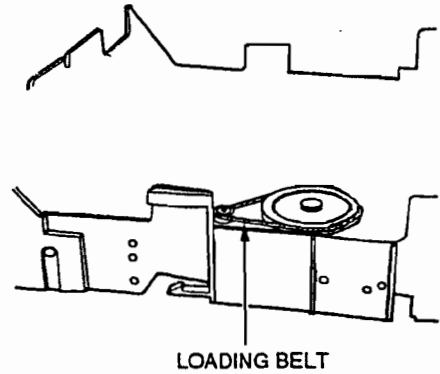


Fig. 3-8

- 3) Unsolder the lead wires of the LOADING MOTOR with a soldering iron.
- 4) While releasing the LOADING MOTOR's three retaining hooks, push the motor pulley part down with your middle finger to remove the LOADING MOTOR, then replace it.

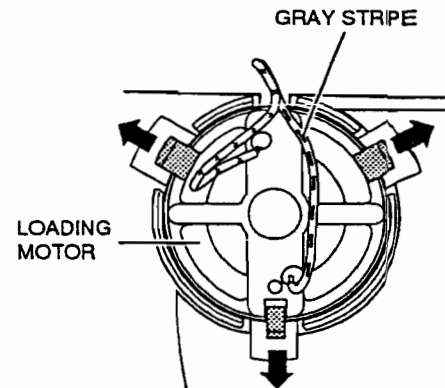


Fig. 3-9

- 5) Reassemble in the reverse order. Make sure that the wire with the gray stripe is connected to the motor's O marked terminal when soldering.

**3-1-5. Removal of the TRAY BLOCK**

- 1) If the TRAY BLOCK is in the "in" position, slide the protruding part of the GEAR HOLDER PART in the direction of the arrow and pull out the TRAY BLOCK slowly (refer to Fig. 3-7).
- 2) In order to disengage the two stoppers, carefully press the Ⓐ part of the TRAY BLOCK downwards while pulling the TRAY BLOCK out as shown in Fig. 3-10.

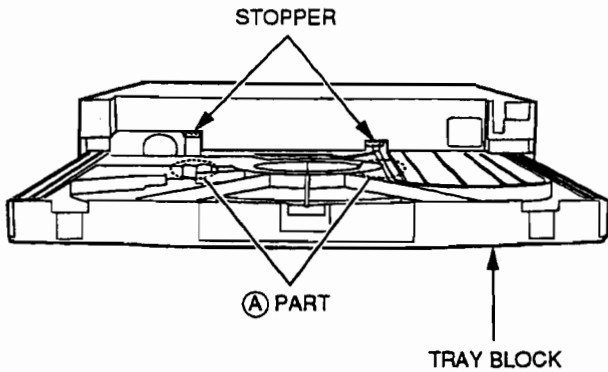


Fig. 3-10

- 4) Remove the TRAY BLOCK by pulling it out carefully.
- 5) Reassemble in the reverse order for installation. When reattaching the TRAY BLOCK to the chassis, carefully align the guides on both sides of the TRAY BLOCK with their corresponding rails on the chassis. Also, make sure that any one of the reference marks on the DISC HOLDER aligns with the reference mark on the LOADING TRAY.

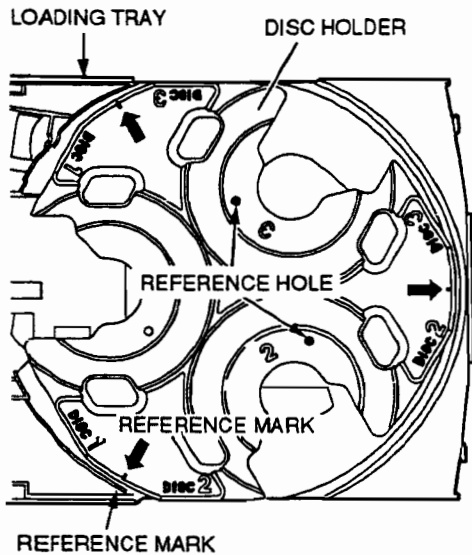


Fig. 3-11

Next, move the head of the GEAR HOLDER PART in the direction of the arrow before engaging the stoppers as shown in Fig. 3-12.

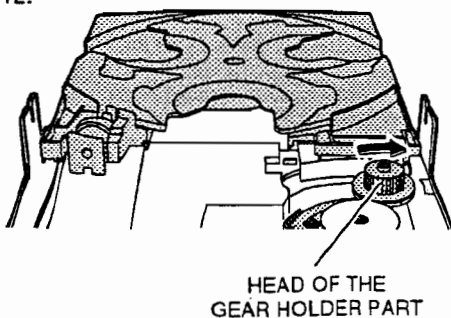


Fig. 3-12

### 3-1-6. Replacement of the TABLE MOTOR

- 1) Remove the TRAY BLOCK (refer to section 3-1-5).
- 2) Remove the DISC HOLDER retaining screw then remove the DISC HOLDER.

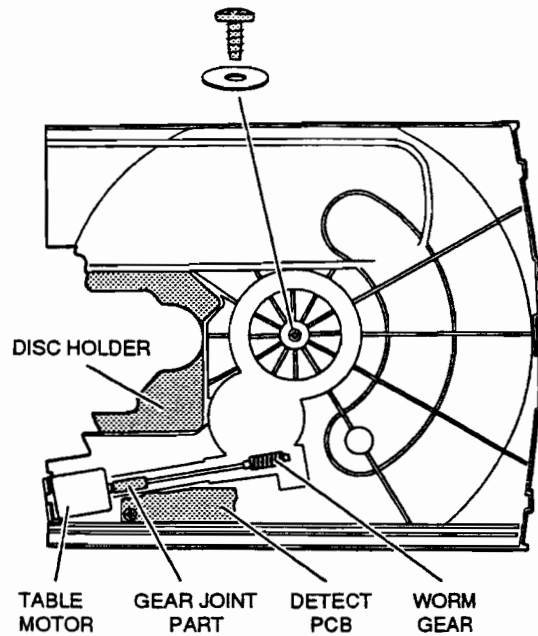


Fig. 3-13

- 3) Unsolder the leads of the TABLE MOTOR and remove the TABLE MOTOR PCB.

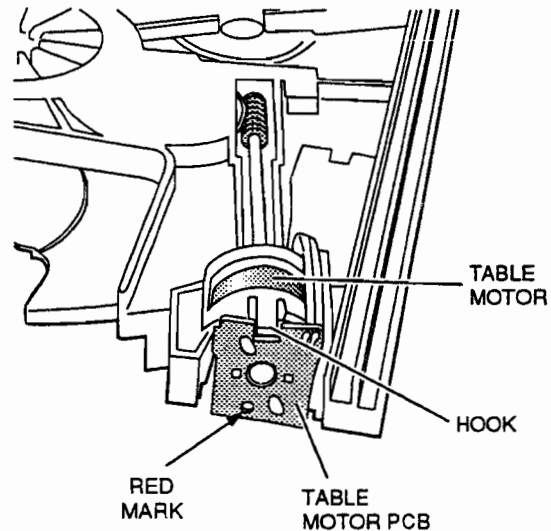


Fig. 3-14

- 4) Remove the TABLE MOTOR by pulling it out while opening the TABLE MOTOR retaining hook. Next, remove the WORM GEAR BLOCK by pulling the GEAR JOINT PART out and attach it to the new motor as shown in Fig. 3-13.
- 5) Reassemble in the reverse order.
  - When soldering the TABLE MOTOR PCB on the TABLE MOTOR, the TABLE MOTOR's red mark must be visible through the hole on the TABLE MOTOR PCB.
  - When attaching the DISC HOLDER on the LOADING TRAY, make sure to place the DISC HOLDER so that any one of the three reference marks aligns with the reference mark on the LOADING TRAY (any two reference holes on the DISC HOLDER align with the corresponding reference holes on the LOADING TRAY accordingly). (Refer to Fig. 3-11)

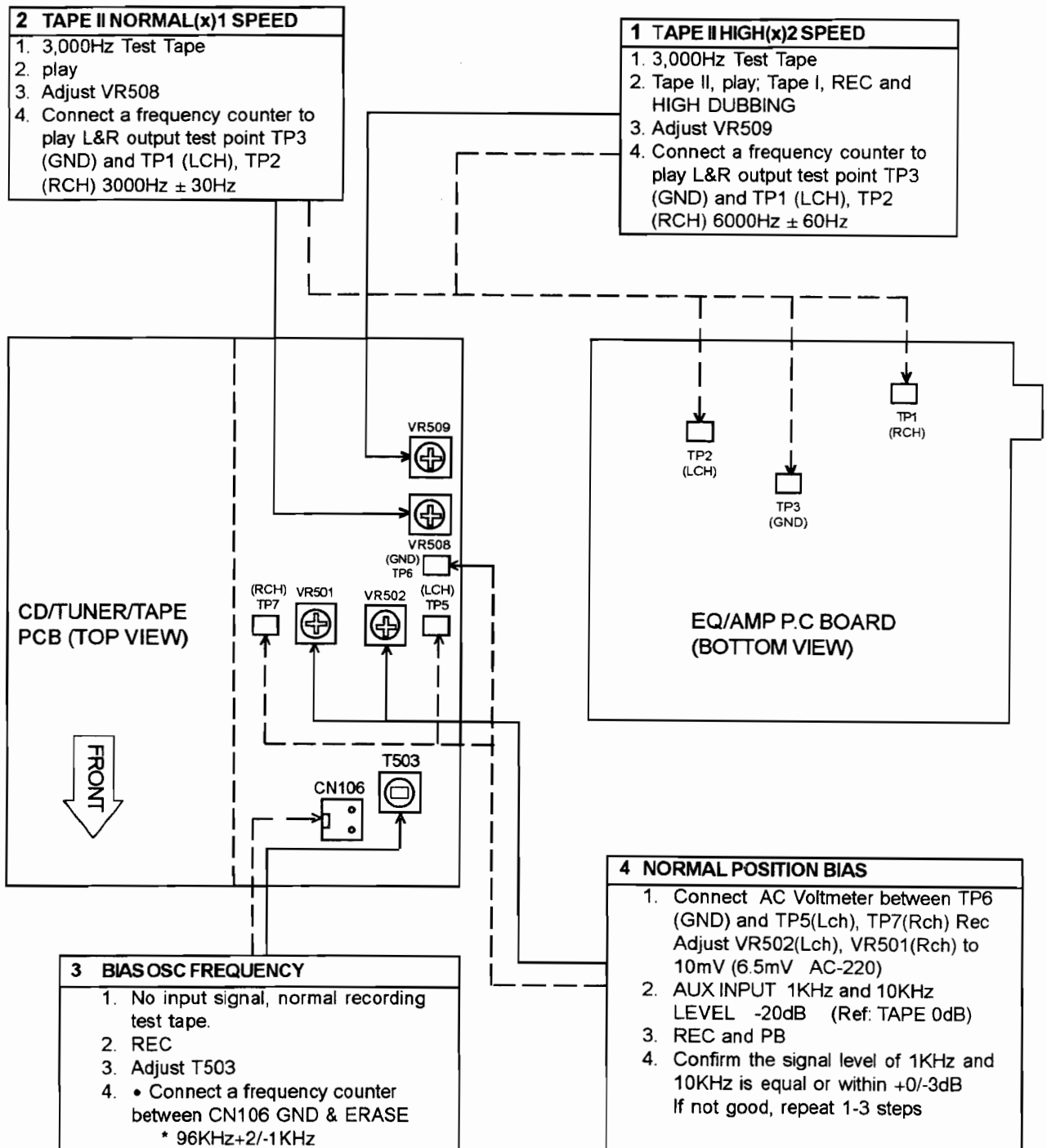
## IV. ELECTRICAL ADJUSTMENT

### 4-1. CASSETTE DECK ELECTRICAL ADJUSTMENT

**PRECAUTIONS:** Before adjustment, clean and demagnetize the heads and tape guides.

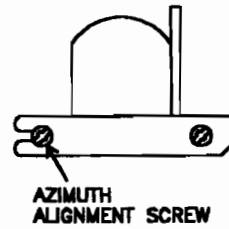
#### ADJUSTMENT STEP:

1. TEST TAPE/TEST CONDITON
2. MODE
3. CHECK POINT/ADJUSTMENT PART
4. REMARK (\*--->Test point ) AND RESULT (\*→Adjustment part)



### 5 HEAD AZIMUTH ALIGNMENT (TAPE I & II)

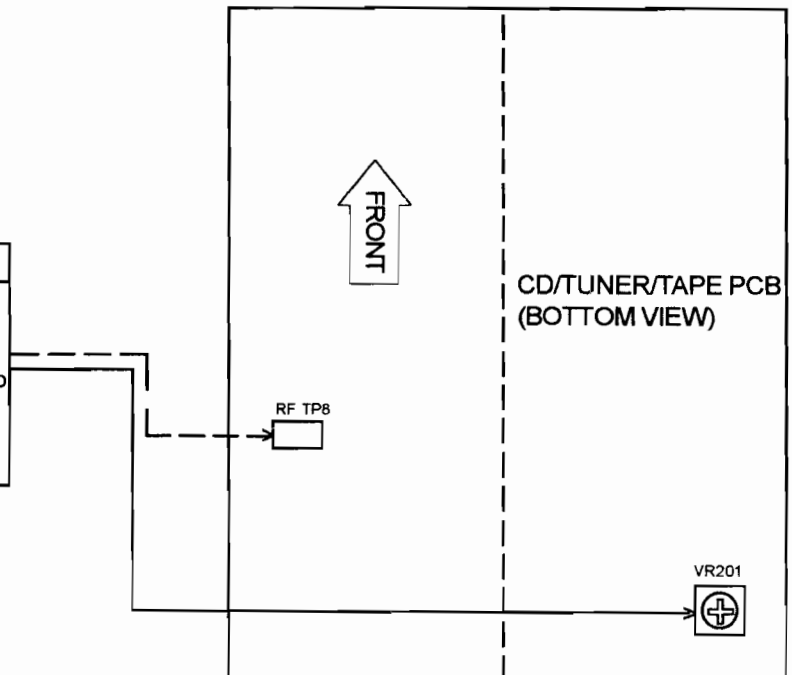
1. 10KHz Test Tape
2. play
3. Adjust Head Azimuth screw
4. Connect an oscilloscope to play L&R output test point TP1/TP2/TP3  
Maximum output level



## 4-2. CD ELECTRICAL ADJUST

### 6 FOCUS BIAS

1. Test disc SONY YEDS-18
2. CD play
3. Adjust VR201
4. Connect an 40MHz oscilloscope to the RF TP8 & GND, adjust the RF signal to maximum  
\*1.2V p-p (ONLY FOR REFERENCE)



## V. PARTS LIST

---

### ATTENTION

1. When placing an order for parts, be sure to list the part No., Model No. and the description of each part. Otherwise, the nondelivery of the part or the delivery of a wrong part may result.
2. Please make sure that part No. is correct when ordering.  
If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in parts list of preliminary service manual may have been the subject of changes, please use this parts list for all future reference.

### [NOTE]

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

### WARNING

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

### AVEERTISSEMENT

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



### 1. REMOTE P.C. BOARD

REF.NO.	PART NO.	DESCRIPTION
CF001	007-300455-63	RESONATOR CRK455 455KHz
IC001	033-806122-13	REMOTE TRANSMITTER UPD6122G-001
LED001	130-600101-10	INFRA RED EMITTINT DIODE EL-1L1
PCB	090-385604-01	REMOTE BOARD T=1.6mm 94HB (46X119mm)
Q001	031-468050-03	TRANSISTOR NPN KTC8050C
	210-010101-02S	REMOTE BATTERY COVER

### 2. ASS'Y KEY/DISPLAY P.C. BOARD

REF.NO.	PART NO.	DESCRIPTION
D413	030-560031-00	LED YELLOW DIODE "MYB31CA"
D401-412	030-560034-10	LED MYB34C YELLOW
D414-419	030-540034-04	LED MGB34D GREEN
FLT	035-131610-00	"SVA-16MM10"
HS SW	046-080001-00	PUSH SW VPS-800
IC401	033-002401-42	XL24C01A
IC403	034-B00501-12	MCU AKWBCA M38184MB-191FP
L401	005-101056-00	FIXED INDUCTOR COIL LONELY "SPO203-101J-7"
MIC JACK	061-121406-00	MIC JACK VERTICAL HSJ1406-01-010
MIC VOLUME	011-202298-00	ROTARY VOLUME 2KB "ALPS"
Q401-410	031-279014-032	TRANSISTOR NPN SS9014C
RH	036-600446-01	REMOCON RECEIVER SPS-446-1
SW402/403/404/414/412/ SW413/414/415/416/417/ SW418/423/424/425/426/427	046-101102-62	TACK SW 1T1102
SW408/419/420/428	046-101102-627	TACK SWITCH "I.T.1102P"
SW421/422	046-100116-48	TACK SW "TM116A"
X401	037-032768-10	CRYSTAL 32.768MHZ
X402	007-208000-06	CERAMIC RESONATOR CST 8.00 MTW

### 3. ASS'Y POWER AMP/EQ P.C BOARD

REF.NO.	PART NO.	DESCRIPTION
AC CORD(E1/E2/E3/Y7/U5/U8)	△ 071-669078-00	AC LINE CORD VDE 78" BLACK PLUG & PIN ASS'Y
AC CORD(B1/Y6)	△ 071-449078-20	AC CORD BS STAND W/5A 250V FUSE MOULDED PLUG 78" BLACK
AC COORD(S1)	△ 071-559078-20	AC LINE CORD SAA PLUG W/TERMINAL(24183BS-2) 78" BLACK
AC FILTER(E1/E2/E3/B1)	△ 002-300002-09	LINER FILTER COIL LF-4D-102
D700/706/707/710/712/726/ D728/729/732/733/734/747/ D750/761/762( for AC-320) D700/706/707/710/712/714/ D722/726/728/729/732/733/ D734/747( for AC-220)	031-174148-00	SILCON DIODE IN4148
D701/703/704/705/721	030-410062-00H	ZENER DIODE 7.5V
D702/709/715/718/719/720/ D725/730/741-744/D747 for AC-320)	030-314002-10	RECTIFIER DIODE IN4002
D708/713/731	030-410062-00H	ZENER DIODE 6.2V 500mW

D716	030-410270-01	ZENER DIODE 27V 0.5W
D717/724	030-410130-00H	ZENER DIODE 13V
D727	030-410051-00H	ZENER DIODE 5.1V 0.5W
D736-739	△ 030-315401-00	DIODE IN5401
D746	030-410039-00H	ZENER DIODE 3.9V 0.5W
FUSE 701(for AC-220)	△ 082-220500-13	FUSE 500mA/250V VDE
FUSE 701(for AC-320)	△ 082-220630-10	FUSE 630mA/250V VDE
FUSE 702	△ 082-221600-03	FUSE 1.6A/250V VDE
FUSE 703(U5/U8/Y6/Y7)	△ 082-221000-03	FUSE TIA1250V
HEAD PHONE	061-122101-00	PHONE JACK 3.5 DIA
IC701	033-314052-21	MC14052BCP DUAL 4-CH MULTIPLEXER
IC706	033-009260-14	TC9260P ELECTRONIC VOLUME
IC707(for AC-320)	033-218751-38	POWER AMP IC SI-18751 "SANKEN"
IC707(for AC-220)	033-202616-33Q	TDA2616Q PHILIPS
IC708	033-007338-11	AN7338K 4+1 PRESET EQ
IC709	033-507805-31	L7805CV VOLTAGE REGULATOR
IC702-IC704	033-204558-18	BA4558 DUAL AMP
IC705(for AC-220)	033-204558-18	BA4558 DUAL AMP
IC710(for AC-320)	033-218751-38	POWER AMP IC SI-18751 "SANKEN"
Q704/705(for AC-320)	031-211048-25	TRANSISTOR 2SA1048Y "TOSHIBA"
Q706(for AC-320)	031-241796-00	TRANSISTOR NPN 2SD1796 "SANKEN"
Q707(for AC-320)	031-221257-00	TRANSISTOR PNP 2SB1257 "SANKEN"
Q700/704-709/711/718	031-279014-03V	TRANSISTOR NPN SS9014C SAMSUNG
Q719/731/732(for AC-220)		
Q700Q711/718/731/	031-279014-03V	TRANSISTOR NPN SS9014C SAMSUNG
950/951(for AC-320)		
Q703(for AC-320)	031-440114-05V	TRANSISTOR DTC114ES-TP
Q703/708/724/725/726/	031-279015-03V	TRANSISTOR DNP SS9015C SAMSUNG
Q730(for AC-220)		
Q708/716/724/725/726/	031-279015-03V	TRANSISTOR DNP SS9015C SAMSUNG
Q730(for AC-310)		
Q710/713/715(for AC-320)	031-232458-25V	TRANSISTOR 2SC2458
Q712	031-278550-04V	TRANSISTOR PNP SS8550D SAMSUNG
Q721	031-278550-03V	TRANSISTOR CS8550C
Q722/727	031-221335-05	TRANSISTOR 2SB1335-T
Q728/729	031-278050-03V	TRANSISTOR SS8050C
RE701(for AC-220)	△ 006-110212-04	RELAY POW TV-3 "OSA-SS-212DM5"
R847/850/856	△ 013-220305-82	FUSING RESISTOR 22 OHM 1W
R908	△ 013-129305-62	FLAME PROOF FUSING RESISTOR 0.2 OHM 1W

#### 4. ASS'Y CD/TUNER/TAPE P.C. BOARD

CD		
REF. NO.	PART NO.	DESCRIPTION
D260/265/266/311/312/313	030-134148-00H	SILCON DIODE IN4148
D290-294	030-314002-10	DIODE IN4002
D310	030-410051-00H	ZENER DIODE 5.1V 0.5W
D4410	030-600048-00	INFRA RAD LED GL4800
IC200	033-601782-64Q	CXA1782BQ/BR

IC201	033-209258-61	KA9258D
IC202	033-K02508-64	CXD2508A4
IC204	033-206247-18	MOTOR DRIVER BA6247
IC260	033-204558-18	DUAL AMP BA4558
TR200	031-211317-00V	TRANSISTOR 2SA1317
TR201/202	031-279014-03V	TRANSISTOR NPN SS9014C SAMSUNG
TR260	031-430144-05V	TRANSISTOR DTA144ES
TR261/262/290/313/314	031-440114-60	TRANSISTOR DTC114TS
TR292	031-221425-00V	TRANSISTOR 2SB1245
TR311	031-233330-00V	TRANSISTOR 2SC3330
TR312	031-203536-06V	TRANSISTOR 536FS
TR44 10	031-594800-00	PHOTO TRANS DIODE PT 4800
VR201	012-103330-06	SEMI-FIXED RES 13-10K OHM
X240	007-201693-06	RESONATOR OSC CSA 16.93MHz

**TUNER**

TU-A (E1/E2/B1/E3)	103-146601-04	TUNER ASS'Y FMMW/LW TFCB3E720A
TU-B (Y6/U5/U8/S1)	103-146401-04	TUNER ASS'Y FM/AM TFCB1U717A
TU-C (Y7)	103-146101-04	TUNER ASS'Y FM/MW/SW TECB1S713A
ANT TERMINAL	061-480312-00	ANTENNA TERMINAL "HSP-312V-02"
AUX TERMINAL	071-782421-00	PUSH TERMINAL 2PIN HSP-242V1-05 "KUNMING"
D101	030-134148-00H	SILCON DIODE IN4148
D102	030-410062-00H	ZENER DIODE 6.2V
D502/503	030-130024-00H	SILCON DIODE CDG24
Q101/106	031-278050-03V	TRANSISTOR 538050C
Q102/103/105	031-279014-03V	TRANSISTOR NPN SS9014 SAMSUNG
Q104	031-279015-03V	TRANSISTOR PNP SS9015C SAMSUNG

**TAPE**

D501/513/514/516/517/518	030-134148-00H	SILCON DIODE IN4148
D519	030-410100-00H	ZENER DIODE 10V 5%
IC501	033-203246-16	LA3246
IC502	033-207324-14	TA73249
IC503	033-203241-16	LA3241
IC504	033-204558-18	BA4558
IC505	033-201330-13	UPC1330
L502	005-271101-00	FIXED INDUCTOR COIL 270MH
Q503/504/508/511/512/ Q516/517/521/522/523/ Q525/526/527/530	031-279014-03V	TRANSISTOR SS9014C
Q510/513/529	031-279015-03V	TRANSISTOR SS90115C
Q518	031-370435-00	TRANSISTOR BD435
Q524	031-278550-04V	TRANSISTOR SS8550D
T501/502/504/505	007-100100-009	BIAS TRAP COIL 100Z-121
T503	002-815100-05	REC OSC IET 510-067
VR501/502	112-103541-06	SEMI-FIXED RES 100K
VR508	012-103330-06	SEMI-FIXED RESISTOR 10KB VERTICAL
VR509	012-502310-06	SEMI-FIXED RESISTOR 5KB VERTICAL

**5. PC BOARD BLOCK**

REF.NO	PART NO.	DESCRIPTION
1-a(B1/E1/E2/E3 for AC-320)	771-AC32001-04	TC-DK P.C. BOARD
1-b(S1/U5/U8/Y6 for AC-320)	771-AC32001-10	TC-DK P.C. BOARD
1-c( Y7 for AC-320)	771-AC32001-13	TC-DK P.C. BOARD
1-d(ALL VERSION)	771-AC32001-05	CD CONNECTOR P.C. BOARD
2-a(B1/E1/E2/E3 for AC-220)	771-AC22001-04	TC-DK P.C. BOARD
2-b(S1/U5/U8/Y6 for AC-220)	771-AC22001-10	TC-DK P.C. BOARD
2-c(Y7 for AC-220)	771-AC22001-12	TC-DK P.C. BOARD

3-a(B1/E1/E2/E3 )	771-AC32001-06	KEY &FLD P.C. BOARD
3-b(U8)	771-AC32001-12	KEY &FLD P.C. BOARD
3-c(Y7)	771-AC32001-14	KEY &FLD P.C. BOARD
3-d(S1/U5/Y6)	771-AC32001-15	KEY &FLD P.C. BOARD
4-a(B1/E1/E2/E3 for AC-320)	771-AC32001-01	AMP MAIN P.C. BOARD
4-b(S1/U5/U8/Y6 for AC-320)	771-AC32001-08	AMP MAIN P.C. BOARD
5-a(B1/E1/E2/E3 for AC-220)	771-AC32001-01	AMP MAIN P.C. BOARD
5-b(S1/U5/U8/Y6 for AC-220)	771-AC32001-08	AMP MAIN P.C. BOARD
6-a(B1/E1/E2/E3 for AC-320)	771-AC32001-02	POWER TRANS. PRIMARY P.C. BOARD
6-b(S1/U5/U8/Y6 for AC-320)	771-AC32001-09	POWER TRANS. PRIMARY P.C. BOARD
6-c( Y7 for AC-320)	771-AC32001-11	POWER TRANS. PRIMARY P.C. BOARD
7-a(B1/E1/E2/E3 for AC-220)	771-AC22001-02	POWER TRANS. PRIMARY P.C. BOARD
7-b(S1/U5/U8/Y6 for AC-220)	771-AC22001-09	POWER TRANS. PRIMARY P.C. BOARD
7-c(Y7 for AC-220)	771-AC22001-11	POWER TRANS. PRIMARY P.C. BOARD
8(ALL VERSION)	771-AC32001-03	POWER TRANS. SSECONDARY P.C. BOARD

## 6. ACCESSORY

REF.NO	PART NO.	DESCRIPTION
1	790-010103-02	REMOCON(RC-S320)

## 7. OTHERS

### TRANS. FORMER

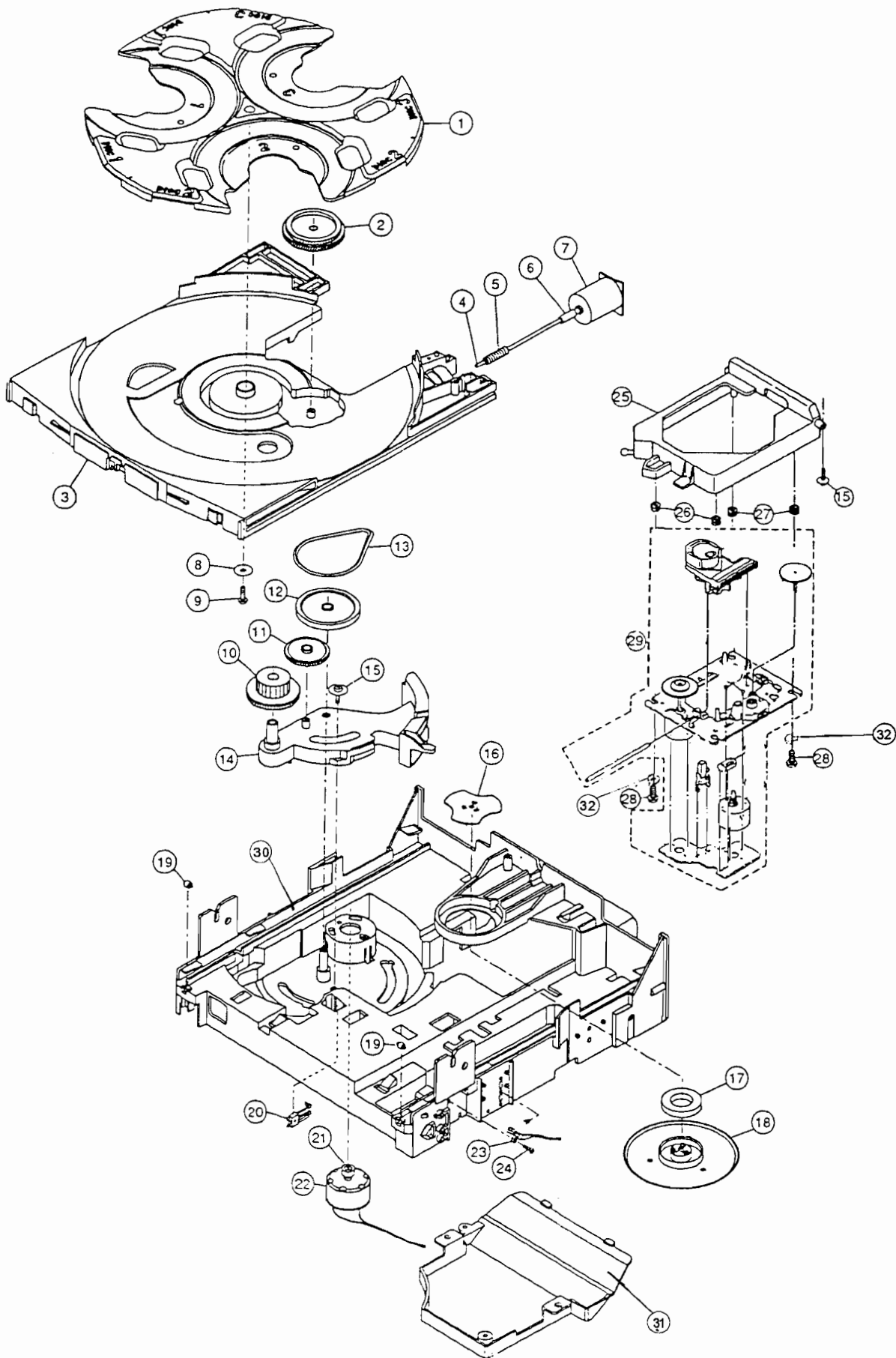
(for AC-220)	⚠ 001-66AC22022	TRANS. FORMER 230V/50Hz
(for AC-320)	⚠ 001-66AC32022	TRANS. FORMER 230V/50Hz
(for AC-220)	⚠ 001-66AA01-06	TRANS. FORMER MULTIPLE VOLTAGE
(for AC-320)	⚠ 001-66AA02-06	TRANS. FORMER MULTIPLE VOLTAGE

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## 8. CD MECHANISM

REF. NO.	PART NO.	DESCRIPTION
1	229-385602-01S	HOLDERDISC
2	288-385601-01Z	GEAR WORMWHEEL TABLE
3	220-385602-01S	TRAY LOADING
4	438-385601-01	SHAFT
5	288-385604-01Z	WORM
6	239-385601-01Z	JOINT
7	743-037012-54	MOTOR PF-370CA-15370 12V
8	634-150030-08	PW30X150X080 THK
9	619-300208-00	TAPING SCREW 3X1.25X8mm
10	288-385605-01Z	GEAR LOADING (A)
11	288-385606-01Z	GEAR LOADING(B)
12	288-385602-01Z	PULLEY GEAR
13	334-385604-01	BELT LOADING
14	288-385603-01S	HOLDER GEAR
15	615-300308-00	BW/T 3X8mm
16	428-385603-01	PLATE CLAMPER
17	489-383801-01	MAGNET DISC CLAMP
18	229-385606-01S	CLAMPER
19	259-385602-01Z	ROLLER
20	047-102127-00	LEAF SWITCH LSA-2127E
21	243-385601-01Z	PULLEY
22	743-050009-54	MOTOR RF-500TB-14415 D/V
23	047-101119-01	LEAF SWITCH ISA-1119H
24	610-260208-10	R/T 2.6X8mm
25	220-385601-01S	HOLDER TRAVERSE
26	334-385606-01	INSULATOR
27	334-385606-01	INSULATOR
28	610-200216-00	SELF-SCREW TAPING B/T 2.0X16
29	747-021301-02	MECHA TRAVERSE KSM213CCM
30	220-385603-01R	CHASSIS MAIN
31	219-385601-01Z	CD MECH COVER
32	634-100027-05	METAL WASHER 10X2.7X0.5

CD MECHANISM BLOCK



**9. AC-220 (E1, E2, E3, B1, S1)**

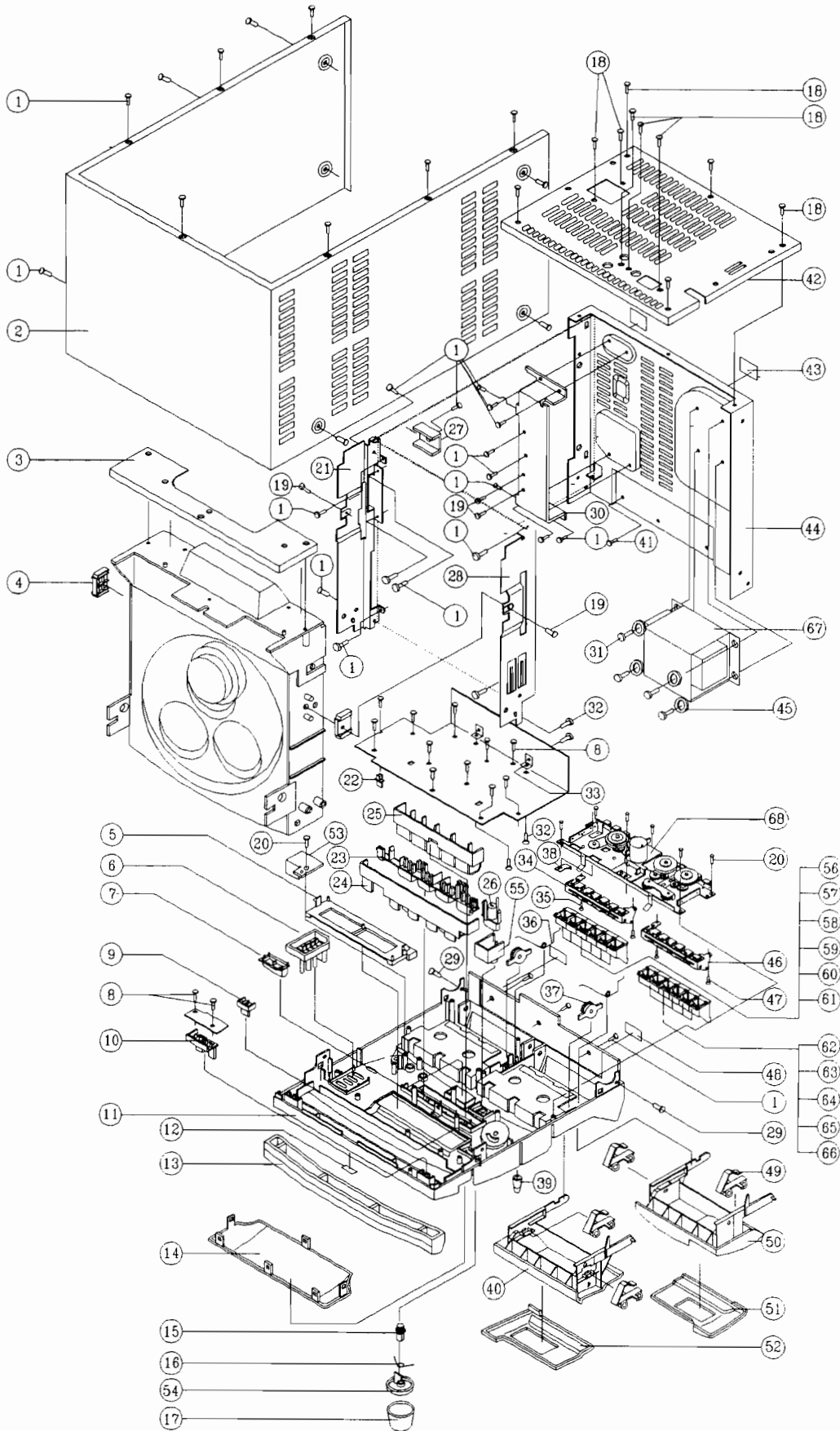
<b>REF. NO.</b>	<b>PARTS NO.</b>	<b>DESCRIPTION</b>
1	619-300208-10	TAPPING SCREW C TYPE BID H 3X8MM NICKEL PLATE
2	402-385002-02	MAIN COVER
3	495-385017-01	REAR CAB SUB
4	284-385001-01R	MECH SPACER BLACK
5	248-AA0201-01S	FLD HOLDER BLACK
6	291-AA0201-01S	PROG BUTTON
7	292-AA0202-01S	POWER BUTTON
8	610-300108-10	SELF-TAPPING SCREW R/T 3X8MM WHITE
9	291-AA0202-01S	BALANCE BUTTON
10	291-AA0301-01S	DISC BUTTON
11	200-AA0201-01R	FRONT CAB
12	286-385001-02S	NAME PLATE "AKAI"
13	219-AA0301-01R	CD DOOR (B)
14	263-AA0201-01K	FRONT CAB. LENS
15	430-385001-01	VOLUME SHAFT ASS'Y
16	477-380501-01	VOLUME SPRING
17	273-AA0201-01S	VOLUME KNOB
18	606A301208-00	SELF-TAPPING SCREW R/T 3X10 ZINE PLATE
19	619-300212-00	TAPING SCREW B/H 3X12mm ZINE PLATE
20	610-300110-10	SELF TAPING SCREW R/T 3X10mm WHITE
21	428-385001-01	CD BKT "L"
22	275-AA0201-01S	H.S.DUBBING BUTTON
23	229-AA0201-01S	LED BKT WHITE A
24	277-AA0201-01S	FUNCTION BUTTON MILKY WHITE
25	291-AA0203-01S	CD FUNCTION BUTTON "B"
26	229-AA0202-01S	LED BKT B
27	481-380502-01	HEAT SINK
28	428-385002-01	CD BKT "R"
29	619-300306-00	TAPING SCREW P TYPE FLAT H 3X6MM ZINCE PLATE BLK
30	481-385011-01	HEAT SINK
31	602-407008-60A	TAPPING SCREW C TYPE BID H 3X1.25PX8MM ZINCE PLATE
32	600-305006-10	MACHINE SCREW P/H 3X6 MM WHITE
33	428-385601-01	PCB MTG BKT
34	420-331601-02F	CASS KEY BKT ASS'Y A/S
35	608-204007-10G	MACHINE SCREW S.P/H 2X7MM
36	471-AA0201-01	CASS DOOR SPRING
37	703-385002-01	DAMPER GEAR ASS'Y
38	428-385605-01	DECK MTG BKT
39	292-AA0201-01S	MIC MIXING KNOB
40	211-AA0201-01S	CASS DOOR "L"
41	608-400706-60	TAPING SCREW P TYPE BID H 4X6MM ZINCE PLATE BLACK
42-a(E1)	495-385001-08	REAR CAB
42-b(E2/E3/B1)	495-385001-16	REAR CAB
42-c(S1)	495-385001-18	REAR CAB

43	330-385002-01	REAR CUSHION FOOT
44	493-385011-01	METAL BOTTOM CAB
45	633-071040-10	SPRING WASHER
46	420-380601-01	CASS KEY BKT ASS'Y A/R
47	608-204009-10G	MACHINE SCREW 2X9MM
48	330-385001-01	FRONT CUSHION FOOT
49	259-AA0201-01S	CASS TAPE SPRING BLACK
50	211-AA0202-02S	CASS DOOR "R"
51	261-AA0202-01K	CASS DOOR LENS "R"
52	261-AA0201-01K	CASS DOOR LENS "L"
53	428-AA0201-01	PHONE JACK BKT
54	273-AA0202-01S	VOLUME RING
55	291-AA0204-01S	SUPPER BASE KNOB
56	272-AA0201-01S	CASS KEY A
57	272-AA0202-01S	CASS KEY B
58	272-AA0203-01S	CASS KEY C
59	272-AA0204-01S	CASS KEY D
60	272-AA0205-01S	CASS KEY E
61	272-AA0206-01S	CASS KEY F
62	272-AA0101-01S	CASS KEY M
63	272-AA0209-01S	CASS KEY I
64	272-AA020A-01S	CASS KEY J
65	272-AA020B-01S	CASS KEY K
66	272-AA020C-01S	CASS KEY L
67	⚠ 001-66AC22022	POWER TRANSFORMER
68	741-313858-19	CASSETTE MECHA BLOCK



# FINAL ASSEMBLY BLOCK

MODEL: AC-220 E1, E2, E3, B1, S1



**10. AC-220 (Y6, Y7, U5, U8)**

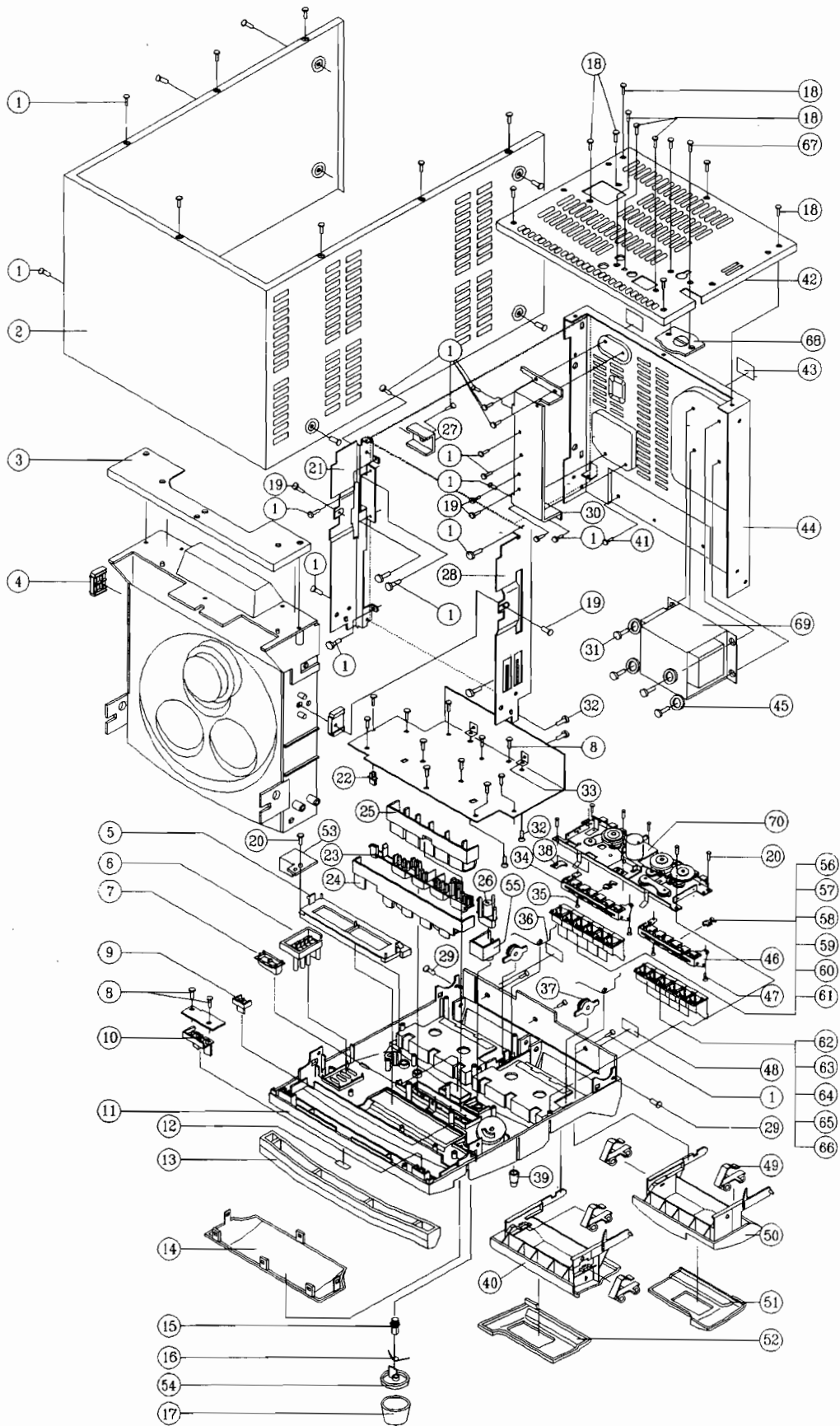
<b>REF.NO.</b>	<b>PARTS NO.</b>	<b>DESCRIPTION</b>
1	619-300208-10	TAPPING SCREW C TYPE BID H 3X8MM NICKEL PLATE
2	402-385002-02	MAIN COVER
3	495-385017-01	REAR CAB SUB
4	284-385001-01R	MECH SPACER BLACK
5	248-AA0201-01S	FLD HOLDER BLACK
6	291-AA0201-01S	PROG BUTTON
7	292-AA0202-01S	POWER BUTTON
8	610-300108-10	SELF-TAPPING SCREW R/T 3X8MM WHITE
9	291-AA0202-01S	BALANCE BUTTON
10	291-AA0301-01S	DISC BUTTON
11	200-AA0201-01R	FRONT CAB
12	286-385001-02S	NAME PLATE "AKAI"
13	219-AA0301-01R	CD DOOR (B)
14	263-AA0201-01K	FRONT CAB. LENS
15	430-385001-01	VOLUME SHAFT ASS'Y
16	477-380501-01	VOLUME SPRING
17	273-AA0201-01S	VOLUME KNOB
18	606A301208-00	SELF-TAPPING SCREW R/T 3X10 ZINE PLATE
19	619-300212-00	TAPING SCREW B/H 3X12mm ZINE PLATE
20	610-300110-10	SELF TAPING SCREW R/T 3X10mm WHITE
21	428-385001-01	CD BKT "L"
22	275-AA0201-01S	H.S.DUBBING BUTTON
23	229-AA0201-01S	LED BKT WHITE A
24	277-AA0201-01S	FUNCTION BUTTON MILKY WHITE
25	291-AA0203-01S	CD FUNCTION BUTTON "B"
26	229-AA0202-01S	LED BKT B
27	481-380502-01	HEAT SINK
28	428-385002-01	CD BKT "R"
29	619-300306-00	TAPING SCREW P TYPE FLAT H 3X6MM ZINCE PLATE BLK
30	481-385011-01	HEAT SINK
31	602-407008-60A	TAPPING SCREW C TYPE BID H 3X1.25PX8MM ZINCE PLATE
32	600-305006-10	MACHINE SCREW P/H 3X6 MM WHITE
33	428-385601-01	PCB MTG BKT
34	420-331601-02F	CASS KEY BKT ASS'Y A/S
35	608-204007-10	GMACHINE SCREW S.P/H 2X7MM
36	471-AA0201-01	CASS DOOR SPRING
37	703-385002-01	DAMPER GEAR ASS'Y
38	428-385605-01	DECK MTG BKT
39	292-AA0201-01S	MIC MIXING KNOB
40	211-AA0201-01S	CASS DOOR "L"
41	608-400706-60	TAPING SCREW P TYPE BID H 4X6MM ZINCE PLATE BLACK
42-a(U8/Y7)	495-385002-14	REAR CAB
42-b(U5/Y6)	495-385002-13	REAR CAB

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43	330-385002-01	REAR CUSHION FOOT
44	493-385011-01	METAL BOTTOM CAB
45	633-071040-10	SPRING WASHER
46	420-380601-01	CASS KEY BKT ASS'Y A/R
47	608-204009-10G	MACHINE SCREW 2X9MM
48	330-385001-01	FRONT CUSHION FOOT
49	259-AA0201-01S	CASS TAPE SPRING BLACK
50	211-AA0202-02S	CASS DOOR "R"
51	261-AA0202-01K	CASS DOOR LENS "R"
52	261-AA0201-01K	CASS DOOR LENS "L"
53	428-AA0201-01	PHONE JACK BKT
54	273-AA0202-01S	VOLUME RING
55	291-AA0204-01S	SUPPER BASE KNOB
56	272-AA0201-01S	CASS KEY A
57	272-AA0202-01S	CASS KEY B
58	272-AA0203-01S	CASS KEY C
59	272-AA0204-01S	CASS KEY D
60	272-AA0205-01S	CASS KEY E
61	272-AA0206-01S	CASS KEY F
62	272-AA0101-01S	CASS KEY M
63	272-AA0209-01S	CASS KEY I
64	272-AA020A-01S	CASS KEY J
65	272-AA020B-01S	CASS KEY K
66	272-AA020C-01S	CASS KEY L
67	606-305008-00	TAPPING SCREW B/H 3X8mm ZINE PLATE
68	△ 040-024910-00	VOLTAGE SELECTOR
69	△ 001-66AA01-06	POWER TRANSFORMER
70	741-313858-19	CASSETTE MECHA BLOCK

# FINAL ASSEMBLY BLOCK

MODEL: AC-220 Y6, Y7, U5, U8



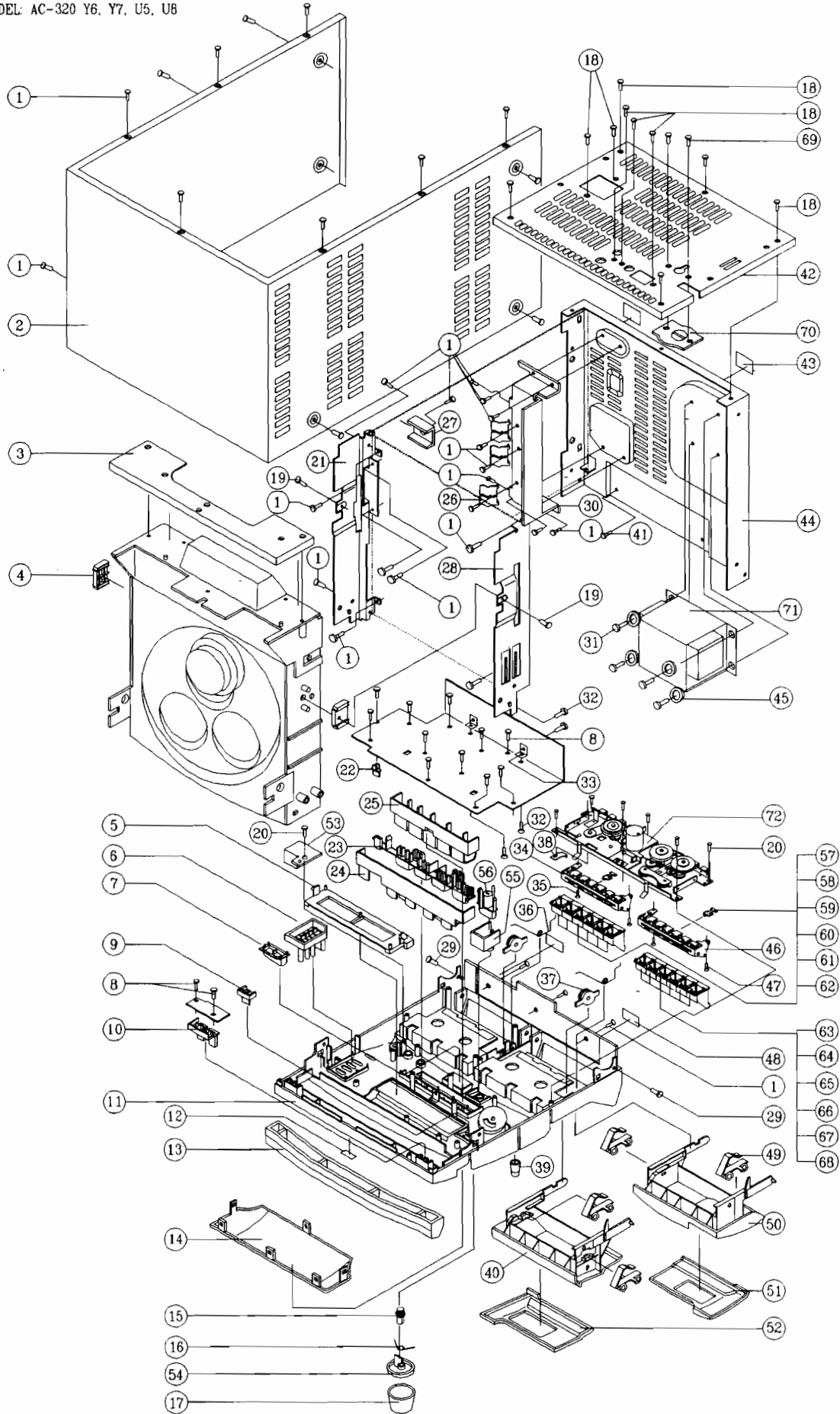
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**11. AC-320 (E1, E2, E3, B1, S1)**

<b>REF. NO.</b>	<b>PARTS NO.</b>	<b>DESCRIPTION</b>
1	619-300208-10	TAPPING SCREW C TYPE BID H 3X8MM NICKEL PLATE
2	402-385002-02	MAIN COVER
3	495-385017-01	REAR CAB SUB
4	284-385001-01R	MECH SPACER BLACK
5	248-AA0201-01S	FLD HOLDER BLACK
6	291-AA0201-01S	PROG BUTTON
7	292-AA0202-01S	POWER BUTTON
8	610-300108-10	SELF-TAPPING SCREW R/T 3X8MM WHITE
9	291-AA0202-01S	BALANCE BUTTON
10	291-AA0301-01S	DISC BUTTON
11	200-AA0201-02R	FRONT CAB
12	286-385001-02S	NAME PLATE "AKAI"
13	219-AA0301-01R	CD DOOR (B)
14	263-AA0201-01K	FRONT CAB. LENS
15	430-385001-01	VOLUME SHAFT ASS'Y
16	477-380501-01	VOLUME SPRING
17	273-AA0201-01S	VOLUME KNOB
18	606A301208-00	SELF-TAPPING SCREW R/T 3X10 ZINE PLATE
19	619-300212-00	TAPING SCREW B/H 3X12mm ZINE PLATE
20	610-300110-10	SELF TAPING SCREW R/T 3X10mm WHITE
21	428-385001-01	CD BKT "L"
22	275-AA0201-01S	H.S.DUBBING BUTTON
23	229-AA0201-01S	LED BKT WHITE A
24	277-AA0201-01S	FUNCTION BUTTON MILKY WHITE
25	291-AA0203-01S	CD FUNCTION BUTTON "B"
26	428-385003-01	HOLDER BKT
27	481-380502-01	HEAT SINK
28	428-385002-01	CD BKT "R"
29	619-300306-00	TAPING SCREW P TYPE FLAT H 3X6MM ZINCE PLATE BLK
30	481-AA0201-01	HEAT SINK
31	602-407008-60A	TAPPING SCREW C TYPE BID H 3X1.25PX8MM ZINCE PLATE
32	600-305006-10	MACHINE SCREW P/H 3X6 MM WHITE
33	428-385601-01	PCB MTG BKT
34	420-331601-02F	CASS KEY BKT ASS'Y A/S
35	608-204007-10G	MACHINE SCREW S.P/H 2X7MM
36	471-AA0201-01	CASS DOOR SPRING
37	703-385002-01	DAMPER GEAR ASS'Y
38	428-385605-01	DECK MTG BKT
39	292-AA0201-01S	MIC MIXING KNOB
40	211-AA0201-01S	CASS DOOR "L"
41	608-400706-60	TAPING SCREW P TYPE BID H 4X6MM ZINCE PLATE BLACK
42-a(E1)	495-385001-08	REAR CAB
42-b(E2/E3/B1)	495-385001-15	REAR CAB

42-c(S1)	495-385001-17	REAR CAB
43	330-385002-01	REAR CUSHION FOOT
44	493-385011-01	METAL BOTTOM CAB
45	633-071040-10	SPRING WASHER
46	420-380601-01	CASS KEY BKT ASS'Y A/R
47	608-204009-10G	MACHINE SCREW 2X9MM
48	330-385001-01	FRONT CUSHION FOOT
49	259-AA0201-01S	CASS TAPE SPRING BLACK
50	211-AA0202-02S	CASS DOOR "R"
51	261-AA0202-02K	CASS DOOR LENS "R"
52	261-AA0201-02K	CASS DOOR LENS "L"
53	428-AA0201-01	PHONE JACK BKT
54	273-AA0202-01S	VOLUME RING
55	291-AA0204-01S	SUPPER BASE KNOB
56	229-AA0202-01S	LED BKT B
57	272-AA0201-01S	CASS KEY A
58	272-AA0202-01S	CASS KEY B
59	272-AA0203-01S	CASS KEY C
60	272-AA0204-01S	CASS KEY D
61	272-AA0205-01S	CASS KEY E
62	272-AA0206-01S	CASS KEY F
63	272-AA0207-01S	CASS KEY G
64	272-AA0208-01S	CASS KEY H
65	272-AA0209-01S	CASS KEY I
66	272-AA020A-01S	CASS KEY J
67	272-AA020B-01S	CASS KEY K
68	272-AA020C-01S	CASS KEY L
69	△ 001-66AC32022	POWER TRANSFORMER
70	741-310521-50	CASSETTE MECHA BLOCK

FINAL ASSEMBLY BLOCK  
 MODEL: AC-320 Y6, Y7, U5, U8



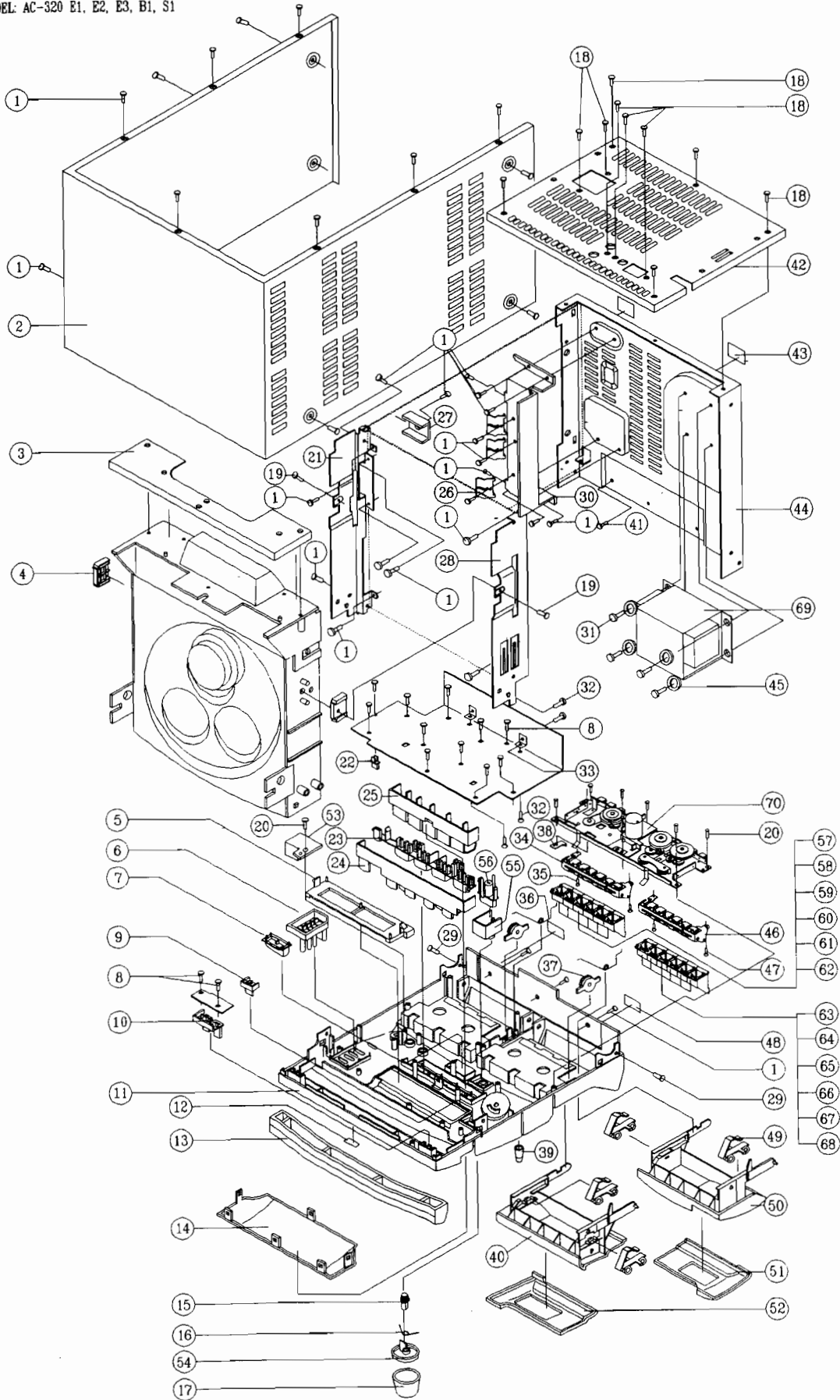
**12. AC-320(Y6, Y7, U5, U8)**

<b>REF. NO.</b>	<b>PARTS NO.</b>	<b>DESCRIPTION</b>
1	619-300208-10	TAPPING SCREW C TYPE BID H 3X8MM NICKEL PLATE
2	402-385002-02	MAIN COVER
3	495-385017-01	REAR CAB SUB
4	284-385001-01R	MECH SPACER BLACK
5	248-AA0201-01S	FLD HOLDER BLACK
6	291-AA0201-01S	PROG BUTTON
7	292-AA0202-01S	POWER BUTTON
8	610-300108-10	SELF-TAPPING SCREW R/T 3X8MM WHITE
9	291-AA0202-01S	BALANCE BUTTON
10	291-AA0301-01S	DISC BUTTON
11	200-AA0201-02R	FRONT CAB
12	286-385001-02S	NAME PLATE "AKAI"
13	219-AA0301-01R	CD DOOR (B)
14	263-AA0201-01K	FRONT CAB. LENS
15	430-385001-01	VOLUME SHAFT ASS'Y
16	477-380501-01	VOLUME SPRING
17	273-AA0201-01S	VOLUME KNOB
18	606A301208-00	SELF-TAPPING SCREW R/T 3X10 ZINE PLATE
19	619-300212-00	TAPING SCREW B/H 3X12mm ZINE PLATE
20	610-300110-10	SELF TAPING SCREW R/T 3X10mm WHITE
21	428-385001-01	CD BKT "L"
22	275-AA0201-01S	H.S.DUBBING BUTTON
23	229-AA0201-01S	LED BKT WHITE A
24	277-AA0201-01S	FUNCTION BUTTON MILKY WHITE
25	291-AA0203-01S	CD FUNCTION BUTTON "B"
26	428-385003-01	HOLDER BKT
27	481-380502-01	HEAT SINK
28	428-385002-01	CD BKT "R"
29	619-300306-00	TAPING SCREW P TYPE FLAT H 3X6MM ZINCE PLATE BLK
30	481-AA0201-01	HEAT SINK
31	602-407008-60A	TAPPING SCREW C TYPE BID H 3X1.25PX8MM ZINCE PLATE
32	600-305006-10	MACHINE SCREW P/H 3X6 MM WHITE
33	428-385601-01	PCB MTG BKT
34	420-331601-02F	CASS KEY BKT ASS'Y A/S
35	608-204007-10G	MACHINE SCREW S.P/H 2X7MM
36	471-AA0201-01	CASS DOOR SPRING
37	703-385002-01	DAMPER GEAR ASS'Y
38	428-385605-01	DECK MTG BKT
39	292-AA0201-01S	MIC MIXING KNOB
40	211-AA0201-01S	CASS DOOR "L"
41	608-400706-60	TAPING SCREW P TYPE BID H 4X6MM ZINCE PLATE BLACK
42-a(U8/Y7)	495-385002-12	REAR CAB
42-b(U5/Y6)	495-385002-11	REAR CAB

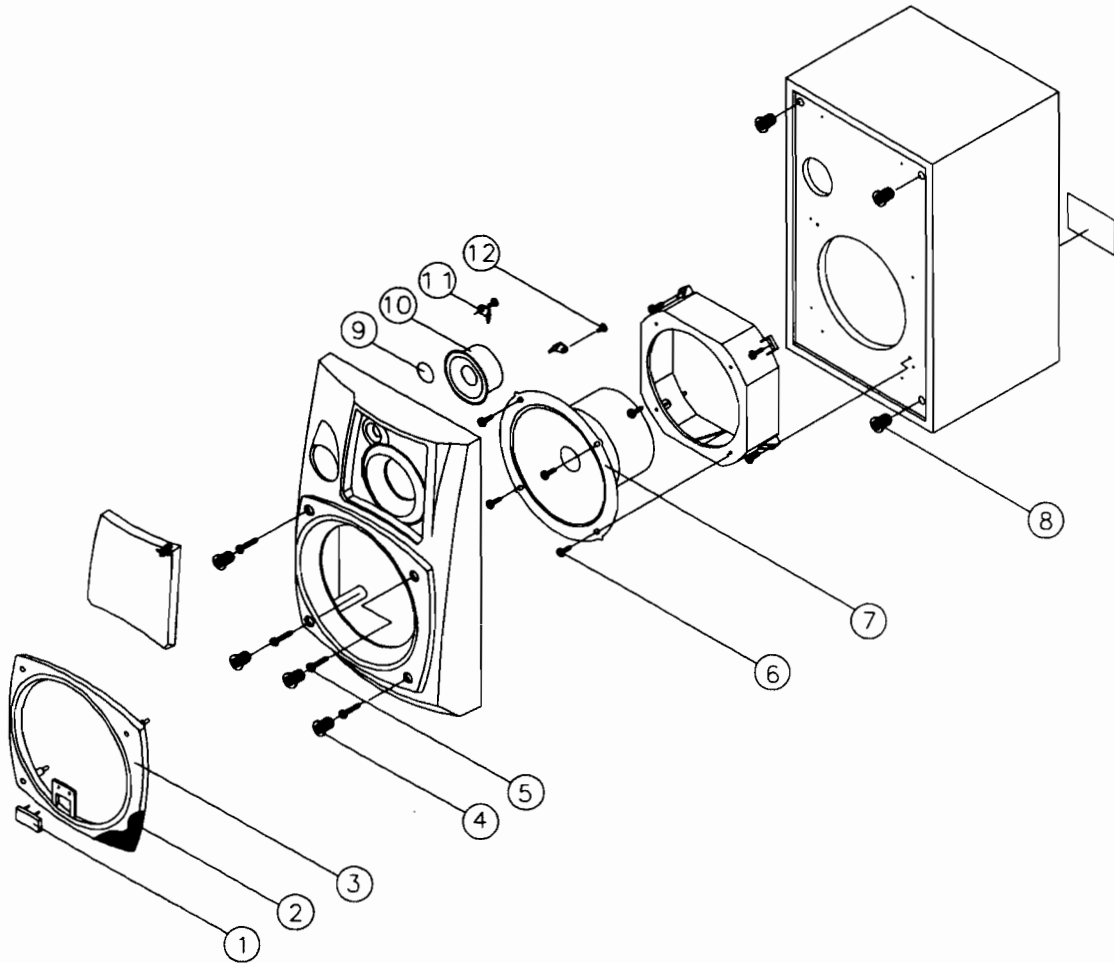


43	330-385002-01	REAR CUSHION FOOT
44	493-385011-01	METAL BOTTOM CAB
45	633-071040-10	SPRING WASHER
46	420-380601-01	CASS KEY BKT ASS'Y A/R
47	608-204009-10G	MACHINE SCREW 2X9MM
48	330-385001-01	FRONT CUSHION FOOT
49	259-AA0201-01S	CASS TAPE SPRING BLACK
50	211-AA0202-02S	CASS DOOR "R"
51	261-AA0202-02K	CASS DOOR LENS "R"
52	261-AA0201-02K	CASS DOOR LENS "L"
53	428-AA0201-01	PHONE JACK BKT
54	273-AA0202-01S	VOLUME RING
55	291-AA0204-01S	SUPPER BASE KNOB
56	229-AA0202-01S	LED BKT B
57	272-AA0201-01S	CASS KEY A
58	272-AA0202-01S	CASS KEY B
59	272-AA0203-01S	CASS KEY C
60	272-AA0204-01S	CASS KEY D
61	272-AA0205-01S	CASS KEY E
62	272-AA0206-01S	CASS KEY F
63	272-AA0207-01S	CASS KEY G
64	272-AA0208-01S	CASS KEY H
65	272-AA0209-01S	CASS KEY I
66	272-AA020A-01S	CASS KEY J
67	272-AA020B-01S	CASS KEY K
68	272-AA020C-01S	CASS KEY L
69	606-305008-00	TAPPING SCREW B/H 3X8mm ZINE PLATE
70	△ 040-024910-00	VOLTAGE SELECTOR
71	△ 001-66AA02-06	POWER TRANSFORMER
72	741-310521-50	CASSETTE MECHA BLOCK

FINAL ASSEMBLY BLOCK  
 MODEL: AC-320 E1, E2, E3, B1, S1

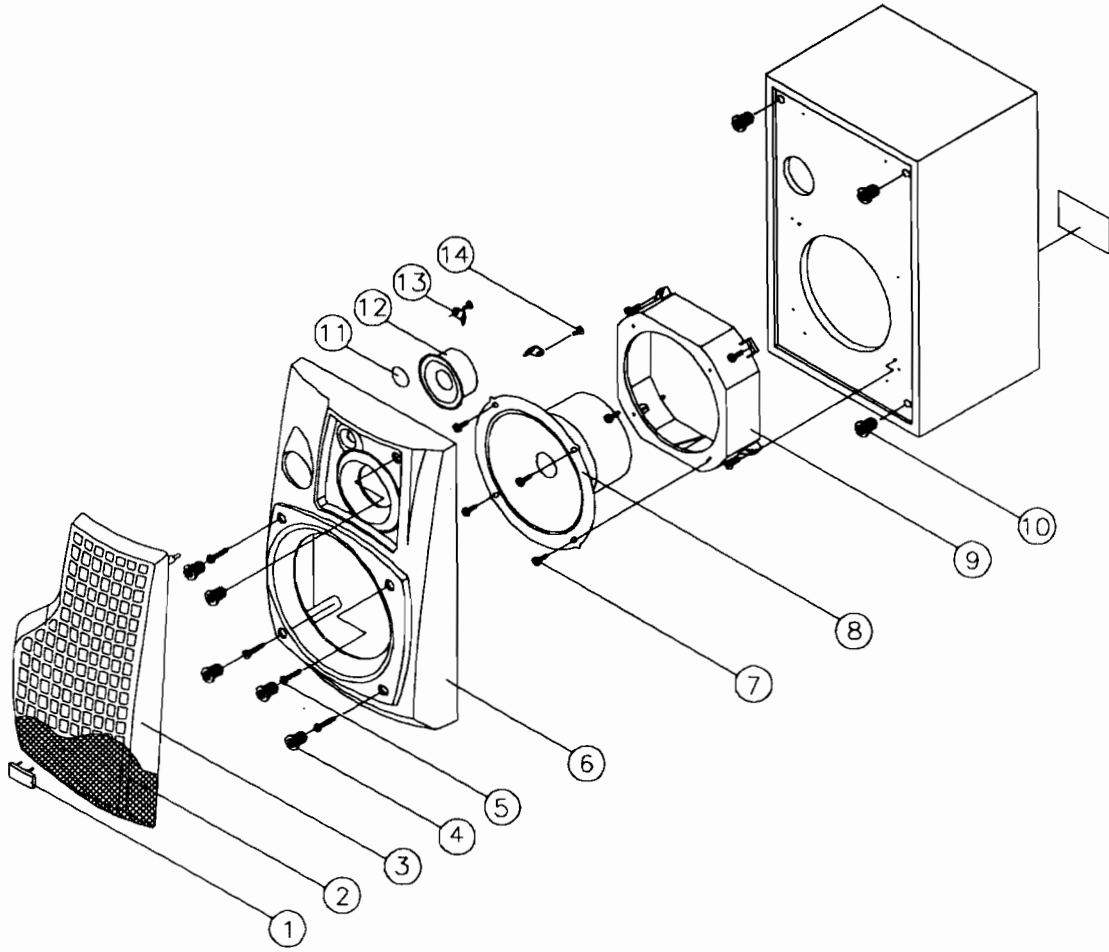


**13. SPEAKER SYSTEM (SR-425)**



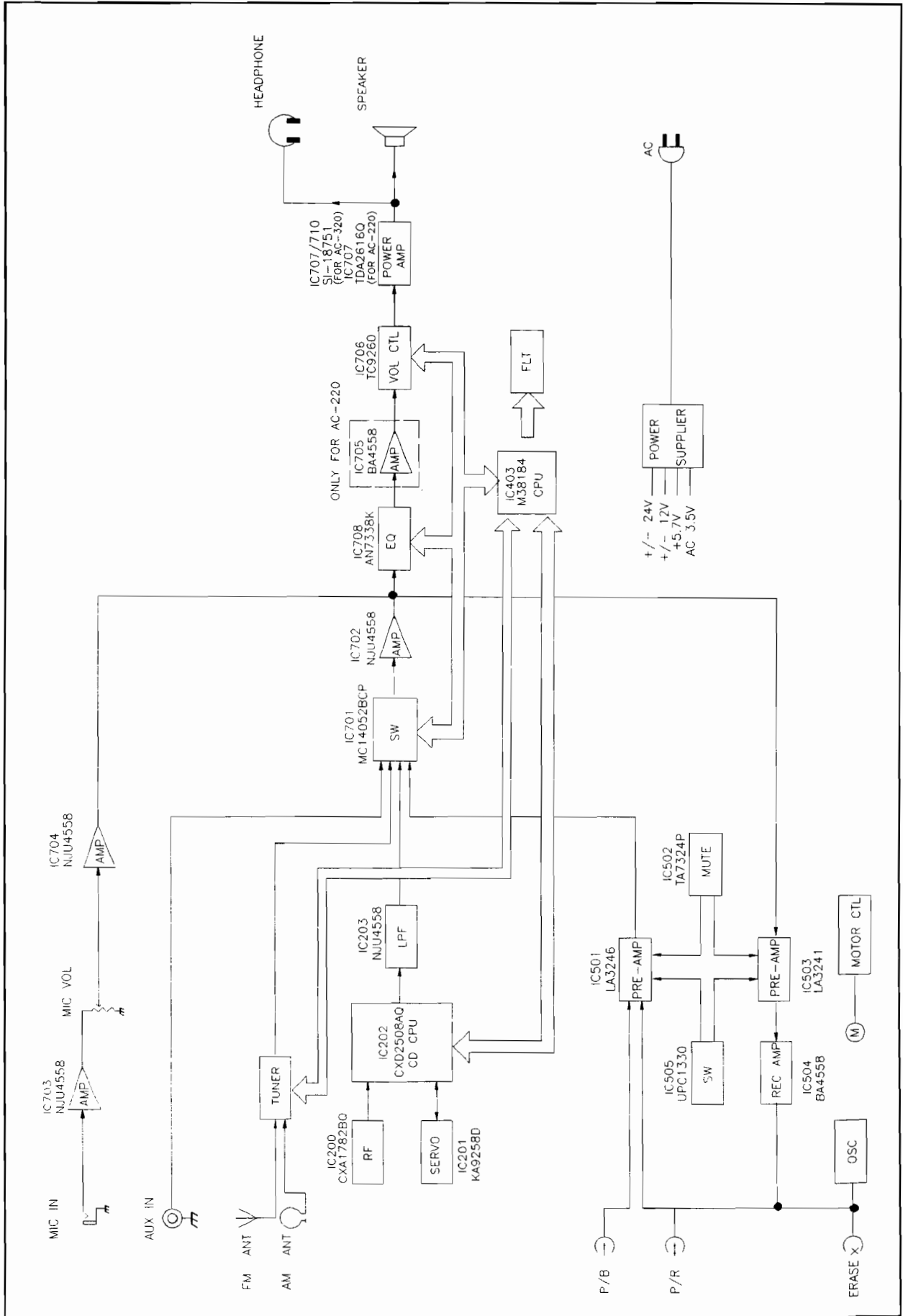
REF. NO	PART NO	DESCRIPTION
1	286-385002-01S	NAME PLATE FOR AKAI
2	583-051501-01	SPEAKER CLOTH
3	239-051501-01R	FRAME NET (R)
4	259-050201-01Z	CUSHION FOR SPEAKER BOX BLK S.B.R
5	610-350220-10	SELF-TAPPING SCREW R/T 3.5X20MM
6	614-400216-30	SELF-TAPPING SCREW R/T 4.0X16MM BLACK
7	066-953254-WT	WOOFER SPEAKER
8	259-381301-01	CUSHION
9	070-100027-02Z	27MM PIEZO
10	066-283220-WT	MIDRANGE SPEAKER
11	462-333202-01	SPEAKER CLIP
12	612-300210-10	SELF-TAPPING SCREW 3X10MM

14. SPEAKER SYSTEM (SR-225)

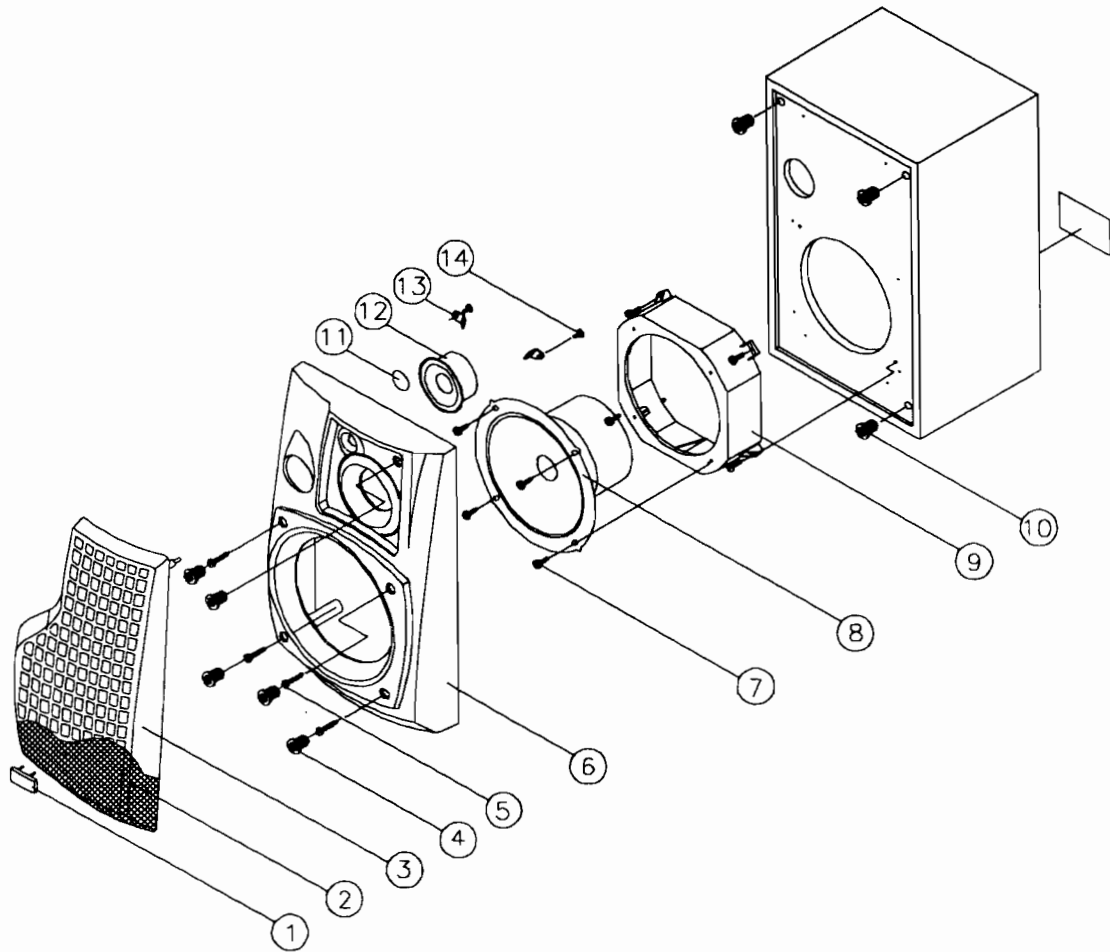


REF. NO	PART NO	DESCRIPTION
1	286-385002-02S	NAME PLATE FOR AKAI
2	583-051401-01	SPEAKER CLOTH
3	239-051402-01R	FRAME NET (R)
4	259-050201-01Z	CUSHION FOR SPEAKER BOX BLK S.B.R
5	610-350220-10	SELF-TAPPING SCREW R/T 3.5X20MM
6	205-051402-01R	CABINET FRONT (R)
7	614-400216-30	SELF-TAPPING SCREW R/T 4.0X16MM BLACK
8	066-252254-WT	WOOFER SPEAKER
9	229-050501-01R	SPEAKER BRACKET
10	259-381301-01	CUSHION
11	070-100027-02Z	27MM PIEZO
12	066-272221-WT	MIDRANGE SPEAKER
13	462-333202-01	SPEAKER CLIP
14	612-300210-10	SELF-TAPPING SCREW 3X10MM

# VI. BLOCK DIAGRAM

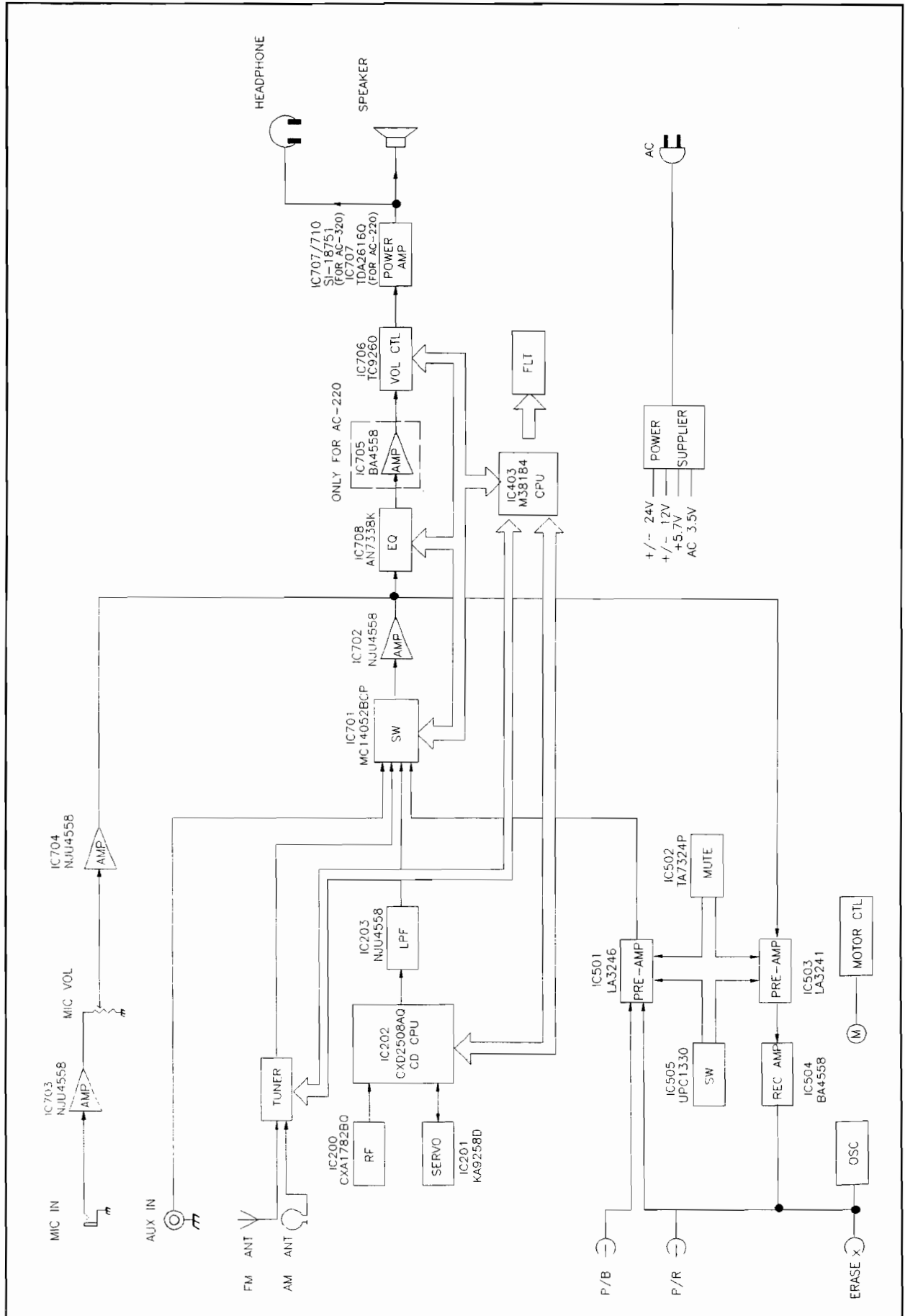


14. SPEAKER SYSTEM (SR-225)



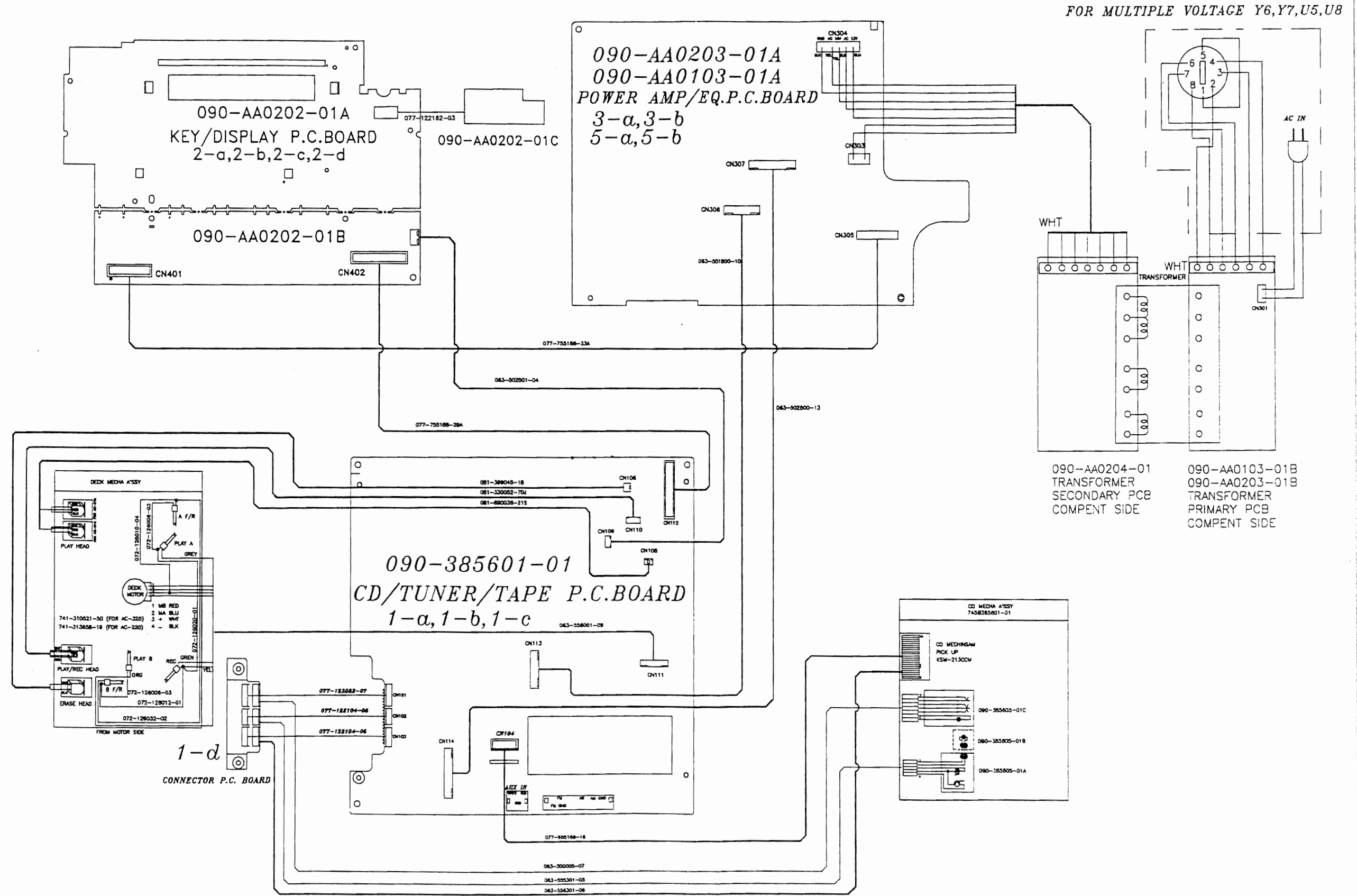
REF. NO	PART NO	DESCRIPTION
1	286-385002-02S	NAME PLATE FOR AKAI
2	583-051401-01	SPEAKER CLOTH
3	239-051402-01R	FRAME NET (R)
4	259-050201-01Z	CUSHION FOR SPEAKER BOX BLK S.B.R
5	610-350220-10	SELF-TAPPING SCREW R/T 3.5X20MM
6	205-051402-01R	CABINET FRONT (R)
7	614-400216-30	SELF-TAPPING SCREW R/T 4.0X16MM BLACK
8	066-252254-WT	WOOFER SPEAKER
9	229-050501-01R	SPEAKER BRACKET
10	259-381301-01	CUSHION
11	070-100027-02Z	27MM PIEZO
12	066-272221-WT	MIDRANGE SPEAKER
13	462-333202-01	SPEAKER CLIP
14	612-300210-10	SELF-TAPPING SCREW 3X10MM

# VI. BLOCK DIAGRAM



VII. WIRING DIAGRAM

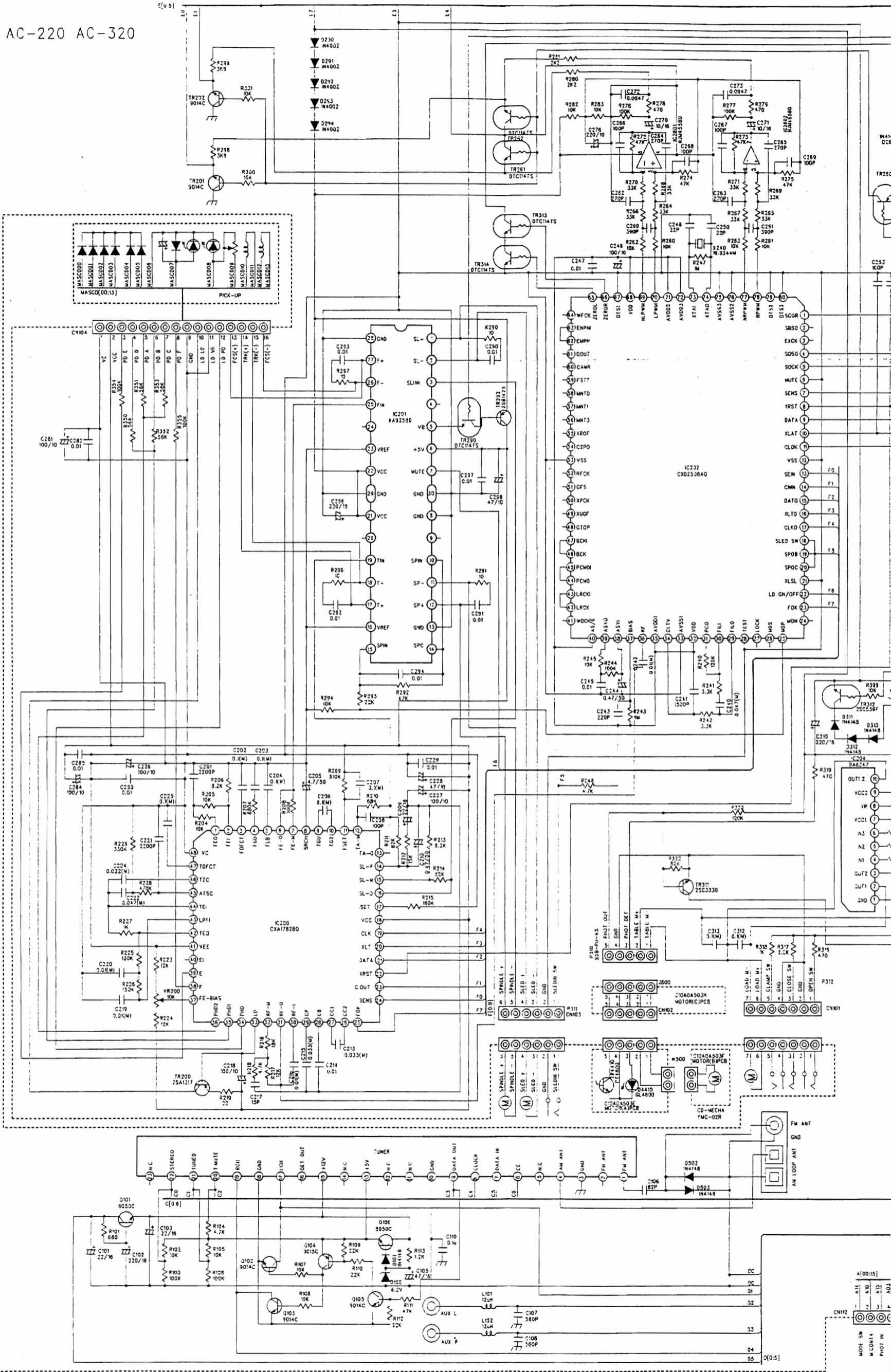
AC-220/AC-320 WIRING DIAGRAM





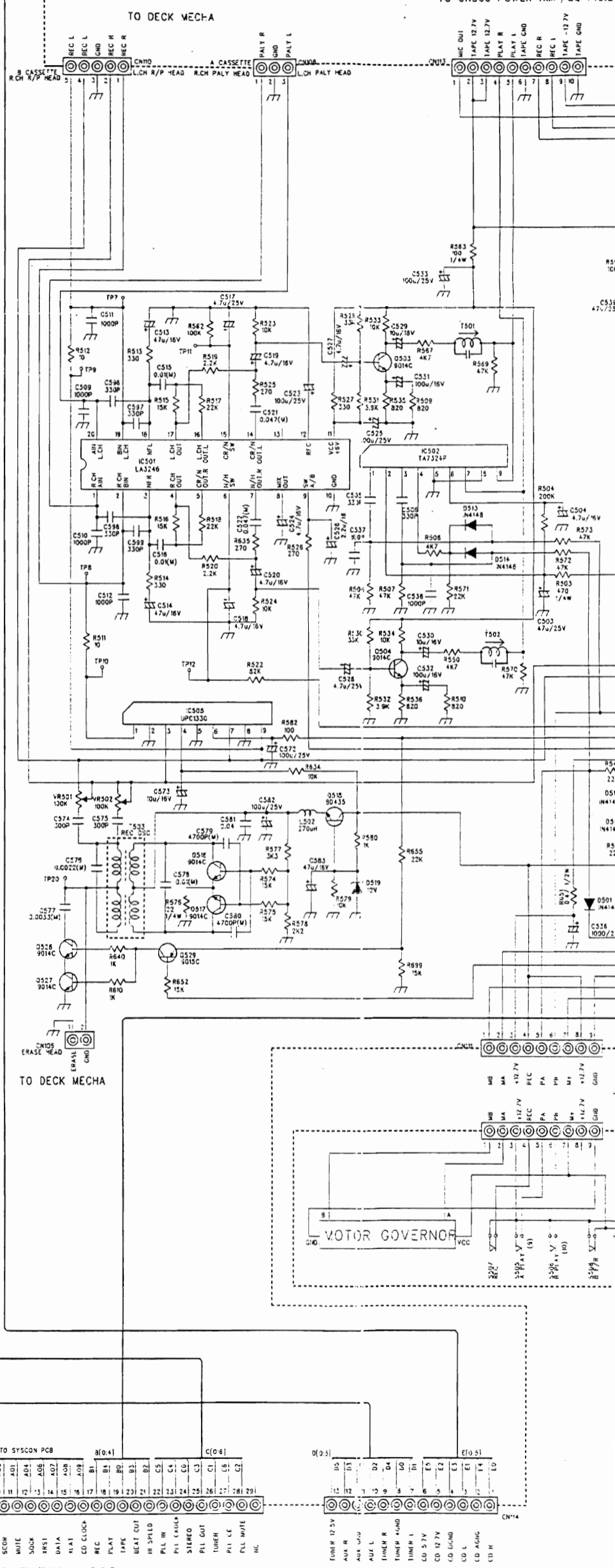
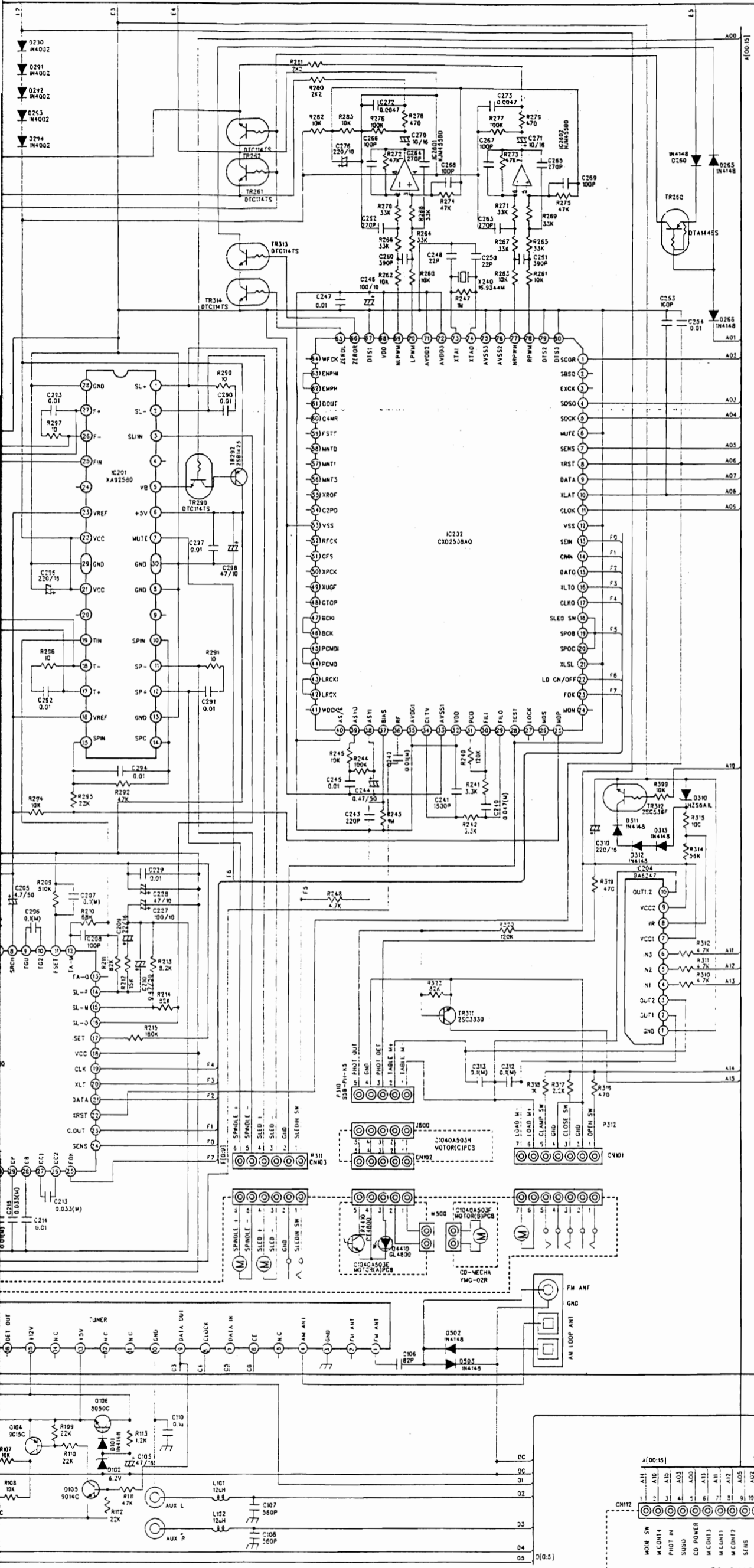
### VIII. SCHEMATIC DIAGRAM

AC-220 AC-320



# CD/TAPE/TUNER SCHEM

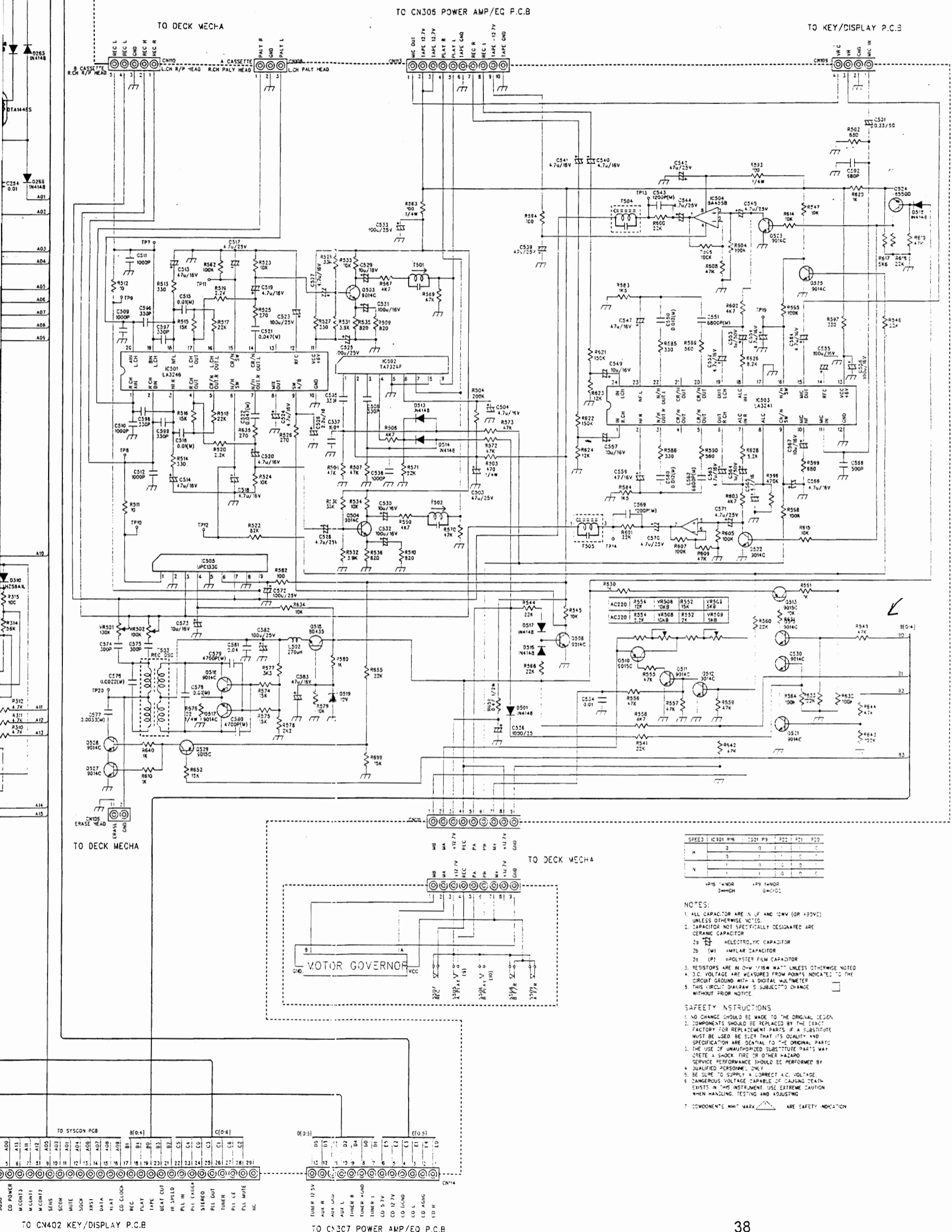
TO CN305 POWER AMP/EQ P.C.B.



TO CN402 KEY/DISPLAY P.C.B.

TO CN307 POWER AMP/EQ P.C.B.

# CD/TAPE/TUNER SCHEMATIC DIAGRAM



SPEED	IC301 P16	P21 P3	P22	P21	P20
H	0	0	1	1	0
M	0	1	0	0	0
L	1	0	0	0	0

P16 = \*NOR  
P21 = HIGH

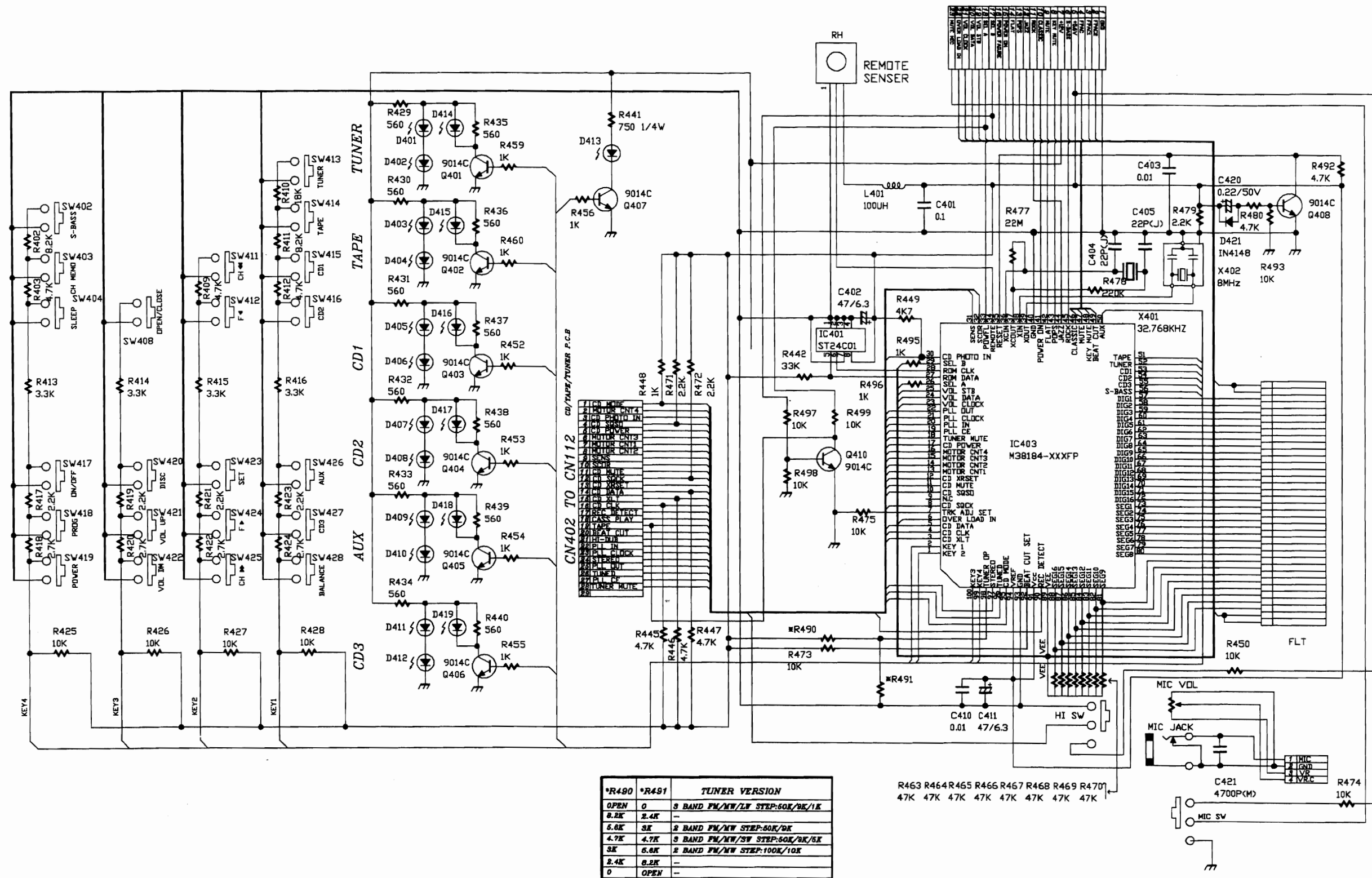
- NOTES:**
- ALL CAPACITORS ARE .1UF AND .01UF (OR .001UF) UNLESS OTHERWISE NOTED.
  - CAPACITORS NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS.
  - 2a = ELECTROLYTIC CAPACITOR
  - 2b = MYLAR CAPACITOR
  - 2c = POLYESTER FILM CAPACITOR
  - RESISTORS ARE IN OHM (1/16W MAX) UNLESS OTHERWISE NOTED.
  - D.C. VOLTAGE ARE MEASURED FROM POINTS INDICATED TO THE CIRCUIT GROUND WITH A DIGITAL MULTIMETER.
  - THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

- SAFETY INSTRUCTIONS:**
- NO CHANGE SHOULD BE MADE TO THE ORIGINAL DESIGN.
  - COMPONENTS SHOULD BE REPLACED BY THE EXACT FACTORY FOR REPLACEMENT PARTS. IF A SUBSTITUTE MUST BE USED BE SURE THAT ITS QUALITY AND SPECIFICATION ARE IDENTICAL TO THE ORIGINAL PARTS.
  - THE USE OF UNAUTHORIZED SUBSTITUTE PARTS MAY CREATE A SHOCK HAZARD OR OTHER HAZARD. SERVICE PERFORMANCE SHOULD BE PERFORMED BY A QUALIFIED PERSONNEL ONLY.
  - BE SURE TO SUPPLY A CORRECT A.C. VOLTAGE.
  - DANGEROUS VOLTAGE CAPABLE OF CAUSING DEATH EXISTS IN THIS INSTRUMENT. USE EXTREME CAUTION WHEN HANDLING, TESTING AND ADJUSTING.
  - COMPONENTS WITH MARK ARE SAFETY INDICATION.

AC-220  
AC-320

# KEY/DISPLAY SCHEMATIC DIAGRAM

CN401 TO CN305 POWER AMP/EQ P.C.B



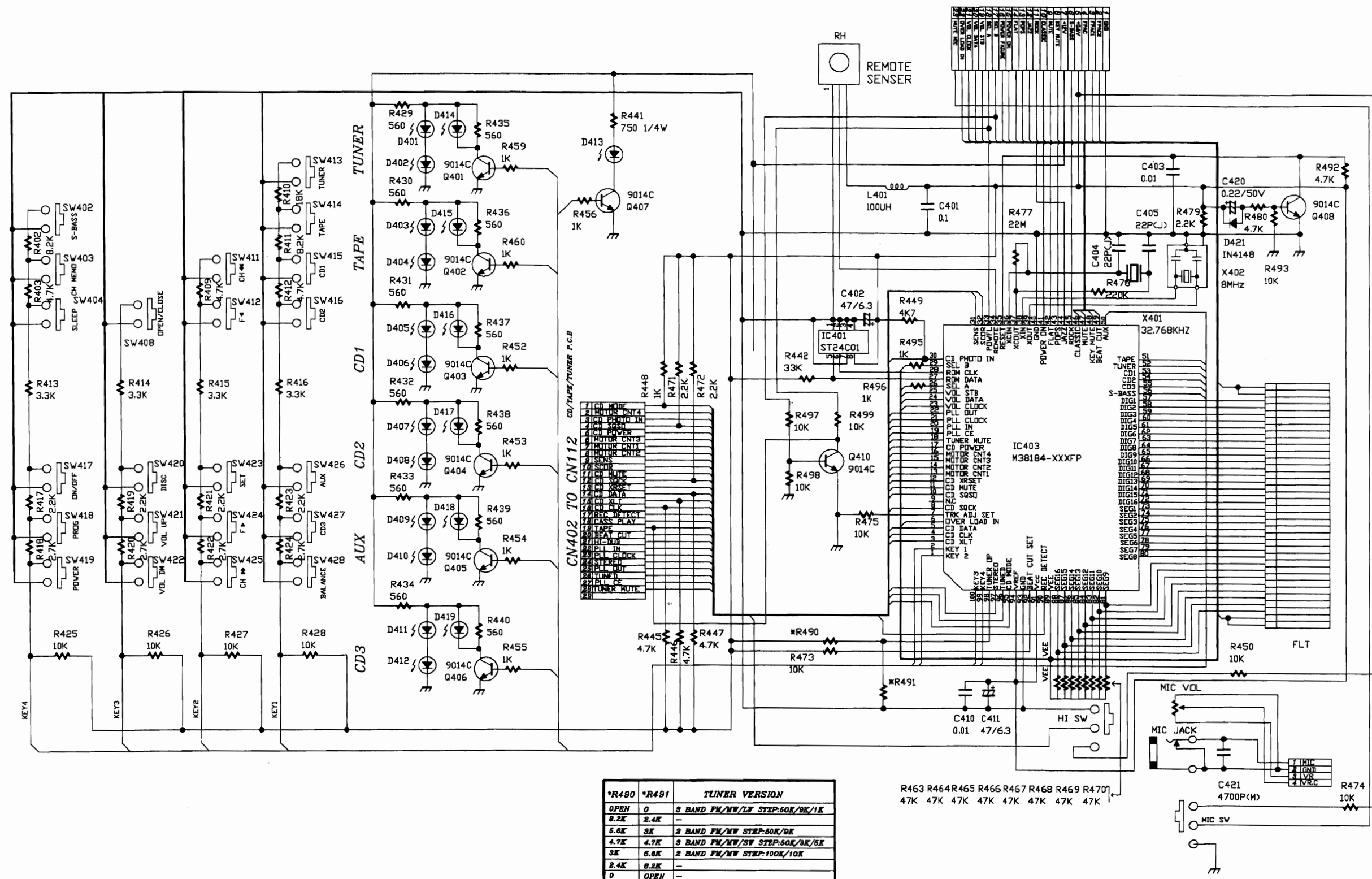
*R490	*R491	TUNER VERSION
OPEN	0	3 BAND FM/NW/LW STEP:50K/8K/1K
8.2K	2.4K	-
5.6K	3K	2 BAND FM/NW STEP:50K/8K
4.7K	4.7K	3 BAND FM/NW/SW STEP:50K/8K/8K
3K	5.6K	2 BAND FM/NW STEP:100K/10K
2.4K	8.2K	-
0	OPEN	-

R463 R464 R465 R466 R467 R468 R469 R470  
4.7K 4.7K 4.7K 4.7K 4.7K 4.7K 4.7K 4.7K

AC-220  
AC-320

# KEY/DISPLAY SCHEMATIC DIAGRAM

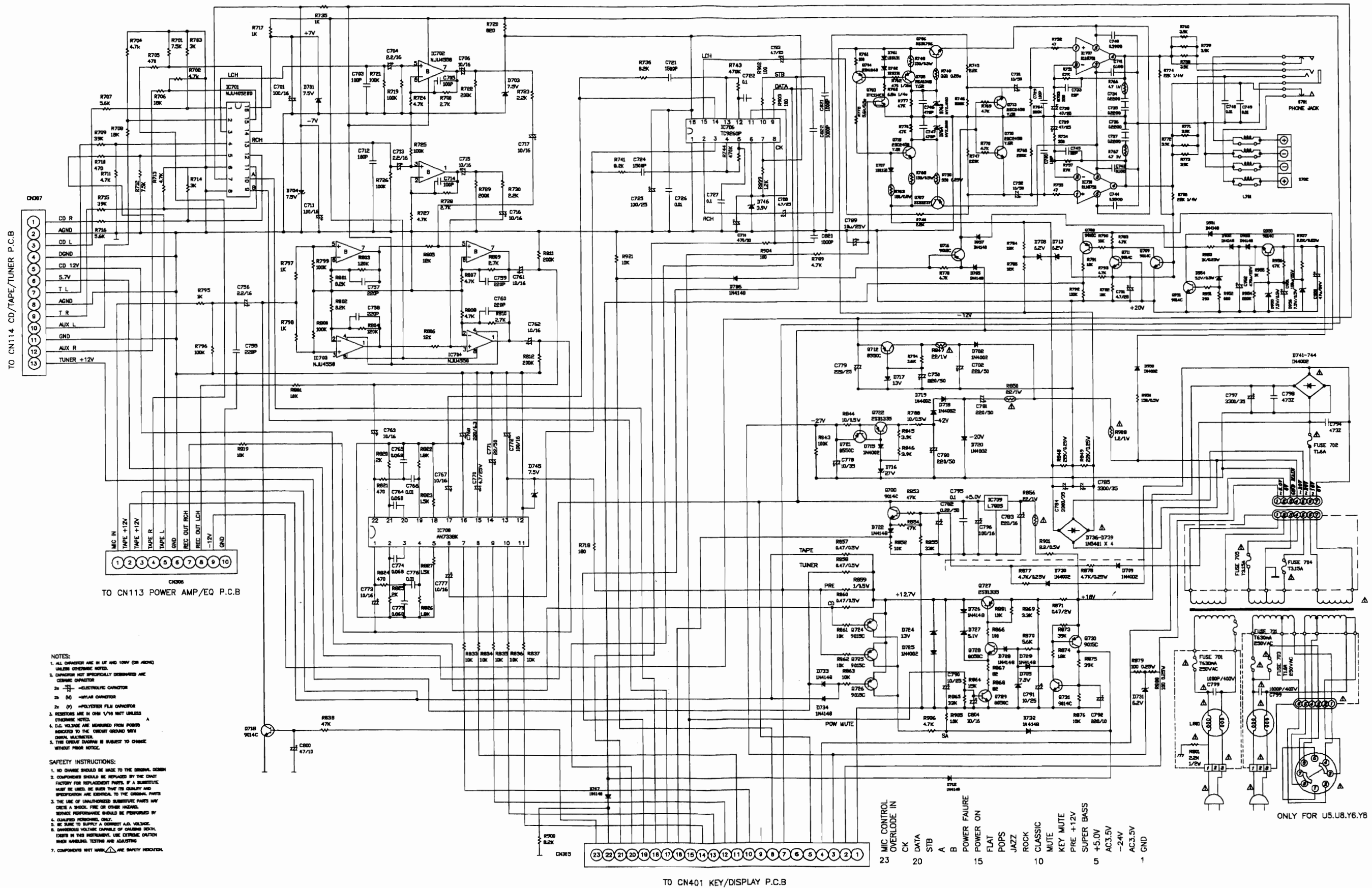
CN401 TO CN305 POWER AMP/EQ P.C.B



*R490	*R491	TUNER VERSION
OPEN	0	3 BAND FM/NW/LW STEP:50K/8K/1K
0.2K	2.4K	-
5.6K	3K	2 BAND FM/NW STEP:50K/8K
4.7K	4.7K	3 BAND FM/NW/SW STEP:50K/8K/5K
3K	5.6K	2 BAND FM/NW STEP:100K/10K
2.4K	0.2K	-
0	OPEN	-

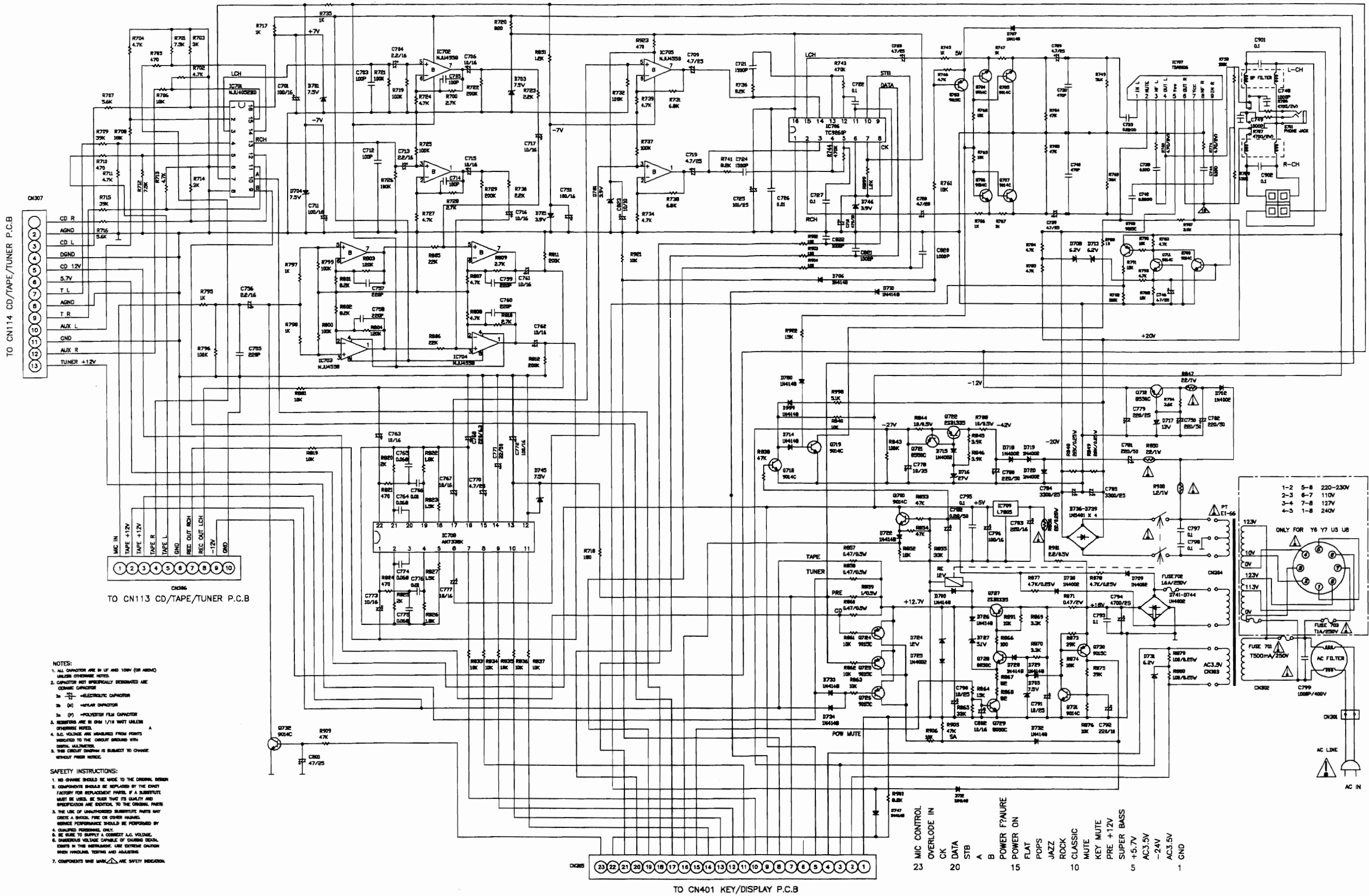
R463 R464 R465 R466 R467 R468 R469 R470  
4.7K 4.7K 4.7K 4.7K 4.7K 4.7K 4.7K 4.7K

# AC-320 POWER AMP/EQ SCHEMATIC DIAGRAM

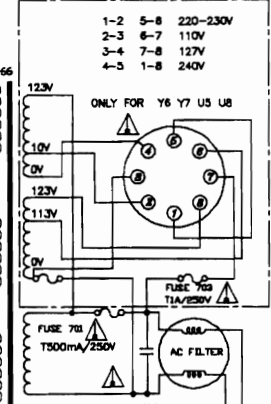


- NOTES:
1. ALL CAPACITORS ARE IN PF UNLESS OTHERWISE NOTED.
  2. CAPACITORS NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS.
  3. (M) - METAL FILM CAPACITOR
  4. (P) - POLYESTER FILM CAPACITOR
  5. RESISTORS ARE IN OHM UNLESS OTHERWISE NOTED.
  6. D.C. VOLTAGE ARE MEASURED FROM POINTS INDICATED TO THE CIRCUIT GROUND WITH CIRCUIT POWERED.
  7. THE CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.
- SAFETY INSTRUCTIONS:
1. NO CHANGE SHOULD BE MADE TO THE ORIGINAL DESIGN.
  2. COMPONENTS SHOULD BE REPLACED BY THE FACTORY FOR REPLACEMENT PARTS. IF A SUBSTITUTE MUST BE USED, BE SURE THE QUALITY AND SPECIFICATION ARE IDENTICAL TO THE ORIGINAL PARTS.
  3. THE USE OF UNAUTHORIZED SUBSTITUTE PARTS MAY CAUSE A SHORT, FIRE OR OTHER HAZARD.
  4. QUALIFIED PERSONNEL ONLY.
  5. BE SURE TO SUPPLY A CORRECT A.C. VOLTAGE.
  6. DANGEROUS VOLTAGE CAPABLE OF CAUSING DEATH. CHECK IN THIS INSTRUMENT. USE EXTREME CAUTION WHEN HANDLING TESTING AND ADJUSTING.
  7. COMPONENTS WITH WAVE/⚡ ARE SAFETY CRITICAL.

# AC-220 POWER AMP/EQ SCHEMATIC DIAGRAM

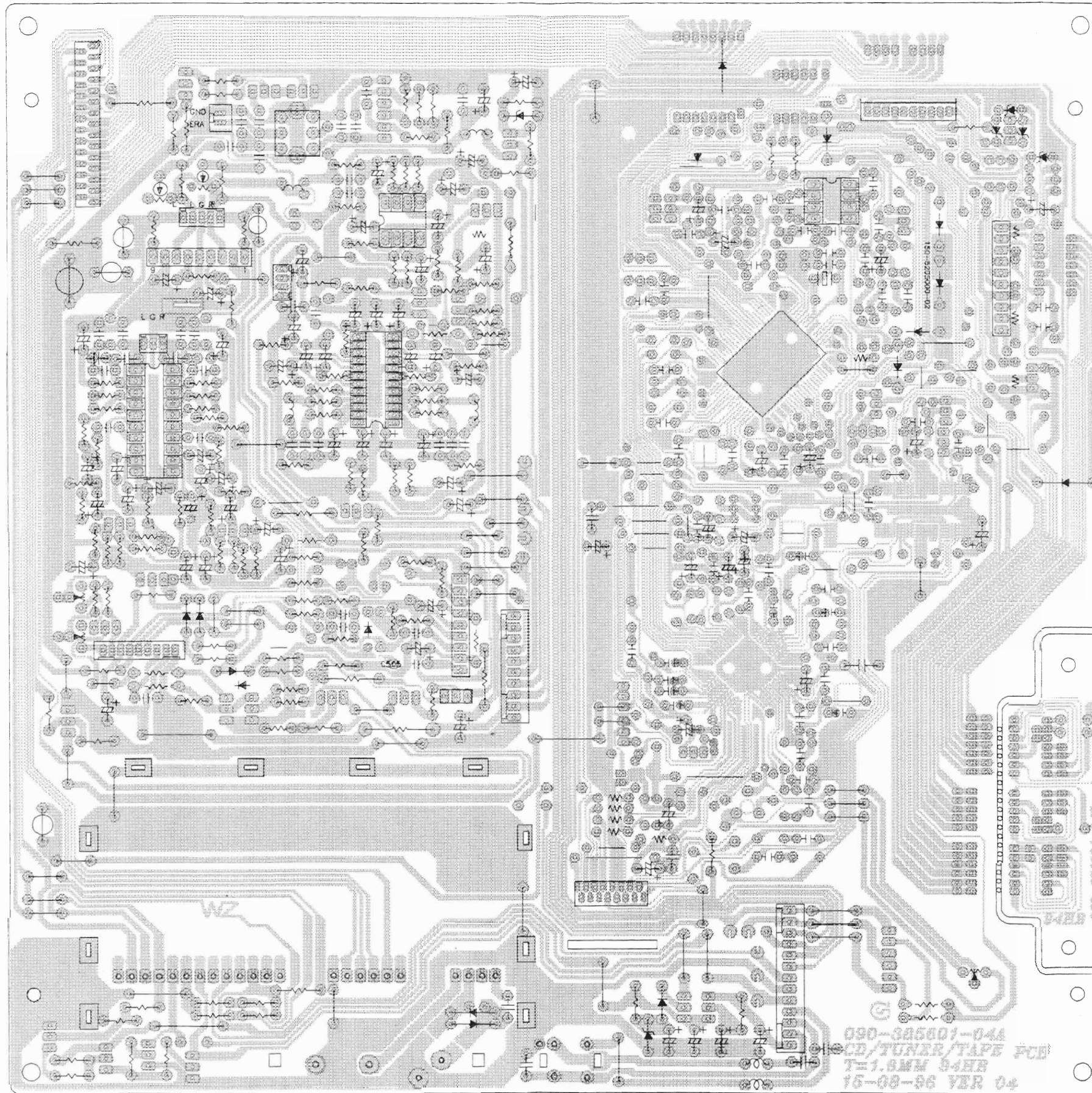


- NOTES:**
1. ALL CAPACITORS ARE IN UF AND 100V (OR ABOVE) UNLESS OTHERWISE NOTED.
  2. CAPACITOR NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS.
  3.  $\text{---}$  = ELECTROLYTIC CAPACITOR
  - 3a. (M) = MYLAR CAPACITOR
  - 3a. (P) = POLYESTER FILM CAPACITOR
  4. RESISTORS ARE IN OHM 1/16 WATT UNLESS OTHERWISE NOTED.
  5. ALL VOLTAGE ARE SHOWN FROM POINTS INDICATED TO THE CIRCUIT SHOWN WITH SIGNAL MALFUNCTION.
  6. THE CIRCUIT SHOWN IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.
- SAFETY INSTRUCTIONS:**
1. NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN.
  2. COMPONENTS SHOULD BE REPLACED BY THE EXACT FACTORY FOR REPLACEMENT PARTS. IF A SUBSTITUTE MUST BE USED, BE SURE THAT ITS QUALITY AND SPECIFICATIONS ARE IDENTICAL TO THE ORIGINAL PARTS.
  3. THE USE OF UNAUTHORIZED SUBSTITUTE PARTS MAY CREATE A SHOCK, FIRE OR OTHER HAZARDOUS SITUATION. PERFORMANCE SHOULD BE MONITORED BY QUALIFIED PERSONNEL ONLY.
  4. BE SURE TO SUPPLY A CORRECT A.C. VOLTAGE.
  5. DANGEROUS VOLTAGE CAPABLE OF CAUSING SERIOUS INJURY OR DEATH IS IN THE SCHEMATIC. USE EXTREME CAUTION WHEN HANDLING TESTERS AND ADJUSTERS.
  6. COMPONENTS WITH MARK  $\Delta$  ARE SAFETY CRITICAL.



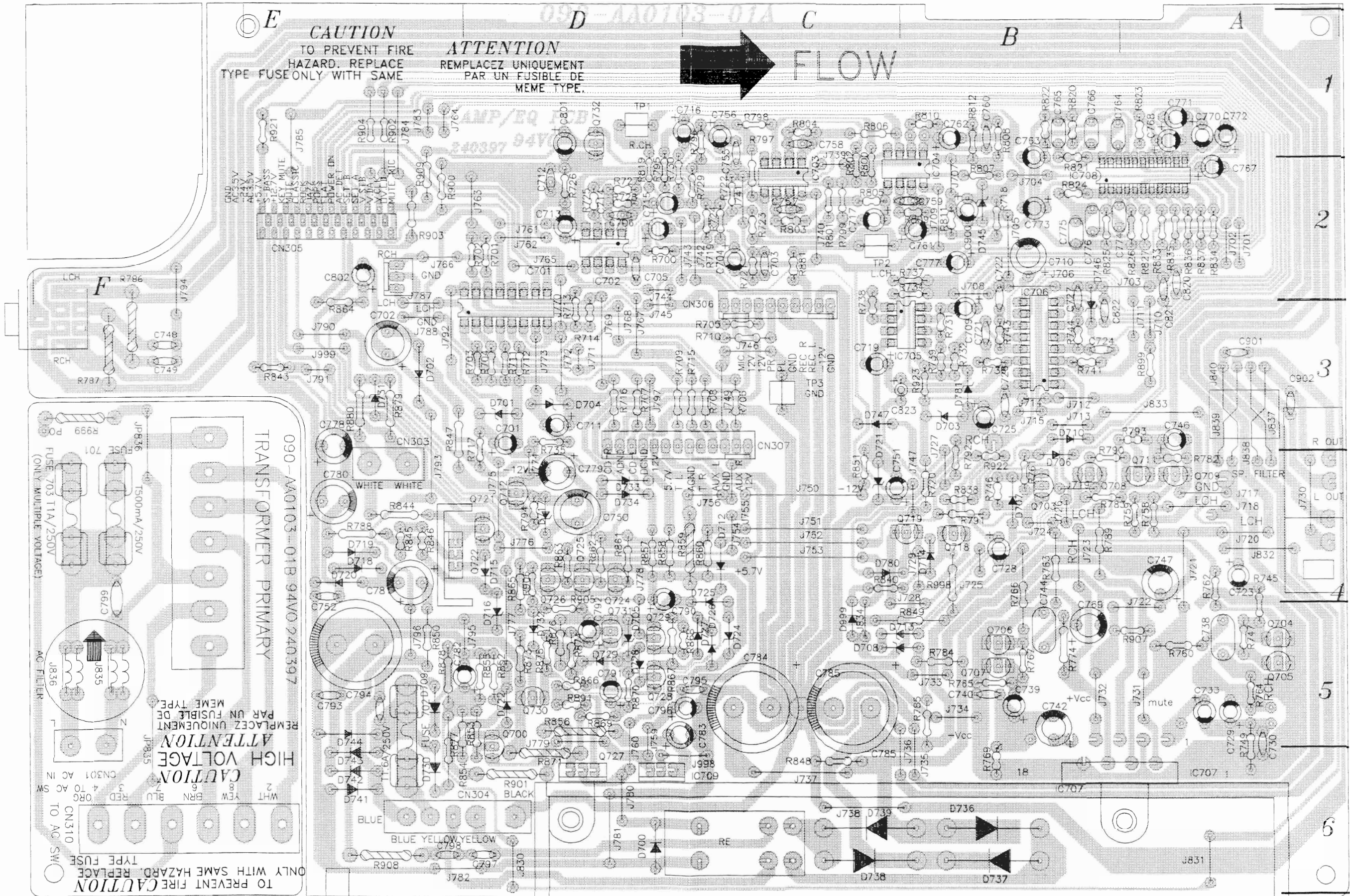






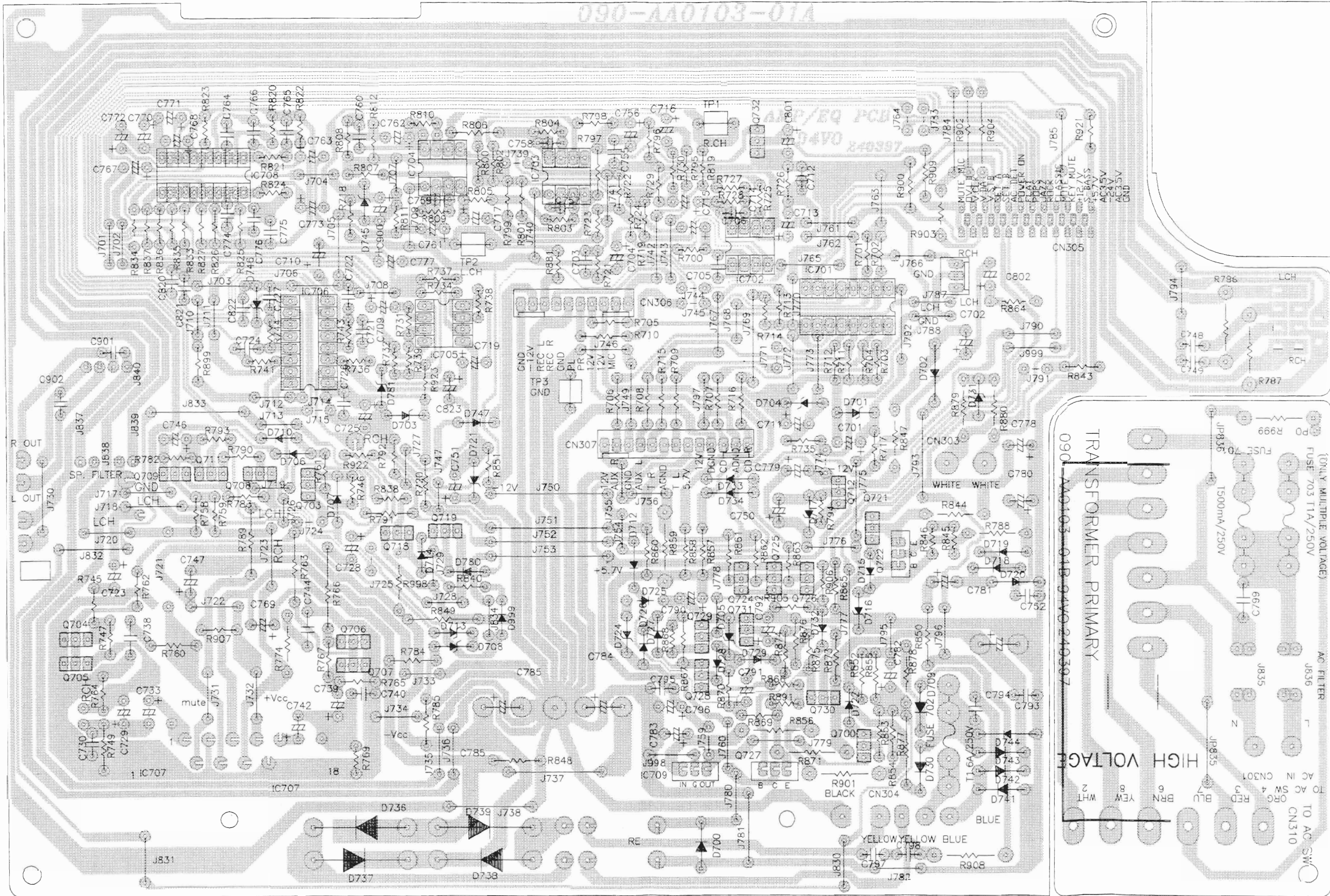
*BOTTOM VIEW*

POWER AMP/EQ P.C.BOARD



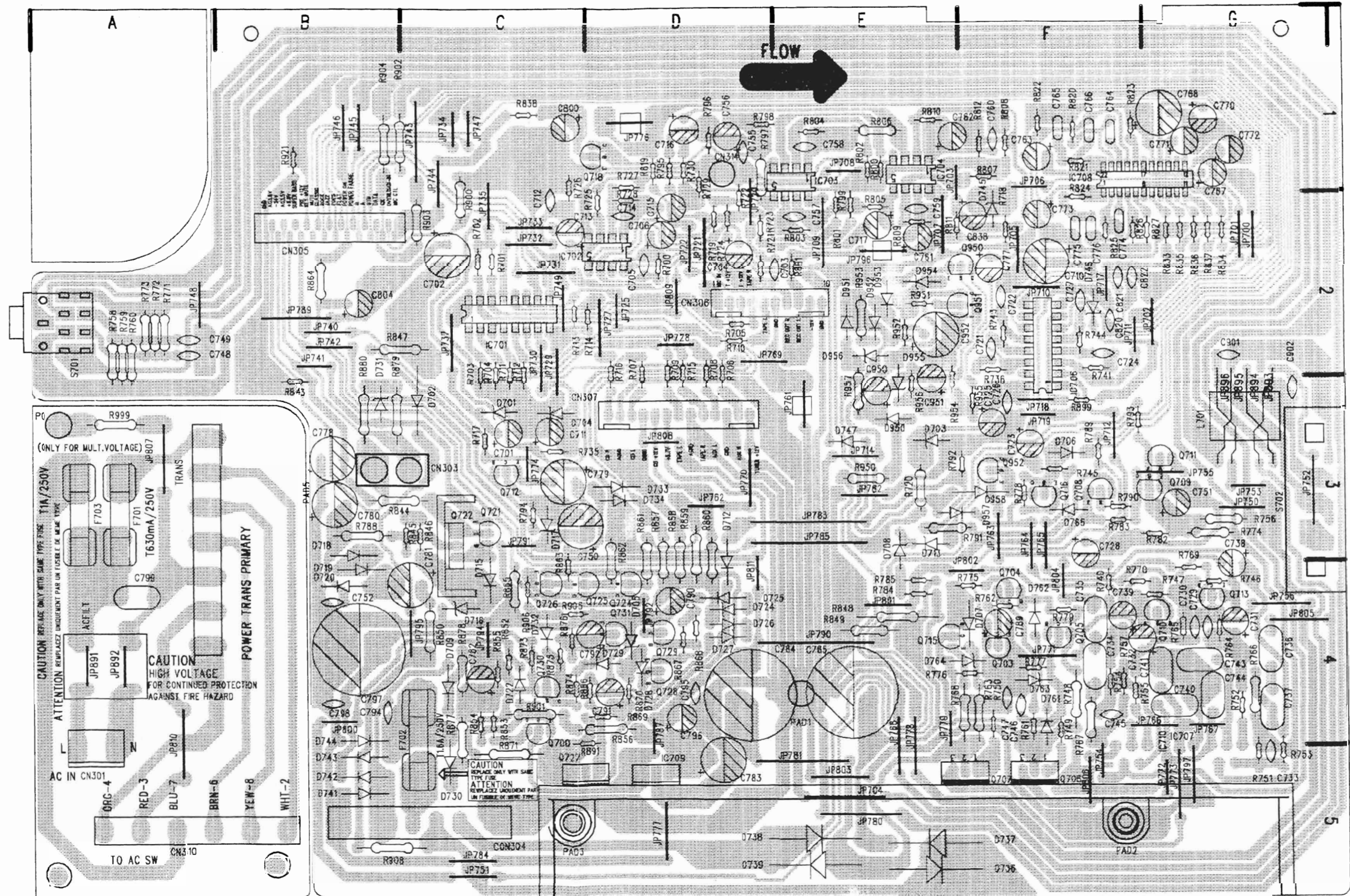
TOP VIEW

POWER AMP/EQ P.C.BOARD



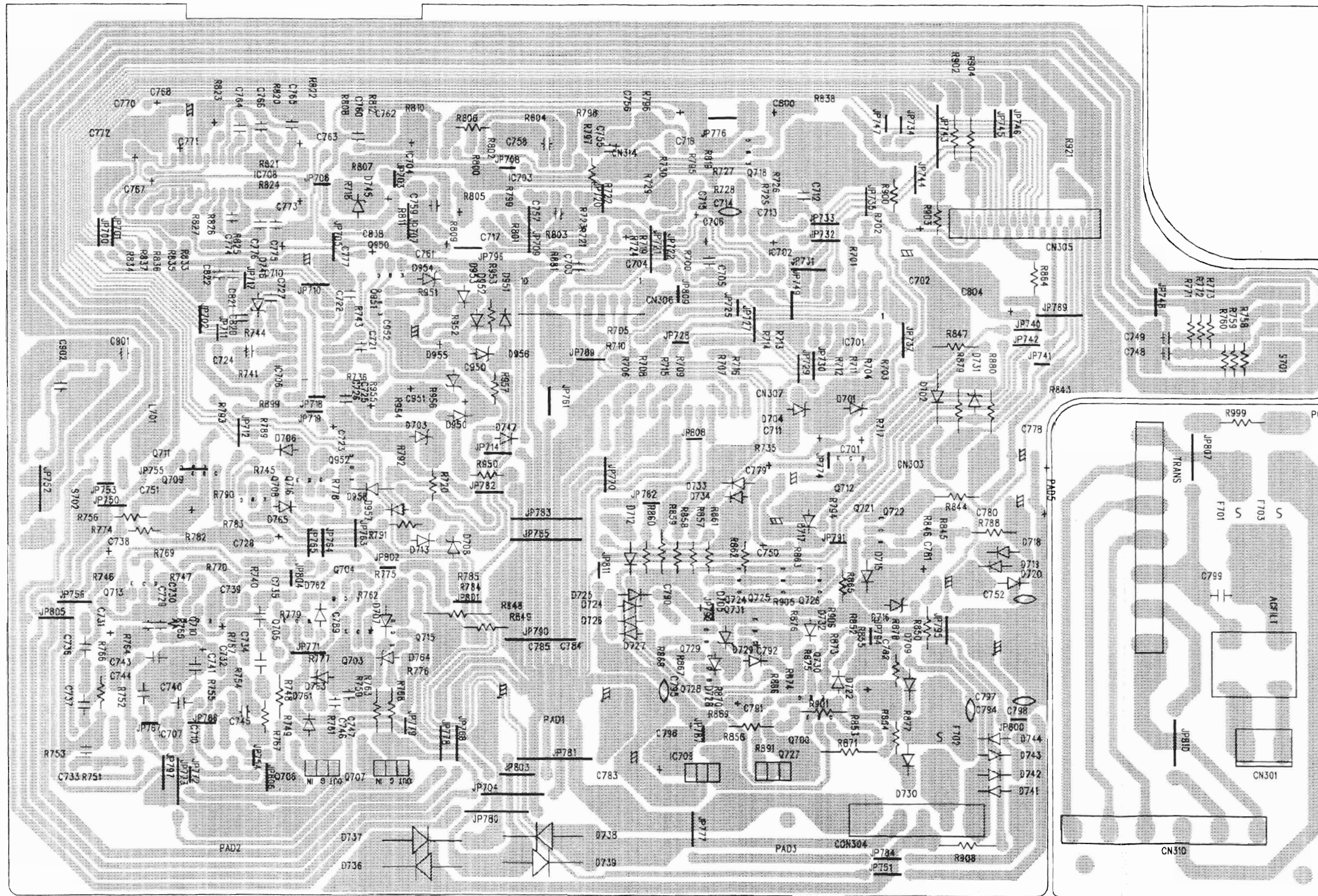
BOTTOM VIEW

AC-320  
POWER AMP/EQ P.C.BOARD



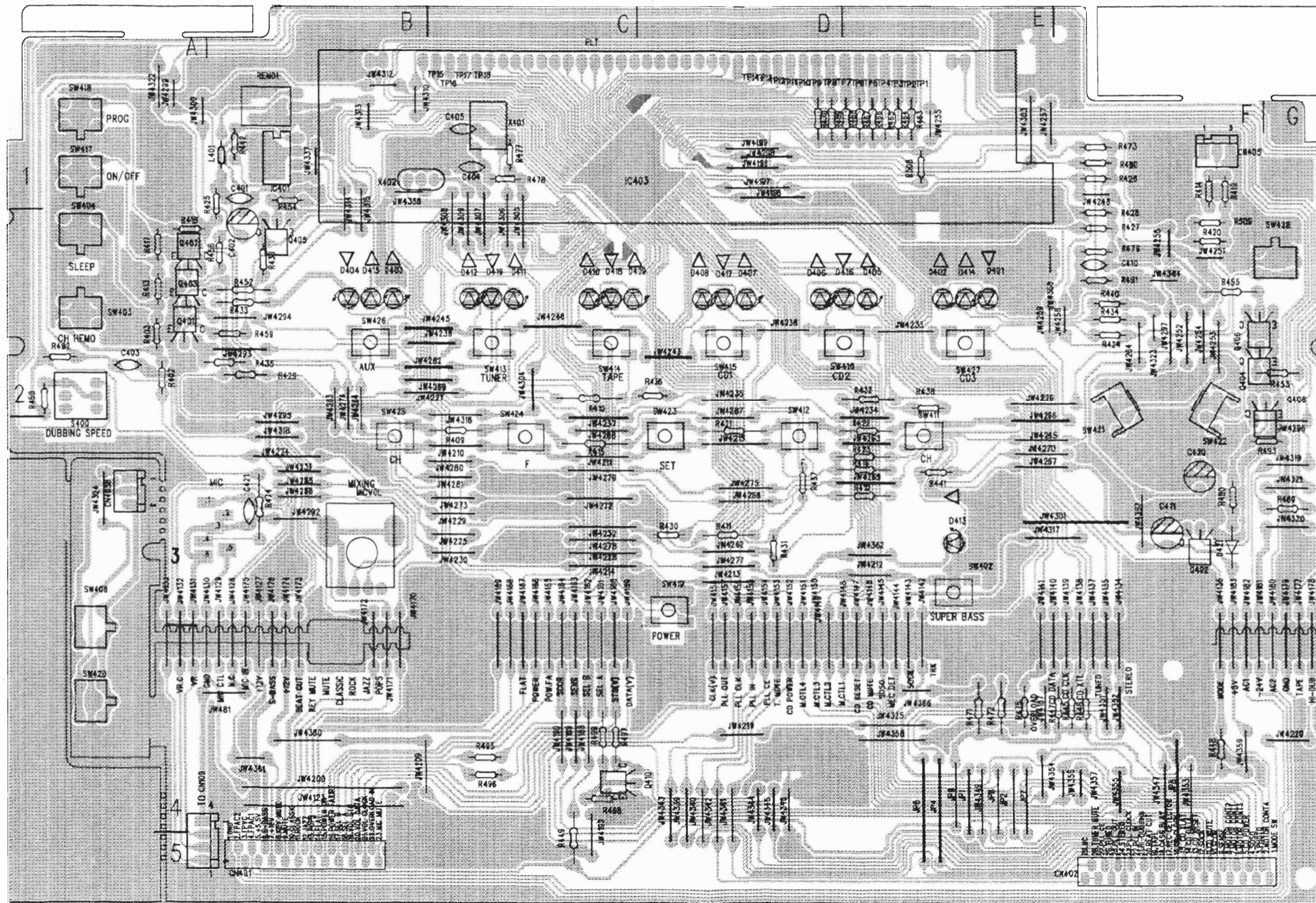
TOP VIEW

AC-320  
POWER AMP/EQ P.C.BOARD



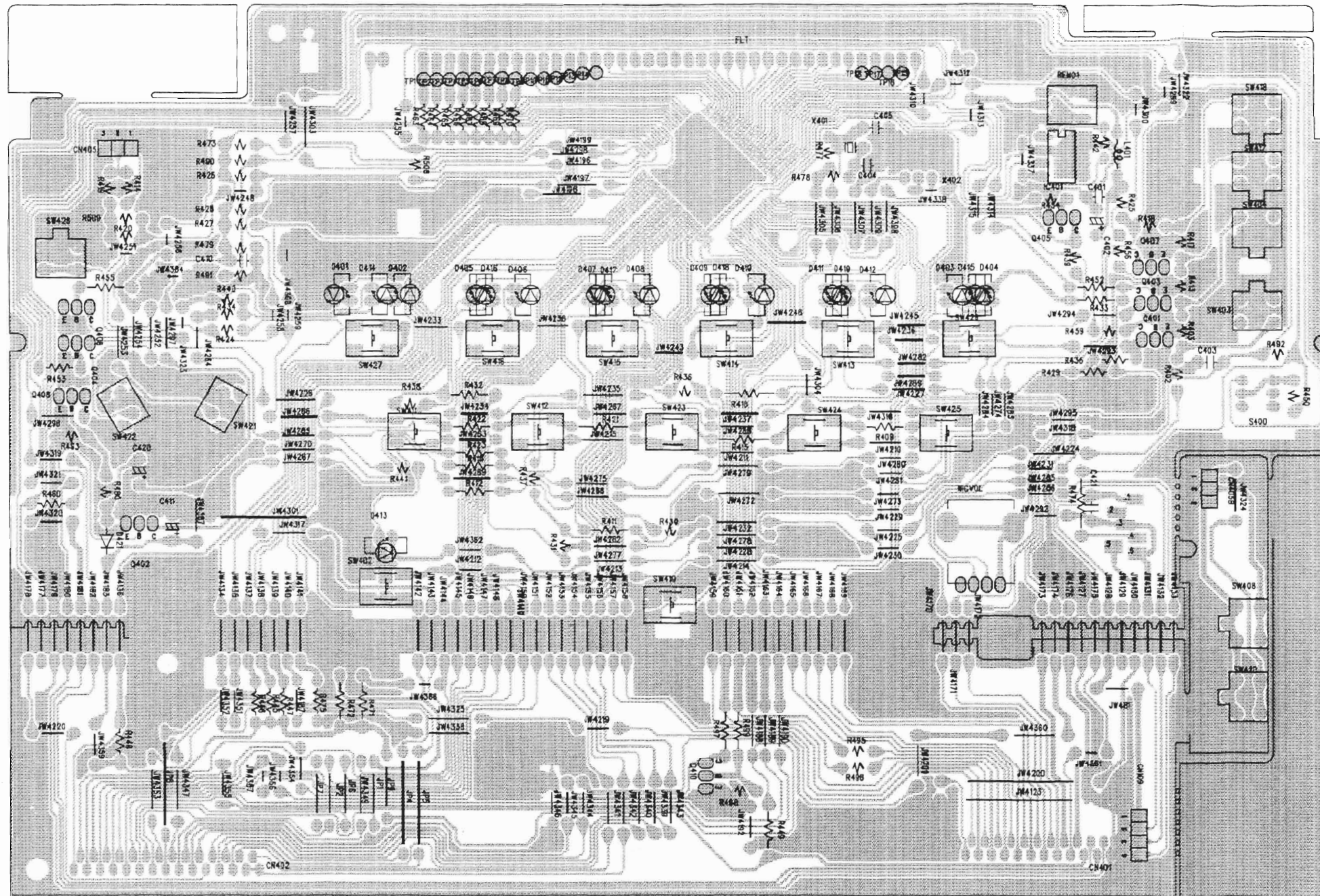
BOTTOM VIEW

AC-220 AC-320  
KEY/DISPLAY P.C.BOARD



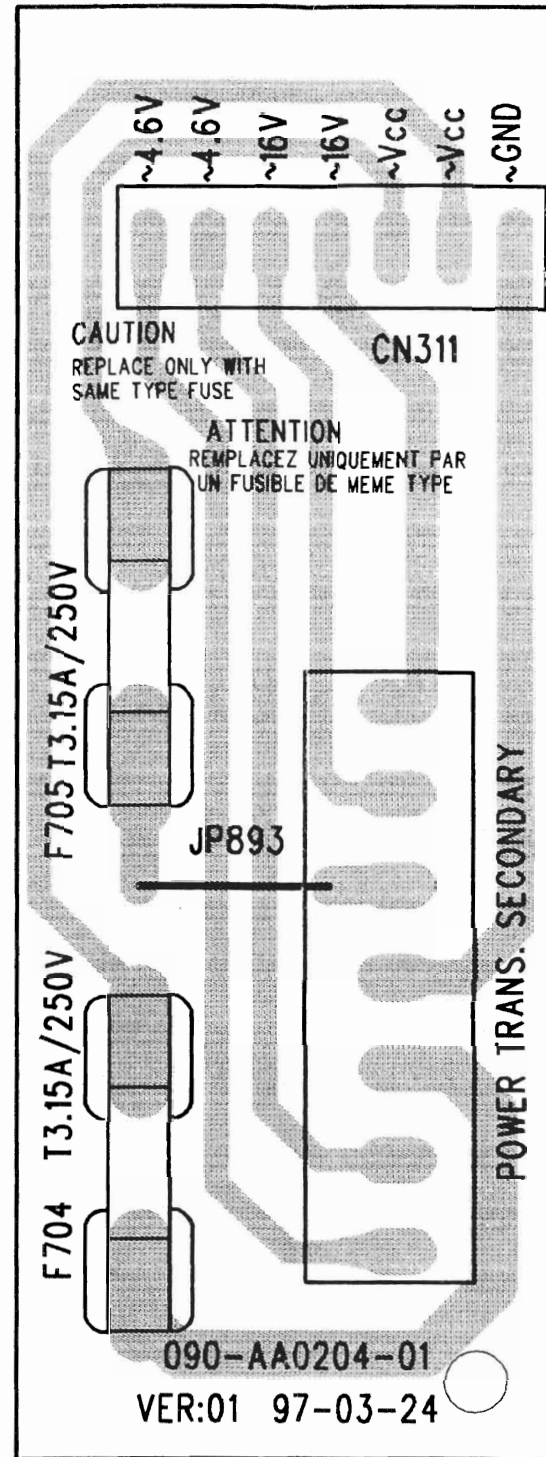
TOP VIEW

AC-220 AC-320  
KEY/DISPLAY P.C.BOARD



BOTTOM VIEW

AC-220 AC-320  
POWER TRANS SECONDARY P.C. BOARD

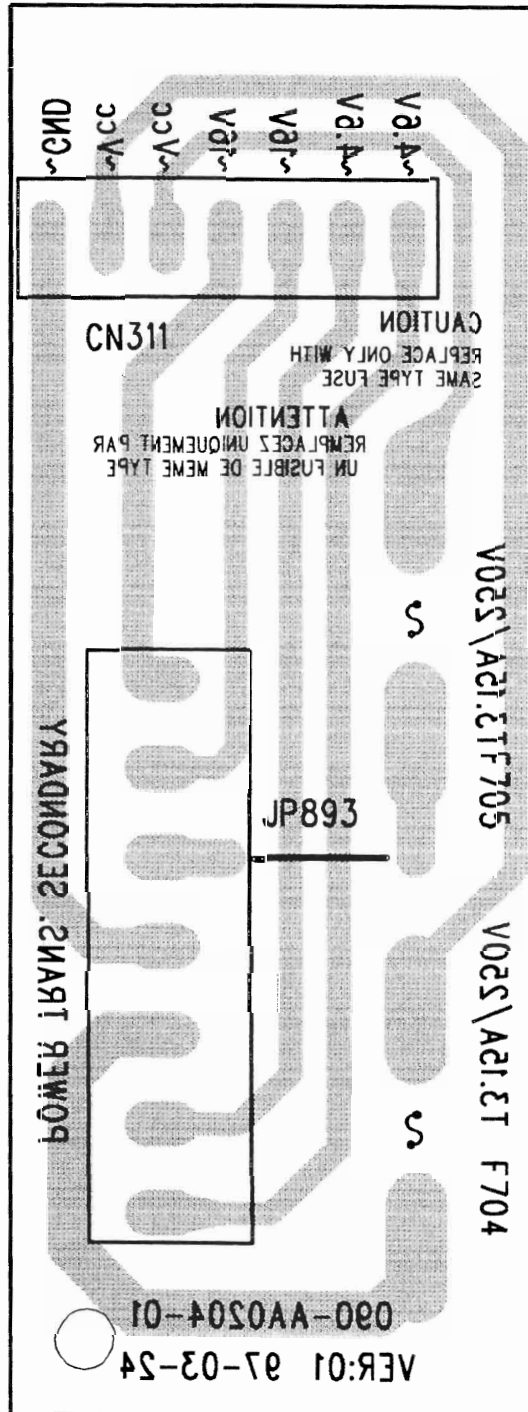


TOP VIEW



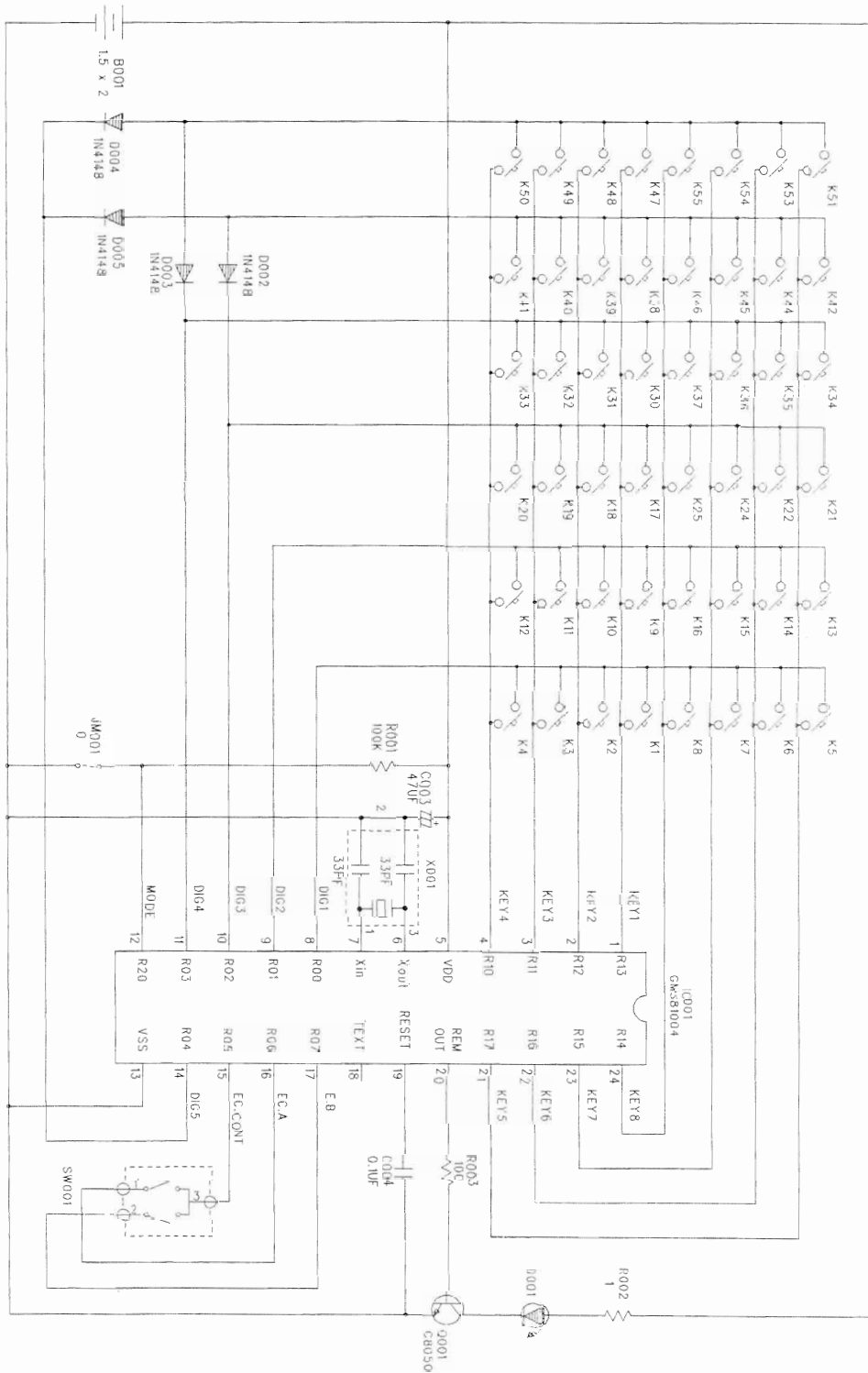
AC-220 AC-320

POWER TRANS SECONDARY P.C. BOARD

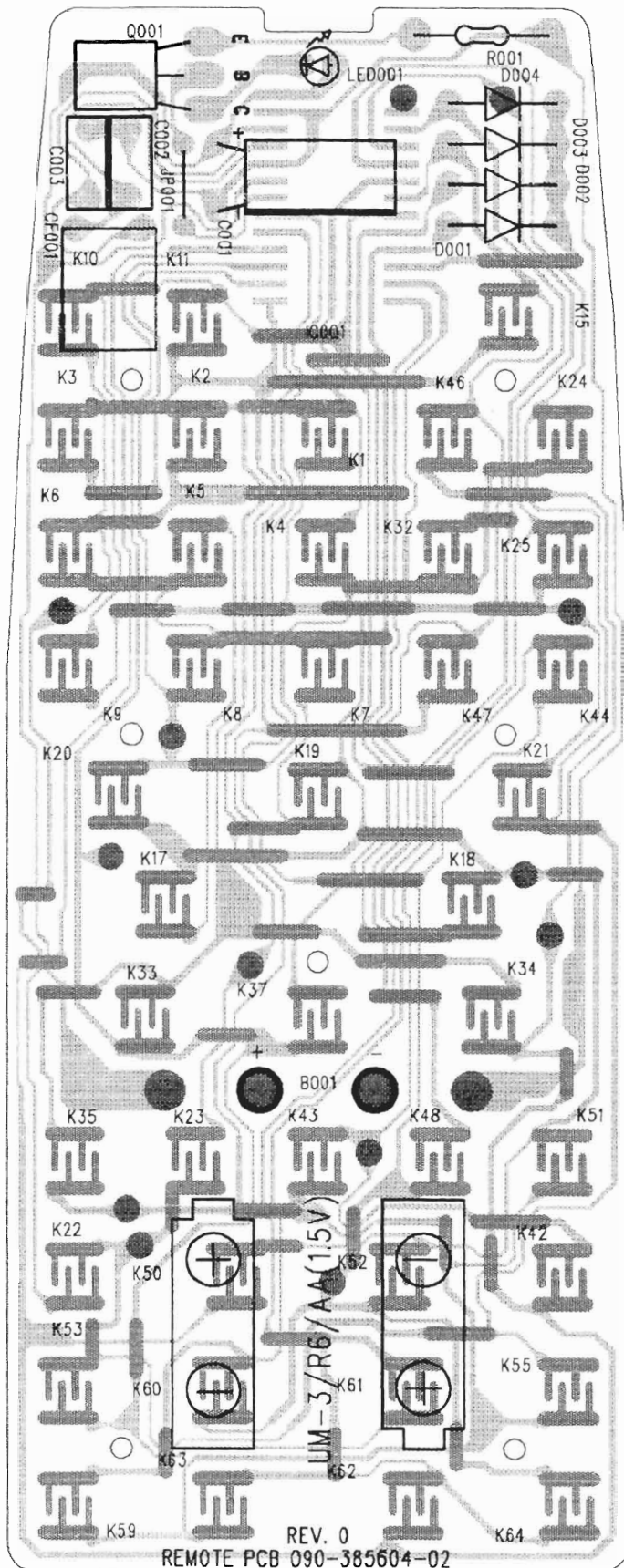


BOTTOM VIEW

# X. REMOTE HANDSET MANUAL

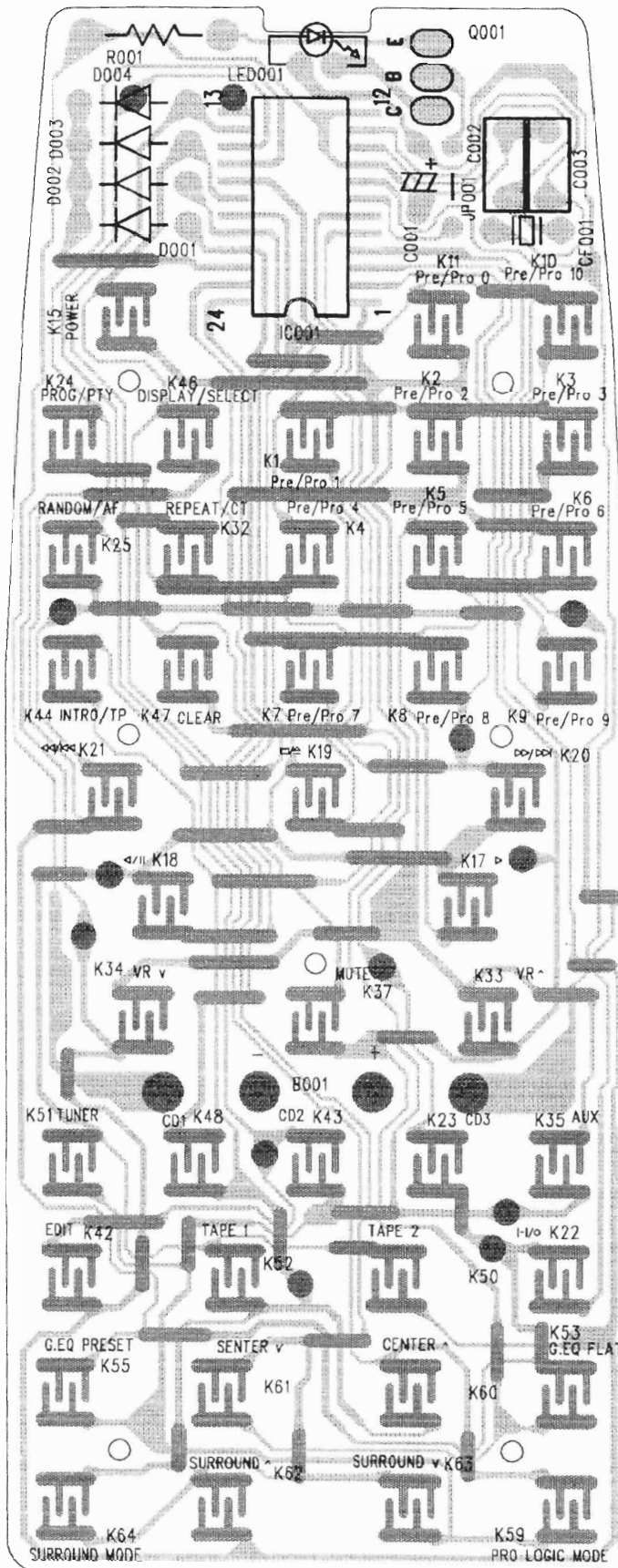


# REMOTE P.C.BOARD



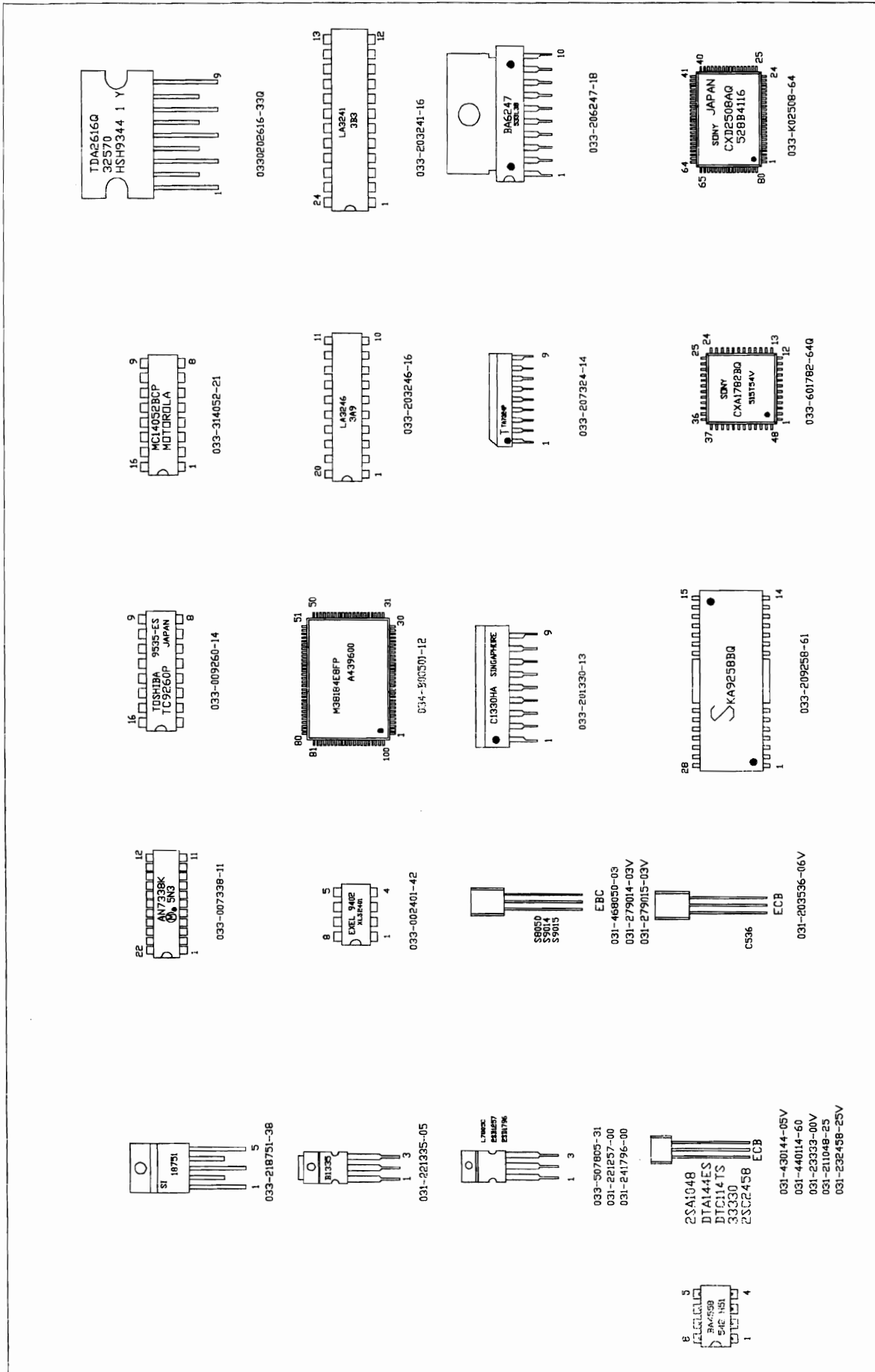
## TOP VIEW

# REMOTE P.C.BOARD



BOTTOM VIEW

# X. REMOTE HANDSET MANUAL



## XII. ABBREVIATIONS

### TUNER

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AFC	Auto Frequency Control	MEMO	MEMOry
AGC	Auto Gain Control	MI-COM	Micro-COMputer
ALC	Auto Level Control	MIN	MINimum
AM	Amplitude Modulation	MIX	MIXing
AMP	AMPlifier	MPX	MultiPleX
ANT	ANTenna	MW	Medium Wave(frequency)
BATT	BATTery	NC	No Connection
BLK	BLock	NFB	Negative Feed Back
BUFF	BuFFer	OSC	OSCillator
COMP	COMParator	PCB	Printed Circuit Board
DET	DETECT(DETECTOR)	PLL	Phase Locked Loop
FLD	FLUorescent Display	Q.D	Quadrature Detector
FM	Frequency Modulation	Rch	Right channel
FREQ	FREQUENCY	REF	REFerence
GND	GrouND	REG	REGulator
H	High	RF	Radio Frequency
HPF	High Pass Filter	SEG	SEGment
IF	Intermediate Frequency	SELE	SELEctor
IHF	Institute of High Fidelity	SENS	SENSitivity
IND	INDicator	SIG	SIGnal
I/O	In/Out	S/N	Signal to Noise Ratio
JW	Jumper Wire	SSG	Standard Signal Generator
L	Low	STD	STanDard
LCD	Liquid Crystal Display	SW	Switch: Short Wave(frequency)
LCH	Left CHannel	THD	Total Harmonic Distortion
LED	Light Emitting Diode	TP	Test Point
LPF	Low Pass Filter	VCO	Voltage Controlled Oscillator
LW	Long Wave (Frequency)	VR	Variable Resistor
XTAL	Crystal		

## COMPACT DISC

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A-D	Analog to Digital(Converter)	Mb	Mega Bits
ADC	Analog Code Decimal (Converter)	MDA	Motor Drive Amplifier
BCD	Binary Code Decimal	MFM	Modified Frequency Modulation
BPI	Bits Per Inch	MV	Mono-stable Multivibrator
CD	Compact Disc	M2FM	Modified Modified Frequency Modulation
CIRC	Cross Interleaving & Reed Solomon Coding	MOD2	Module 2 (Addition)
CLV	Constant Linear Velocity	MP	Microprocessor
CP	Clock Pulses	MSB	Most Significant Bit
CRCC	Cyclic Redundancy Check Codes	NA	Numerical Aperture
D Level	Decision Level	NRZ	Non Return to Zero
D-A	Digital to Analog(Converter)	NRZ-I	Non Return to Zero Inverted
DAC	Digital to Analog(Converter)	P	Parity Data
DAD	Digital Audio Disc	PAM	Pulse Amplitude Modulation
DEM	Dynamic Element Matching	PCM	Pulse Code Modulation
DPD	Differential Phase Detection	PD	Phase Detector
DSV	Digital sum Value	PE	Phase Encode
EFM	Eight to Fourteen Modulation	PLL	Phase locked Loop
EX-OR	Exclusive OR	PNM	Pulse Number Modulation
FCI	Flux Changes per Inch	PPM	Pulse Phase Modulation
FIR	Finite Impulse Response	PWM	Pulse Width Modulation
FP	Front Pulse	Q	Parity Data
FPG	Front Pulse Gate	R,R1,R2,ect.	Data for Right Channel
F	Frequency of Sampling	RAM	Random Access Memory
GF	Galois Field	RPG	Rear Pulse Gate
H&V(Parity)	Horizontal & Vertical	SCOOP	Self Coupled Optical Pick-up
IIR	Infinite Impulse Response	S&H	Sample & Hold
KB	Kilo Bits	S/N	Signal to Noise Ratio
L,L1,L2,ect.	Data for Left Channel	SSG	Standard Signal Generator
LPF	Low Pass Filter	SYSCON	SYStem CONtrol
LSB	Least Significant Bit		

## CASSETTE

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AC	Alternating Current	MIN	Minute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	MultiPlex
AR	Anti Recording	NC	Not connected (No Connection)
AT BIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMAl
BAL	BALance	NR	Noise Reduction
BEFB	and Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAPM	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	OR	Quick Reverse
CONT	CONTinuanance	RCH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord (RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETEctor	SEC	SECOnd
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQUALizer	SEPP	Single Ended Push Pull
FF or (F.FWD)	Fast Forward	SIG	SIGnal
FLD	FLuorescent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	TEST Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	Volume
L	Low	VOLT	VOLTage
LCH	Left Channel	VR	Variable Resistor
LEDLight	Emitting Diode	XTAL	crystAL
MEMO	MEMOry	X1	Normal speed
MICOM	MicroCOMputer	X2	Double speed



**AMPLIFIER**

<b>ABBREVIATION</b>	<b>EXPLANATION</b>
A	Analog
AC	Alternating Current
AMP	AMPlifier
CD	Compact Disc
COM	COMmon
D	Digital
D/A	Digital to Analog
DAC	Digital to Analog Converter
DAT	Digital Audio Tape recorder
DC	Direct Current
GND	GrouNd
L	Left
LED	Light Emitting Diode
MC	Moving Coil
MM	Moving Magnet
PCB	Printed Circuit Board
R	Right
REG	REGulator
REC	RECord
TR	TRansistor
SW	SWitch
VAMP	Voltage AMPlifier
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder