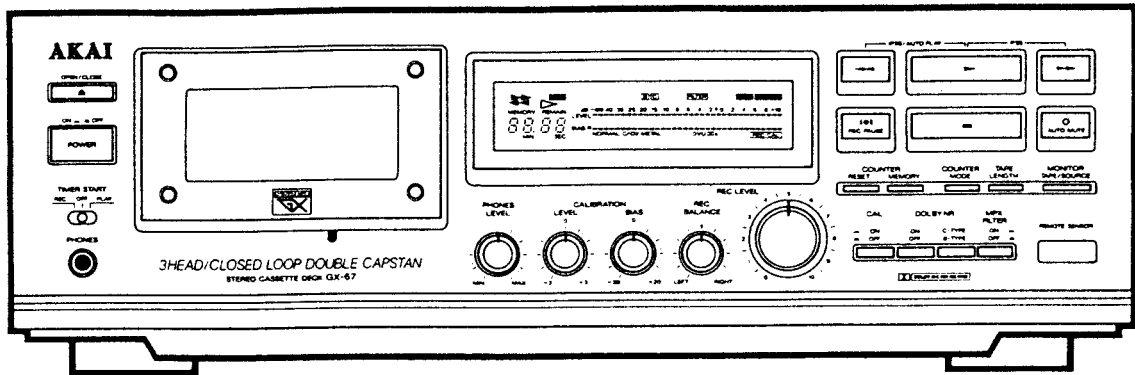


# AKAI SERVICE MANUAL



MODEL GX-67

## STEREO CASSETTE DECK

MODEL **GX-67**  
MODEL **DX-57**

## SPECIFICATIONS

<b>Track System</b> .....	4 track 2 channel Stereo	<b>S/N ratio</b> .....	57 dB (Measured via Metal tape with peak recording level)
<b>Heads</b>		<b>Dolby B type NR</b> .....	Improves up to 5 dB at switch ON : 1 kHz, 10 dB above 5 kHz
GX-67 .....	Erase Head x 1 LC-OFC SGX Head for recording x 1 LC-OFC SGX Head for playback x 1	<b>Dolby C type NR</b> .....	Improves up to 15 dB at switch ON : 500 Hz, 20 dB at 1 kHz to 10 kHz
DX-57 .....	Erase Head x 1 Hard permalloy Head for recording x 1 Hard permalloy Head for playback x 1	<b>Total Harmonic Distortion</b> .....	1.0 %
<b>Motors</b> .....	Electronic speed controlled DC motor for capstan x 1 DC motor for reel drive x 1 DC motor for tape eject/loading x 1 (GX-67 only)	<b>Input Level/Impedance</b>	
<b>Wow &amp; Flutter</b> .....	0.045 % (WRMS) 0.08 % (DIN)	Line .....	70 mV / 47 kohms
<b>Tape winding time</b> .....	80 sec. (C-60)	<b>Output Level/Impedance</b>	
<b>Frequency Response</b>		Line .....	388 mV / 2 kohms
GX-67 Normal ....	15 Hz to 18,000 Hz $\pm 3$ dB	Headphones .....	1.3 mW / (8 ohms)
CrO <sub>2</sub> .....	15 Hz to 18,000 Hz $\pm 3$ dB	<b>Power Requirements</b> .....	AC 220 V- 230 V, 50 Hz for Europe except UK AC 240 V, 50 Hz for UK AC 110 V- 120 V, 220 V-240 V, 50 / 60 Hz Convertible for other countries
Metal .....	15 Hz to 21,000 Hz $\pm 3$ dB	<b>Dimensions</b> .....	425 (W) x 135 (H) x 351 (D) mm
DX-57 Normal ....	15 Hz to 17,000 Hz $\pm 3$ dB	<b>Weight</b>	
CrO <sub>2</sub> .....	15 Hz to 17,000 Hz $\pm 3$ dB	GX-67 .....	5.4 kg
Metal .....	15 Hz to 20,000 Hz $\pm 3$ dB	DX-57 .....	5.3 kg
		<b>Standard accessories</b>	
		Connection cords .....	x 2
		Remote control unit .....	x 1
		Dry batteries R6 (AA) size .....	x 2
		Operator's manual .....	x 1

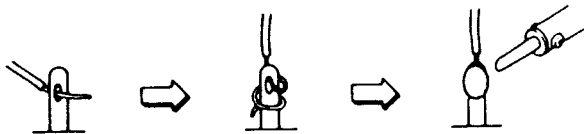
0 dBs = 0.775 V

- \* For improvement purposes, specifications and design are subject to change without notice.
- \* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
- \* "DOLBY", the double-D symbol  $\square$  and "HX Pro" are trademarks of Dolby Laboratories Licensing Corporation.

# ★ SAFETY INSTRUCTIONS

## PRECAUTIONS DURING SERVICING

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



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

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

## SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit. The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15  $\mu$ F capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.

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

## MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

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



Please leave them at an appropriate depot. All other household batteries can be thrown out with the household waste.

# ★ INFORMATION

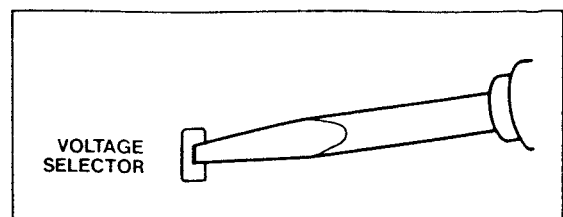
## SYMBOLS FOR PRIMARY DESTINATION

Primary destinations of units are indicated with the following alphabet.

Symbols	Primary Destinations
B	UK
E	Europe (except UK)
S	Australia
V	Germany
U	Universal Area
Y*	Custom version

## VOLTAGE CONVERSION ( U Model only)

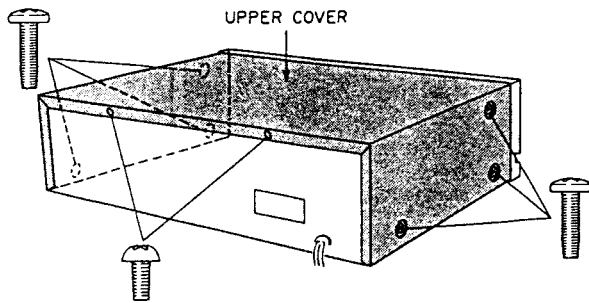
Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel with a flat type screwdriver so that the correct voltage for your area is indicated.



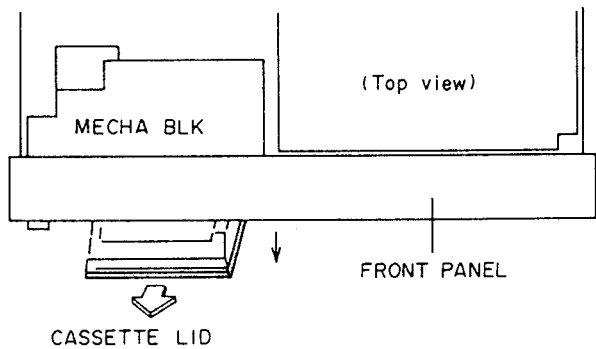
# I. DISASSEMBLY

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

## 1. Removal of the UPPER COVER

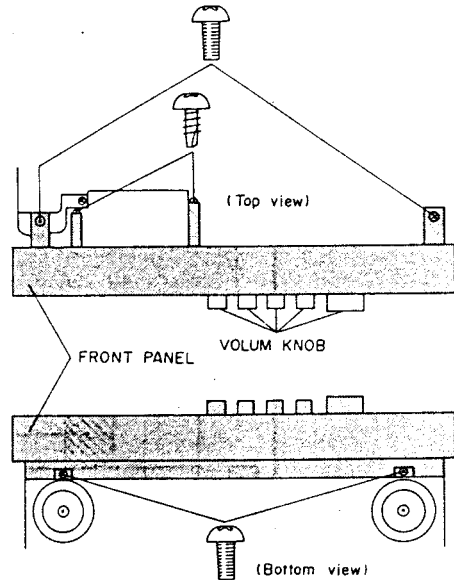


## 2. Removal of the CASSETTE LID

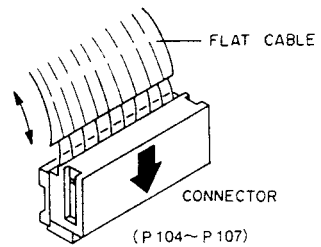


- 1) Turn the power ON and press the OPEN/CLOSE (▲) button to open the cassette lid. (GX-67 ONLY)
- 2) Press the EJECT button to open the cassette lid. (DX-57 ONLY)
- 3) Remove the cassette lid by pulling it in the direction of the arrow (⇓)

## 3. Removal of the FRONT PANEL



- 1) Remove the five knobs on the FRONT PANEL.
- 2) Remove the REC LEVEL volume retaining nut.
- 3) Disconnect the P104, P105, P106 and P107 connectors on the PRE AMP PCB.
- 4) Remove the FRONT PANEL retaining screws.



## II. PRINCIPAL PARTS LOCATION

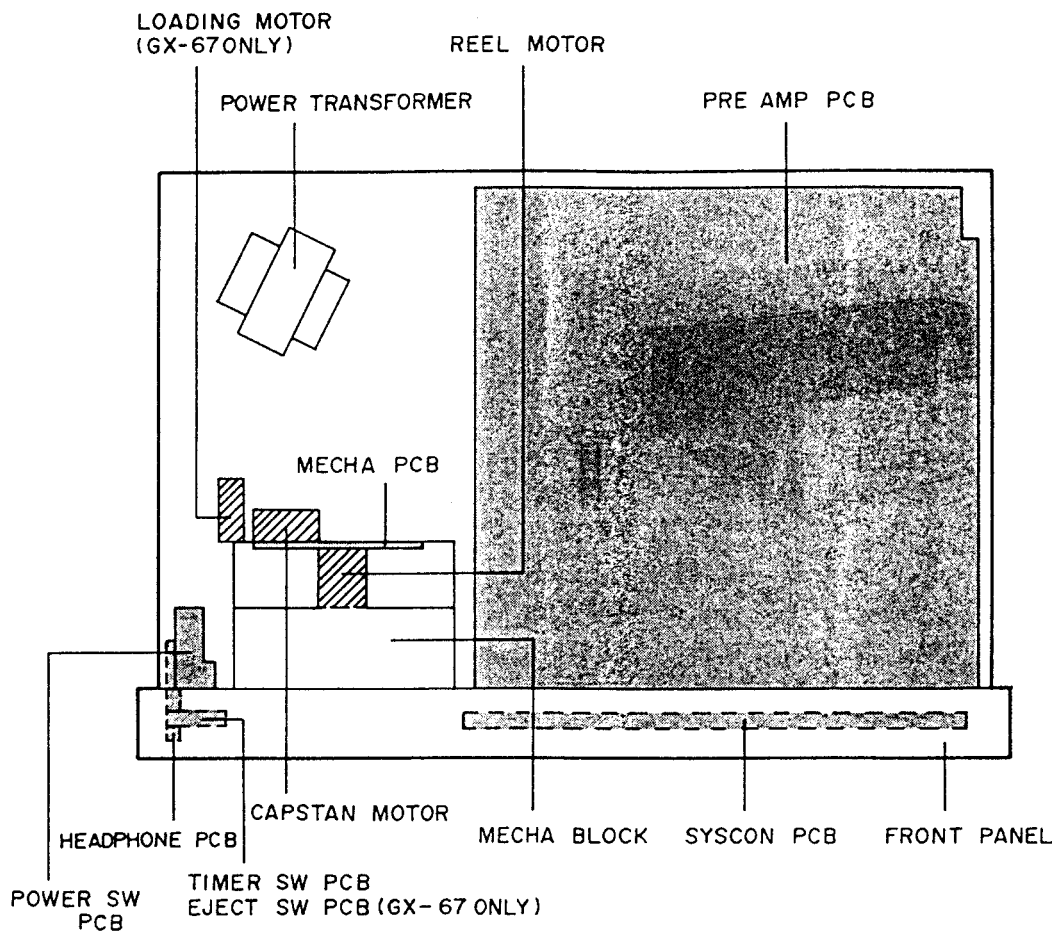
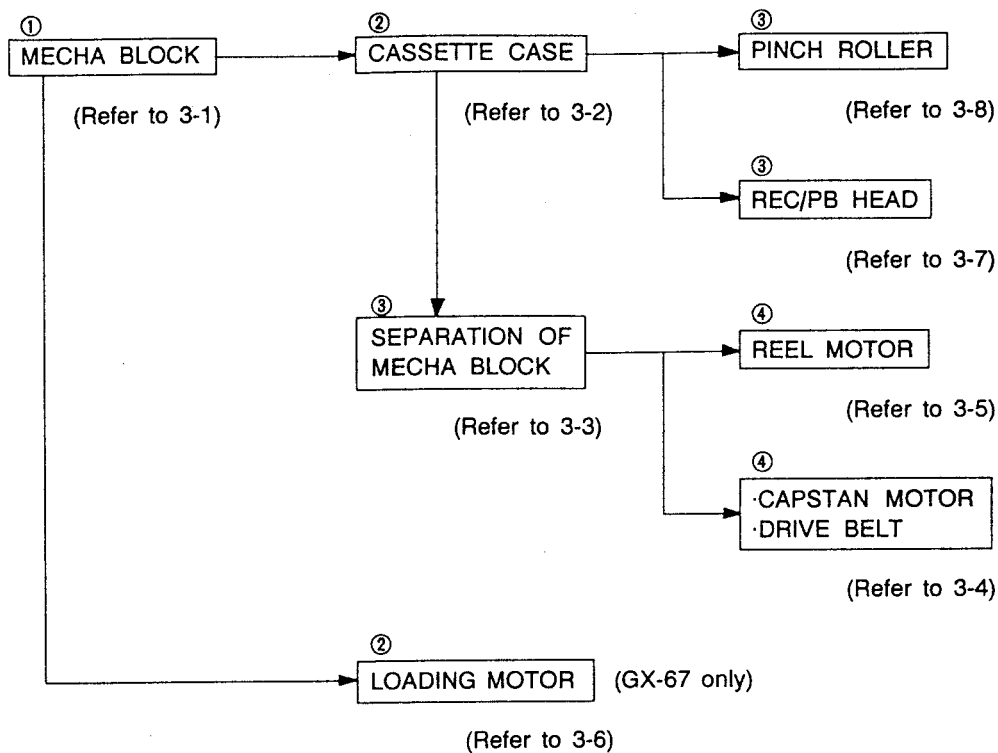


Fig. 2-1 Top view

# III. REPLACEMENT OF THE PRINCIPAL COMPONENT

## [DISMANTLING PROCEDURE OF THE COMPONENT]

When replacement of a mechanical part is necessary, replace the part using one of the following procedures.



### 3-1. HOW TO REMOVE THE MECHA BLOCK

- 1) Disconnect the two connectors on the MECHA BLOCK.
- 2) Disconnect the P101, P102, P103, P108, P109, P110 and P111 connectors on the PRE AMP PCB.
- 3) Remove the MECHA BLOCK retaining screws (A).
- 4) Remove the MECHA BLOCK retaining screws (B) and (C) of bottom side.
- 5) Remove the MECHA BLOCK.
- 6) Reassemble by replacing the parts in the reverse order of removal.

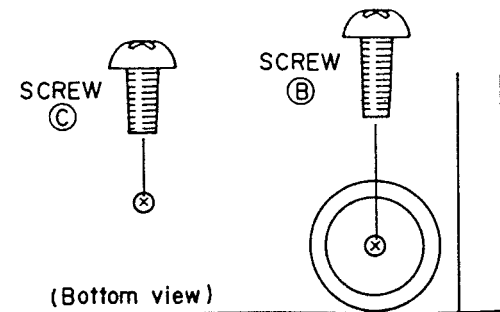


Fig. 3-1

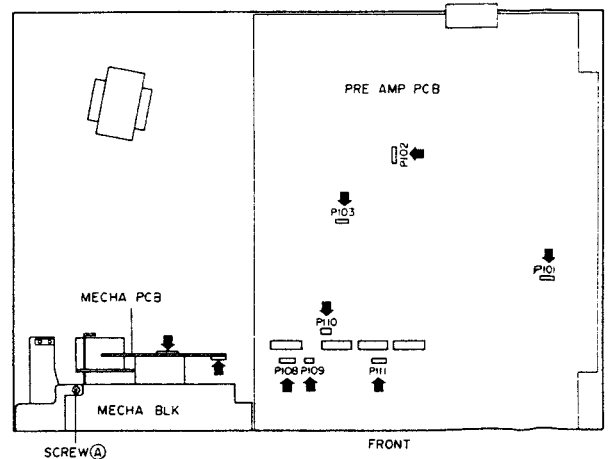


Fig. 3-2

### 3-2. HOW TO REMOVE THE CASSETTE CASE

- 1) Remove the spring ④.
- 2) Remove the lid arm from the cassette case.
- 3) Remove the pivot from the MECHA BLOCK.
- 4) Reassemble by replacing the parts in the reverse order of removal.

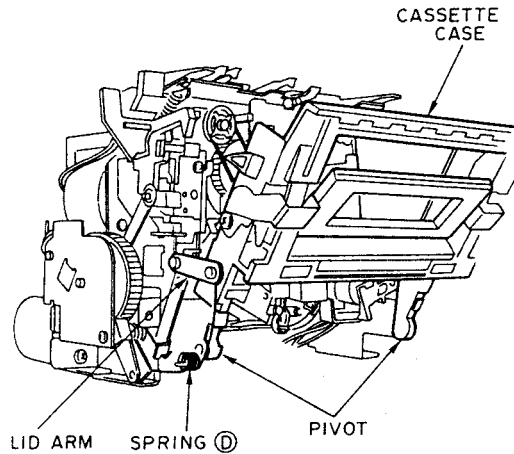


Fig. 3-3

### 3-3. SEPARATION OF THE MECHA BLOCK

- 1) Remove the capstan motor lead wires with a soldering iron.
- 2) Remove the stopper retaining screw ⑤.
- 3) Remove the MECHA BLOCK retaining screws ⑥.
- 4) Separate the REEL BLOCK and the CAPSTAN BLOCK of the MECHA BLOCK.
- 5) Reassemble by replacing the parts in the reverse order of removal.

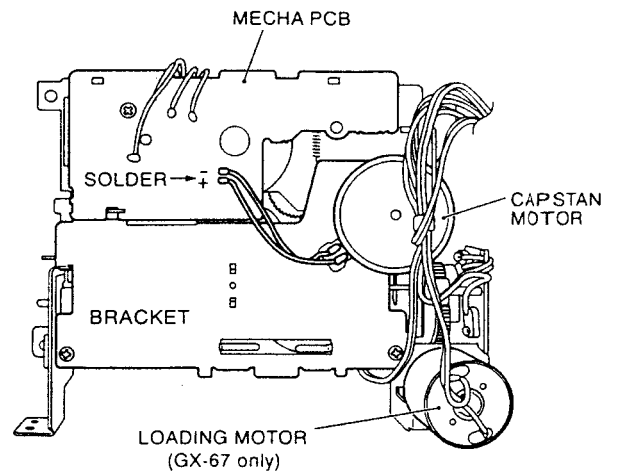


Fig. 3-4

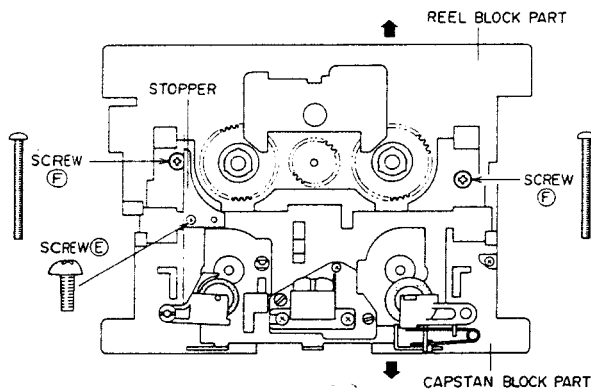


Fig. 3-5

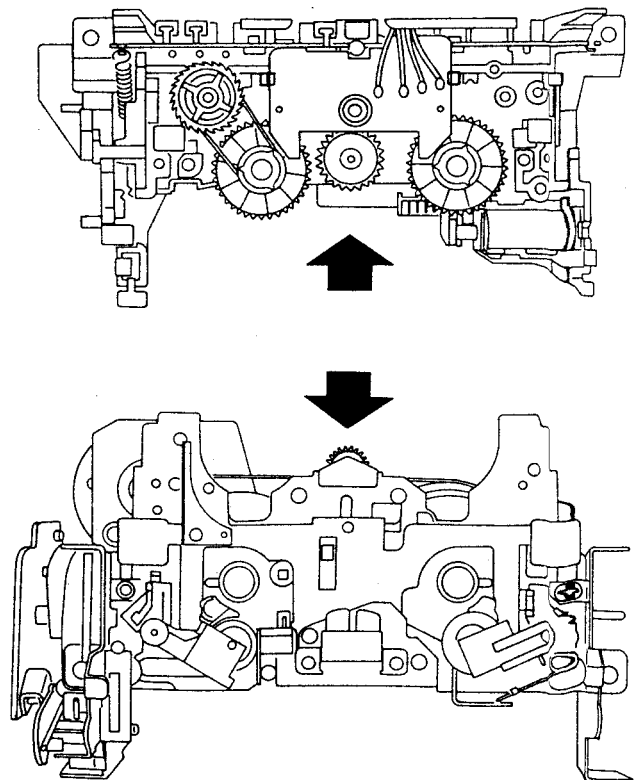


Fig. 3-6

### 3-4.REPLACEMENT OF THE CAPSTAN MOTOR AND DRIVE BELT

- 1) Remove the side plate retaining screw ㉓ and then remove the side plate.
- 2) Remove the bracket retaining screw ㉔ and then remove the bracket. (Refer to Fig.3-8).

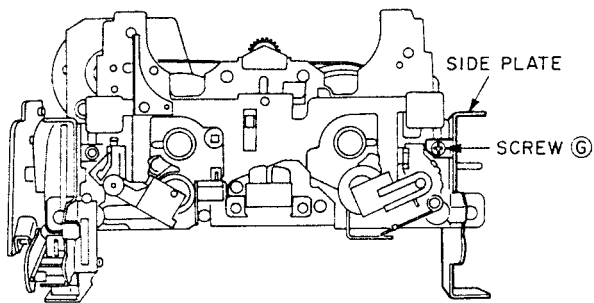


Fig. 3-7

#### 3-4-1. HOW TO REMOVE THE CAPSTAN MOTOR

- 1) Remove the capstan motor retaining screw ㉑.
- 2) To reassemble, replace the retaining screw and connect the drive belt to the motor pulley.

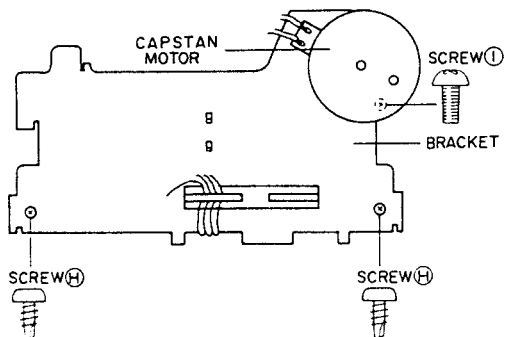


Fig. 3-8

#### 3-4-2. HOW TO REMOVE THE DRIVE BELT

- 1) Remove the DRIVE BELT from the capstan wheel.
- 2) To reassemble, connect the DRIVE BELT to the capstan wheel and then connect it to the motor pulley.

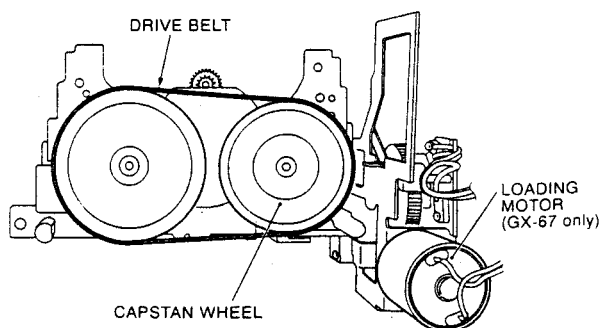


Fig. 3-9

### 3-5.REPLACEMENT OF THE REEL MOTOR

- 1) Remove the solder of all detector switches, lead wires from the solenoid and reel motor leads with a soldering iron.
- 2) Remove the PCB retaining screw ㉒.
- 3) Release the two hooks which retain the REEL PULSE DETECTION PCB and remove the PCB. (Refer to Fig.3-12)
- 4) Remove the springs of the assist lever (A) and (B).
- 5) Extract the assist lever (A) and (B).
- 6) Remove the reel motor retaining screws ㉕ and remove the REEL MOTOR.
- 7) Reassemble by replacing the parts in the reverse order of removal.

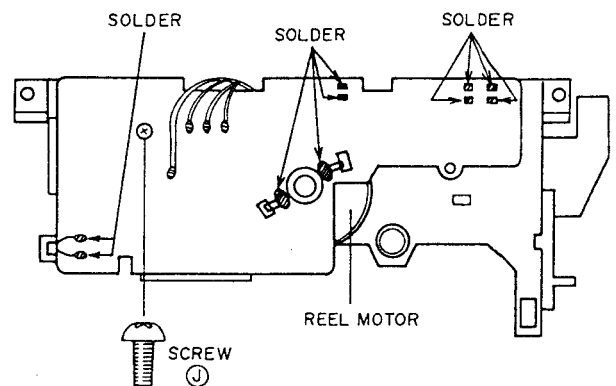


Fig. 3-10

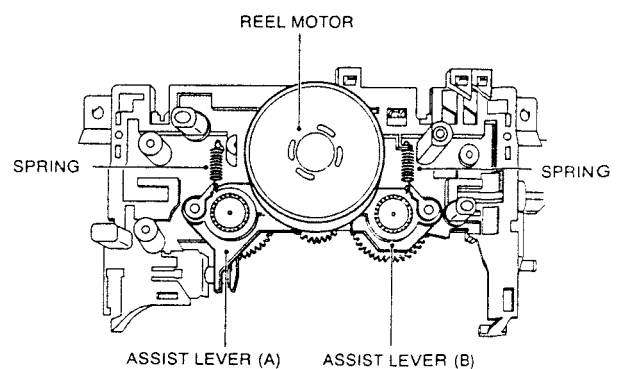


Fig. 3-11

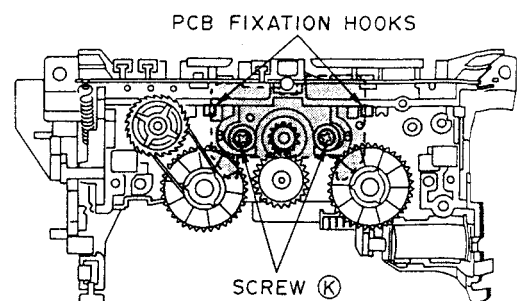


Fig. 3-12

### 3-6. REPLACEMENT OF THE LOADING MOTOR (GX-67 only)

- 1) Remove the holder (2) retaining screws (L) and then remove the holder (2).
- 2) Remove the LOADING MOTOR retaining screws (M) and remove the LOADING MOTOR.
- 3) Reassemble by replacing the parts in the reverse order of removal.

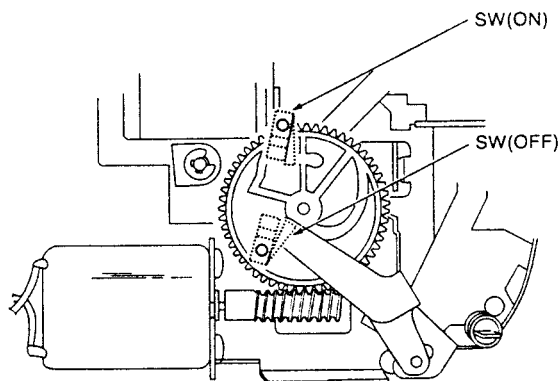


Fig. 3-14

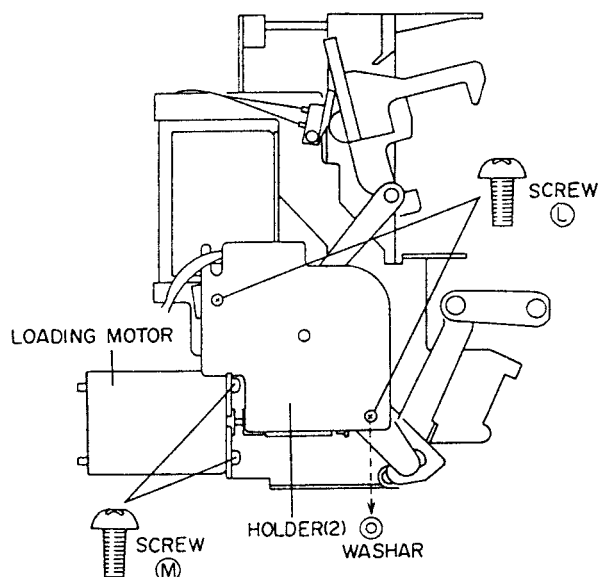
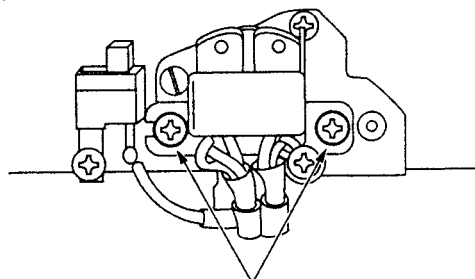


Fig. 3-13

### 3-7. REPLACEMENT OF THE REC/PB HEAD

- 1) Remove the head retaining screws (N).
- 2) Disconnect the lead wires with a soldering iron.
- 3) Reassemble by replacing the parts in the reverse order of removal.

- Never move the head height adjustment screws (N) and (D) in this step as they have been adjusted previously.
- After replacement, precise head adjustment is necessary (refer to 5. HEAD ADJUSTMENT).



SCREW (N)

Fig. 3-15

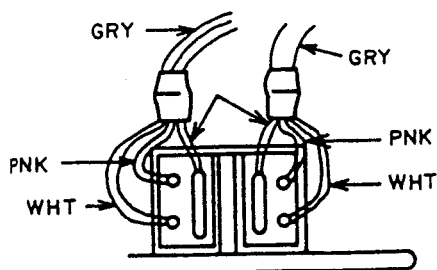


Fig. 3-16

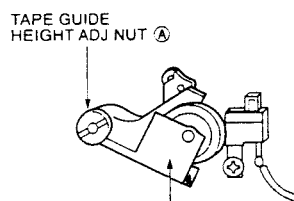
### 3-8. REPLACEMENT OF THE PINCH ROLLER BLOCK

#### 3-8-1. SUPPLY PINCH ROLLER BLOCK

- 1) Remove the tape guide (1) adjustment nut (A).
- 2) Extract the SUPPLY PINCH ROLLER BLOCK.
- 3) Reassemble by replacing the parts in the reverse order of removal.

#### [NOTE]

After reassembling the supply pinch roller block, step 5-1, "TAPE GUIDE HEIGHT ADJUSTMENT" must be performed.



SUPPLY PINCH ROLLER BLOCK

Fig. 3-17

#### 3-8-2. TAKE UP PINCH ROLLER BLOCK

- 1) Release the TAKE UP PINCH ROLLER BLOCK's retaining hook and extract the TAKE UP PINCH ROLLER BLOCK.
- 2) Reassemble by replacing parts in the reverse order of removal.

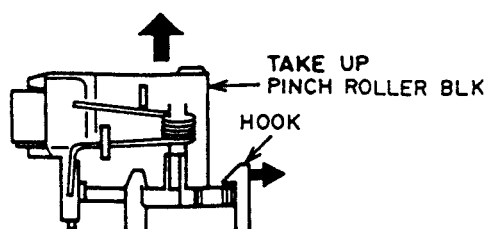


Fig. 3-18



# IV.MECHANICAL ADJUSTMENT

## 4-1.CONFIRMATION OF PINCH ROLLER PRESSURE

- 1) Set the unit in the "PLAY" mode without a cassette tape loaded.
- 2) Push the TAKE UP PINCH ROLLER arm down 1 or 2 mm from the capstan with a spring gauge.

Release the pressure of the spring gauge little by little and read the scale at the moment when the TAKE UP PINCH ROLLER touches to the capstan and starts rotation.

Also confirm the SUPPLY PINCH ROLLER pressure with the same procedure as above.

Specified pinch roller pressure:

TAKE UP PINCH ROLLER :  $320 \pm 50$  grams

SUPPLY PINCH ROLLER :  $200 \pm 40$  grams

- If either of the PINCH ROLLER's pressure is not satisfactory, replace it.

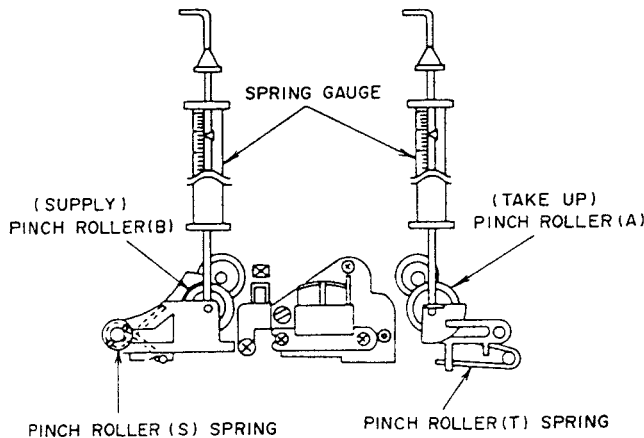


Fig. 4-1

## 4-2.CONFIRMATION OF WINDING TORQUE IN EACH MODE

- 1) Insert the CASSETTE TORQUE METER (AJ-751179).
- 2) Read the TORQUE METER in each mode. For fast forward and rewind, read at the end of the tape when the tape has stopped running.

PLAY mode

TAKE UP TORQUE : 35 to 55 grams

BACK TENSION : 5 to 10 grams

FF and RWD mode : 70 to 160 grams

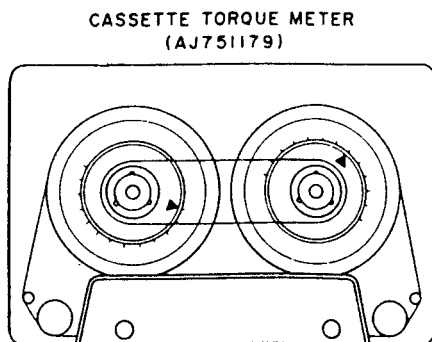


Fig. 4-2

## 4-3.TAPE SPEED ADJUSTMENT

- 1) Connect a frequency counter to the LINE OUT and play back a 3150 Hz test tape (AT-751263).
- 2) Insert a small flat screw driver into a hole on the capstan motor and adjust the tape speed control VR so that the reading on the frequency counter is  $3150 \pm 10$  Hz.

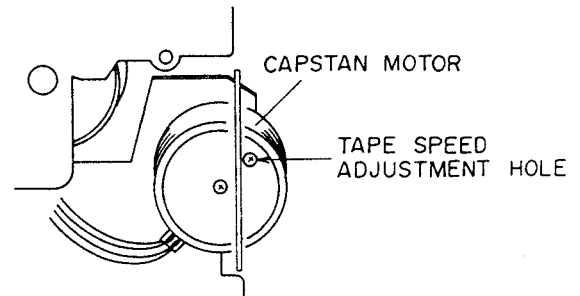


Fig. 4-3

## 4-4.HOW TO REMOVE A JAMMED CASSETTE TAPE

If a damaged tape or defective tape drive mechanism causes a cassette tape to be caught by the capstan, remove the tape from the mechanism block using the following procedure.

- 1) Place your index finger under the mechanism block and turn the capstan wheel (take up side) counterclockwise until the jammed tape loosens.
- 2) Press the EJECT button. (DX-57 only)
- 3) Disconnect the LOADING MOTOR'S P110 connector from the PRE AMP PCB. (GX-67 only)
- 4) Connect a 4.5 V battery onto the LOADING MOTOR and eject the tape. (GX-67 only)

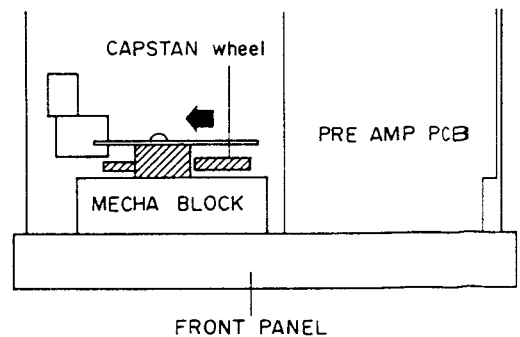
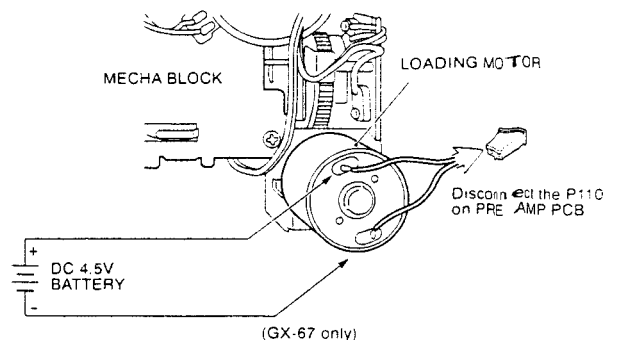


Fig. 4-4



(GX-67 only)  
Fig. 4-5

# V. HEAD ADJUSTMENT

## 5-1. TAPE GUIDE HEIGHT ADJUSTMENT

**\* Caution:**

The tape guide adjustment nut ① is important as it fixes the position of the tape guide (1) and has been precisely adjusted at the factory.

Never turn this nut unless it is absolutely necessary (when replacing the SUPPLY PINCH ROLLER BLOCK for example).

- 1) Load the mirror cassette tape (AJ-751178) and engage the PLAY mode.
- 2) Pre-adjust the tape guide adjustment nut ① so that the tape runs smoothly and the edge of the tape is not curled or wrinkled at the TAPE GUIDE (1) or TAPE GUIDE (2).
- 3) Load the 10 kHz head azimuth test tape (AT-750778) and play it back.  
Adjust the tape guide adjustment nut ① precisely so that the line output level is maximum and also confirm that the edge of the tape is not curled or wrinkled at both the tape guides.
- 4) After the adjustment is completed, lock the tape guide adjustment nut ① with lock-paint.

## 5-2. REC/PB HEAD AZIMUTH ALIGNMENT ADJUSTMENT

- 1) Load the 10 kHz head azimuth test tape (AT-750778) and play it back.
- 2) Turn the azimuth adjust screw ⑥ so that both the left and right channel line output levels are maximum and in the same phase.
- 3) After the adjustment is completed, lock the azimuth adjust screw ⑥ with lock-paint.

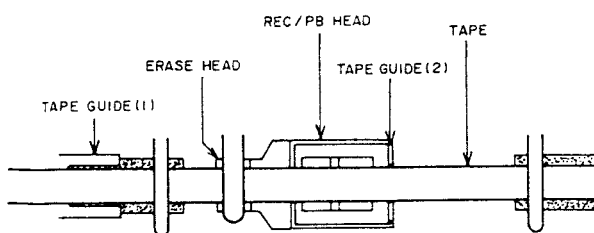


Fig.5-1

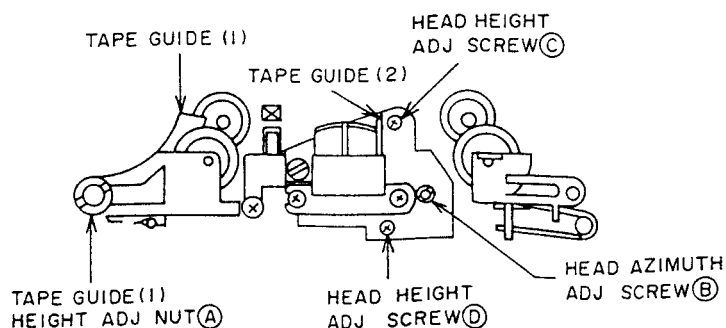


Fig.5-2

## 5-3. ADJUSTMENT WHEN THE REC/PB HEAD IS REPLACED

- 1) Load the mirror cassette tape (AJ-751178) and engage the PLAY mode, confirming that the edge of the tape is not curled or wrinkled at the TAPE GUIDE (2).

**[When the tape is running smoothly]**

- A) Perform the REC / PB HEAD azimuth adjustment (refer to 5-2).
- B) Play back the 1000 Hz (4 track) head height adjustment test tape (AT-750775) and confirm that the LINE OUTPUT level is maximum (-6 dBs).

**[When the tape is not running smoothly]**

- A) Play back the mirror cassette test tape and observe the TAPE GUIDE (2), checking to see whether its height is too low or too high.
- B) Loosen the azimuth adjust screw ⑥ and pre-adjust the head height adjustment screws ③ and ④.

**NOTE**

Always turn the ③ and ④ screws in the same direction and to the same degrees.

- When the head height is too low : Turn clockwise.
- When the head height is too high : Turn counterclockwise.

(The head height adjust screws ③ and ④ can not be adjusted during playback.)

- C) Play back the mirror cassette tape and check the TAPE GUIDE (2) height again.
- D) Repeat the above steps B) and C) until results are satisfactory.
- E) Play back the 10 kHz head azimuth test tape and finely adjust the tape guide adjustment nut ① so that the LINE OUTPUT level is maximum.
- F) Play back the 1000 Hz (4 track) head height adjust test tape and confirm that the LINE OUTPUT level is maximum (-6 dBs).
- Move the REC / PB HEAD up or down slightly during playback, and if the level increases, re-adjust the head height adjustment screws ③ and ④.
- G) After the above adjustments are completed, adjust the head azimuth again (Refer to step 5-2).
- H) Lock the head height adjustment screws ③ and ④ with lock-paint after all the adjustments are satisfactorily completed.

# VI. ELECTRICAL ADJUSTMENT

## NOTES

- All adjustments should be made with CAL, DOLBY and MPX FILTER switches OFF (except STEP 4,11)
- Control settings
  - REC LEVEL : Maximum
  - REC BALANCE : Center click position
  - CALIBRATION LEVEL : Center click position (GX-67 only)
  - CALIBRATION BIAS : Center click position (GX-67 only)
  - BIAS : Center click position (DX-57 only)
- Use the following cassette tapes for adjustment.
  - NORMAL TAPE : MAXELL UD1 C-60
  - CrO<sub>2</sub> TAPE : TDK SA C-60
  - METAL TAPE : TDK MA C-60

## ADJUSTMENT KEY

STEP No.	ADJUSTMENT ITEM
1.	TEST tape / Supply signal
2.	MODE
3.	Adjustment Parts / Adjustment point
4.	(•) Remarks / (*) Result

Adjustment parts  
TEST point

- ### 7 NORMAL POSITION BIAS
- NORMAL recording tape / 1 kHz, 12.5 kHz, Set AUDIO signal generator output control so that the LINE OUTPUT level is - 28.5 dBs
  - REC / PLAY (◀▶ → ▶), PLAY (▶)
  - VR 323 (Lch), VR 423 (Rch) / LINE OUTPUT
  - Connect the AC milli-voltmeters to LINE OUT  
\* - 28.5 dBs (1 kHz, 12.5 kHz) flat

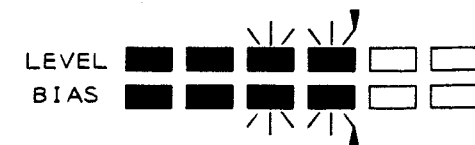
- ### 8 CrO<sub>2</sub> POSITION BIAS
- CrO<sub>2</sub> recording tape / 1 kHz, 12.5 kHz, Set AUDIO signal generator output control so that the LINE OUTPUT level is - 28.5 dBs
  - REC/PLAY (◀▶ → ▶), PLAY (▶)
  - VR 322 / LINE OUTPUT
  - Connect the AC milli-voltmeters to LINE OUT  
\* - 28.5 dBs (1 kHz, 12.5 kHz) flat

- ### 9 METAL POSITION BIAS
- METAL recording tape / 1 kHz, 12.5 kHz, Set AUDIO signal generator output control so that the LINE OUTPUT level is - 28.5 dBs
  - REC/PLAY (◀▶ → ▶), PLAY (▶)
  - VR 321 / LINE OUTPUT
  - Connect the AC milli-voltmeters to LINE OUT  
\* - 28.5 dBs (1 kHz, 12.5 kHz) flat

- ### 2 ERASE / BIAS FREQUENCY
- METAL recording tape
  - REC / PLAY (◀▶ → ▶)
  - T 322 / P103
  - Connect a frequency counter to P103 (① / ②)  
\* 105 ± 0.2 kHz

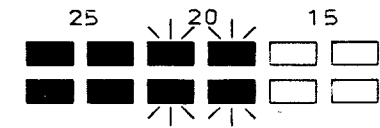
- ### 4 MPX FILTER
- 19 kHz, Set AUDIO signal generator output control so that the LINE OUTPUT level is - 6.0 dBs
  - STOP / SOURCE MONITOR
  - FL 171 (Lch), FL 271 (Rch) / LINE OUTPUT
  - MPX sw ON  
• Connect the AC voltmeters to LINE OUTPUT  
\* Minimum level (Less then - 36 dBs)

- ### 11 CAL METER (GX-67 only)
- CrO<sub>2</sub> recording tape
  - CAL SW ON, REC/PLAY (◀▶ → ▶)
  - VR 181 (CAL LEVEL), VR 281 (CAL BIAS) / on FLD (VU meter)
  - Adjustment must be made just before the 0 dB segment lights completely



- ### 3 BIAS DIP POINT
- METAL recording tape
  - REC/PLAY (◀▶ → ▶)
  - T 321 (Lch), T 421 (Rch) / TP-1 and TP-2
  - Connect the DC milli-voltmeter between TP-1 (+) and TP-2 (-)  
\* Minimum DC voltage

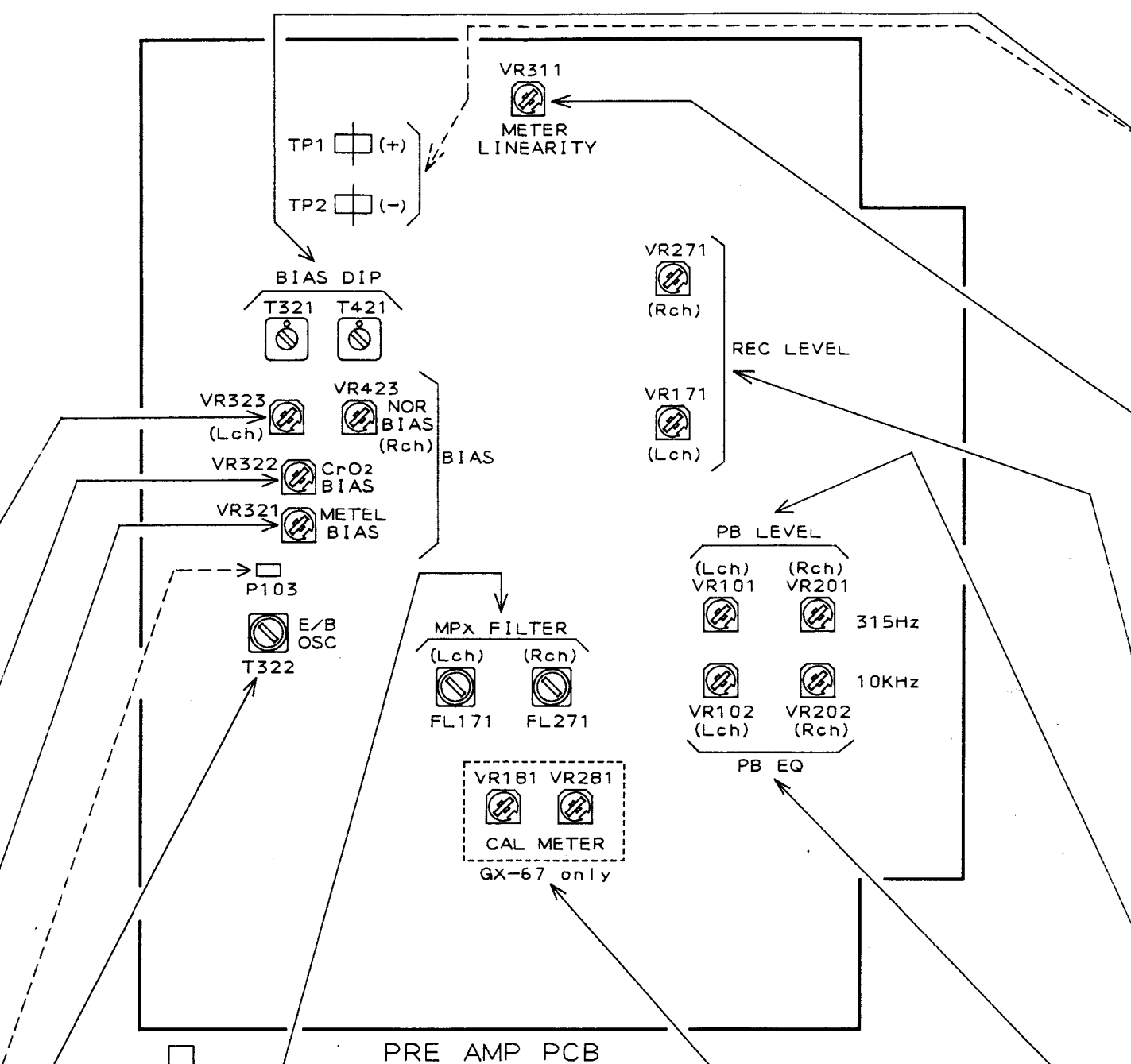
- ### 1 METER LINEARITY
- 400 Hz, Set AUDIO signal generator output control so that the LINE OUTPUT level is - 23.0 dBs.
  - STOP/SOURCE MONITOR
  - VR 311 / on FLD (VU meter)
  - Adjustment until the - 20 dB indicator lights completely



- ### 10 RECORDING LEVEL
- NORMAL recording tape / 315 Hz, Set AUDIO signal generator output control so that the LINE OUTPUT level is - 6.0 dBs
  - REC/PLAY (◀▶ → ▶), PLAY (▶)
  - VR 171 (Lch), VR 271 (Rch) / LINE OUTPUT
  - Connect the AC milli-voltmeters to LINE OUT  
\* - 6.0 dBs

- ### 5 PLAYBACK LEVEL
- 315 Hz TEST tape (AT750773)
  - PLAY (▶)
  - VR 101 (Lch), VR 201 (Rch) / LINE OUTPUT
  - Connect the AC milli-voltmeters to LINE OUT  
\* - 6.0 dBs

- ### 6 PLAYBACK EQUALIZER LEVEL
- 10 kHz (-15 dB) TEST tape (AT750778)
  - PLAY (▶)
  - VR 102 (Lch), VR 202 (Rch) / LINE OUTPUT
  - Connect the AC milli-voltmeters to LINE OUT  
\* - 21.0 dBs



# VII. PARTS LIST

## ATTENTION

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

## HOW TO USE THIS PARTS LIST

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

### a) Mechanism Block

## 2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20x03STL CMT
4	ZS-536488	BID20x08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification  
This number corresponds with the individual parts index number in that figure.

### b) PC Board

## 6. MAIN PC BOARD

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

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

SP (Service Parts) Classification  
These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

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

## WARNING

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

## AVERTISSEMENT

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

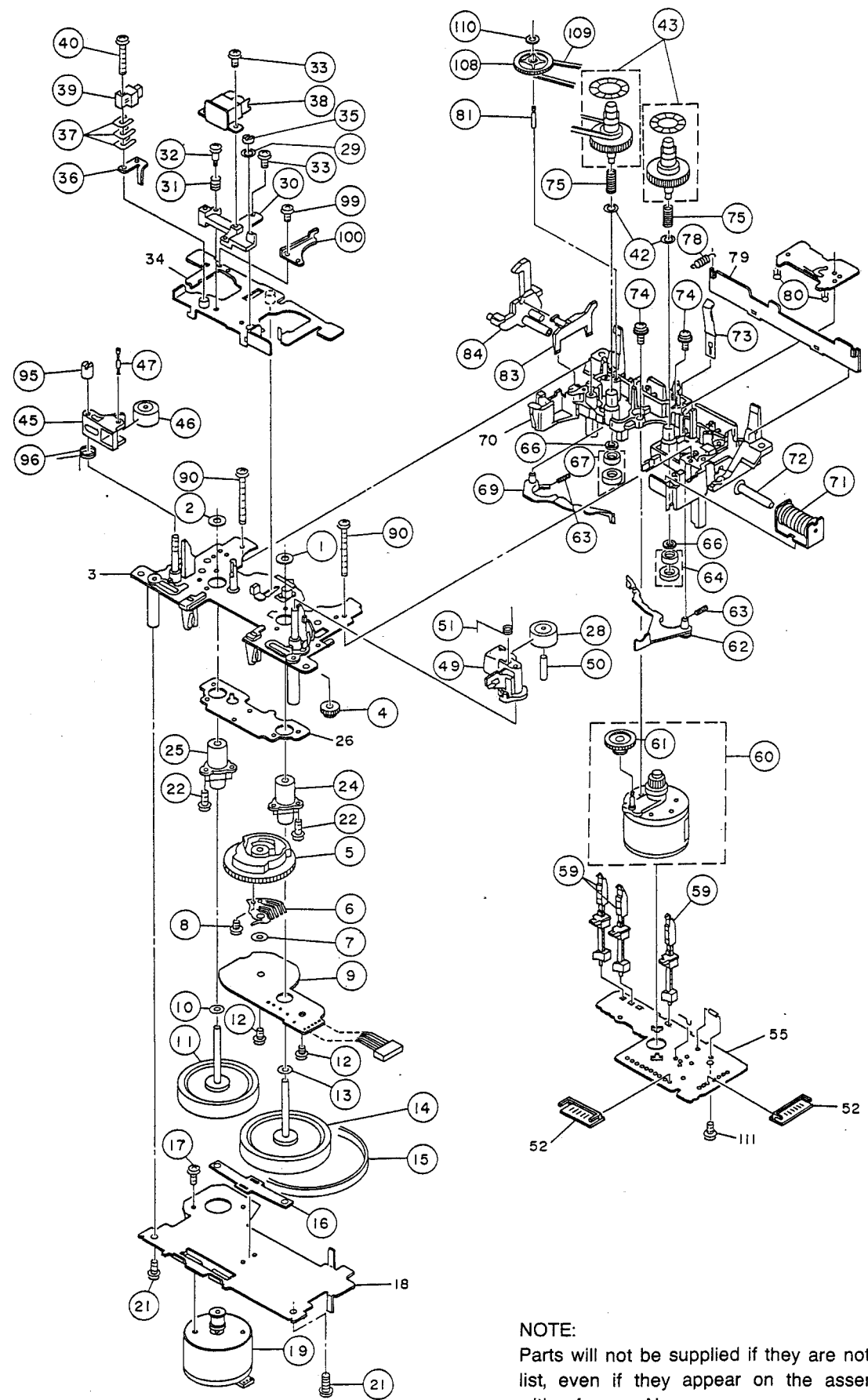
## 1. RECOMMENDED SPARE PARTS

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

Ref.No.	Part No.	Description
1	AX-D4004A010B	REMOCON BLK RC-G57 [DX-57]
2	AX-D4004A010A	REMOCON BLK RC-G67 [GX-67]
3	BB-T2130A050B	MECHA BLK DX-57 [DX-57]
4	BB-T2130A050A	MECHA BLK GX-67 [GX-67]
5	*BT-391564J	TRANS POW T2118 BS [B,S]
6	*BT-391561J	TRANS POW T2118 U [U]
7	*BT-405379J	TRANS POW T2130 E [E]
8	ED-307572	D SILICON H 1SS131
9	ED-624903	D SILICON H 1S2473 [GX-67]
10	*ED-405583J	D SILICON RL202BB81 F08 100/2A [B]
11	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT B]
12	ED-400221J	D ZENER H HZ11A3LFA F10
13	ED-346574	D ZENER H HZ22-2L
14	ED-346598	D ZENER H HZ4 C2
15	*ED-346602	D ZENER H HZ5 B3
16	ED-343410	D ZENER H HZ6A1L
17	*ED-346525	D ZENER H HZ6A3L
18	ED-351419	D ZENER H HZ7B3L
19	ED-346536	D ZENER H HZ7C3L [GX-67]
20	ED-346541	D ZENER H HZ9B2L
21	*EF-358641	FUSE BET T 250V 800MA [E,B,S]
22	*EF-309387	FUSE TSC A 250V 1.00A [U]
23	EH-370972	FILTER LC LP 370972
24	EI-367572	IC BA15218
25	EI-373980	IC BA15218N
26	EI-353421	IC BA6229 [GX-67]
27	EI-384868J	IC BU4030B
28	EI-394573J	IC CXA1331S
29	EI-394574J	IC LA2000
30	EI-405498J	IC M50941-627SP 91DECK2
31	EI-360043	IC M5220P
32	EI-310036	IC TC4066BP
33	EI-373383	IC UPC1297CA
34	*EI-377101	IC UPC7805HF
35	EI-405327J	OSC CE CST6.00MGW 6.000MHZ
36	EM-405274J	IND FL CM1068C DOUBLE
37	EO-361292	COIL FIX 1 RC875 682J [GX-67]
38	EO-405355J	COIL FIX 3 E1222T472J 472J222J
39	EO-389245J	COIL OSC 1 T2118 100.0KHZ
40	EO-400766J	COIL OSC 1 T2128 (HX) -7 200KHZ [GX-67]
41	EO-405296J	COIL OSC 1 T2130 (HX) 105KHZ [DX-57]
42	EO-405356J	COIL TUN 1 105Z391S 105KHZ [DX-57]
43	EO-405304J	COIL TUN 1 210Z181S [GX-67]
44	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G
45	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
46	*ES-371104	SW PUSH SDDL1 01-1 [POWER SW]
47	ES-405302J	SW PUSH SPUY32 3THROW N [DX-57]
48	ES-405295J	SW PUSH SPUY42 4THROW N [GX-67]
49	ES-370965	SW SLIDE SSSU02 1-01-03N
50	ES-396610J	SW TACT SOR-122HS T05 [REW]
51	ET-403246J	DETECTOR HC-377

Ref.No.	Part No.	Description
52	ET-396487J	TR DTA124XL T05
53	ET-371075	TR DTA124XS
54	ET-373382	TR DTA143ZS
55	ET-354415	TR DTA144ES
56	ET-360399	TR DTC114TS
57	ET-354365	TR DTC114YS
58	ET-354371	TR DTC124ES
59	ET-354364	TR DTC143TS
60	ET-405594J	TR DTC143ZL T05
61	ET-373391	TR DTC143ZS
62	ET-396488J	TR DTC144EL T05
63	ET-354414	TR DTC144ES [GX-67]
64	ET-370310	TR DTC144TS
65	ET-347738	TR 2SA1282A E,F F05
66	ET-364093	TR 2SA1283 E,F
67	ET-352726	TR 2SA1392 T,U
68	ET-389803J	TR 2SA933S R,S
69	ET-400218J	TR 2SC1740S R,S
70	ET-365394	TR 2SC3242A E,F,G F05
71	ET-378524J	TR 2SC3383 S,T,U
72	ET-400741J	TR 2SC3708 T T05
73	ET-396072J	TR 2SD2159 V,W
74	EV-405297J	VR RK14K12B0 SPL C1253X2 [GX-67]
75	EV-405298J	VR ROTARY RK11K1120 B102
76	EV-405300J	VR ROTARY RK11K1120 SP W254
77	EV-405301J	VR ROTARY RK14K12B0 A503X2
78	EV-405299J	VR ROTARY RK16312A0 A104X2

**MECHA BLOCK**



**2. MECHA BLOCK**

Ref.No.	Part No.	Description
1	ZW-729545J	TW25
2	ZW-729440J	TW22
4	MZ-729441J	GEAR ASSIST
5	MZ-729442J	CAM
6	ES-729443J	SW ROTARY
7	ZW-729444J	WASHER 30X080X050 PSL
8	ZS-729445J	PAN 20X03
9	EA-732798J	PC CONTROL
10	ZW-732799J	WASHER
11	MI-732800J	FLYWHEEL
12	ZS-729449J	PAN 20X30
13	ZW-732801J	WASHER 26X047X050 PSL
14	MI-729453J	FLYWHEEL
15	MB-729451J	BELT CAPSTAN
16	MZ-729452J	HOLDER THRUST
17	ZS-729454J	PAN 26X03
19	BM-732802J	MOTOR CAPSTAN SHE2L55
21	ZS-729456J	SCREW TAPPING 26X08
22	ZS-729457J	ST PAN 20X08
24	MV-729458J	MAIN CASE (R)
25	MV-729459J	MAIN CASE (L)
28	MP-732803J	PINCH ROLLER
29	ZW-732819J	WASHER
30	HZ-732804J	BASE HEAD
31	ZG-729462J	SP AZIMUTH
32	MS-729463J	SHAFT
33	ZS-732805J	ST PAN 20X04
35	ZW-729466J	NUT ADJ
36	HZ-729467J	BASE E HEAD
37A	ZW-729468J	SPACER
37B	ZW-729465J	SPACER
37C	ZW-729546J	SPACER
38A	HR-H2411A010A	HEAD COMB RP4-10TG2 RP4-10TG2
38B	HR-405284J	[GX-67] HEAD COMBO H2381 [DX-57]
39	HE-729469J	HEAD E 876-30-03
40	ZS-729470J	BID 20X12
42	ZW-732820J	WASHER
43	MT-732806J	REEL TABLE
45	ML-732807J	ARM PINCH ROLLER (S)
46	MP-732808J	PINCH ROLLER
47	MS-732809J	SHAFT PINCH ROLLER
49	ML-732810J	ARM PINCH ROLLER (R)
50	MS-729475J	SHAFT PINCH ROLLER
51	ZG-732811J	SP ARM PINCH ROLLER (R)
59	ES-729477J	LEAF SW
60	BM-732812J	MOTOR REEL PART SGE09014
61	MZ-729479J	GEAR IDLER
62	ML-729480J	LEVER ASSIST (A)
63	ZG-732813J	SP LEVER ASSIST
64	MR-729482J	PULLEY BRAKE (T) PART (WH)
66	ZW-729483J	WASHER 26X055X013 (PSL)
67	MR-729484J	PULLEY BRAKE (S) PART (BK)
69	ML-732814J	LEVER ASSIST (B)
71	EP-729487J	SOLENOID
72	MS-729488J	SHAFT SOLENOID
73	ZG-732815J	SP PLATE CASSETTE HOLDER [DX-57]
74	ZS-729490J	SCREW SPECIAL 26X016
75	ZG-729491J	SP REEL TABLE
78A	ZG-732816J	SP PULL CASSETTE PLATE [GX-67]
78B	ZG-729494J	SP PULL CASSETTE PLATE [DX-57]
80	ET-729496J	TR PHOTO NJL5161KF1 B
81	MS-729497J	SHAFT PULLEY
83	ML-729498J	LEVER
84	ML-729499J	LEVER EJECT
90	ZS-729500J	PAN 26X30
95	ZS-729501J	SCREW ADJ ARM PINCH ROLLER
96	ZG-729502J	SP PINCH ROLLER (S)
99	ZS-729503J	PAN 20X025
100	MZ-729504J	STOPPER
108	MR-729505J	PULLEY PART
109	MB-732817J	BELT
110	ZW-729507J	WASHER

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

### 3. P.C BOARD BLOCK

Ref.No.	Part No.	Description
1A	BA-T2130A020B	PC (#) PREAMP BLK GX-67 (U) [U,E,S]
1B	BA-T2130A020C	PC (#) PREAMP BLK GX-67 (B) [B]
1C	BA-T2130A020E	PC (#) PREAMP BLK DX-57 (U) [U,E,S]
1D	BA-T2130A020F	PC (#) PREAMP BLK DX-57 (B) [B]
2A	BA-T2130A030A	PC (#) SYSCON BLK GX-67
2B	BA-T2130A030B	PC (#) SYSCON BLK DX-57

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

- PRE AMP P.C BOARD
- HEAD PHONE P.C BOARD
- POWER SW P.C BOARD

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

- SYSCON P.C BOARD
- TIMER SW P.C BOARD
- EJECT SW P.C BOARD

### 4. PRE AMP P.C BOARD

Ref.No.	Part No.	Description
D301	ED-624903	D SILICON H 1S2473 [GX-67]
D302	ED-624903	D SILICON H 1S2473 [GX-67]
D311	ED-624903	D SILICON H 1S2473
D411	ED-624903	D SILICON H 1S2473
D501	ED-624903	D SILICON H 1S2473
D502	ED-624903	D SILICON H 1S2473
D503	ED-346536	D ZENER H HZ7C3L [GX-67]
D504	ED-351419	D ZENER H HZ7B3L
D505	ED-346598	D ZENER H HZ4 C2
D506	ED-624903	D SILICON H 1S2473
D507	ED-624903	D SILICON H 1S2473
D508	ED-624903	D SILICON H 1S2473
D509	ED-624903	D SILICON H 1S2473
D801A	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT B]
D801B	*ED-405583J	D SILICON RL202BB81 F08 100/2A [B]
D802A	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT B]
D802B	*ED-405583J	D SILICON RL202BB81 F08 100/2A [B]
D803A	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT B]
D803B	*ED-405583J	D SILICON RL202BB81 F08 100/2A [B]
D804A	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT B]
D804B	*ED-405583J	D SILICON RL202BB81 F08 100/2A [B]
D805	ED-346541	D ZENER H HZ9B2L
D806	ED-346541	D ZENER H HZ9B2L
D807	ED-511907	D SILICON 1N4002 100/1.0A
D808	ED-511907	D SILICON 1N4002 100/1.0A
D809	ED-511907	D SILICON 1N4002 100/1.0A
D810	*ED-346525	D ZENER H HZ6A3L
D811	ED-400221J	D ZENER H HZ11A3LFA F10
D812	ED-511907	D SILICON 1N4002 100/1.0A
D813	ED-511907	D SILICON 1N4002 100/1.0A
D814	*ED-511907	D SILICON 1N4002 100/1.0A
D815	ED-343410	D ZENER H HZ6A1L
D816	ED-511907	D SILICON 1N4002 100/1.0A
D817	ED-511907	D SILICON 1N4002 100/1.0A
D818	ED-346574	D ZENER H HZ22-2L
D819	*ED-346602	D ZENER H HZ5 B3
D820	ED-511907	D SILICON 1N4002 100/1.0A
D821	ED-624903	D SILICON H 1S2473

Ref.No.	Part No.	Description
D822	ED-624903	D SILICON H 1S2473
D823	ED-624903	D SILICON H 1S2473
D824	ED-511907	D SILICON 1N4002 100/1.0A
FL101	EO-405304J	COIL TUN 1 210Z181S [GX-67]
FL141A	EO-405304J	COIL TUN 1 210Z181S [GX-67]
FL141B	EO-405356J	COIL TUN 1 105Z391S 105KHZ [DX-57]
FL171	EH-370972	FILTER LC LP 370972
FL201	EO-405304J	COIL TUN 1 210Z181S [GX-67]
FL241A	EO-405304J	COIL TUN 1 210Z181S [GX-67]
FL241B	EO-405356J	COIL TUN 1 105Z391S 105KHZ [DX-57]
FL271	EH-370972	FILTER LC LP 370972
FR800	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
FR801	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
FR802	*ER-320528	R FUSE H ERD2FCV 1/4W 22R0G
IC101	EI-360043	IC M5220P
IC121	EI-394573J	IC CXA1331S
IC141	EI-367572	IC BA15218
IC171	EI-394573J	IC CXA1331S
IC301	EI-373980	IC BA15218N
IC311	EI-373980	IC BA15218N
IC401	EI-373383	IC UPC1297CA
IC501	EI-394574J	IC LA2000
IC502	EI-384868J	IC BU4030B
IC503	EI-310036	IC TC4066BP
IC504	EI-353421	IC BA6229
IC505	EI-353421	IC BA6229
IC801	*EI-377101	IC UPC7805HF
J302	EJ-336905	PIN J AJC-035-ACB P 4P
L141	EO-405355J	COIL FIX 3 E1222T472J 472J222J
L241	EO-405355J	COIL FIX 3 E1222T472J 472J222J
L331	EO-361292	COIL FIX 1 RC875 682J [GX-67]
SW101A	ES-405295J	SW PUSH SPUY42 4THROW N [GX-67]
SW101B	ES-405302J	SW PUSH SPUY32 3THROW N [DX-57]
T321A	EO-400766J	COIL OSC 1 T2128 (HX)-7 200KHZ [GX-67]
T321B	EO-405296J	COIL OSC 1 T2130 (HX) 105KHZ [DX-57]
T322	EO-389245J	COIL OSC 1 T2118 100.0KHZ
T421A	EO-400766J	COIL OSC 1 T2128 (HX)-7 200KHZ [GX-67]
T421B	EO-405296J	COIL OSC 1 T2130 (HX) 105KHZ [DX-57]
TR101	ET-400218J	TR 2SC1740S R,S
TR102	ET-378524J	TR 2SC3383 S,T,U
TR103	ET-352726	TR 2SA1392 T,U
TR140	ET-400218J	TR 2SC1740S R,S
TR141	ET-400218J	TR 2SC1740S R,S [GX-67]
TR142	ET-400218J	TR 2SC1740S R,S
TR143	ET-400218J	TR 2SC1740S R,S
TR144	ET-400218J	TR 2SC1740S R,S
TR145	ET-400218J	TR 2SC1740S R,S
TR146	ET-389803J	TR 2SA933S R,S
TR201	ET-400218J	TR 2SC1740S R,S
TR240	ET-400218J	TR 2SC1740S R,S
TR241	ET-400218J	TR 2SC1740S R,S [GX-67]
TR242	ET-400218J	TR 2SC1740S R,S
TR243	ET-400218J	TR 2SC1740S R,S
TR244	ET-400218J	TR 2SC1740S R,S
TR245	ET-400218J	TR 2SC1740S R,S
TR301	ET-378524J	TR 2SC3383 S,T,U
TR311	ET-354414	TR DTC144ES [GX-67]
TR321	ET-400218J	TR 2SC1740S R,S
TR322	ET-400218J	TR 2SC1740S R,S
TR323	ET-373391	TR DTC143ZS
TR324	ET-370310	TR DTC144TS
TR325	ET-370310	TR DTC144TS
TR326	ET-354371	TR DTC124ES
TR327	ET-396072J	TR 2SD2159 V,W
TR328	ET-400741J	TR 2SC3708 T T05

Ref.No.	Part No.	Description
TR329	ET-400741J	TR 2SC3708 T T05
TR330	ET-354364	TR DTC143TS
TR401	ET-378524J	TR 2SC3383 S,T,U
TR411	ET-354414	TR DTC144ES [GX-67]
TR501	ET-360399	TR DTC114TS
TR502	ET-373382	TR DTA143ZS
TR503	ET-373382	TR DTA143ZS
TR504	ET-354365	TR DTC114YS
TR505	ET-396072J	TR 2SD2159 V,W
TR506	ET-396072J	TR 2SD2159 V,W
TR507	ET-354365	TR DTC114YS
TR508	ET-354365	TR DTC114YS
TR510	ET-354365	TR DTC114YS
TR801	ET-365394	TR 2SC3242A E,F,G F05
TR802	ET-347738	TR 2SA1282A E,F F05
TR804	*ET-378524J	TR 2SC3383 S,T,U
TR805	ET-400218J	TR 2SC1740S R,S
TR806	ET-364093	TR 2SA1283 E,F
VR101	EV-394962J	R S-FIX H T05EVNDXAA03 0.1W102
VR102	EV-389478J	R S-FIX H T05EVNDXAA03 0.1W153
VR171	EV-397174J	R S-FIX H T05EVNDXAA03 0.1W683
VR181	EV-389482J	R S-FIX H T05EVNDXAA03 0.1W682 [GX-67]
VR201	EV-394962J	R S-FIX H T05EVNDXAA03 0.1W102
VR202	EV-389478J	R S-FIX H T05EVNDXAA03 0.1W153
VR271	EV-397174J	R S-FIX H T05EVNDXAA03 0.1W683
VR281	EV-389482J	R S-FIX H T05EVNDXAA03 0.1W682 [GX-67]
VR311	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223
VR321	EV-389482J	R S-FIX H T05EVNDXAA03 0.1W682
VR322A	EV-389481J	R S-FIX H T05EVNDXAA03 0.1W473 [GX-67]
VR322B	EV-397174J	R S-FIX H T05EVNDXAA03 0.1W683 [DX-57]
VR323	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR423	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR901	EV-405297J	VR RK14K12B0 SPL C1253X2 [GX-67]
VR902	EV-405298J	VR ROTARY RK11K1120 B102
VR903	EV-405299J	VR ROTARY RK16312A0 A104X2
VR904	EV-405300J	VR ROTARY RK11K1120 SP W254
VR905	EV-405301J	VR ROTARY RK14K12B0 A503X2
F1A	*EF-309387	FUSE TSC A 250V 1.00A [U]
F1B	*EF-358641	FUSE BET T 250V 800MA [E,B,S]
F2A	*EF-309387	FUSE TSC A 250V 1.00A [U]
F2B	*EF-358641	FUSE BET T 250V 800MA [E,B,S]

## 5. HEAD PHONE P.C BOARD

Ref.No.	Part No.	Description
J301	EJ-369995	PHONE J 3P HLJ0540-410 GP 6.3

## 6. POWER SW P.C BOARD

Ref.No.	Part No.	Description
C815	*EC-338411	C CE V DE7 FZ 103P 400AC
SW801	*ES-3711104	SW PUSH SDDL1 01-1 [POWER SW]

## 7. SYSCON P.C BOARD

Ref.No.	Part No.	Description
D701	ED-307572	D SILICON H 1SS131
D702	ED-307572	D SILICON H 1SS131
D703	ED-307572	D SILICON H 1SS131
D704	ED-307572	D SILICON H 1SS131
D705	ED-307572	D SILICON H 1SS131
D706	ED-307572	D SILICON H 1SS131
D707	ED-307572	D SILICON H 1SS131
D708	ED-307572	D SILICON H 1SS131
D709	ED-307572	D SILICON H 1SS131
D710	ED-307572	D SILICON H 1SS131
D711	ED-307572	D SILICON H 1SS131 [GX-67]
D712	ED-307572	D SILICON H 1SS131
D713	ED-307572	D SILICON H 1SS131
D714	ED-307572	D SILICON H 1SS131 [GX-67]
D715	ED-307572	D SILICON H 1SS131
D716	ED-307572	D SILICON H 1SS131
D717	ED-307572	D SILICON H 1SS131
D718	ED-307572	D SILICON H 1SS131 [GX-67]
D719	ED-307572	D SILICON H 1SS131
D720	ED-307572	D SILICON H 1SS131
D721	ED-307572	D SILICON H 1SS131
D722	ED-307572	D SILICON H 1SS131
D723	ED-307572	D SILICON H 1SS131 [GX-67]
D724	ED-307572	D SILICON H 1SS131 [GX-67]
D725	ED-307572	D SILICON H 1SS131
D726	ED-307572	D SILICON H 1SS131
D727	ED-307572	D SILICON H 1SS131 [GX-67]
D728	ED-307572	D SILICON H 1SS131
D729	ED-307572	D SILICON H 1SS131
D730	ED-307572	D SILICON H 1SS131
D731	ED-307572	D SILICON H 1SS131
D732	ED-307572	D SILICON H 1SS131
IC701	EI-405498J	IC M50941-627SP 91DECK2
IN701	EM-405274J	IND FL CM1068C DOUBLE
RM701	ET-403246J	DETECTOR HC-377
TR701	ET-400218J	TR 2SC1740S R,S
TR702	ET-400218J	TR 2SC1740S R,S
TR703	ET-405594J	TR DTC143ZL T05
TR704	ET-396487J	TR DTA124XL T05
TR705	ET-396488J	TR DTC144EL T05
TR706	ET-396487J	TR DTA124XL T05
TR707	ET-396488J	TR DTC144EL T05
TR708	ET-396487J	TR DTA124XL T05
TR709	ET-396488J	TR DTC144EL T05
TR710	ET-396487J	TR DTA124XL T05
TR711	ET-371075	TR DTA124XS
TR712	ET-354414	TR DTC144ES
TR713	ET-371075	TR DTA124XS
TR714	ET-354414	TR DTC144ES
TR715	ET-371075	TR DTA124XS
TR716	ET-354414	TR DTC144ES
TR717	ET-354414	TR DTC144ES [GX-67]
TR718	ET-354415	TR DTA144ES
TR719	ET-354415	TR DTA144ES [GX-67]

Ref.No.	Part No.	Description
TR720	ET-354415	TR DTA144ES
TR721	ET-354415	TR DTA144ES [GX-67]
TR722	ET-354415	TR DTA144ES
TR723	ET-354415	TR DTA144ES
TR724	ET-354415	TR DTA144ES [GX-67]
TR725	ET-354415	TR DTA144ES
TS701	ES-396610J	SW TACT SOR-122HS T05 [REW]
TS702	ES-396610J	SW TACT SOR-122HS T05 [PLAY]
TS703	ES-396610J	SW TACT SOR-122HS T05 [FF]
TS704	ES-396610J	SW TACT SOR-122HS T05 [REC]
TS705	ES-396610J	SW TACT SOR-122HS T05 [STOP]
TS706	ES-396610J	SW TACT SOR-122HS T05 [AUTO MUTE]
TS707	ES-396610J	SW TACT SOR-122HS T05 [COUNTER RESET]
TS708	ES-396610J	SW TACT SOR-122HS T05 [COUNTER MEMORY]
TS709	ES-396610J	SW TACT SOR-122HS T05 [COUNTER MODE][GX-67]
TS710	ES-396610J	SW TACT SOR-122HS T05 [TAPE LENGTH][GX-67]
TS711	ES-396610J	SW TACT SOR-122HS T05 [TAPE MONITOR]
X701	EI-405327J	OSC CE CST6.00MGW 6.000MHZ

## 8. TIMER SW P.C BOARD

Ref.No.	Part No.	Description
SW701	ES-370965	SW SLIDE SSSU02 1-01-03N

## 9. EJECT SW P.C BOARD (GX-67)

Ref.No.	Part No.	Description
TS712	ES-396610J	SW TACT SOR-122HS T05

## 10. FAINAL ASSEMBLY BLOCK

Ref.No.	Part No.	Description
1	MZ-391475J	PLATE EJECT [DX-57]
2	MZ-391606J	DAMPER K-106
3A	BB-T2130A050A	MECHA BLK GX-67 [GX-67]
3B	BB-T2130A050B	MECHA BLK DX-57 [DX-57]
4	SA-379375	FOOT (N)
5	ZS-305827	ST BID30X08STL BNI
6	ZS-336714	ST BID30X12STL CMT
8A	*BT-391561J	TRANS POW T2118 U [U]
8B	*BT-405379J	TRANS POW T2130 E [E]
8C	*BT-391564J	TRANS POW T2118 BS [B,S]
9	ZW-273914	SW40
10	ZS-322580	ST BID40X08STL BNI
11A	*EW-363656	AC CORD200 0129AVFF B200 A U/T [U]
11B	*EW-363669	AC CORD200 0364 LCFL B200 A EV [E]
11C	*EW-363681	AC CORD200 LCFL B200 A B [B]
11D	*EW-363695	AC CORD220 0436 LCFL B200 A S [S]
12A	SP-405910J	PANEL REAR GX-67 (U)
12B	SP-405912J	PANEL REAR DX-57 (U)
12B	SP-405915J	PANEL REAR GX-67 (E)
12C	SP-405916J	PANEL REAR DX-57 (E)
12D	SP-405917J	PANEL REAR GX-67 (B,S)
12E	SP-405918J	PANEL REAR DX-57 (B,S)
13	ZS-358953	ST BID30X08STL BNI
14	ZS-331532	PT BID30X08STL BNI
15	ED-344244	D LED SLF-601C AMBER
16	BZ-391578J	LID STABILIZER PART [GX-67]
17	SZ-391531J	SHEET DAMP [GX-67]
18	ZG-391481J	SP TORSION STABILIZER (L) [GX-67]
19	ZG-336615	SP PLATE CASSETTE HOLDER (B)
20	TC-405054J1	CASSETTE CASE
21	ES-393376J	SW LEAF SPPB22 01-1 [GX-67]
22	ZS-608106	PAN20X06STL CMT [GX-67]
23	ZG-405059J	SP TORSION (EJECT)
24-B	SK-373236B	KNOB POWER-B
24-G	SK-373236A	KNOB POWER-G
25-B	SK-405070J	KNOB TIMER-B
25-G	SK-405071J	KNOB TIMER-G
26-B	SK-405085J	BUTTON PUSH (2)-B
26-G	SK-405086J	BUTTON PUSH (2)-G
27-B	SK-405087J	KNOB VR (3)-B
27-G	SK-405088J	KNOB VR (3)-G
28-B	SK-405089J	KNOB VR (4)-B
28-G	SK-405090J	KNOB VR (4)-G
30A-B	SP-405099J	PANEL FRONT GX-67-B
30B-B	SP-405101J	PANEL FRONT DX-57-B
30C-G	SP-405100J	PANEL FRONT GX-67-G
30D-G	SP-405102J	PANEL FRONT DX-57-G
32	SE-405062J	WINDOW FLD
33	SZ-361424	PLATE REMOCON
34-B	SK-405092J	BUTTON COUNTER (2)-B
34-G	SK-405093J	BUTTON COUNTER (2)-G
35-B	SK-405094J	BUTTON MONITOR (2)-B
35-G	SK-405095J	BUTTON MONITOR (2)-G
36-B	SK-405073J	BUTTON OP GX-67-B
36-G	SK-405074J	BUTTON OP GX-67-G
37A-B	SK-405081J	BUTTON EJECT (2)-B [GX-67]
37A-G	SK-405082J	BUTTON EJECT (2)-G [GX-67]
37B-B	SK-405083J	BUTTON EJECT (3)-B [DX-57]
37B-G	SK-405084J	BUTTON EJECT (3)-G [DX-57]
38A	ZG-405048J	SP PLATE EJECT [GX-67]

Ref.No.	Part No.	Description
38B	ZG-405061J	SP PUSH (EJECT) [DX-57]
39-B	SP-405097J1	PANEL ESCUTCHEON GX-Z6300
39-G	SP-405098J1	PANEL ESCUTCHEON GX-67-G
40	ZS-390457J	BT PAN20X04STL BZN
42-B	SM-365756C	NAME PLATE AKAI (2)
42-G	SM-365756A	NAME PLATE AKAI-G
43	SZ-378311-A	CUSHION
50A-B	BD-T2130A090C	LID PANEL BLK GX-67-B
50A-G	BD-T2130A090E	LID PANEL BLK GX-67-G
50B-B	BD-T2130A090D	LID PANEL BLK DX-57-B
50B-G	BD-T2130A090F	LID PANEL BLK DX-57-G
51-B	SP-391493J	COVER UPPER B
51-G	SP-391492J	COVER UPPER G
52-B	ZS-322580	ST BID40X08STL BNI
52-G	ZS-322570	ST BID40X08STL NI3
60	ZS-342733	ST PAN26X04STL CMT [GX-67]
61	MZ-405106J	HOLDER (L) PART [GX-67]
62	ES-405288J	SW LEAF MSW-18120A [GX-67]
63	ZS-487091	PAN23X08STL CMT [GX-67]
64	BM-405969J	MOTOR RF-370 PART [GX-67]
67	ZS-432674	PAN30X03STL CMT [GX-67]
68	ML-405041J	ARM LOCK (1) PART [GX-67]
71	ZW-410051	RETAINING RING E250SUP CMT [GX-67]
72	ML-405038J	ARM EJECT (2) PART [GX-67]
75	ZG-405058J	SP TORSION (EJ) ARM [GX-67]
76	MZ-405056J	GEAR CAM EJECT [GX-67]
77	ML-405036J	ARM EJECT (1) PART [GX-67]
78	ES-372912	SW LEAF SPPB21 01-2 [GX-67]
81	ZW-318238	PW30X060X030PBR NI3 [GX-67]
82	ZS-460440	PAN20X04STL CMT [GX-67]

### NOTE:

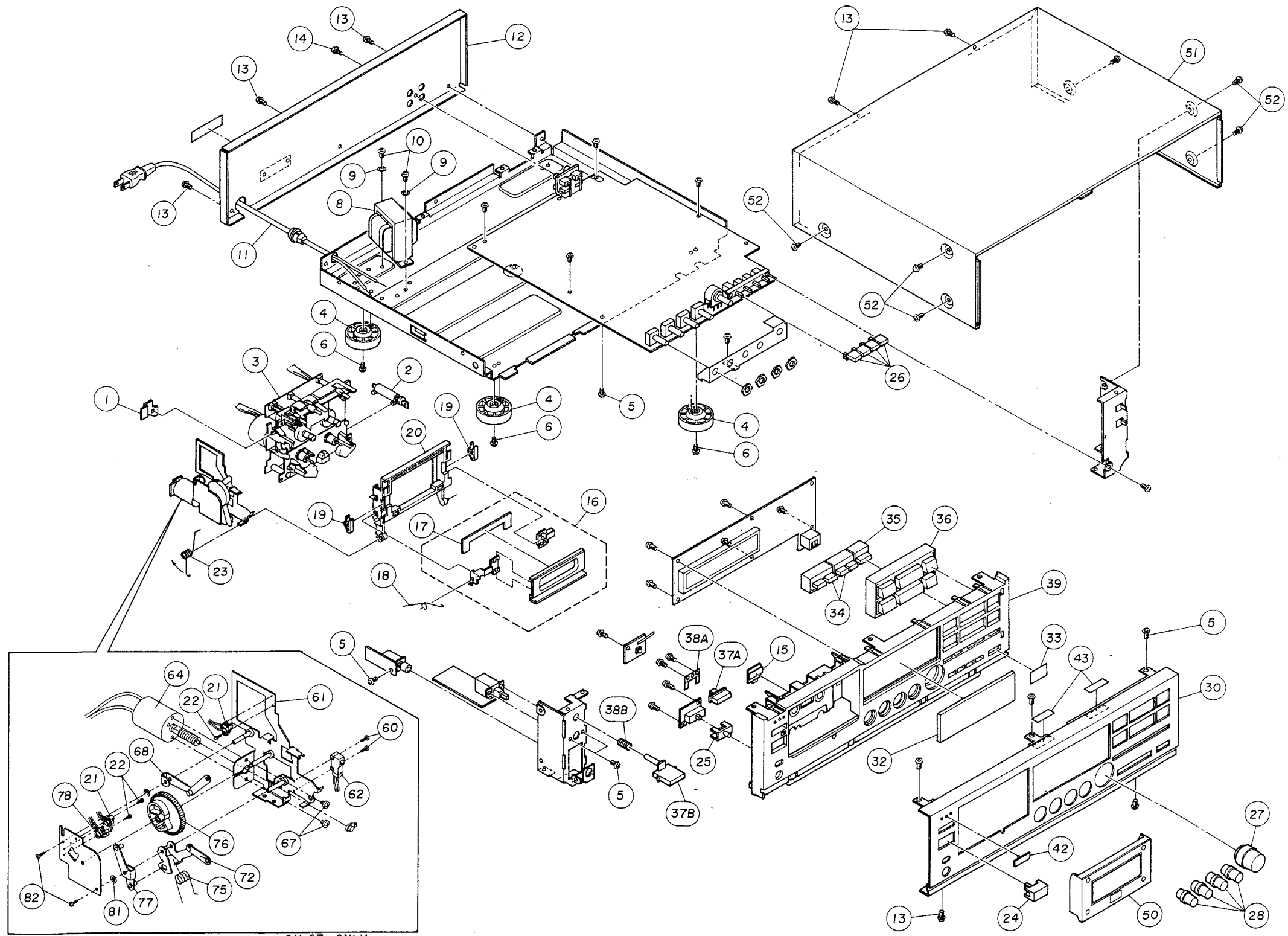
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

## 11. ACCESSARY

Ref.No.	Part No.	Description
1	EW-383168J	CORD TC-C-05S P-P 2P 2PCS
2A	AX-D4004A010A	REMOCON BLK RC-G67 [GX-67]
2B	AX-D4004A010B	REMOCON BLK RC-G57 [DX-57]



**FINAL ASSEMBLY BLOCK**



GX-67 ONLY

PARTS LIST

NOTE

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PARTS LIST

# AKAI

MODEL **DX-57**

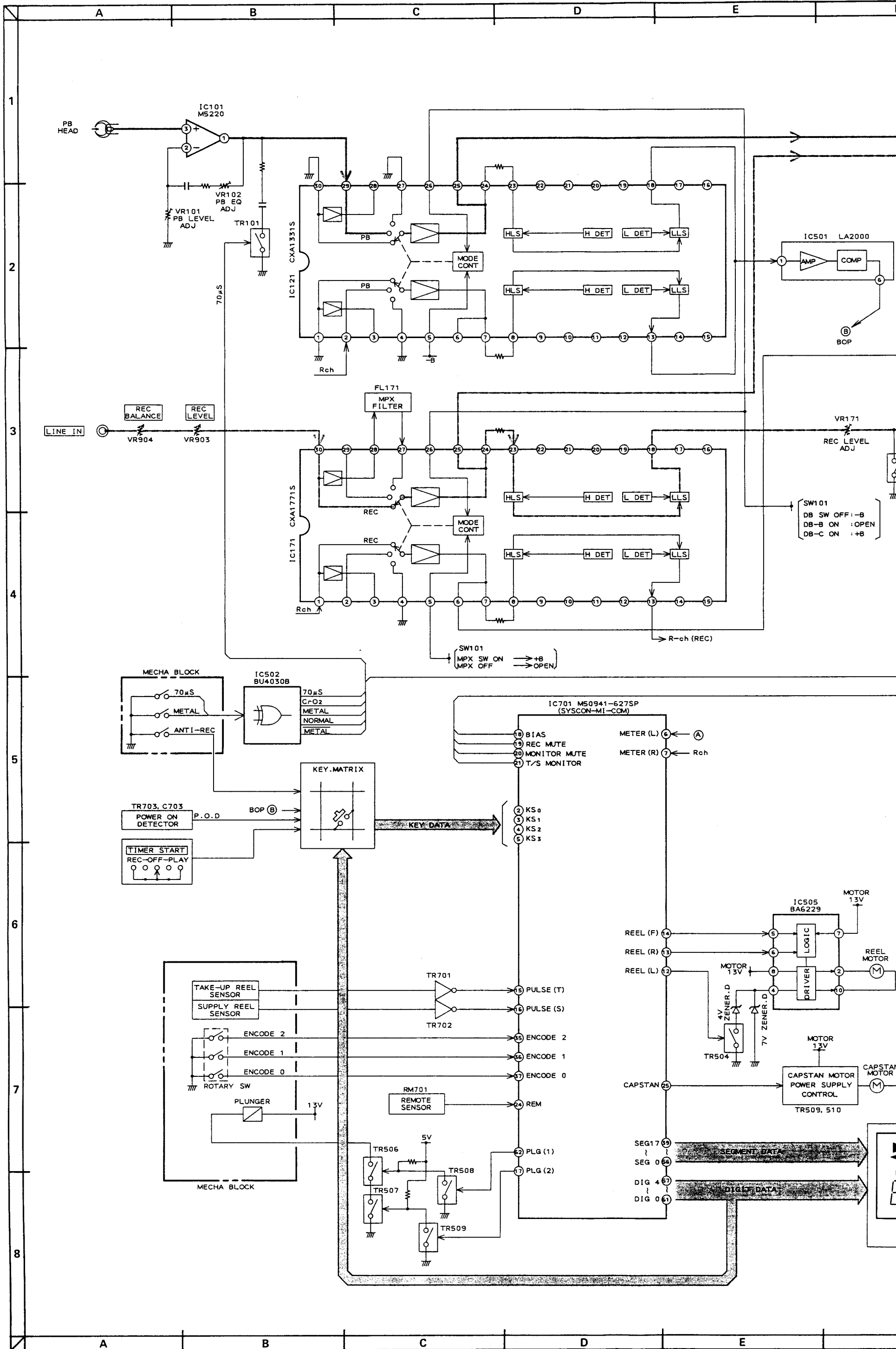
MODEL **GX-67**

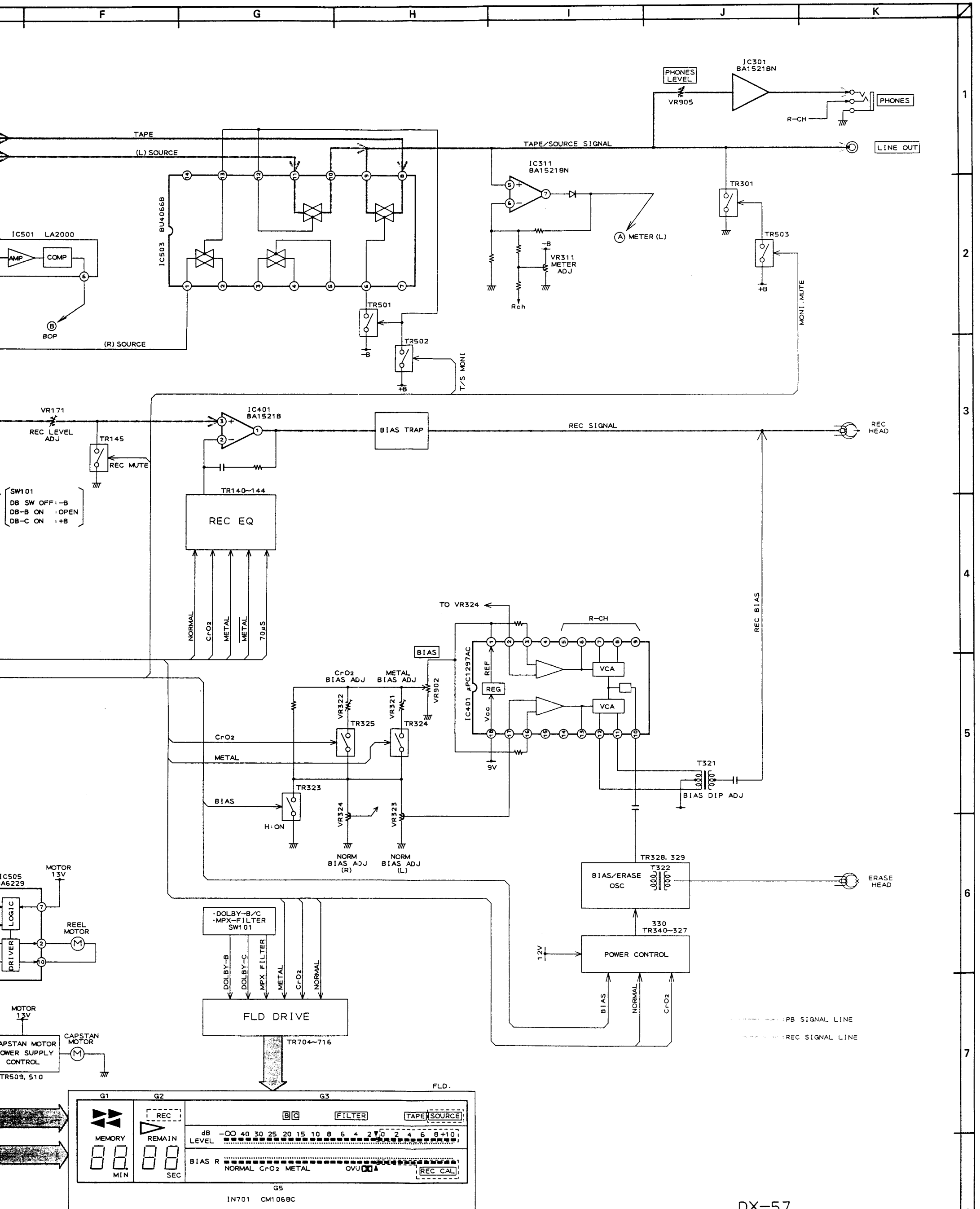
## SCHEMATIC DIAGRAMS AND PC BOARDS

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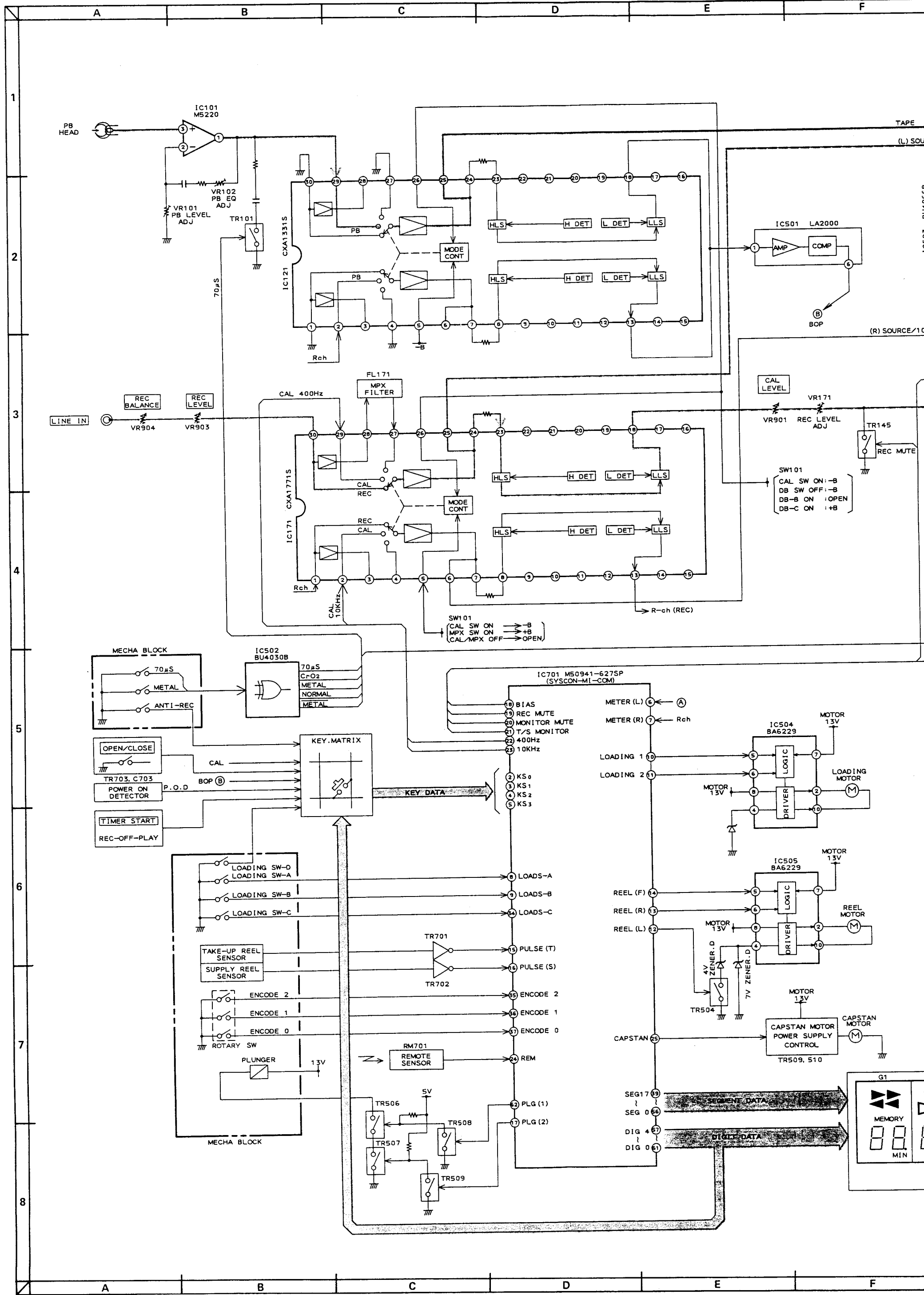
1. DX-57 BLOCK DIAGRAM .....	3
2. GX-67 BLOCK DIAGRAM .....	4
3. CONNECTION DIAGRAM .....	6
4. DX-57 PRE AMP SCHEMATIC DIAGRAM .....	7
5. GX-67 PRE AMP SCHEMATIC DIAGRAM .....	8
6. PRE AMP AND OTHER PC BOARDS .....	9
7. SYSCON SCHEMATIC DIAGRAM .....	10
8. SYSCON PC BOARD .....	11
9. EJECT SW AND TIMER SW PC BOARDS .....	12

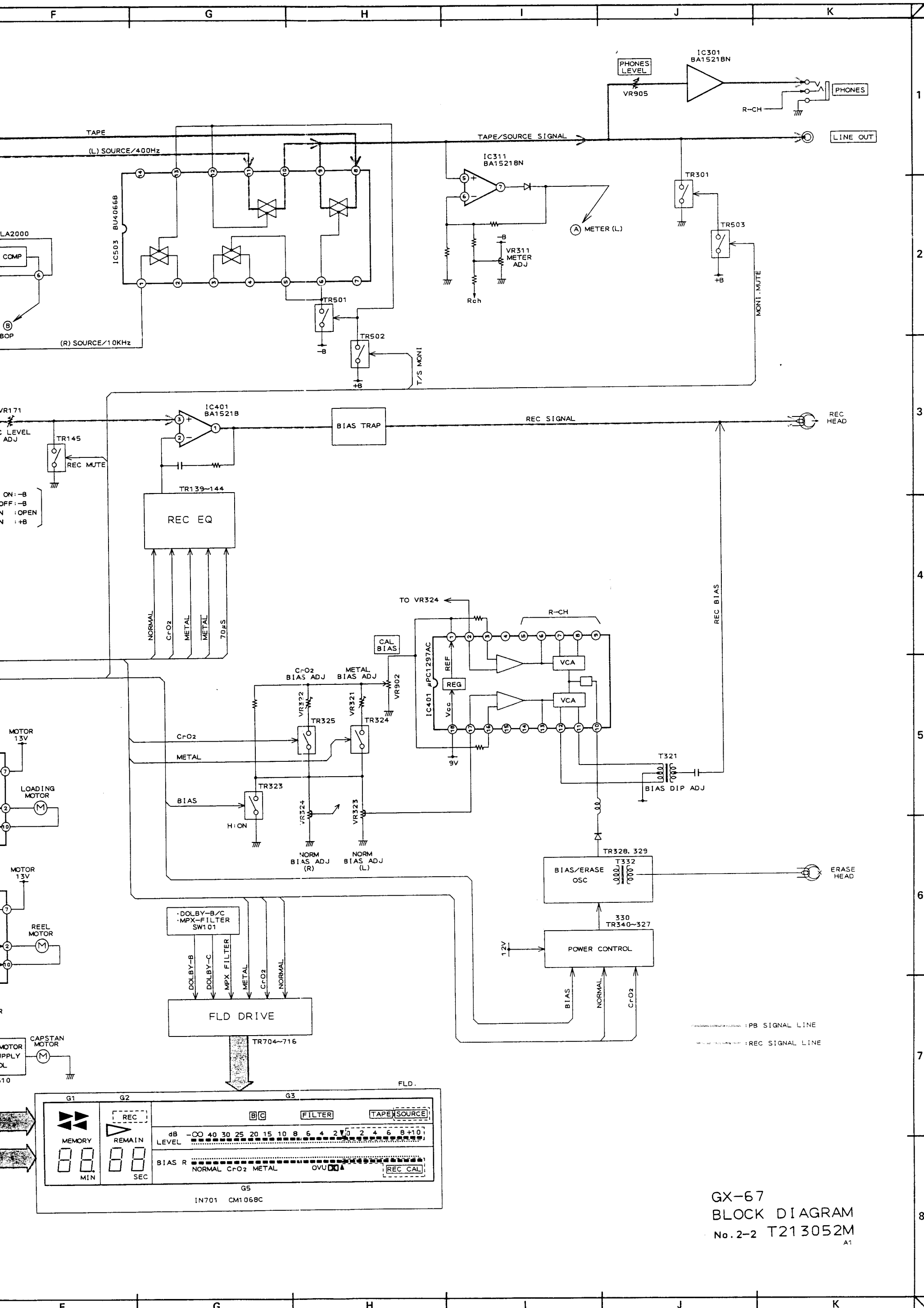
Use these schematic diagrams and PC boards together with the provided service manual.



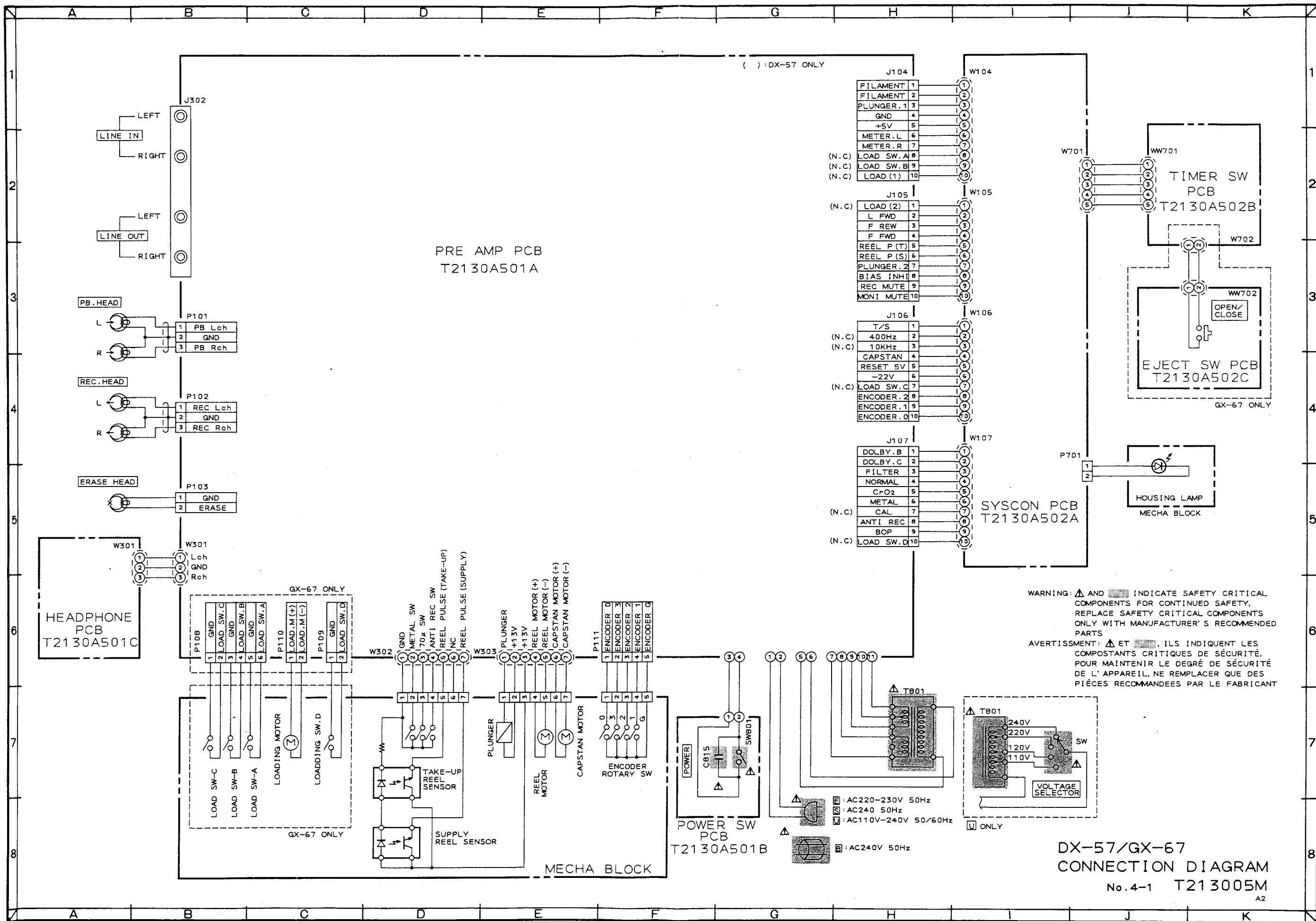


DX-57  
BLOCK DIAGRAM  
No. 2-1 T213053M  
A1

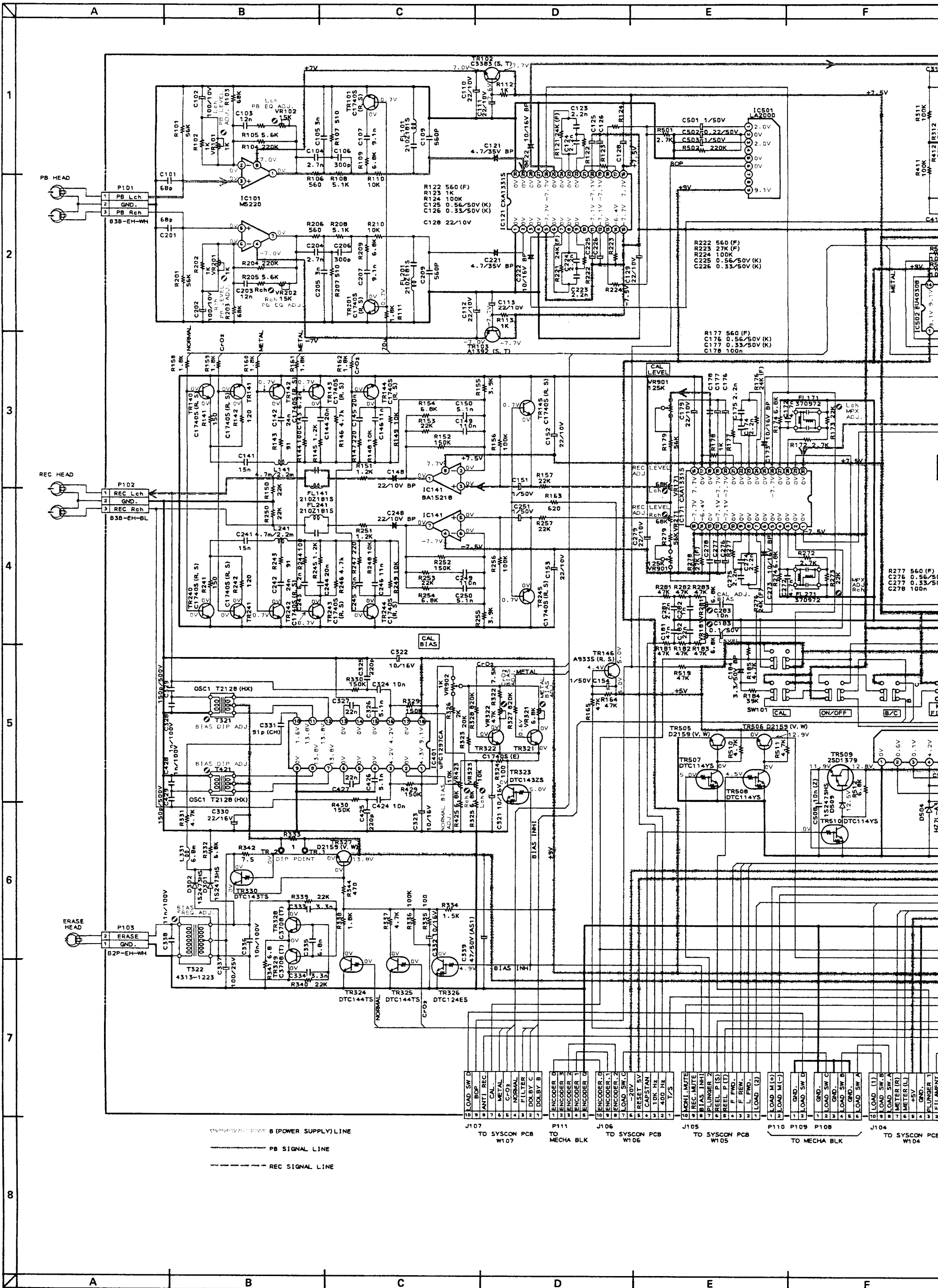




GX-67  
 BLOCK DIAGRAM  
 No. 2-2 T213052M  
 A1

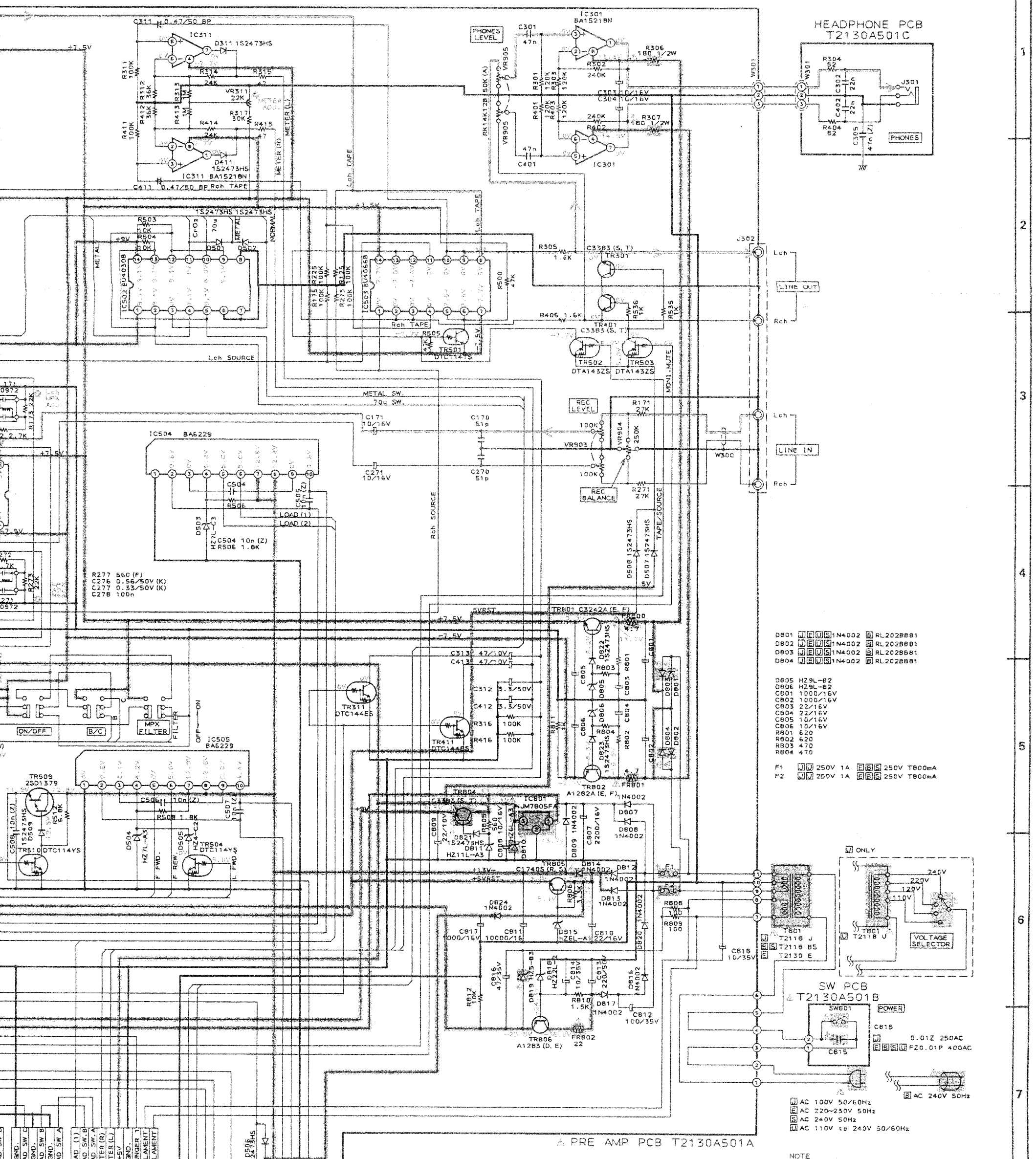




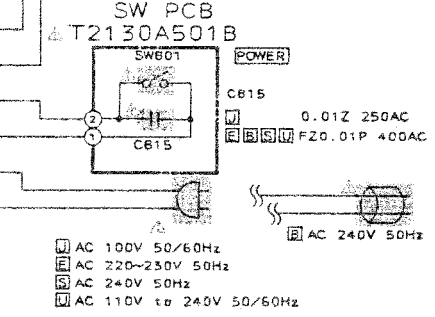
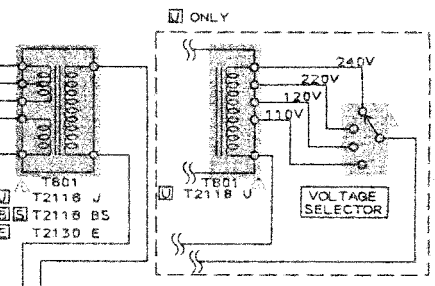


B (POWER SUPPLY) LINE  
 PB SIGNAL LINE  
 REC SIGNAL LINE

J107 TO SYSCON PCB W107  
 P111 TO MECHA BLK  
 J106 TO SYSCON PCB W106  
 J105 TO SYSCON PCB W105  
 P110 P109 P108 TO MECHA BLK  
 J104 TO SYSCON PCB W104



- DB01 [Symbol] 1N4002 [Symbol] RL202BB81
- DB02 [Symbol] 1N4002 [Symbol] RL202BB81
- DB03 [Symbol] 1N4002 [Symbol] RL202BB81
- DB04 [Symbol] 1N4002 [Symbol] RL202BB81
- DB05 HZ9L-B2
- DB06 HZ9L-B2
- CB01 1000/16V
- CB02 1000/16V
- CB03 22/16V
- CB04 22/16V
- CB05 10/16V
- CB06 10/16V
- RB01 620
- RB02 620
- RB03 470
- RB04 470
- F1 [Symbol] 250V 1A [Symbol] 250V T800mA
- F2 [Symbol] 250V 1A [Symbol] 250V T800mA



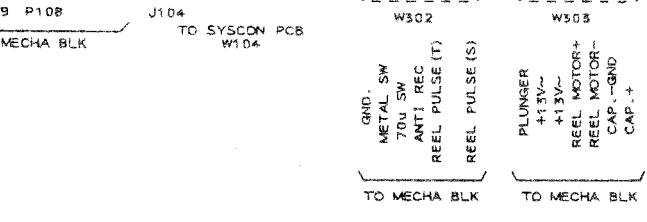
NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/4W(J)  
ALL CAPACITORS IN  $\mu$ F  
INDICATE EXAMPLE ABOUT HOW TO  
DESCRIBE CAPACITOR VALUE.  
47n SHOWS 0.047 $\mu$ F  
(n=10<sup>-9</sup>  $\mu$ F)

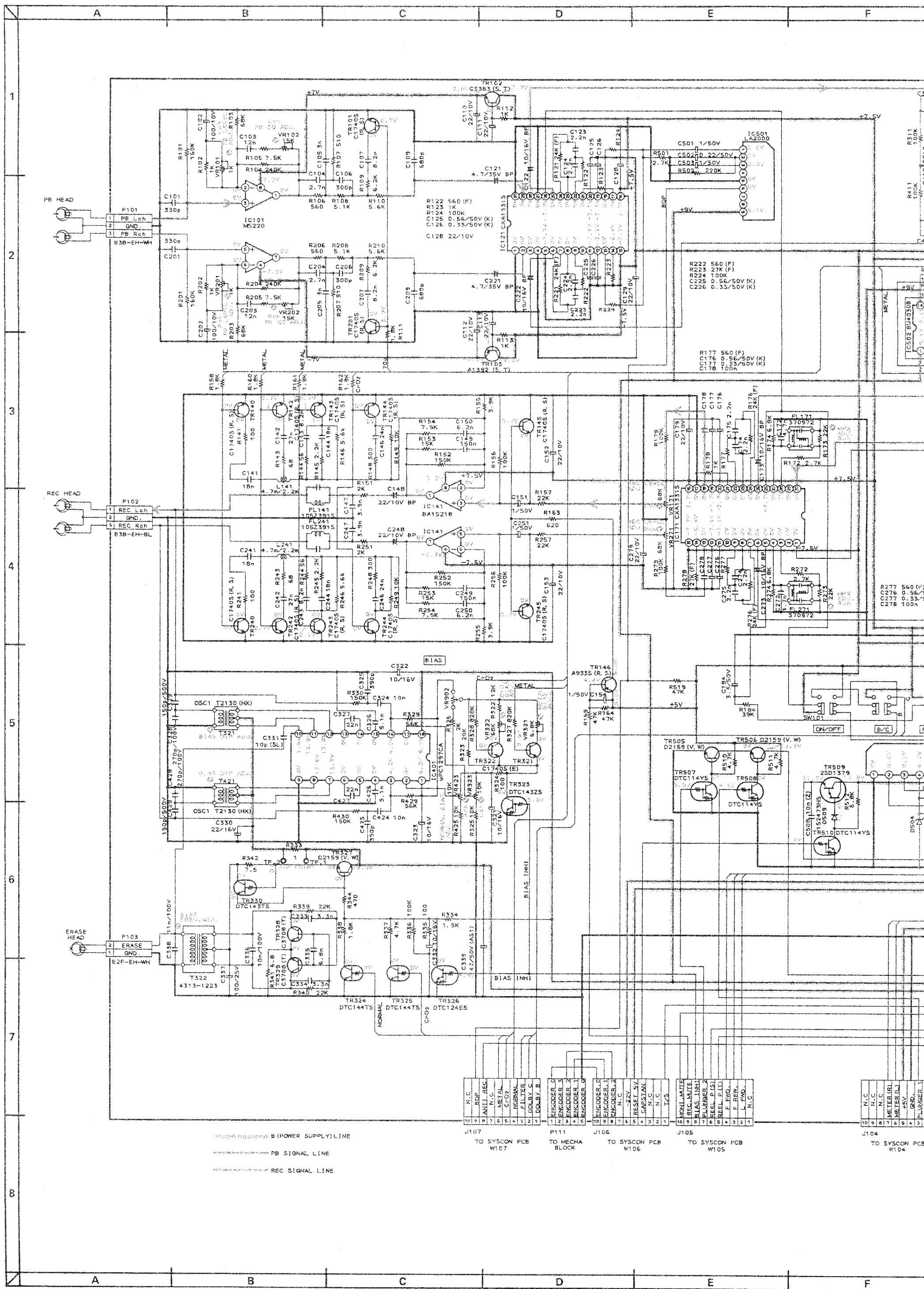
INDICATED VOLTAGES WERE  
REMOVED DURING THE MODE.  
TAPE USED METAL TYPE,  
002BY SW (CFF)

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

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

GX-67  
PRE AMP  
SCHEMATIC DIAGRAM  
No. 4-3 T213007M  
A01

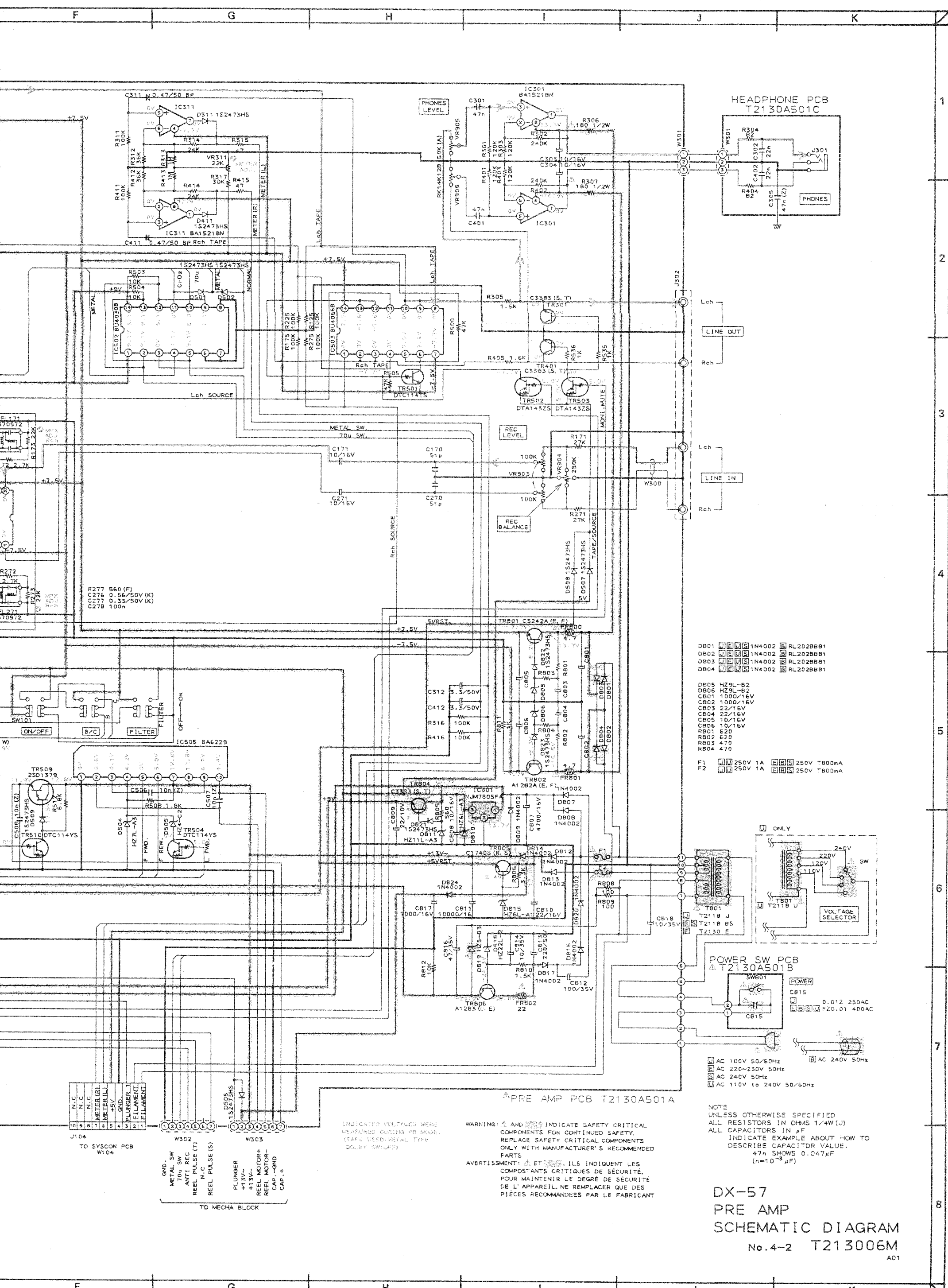




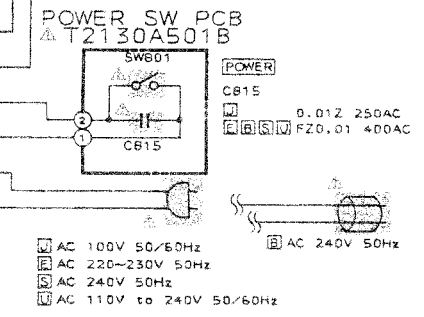
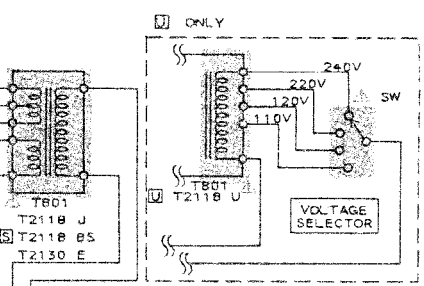
TO SYSCON PCB W107  
 TO MECHA BLOCK  
 TO SYSCON PCB W106  
 TO SYSCON PCB W105  
 TO SYSCON PCB W104

1	N.C.
2	REC Lch
3	GND.
4	REC Reh
5	N.C.
6	N.C.
7	N.C.
8	N.C.
9	N.C.
10	N.C.
11	N.C.
12	N.C.
13	N.C.
14	N.C.
15	N.C.
16	N.C.
17	N.C.
18	N.C.
19	N.C.
20	N.C.
21	N.C.
22	N.C.
23	N.C.
24	N.C.
25	N.C.
26	N.C.
27	N.C.
28	N.C.
29	N.C.
30	N.C.
31	N.C.
32	N.C.
33	N.C.
34	N.C.
35	N.C.
36	N.C.
37	N.C.
38	N.C.
39	N.C.
40	N.C.
41	N.C.
42	N.C.
43	N.C.
44	N.C.
45	N.C.
46	N.C.
47	N.C.
48	N.C.
49	N.C.
50	N.C.
51	N.C.
52	N.C.
53	N.C.
54	N.C.
55	N.C.
56	N.C.
57	N.C.
58	N.C.
59	N.C.
60	N.C.
61	N.C.
62	N.C.
63	N.C.
64	N.C.
65	N.C.
66	N.C.
67	N.C.
68	N.C.
69	N.C.
70	N.C.
71	N.C.
72	N.C.
73	N.C.
74	N.C.
75	N.C.
76	N.C.
77	N.C.
78	N.C.
79	N.C.
80	N.C.
81	N.C.
82	N.C.
83	N.C.
84	N.C.
85	N.C.
86	N.C.
87	N.C.
88	N.C.
89	N.C.
90	N.C.
91	N.C.
92	N.C.
93	N.C.
94	N.C.
95	N.C.
96	N.C.
97	N.C.
98	N.C.
99	N.C.
100	N.C.





- DB01 [Symbol] 1N4002 [Symbol] RL202B881
- DB02 [Symbol] 1N4002 [Symbol] RL202B881
- DB03 [Symbol] 1N4002 [Symbol] RL202B881
- DB04 [Symbol] 1N4002 [Symbol] RL202B881
- DB05 HZ9L-B2
- DB06 HZ9L-B2
- CB01 1000/16V
- CB02 1000/16V
- CB03 22/16V
- CB04 22/16V
- CB05 10/16V
- CB06 10/16V
- RB01 620
- RB02 620
- RB03 470
- RB04 470
- F1 [Symbol] 250V 1A [Symbol] 250V T800mA
- F2 [Symbol] 250V 1A [Symbol] 250V T800mA



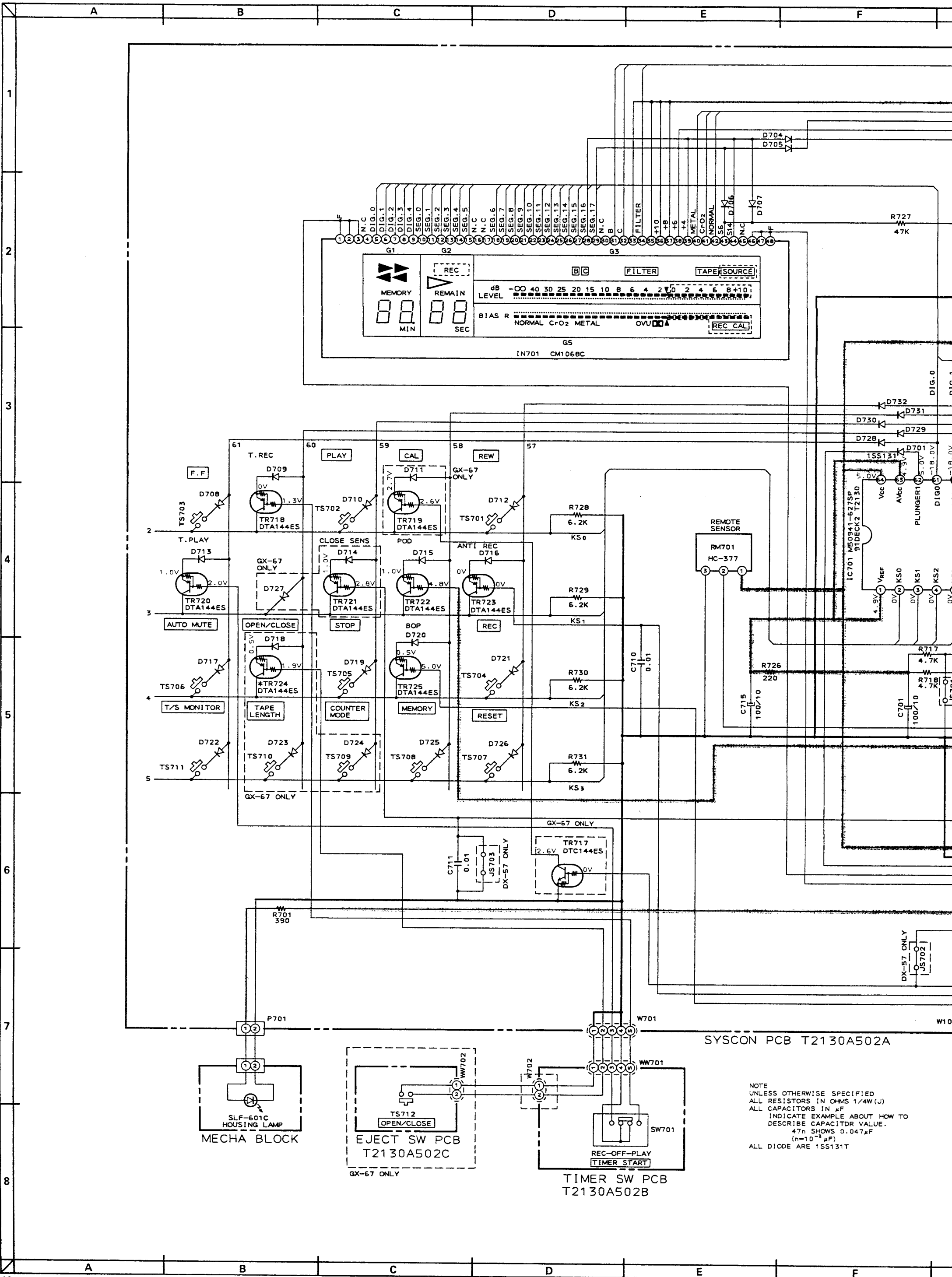
INDICATED VOLTAGES WERE MEASURED DURING PR MODE. (CAPS USED-METAL TYPE, 50% BY SW-OFF)

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

AVERTISSEMENT: [Symbol] ET [Symbol] ILS INDICENT LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.

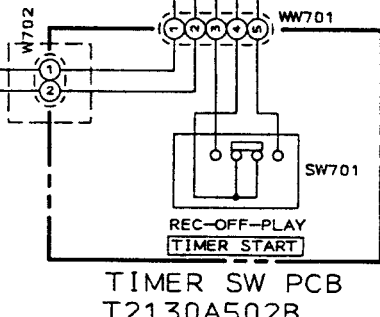
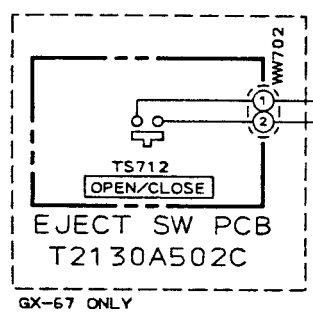
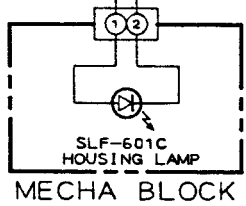
NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/4W (J)  
ALL CAPACITORS IN  $\mu$ F  
INDICATE EXAMPLE ABOUT HOW TO DESCRIBE CAPACITOR VALUE.  
47n SHOWS 0.047 $\mu$ F  
(n=10<sup>-3</sup>  $\mu$ F)

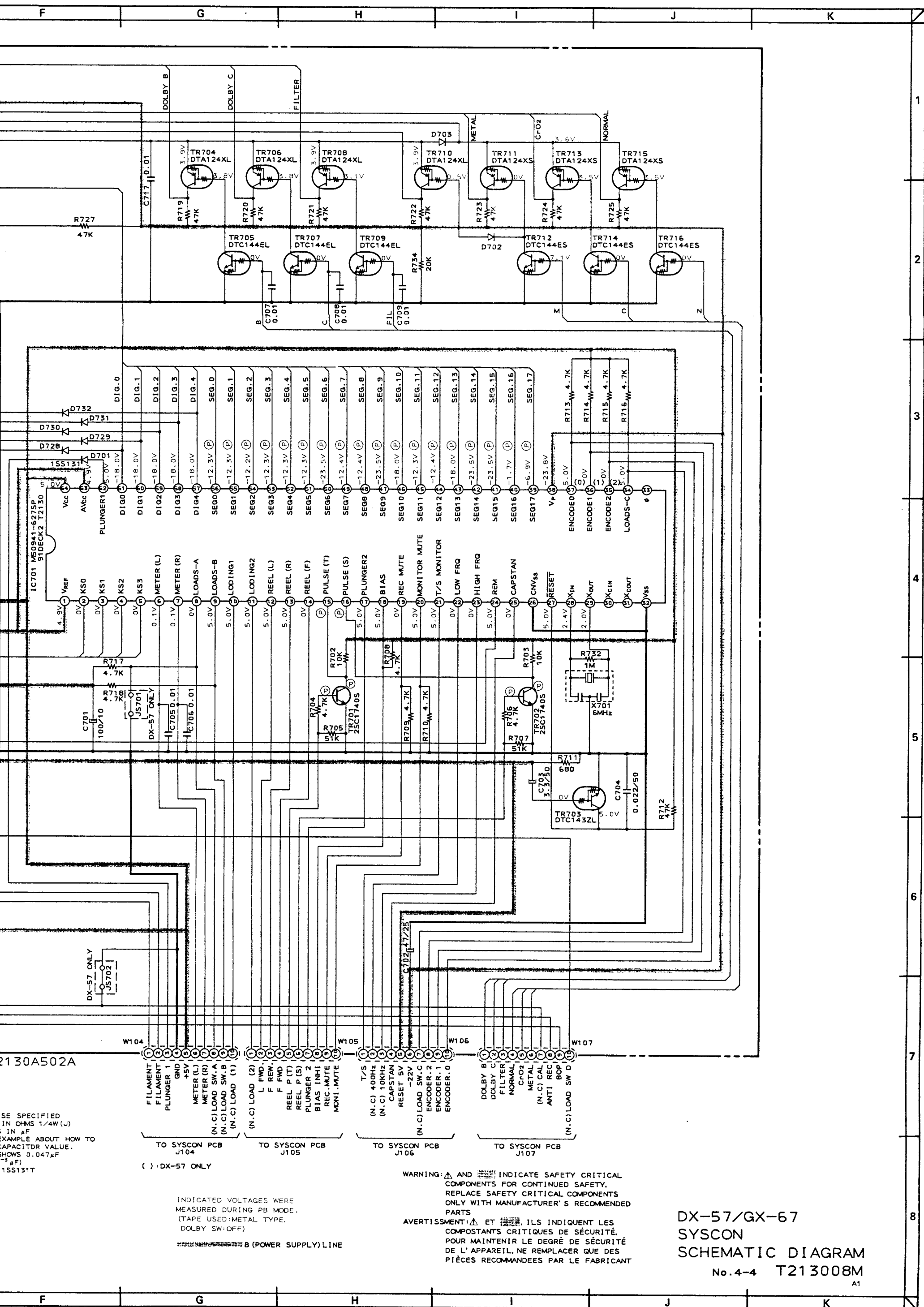
DX-57  
PRE AMP  
SCHEMATIC DIAGRAM  
No. 4-2 T213006M  
A01



SYSCON PCB T2130A502A

NOTE  
 UNLESS OTHERWISE SPECIFIED  
 ALL RESISTORS IN OHMS 1/4W(J)  
 ALL CAPACITORS IN μF  
 INDICATE EXAMPLE ABOUT HOW TO  
 DESCRIBE CAPACITR VALUE.  
 47n SHOWS 0.047μF  
 (n=10<sup>-3</sup> μF)  
 ALL DIODE ARE 1SS131T





SE SPECIFIED  
IN OHMS 1/4W(J)  
IN #F  
EXAMPLE ABOUT HOW TO  
CAPACITR VALUE.  
SHOWS 0.047#F  
#F)  
15S131T

( ) : DX-57 ONLY

INDICATED VOLTAGES WERE  
MEASURED DURING PB MODE.  
(TAPE USED: METAL TYPE,  
DOLBY SW: OFF)

⚠ B (POWER SUPPLY) LINE

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

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

DX-57/GX-67  
SYSCON  
SCHEMATIC DIAGRAM  
No. 4-4 T213008M  
A1

PRINCIPAL PARTS LOCATION

ICs

IC101	.....	E1,2
IC121	.....	C1
IC141	.....	C3
IC171	.....	E3
IC301	.....	G,H6
IC311	.....	A,B3
IC401	.....	C5
IC501	.....	B1
IC502	.....	F4
IC503	.....	A2
IC504	.....	F6
IC505	.....	E6
IC801	.....	B4

CONNECTORS

P101	.....	E1,2
P102	.....	C4
P103	.....	D5
P108	.....	G5,6
(67 ONLY)		
P109	.....	G5
(67 ONLY)		
P110	.....	F5
(67 ONLY)		
P111	.....	G4
J104	.....	F,G6
J105	.....	F,G5
J106	.....	F,G4,5
J107	.....	F,G4
J302	.....	A2,3

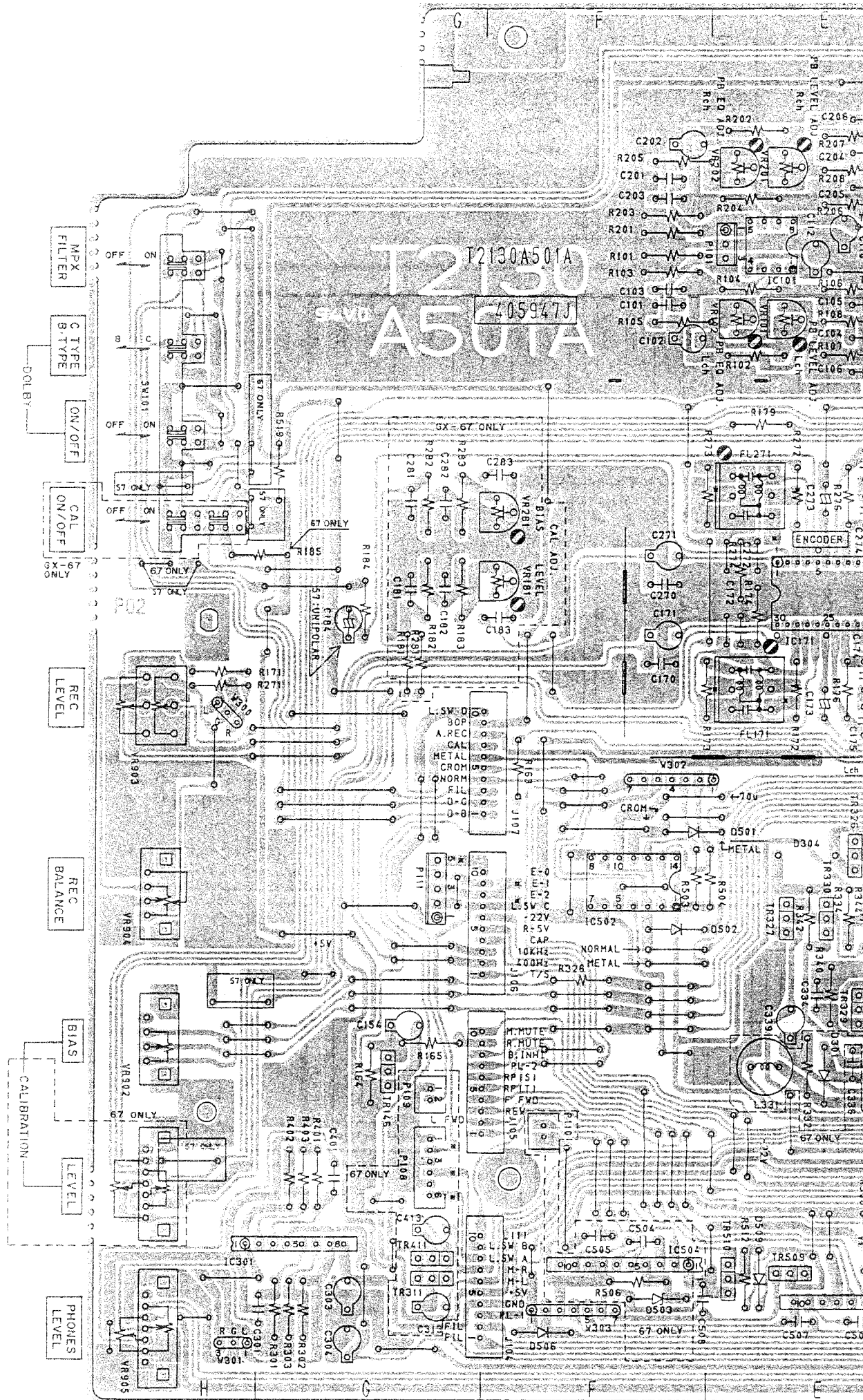
WIRES

W300	.....	A2,H4
W301	.....	H6
W302	.....	F4
W303	.....	F6

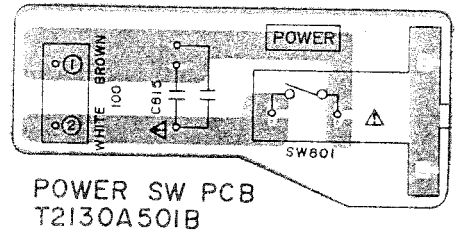
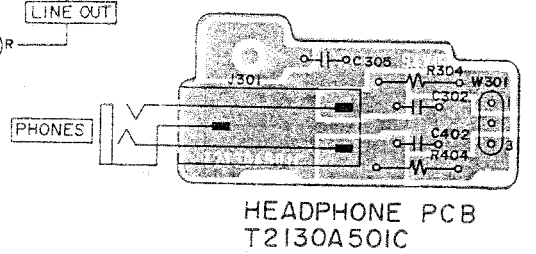
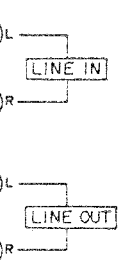
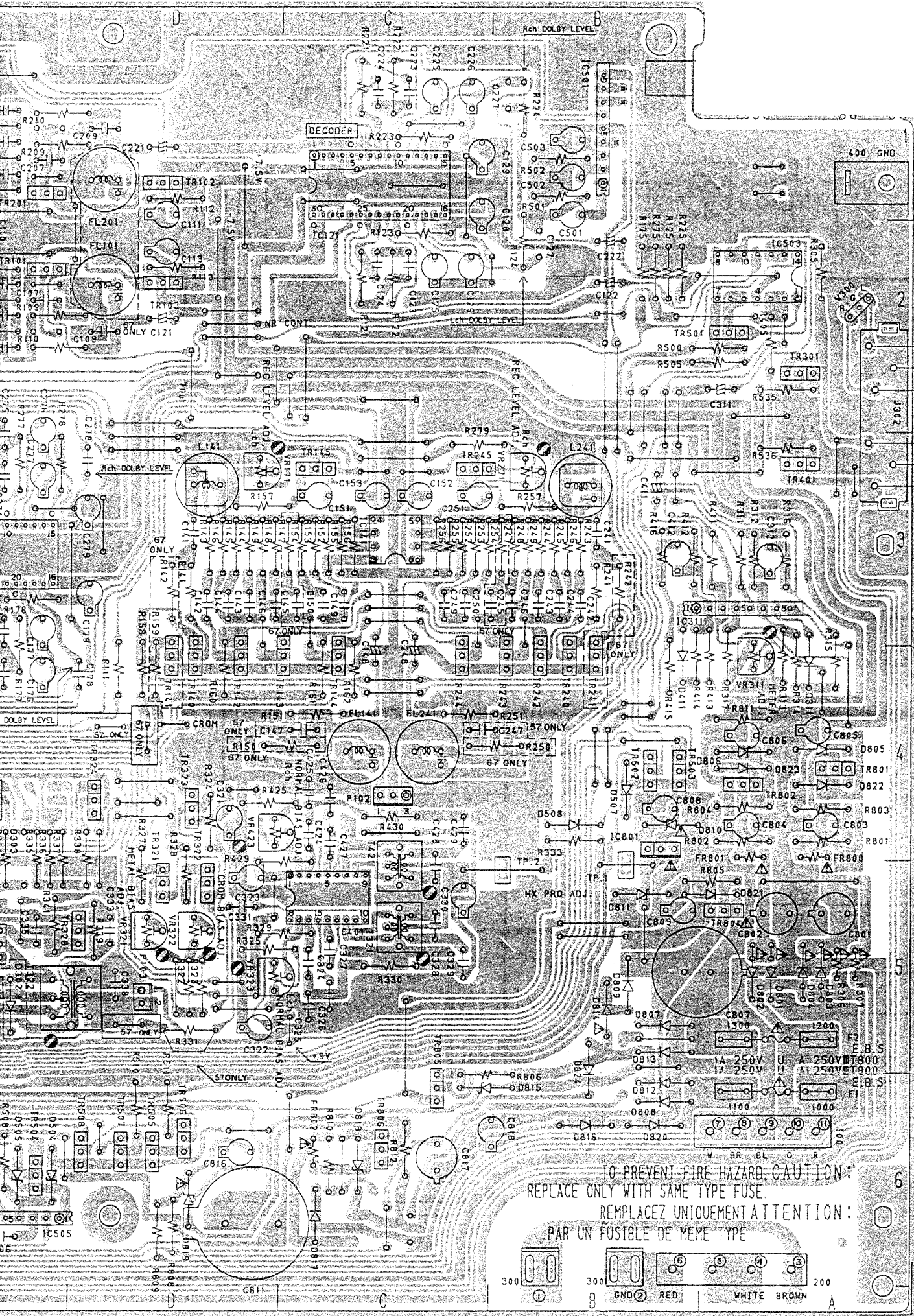
TRANSISTORS

TR101	.....	E2
TR102	.....	D1
TR103	.....	D2
TR140	.....	D3,4
TR141	.....	D3,4
(67 ONLY)		

TR142	.....	D3,4
TR143	.....	C3,4
TR144	.....	C3,4
TR145	.....	C3
TR146	.....	G5
TR201	.....	E1
TR240	.....	B3,4
TR241	.....	B3,4
(67 ONLY)		
TR242	.....	B3,4
TR243	.....	B3,4
TR244	.....	C3,4
TR245	.....	C3
TR301	.....	A2
TR311	.....	G6
TR321	.....	D5
TR322	.....	D5
TR323	.....	D4
TR324	.....	D4
TR325	.....	E4
TR326	.....	E4
TR327	.....	E4,5
TR328	.....	D5
TR329	.....	E5
TR330	.....	E4,5
TR401	.....	A3
TR411	.....	G6
TR501	.....	A2
TR502	.....	B4
TR503	.....	B4
TR504	.....	E6
TR505	.....	D6
TR506	.....	D6
TR507	.....	D6
TR508	.....	D6
TR509	.....	E6
TR510	.....	E6
TR801	.....	A4
TR802	.....	A4
TR804	.....	A5
TR805	.....	C6
TR806	.....	C6



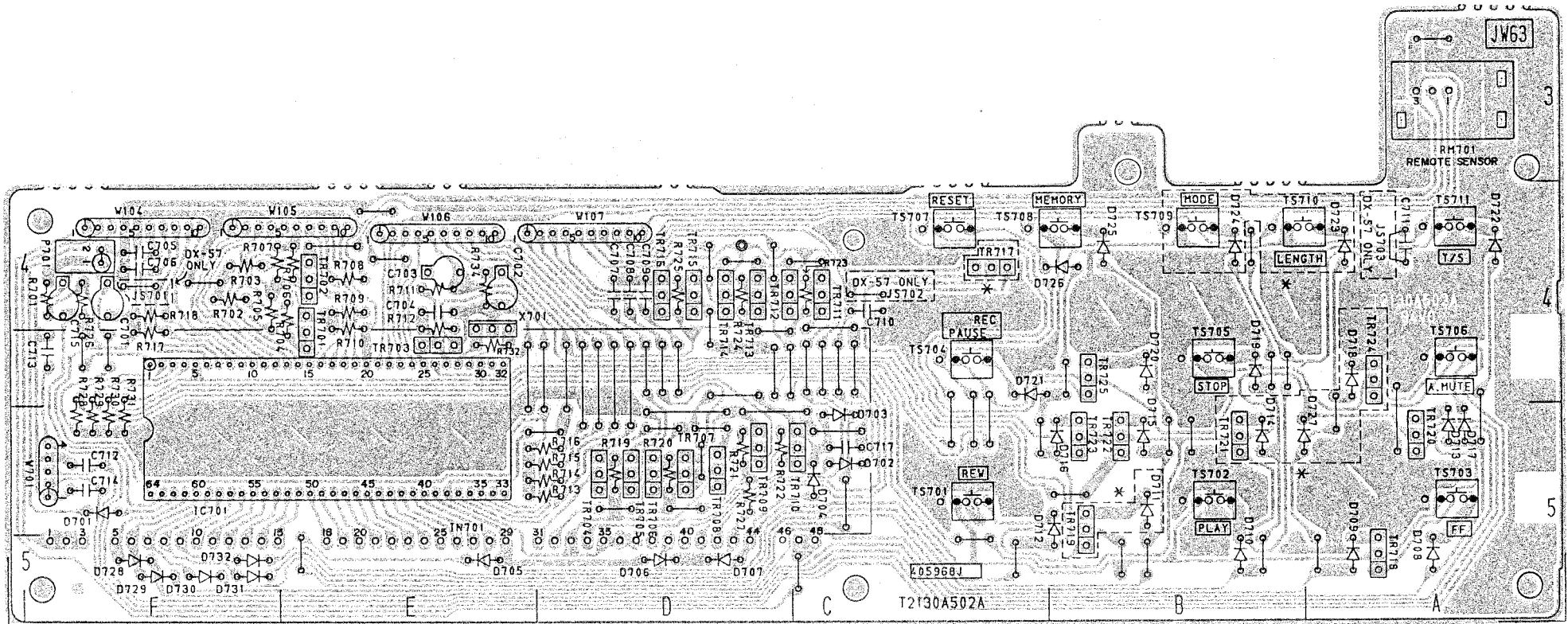




PRE AMP PCB T2130A501A J1

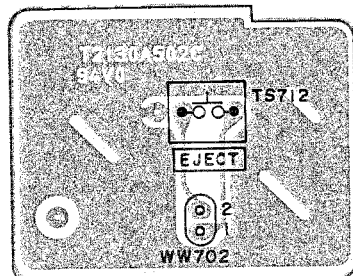
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.  
 AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL. NE REMPLACER QUE DES PIECES RECOMMENDEES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



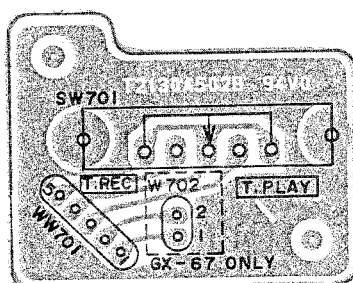


SYSCON PCB T2130A502A

\* MARK ARE GX - 67 ONLY



EJECT SW PCB  
T2130A502C  
(GX-67 ONLY)



TIMER SW PCB  
T2130A502B

## ABBREVIATIONS (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	Multi PleX
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
BEF	Band Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMPARator	QR	Quick Reverse
CONT	CONTinuance	R CH	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 Foward	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
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitting Diode	X'TAL	cysTAL
MEMO	MEMORy	X1	Normal speed
MICOM	MicroCOMputer	X2	Dubble speed