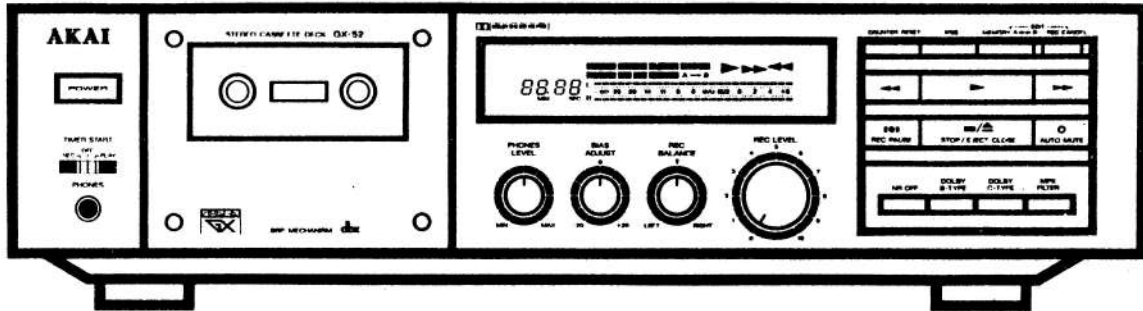


# AKAI SERVICE MANUAL



## STEREO CASSETTE DECK

## MODEL GX-52

### SPECIFICATIONS

Track system	4 track 2 channel stereo	T.H.D.	Less than 0.8%
Heads	Twin field supper GX head for Recording and Playback x 1 Erase head x 1	Frequency response	
Motors	Direct drive EG servo motor for Capstan drive x 1 DC motor for reel drive x 1 DC motor for cam drive and Tape eject/loding x 1	Normal	25Hz to 17,000Hz $\pm$ 3dB
Wow & flutter	0.027% WRMS (JIS), 0.045% (DIN)	CrO <sub>2</sub>	25Hz to 18,000Hz $\pm$ 3dB
S/N (Metal)	59dB (Measured via tape with 3% THD recording level) Dolby B type NR switch ON: Improves up to 5dB at 1KHz, 10dB above 5KHz Dolby C type NR switch ON: Improves up to 15dB at 500Hz, 10dB at 1KHz to 10KHz	Metal	25Hz to 20,000Hz $\pm$ 3dB
		Input sensitivity/Impedance	
		LINE IN	70mV/47kohms
		Output sensitivity/Impedance	
		LINE OUT	388mV/2.7kohms
		Phones	1.3mW (8 ohms)
		Power requirements	120V, 60Hz for Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK 110/120/220/240V, 50Hz/60Hz convertible for other countries
		Dimension	425(W) x 112(H) x 352(D)mm (16.7 x 4.4 x 13.9 inches)
		Weight	6.5Kg (14.3lbs)

\*For improvement purpose, specifications and design are subject to change without notice.

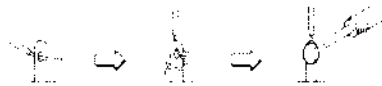
\*Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"Dolby" and double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

## ★ SAFETY INSTRUCTIONS

### PRECAUTIONS DURING SERVICING

- Parts identified by the  $\Delta$  symbol parts are critical for safety.  
Replace only with parts number specified.
- In addition to safety, others parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.  
These must also be replaced only with specified replacement.  
Examples: RF cables, noise blocking capacitors, noise blocking filters, etc.
- Use specified internal wiring. Note especially:
  - Wires covered with PVC tubing
  - Double insulated wires
  - High voltage leads
- Use specified insulating materials for hazardous live parts. Note especially:
  - Insulation Tape
  - PVC tubing
  - Spacers (Insulating Barriers)
  - Insulation Seats for transistors
  - 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 that set.

### SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10M ohms but for equipment with external antenna terminals (tuner, receiver, etc.) and is intend for  $\square$  or  $\Delta$ , specified insulation resistance should be headphone jacks line in/out jacks etc. more than 2.2M ohms (ground terminals, microphone jacks)

## ★ INFORMATION

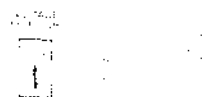
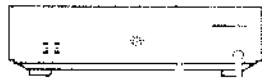
### SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbol	Primary Destinations
A	USA
B	UK
C	Canada
D	Europe (except UK)
E	Japan
F	Australia
G	W. Germany only
H	Europe, Asia, Latin America

### VOLTAGE CONVERSION: (Model only)

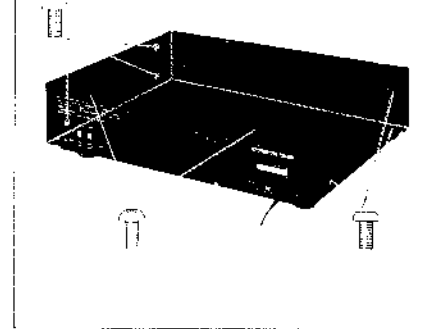
Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel with a screwdriver so that the correct voltage is indicated.



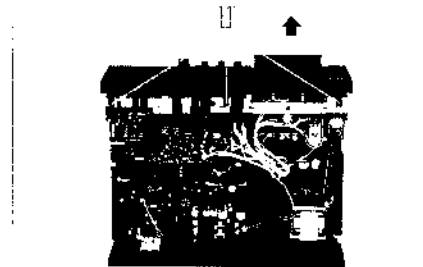
## I. DISASSEMBLY

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

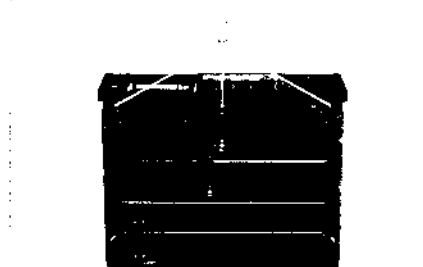
### 1. REMOVAL OF UPPER COVER



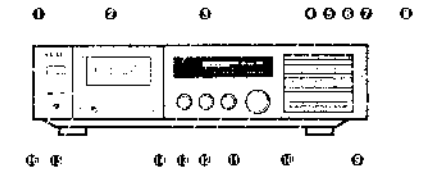
### 2. REMOVAL OF FRONT COVER



- Remove the cassette lid first then remove the front panel (Turn on the Power and depress the eject button.)



## II. CONTROLS



- POWER Switch**  
To turn ON and OFF the power.
- Cassette lid and cassette holder (Power assisted)**  
Load a cassette tape here. To open, press the  $\blacksquare$  button. To close, press once again. Do not manually open this cassette holder, as it may damage your equipment.
- FL (Fluorescent) Display**  
Tells you what the cassette deck is doing.
- COUNTER RESET button**  
To reset the digital counter to "00:00".
- IPSS button**  
To select playback with the IPSS system.
- A  $\rightarrow$  B MEMORY button**  
For memorization of a selection(s) or part of a selection that you wish to hear repeatedly. Also used with the recording cancel system for erasure of unwanted parts.
- REC CANCEL button**  
To cancel recording and rewind tape to the first detectable blank space of tape. Convenient for re-recording a section of tape.
- Operating buttons**  
For playback and recording operations.  
Press the  $\blacksquare$  button to open and close the cassette holder.
- MPX (Multiplex) FILTER switch**  
To turn on and off the multiplex filter.
- Noise reduction selector (NR OFF, DOLBY B and DOLBY C)**  
To select noise reduction for recording and playback purposes.
- REC LEVEL control**  
To set recording levels. The level adjustment is the same amount for both right and left channels.
- REC BALANCE control**  
To set the left and right channel balance of recording input levels.
- BIAS ADJUST control**  
To set the recording bias current. The bias adjustment range is between  $-20\%$  and  $+20\%$  of the proper bias current of each tape position. If using a reference tape recommended for use with Akai cassette decks, set this control to the "center mark" position.
- PHONES Level control**  
To adjust the output level of the PHONES jack.
- TIMER START Switch**  
For operation for timing and time position.
- PHONES jack**  
To listen through a pair of headphones, connect them to the jack.

### III. PRINCIPAL PARTS LOCATION

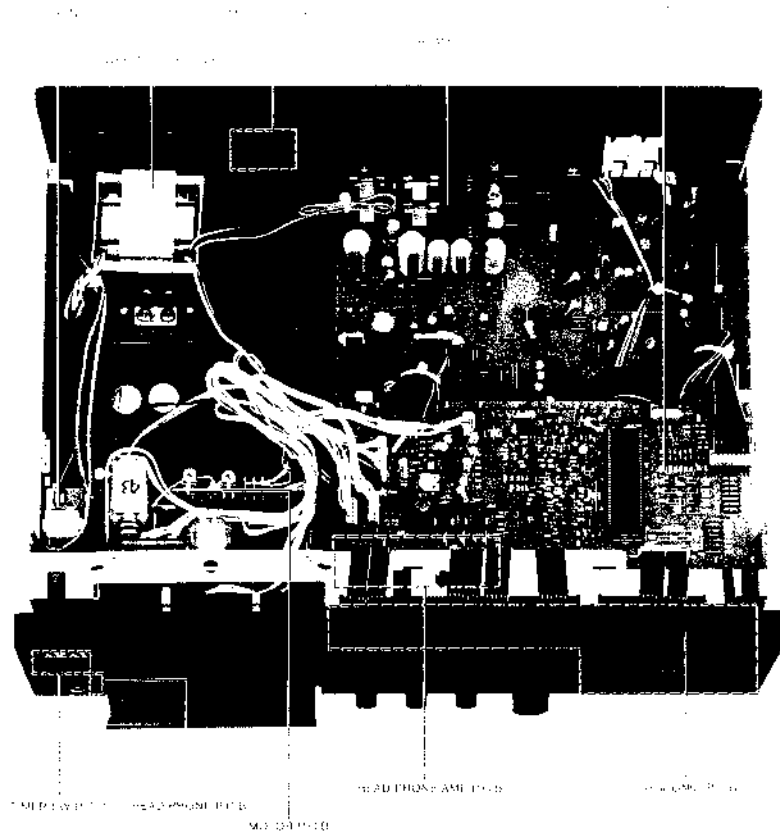


Fig. 3-1 Top View

### IV. MECHANICAL ADJUSTMENT

#### E-1. PINCH ROLLER PRESSURE MEASUREMENT (Refer to Fig. 4-1)

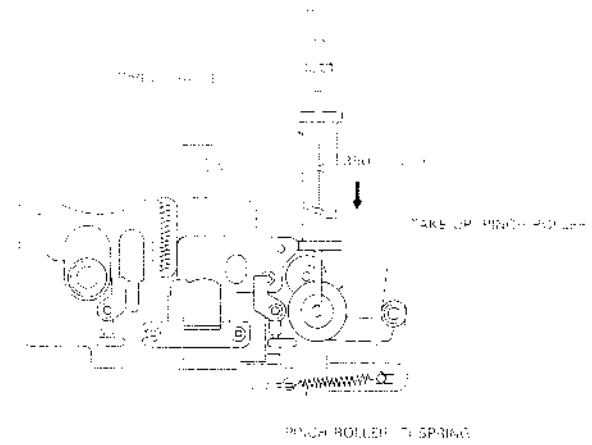


Fig. 4-1

Put in PLAY mode, push pinch roller arm down with the spring gauge, push the pinch roller 1 or 2 mm from the capstan and release slowly. Read the spring gauge at the moment the pinch roller touches the capstan and begins to rotate.

Specified pressure:  $350 \pm 20$  gram (Take up)

If there is no measurement obtained, replace the pinch roller spring.

#### E-2. WINDING TORQUE MEASUREMENT IN EACH MODE (Refer to Fig. 4-2)

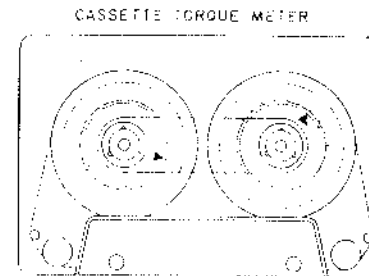


Fig. 4-2

Insert a cassette torque meter (AJ-751197) and measure in each mode. For First Forward and Rewind, measure at the end of the tape has stopped running.

PLAY mode	
Take up Torque	$40 \pm 20$ g-cm
Back Tension Torque	$10 \pm 10$ g-cm
FIRST FORWARD, REWIND mode	
Take up Torque	$100 \pm 20$ g-cm

4-3 HOW TO INSTALL VOLUME (VR90) AND CAM WHEEL

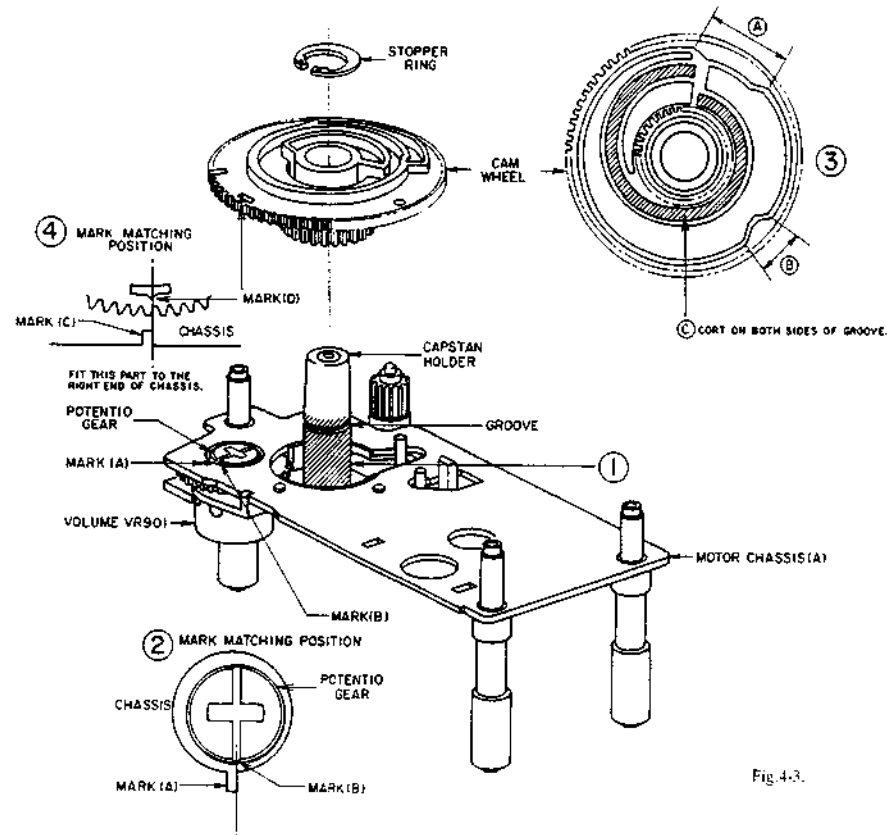


Fig.4-3.

- 1) Apply Molybdenum coat on the capstan holder  
Apply Molybdenum coat on the area of 360° from the bottom to the upside 2mm of groove as shown in the figure (Fig.4-3-1).
- 2) Fitting position volume (potentio gear)  
Fit the right end of Mark (A) to the center of Mark (B) as shown in the figure (Fig. 4-3-2).
- 3) Apply Molybdenum coat on the ①, ② and ③ shown in the Fig.4-3-3.
- 4) Set the cam wheel on the capstan wheel (ensure that the cam wheel and potentiometer gear are meshed properly).

When the cam wheel is set properly, fit the center of Mark (D) to the right end of Mark (C) (Fig.4-3-3).

- 5) Fit the stopper ring in the groove of the capstan holder

**CAUTIONS:**

1. Make sure that the teeth on the periphery of cam wheel and the cam are absolutely free from any scratch, cut, etc.
2. Make sure that Molybdenum coat is applied on the specified area only.

## 4-4. POTENTIOMETER PRE-SET VOLTAGE ADJUSTMENT (Refer to fig. 4-4 to 4-5)

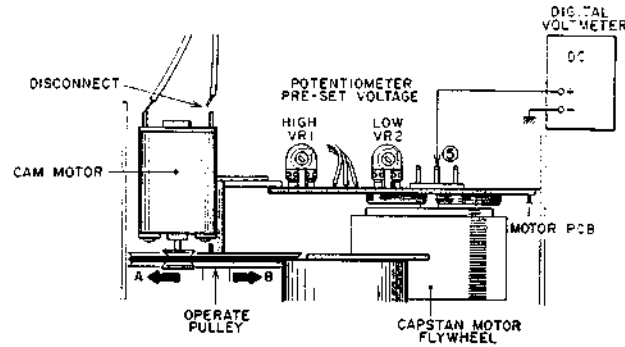


Fig. 4-4.

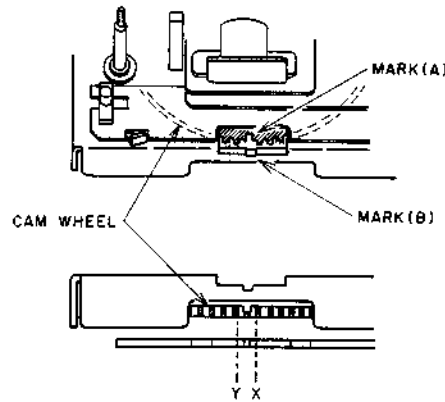


Fig. 4-5.

### 1) LOW VOLTAGE ADJUSTMENT

- a. With power OFF, remove the connecting cord of the cam motor and turn the operate pulley fully with your fingers in A direction. (EJECT DIRECTION)
- b. Connect the digital voltmeter as shown in fig. 4-4.
- c. With power ON, adjust VR2 so that the voltage reading will be 1.15V (DC).

### 2) HIGH VOLTAGE ADJUSTMENT

- a. With power OFF, turn the operate pulley fully with your fingers in B direction. (PLAY DIRECTION)
- b. With power ON, adjust VR1 so that voltage reading will be 9.08V (DC).

### 3) Repeat Items 1) and 2).

- 4) a. With power OFF, connect the connecting cord of the motor.
- b. Remove the digital voltmeter.

- 5) Remove the Cassette lid, Front panel and Bottom cover.

### 6) a. Set power to ON.

- b. Adjust VR1 slightly so that the center of Marker (A) coincides with the center of Marker (B) (should be within the range between X and Y) at STOP Mode as shown in Fig. 4-5. (The marker (STOP) on the CAM WHEEL can be seen clearly by lighting it from the back.)

### c. Set the IPLS switch to ON.

- d. Confirm that head and pinch rollers do not move up and down when the FF and REW switches are alternately depressed.

- e. Turn the reel with fingers in STOP Mode to check that the brake works sufficiently.

When the brake acts normally, the take-up reel does not turn clockwise while the supply reel does not rotate counterclockwise.

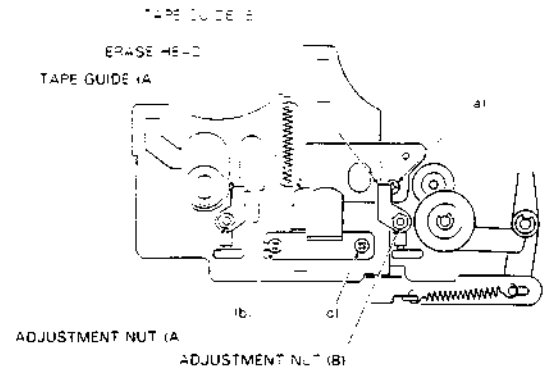


Fig. 5-1.

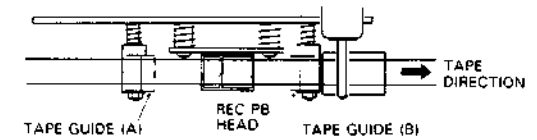


Fig. 5-2.

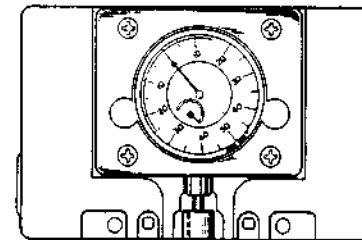


Fig. 5-3 Cassette Head Projection Gauge (AJ-751180)

### 5-1. REC/PB HEAD PROJECTION ADJUSTMENT

Take off the LID CASE and set the cassette head projection gauge (AJ 751180) and set to PLAY mode. Loosen the screw (a) and adjust so that the gauge indication at that time will be  $3.2 \pm 0.1$ mm. After adjustment, apply paintlock on the screw (a).

### 5-2. TAPE GUIDE HEIGHT ADJUSTMENT

- 1) Set the mirror cassette tape (AJ-751178) and set to PLAY mode.
- 2) Adjust the tape guide (A) so that the parts of the erase head coming out of both sides of the tape (A and A') in Fig. 5-2 will be equal. For the adjustment, use the adjustment nut (A).
- 3) Adjust the tape guide (B) so that the tape runs smoothly and is not hitched by the tape guide. For the adjustment, use the adjustment nut (B).
- 4) After adjustment, paint-lock the adjustment nuts (A) and (B).

### 5-3. REC/PB HEAD HEIGHT ADJUSTMENT

- 1) Set the mirror cassette tape and set to PLAY mode.
- 2) Adjust the screws (b), (c) and (d) so that the upper edge of REC/PB head Lch core and the upper side of the tape is in alignment.
- 3) Playback the head height adjustment tape (4 Track 1.000Hz) (AT-750775), and fine-adjust the screw (b), (c) and (d) so that the largest output is obtained for both channels.

### 5-4. REC/PB HEAD AZIMUTH ALIGNMENT ADJUSTMENT

- 1) Playback a 10kHz Head Azimuth Alignment Tape (AT-750778) and adjust the screw (d) until the output levels of both channels are at maximum.
- 2) Record a 10kHz, -26dBm signal from the audio frequency oscillator.
- 3) Rewind and check for any fluctuation in the output level at playback.
- 4) After adjustment, paintlock the screws (b), (c) and (d).

- NOTES:
1. Be sure to clean the heads prior to head adjustment.
  2. Be careful not to use a magnetized driver or other magnetized tools in the vicinity of the heads.
  3. Be sure to demagnetize the heads with a Head Demagnetizer before and after head adjustment.

# VI. PRE AMP, SYSCON and dbx PCB ADJUSTMENT

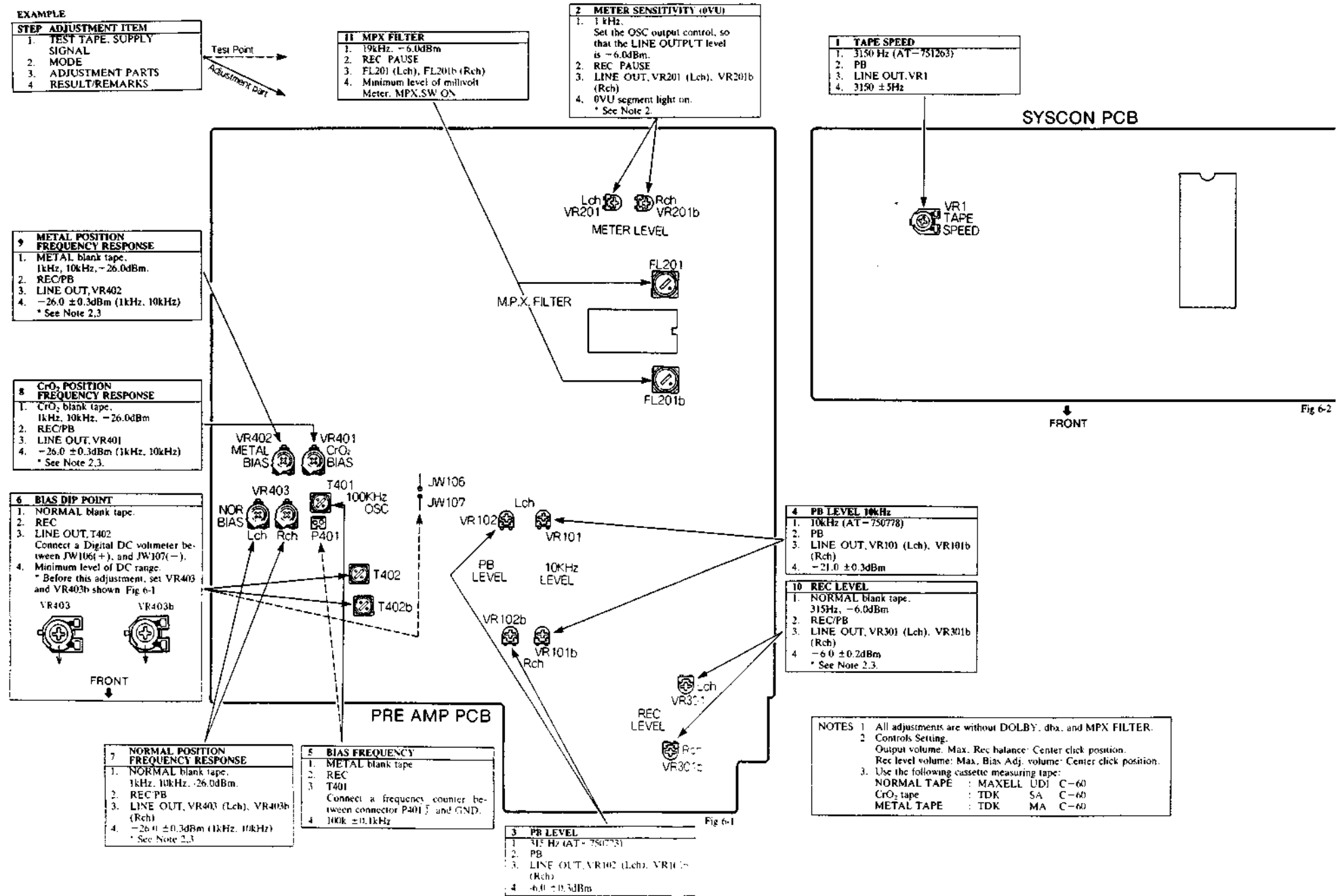


Fig 6-2

**NOTES**

- All adjustments are without DOLBY, dbx, and MPX FILTER.
- Controls Setting:  
Output volume: Max. Rec balance: Center click position.  
Rec level volume: Max. Bias Adj. volume: Center click position.
- Use the following cassette measuring tape:  
NORMAL TAPE : MAXELL UDJ C-60  
CrO<sub>2</sub> tape : TDK SA C-60  
METAL TAPE : TDK MA C-60

# 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
2-1-x	BH-T2023A320A	HEAD BASE BLOCK
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x035TL CMT
2-4	ZS-536488	BID20x085TL CMT
2-5	ZG-402895	SP CS ANGLE ADJUST

- SP (Service Parts) Classification
- A small "x" indicates that this part is not shown in the Photo or Illustration.
- This number corresponds with the individual parts index number in that figure.
- This number corresponds with the Figure Number.

### b) PC Board

#### 6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-1C1	EI-324536	IC HD14049BP
6-1C2	EI-336801	IC M98841-364M
6-C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
6-C1B	EC-350949	C MMY V 223M 250DC [J]
6-C1C	EC-338397	C MMY V 223M 125AC [C,A]
6-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) [V]: VDE(W. Germany)
  - [E]: CEE(Europe) [Y]: Custom Version
  - [J]: JPN(Japan)
- 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

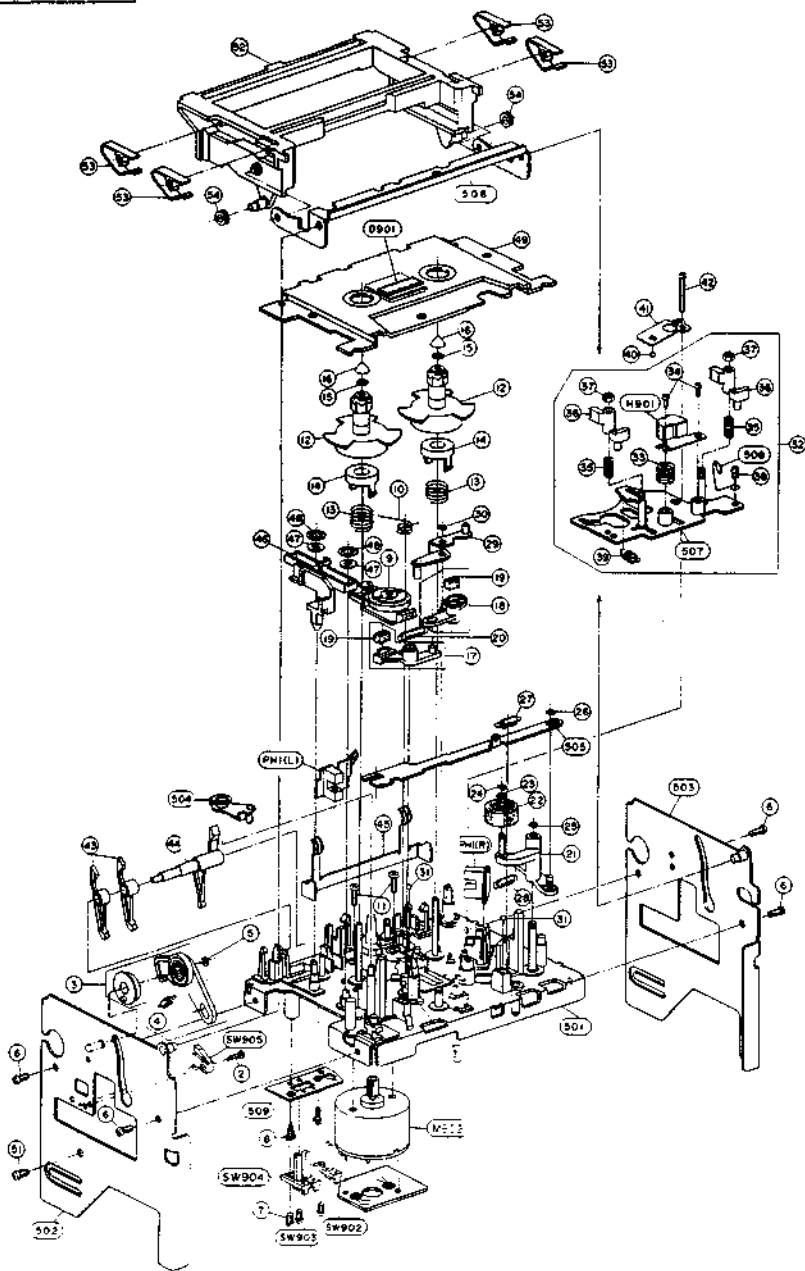
△ (\*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

## 1. RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items:

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	EB-T2100A020A	MECHA BLK GX-32	56	ES-372912	SW LEAF SPW921 01-2
2	EB-T2100A030A	HEAD BLK GX-32			LOADING SW
3	EM-MG103A010A	MOTOR BLM-3C3	57	ES-373380	SW PUSH ESE-88630 4 THROW N
		CAPSTAN MOTOR			NR SW
4	EM-B345198	MOTOR OPERATION PULLEY PART	58	*ES-371104	SW PUSH SDD01082A 011
		CAM MOTOR			POWER SW
5	BR-T2069A360A	REEL TABLE BLK EX-3	59	*ES-359808	SW SELECTOR BT-41S0454 01-4
6	*ST-373395	TRANS POWER T2100A.C.			[U] VOLTAGE SELECTOR
		[A.C.]	80	ES-370985	SW SLIDE SSSU02 1-01-03N
7	*BT-373398	TRANS POWER T2100B.SI			TIMER START SW
		[B.S.]	81	ES-373381	SW TACT SKHPP
8	*BT-373396	TRANS POWER T2100E.VI	62	ET-345081	DETECTOR SPW201-40 B.C
		[E.V.]			[DETECTOR-R PCB]
9	*BT-373394	TRANS POWER T2100U	63	ET-373382	TR DTA1432S
		[U]	64	ET-372030	TR DTA1446F
10	ED-307572	D SILICON H 1S5131	65	ET-354415	TR DTA1446S
11	ED-624903	D SILICON H 1S2473	66	ET-353897	TR DTC1146S
12	*ED-330622	D SILICON 1SR35-100VL 100 1CA	67	ET-354366	TR DTC1147S
13	ED-316389	D ZENER MH211 A2	68	ET-373485	TR DTC1223S
14	ED-324014	D ZENER MH211 B1	69	ET-373382	TR DTC124XS
15	ED-346550	D ZENER MH211L B2	70	ET-373381	TR DTC1432S
16	ED-338561	D ZENER MH22FA B2 F10	71	ET-360824	TR DTC1446F
17	ED-324013	D ZENER MH22O 2	72	ET-354414	TR DTC1446S
18	ED-346624	D ZENER MH23O 2	73	ET-370310	TR DTC1447S
19	ED-306010	D ZENER MH26 A2	74	ET-308472	TR 2SA1115 E.F.G F05
20	ED-309069	D ZENER MH26 B2	75	*ET-354841	TR 2SA1282A F.G F05
21	ED-346804	D ZENER MH27 B2	76	*ET-352726	TR 2SA1392 T.U
22	ED-346809	D ZENER MH29 C1	77	ET-337760	TR 2SA984K F
23	ED-346838	D ZENER MH29L A2	78	ET-308977	TR 29C2274K F F05
24	ED-345540	D ZENER YH29L B1	79	ET-308141	TR 29C2603 G F05
25	*EF-355374	FUSE BET T 250V 500MA	80	*EF-305394	TR 29C3242A F.G F05
		[B]	81	*ET-357845	TR 29C3242A F.G F05
26	*EF-358974	FUSE BET T 250V 630MA	82	ET-349081	TR 29C3383 S.T
		[B]	83	ET-347961	TR 2SD1012-V G F05
27	*EF-593705	FUSE SEMKO T 250V 300MA	84	*ET-354063	TR 2SD1189 Q.R
		[E]	85	EV-373389	VR ROTARY RK1631110 B102
28	*EF-601942	FUSE SEMKO T 250V 630MA			[BAS ADJUST.]
		[E]	86	EV-373387	VR ROTARY RK16312AD A104X2
29	*EF-306948	FUSE TSC A 250V 1.25A			[REC LEVEL.]
		[U]	87	EV-373388	VR ROTARY RK16312AD A104X2
30	*EF-308388	FUSE TSC A 250V 800MA			[PHONES LEVEL.]
		[U]	88	EV-373385	VR ROTARY RK1631210 M104 M104
31	*EF-309392	FUSE TSC 125V 1.25A			[REC BALANCE.]
		[C]	89	HR-H2505A010A	HEAD COMB EPRA-13TG
32	*EF-309391	FUSE TSC 125V 800MA	90	MP-345329	PINCH ROLLER(C)
		[C]	91	TC-336605	WIND IDLER ASSY
33	EH-372101	FILTER DB 428-5162-04			
34	EI-337568	HOLE-E DHD-H070			
35	EI-359585	IC CX20187			
36	EI-356327	IC HA12067NT			
37	IC-337013	IC L81290			
38	IC-345765	IC L81292			
39	IC-355602	IC L81649			
40	IC-373379	IC M50743-600SP T2100 CUSTOM			
41	IC-357498	IC M51143AL			
42	IC-383227	IC M5215L			
43	IC-346071	IC M5218L-21			
44	IC-348785	IC M5220K			
45	IC-201940	IC NJM4558S			
46	IC-339882	IC UPC1043C			
47	IC-373383	IC UPC12970A			
48	EI-372031	OSC CE W C-CR80MC 80MHZ			
49	EM-373138	MD RL FP25A-W15V			
50	ED-328529	RELAY LEAD LABRNS 2NO 12V			
51	*ER-387642	R FUSE H S10 ERD2FC 1 4W 1200G			
52	*ER-200926	R FUSE H S10 ERD2FC 1 4W 2700G			
53	*ER-200972	R FUSE H S10 ERD2FC 1 4W 3370G			
54	ER-358910	R OMF H S15 FS 2W 181J			
55	ES-336990	SW LEAF BSW-169 01-1 NO			[CRO2 METAL.]

**MECHA BLOCK**



PARTS LIST

**2. MECHA BLOCK**

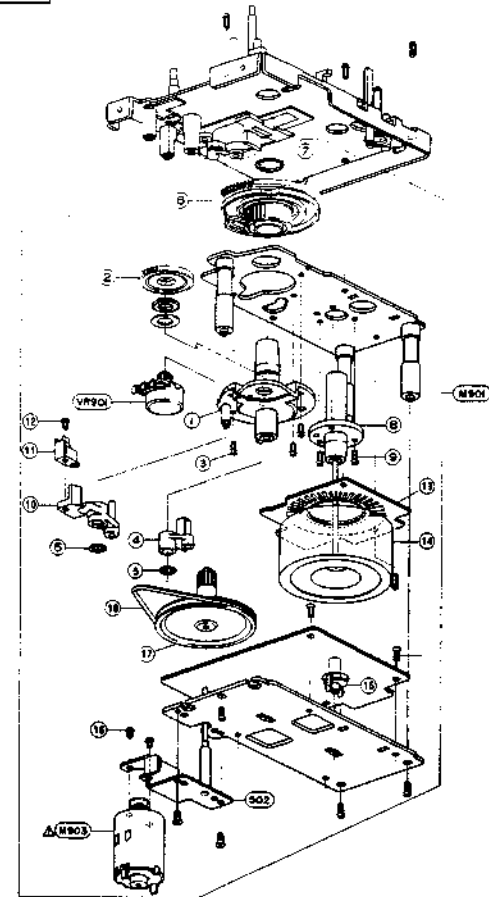
Ref. No.	Part No.	Description
1	BB-T2100A020A	MECHA BLK GX-52
2	ZS-608106	PAN20X06STL CMT
3	BZ-T2030A110C	OL CLUTCH BLK GX-6
4	ZG-341970	SP PULL OL CLUTCH
5	ZW-270088	RWG E190SUP CMT
6	ZS-201275	ST PAN26X06STL CMT
SW905	ES-372912	SW LEAF SPP621 01-2 {LOADING SW}
PH10R	ET-345091	DETECTOR SPI-201-40 B.C {DETECTOR-R PCB}
PH1L1	ET-345091	DETECTOR SPI-201-40 B.C {DETECTOR-L PCB}
SW902	ES-336890	SW LEAF BSW-169 01-1 MO {CROZ/METAL}
SW903	ES-336890	SW LEAF BSW-169 01-1 MO {120U/70U}
SW904	ES-336890	SW LEAF BSW-169 01-1 MO {ANTI REC}
7	ZS-464703	MD20X04STL CMT
8	ZS-336614	PT PAN26X06STL CMT
9	TC-336605	WIND IDLER ASSY
10	ZG-336140	SP TORSION IDLER
M902	BM-6336869	MOTOR REEL (PULLEY) PART {REEL MOTOR}
11	ZS-550708	PAN26X06STL M3
12	BR-T2068A360A	REEL TABLE BLK GX-9
13	ZG-336141	SP PUSH BT
14	TC-336142	HOLDER BT SP
15	ZW-530073	PW21X04X020 TOUGH LIGHT N0440
16	MT-305793	REEL CAP
17	BL-T2030A160A	LEVER BRAKE (A) BLK GX-F51
18	BL-T2030A170A	LEVER BRAKE (B) BLK GX-F51
19	TC-336145	BRAKE RUBBER
20	ZG-312846	SP T1-03.2 / 0.29-16.0 T1-062
21	BL-6336150	ARM PINCH ROLLER (A) PART
22	MP-346329	PINCH ROLLER (C)
23	ZW-305546	PW21X04X025PSL
24	ZW-356857	RWG E150SUP CMT
25	ZW-270088	RWG E190SUP CMT
26	ZW-270088	RWG E190SUP CMT
27	ZG-342576	SP PULL PINCH ROLLER (T-2)
28	ZG-321634	SP T3-03.2 / 0.29-12.5 T2-060
29	BL-6336150	ARM HEAD SLIDE PART
30	ZW-270088	RWG E190SUP CMT
31	MV-357208	BALL 200STL
32	BH-T2100A030A	HEAD BLK GX-52
33	ZG-373323	SP PUSH HEAD
H901	HR-H2505A010A	HEAD COMB EPRA-13TG
34	ZS-201506	PAN20X04STL M3
35	ZG-336130B	SP PUSH GUIDE B
36	HZ-336128	GUIDE TAPE
37	ZW-373137	N20STL BN 1
38	ZS-391306	PAN23X03STL M3
38	ZG-341972	SP PULL HEAD RETURN
40	MV-357208	BALL 200STL
41	ZG-336157	SP PLATE HEAD HOLD
42	ZS-308931	PAN26X16STL CMT
43	ML-336156	LEVER DETECTION (B)
44	ML-336156-A	LEVER DETECTOR (A)
45	ZG-336160	SP PLATE CASSETTE HOLDER (A)
46	TC-336161	SLIDE EJECT
47	ZW-306464	PW31X07X060STL CMT
48	ZW-329422	RWG CS 0300
49	SP-336162B-A	LID DECORATION (B)
D901	ED-344244	D LED SLF-601C AMBER {HOUSING LAMP PCB}
50	ZS-479474	PAN26X06STL CMT
51	ZS-201275	ST PAN26X06STL CMT
52	SP-336162B	LID CASE (2)
53	ZG-336615	SP PLATE CASSETTE HOLDER (B)
54	SZ-336166	COLLAR LID

NOTE: The parts reference numbered here except the ones in 500's are normally stocked for replacement purpose. The rest of the parts shown in this manual are not stocked since they are seldom required for routine service.

PARTS LIST



**MOTOR BLM310B BLOCK**



**3. MOTOR BLM-300 BLOCK**

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
M901	BM-M3103A010A	MOTOR BLM-300	14	BF-8336013	FLYWHEEL PART
		[CAPSTAN MOTOR]	15	TC-338016	HOLDER THRUST (A)
1	TC-3380048	HOLDER CAPSTAN (C-2)	M903	BM-8345196	MOTOR OPERATION (PULLEY) PART
VR901	EV-337052	VR ROTARY 18L10XOR B103			[CAM MOTOR]
2	MZ-338005	GEAR POTENTIOM	16	ZS-592378	PAN26X03STL CMT
3	ZS-432843	PAN26X04STL CMT	17	MR-338019	PULLEY OPERATE
4	BL-8338007	LEVER BRAKE CAM PART	18	MB-338021	BELT OPERATION
5	ZW-663183	RWG CS 280STL PKR			
6	MZ-338006	CAM WHEEL			
7	ZW-338604	RETAINING RING O 5930SUP ACP			
8	TC-338002	HOLDER CAPSTAN (B)			
9	ZS-478474	PAN26X05STL CMT			
10	BL-8338009	LEVER EJECT CAM PART			
11	MZ-353158	SP PLATE EJECT			
12	ZS-477876	PAN20X03STL CMT			
13	EA-338012	PC FG			

NOTE: The parts reference numbered here except the ones in 500's are normally stocked for replacement purpose. The rest of the parts shown in this manual are not stocked since they are seldom required for routine service.

#### 4. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1A	BA-T2100A040A	PC(M) PRE AMP BLK GX-52(U) [U]
1B	BA-T2100A040B	PC(M) PRE AMP BLK GX-52(C.E.BI) (B.CE)
2	BA-T2100A050A	PC(M) SYSCON BLK GX-52

PC PRE-AMP BLK CONSISTS OF FOLLOWING P.C.BOARD.

- ◆PRE-AMP P.C.BOARD
- ◆HEADPHONE AMP P.C.BOARD
- ◆POWER TRANS P.C.BOARD
- ◆HEADPHONE P.C.BOARD

PC SYSCON BLK CONSISTS OF FOLLOWING P.C.BOARD.

- ◆SYSTEM CONTROL(1)P.C.BOARD
- ◆SYSTEM CONTROL(2)P.C.BOARD
- ◆TIMER SW P.C.BOARD
- ◆REMOCON JACK P.C.BOARD

#### 5. PRE-AMP P.C BOARD

Ref. No.	Part No.	Description
D101	ED-824903	D SILICON H 1S2473
D601	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D602	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D603	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D604	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D605	ED-824903	D SILICON H 1S2473
D606	ED-373390	D LED LTZ-R15 RED F10
D607	ED-346540	D ZENER H HZ9L B1
D608	ED-624903	D SILICON H 1S2473
D609	ED-373390	D LED LTZ-R15 RED F10
D610	ED-346540	D ZENER H HZ9L B1
D611	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D612	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D613	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D614	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D615	ED-624903	D SILICON H 1S2473
D616	ED-346550	D ZENER H HZ11L B2
D617	ED-624903	D SILICON H 1S2473
D618	ED-346550	D ZENER H HZ11L B2
D619	ED-346538	D ZENER H HZ9L A2
D620	ED-346538	D ZENER H HZ9L A2
D621	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D622	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D623	ED-324014	D ZENER H HZ11 B1
D641	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D642	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D643	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D644	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D662	ED-324014	D ZENER H HZ11 B1
D653	ED-324014	D ZENER H HZ11 B1
D654	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D655	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D656	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D657	ED-309070	D ZENER H HZ6 A2
D658	ED-309069	D ZENER H HZ6 B2
D659	ED-824903	D SILICON H 1S2473
D660	ED-346524	D ZENER H HZ30 2
D661	ED-324013	D ZENER H HZ20 2
D662	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D663	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D664	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D665	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D666	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D601	ED-824903	D SILICON H 1S2473
D602	ED-824903	D SILICON H 1S2473
FL101	EH-388105	FILTER EM STY103NB
FL201	EH-372101	FILTER DB 420-5162-04
FL202	EO-323982	COL. TUN 1 1002-431 100 000KHZ
FL203	EH-388105	FILTER EM STY103NB
FL204	EH-388105	FILTER EM STY103NB
FL20E	EH-388105	FILTER EM STY103NB
FR201	*ER-200972	R FUSE H S10 ERD2FC 1/4W 33RDG

Ref. No.	Part No.	Description
FR501	*ER-200926	R FUSE H S10 ERD2FC 1/4W 27RDG
FR502	*ER-387642	R FUSE H S10 ERD2FC 1/4W 1200G
IC101	EH-348785	IC MS220L
IC201	EH-359985	K CX20187
IC301	EH-346071	IC MS218L-21
IC401	EH-373383	IC UPC1287CA
IC501	EH-357498	IC MS1143AL
J601	EJ-336905	PN J AJC 036-ACB P 4P [LINE IN - OUT]
L201	EO-372996	COL. FIX 1 R875 223J
L301	EO-357050	COL. FIX 1 R875 822J
L302	EO-369989	COL. FIX 1 79-5249-13 542J
RL101	EO-328529	RELAY LEAD LAB2NS 2ND 12V
TR101	ET-349081	TR 25C3383 S.T
TR102	ET-349081	TR 25C3383 S.T
TR103	ET-349081	TR 25C3383 S.T
TR104	ET-373485	TR DTC123AS
TR105	ET-354365	TR DTC114YS
TR106	ET-354365	TR DTC114YS
TR201	ET-349081	TR 25C3383 S.T
TR202	ET-349081	TR 25C3383 S.T
TR203	ET-349081	TR 25C3383 S.T
TR301	ET-349081	TR 25C3383 S.T
TR302	ET-349081	TR 25C3383 S.T
TR303	ET-349081	TR 25C3383 S.T
TR304	ET-349081	TR 25C3383 S.T
TR305	ET-349081	TR 25C3383 S.T
TR306	ET-349081	TR 25C3383 S.T
TR307	ET-349081	TR 25C3383 S.T
TR401	*ET-357845	TR 25C3242A F.G F05
TR402	ET-373391	TR DTC143ZS
TR403	ET-370310	TR DTC144TS
TR404	ET-370310	TR DTC144TS
TR405	ET-308977	TR 25C2274K F F05
TR406	ET-308977	TR 25C2274K F F05
TR407	ET-308472	TR 25A1115 E.F.G F05
TR408	ET-373392	TR DTC124XS
TR409	ET-370310	TR DTC144TS
TR410	ET-370310	TR DTC144TS
TR411	ET-354415	TR DT A144ES
TR513	ET-308141	TR 25C2603 G F05
TR501	*ET-349081	TR 25C3383 S.T
TR502	ET-352726	TR 25A1392 T.U
TR503	*ET-352726	TR 25A1392 T.U
TR504	ET-349081	TR 25C3383 S.T
TR505	*ET-349081	TR 25C3383 S.T
TR506	*ET-349081	TR 25C3383 S.T
TR507	*ET-349081	TR 25C3383 S.T
TR508	*ET-352726	TR 25A1392 T.U
TR509	*ET-352726	TR 25A1392 T.U
TR510	*ET-352726	TR 25A1392 T.U
TR511	*ET-357845	TR 25C3242A F.G F05
TR551	*ET-357845	TR 25C3242A F.G F05
TR552	*ET-354841	TR 25A1282A F.G F05
TR553	*ET-354083	TR 25D1188 Q.F
TR554	*ET-308141	TR 25C2603 G F05
TR555	*ET-308472	TR 25A1115 E.F.G F05
TR556	*ET-308141	TR 25C2603 G F05
TR557	*ET-365394	TR 25C3242A F.G F05
TR601	ET-354415	TR DT A144ES
TR602	ET-354415	TR DT A144ES
TR603	ET-354415	TR DT A144ES
T401	EO-373384	COL. OSC 1 23D6-01 100 00KHZ
T402	EO-373483	COL. OSC 1 23D6-02 100 00KHZ
VR101	EV-356582	R S-FIX H RH0619C 0 10W 473
VR102	EV-356577	R S-FIX H RH0619C 0 10W 103
VR201	EV-357619	R S-FIX H RH0619C 0 10W 104
VR301	EV-357619	R S-FIX H RH0619C 0 10W 104
VR401	EV-345781	P S-FIX H RVF8P01 0.10W 202
VR402	EV-337996	P S-FIX H RVF8P01 0.10W 104
VR403	EV-337996	R S-FIX H RVF8P01 0 10W 104
F1A	*EF-309398	FUSE TSC A 250V 800MA U
F2A	*EF-309388	FUSE TSC A 250V 800MA U
F3A	*EF-306949	FUSE TSC A 250V 1.25A U

Ref. No.	Part No.	Description
F4A	*EF-306949	FUSE TSC A 250V 1.25A [U]
F10	*EF-309391	FUSE TSC 125V 800MA [C]
F20	*EF-309391	FUSE TSC 125V 800MA [C]
F30	*EF-309392	FUSE TSC 125V 1.25A [C]
F40	*EF-309392	FUSE TSC 125V 1.25A [C]
F1C	*EF-593706	FUSE SEMKO T 250V 500MA [E]
F2C	*EF-593708	FUSE SEMKO T 250V 500MA [E]
F3C	*EF-601842	FUSE SEMKO T 250V 630MA [E]
F4C	*EF-601842	FUSE SEMKO T 250V 630MA [E]
F1D	*EF-355374	FUSE BET T 250V 500MA [B]
F2D	*EF-355374	FUSE BET T 250V 500MA [B]
F3D	*EF-358974	FUSE BET T 250V 630MA [B]
F4D	*EF-358974	FUSE BET T 250V 630MA [B]

#### 6. HEADPHONE AMP P.C BOARD

Ref. No.	Part No.	Description
IC701	EI-353227	IC MS218L
IC705	ER-358910	R OMF H S15 FS 2W 181J
IC706	ER-358910	R OMF H S15 FS 2W 181J
VR701	EV-373387	VR ROTARY RK1631240 A104X2 [REC LEVEL]
VR702	EV-373388	VR ROTARY RK1631210 M104 N104 [REC BALANCE]
VR703	EV-373388	VR ROTARY RK1631240 A104X2 [PHONES LEVEL]
VR704	EV-373389	VR ROTARY RK1631110 B102 [BIAS ADJUST]

#### 7. POWER TRANS P.C BOARD

Ref. No.	Part No.	Description
CB01A	*EC-320548	C CE V F 103Z 250AC [U]
CB01B	*EC-338411	C CE V F 103P 400AC [C.B.E]
FL801	EO-388466	COL LF LF4N
SW801	*ES-371104	SW PUSH SDDLD1082A 01-1 [POWER SW]

#### 8. HEADPHONE P.C BOARD

Ref. No.	Part No.	Description
.701	EJ-369995	PHONE J 3P HLJ0540-410 GP 63 PHONES

#### 9. SYSTEM CONTROL (1) P.C BOARD

Ref. No.	Part No.	Description
O1	ED-307572	D SILICON H 1SS131
O2	ED-307572	D SILICON H 1SS131
O3	ED-307572	D SILICON H 1SS131
O4	ED-307572	D SILICON H 1SS131
D5	ED-307672	D SILICON H 1SS131
D6	ED-346593	D ZENER H HZ3 B1
D7	ED-338332	D ZENER H HZ4 A2
D8	ED-316389	D ZENER H HZ11 A2
D9	ED-346609	D ZENER H HZ9 C1
O10	ED-307572	D SILICON H 1SS131
O11	ED-346804	D ZENER H HZ7 B2
O12	ED-307572	D SILICON H 1SS131
D13	ED-307572	D SILICON H 1SS131
O14	ED-307572	D SILICON H 1SS131
D15	ED-307572	D SILICON H 1SS131
D16	ED-307572	D SILICON H 1SS131
D17	ED-307572	D SILICON H 1SS131
D18	ED-307572	D SILICON H 1SS131
K1	EI-373379	K MS0743-800SP T2100 CUSTOM
K2	EI-338982	K UPC1043C
K3	EI-348071	K MS218L-21
K4	EI-348071	K MS218L-21
K5	EI-355402	K L81649
TR1	ET-354414	TR DTC144ES
TR2	ET-354414	TR DTC144ES
TR3	ET-353897	TR DTC114ES
TR4	ET-353897	TR DTC114ES
TR5	ET-353897	TR DTC114ES
TR6	ET-353897	TR DTC114ES
TR7	ET-353897	TR DTC114ES
TR8	ET-353897	TR DTC114ES
TR9	ET-353897	TR DTC114ES
TR10	ET-353897	TR DTC114ES
TR11	ET-353897	TR DTC114ES
TR12	ET-353897	TR DTC114ES
TR13	ET-353897	TR DTC114ES
TR14	ET-308141	TR 25C2603 G F05
TR15	ET-347961	TR 25D1012-V G F05
TR16	ET-347961	TR 25D1012-V G F05
TR17	ET-347961	TR 25D1012-V G F05
TR18	ET-347961	TR 25D1012-V G F05
TR19	ET-347961	TR 25D1012-V G F05
TR20	ET-354415	TR DT A144ES
TR21	ET-308141	TR 25C2603 G F05
TR22	ET-353897	TR DTC114ES
TR23	ET-353897	TR DTC114ES
TR24	ET-353897	TR DTC114ES
TR25	ET-308141	TR 25C2603 G F05
TR26	ET-308141	TR 25C2603 G F05
TR27	ET-354414	TR DTC144ES
TR28	ET-354414	TR DTC144ES
TR29	ET-353897	TR DTC114ES
TR30	ET-308472	TR 25A1115 E.F.G F05
TR31	ET-373382	TR DT A144ES
TR32	ET-353897	TR DTC114ES
TR33	ET-353897	TR DTC114ES
TR34	ET-353897	TR DTC114ES
TR35	ET-353897	TR DTC114ES
TR36	ET-353897	TR DTC114ES
TR37	ET-353897	TR DTC114ES
VR1	EV-330531	R S-FIX H TMRK1V2-1S 0 50W503
X1	EP-372031	OSC CE W/C FORB. QMC 8 0MHZ

### 10. SYSTEM CONTROL (2) P.C BOARD

Ref. No.	Part No.	Description
D201	ED-624903	D SILICON H 1S2473
D202	ED-624903	O SILICON H 1S2473
D203	ED-307572	O SILICON H 1SS131
D204	ED-624903	O SILICON H 1S2473
D205	ED-624903	D SILICON H 1S2473
IC201	BI-345765	IC L81292
IC202	BI-345765	IC L81292
IC203	BI-337013	IC L81290
IC204	BI-358327	IC HA12067NT
MC201	EM-373136	IND FL FIP26AW15Y
SW201	ES-373380	SW PUSH ESB-88630 4 THROW N [NR SW]
TR201	ET-360824	TR DTC144EF
TR202	ET-360824	TR DTC144EF
TR203	ET-372030	TR DTA144EF
TR204	ET-372030	TR DTA144EF
TR205	ET-360824	TR DTC144EF
TR206	ET-360824	TR DTC144EF
TS201	ES-373381	SW TACT SKHPP
TS202	ES-373381	SW TACT SKHPP
TS203	ES-373381	SW TACT SKHPP
TS204	ES-373381	SW TACT SKHPP
TS205	ES-373381	SW TACT SKHPP
TS206	ES-373381	SW TACT SKHPP
TS207	ES-373381	SW TACT SKHPP
TS208	ES-373381	SW TACT SKHPP
TS209	ES-373381	SW TACT SKHPP
TS210	ES-373381	SW TACT SKHPP

### 11. TIMER SW P.C BOARD

Ref. No.	Part No.	Description
SW301	ES-370965	SW SLIDE SSSU02 1-01-03N [TIMER START SW]

### 12. REMOCON JACK P.C BOARD

Ref. No.	Part No.	Description
J401	EJ-346076	DNV J TCS4690-01-1111 P 8P [REMOTE]

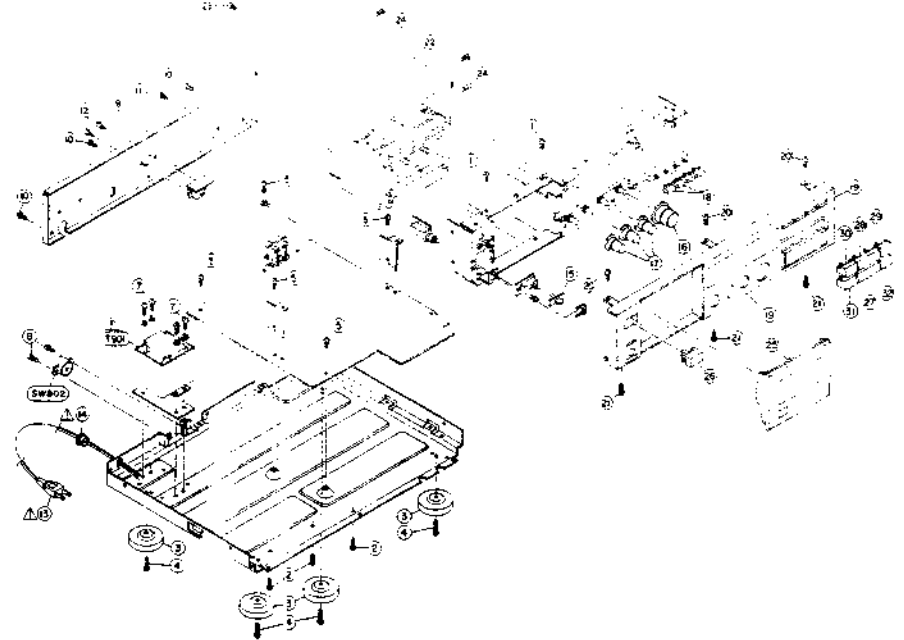
### 13. MOTOR P.C BOARD

Ref. No.	Part No.	Description
D6	ED-338561	D ZENER H MZ2FA 82 F10
IC1	ED-201940	IC NJM4558S
IC2	ED-201940	IC NJM4558S
IC3	BI-337568	HOLE-E DHD-H070
IC4	BI-337568	HOLE-E DHD-H070
TR1	ET-308977	TR 2SC2274K F F05
TR2	ET-337760	TR 2SA984K F
TR3	ET-308977	TR 2SC2274K F F05
TR4	ET-337760	TR 2SA984K F
VR1	EV-464253	R S-FIX V V8K1-1 0.10W 202
VR2	EV-464253	R S-FIX V V8K1-1 0.10W 202

### 14. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1	ZS-361242	ST BR26X06STL CMT
2	ZS-345272	ST BR30X06STL BM
3	SA-B368350A1	FOOT PART
4	ZS-351098	ST BR30X12STL BM
5	ZS-342001	ST BR30X06STL M3
6	MZ-553948	WIRE BAND F-100
T901A	*BT-373394	TRANS POWER T2100IUJ [U]
T901B	*BT-373395	TRANS POWER T2100IACI [A.C]
T901C	*BT-373396	TRANS POWER T2100IEVI [E.V.]
T901D	*BT-373398	TRANS POWER T2100IBSI [B.S.]
7	ZS-325260	ST BD40X08STL BM
SW802	*ES-359600	SW SELECTOR BT-4190454 01-4 [U] [VOLTAGE SELECTOR]
8	ZS-352133	ST BR30X10STL CMT
9A	SP-373338A	PANEL REAR GX-52IUJ [U]
9B	SP-373338C	PANEL REAR GX-52IC [C]
9C	SP-373338D	PANEL REAR GX-52IE [E]
9D	SP-373338E	PANEL REAR GX-52IB [B]
10	ZS-345272	ST BR30X06STL BM
11	ZS-360934	PT BR30X08STL BM
12	ZW-231030	RV NYL30X045 BL
13A	*EW-363654	AC CORD 200 0129AYFF B300 A U/ [U]
13B	*EW-363617	AC CORD 200 0236 SPT1 B300 A UC [C]
13C	*EW-363687	AC CORD 200 0364 LCLF B300 A E [E]
13D	*EW-363679	AC CORD 200 LCLF B300 A B [B]
14	*EZ-330775	CLAMPER CORD 130
15-G	SK-358068E	KNOB SLIDE [4]-GOLD [TIMER START-GOLD]
15-B	SK-358068D	KNOB SLIDE-BLACK [TIMER START-BLACK]
16-G	SK-373334B	KNOB VRIA-GOLD [REC LEVEL-GOLD]
16-B	SK-373334A	KNOB VRIA-BLACK [REC LEVEL-BLACK]
17-G	SK-373335B	KNOB VRBI-GOLD [GOLD]
17-B	SK-373335A	KNOB VRBI-BLACK [BLACK]
18-G	SK-373340B	KNOB PUSH-GOLD [GOLD]
18-B	SK-373340A	KNOB PUSH-BLACK [BLACK]
19-G	BD-T2100A060A	PANEL FRONT BLK GX-52-G [GOLD]

### FINAL ASSEMBLY BLOCK



Ref. No.	Part No.	Description
19-B	BD-T2100A060B	PANEL FRONT BLK GX-52-B [BLACK]
20	ZS-320906	ST BR30X06STL CMT
21	ZS-305827	ST BD30X06STL BM
22-G	SP-373343B	COVER UPPER-GOLD [GOLD]
22-B	SP-373343A	COVER UPPER-BLACK [BLACK]
23-G	ZS-342001	ST BR30X06STL M3 [GOLD]
23-B	ZS-345272	ST BR30X06STL BM [BLACK]
24-G	ZS-341959	ST BD40X06STL M3 [GOLD]
24-B	ZS-341960	ST BD40X06STL BM [BLACK]
25-G	BD-T2100A070A	[D] PANEL BLK GX-52-G [GOLD]
25-B	BD-T2100A070B	[D] PANEL BLK GX-52-B [BLACK]
26-G	SK-373236A	[NOB POWER-GOLD [GOLD]
26-B	SK-373236B	[NOB POWER-BLACK [BLACK]
27-G	SK-373336B	[NOB OPERATION] STOP-GOLD [GOLD]
27-B	SK-373336A	[NOB OPERATION] STOP-BLACK [BLACK]

Ref. No.	Part No.	Description
28-G	SK-373336D	KNOB OPERATION [A] PLAY-GOLD [GOLD]
28-B	SK-373336C	KNOB OPERATION [A] PLAY-BLACK [BLACK]
29-G	SK-373337B	KNOB OPERATION [B] FF-GOLD [GOLD]
29-B	SK-373337A	KNOB OPERATION [B] FF-BLACK [BLACK]
30-G	SK-373337D	KNOB OPERATION [B] REW-GOLD [GOLD]
30-B	SK-373337C	KNOB OPERATION [B] REW-BLACK [BLACK]
31-G	SK-373337F	KNOB OPERATION [B] PAUSE-GOLD [GOLD]
31-B	SK-373337E	KNOB OPERATION [B] PAUSE-BLACK [BLACK]
32-G	SK-373337H	KNOB OPERATION [B] MUTE-GOLD [GOLD]
32-B	SK-373337G	KNOB OPERATION [B] MUTE-BLACK [BLACK]

NOTE: SYMBOL FOR COLOR VARIATION  
B: BLACK  
G: GOLD

# INDEX

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
BA-T2100A040A	1A	ED-330622	D555	EI-337568	KC3	ET-308143	TR21
BA-T2100A040B	1B	ED-330622	D556	EI-337568	KC4	ET-308143	TR25
BA-T2100A050A	2	ED-330622	D562	EI-345765	38	ET-306143	TR26
BB-T2100A020A	1	ED-330622	D563	EI-345765	K201	ET-308472	74
BB-T2100A020A	1	ED-330622	D564	EI-345765	K202	ET-308472	TR407
BD-T2100A060A	19-G	ED-330622	D565	EI-346071	43	ET-308472	TR555
BD-T2100A060B	19-B	ED-330622	D566	EI-346071	K301	ET-308472	TR30
BD-T2100A070A	25-G	ED-338332	D7	EI-346071	D7	ET-308977	78
BD-T2100A070B	25-B	ED-338561	16	EI-346071	K4	ET-308977	TR405
BF-B336013	14	ED-338561	D5	EI-348786	44	ET-308977	TR406
BN-T2100A030A	2	ED-344244	D901	EI-348786	K101	ET-308977	TR1
BN-T2100A030A	32	ED-344538	23	EI-353227	42	ET-308977	TR3
BL-B336007	4	ED-344538	D619	EI-353227	K701	ET-337760	77
BL-B336009	10	ED-344538	D620	EI-355802	39	ET-337760	TR2
BL-B336180	21	ED-344540	24	EI-355802	K5	ET-337760	TR4
BL-B336155	29	ED-344540	D607	EI-356327	36	ET-349091	62
BL-T2030A180A	17	ED-344540	D610	EI-356327	K204	ET-345091	PH1(R)
BL-T2030A170A	18	ED-344550	15	EI-357498	41	ET-345091	PH1(L)
BM-B336889	M902	ED-344550	D576	EI-357498	K601	ET-347981	83
BM-B345196	4	ED-344550	D518	EI-358985	35	ET-347981	TR16
BM-B345196	M903	ED-344553	D6	EI-358985	K201	ET-347981	TR18
BM-M3103A010A	3	ED-344604	21	EI-372031	48	ET-347981	TR17
BM-M3103A010A	M901	ED-344604	D11	EI-372031	X1	ET-347981	TR18
BR-T2069A360A	5	ED-344609	22	EI-373379	40	ET-347981	TR19
BR-T2069A360A	12	ED-344609	D9	EI-373379	K1	ET-348001	62
BT-373394	9	ED-344624	18	EI-373383	47	ET-348001	TR101
BT-373394	T901A	ED-344624	D560	EI-373383	K401	ET-348001	TR102
BT-373395	6	ED-373390	D606	EJ-336905	J601	ET-348001	TR103
BT-373395	T901B	ED-373390	D509	EJ-344676	J401	ET-348001	TR201
BT-373396	8	ED-624903	11	EJ-369985	J701	ET-348001	TR202
BT-373396	T901C	ED-624903	D101	EM-373136	49	ET-348001	TR203
BT-373398	7	ED-624903	D505	EM-373136	K201	ET-348001	TR201
BT-373398	T901D	ED-624903	D508	EO-323982	L202	ET-348001	TR302
BZ-T2030A110C	3	ED-624903	D516	EO-357050	L901	ET-348001	TR303
CA-336012	13	ED-624903	D517	EO-368485	FL801	ET-348001	TR304
EC-320548	C801A	ED-624903	D559	EO-389999	L302	ET-348001	TR305
EC-328411	C801B	ED-624903	D601	EO-372996	L201	ET-348001	TR306
ED-306910	19	ED-624903	D602	EO-373384	T401	ET-348001	TR307
ED-306910	D557	ED-624903	D201	EO-373483	T402	ET-348001	TR601
ED-307572	10	ED-624903	D202	EO-328629	50	ET-348001	TR604
ED-307572	D1	ED-624903	D204	EQ-328528	RL101	ET-348001	TR605
ED-307572	D2	ED-624903	D206	ER-200926	S2	ET-348001	TR505
ED-307572	D3	EF-306949	F3A	ER-200926	FR501	ET-348001	TR507
ED-307572	D4	EF-306949	F3A	ER-200972	63	ET-352726	76
ED-307572	D5	EF-306949	F4A	ER-200972	FR401	ET-352726	TR502
ED-307572	D10	EF-309388	30	ER-358910	54	ET-352726	TR503
ED-307572	D12	EF-309388	F1A	ER-358910	IC705	ET-352726	TR509
ED-307572	D13	EF-309388	F2A	ER-358910	IC706	ET-352726	TR509
ED-307572	D14	EF-309391	32	ER-367642	51	ET-352726	TR10
ED-307572	D15	EF-309391	F1B	ER-367642	FR502	ET-353897	66
ED-307572	D16	EF-309381	F2B	ES-336880	65	ET-353897	TR3
ED-307572	D17	EF-309392	31	ES-336990	SW902	ET-353897	TR4
ED-307572	D18	EF-309392	F3B	ES-336990	SW903	ET-353897	TR5
ED-307572	D203	EF-309392	F4B	ES-336990	SW904	ET-353897	TR6
ED-309069	20	EF-355374	25	ES-359608	59	ET-353897	TR7
ED-309069	D568	EF-355374	F1D	ES-359608	SW802	ET-353897	TR8
ED-316388	13	EF-355374	F2D	ES-370965	60	ET-353897	TR9
ED-316388	D8	EF-358974	26	ES-370965	SW301	ET-353897	TR10
ED-324013	17	EF-368974	F3D	ES-371104	58	ET-353897	TR11
ED-324013	D561	EF-368974	F4D	ES-371104	SW801	ET-353897	TR12
ED-324014	14	EF-593706	27	ES-372912	56	ET-353897	TR13
ED-324014	D523	EF-593706	F1C	ES-372912	SW905	ET-353897	TR22
ED-324014	D552	EF-593706	F2C	ES-372912	S7	ET-353897	TR23
ED-324014	D553	EF-601942	28	ES-373380	SWZ01	ET-353897	TR24
ED-330622	12	EF-601942	F3C	ES-373381	61	ET-353897	TR29
ED-330622	D501	EF-601942	F4C	ES-373381	TS201	ET-353897	TR32
ED-330622	D502	EH-368105	FL101	ES-373381	TS202	ET-353897	TR33
ED-330622	D503	EH-368105	FL203	ES-373381	TS203	ET-353897	TR34
ED-330622	D504	EH-368105	FL204	ES-373381	TS204	ET-353897	TR35
ED-330622	D511	EH-368105	FL205	ES-373381	TS205	ET-353897	TR36
ED-330622	D512	EH-373101	33	ES-373381	TS206	ET-353897	TR37
ED-330622	D513	EH-373101	FL201	ES-373381	TS207	ET-354083	84
ED-330622	D514	EI-201940	45	ES-373381	TS208	ET-354083	TR563
ED-330622	D521	EI-201940	IC1	ES-373381	TS209	ET-354083	67
ED-330622	D522	EI-201940	IC2	ES-373381	TS210	ET-354083	TR105
ED-330622	D641	EI-336992	46	ET-308141	79	ET-354083	TR106
ED-330622	D642	EI-336992	IC2	ET-308141	TR513	ET-354083	72
ED-330622	D643	EI-337013	37	ET-308141	TR514	ET-354083	TR1
ED-330622	D644	EI-337013	IC203	ET-308141	TR516	ET-354083	TR2
ED-330622	D654	EI-337568	34	ET-308141	TR14	ET-354083	TR27

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Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
ET-354414	TR28	SK-3732369	26-B	ZW-270088	30		
ET-354416	65	SK-373326A	16-B	ZW-305546	23		
ET-354415	TR411	SK-373334B	16-G	ZW-308464	47		
ET-354416	TR601	SK-373335A	17-B	ZW-328422	48		
ET-354415	TR602	SK-373335B	17-G	ZW-330073	15		
ET-354416	TR603	SK-373336A	27-B	ZW-336404	7		
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ET-354841	75	SK-373336C	28-B	ZW-373137	37		
ET-354841	TR552	SK-373336D	28-G	ZW-653163	6		
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ET-357845	TR601	SK-373337B	29-G				
ET-357845	TR811	SK-373337C	30-B				
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ET-360824	71	SK-373337E	31-B				
ET-360824	TR201	SK-373337F	31-G				
ET-360824	TR202	SK-373337G	32-B				
ET-360824	TR205	SK-373337H	32-G				
ET-360824	TR206	SK-373340A	18-B				
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ET-365394	TR557	SP-336162B-A	49				
ET-370310	73	SP-336163B	52				
ET-370310	TR403	SP-373338A	9A				
ET-370310	TR404	SP-373338C	9B				
ET-370310	TR405	SP-373338D	9C				
ET-370310	TR410	SP-373338E	9D				
ET-372030	64	SP-373343A	22-B				
ET-372030	TR203	SP-373343B	22-G				
ET-372030	TR204	SZ-336166	54				
ET-373382	63	TC-336002	8				
ET-373382	TR31	TC-336004B	1				
ET-373391	70	TC-336016	15				
ET-373391	TR402	TC-336142	14				
ET-373392	65	TC-336145	18				
ET-373392	TR406	TC-336161	45				
ET-373485	68	TC-336605	91				
ET-373485	TR104	TC-336605	9				
EV-330531	VR1	ZG-312946	20				
EV-337052	VR901	ZG-321534	28				
EV-337996	VR402	ZG-336130B	35				
EV-337996	VR403	ZG-336140	10				
EV-345781	VR401	ZG-336141	13				
EV-345781	VR102	ZG-336167	41				
EV-356582	VR101	ZG-336160	45				
EV-357619	VR201	ZG-336165	53				
EV-357619	VR301	ZG-341970	4				
EV-373385	68	ZG-341972	39				
EV-373385	VR702	ZG-342576	27				
EV-373387	86	ZG-373323	33				
EV-373387	VR701	ZS-201275	6				
EV-373388	87	ZS-201275	51				
EV-373388	VR703	ZS-201508	34				
EV-373389	85	ZS-305827	21				
EV-373389	VR704	ZS-308931	42				
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EV-464253	VR2	ZS-329905	7				
EW-363617	13B	ZS-338614	8				
EW-363654	13A	ZS-341959	24-G				
EW-363667	13C	ZS-341960	24-B				
EW-363679	13D	ZS-342001	5				
EZ-330775	14	ZS-342001	23-G				
HR-M2505A010A	89	ZS-345272	2				
HR-M2505A010A	H901	ZS-345272	10				
HR-336129	38	ZS-345272	23-B				
HR-336021	18	ZS-350934	11				
ML-336158	44	ZS-351098	4				
ML-336158-A	44	ZS-352133	1				
MP-346325	90	ZS-361242	8				
MP-346328	22	ZS-391386	38				
MR-336019	17	ZS-422843	3				
MT-305793	16	ZS-464703	7				
MV-357208	31	ZS-477876	12				
MV-357208	40	ZS-478474	50				
MZ-336005	2	ZS-478474	9				
MZ-336005	6	ZS-560708	11				
MZ-353158	11	ZS-592378	16				
MZ-552948	6	ZS-606106	2				
SA-8368350A	3	ZW-231030	12				
SK-358066B	15						

**NOTE**

**ABBREVIATIONS FOR SERVICE MANUAL (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 Tuning 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 Process- ing	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
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitting Diode	X'TAL	cysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MicroCOMputer	X2	Dubble speed

# AKAI

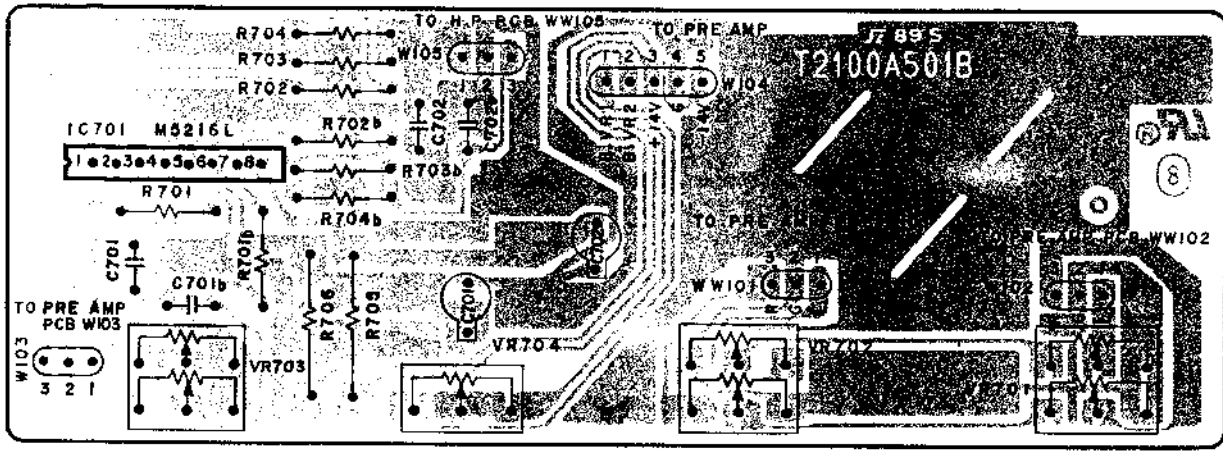
## MODEL GX-52

### SCHEMATIC DIAGRAM AND PC BOARDS

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1. OTHER PC BOARDS.....	2
2. CONNECTION DIAGRAM.....	3
3. SYSTEM CONTROL SCHEMATIC DIAGRAM.....	4
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5. PRE AMP SCHEMATIC DIAGRAM.....	6
6. PRE AMP PC BOARD.....	7
7. BLOCK DIAGRAM.....	8

# HEAD PHONE AMP PCB T2100A501B

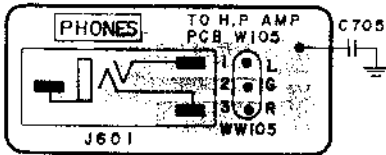


PHONES  
LEVEL

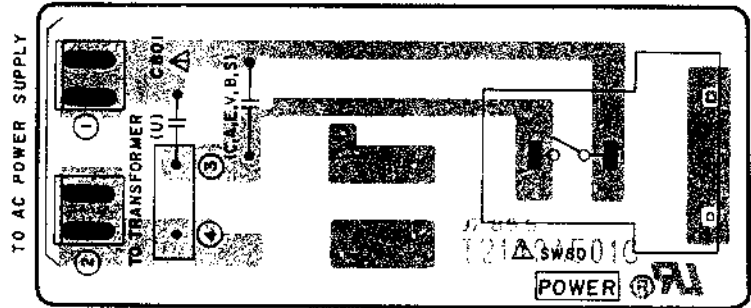
BIAS  
ADJUST

REC  
BALANCE

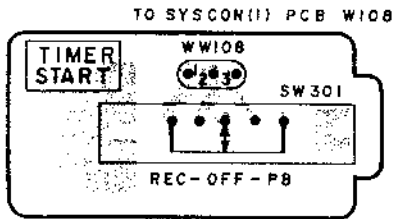
REC  
LEVEL



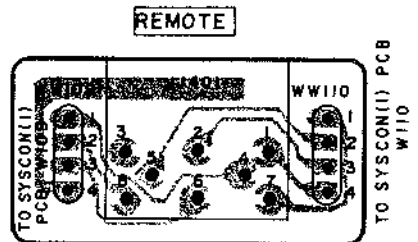
HEAD PHONE PCB  
T2100A501D



POWER TRANS PCB T2100A501C



TIMER SW PCB  
T2100A502C

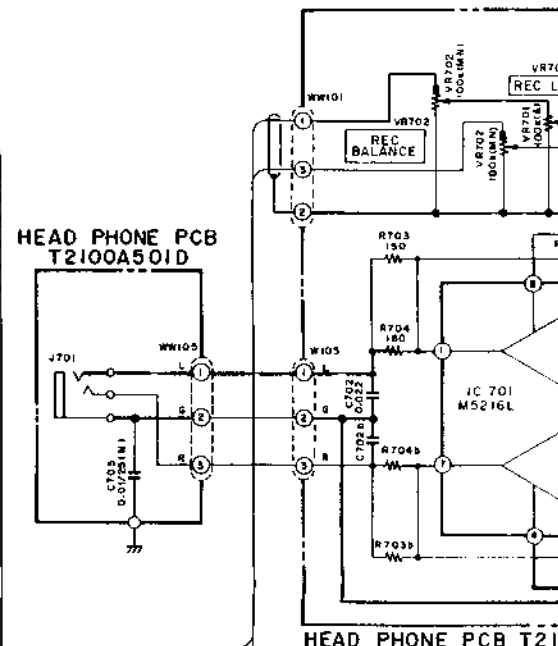
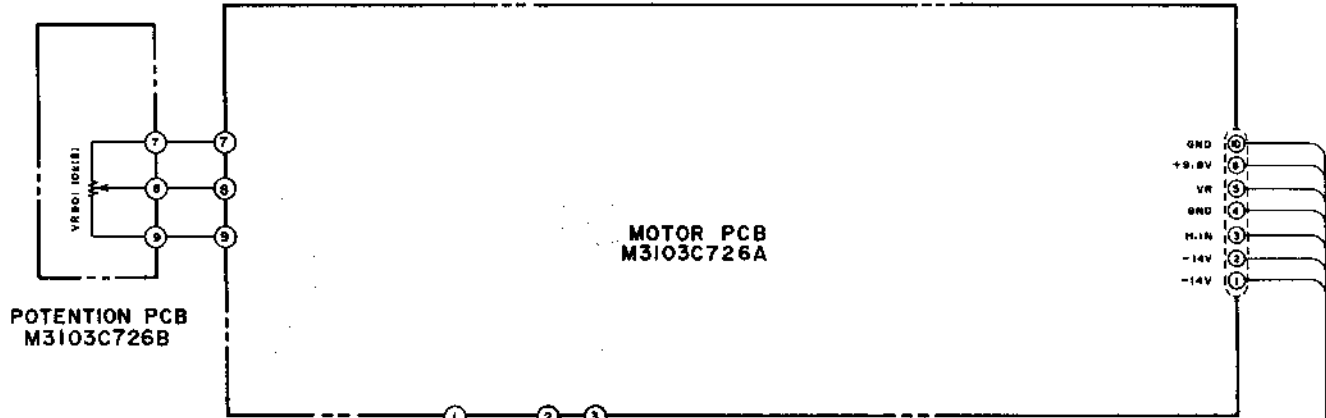


REMOCON JACK PCB  
T2100A502D

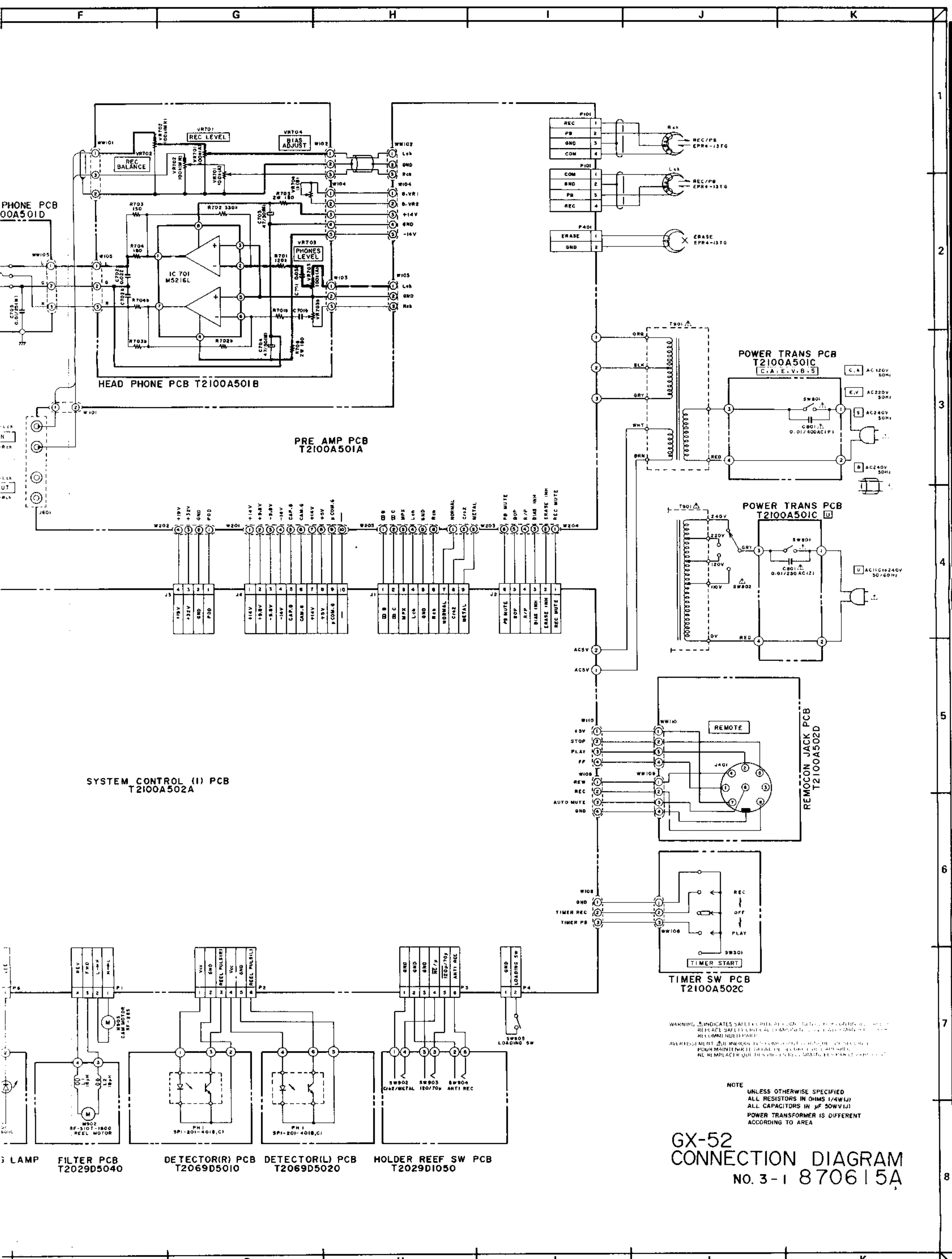
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

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

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WARNING: ⚠️ INDICATES SAFETY PRECAUTIONS. REPLACE SAFETY CAPACITORS IMMEDIATELY. RECOMMENDED PARTS LIST. AVERTISSEMENT: ⚠️ INDICATE LES PRECAUTIONS DE SECURITE. REMPLACEZ IMMEDIATEMENT LES CAPACITERS DE SECURITE. LISTE DES PIÈCES RECOMMANDÉES.

NOTE: UNLESS OTHERWISE SPECIFIED, ALL RESISTORS IN OHMS (1/4W/1%), ALL CAPACITORS IN µF (50WV/1%). POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA.

**GX-52 CONNECTION DIAGRAM NO. 3-1 870615A**

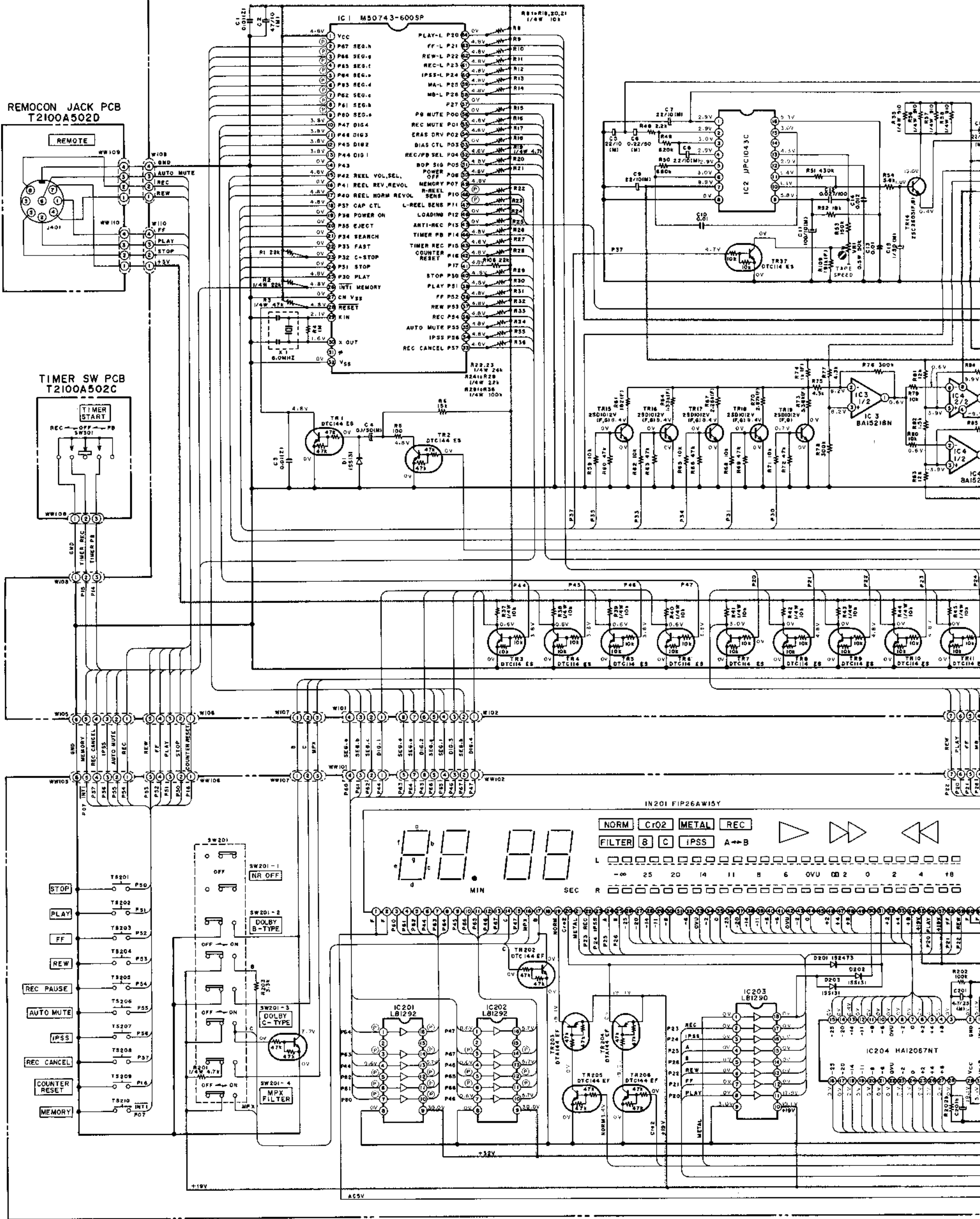
1  
2  
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GX-52

SYSTEM CONTROL (1) PCB T2100A502A

REMOCON JACK PCB T2100A502D

TIMER SW PCB T2100A502C



SYSTEM CONTROL (2) PCB T2100A502B



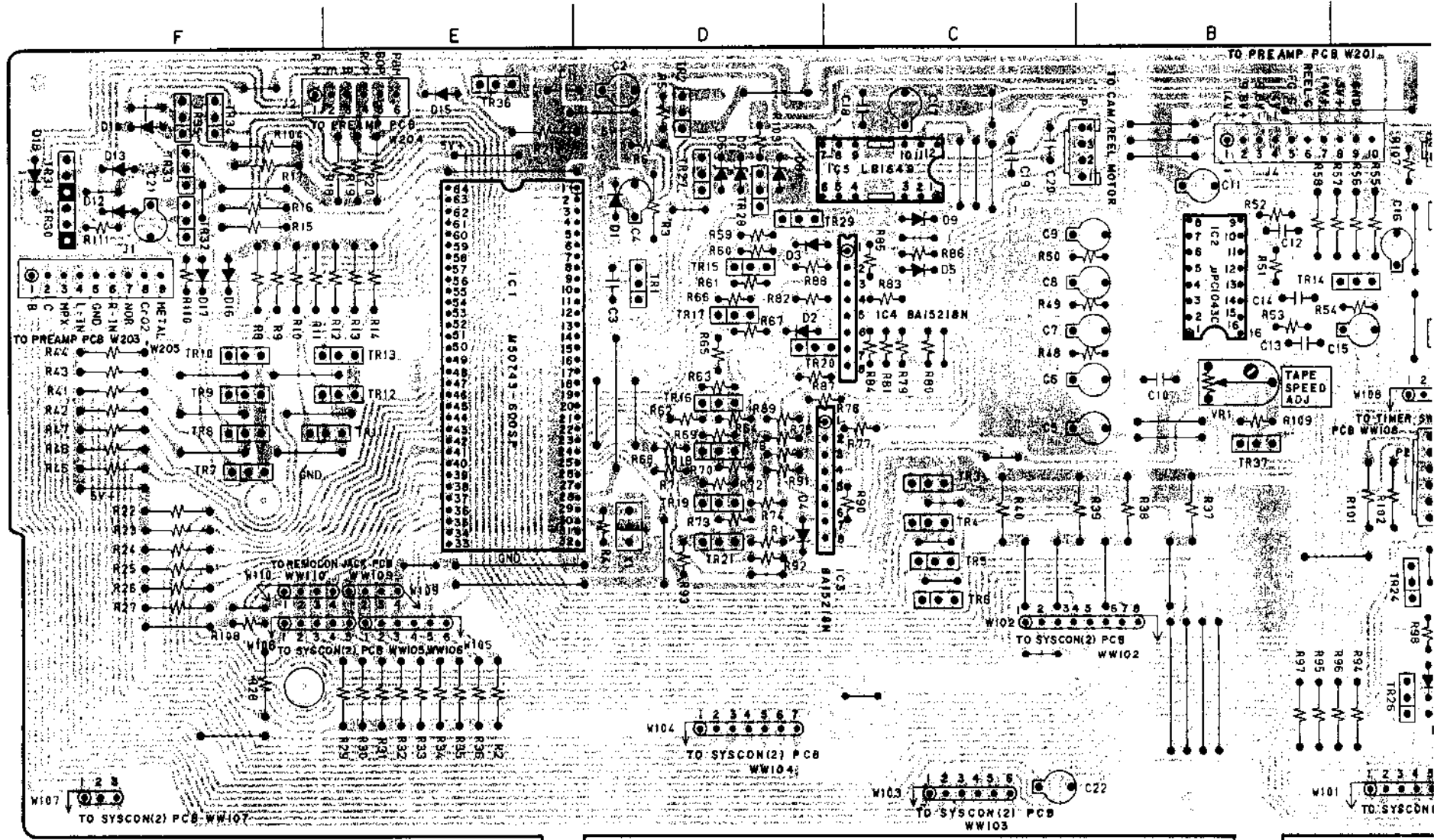
LOCATION OF COMPONENTS

IC  
 IC1 . . . . . E2  
 IC2 . . . . . B1  
 IC3 . . . . . D2  
 IC4 . . . . . C2  
 IC5 . . . . . C1

TRANSISTOR  
 TR1 . . . . . D2  
 TR2 . . . . . D1  
 TR3 . . . . . C2  
 TR4 . . . . . C2  
 TR5 . . . . . C3  
 TR6 . . . . . C3  
 TR7 . . . . . F2  
 TR8 . . . . . F2  
 TR9 . . . . . F2  
 TR10 . . . . . F2  
 TR11 . . . . . E2  
 TR12 . . . . . E2  
 TR13 . . . . . E2  
 TR14 . . . . . A1  
 TR15 . . . . . D1  
 TR16 . . . . . D2  
 TR17 . . . . . D2  
 TR18 . . . . . D2  
 TR19 . . . . . D2  
 TR20 . . . . . D2  
 TR21 . . . . . D2  
 TR22 . . . . . A3  
 TR23 . . . . . A3  
 TR24 . . . . . A3  
 TR25 . . . . . A3  
 TR26 . . . . . A3  
 TR27 . . . . . D1  
 TR28 . . . . . D1  
 TR29 . . . . . D1  
 TR30 . . . . . F1  
 TR31 . . . . . F1  
 TR32 . . . . . F1  
 TR33 . . . . . F1  
 TR34 . . . . . F1  
 TR35 . . . . . F1  
 TR36 . . . . . F1  
 TR37 . . . . . B2

CONNECTOR  
 W101 . . . . . A3  
 W102 . . . . . B3  
 W103 . . . . . C3  
 W104 . . . . . D3  
 W105 . . . . . E3  
 W106 . . . . . F3  
 W107 . . . . . A2  
 W108 . . . . . B2  
 W109 . . . . . E3  
 W110 . . . . . F3  
 J1 . . . . . F1  
 J2 . . . . . F2

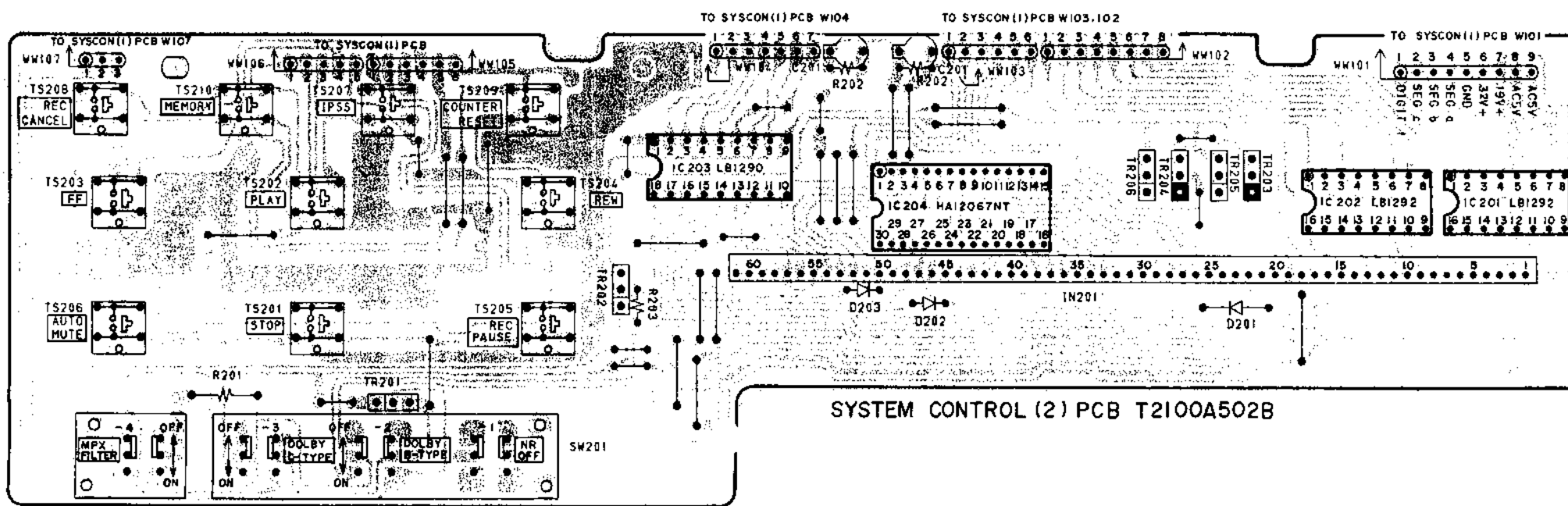
2SC2603 . . . TR14, TR21, TR25, TR26  
 2SD1012 . . . TR15, TR16, TR17, TR18, TR19  
 DTC144 . . . TR1, TR2, TR20, TR27, TR28  
 DTC114 . . . TR3, TR4, TR5, TR6, TR7, TR8, TR9, TR10, TR11, TR12, TR13, TR22, TR23, TR24, TR29, TR32, TR33, TR34, TR35, TR36, TR37  
 DTA143 . . . TR30, TR31



SYSTEM CONTROL (1) PCB T2100A502A

= NPN TRANSISTOR  
 = PNP TRANSISTOR

ECB  
 2SC2603  
 2SD1012  
 DTC144  
 DTC114  
 DTA143



SYSTEM CONTROL (2) PCB T2100A502B

LOCATION OF COMPONENTS

ICs  
 IC201 . . . . . A1  
 IC202 . . . . . A1  
 IC203 . . . . . D1  
 IC204 . . . . . C1

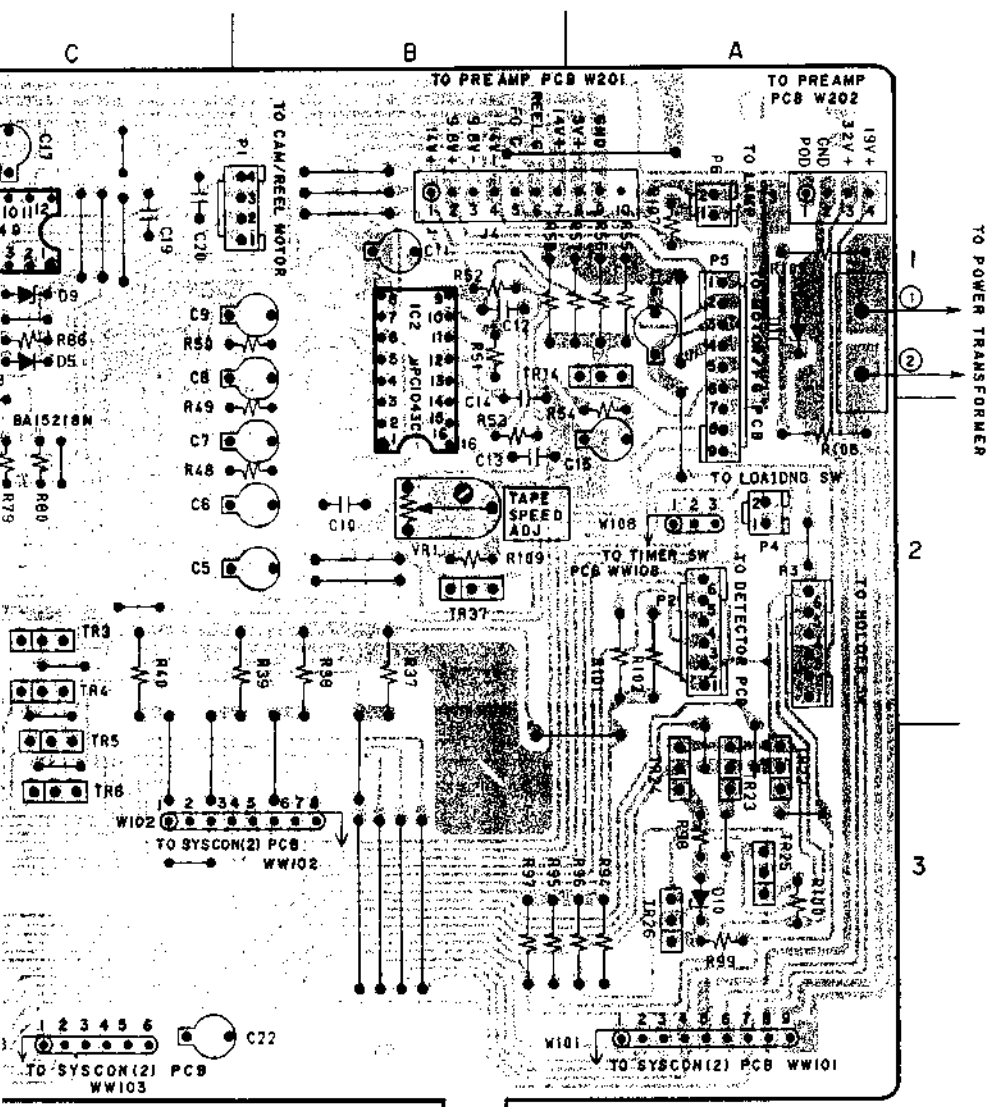
TRANSISTORS  
 TR201 . . . . . E2  
 TR202 . . . . . D2  
 TR203 . . . . . B1  
 TR204 . . . . . B1  
 TR205 . . . . . B1  
 TR206 . . . . . B1

CONNECTORS  
 WW101 . . . . . A1  
 WW102 . . . . . B1  
 WW103 . . . . . C1  
 WW104 . . . . . D1  
 WW105 . . . . . E1  
 WW106 . . . . . F1  
 WW107 . . . . . F1

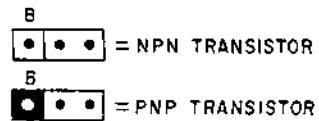
DTC144 . . . . . TR201, TR202, TR205  
 TR206  
 DTA144 . . . . . TR203, TR204

= NPN TRANSISTOR  
 = PNP TRANSISTOR

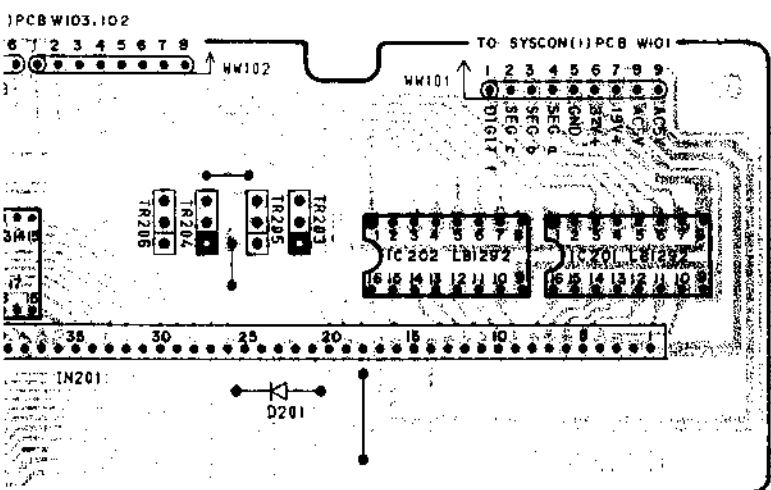
ECB  
 DTC144  
 DTA144



B T2100A502A

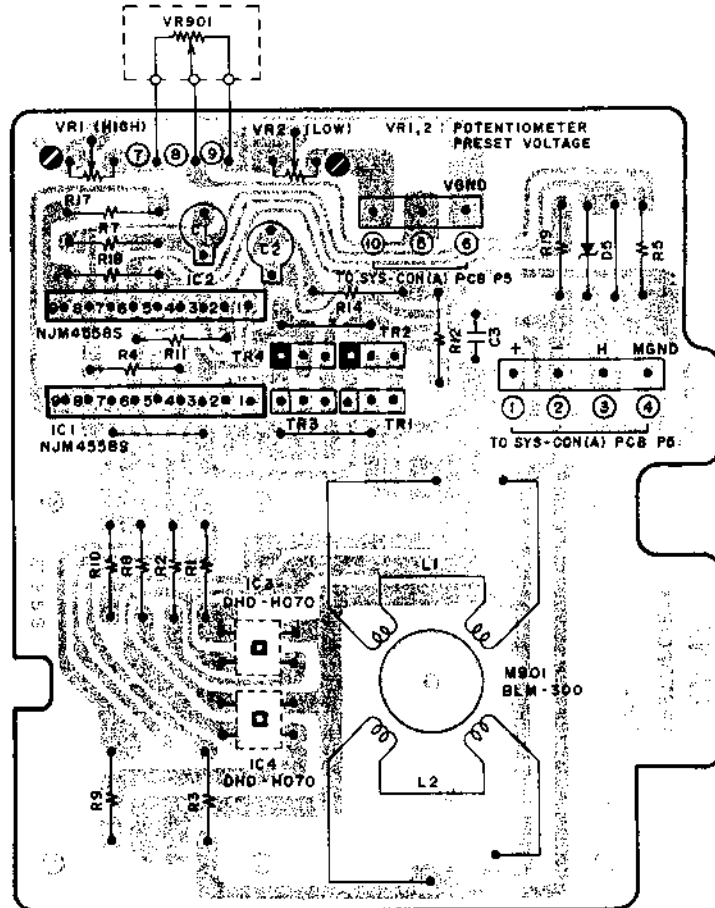


- 2SC2603
- 2SD1012
- DTC144
- DTC114
- DTA143



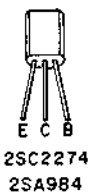
(2) PCB T2100A502B

POTENTIOMETER PCB M3103C726B

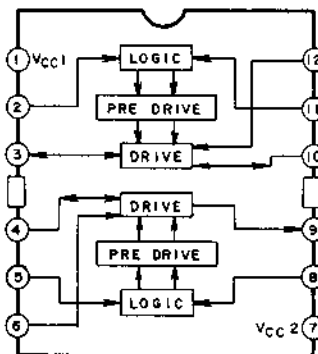


MOTOR PCB M3103C726A

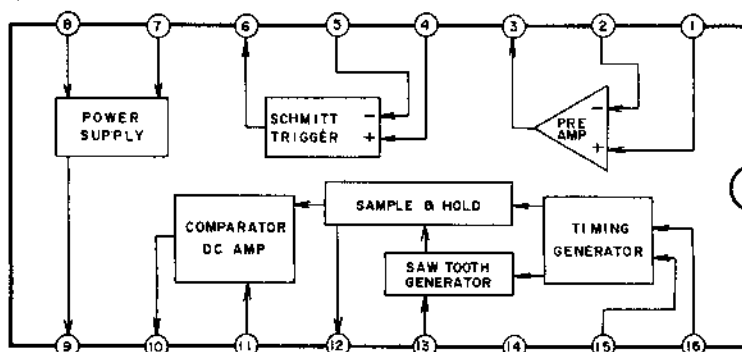
- = PNP TRANSISTOR
- = NPN TRANSISTOR
- TR1,3 --- 2SC2274
- TR2,4 --- 2SA984



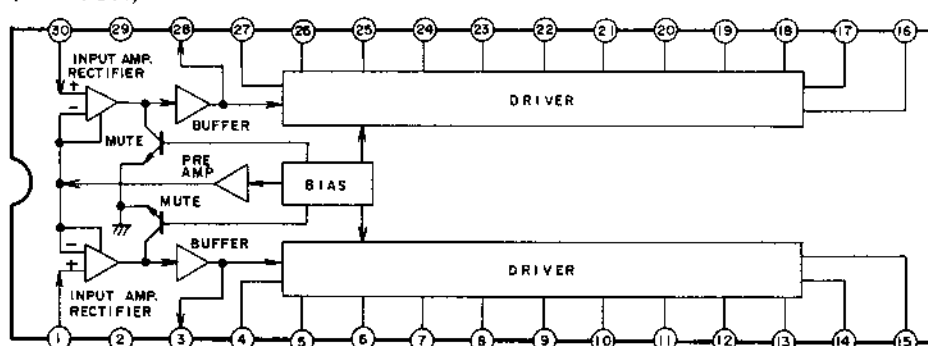
LB1649 (SYS-CON)



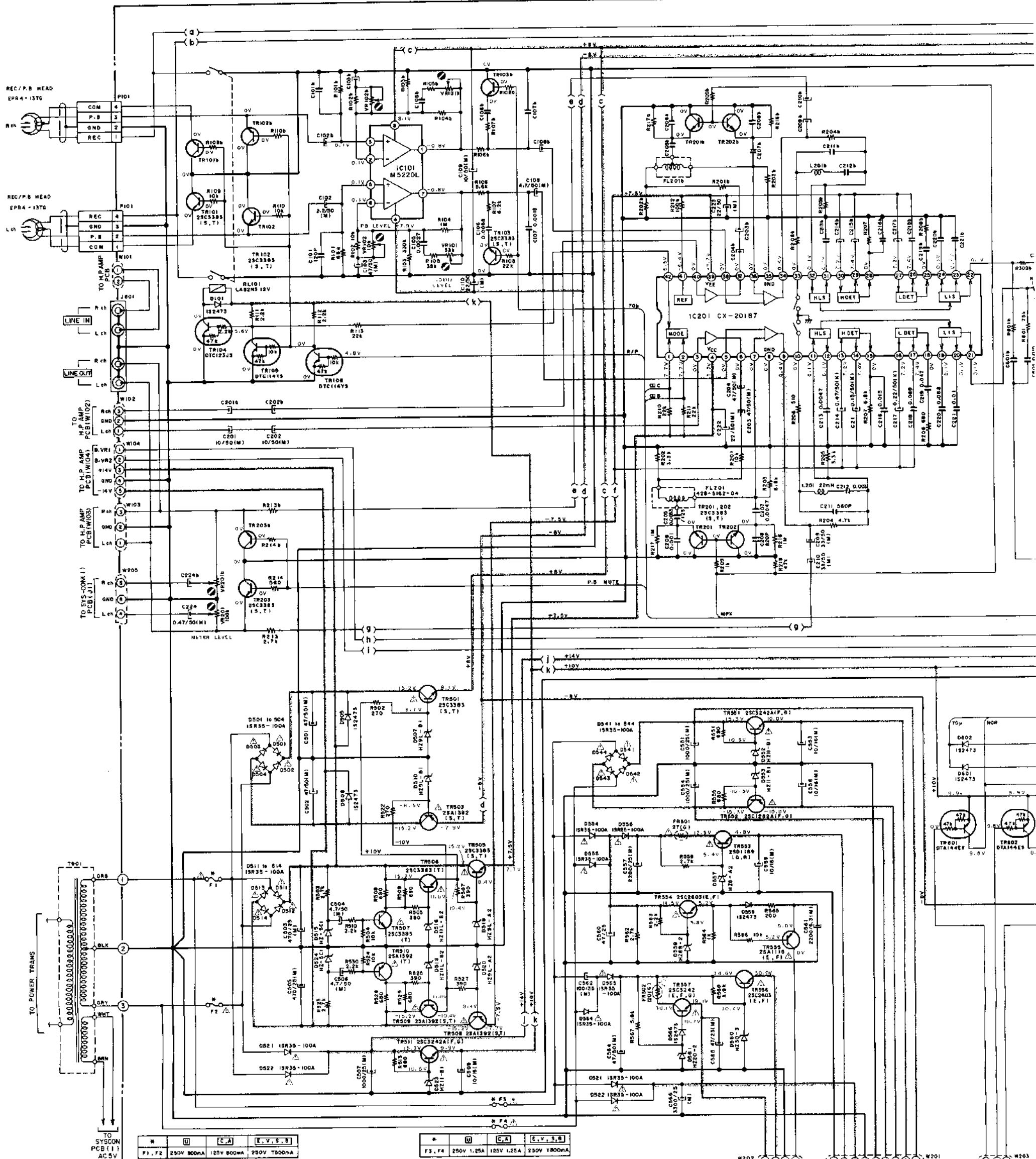
μPC1043C (SYS-CON)



HA12067NT (SYS-CON)



GX-52

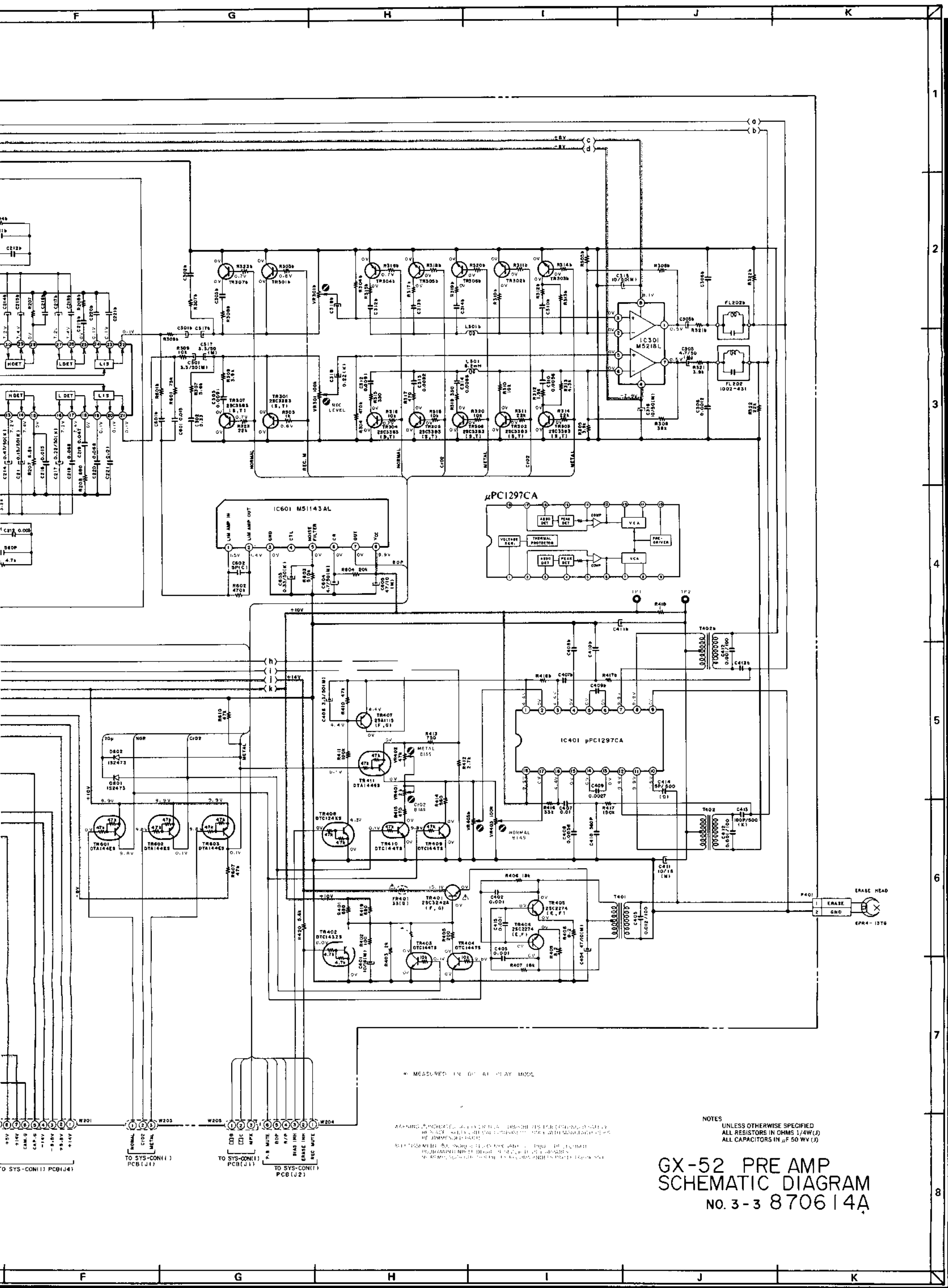


PRE AMP PCB T2100A501A

(POWER SUPPLY) LINE  
 REC SIGNAL LINE  
 P.B SIGNAL LINE

TO SYS-CON(1) PCB(J3)  
 TO SYS-CON(1) PCB(J4)  
 TO SYS-CON(F) PCB(J1)

W	U	C.A	E.V.S.B
F1, F2	250V 800mA	120V 800mA	250V T800MA
F3, F4	250V 1.25A	120V 1.25A	250V T800MA

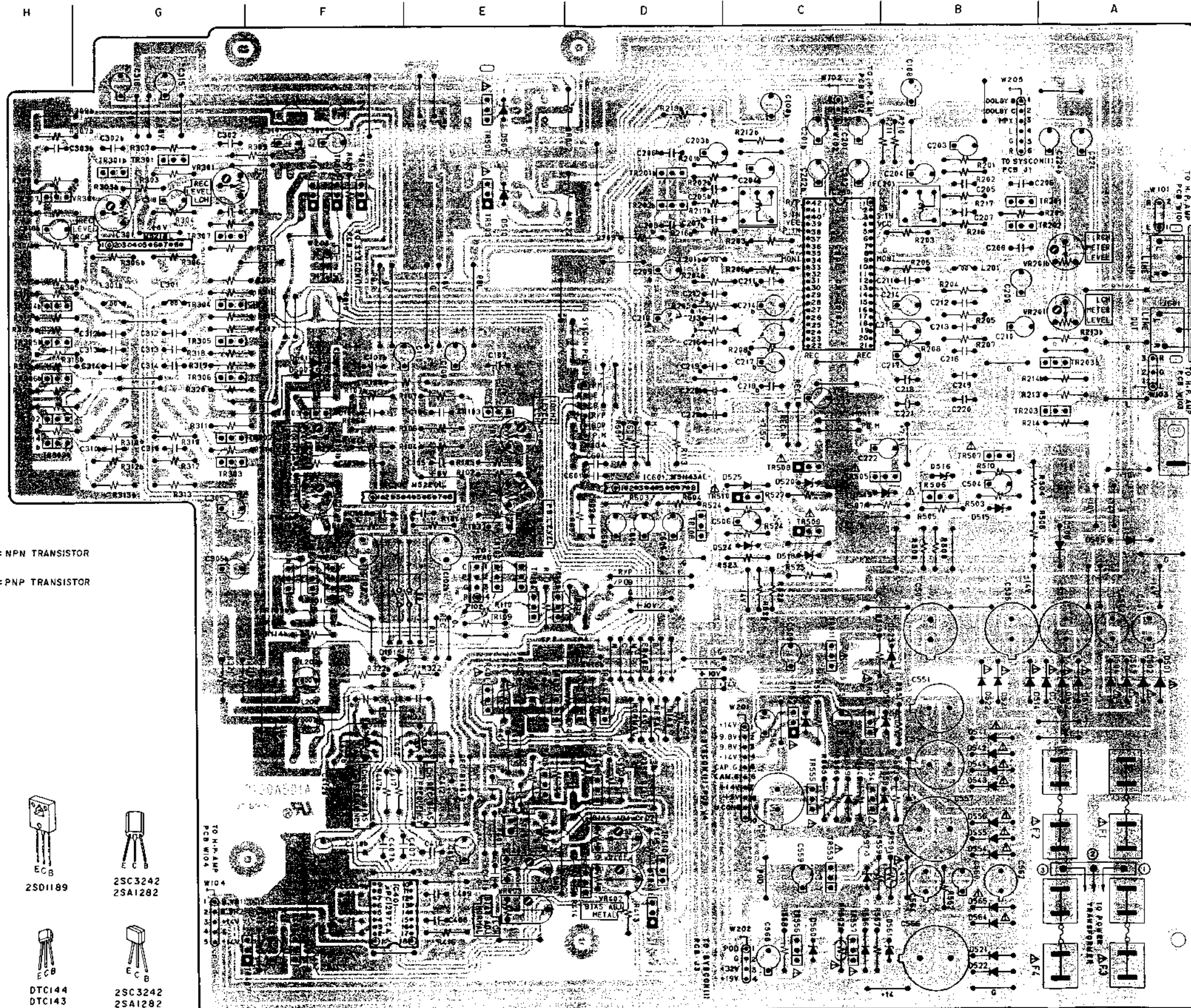




\* MEASURED IN (B) AT PLAY MODE

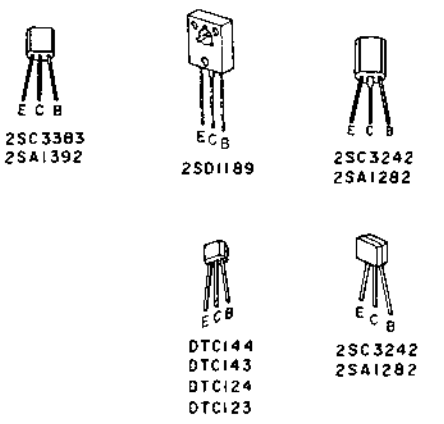
WARNING: UNPLUG THE CORD FROM THE WALL SOCKET BEFORE SERVICING THIS EQUIPMENT. ALWAYS USE THE CORRECT WIRE GAUGE AND TYPE OF WIRE FOR THE WIRING. ALWAYS USE THE CORRECT WIRE GAUGE AND TYPE OF WIRE FOR THE WIRING. ALWAYS USE THE CORRECT WIRE GAUGE AND TYPE OF WIRE FOR THE WIRING.

NOTES  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/4W(J)  
ALL CAPACITORS IN μF 50 WV (J)

# GX-52 PRE AMP SCHEMATIC DIAGRAM NO. 3-3 870614A



 = NPN TRANSISTOR  
 = PNP TRANSISTOR



LOCATION OF COMPONENTS

IC	IC101	E4
IC	IC201	C2
IC	IC301	G2
IC	IC401	E6
IC	IC601	D3

TRANSISTOR



TR101	E4
TR101	F4
TR102	E4
TR102	F4
TR103	E3
TR103	F3
TR104	E4
TR105	E4
TR106	D4
TR201	B2
TR201	D1
TR202	B2
TR202	D2
TR203	A3
TR301	G1
TR301	E1
TR302	G3
TR302	H3
TR303	G3
TR303	H3
TR304	G2
TR304	H2
TR305	G3
TR305	H3
TR306	H3
TR307	C2
TR307	H2
TR401	E5
TR402	E5
TR403	D5
TR404	E5
TR405	E5
TR406	D5
TR407	G6
TR408	F6
TR409	D6
TR410	D6
TR411	D6
TR501	E1
TR502	E1
TR503	E2
TR504	E2
TR506	B3
TR506	B3
TR507	B3
TR508	C3
TR509	C4
TR510	C4
TR511	C5
TR511	C5
TR552	C5
TR553	C5
TR554	C5
TR555	C5
TR556	C5
TR557	C6
TR601	F2
TR602	F2
TR603	F2

CONNECTOR

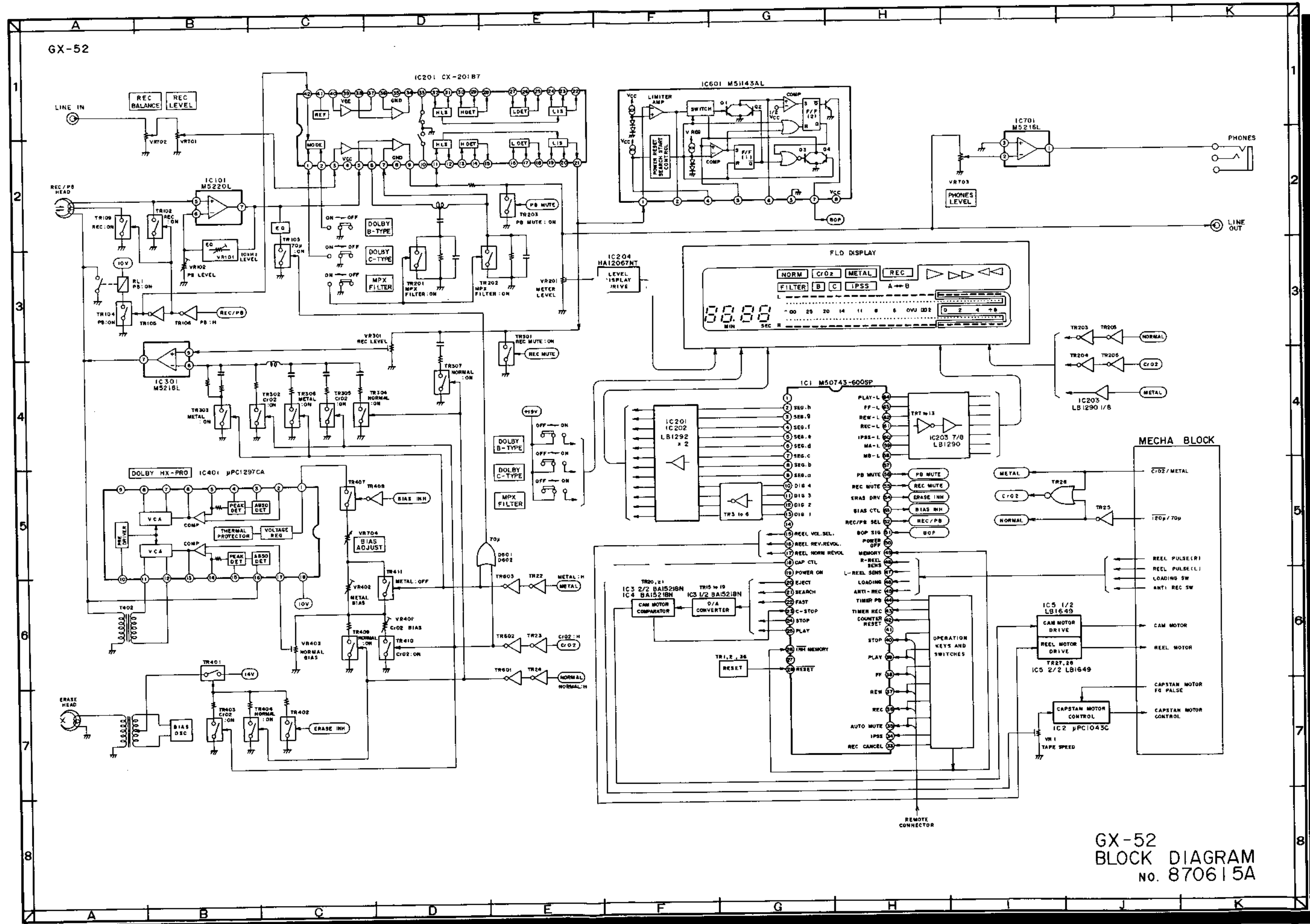
W101	A2
W102	C1
W103	A3
W104	G6
W201	C6
W202	C6
W203	F2
W204	D3
W205	B1
P101	F4
P102	E4

2SC3383 TR101, TR102, TR103, TR201, TR202, TR203, TR301, TR302, TR303, TR304, TR305, TR306, TR307, TR501, TR504, TR505, TR506, TR507  
 2SC3242 TR401, TR511, TR551, TR557  
 2SC2274 TR405, TR406  
 2SC2603 TR554, TR556  
 2SA1392 TR502, TR503, TR508, TR509, TR510  
 2SA1116 TR407, TR555  
 2SA1282 TR552  
 2SD1189 TR553  
 DTC144 TR403, TR404, TR409, TR410, TR412  
 DTC143 TR402  
 DTC124 TR406  
 DTC123 TR104  
 DTC14 TR106, TR106  
 DTA144 TR411, TR601, TR602, TR603

PRE AMP PCB T2100A501A

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





GX-52  
BLOCK DIAGRAM  
No. 870615A