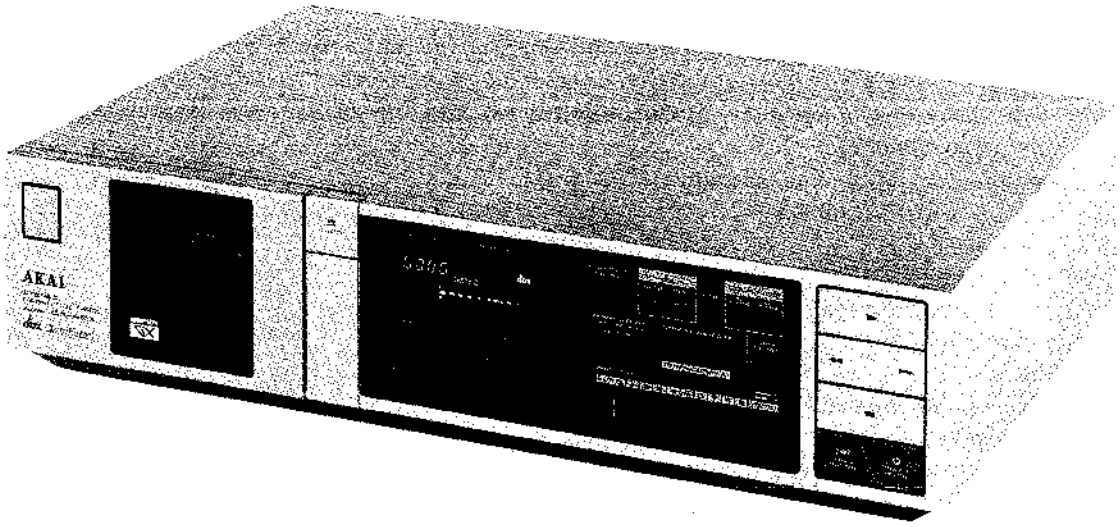


STEREO CASSETTE DECK

MODEL GX-A5/X

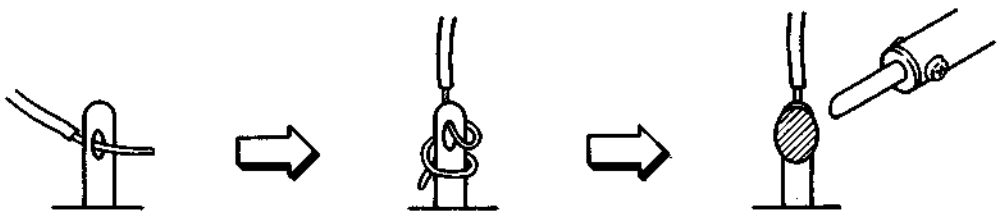
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks, line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

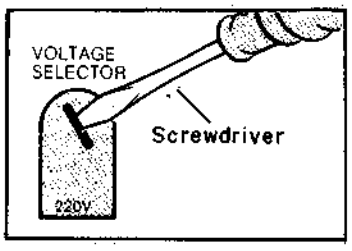
1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified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



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

VOLTAGE CONVERSION

Models for Canada, USA, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to its destination, but some machines can be set to 110V, 120V, 220V, or 240V as required.
If your machine's voltage can be converted:
Before connecting the power cord, turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



CYCLE CONVERSION

Cycle conversion are not necessary since GX–A5 and GX–A5X use a DC MOTOR.

SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

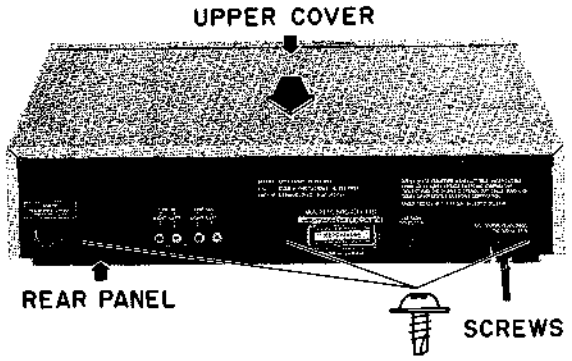
MOTOR	Electronically speed controlled DC motor for capstan drive x 1
HEADS	Twin Field Super GX head for recording and playback x 1 Erase head x 1
WINDING TIME	90 sec. (C-60 tape)
WOW & FLUTTER	0.05% (WRMS), 0.12% (DIN. WTD)
DISTORTION	0.65% (Metal)
FREQUENCY RESPONSE	Metal 20Hz to 19,000Hz±3dB CrO_2 20Hz to 18,000Hz±3dB Normal 20Hz to 17,000Hz±3dB
S/N	60dB (Metal) Dolby C type NR ON: Improves up to 15dB at 500Hz, 20dB at 1kHz to 10kHz Dolby B type NR ON: Improves up to 5dB at 1kHz, 10dB above 5kHz
DYNAMIC RANGE (dbx ON)	115dB (GX–A5X ONLY)
INPUT SENSITIVITY/IMPEDANCE	LINE 70mV/47kohms MIC 2.5mV/5kohms
OUTPUT SENSITIVITY/IMPEDANCE	LINE 380mV/1.2kohms PHONES 0.3mW (at 8 ohms)/91 ohms
POWER REQUIREMENTS	120V, 60Hz for USA & Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK & Australia 110V/120V/220V/240V, 50/60Hz switchable for other countries
DIMENSIONS	440 (W) x 104 (H) x 285 (D) mm (17.3 x 4.1 x 11.2 inches)
WEIGHT	4.1kg (9.0 lbs)

* For improvement purposes, specifications and design are subject to change without notice.
* Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.
* "dbx" is Trademark of dbx Incorporated.

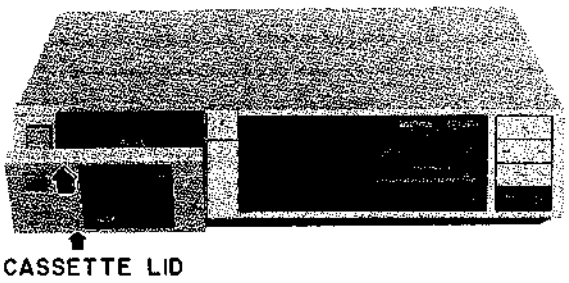
II. DISMANTRING OF UNIT

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

3



1



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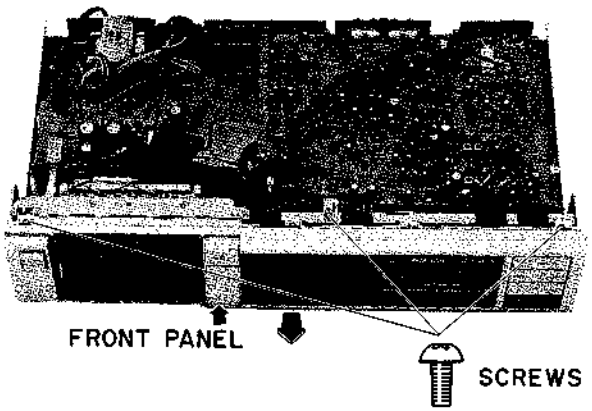
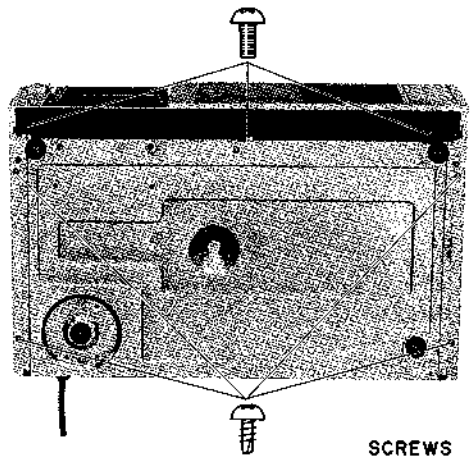


2



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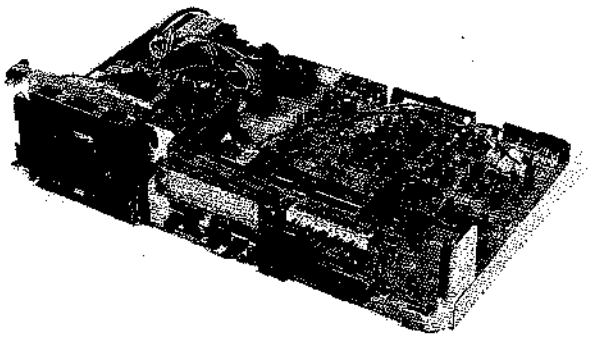


III. CONTROLS

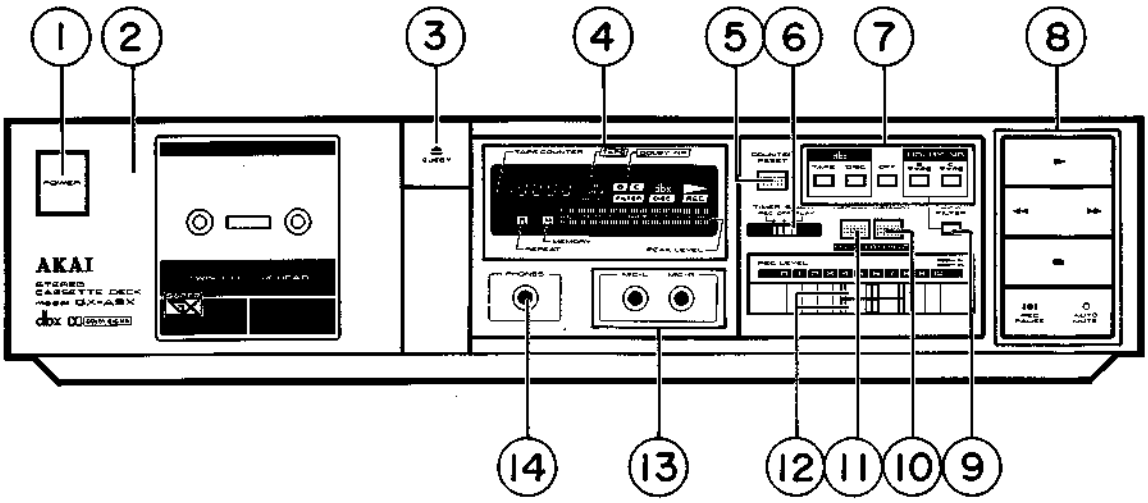


Fig. 3-1 Front View (GX–A5X)

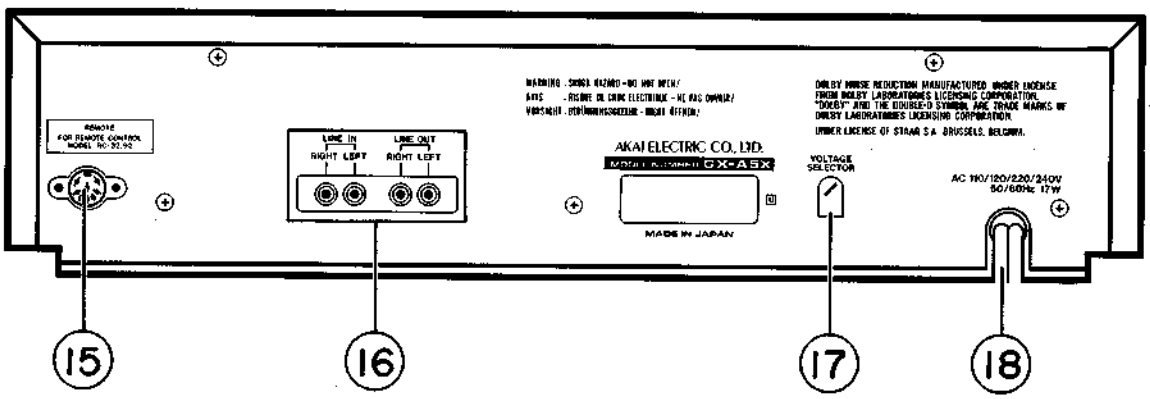


Fig. 3-2 Rear View (U MODEL)

1. POWER SWITCH
2. CASSETTE HOLDER
3. EJECT BUTTON
4. FL DISPLAY
5. COUNTER RESET BUTTON
6. TIMER START SWITCH
7. dbx and DOLBY NR BUTTONS (MODEL GX–A5 EXCEPT dbx BUTTONS)
8. OPERATION BUTTONS
9. MPX FILTER BUTTON
10. MEMORY BUTTON
11. REPEAT BUTTON
12. REC LEVEL CONTROLS
13. MICROPHONE (L/R) JACKS
14. HEADPHONE JACK
15. REMOTE JACK
16. LINE IN/OUT (L/R) JACKS
17. VOLTAGE SELECTOR SWITCH (U MODEL ONLY)
18. AC POWER CORD

IV. PRINCIPAL PARTS LOCATION

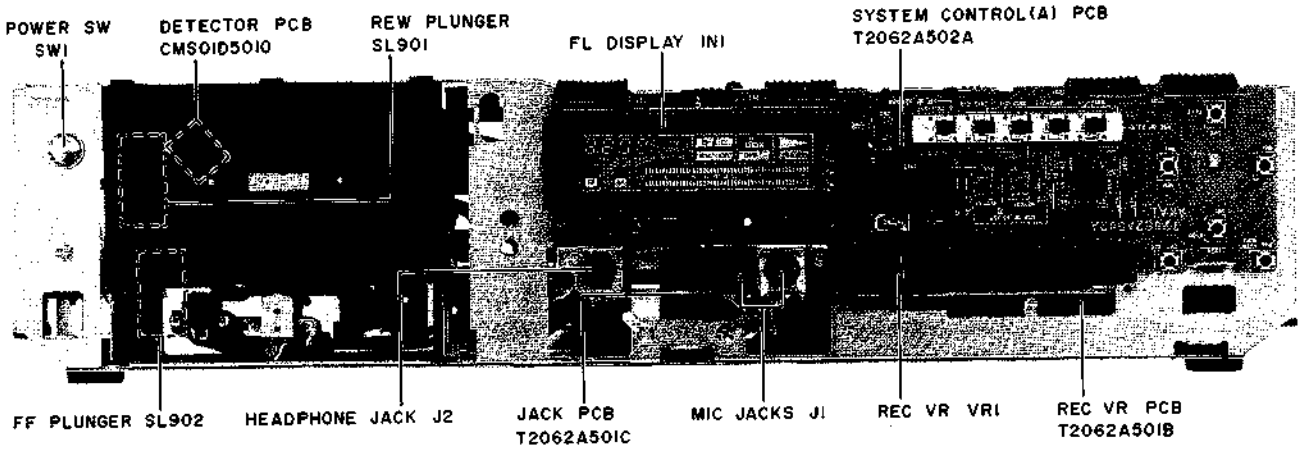


Fig. 4-1 Front View

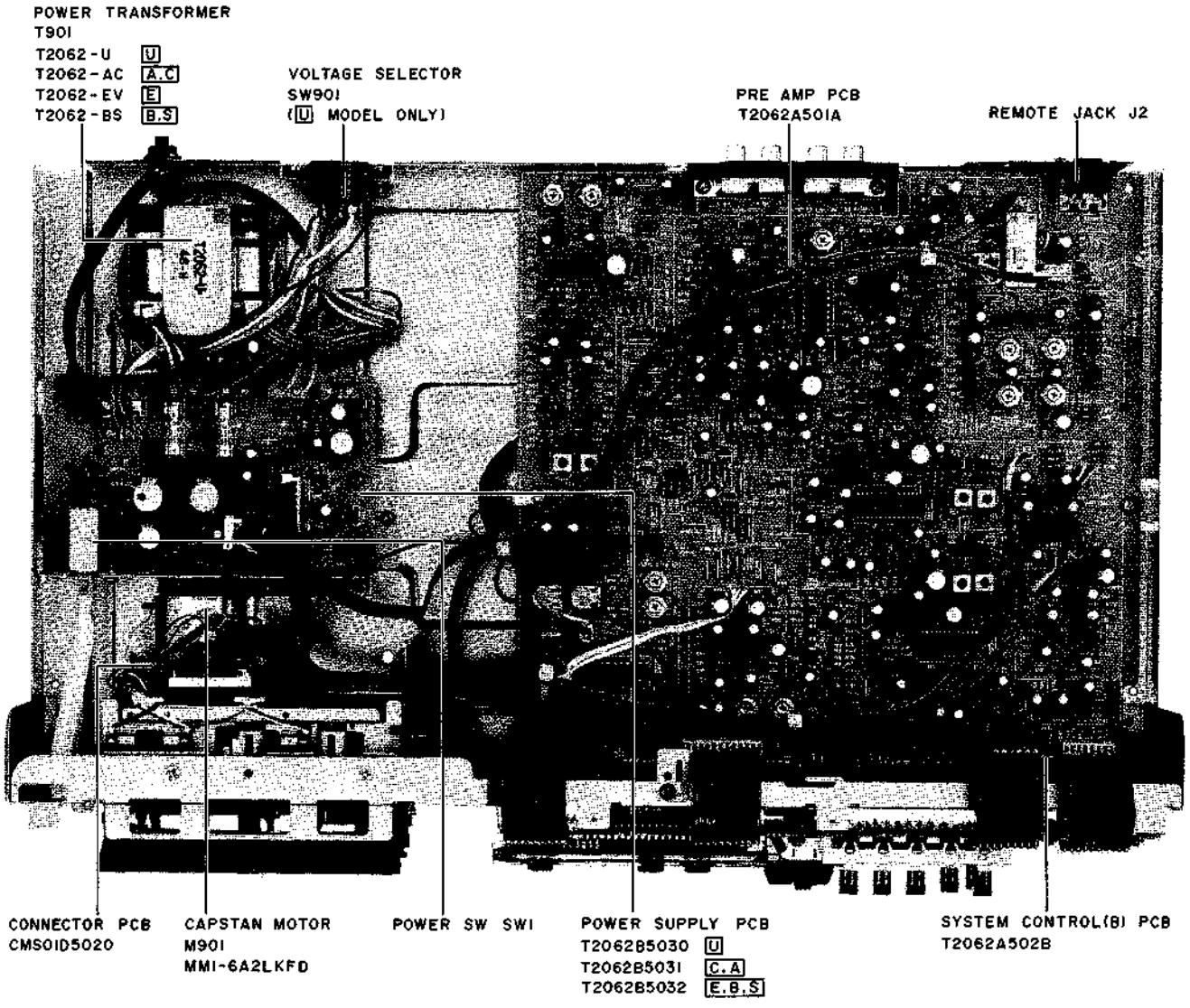


Fig. 4-2 Top View

V. MEMORY-REPEAT SWITCH AND AUTO SYSTEM

S-F MEMORY REPEAT AND Z-F MEMORY REPEAT

S . . . . Start Point (beginning of tape)
F . . . . Free Point (counter point when REW and PLAY keys are pressed simultaneously)
Z . . . . Zero (0000) point of the counter.

5-1 S→F MEMORY REPEAT

The function is to playback repeatedly from the tape beginning to the free point (when REW and PLAY keys are pressed simultaneously). It can be used for repeating the first tune of the tape or one measurement.

5-2 Z → F MEMORY REPEAT

The function is to playback repeatedly from the zero (0000) point of the counter to the free point (when REW and PLAY are pressed simultaneously). It can be used for repeating a tune on the way or a certain part of a tune.

5-3 MEMORY-REPEAT SWITCH AND SYSTEM

MEMORY SW	OFF	OFF	ON	ON
REPEAT SW	OFF	ON	OFF	ON
Key input	◁◁	◁◁	◁◁	◁◁
Operation	AUTO STOP REW → (Tape End) STOP	AUTO REPEAT REW → (Tape Top) → PLAY → (Tape End) —	MEMORY STOP REW → (0000) STOP	MEMORY REPEAT REW → (0000) → PLAY → (Tape End) —
Key input	◁◁ + ▷	◁◁ + ▷	◁◁ + ▷	◁◁ + ▷
Operation	AUTO PLAY REW → (Tape Top) → PLAY → (Tape End) STOP	S·F MEMORY REPEAT REW →(Tape Top) → PLAY → (Free Point) —	MEMORY PLAY REW → (0000) → PLAY → (Tape End) STOP	Z·F MEMORY REPEAT REW → (0000) → PLAY → (Free Point) —
Key input	▷	▷	▷	▷
Operation	AUTO STOP PLAY → (Tape End) STOP	AUTO REPEAT PLAY → (Tape End) → REW → (Tape Top) —	AUTO STOP PLAY → (Tape End) STOP	MEMORY REPEAT PLAY → (Tape End) → REW → (0000) —
Key input	○+ ▷	○+ ▷	○+ ▷	○+ ▷
Operation	AUTO STOP REC → (Tape End) STOP	AUTO REPEAT REC → (Tape End) → REW → (Tape Top) → PLAY —	AUTO STOP REC → (Tape End) STOP	MEMORY REPEAT REC → (Tape End) → REW → (0000) → PLAY —

Chart 5-1

VI. ACTIONS OF SYSTEM CONTROL IC LM6504-145

6-1 ACTION OF FF AND RWD PLUNGERS

The FF and RWD plungers are controlled by the "HIGH" and "LOW" signals at Pin ㉖ and ㉗ of IC4 (LM6504-145), and the "ON" and "OFF" operation of the FF and RWD plungers activates the mechanical operation of each mode.

* The plunger is activated by the "LOW" control signal from IC4 (LM6504-145) pins ㉖ and ㉗

PLUNGER	CONTROL by IC4	OUTPUT SIGNALS			
RWD Plunger	Pin ㉖	High	Low	High	Low
FF Plunger	Pin ㉗	High	Low	Low	High
Mechanical Action		STOP	PLAY	FF	RWD

Fig. 6-1 TAPE SELECTOR OPERATION

6-2 TAPE SELECTOR OPERATION

When a cassette tape is inserted and the switches SW901 and SW902 are turned ON or OFF, the signal combination as shown in Fig. 6-2 will be input through Pins ㉝ and ㉞ of the IC4 (LM6504-145). Through the combination of "LOW" and "HIGH" at these input pins ㉝ and ㉞ , the signals to control the REC equalizer, bias voltage, etc. will be output from IC4 (LM6504-145) as shown in Fig. 6-3.

Each POSITION lights at "L" output

* In Pin Nos. ㉝ and ㉞, same as in other switch inputs, when the switch is pressed, the input to Micro Computer is switched from "H" level to "L" level.

[Input]

T.S.IN METAL	T.S. IN CrO_2
Pin No.	Pin No.
(33)	(34)
L	L
L	H
H	H
H	L

Fig. 6-2 INPUT

[Output]

	Pin No.	Pin No.	Pin No.
	(30)	(31)	(32)
NORMAL	H	H	L
CrO_2	L	H	H
METAL	H	L	H
	H	L	H

Fig. 6-3 OUTPUT

VII. MECHANICAL AND HEAD ADJUSTMENT

7-1. PINCH ROLLER PRESSURE MEASUREMENT

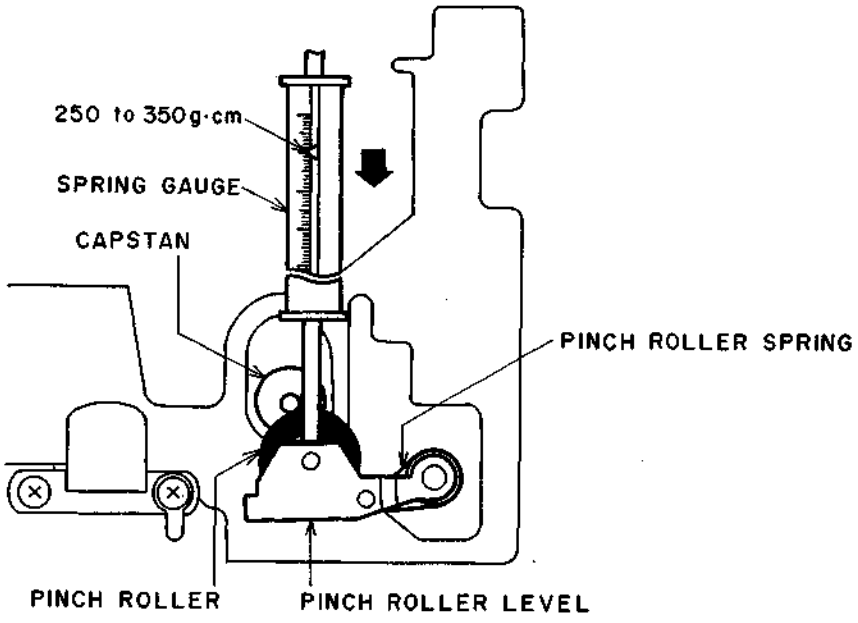


Fig. 7-1

Put in PLAY mode. Push pinch roller arm down with the spring gauge, push the pinch Roller 1 to 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 contact pressure measurement of 250 to 350 grm. If there is no measurement obtained, Adjust or Replace the pinch Roller spring.

7-2. WINDING TORQUE MEASUREMENT IN EACH MODE

Insert a cassette torque meter (AJ-751179) and measure in each mode. For Fast Forward and Rewind, measure at the end of the tape when the tape has stopped running.

PLAY mode

Take up Torque:	25 to 60 grm-cm
Back tension Torque:	2 to 5 grm-cm

FAST FORWARD, REWIND mode

Take up Torque:	70 to 120 grm-cm

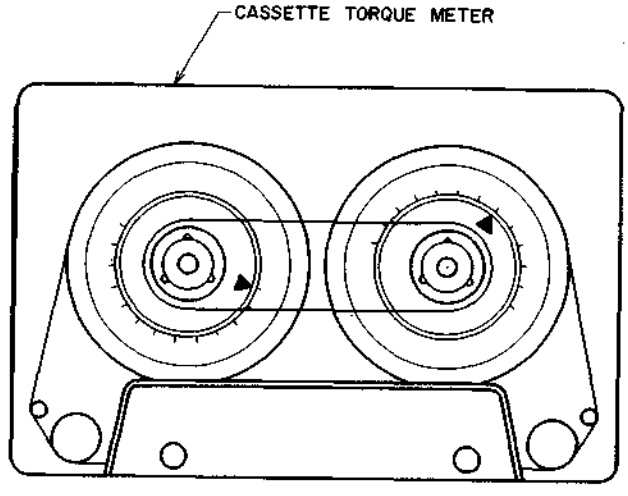


Fig. 7-2

7-3. TAPE SPEED ADJUSTMENT

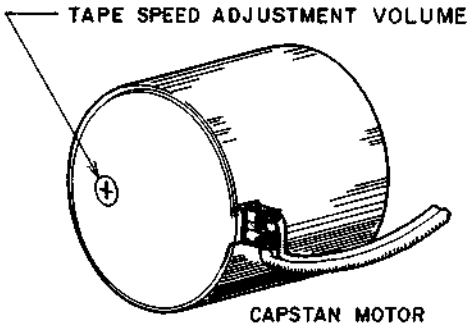


Fig. 7-3

Connect a frequency Counter to Line output terminals. Play Back a 3150Hz Tape Speed Test Tape (AT-751263) or 1000Hz Tape Speed Test Tape (AT-750774) and adjust a Tape Speed Adjustment Volume (see Fig. 7-3) to obtain a tape speed of 3118.5Hz to 3181.5Hz or 990Hz to 1010Hz.

7-4. REC/PB HEAD AZIMUTH ADJUSTMENT

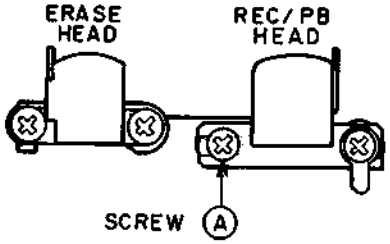


Fig. 7-4

Play Back a 10kHz Azimuth Alignment tape (AT-750778) and Adjsut the screw Ⓐ until the output levels of both channels are maximum. After Adjustment, paintlock the screw Ⓐ.

VIII. AMPLIFIER ADJUSTMENT

PRE AMP ADJUSTMENT POINT

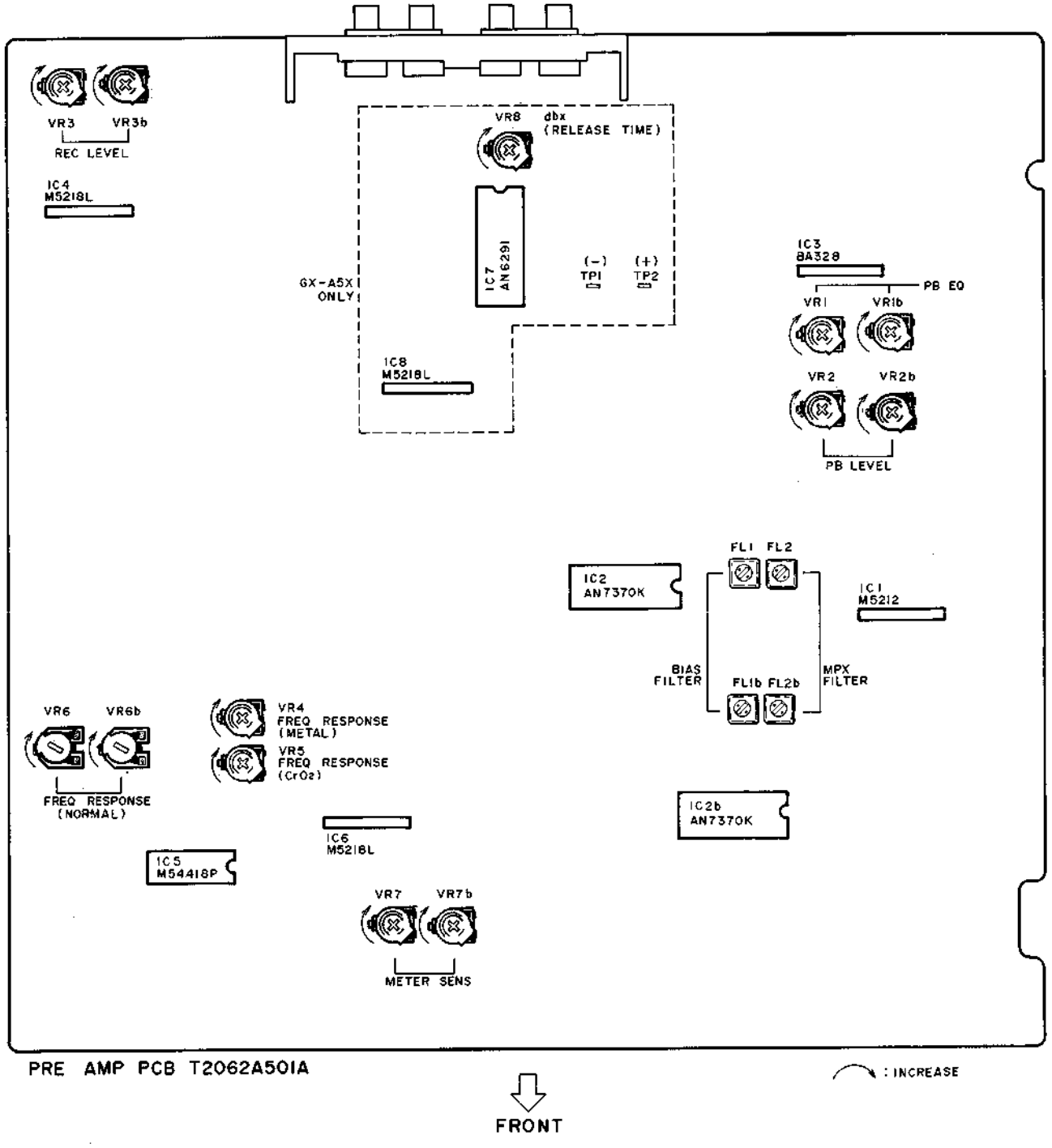


Fig. 8-1 Pre-Amp Adjustment

CAUTION: Connect a resistor (22 kohms) between LINE OUT and GND, while PB LEVEL, PB EQ, REC LEVEL and each FREQUENCY RESPONSE adjustments.

Step	Adjustment Item	Test Tape & Supply Signal	Mode	Adjustment Point	Result	Remarks
1	PB LEVEL	315Hz or 333Hz	PB	VR 2 (Lch) VR 2b (Rch)	−6.0±0.2dBm or −6.6±0.2dBm	
2	PB EQ	10kHz	PB	VR1(Lch) VR1b(Rch)	−21.0 ±1.0dBm	
3	Normal Position Frequency Response	Normal Blank Tape 1kHz, 10kHz −26.0dBm	REC/PB	VR 6 (Lch) VR 6b (Rch)	1kHz, 10kHz Flat ±0.3dBm	
4	CrO_2 Position Frequency Response	CrO_2 Blank Tape 1kHz, 10kHz −26.0dBm	REC/PB	VR 5	1kHz, 10kHz Flat ±1.0dBm	
5	Metal Position Frequency Response	Metal Blank Tape 1kHz, 10kHz −26.0dBm	REC/PB	VR 4	1kHz, 10kHz Flat ±1.0dBm	
6	REC LEVEL	Normal Blank Tape 315Hz −6.0dBm	REC/PB	VR 3 (Lch) VR 3b (Rch)	−6.0±0.5dBm	
7	BIAS Filter	Metal Blank Tape No Signal Input	REC or REC PAUSE	FL 1 (Lch) FL 1b (Rch)	Less than −46dBm	
8	MPX Filter	Normal Blank Tape 19kHz, 0dBm	REC PAUSE	FL 2 (Lch) FL 2b (Rch)	Less than −35dBm	Set DOLBY NR SW to DOLBY-B or DOLBY-C.
9	Meter Sensitivity	Normal Blank Tape 1kHz, −6.0dBm	REC PAUSE	VR 7 (Lch) VR 7b (Rch)	OVU INDICATION	
10	dbx (Release Time)	NO SIGNAL Blank Tape	STOP	VR 8	15mV±0.15mV	HX-A3X ONLY. Set the dbx SW to dbx disc. Connect the digital voltmeter between TP1 (−) and TP2 (+).

NOTE: 1. Above adjustment except for step 8 and step 10, adjustment should be made with Dolby NR and dbx at OFF POSITION.

2. Use the following cassette measuring tapes:

NORMAL TAPE : Maxell UDI C-60
CrO_2 TAPE : TDK SA C-60
METAL TAPE : TDK MA C-60

3. Refer to Fig. 6-1, for above adjustments.

IX. DC RESISTANCE OF VARIOUS COILS

PARTS	DESIGNATION	DC RESISTANCE
PB/REC Head	PR4-7TG	650 ohms ±10%
Erase Head	HJ213270	3.5 ohms
Solenoid	0730PLT	144 ohms ±10%
Relay	LAB2NS	1000 ohms

X. PC BOARD TITLES AND IDENTIFICATION NUMBERS

MODEL GX–A5

PC BOARD TITLE	PC BOARD NUMBER	REMARKS
PRE AMP PC BOARD	T2062A501A	
REC VR PC BOARD	T2062A501B	
JACK PC BOARD	T2062A501C	
SYSTEM CONTROL (A) PC BOARD	T2062A502A	
SYSTEM CONTROL (B) PC BOARD	T2062A502B	
POWER SUPPLY PC BOARD	T2062B5030	U
	5031	C,A
	5032	E,B,S
CONNECTOR PC BOARD	CMS01D5020	
DETECTOR PC BOARD	CMS01D5010	

MODEL GX–A5X

PC BOARD TITLE	PC BOARD NUMBER	REMARKS
PRE AMP PC BOARD	T2062A501A	
REC VR PC BOARD	T2062A501B	
JACK PC BOARD	T2062A501C	
SYSTEM CONTROL (A) PC BOARD	T2062A502A	
SYSTEM CONTROL (B) PC BOARD	T2062A502B	
POWER SUPPLY PC BOARD	T2062B5030	U
	5031	C,A
	5032	E,B,S
CONNECTOR PC BOARD	CMS01D5020	
DETECTOR PC BOARD	CMS01D5010	

SECTION 2

PARTS LIST

TABLE OF CONTENTS

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no. and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part 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) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

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

AVERTISSEMENT

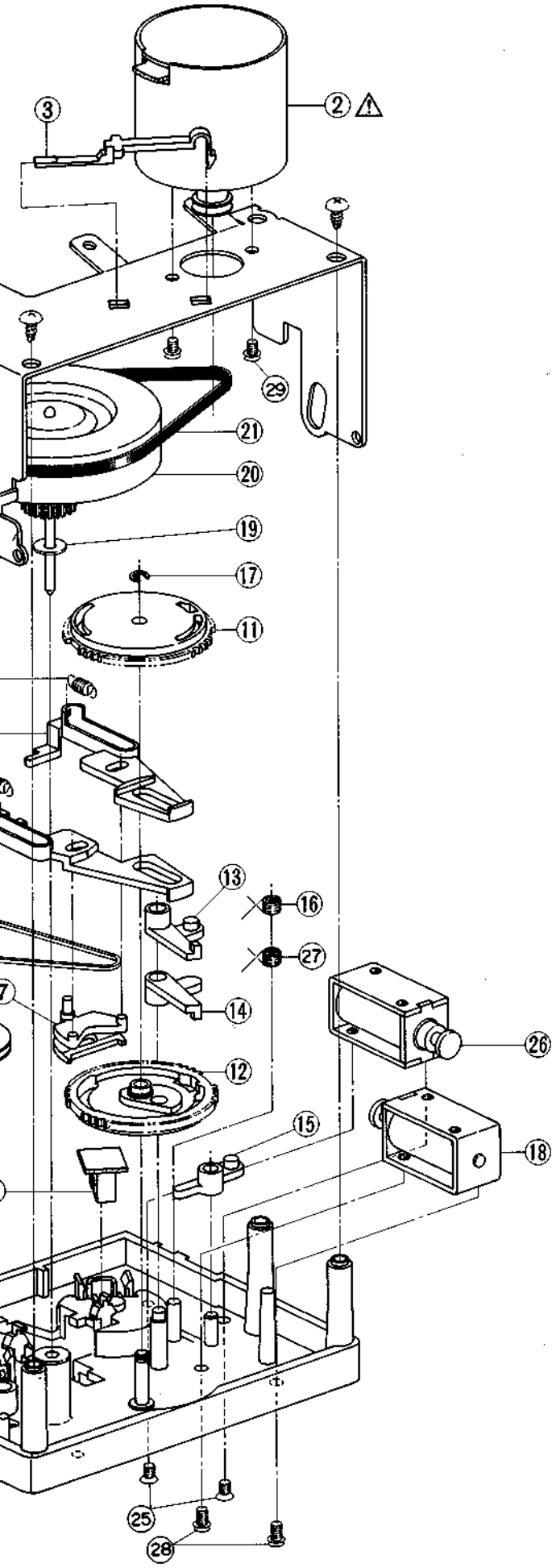
⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.

4. PRE AMP PC BOARD (GX–A5)

REF. NO.	PARTS NO.	DESCRIPTION
4-IC1	EI-337228	IC M5218L0
4-IC2	EI-354821	IC AN7370
4-IC3	EI-349590	IC BA3280EC
4-IC4	EI-337228	IC M5218L0
4-IC5	EI-349388	IC M54418P
4-IC6	EI-337228	IC M5218L0
4-TR1,2	ET-349705	TR 2SC2320 E,F,G
4-TR3	ET-350795	TR 2SC3399
4-TR4	ET-200986	⚠TR 2SD863-V8 F
4-TR5	ET-308141	TR 2SC2603 G
4-TR6,7	ET-338324	TR 2SD1012-V H
4-TR8	ET-348302	TR FET 2SK381 C,D
4-TR9	ET-349705	TR 2SC2320 E,F,G
4-TR10	ET-338324	TR 2SD1012-V H
4-TR11	ET-200986	⚠TR 2SD863-V8 F
4-TR12	ET-338324	⚠TR 2SD1012-V H
4-TR13, 14	ET-308977	TR 2SC2274K F
4-TR15, 16	ET-338324	TR 2SD1012-V H
4-D1	ED-301911	D SILICON H DS448
4-D2	ED-309341	D GERMA H 1K34A
4-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05
4-RL1	EQ-337067	RELAY LEAD LAB2NS 2N0 18V
4-VR1	EV-345781	R S-FIX H RVF8P01 3P 202
4-VR2	EV-338588	R S-FIX H RVF8P01 3P 503
4-VR3	EV-337993	R S-FIX H RVF8P01 3P 203
4-VR4	EV-344109	R S-FIX H RVF8P01 3P 102
4-VR5	EV-337992	R S-FIX H RVF8P01 3P 502
4-VR6	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
4-VR7	EV-338588	R S-FIX H RVF8P01 3P 503
4-VL1	EO-337055	COIL VARI 1 FE002S 10MH
4-FL1	EH-351182	FILTER DB 201AK-005 100kHz
4-FL2	EH-351183	FILTER DB 201AK-006 19kHz
4-FL3	EO-337044	COIL TUN 1 102AZ-005
4-FL4	EO-315758	COIL TUN 1 100Z-431 100.00kHz
4-T1	EO-354820	COIL OSC1 32-5030-12 100KC
4-FR1	ER-318248	⚠R FUSE ERD2FC S10 1/4W 47R0G
4-C3	EC-347364	C MC V F05 FE92 8R0D 500DC
4-C12	EC-314990	C STY V S05 CQFS 101J 50DC
4-C60,61	EC-357103	C PP V F05 CQMFS92 682 G 100DC
4-C62	EC-321583	C PP V F10 PFH 102J 630DC
4-J1	EJ-347664	PIN J YKC21-5053 P 4P
4-J2	EJ-346076	DIN J TCS4690-01-1111 P 8P

5. PRE AMP PC BOARD (GX–A5X)

REF. NO.	PARTS NO.	DESCRIPTION
5-IC1	EI-337228	IC M5218L0
5-IC2	EI-354821	IC AN7370
5-IC3	EI-349590	IC BA3280EC
5-IC4	EI-337228	IC M5218L0
5-IC5	EI-349388	IC M54418P
5-IC6	EI-337228	IC M5218L0
5-IC7	EI-354822	IC AN6291
5-IC8	EI-337228	IC M5218L0
5-TR1,2	ET-349705	TR 2SC2320 E,F,G
5-TR3	ET-350795	TR 2SC3399
5-TR4	ET-200986	⚠TR 2SD863-V8 F
5-TR5	ET-308141	TR 2SC2603 G
5-TR6,7	ET-338324	TR 2SD1012-V H
5-TR8	ET-348302	TR FET 2SK381 C,D
5-TR9	ET-349705	TR 2SC2320 E,F,G
5-TR10	ET-338324	TR 2SD1012-VH
5-TR11	ET-200986	⚠TR 2SD863-V8 F
5-TR12	ET-338324	⚠TR 2SD1012-V H
5-TR13, 14	ET-308977	TR 2SC2274K F
5-TR15, 16	ET-338324	TR 2SD1012-V H
5-TR20	ET-349705	TR 2SC2320 E,F,G
5-TR21 to 24	ET-354863	TR FET 2SJ40 C,D
5-TR25 to 29	ET-349705	TR 2SC2320 E,F,G
5-TR30, 31	ET-308472	TR 2SA1115 E,F,G
5-TR32 to 36	ET-308141	TR 2SC2603 G
5-TR37	ET-308472	TR 2SA1115 E,F,G
5-TR38, 39	ET-308141	TR 2SC2603 G
5-D1	ED-301911	D SILICON H DS448
5-D2	ED-309341	D GERMA H 1K34A
5-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05
5-D7 to 11	ED-301911	D SILICON H DS448
5-D13	ED-306316	D ZENER H HZ5 C2
5-D14, 15	ED-301911	D SILICON H DS448
5-D16 to 19	ED-344280	D SILICON H GMA-01-FY2 F05
5-RL1	EQ-337067	RELAY LEAD LAB2NS 2NO 18V
5-VR1	EV-345781	R S-FIX H RVF8P01 3P 202
5-VR2	EV-338588	R S-FIX H RVF8P01 3P 503
5-VR3	EV-337993	R S-FIX H RVF8P01 3P 203
5-VR4	EV-344109	R S-FIX H RVF8P01 3P 102
5-VR5	EV-337992	R S-FIX H RVF8P01 3P 502
5-VR6	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
5-VR7	EV-338588	R S-FIX H RVF8P01 3P 503
5-VR8	EV-345781	R S-FIX H RVF8P01 3P 202
5-VL1	EO-337055	COIL VARI 1 FE002S 10MH
5-FL1	EH-351182	FILTER DB 201AK-005 100kHz
5-FL2	EH-351183	FILTER DB 201AK-006 19kHz
5-FL3	EO-337044	COIL TUN 1 102AZ-005
5-FL4	EO-315758	COIL TUN 1 100Z-431 100.00kHz
5-T1	EO-354820	COIL OSC1 32-5030-12 100KC
5-FR1	ER-318248	⚠R FUSE ERD2FC S10 1/4W 47R0G
5-FR2	ER-332225	⚠R FUSE ERD2FC S10 1/4W 56R0G
5-C3	EC-347364	C MC V F05 FE92 8R0D 500DC
5-C12	EC-314990	C STY V S05 CQFS 101J 50DC
5-C60, 61	EC-357103	C PP V F05 CQMFS92 682G 100DC
5-C62	EC-321583	C PP V F10 PFH 102J 630DC
5-C97	EC-307494	C STY V F05 CQ09S 331J 50DC
5-C103	EC-314996	C STY V S05 CQFS 391J 50DC
5-J1	EJ-347664	PIN J YKC21-5053 P 4P
5-J2	EJ-346076	DIN J TCS4690-01-1111 P 8P

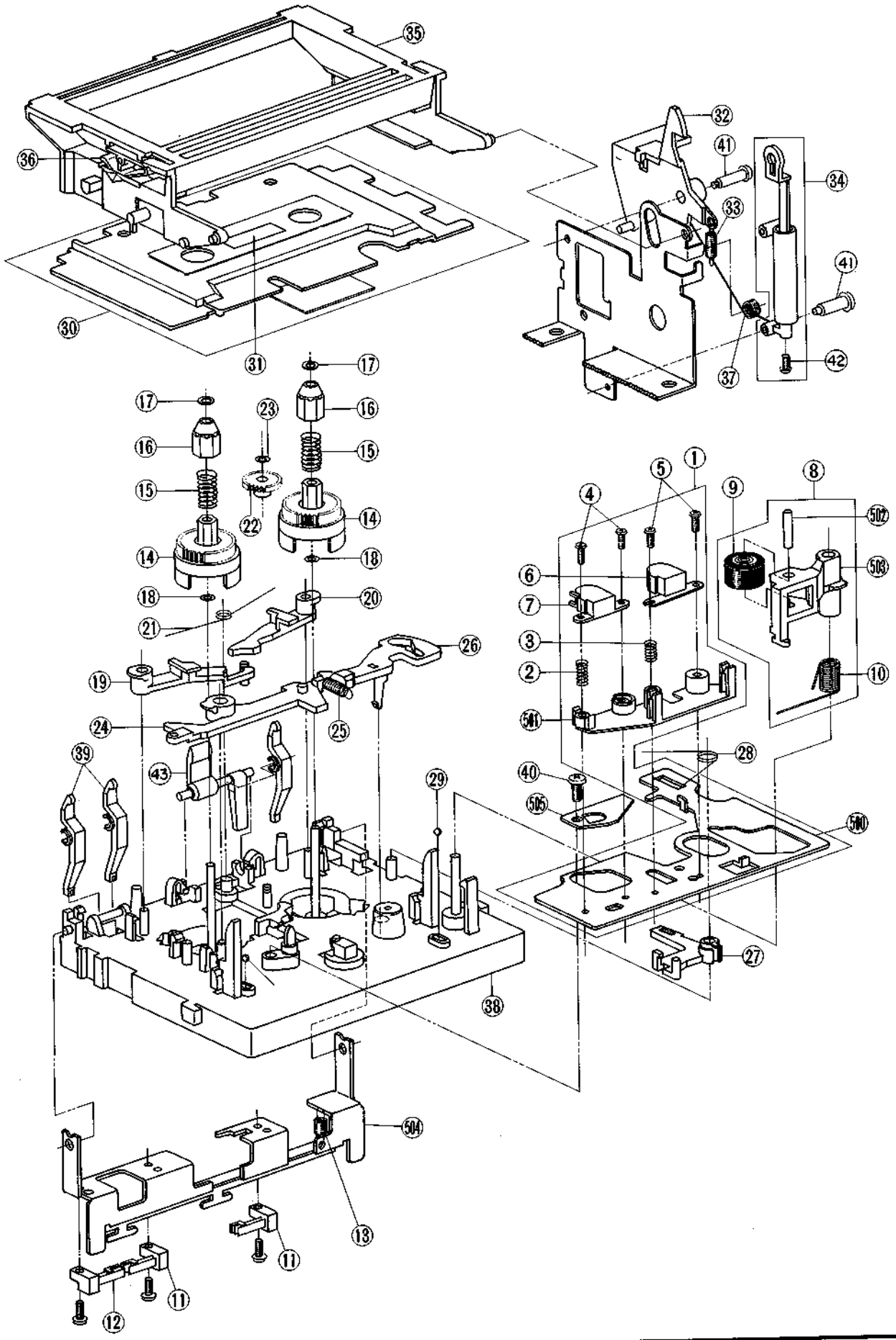


2. MECHA CMS01 BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1	ET-311977	PHOTO SENSOR SPI-201
2-2	BM-B314815	⚠MOTOR [PULLEY] PART HX-M5
2-3	TC-344901	HOLDER THRUST
2-4	MI-B344207	ARM IDLER FR PART
2-5	MI-B344215	ARM IDLER TU PART
2-6	ZG-343152	SP PULL TU IDLER
2-7	TC-344219	CAM SHIFTER
2-8	SK-344220	SIIDE [F]
2-9	TC-344221	SLIDE [R]
2-10	ZS-343153	SP PULL SLIDE
2-11	MZ-353272	CAM [F]-[B]
2-12	MZ-353271	CAM [R]-[B]
2-13	TC-344224	ARM LOCK [F]
2-14	TC-344225	ARM LOCK [R]
2-15	TC-344226	ARM JOINT
2-16	ZG-344227	SP TORTION PLUNGER
2-17	ZW-340648	RING CS190STL PKR
2-18	EP-344251	SOLENOID 0730PLT 12V
2-19	ZW-345389	PW26×080×020NYL
2-20	MI-B344228	FLYWHEEL PART
2-21	MB-344230	BELT 4.0×0.5T×D61CRHS60
2-22	MB-344231	BELT 1.0×D33.3CR HS60
2-23	MB-344905	BELT 1.2×D38.2 CR MS60
2-24	MB-353756	PULLEY RUBBER [C]
2-25	ZS-430413	CTS26×04STL CMT
2-26	EP-344251	SOLENOID 0730PLT 12V
2-27	ZG-356022	SP TORTION PLUNGER [B]
2-28	ZS-442585	BID26x04STL CMT
2-29	ZS-592378	PAN26×03STL CMT

NOTE:
Parts listed in 1 to 29 on the exploded view and list are normally stocked for replacement purpose. The remaining parts shown in this manual are not normally stocked, because they are seldom required for routine service.

MECHA CMS01 BLOCK(1)



REF. NO.	PARTS NO.	DESCRIPTION
69	ET-350795	TR 2SC3399
70	ET-338324	TR 2SD1012-V H
71	ET-310148	TR 2SD612K E,F
72	ET-349979	TR 2SD794 P,Q,R
73	ET-200986	TR 2SD863-V8 F
74	EV-344109	R S-FIX H RVF8P01 3P 102
75	EV-345781	R S-FIX H RVF8P01 3P 202
76	EV-337993	R S-FIX H RVF8P01 3P 203
77	EV-337992	R S-FIX H RVF8P01 3P 502
78	EV-338588	R S-FIX H RVF8P01 3P 503
79	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
80	EV-354807	VR SLIDE VJ6014DPVN A503×2
81	HE-337047	HEAD E HJ213270 C
82	HP-H2210A010A	HEAD PR4-7TG PR6-7TG
83	MB-344231	BELT 1.0×D33.3CR HS60
84	MB-344905	BELT 1.2×D38.2 CR HS60
85	MB-344230	BELT 4.0×0.5T×D61CRHS60
86	MB-353756	PULLEY RUBBER [C]
87	MI-B344207	ARM IDLER FR PART
88	MI-B344215	ARM IDLER FR PART
89	MP-336153	PINCH ROLLER [A]
90	MZ-353272	CAM [F]-[B]
91	MZ-344906	GEAR FF [B]
92	TC-344219	CAM SHIFTER

"NOTE" N : New Parts

SYMBOL FOR DESTINATION

A : AAL [U.S.A]
B : UK [Engalnd]
C : CSA [Canada]
E : CEE [Europe]
S : SAA [Australia]
U : U/T [Universal Area]

6. SYSCON (A) PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
6-IC1	EI-345765	IC LB1292
6-IC2	EI-343417	IC LB1294
6-IC3	EI-337009	IC LC4049B
6-IC4	EI-337845	IC BA6146 M
6-D3 to 7	ED-301911	D SILICON H DS448
6-SW1 to 9	ES-355604	SW TACT B3F-1020
6-SW10	ES-349597	SW SLIDE 00130329 BLACK 01-3 S
6-SW11	ES-354808	SW PUSH SK1100-Y-QM 02-02N
6-SW12A	ES-354809	SW PUSH SK1005-031Q 3 THROW [A5]
6-SW12B	ES-354810	SW PUSH SK1005-051Q 5 THROW [A5X]
6-IB1	EH-354812	COMP R RGSD4X473K
6-IN1	EM-354811	IND FL FIP48BW16Y

7. SYSCON (B) PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
7-IC1	EI-300042	IC M54519P
7-IC2	EI-337009	IC LC4049B
7-IC3	EI-345765	IC LB1292
7-IC4	EI-344277	IC LM6405H-145
7-TR1	ET-348931	TR 2SB774 R,S,T
7-TR2	ET-308472	TR 2SA1115 E,F,G
7-TR3	ET-350795	TR 2SC3399
7-TR4	ET-348931	TR 2SB774 R,S,T
7-TR5,6	ET-350795	TR 2SC3399
7-TR7	ET-308141	⚠TR 2SC6603 G
7-D1 to 21	ED-301911	D SILICON H DS448
7-X1	EI-337017	OSC CE CSB800A 0.800000MHz
7-IB1	EH-354813	COMP R RGSD08x223K

8. REC VR PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
8-VR1	EV-354807	VR SLIDE VJ6014DPVN A503x2

9. JACK PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
9-J1	EJ-357732	PHONE J HLJ0527-3030
9-J2	EJ-355012	PHONE J 3P HLJ0541-010 6.3

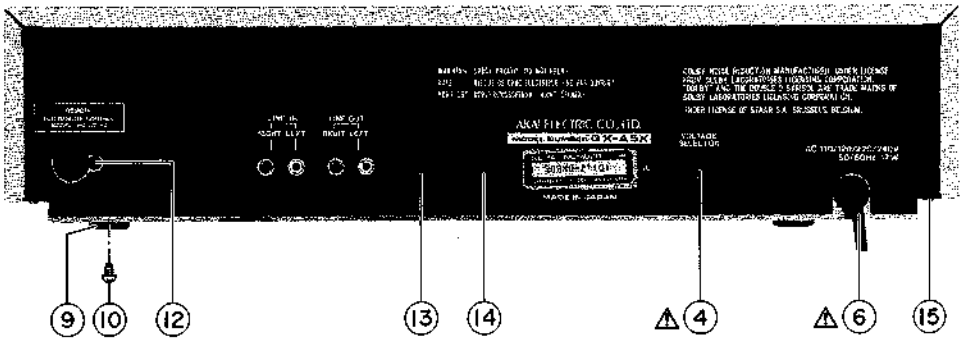
10. POWER SUPPLY PC BOARD

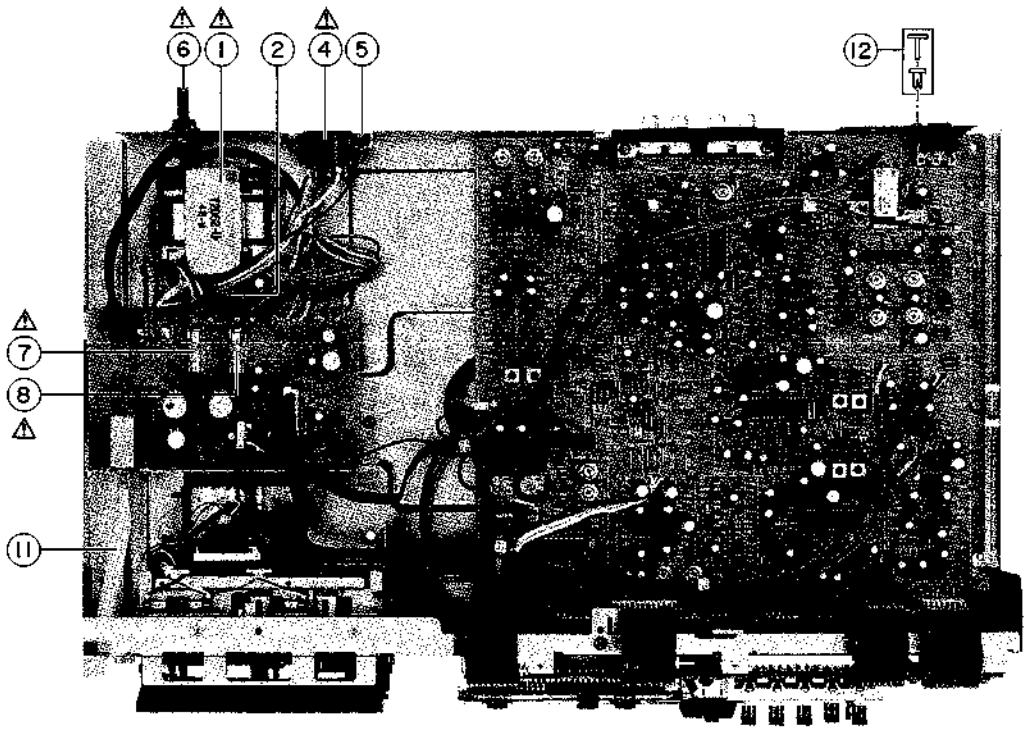
REF. NO.	PARTS NO.	DESCRIPTION
10-TR1	ET-349081	⚠TR 2SC3383 S,T
10-TR2	ET-308472	TR 2SA1115 E,F,G
10-TR3	ET-310148	⚠TR 2SD612K E,F
10-TR4	ET-349081	⚠TR 2SC3383 S,T
10-TR5	ET-310148	⚠TR 2SD612K E,F
10-TR6	ET-349081	⚠TR 2SC3383 S,T
10-TR7	ET-349979	⚠TR 2SD794 P,Q,R
10-TR8	ET-349081	⚠TR 2SC3383 S,T
10-TR9	ET-349081	TR 2SC3383 S,T
10-D1	ED-331667	D ZENER H HZ7 A1
10-D2	ED-301911	D SILICON H DS448
10-D3	ED-330319	⚠D SILICON DBA10B 100/1.0A
10-D4	ED-336805	⚠D SILICON DS135D-KB1 200/1.0A
10-D5	ED-331667	D ZENER H HZ7 A1
10-D6	ED-330319	⚠D SILICON DBA10B 100/1.0A
10-D7	ED-332336	D ZENER H HZ20 3
10-D8	ED-336805	⚠D SILICON DS135D-KB1 200/1.0A
10-D9	ED-346622	D ZENER H HZ30 1
10-D10	ED-301911	D SILICON H DS448
10-SW1	ES-344270	⚠ SW PUSH SDLD1P 01-1
10-R11	ER-354870	R OMF H S15 FS 1W 132J
10-C1	EC-201645	C EC V CUT SM 222M 6.3DC
10-C5	EC-316186	C EC V CUT SM 222M 16.0DC
10-C8	EC-323847	C EC V CUT SM 102M 35.0DC
10-C14A	EC-320548	⚠C CE V F 103Z 250AC [U,C,A]
10-C14B	EC-338411	⚠C CE V FZ 103P 400AC [E,B,S]
10-1	EZ-200473	SILICON RUBBER SHEET TC-30

11. CONNECTOR PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
11-D1,2	ED-306109	D SILICON W03B 100/1.0A
11-D3,4	ED-301911	D SILICON H DS448

ASSEMBLY BLOCK

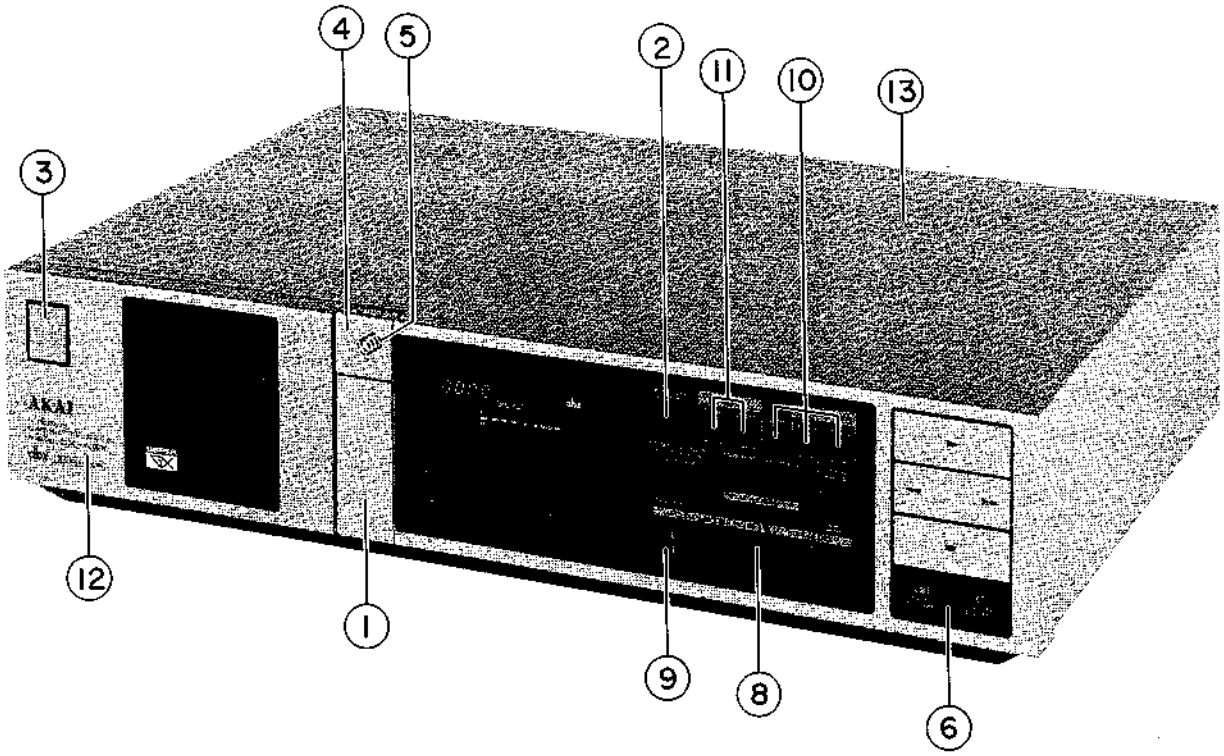




12. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
12-1A	BT-354781	⚠TRANS POWER T2062-U [T901][U]
12-1B	BT-354782	⚠TRANS POWER T2062-AC [T901][C,A]
12-1C	BT-354783	⚠TRANS POWER T2062-EV [T901] [E]
12-1D	BT-354784	⚠TRANS POWER T2062-BS [T901][B,S]
12-2	ZS-301398	ST BID40×08STL CMT
12-3	ZW-413188	N40STL CMT 1
12-4	ES-305733	⚠ SW SELECTOR HXW0131-260 01-4 [SW901][U]
12-5	ZS-348375	ST BR30×08STL CMT [U]
12-6A	EW-347683	⚠ AC CORD 2 CORES VM0129, VFF-CB U/T [U]
12-6B	EW-347607	⚠ AC CORD 2 CORES VM0238, SPT-1CB UC [C,A]
12-6C	EW-347682	⚠ AC CORD 2 CORES VM0364, FC3097-CB EV [E]
12-6D	EW-347680	⚠ AC CORD 2 CORES LCFL2×0.75-CB B [B]
12-6E	EW-347681	⚠ AC CORD 2 CORES VM0436, FC3093-CB S [S]
12-7A	EF-306124	⚠ FUSE TSC A 250V 0.63A [F1][U]
12-7B	EF-305703	⚠ FUSE TSC 125V 0.63A [F1] [C,A]
12-7C	EF-593706	⚠ FUSE SEMKO T 250V 0.50A [F1] [E,B,S]
12-8A	EF-309388	⚠ FUSE TSC A 250V 0.80A [F2][U]
12-8B	EF-309391	⚠ FUSE TSC 125V 0.80A [F2] [C,A]
12-8C	EF-601942	⚠ FUSE SEMKO T 250V 0.63A [F2] [E,B,S]
12-9	SA-349332	FOOT
12-10	ZS-354869	ST BR30×06STL CMT C080
12-11	MZ-349534	JOINT POWER
12-12	ZW-698308	RV NYL30×055 BL
12-13A	SP-354785A	PANEL REAR BOARD GX-A5 [U]
12-13B	SP-354785F	PANEL REAR BOARD GX-A5X [U]
12-13C	SP-354785B	PANEL REAR BOARD GX-A5 [A,C]
12-13D	SP-354785G	PANEL REAR BOARD GX-A5X [A,C]
12-13E	SP-354785C	PANEL REAR BOARD GX-A5 [E,V]
12-13F	SP-354785H	PANEL REAR BOARD GX-A5X [E,V]
12-13G	SP-354785D	PANEL REAR BOARD GX-A5 [B]
12-13H	SP-354785J	PANEL REAR BOARD GX-A5X [B]
12-13I	SP-354785E	PANEL REAR BOARD GX-A5 [S]
12-13J	SP-354785K	PANEL REAR BOARD GX-A5X [S]
12-14	ZS-352120	T2BR30×08STL BCM C080
12-15	ZS-343159	T2BR30×60STL NI3

FINAL ASSEMBY BLOCK



13. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
	PANEL FRONT BLOCK	
13-1A	BD-T2062A050A	PANEL FRONT BLK GX-A5
13-1AP	BD-T2062A050B	PANEL FRONT BLK GX-A5-P
13-1AB	BD-T2062A050C	PANEL FRONT BLK GX-A5-B
13-1B	BD-T2062A050D	PANEL FRONT BLK GX-A5X
13-1BP	BD-T2062A050E	PANEL FRONT BLK GX-A5X-P
13-1BB	BD-T2062A050F	PANEL FRONT BLK GX-A5X-B
13-2	SK-354634B	KNOB TACT-B
13-3	SK-343017G	KNOB POWER
13-3P	SK-343017B	KNOB POWER-P
13-3B	SK-343017F	KNOB POWER-B
13-4	SK-349513A	KNOB EJECT
13-4P	SK-349513B	KNOB EJECT-P
13-4B	SK-349513C	KNOB EJECT-B
13-5	ZG-313182	SP C-04.5/0.35-25.0 C-029
13-6	SK-349516G	KNOB OPERATE [D] (EXCEPT BL)
13-6B	SK-349516L	KNOB OPERATE [D]-B [BL]

REF. NO.	PARTS NO.	DESCRIPTION
	FINAL ASSEMBLY BLOCK	
13-7	ZS-320906	ST BR30x06STL CMT [PANEL SET SCREW]
13-8	TC-354636	HOLDER SCALE
13-9	SK-B346104X3	KNOB REC-2 PART (EXCEPT BL)
13-9B	SK-B346104X4	KNOB REC-2-B PART [BL]
13-10	SK-354635C	KNOB PUSH-B
13-11	SK-354635B	KNOB PUSH [X] [A5X]
13-12A	BD-B349521H	LID PANEL [4] PART [A5]
13-12AP	BD-B349521J	LID PANEL [4]-P PART [A5]
13-12AB	BD-B349521P	LID PANEL [4]-B PART [A5]
13-12B	SP-B349521K	LID PANEL [5] PART [A5X]
13-12BP	BD-B349521L	LID PANEL [5]-P PART [A5X]
13-12BB	BD-B349521Q	LID PANEL [5]-B PART [A5X]
13-13	SP-344591A	COVER UPPER
13-13P	SP-344591B	COVER UPPER P
13-13B	SP-344591D	COVER UPPER-B-[2]

SYMBOL FOR COLOR VARIATION

NON : STANDARD COLOR
P : PEARL SHADOW
B or BL : BLACK

NOTE: PANEL FRONT BLK including 13–2, 13–3, 13–4, 13–5, and 13–6.

INDEX

AKAI

MODEL GX-A5/X

SCHEMATIC DIAGRAM AND PC BOARD

LM 6504-145

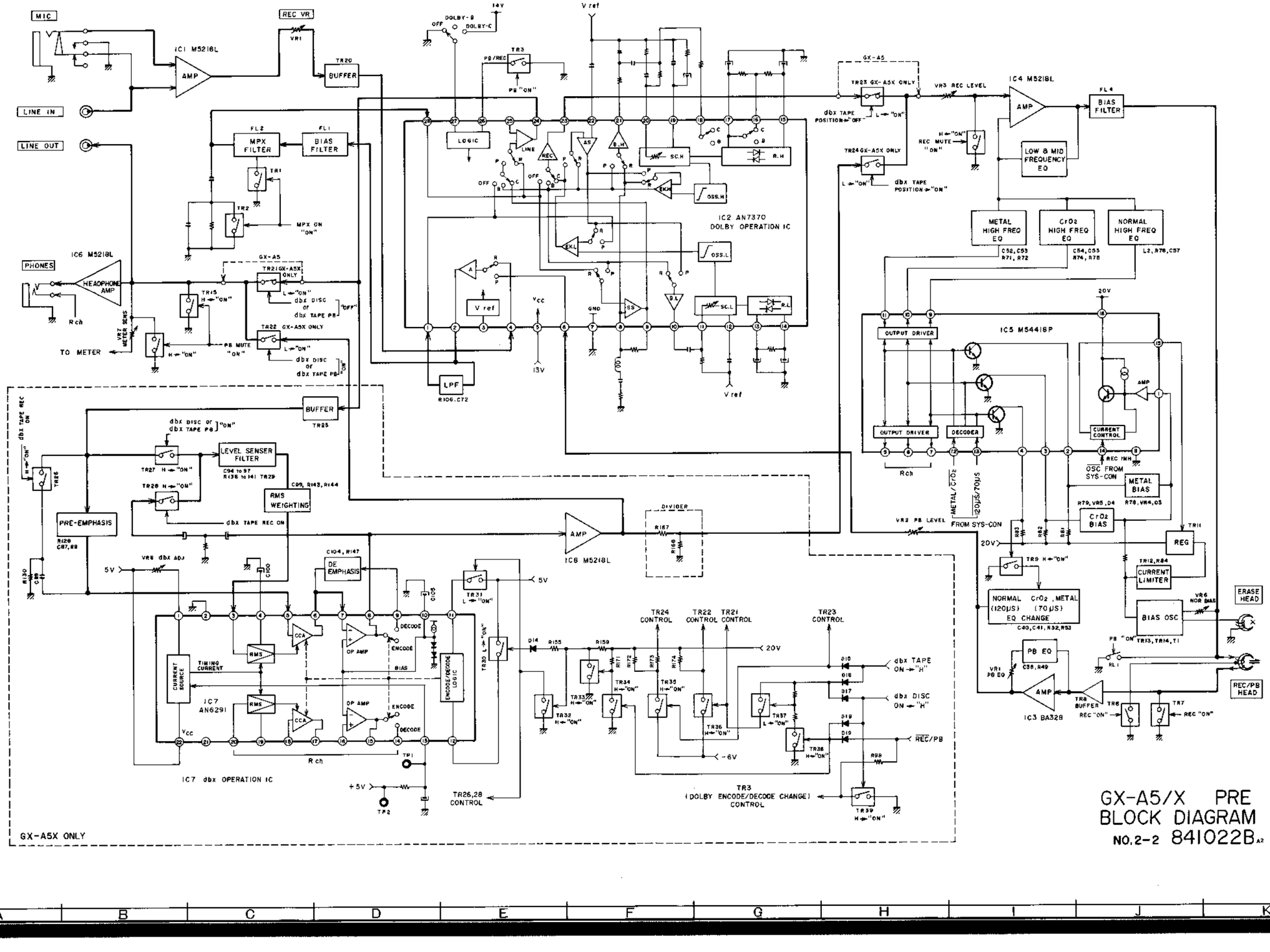
Pin No.	Symbol	Meaning
1	XTAL	Crystal oscillator input
2	C0	Tape Pulse Input
3	C1	×
4	C2	×
5	C3	×
6	$\overline{INT}$	Interrupting terminal: To "GND"
7	$\overline{RES}$	Reset terminal: Reset at "L", when power ON.
8	D0	DIGIT DRIVE (4-digit)
9	D1	
10	D2	
11	D3	
12	E0	7 Segments FLD DRIVE a
13	E1	b
14	E2	c
15	E3	d — Light when synchronized with D0 to D3
16	F0	e
17	F1	f
18	F2	g
19	F3	Strobe signal for operation indicator FLD DRIVE
20	TEST	To "GND"
21	Vss	
22	G0	REC MUTE terminal: REC MUTE at "H"
23	G1	PB MUTE terminal: REC MUTE at "H"
24	G2	BIAS OSC control terminal: Oscillator driven at "L"
25	G3	REC/PB switching terminal: PB at "H" and REC at "L"
26	H0	PLUNGER (R)
27	H1	PLUNGER (F)
28	H2	REC FLD indicator terminal: FLD lights at "L"
29	H3	PB FLD indicator terminal: FLD lighrs at "L"
30	I0	TAPE SELECTOR switching terminal
31	I1	
32	I2	
33	A0	MEMORY, TIMER REC, 120μ/70μ, REC DETECTION (A.R) — Input terminal
34	A1	REPEAT, TIMER PLAY, METAL/CrO_2, COUNTER RESET Input terminal
35	A2	Key input REW
36	A3	STOP
37	B0	PLAY — Earthed when the operation key is pressed.
38	B1	FF
39	B2	REC
40	B3	AUTO MUTE
41	V_{DD}	+5V
42	EXTAL	Crystal oscillator output

GX-A5/X

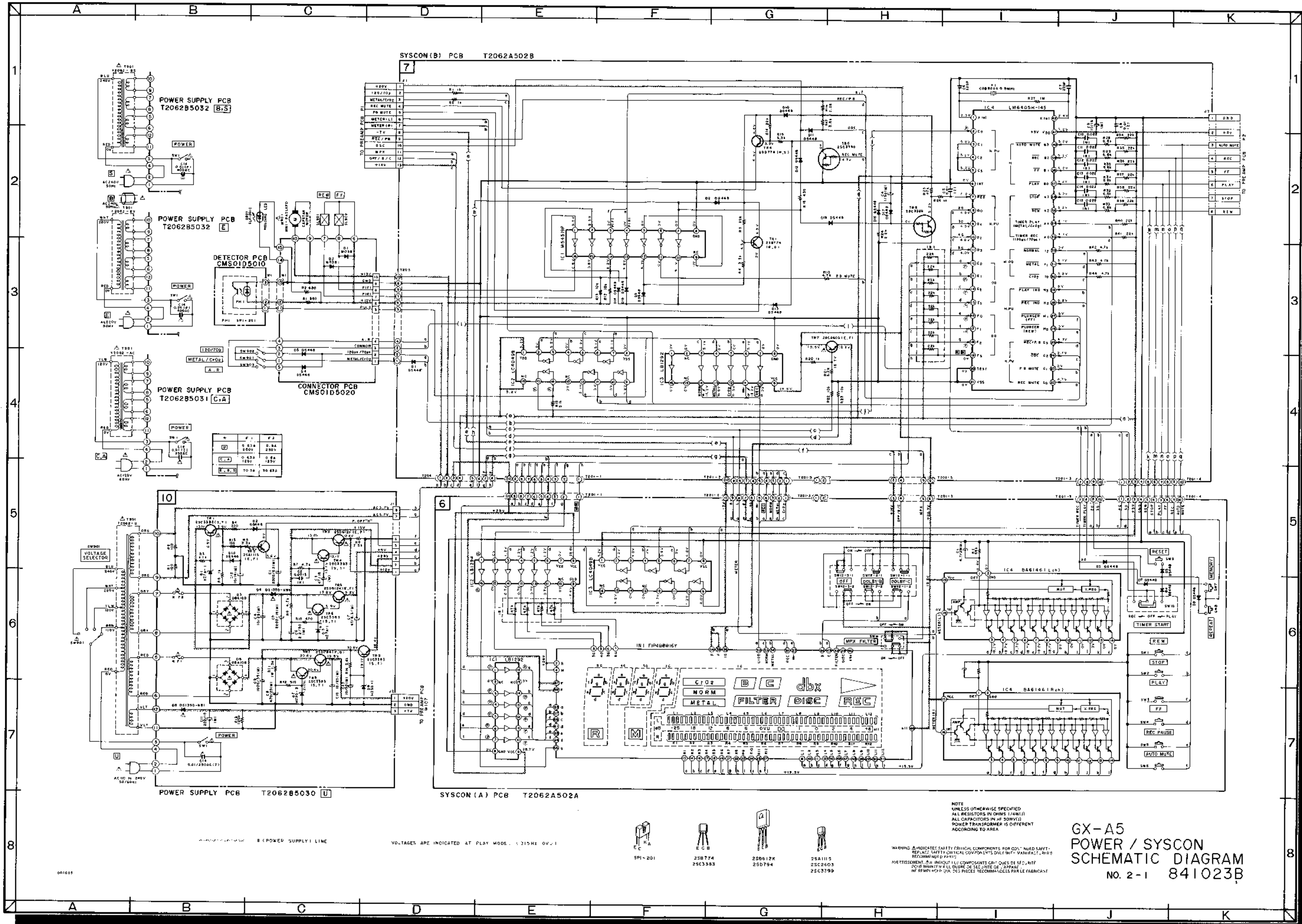
GX-A5/X POWER & SYSCON BLOCK DIAGRAM

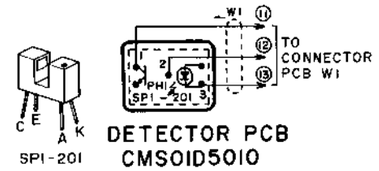
NO.2-1 841021B A2

GX-A5/X

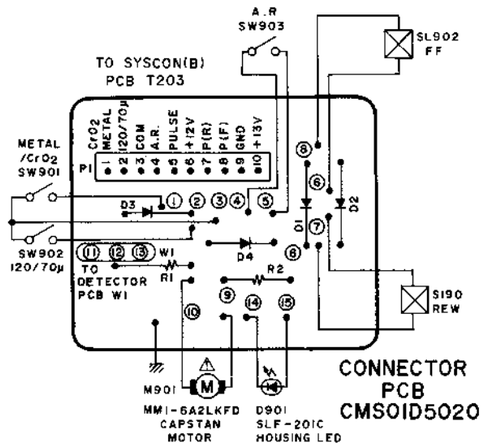


GX-A5/X PRE
BLOCK DIAGRAM
NO.2-2 841022B A2

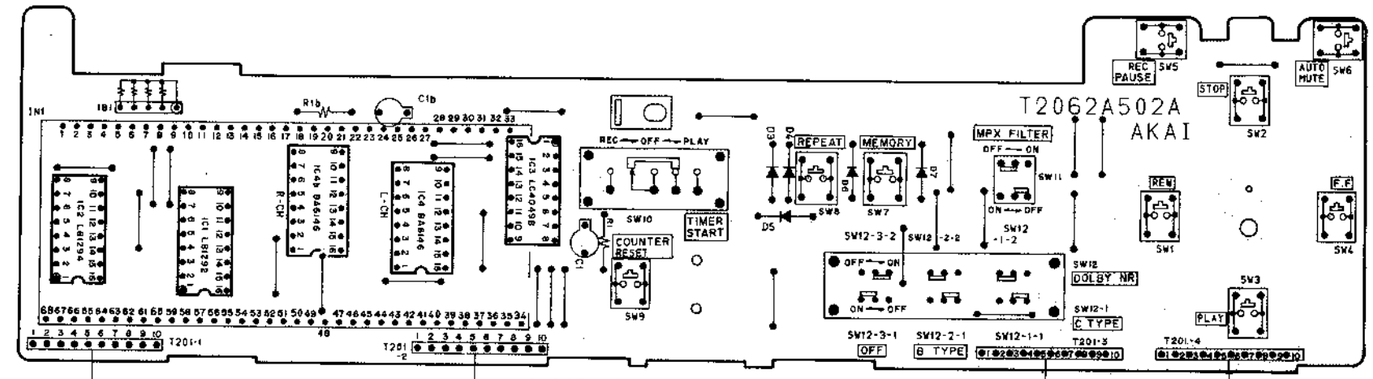

SYSCON (B) PCB T2062A502B
POWER SUPPLY PCB T2062B5032 B,S
POWER SUPPLY PCB T2062B5032 E
POWER SUPPLY PCB T2062B5031 C,A
DETECTOR PCB CMS01D5010
CONNECTOR PCB CMS01D5020
POWER SUPPLY PCB T2062B5030 U
SYSCON (A) PCB T2062A502A
VOLTAGE SELECTOR
TO PREAMP PCB P1
TO PREAMP PCB P2
IC4 LM6405H-145
IC4 BA6146I (L ch)
IC4 BA6146I (R ch)
IN1 FIP4B8W16Y
REW
FF
RESET
MEMORY
REPEAT
TIMER START
STOP
PLAY
REC PAUSE
AUTO MUTE
MPX FILTER
OFF
DOLBY-B
DOLBY-C
CrO2
NORM
METAL
FILTER
DISC
REC
dbx
VOLTAGES ARE INDICATED AT PLAY MODE. (315Hz 0V)
(POWER SUPPLY) LINE
SPI-201
2SB774
2SC3383
2SD612K
2SD794
2SA1115
2SC2603
2SC3399
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN µF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA
GX-A5
POWER / SYSCON
SCHEMATIC DIAGRAM
NO. 2-1 841023B



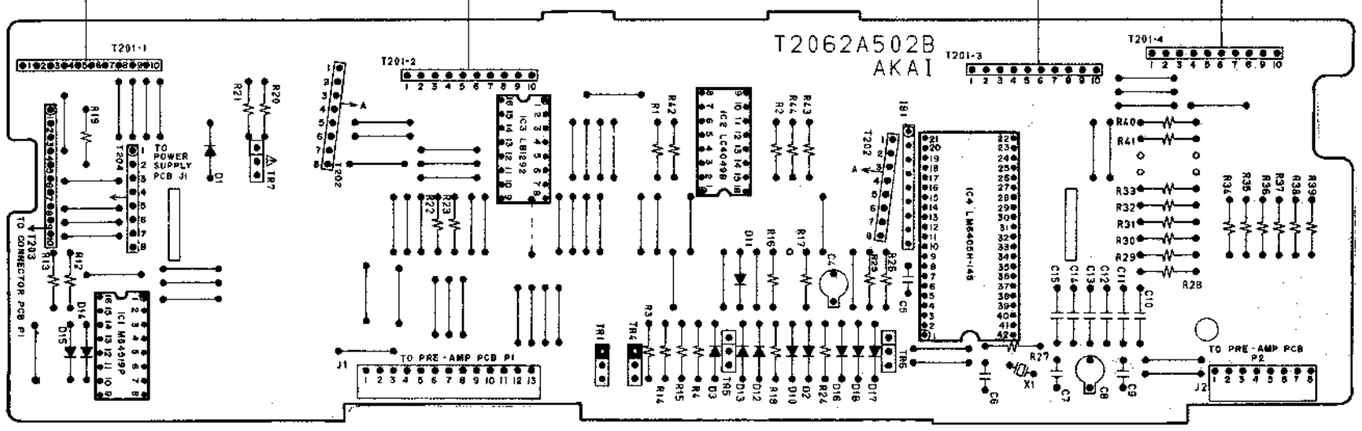
DETECTOR PCB
CMSOID5010



CONNECTOR PCB
CMSOID5020



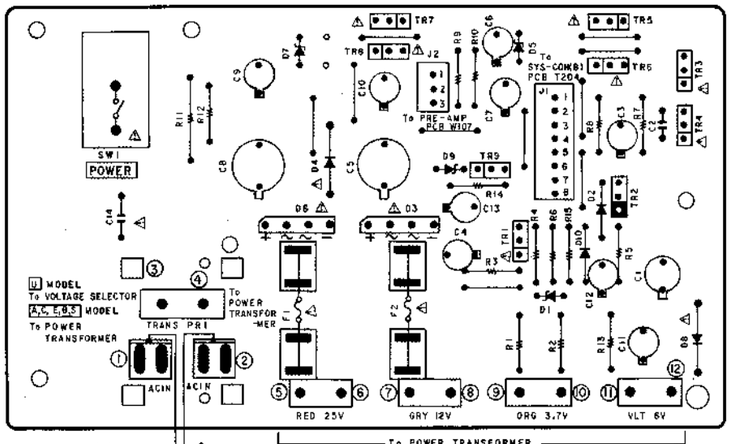
SYSTEM CONTROL(A) PCB T2062A502A



SYSTEM CONTROL(B) PCB T2062A502B

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

B = PNP TRANSISTOR
B = NPN TRANSISTOR



POWER SUPPLY PCB T2062B5030 U
5031 C,A
5032 E,B,S

TR1------2SC3383(S,T)
TR2------2SA1115(E,F)
TR3,5----2SD612K(E,F)
TR4,6----2SC3383(S,T)
TR7------2SD794(P,Q)
TR8,9----2SC3383(S,T)

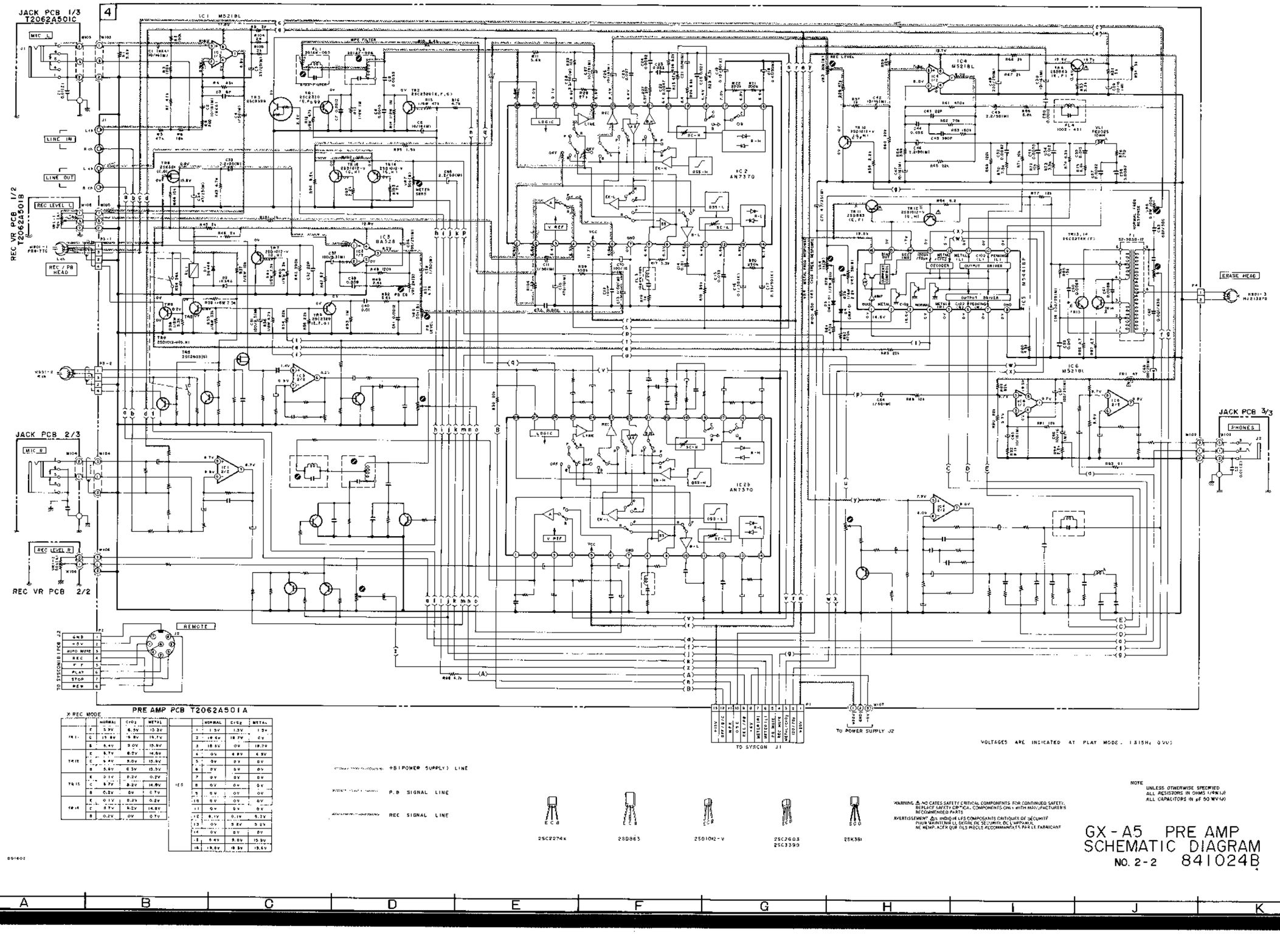
2SC3383
2SD612K
2SD794
2SA1115

TR1,4 ····· 2SB774(R,S)
TR5,6 ····· 2SC3399
TR7 ····· 2SC2603(E,F)

= NPN
= PNP

2SB774
2SC2603
2SC3399

GX - A5



X REC MODE

		NORMAL	CrO2	METAL
TR11	E	5.3V	6.3V	10.3V
	C	13.8V	14.8V	19.7V
	B	6.4V	9.0V	15.0V
TR12	E	5.7V	8.2V	14.6V
	C	6.4V	9.0V	15.0V
	B	5.6V	8.3V	15.3V
TR13	E	0.1V	0.2V	0.2V
	C	6.7V	8.2V	14.8V
	B	0.62V	0V	0.7V
TR14	E	0.1V	0.2V	0.2V
	C	5.7V	8.2V	14.8V
	B	0.2V	0V	0.7V

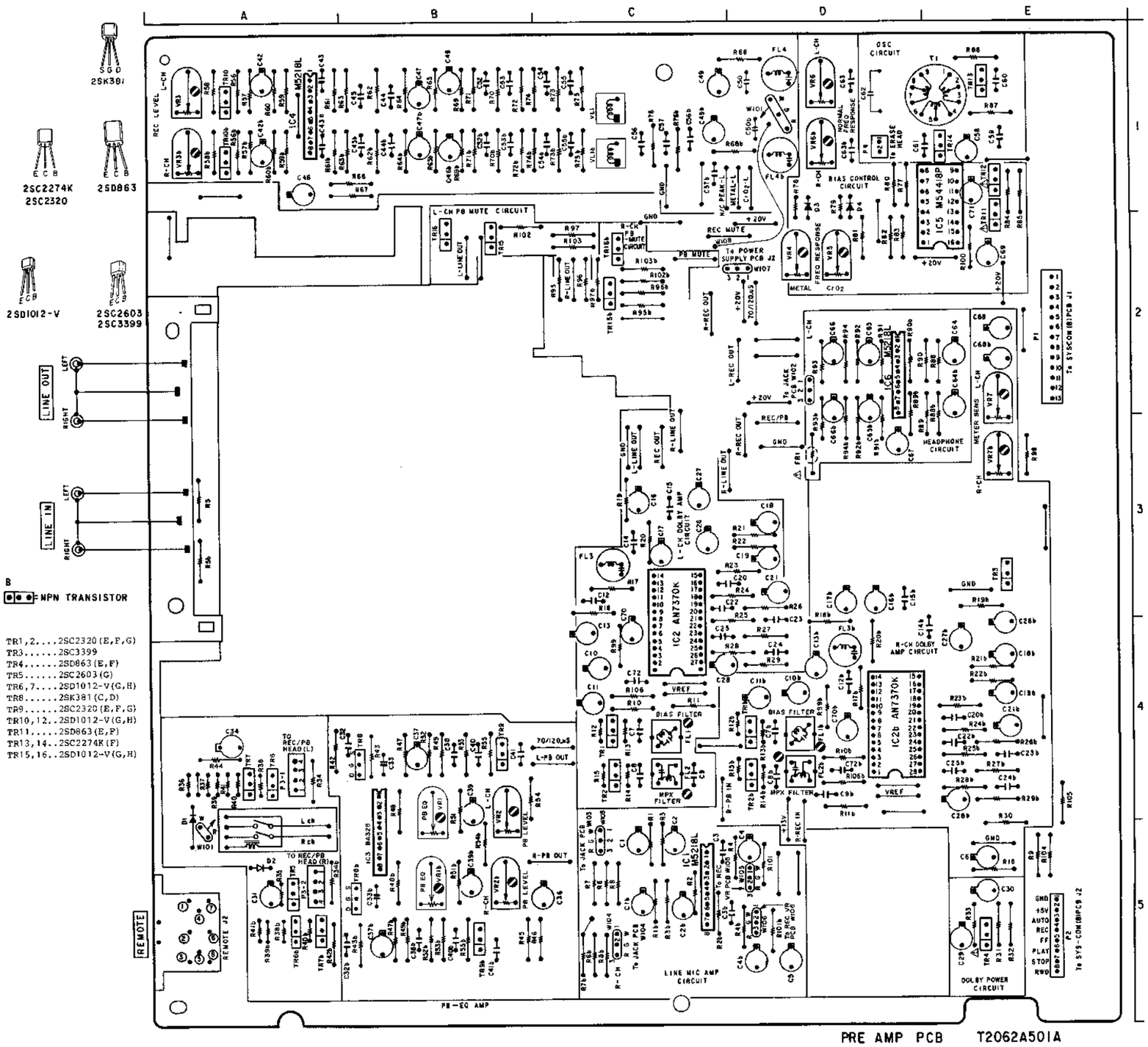
	NORMAL	CrO2	METAL
1	1.3V	1.3V	1.3V
2	18.4V	18.7V	0V
3	18.5V	0V	19.7V
4	0V	4.8V	4.8V
5	0V	0V	0V
6	0V	0V	0V
7	9V	8V	8V
8	0V	0V	0V
9	0V	0V	0V
10	0V	0V	0V
11	0V	0V	0V
12	8.1V	0.1V	5.2V
13	0V	5.8V	5.8V
14	0V	8V	8V
15	6.4V	9.0V	15.0V
16	19.0V	18.8V	19.4V

VOLTAGES ARE INDICATED AT PLAY MODE. (315Hz, 0VU)

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

WARNING ⚠ NO CATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURERS RECOMMENDED PARTS
AVERTISSEMENT ⚠ IL INDIQUE LES COMPOSANTS CRITIQUE DE SECURITE POUR MAINTENIR LL DEFIN. DE SECURITE, DE L'APPAREIL NE REMP. ACER QUE PILS PIECLE RECOMMANDEES PAR LE FABRICANT

GX-A5 PRE AMP SCHEMATIC DIAGRAM
NO. 2-2 841024B



LOCATION OF COMPONENTS

IC's

IC1 ---------- C5
IC2 ---------- C3
IC2b ---------- D4
IC3 ---------- B4
IC4 ---------- A1
IC5 ---------- E1
IC6 ---------- D2

TR's

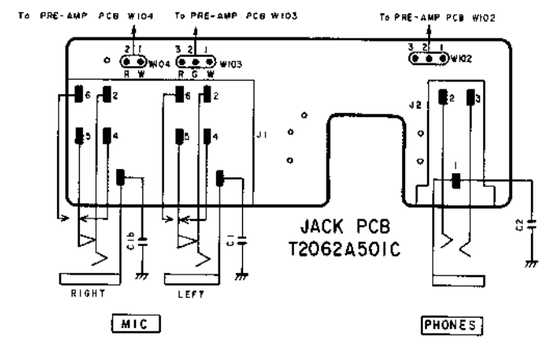
TR1,2 ---------- C4
TR1b,2b ---------- D4
TR3 ---------- E3
TR4 ---------- E5
TR5 ---------- A5
TR6,7 ---------- A4
TR6b,7b ---------- A5
TR8,9 ---------- B4
TR8b,9b ---------- B5
TR10,10b ---------- A1
TR11 to 14 ---------- E1
TR15,16 ---------- B2
TR15b,16b ---------- C2

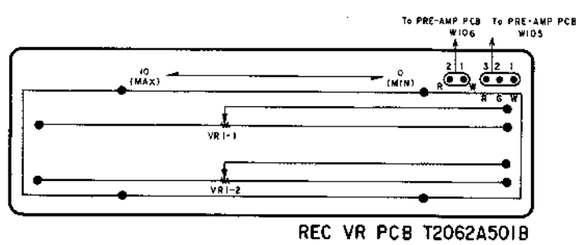
TERMINALS

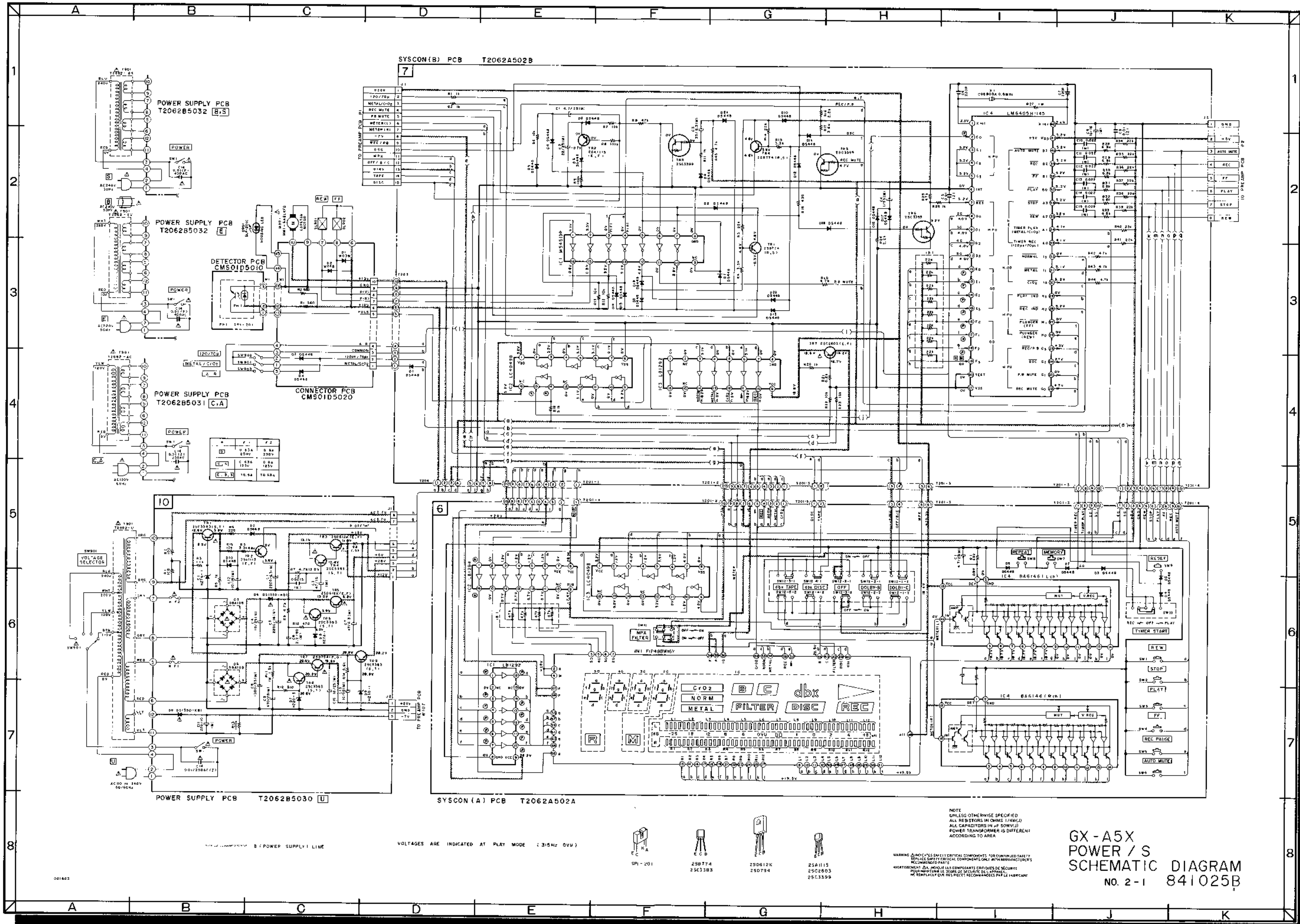
J1(LINE IN,LINE OUT JACKS)---A2,A3
J2(REMOTE JACK)----A5
P1 ---------- E2
P2 ---------- E5
P3-1 ---------- A4
P3-2 ---------- A5
P4 ---------- D1
W102 ---------- C5
W103,W104 ---------- D5
W105,W106 ---------- C5
W107 ---------- D2

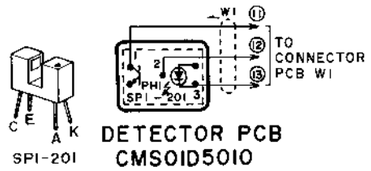
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

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



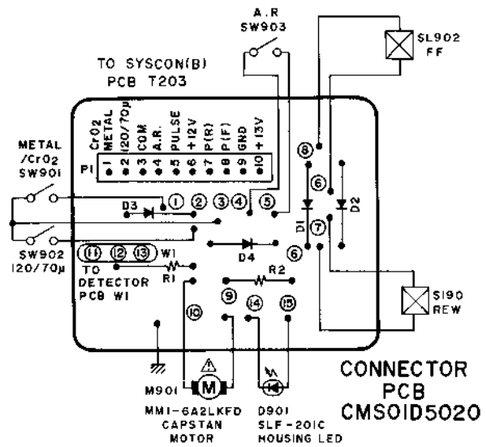


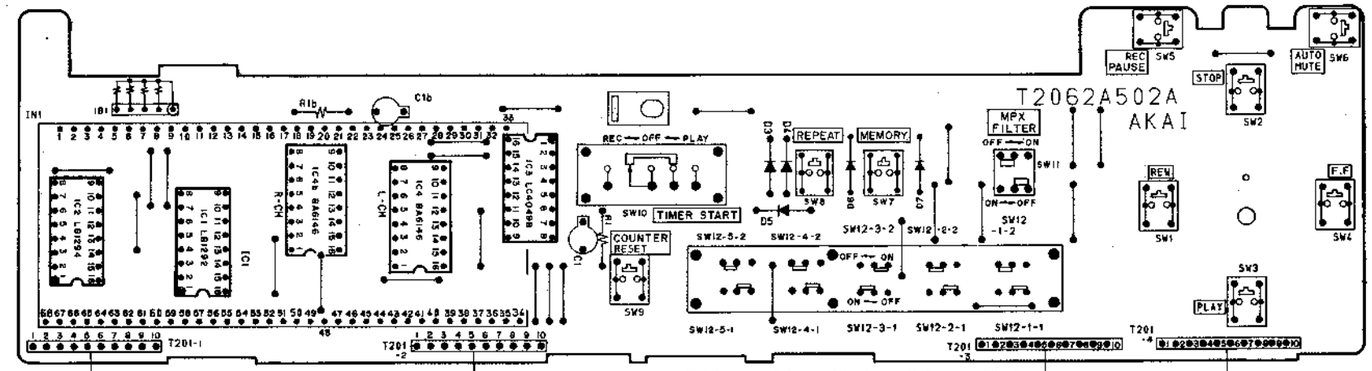

SYSCON (B) PCB T2062A502B
POWER SUPPLY PCB T2062B5032 B·S
POWER SUPPLY PCB T2062B5032 E
POWER SUPPLY PCB T2062B5031 C·A
POWER SUPPLY PCB T2062B5030 U
DETECTOR PCB CMS01D5010
CONNECTOR PCB CMS01D5020
SYSCON (A) PCB T2062A502A
TO PREAMP PCB
VOLTAGE SELECTOR
LM6405H-185
LC4049B
LB1292
BA6146I
FIP4BBW16Y
dbx TAPE
dbx DISC
OFF
DOLBY-B
DOLBY-C
MPX FILTER
REPEAT
MEMORY
RESET
TIMER START
REW
STOP
PLAY
FF
REC PAUSE
AUTO MUTE
CrO2
NORM
METAL
FILTER
DISC
REC
B (POWER SUPPLY) LINE
VOLTAGES ARE INDICATED AT PLAY MODE (315Hz 0VU)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA
GX-A5X
POWER / S
SCHEMATIC DIAGRAM
NO. 2-1 841025B



SPI-201

DETECTOR PCB
CMSOID5010





SYSTEM CONTROL(A) PCB
T2062A502A

SYSTEM CONTROL(B) PCB T2062A502B

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

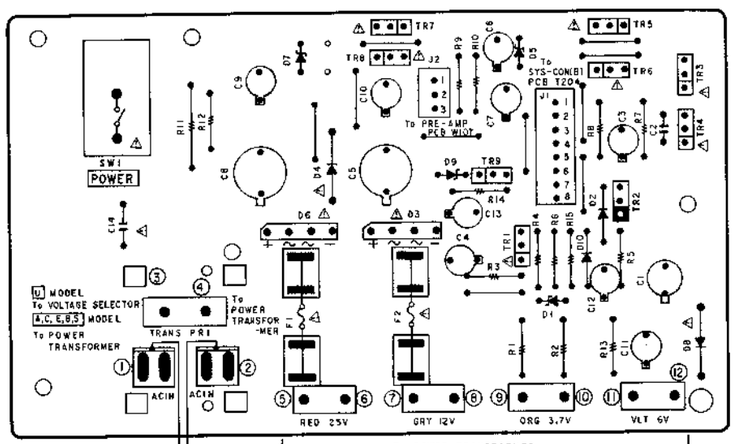
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

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

B = PNP TRANSISTOR

B = NPN TRANSISTOR



POWER SUPPLY PCB T2062B5030 U
5031 C, A
5032 E, B, S

TR1-----2SC3383(S,T)
TR2-----2SA1115(E,F)
TR3,5----2SD612K(E,F)
TR4,6----2SC3383(S,T)
TR7-----2SD794(P,Q)
TR8,9----2SC3383(S,T)

E C B 2SC3383

2SD612K 2SD794

E C B 2SA1115

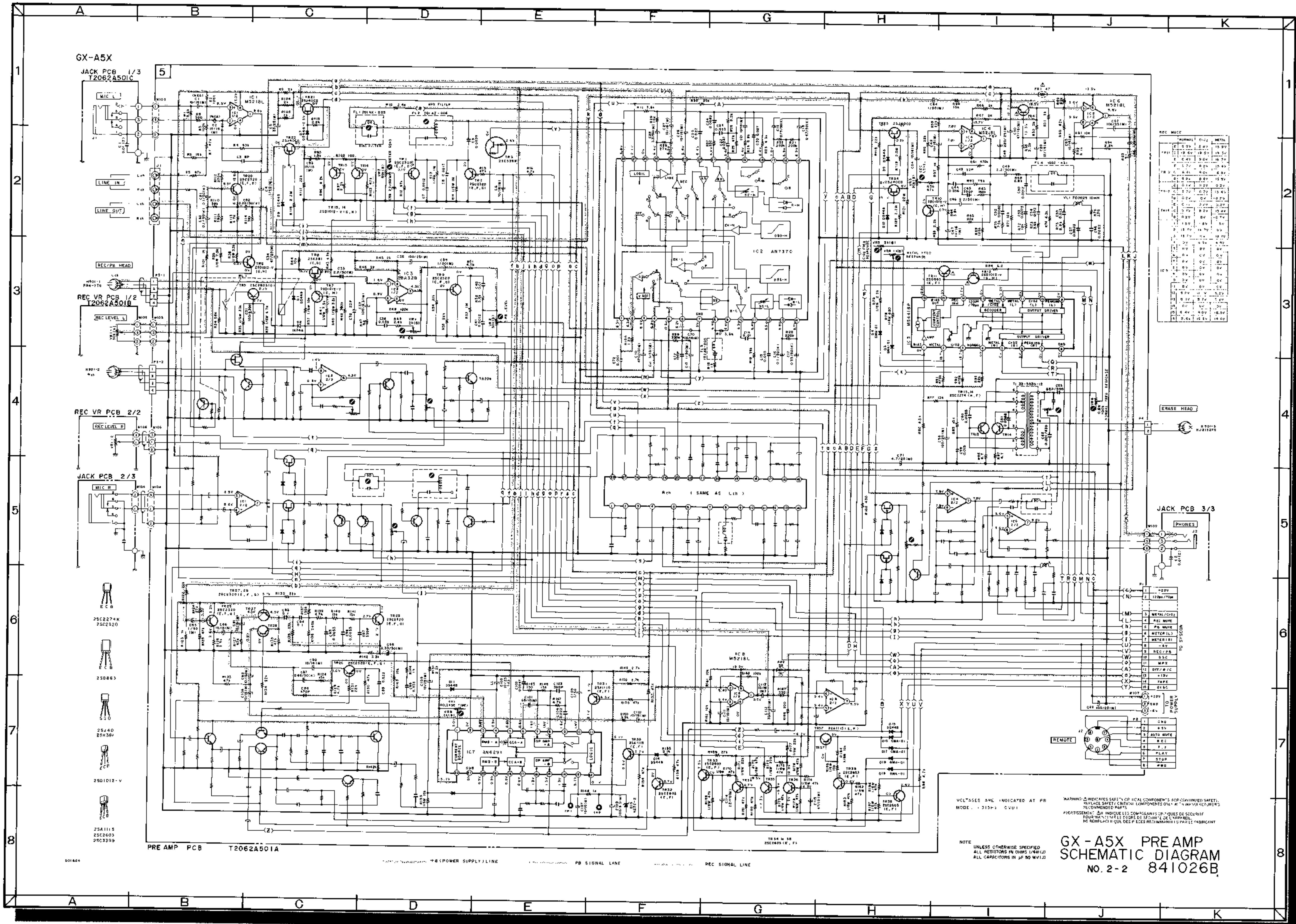
TR1------2SB774(R,S)
TR2------2SA1115(E,F)
TR3------2SC3399
TR4------2SB774(R,S)
TR5,6----2SC3399
TR7------2SC2603(E,F)

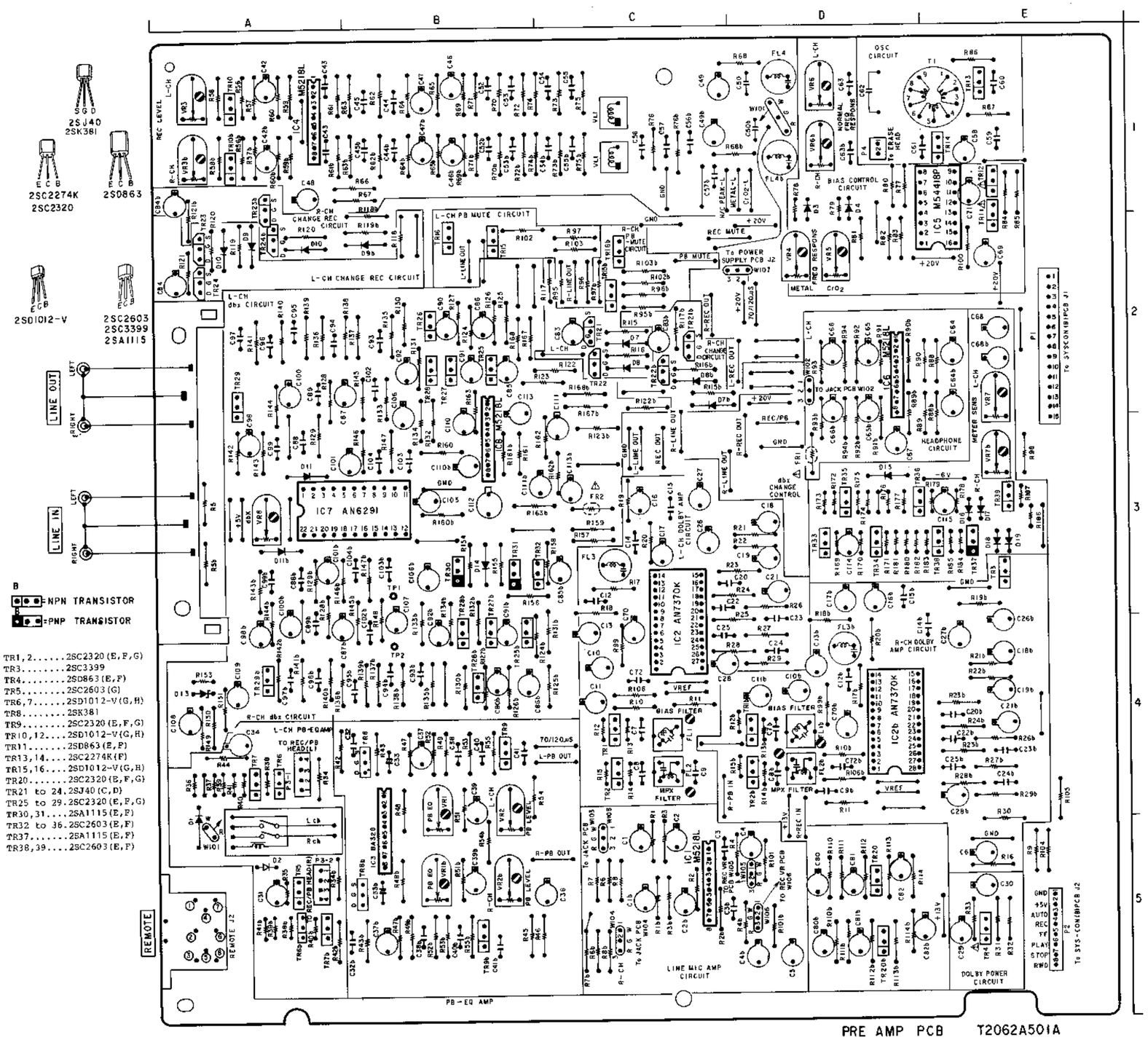
= NPN

= PNP

E C B 2SB774

2SA1115
2SC2603
2SC3399


GX-A5X
JACK PCB 1/3
T2062A501C
MIC L
LINE IN
LINE OUT
REC/PB HEAD
REC VR PCB 1/2
T2062A501B
REC LEVEL L
REC VR PCB 2/2
REC LEVEL R
JACK PCB 2/3
MIC R
IC1 M5218L
IC2 AN7370
IC3 BA328
IC5 M5241BP
IC6 M5218L
IC7 AN6291
IC8 M5218L
Rch (SAME AS Lch)
ERASE HEAD
JACK PCB 3/3
PHONES
TO SYSCON
TO POWER SUPPLY
REMOTE
REC MODE
2SC2274K
2SC2320
2SD863
2SJ40
2SK30
2SD1012-V
2SA1115
2SC2603
2SC3399
PRE AMP PCB T2062A501A
+B (POWER SUPPLY) LINE
PB SIGNAL LINE
REC SIGNAL LINE
VOLTAGES ARE INDICATED AT PB MODE. (315Hz 0VU)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN µF 50 WV(J)
GX-A5X PREAMP
SCHEMATIC DIAGRAM
NO. 2-2 841026B



TR1,2.....2SC2320(E,F,G)
TR3.....2SC3399
TR4.....2SD863(E,F)
TR5.....2SC2603(G)
TR6,7.....2SD1012-V(G,H)
TR8.....2SK381
TR9.....2SC2320(E,F,G)
TR10,12....2SD1012-V(G,H)
TR11.....2SD863(E,F)
TR13,14....2SC2274K(F)
TR15,16....2SD1012-V(G,H)
TR20.....2SC2320(E,F,G)
TR21 to 24.2SJ40(C,D)
TR25 to 29.2SC2320(E,F,G)
TR30,31....2SA1115(E,F)
TR32 to 36.2SC2603(E,F)
TR37.....2SA1115(E,F)
TR38,39....2SC2603(E,F)

LOCATION OF COMPONENTS

IC's

IC1 ---------- C5
IC2 ---------- C3
IC2b ---------- D4
IC3 ---------- B4
IC4 ---------- A1
IC5 ---------- E1
IC6 ---------- D2
IC7 ---------- A3
IC8 ---------- B3

TR's

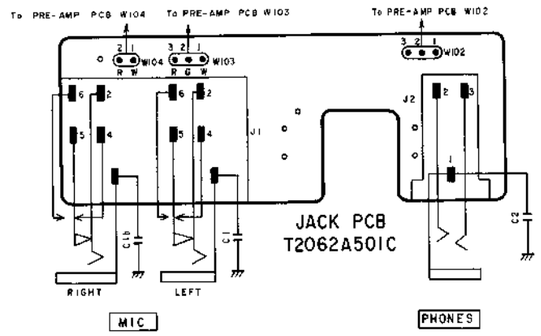
TR1,2 ---------- C4
TR1b,2b ---------- D4
TR3 ---------- E3
TR4 ---------- E5
TR5 ---------- A5
TR6,7 ---------- A4
TR6b,7b ---------- A5
TR8,9 ---------- B4
TR8b,9b ---------- B5
TR10,10b ---------- A1
TR11 to 14 ---------- E1
TR15,16 ---------- B2
TR15b,16b ---------- C2
TR20,20b ---------- D5
TR21,22,21b,22b ---- C2
TR23,24 ---------- A2
TR23b,24b ---------- A1
TR25 to 28 ---------- B2
TR25b ---------- B3
TR26b ---------- B4
TR27b,28b ---------- B3
TR29 ---------- A2
TR29b ---------- A4
TR30 to 32 ---------- B3
TR33 to 36 ---------- D3
TR37 to 39 ---------- E3

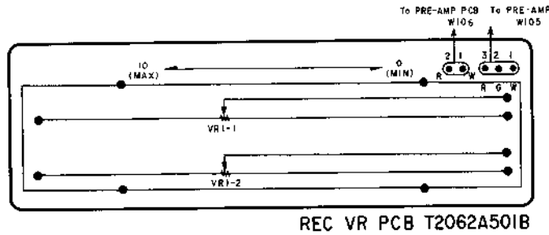
TERMINALS

J1(LINE IN, LINE OUT JACKS) ---- A2, A3
J2(REMOTE JACK) ---------- A5
P1 ---------- E2
P2 ---------- E5
P3-1 ---------- A4
P3-2 ---------- A5
P4 ---------- D1
W102 ---------- D2
W103, W104 ---------- C5
W105, W106 ---------- D5
W107 ---------- D2

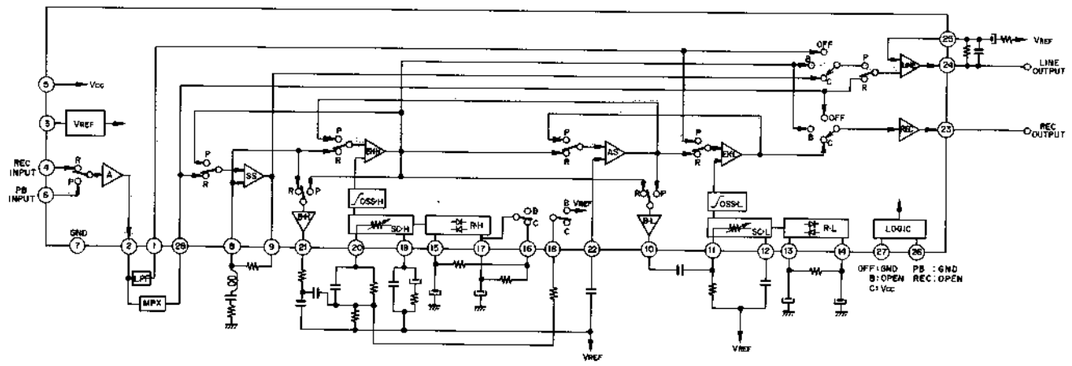
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

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

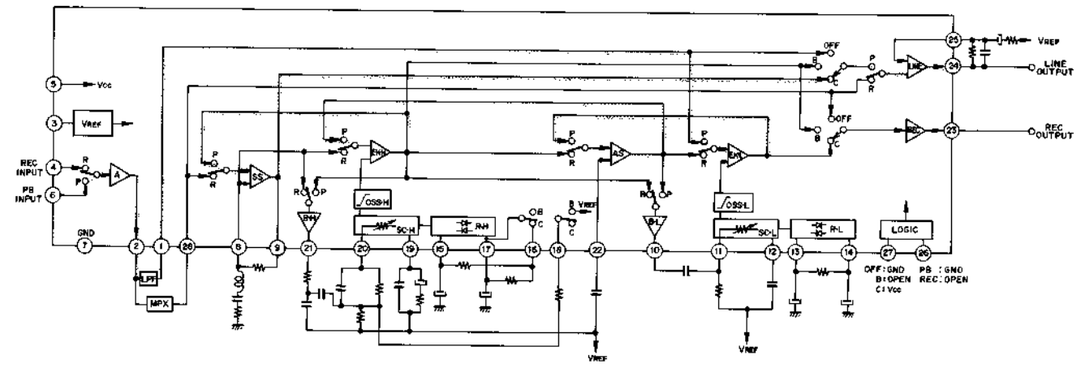




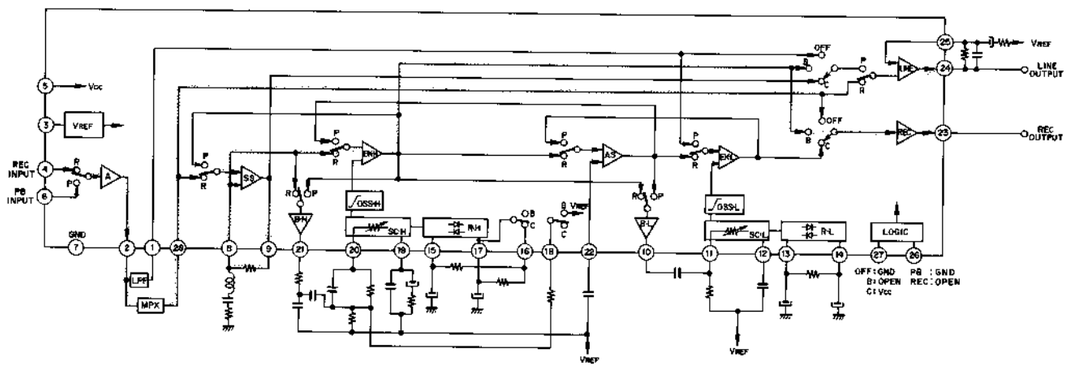
REC VR PCB T2062A501B



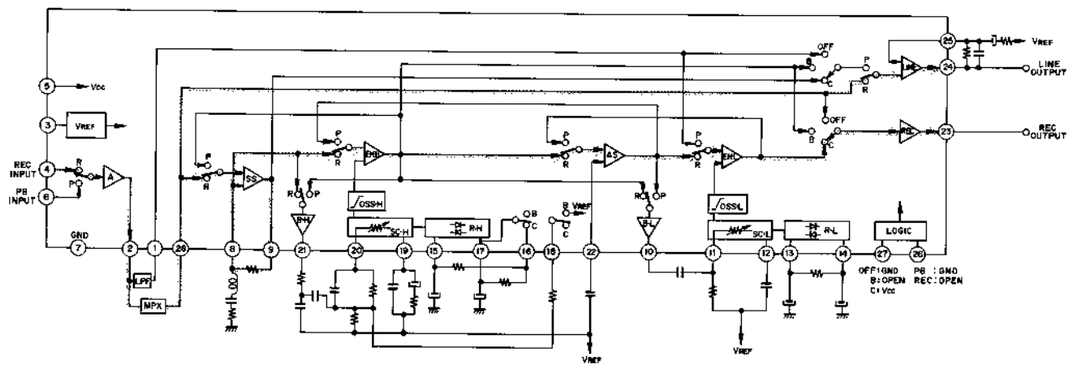
DOLBY-B PLAY MODE



DOLBY-C PLAY MODE



DOLBY-B REC MODE



DOLBY-C REC MODE