



STEREO CASSETTE DECK

MODEL **GXC-715D**

SECTION 1 SERVICE MANUAL	3
SECTION 2 PARTS LIST	29
SECTION 3 SCHEMATIC DIAGRAM	47

SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

I.	TECHNICAL DATA	4
II.	DISMANTLING OF UNIT	5
III.	CONTROLS	6
IV.	PRINCIPAL PARTS LOCATION	7
V.	CIRCUIT OPERATING PRINCIPLES	8
	1. SYSTEM CONTROL OPERATION	8
VI.	REEL TABLE DRIVE MECHANISM	14
VII.	MECHANISM ADJUSTMENT	15
	1. PLAY PLUNGER INSTALLATION POSITION ADJUSTMENT	15
	2. BRAKE PLUNGER INSTALLATION POSITION ADJUSTMENT	15
	3. PAUSE PLUNGER INSTALLATION POSITION ADJUSTMENT	15
	4. REC PLUNGER INSTALLATION POSITION ADJUSTMENT	16
	5. PINCH ROLLER PRESSURE MEASUREMENT	16
	6. FLYWHEEL LOOSE PLAY ADJUSTMENT	17
	7. TAPE SPEED ADJUSTMENT	17
VIII.	HEAD ADJUSTMENT	18
	1. TAPE GUIDE HEIGHT ADJUSTMENT	18
	2. RECORDING/PLAYBACK HEAD HEIGHT ADJUSTMENT	18
	3. RECORDING/PLAYBACK HEAD AZIMUTH ALIGNMENT ADJUSTMENT	19
IX.	AMPLIFIER ADJUSTMENT	20
X.	DC RESISTANCE OF VARIOUS COILS	23
XI.	CLASSIFICATION OF VARIOUS P.C BOARDS	23
	1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS	23
	2. COMPOSITION OF VARIOUS P.C BOARDS	24

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

I. TECHNICAL DATA

TRACK SYSTEM	4 Track, 2 Channel Stereo System
TAPE	Philips Type Cassette
TAPE SPEED	4.76 cm/s $\pm 1.0\%$ (1-7/8 ips $\pm 1.0\%$)
WOW & FLUTTER	Less than 0.04% WRMS, 0.12% (DIN 45 500)
FREQUENCY RESPONSE	35 to 14,000 Hz ± 3 dB using LN tape 35 to 14,000 Hz ± 3 dB using LH tape 35 to 15,000 Hz ± 3 dB using CrO ₂ (SA) tape 35 to 16,000 Hz ± 3 dB using FeCr tape
DISTORTION (1,000 Hz "0" VU)	Less than 1.0% using LN tape Less than 1.0% using LH tape Less than 1.5% using CrO ₂ (SA) tape Less than 1.5% using FeCr tape
SIGNAL TO NOISE RATIO	Better than 54 dB using LN tape Better than 54 dB using LH tape Better than 56 dB using CrO ₂ (SA) tape Better than 56 dB using FeCr tape (measured via tape with peak recording level) Dolby NR Switch ON: Improves up to 10 dB above 5 kHz
ERASE RATIO	Better than 65 dB [*]
BIAS FREQUENCY	85 kHz
HEADS	2: One GX Recording/Playback Head One Erase Head
MOTORS	2: One Electronically Speed Controlled DC Motor for Capstan Drive One DC Motor for Reel Drive
F.F. & REWIND TIME	70 sec. using a C-60 cassette tape
OUTPUT JACKS	Line 2: 410 mV (0 VU) Required load impedance: more than 20 kohms Phone 1: 100 mV/8 ohms
INPUT JACKS	Microphone 2: 0.25 mV (Input impedance 5.0 kohms) Required microphone impedance: 600 ohms Line 2: 70 mV (Input impedance 100 kohms)
DIN JACK	Input: 2 mV (Input impedance 10 kohms) Output: 410 mV Required load impedance: more than 20 kohms
DIMENSION	440(W) $\times$ 138(H) $\times$ 273(D) mm (17.3 $\times$ 5.4 $\times$ 10.8)"
WEIGHT	8.5 kg (18.8 lbs)
POWER REQUIREMENTS	100V, 50/60 Hz for Japan 120V/60 Hz for Canada & U.S.A. 110-120/220-240V (Switchable), 50/60 Hz for the other Countries

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

* "Dolby" and the Double D symbol are trademarks of Dolby Laboratories.
(Manufactured under license from Dolby Laboratories)

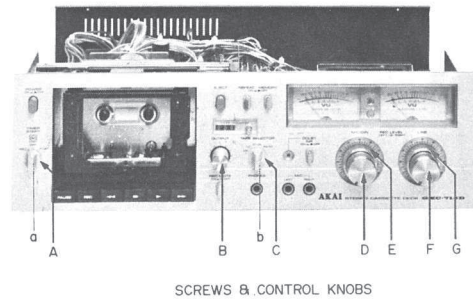
II. DISMANTLING OF UNIT

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

1



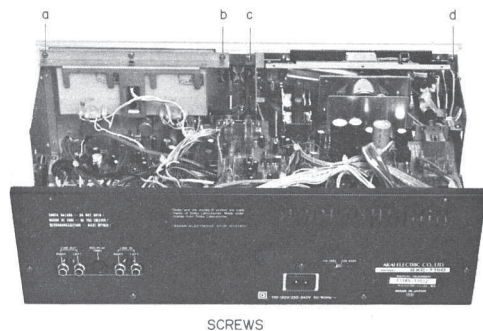
5



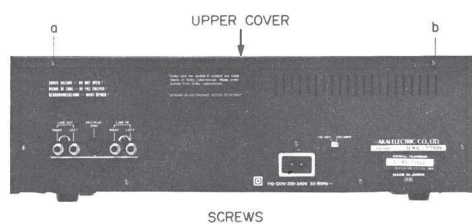
2



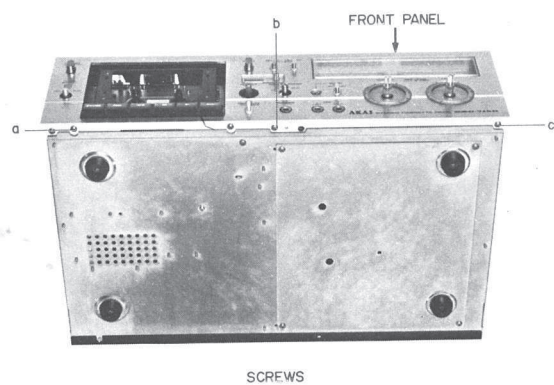
6



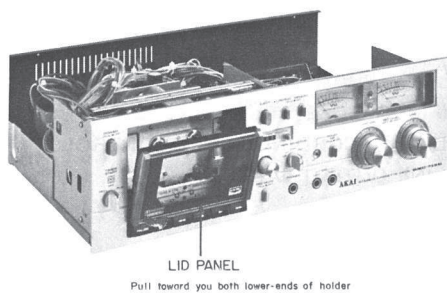
3



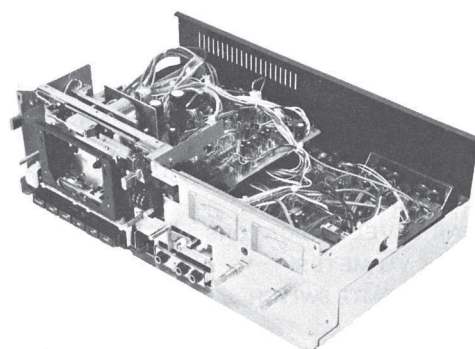
7



4



8



III. CONTROLS

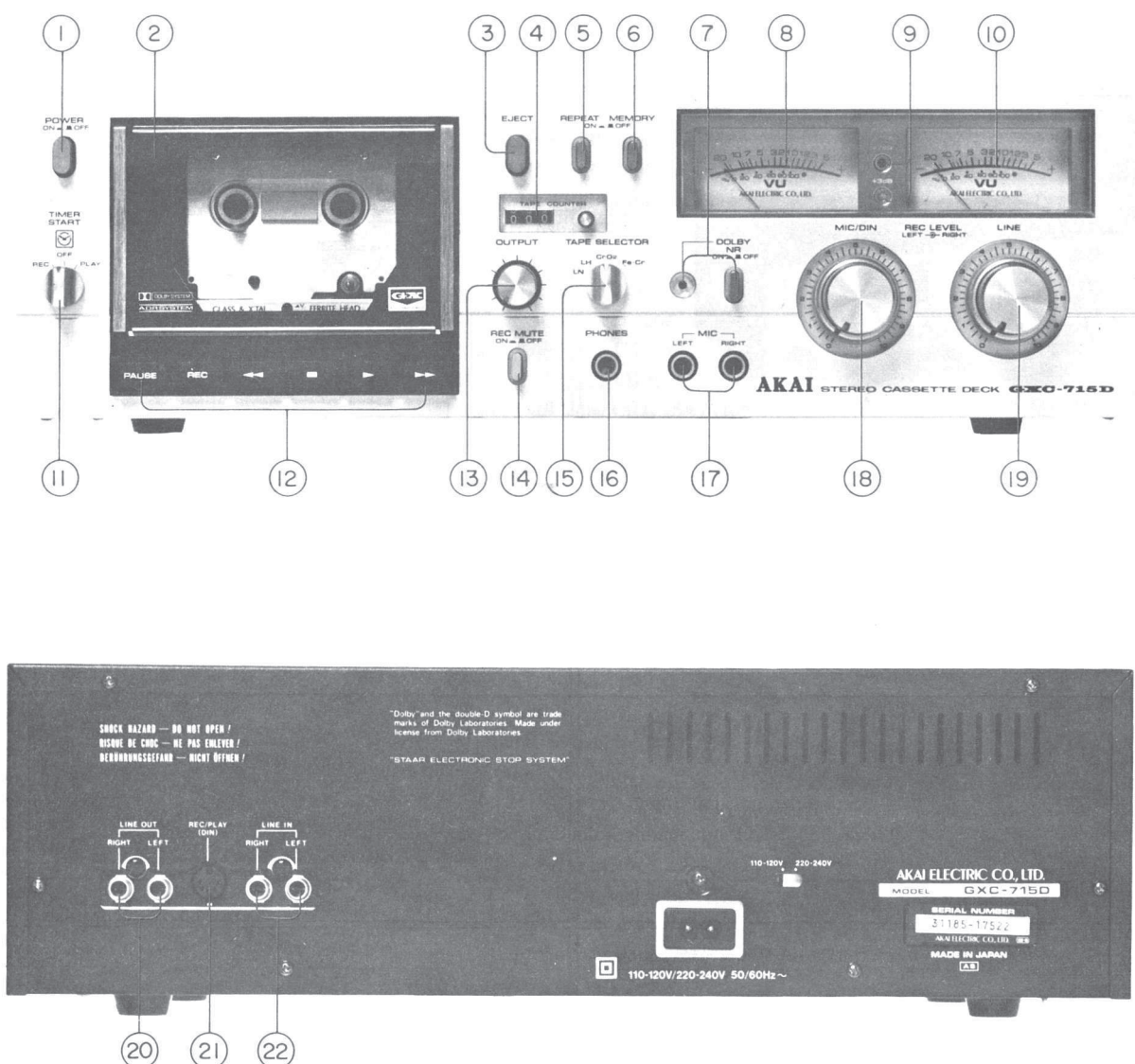


Fig. 1 Controls

- | | |
|---------------------------------------|---|
| 1. POWER SWITCH | 12. MODE BUTTONS |
| 2. CASSETTE RECEPTACLE | 13. OUTPUT LEVEL CONTROL |
| 3. EJECT BUTTON | 14. REC MUTE |
| 4. INDEX COUNTER AND RESET BUTTON | 15. TAPE SELECTOR |
| 5. REPEAT BUTTON | 16. HEADPHONE JACK |
| 6. MEMORY REWIND BUTTON | 17. MICROPHONE JACKS |
| 7. DOLBY NR SWITCH AND INDICATOR LAMP | 18. MICROPHONE RECORDING LEVEL CONTROLS |
| 8. LEFT VU METER | 19. LINE RECORDING LEVEL CONTROLS |
| 9. PEAK LEVEL INDICATORS | 20. LINE OUTPUT JACKS |
| 10. RIGHT VU METER | 21. DIN JACK |
| 11. TIMER START SWITCH | 22. LINE INPUT JACKS |

IV. PRINCIPAL PARTS LOCATION

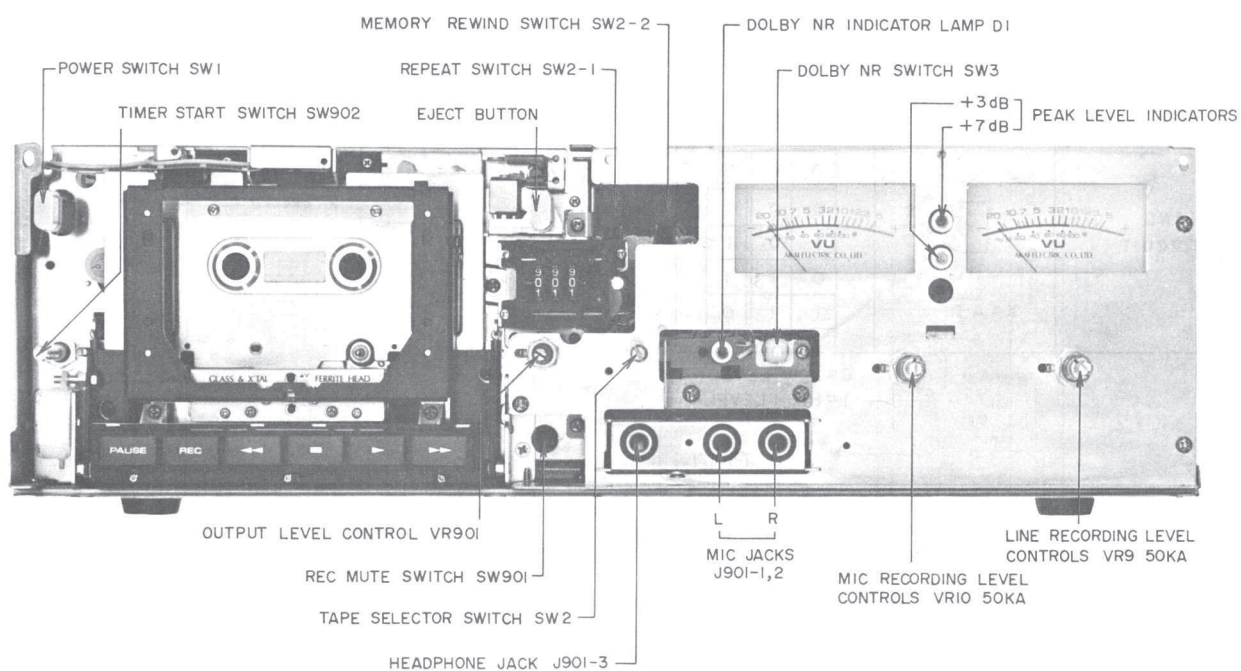


Fig. 2 Front View

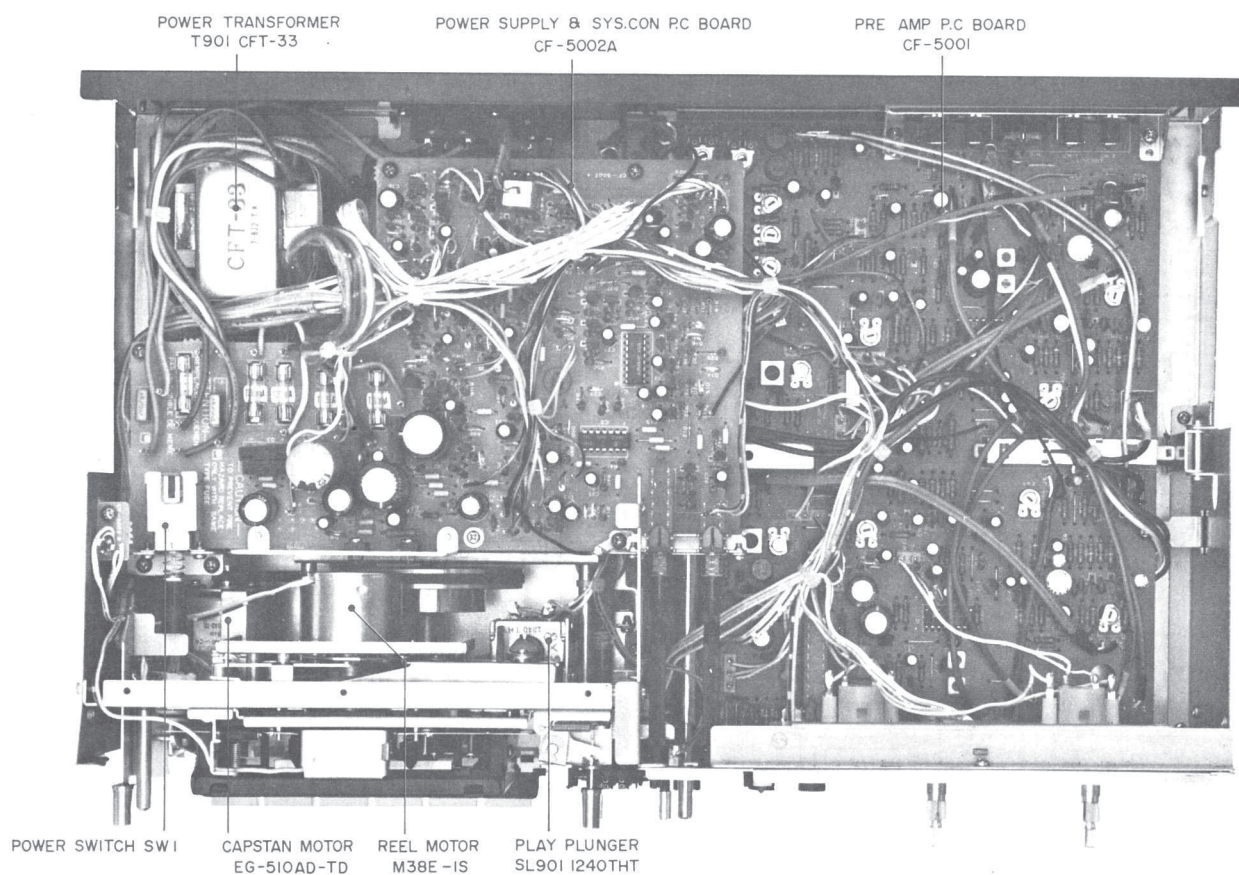
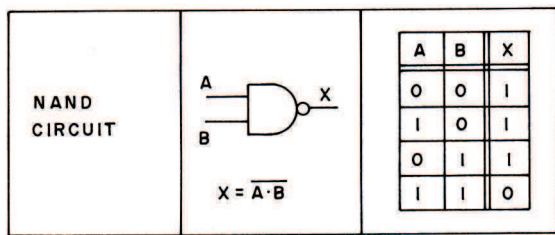


Fig. 3 Top View

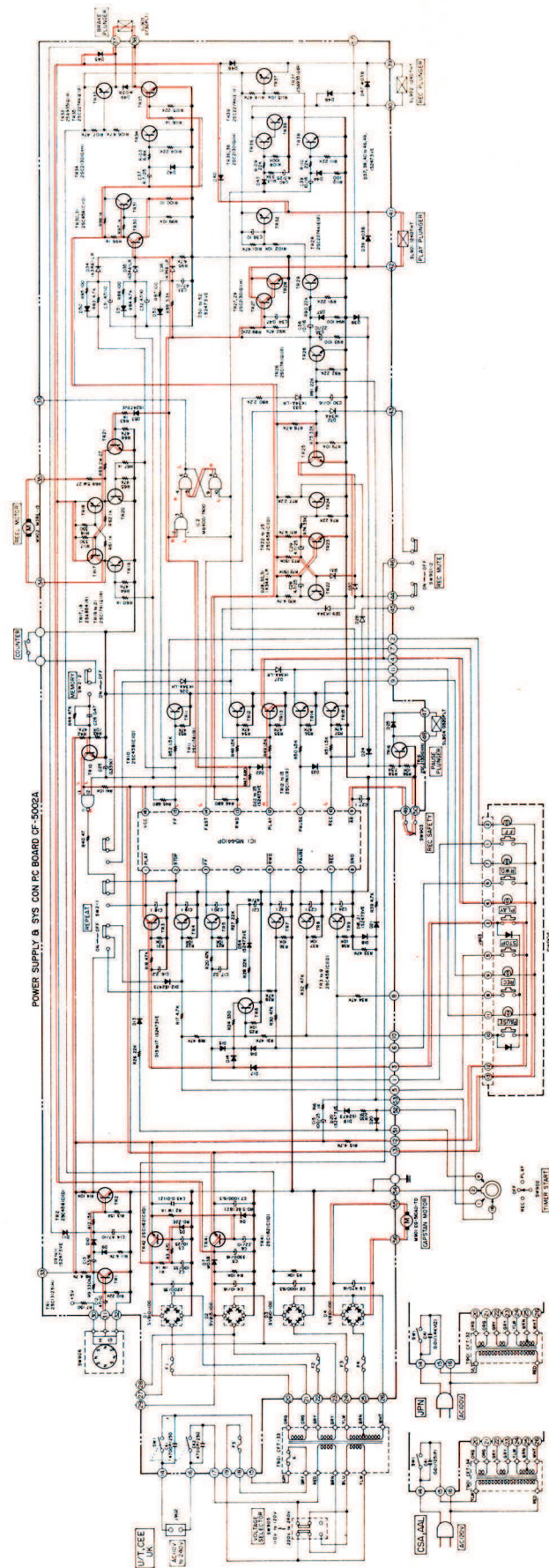
V. CIRCUIT OPERATING PRINCIPLES

1. SYSTEM CONTROL OPERATION

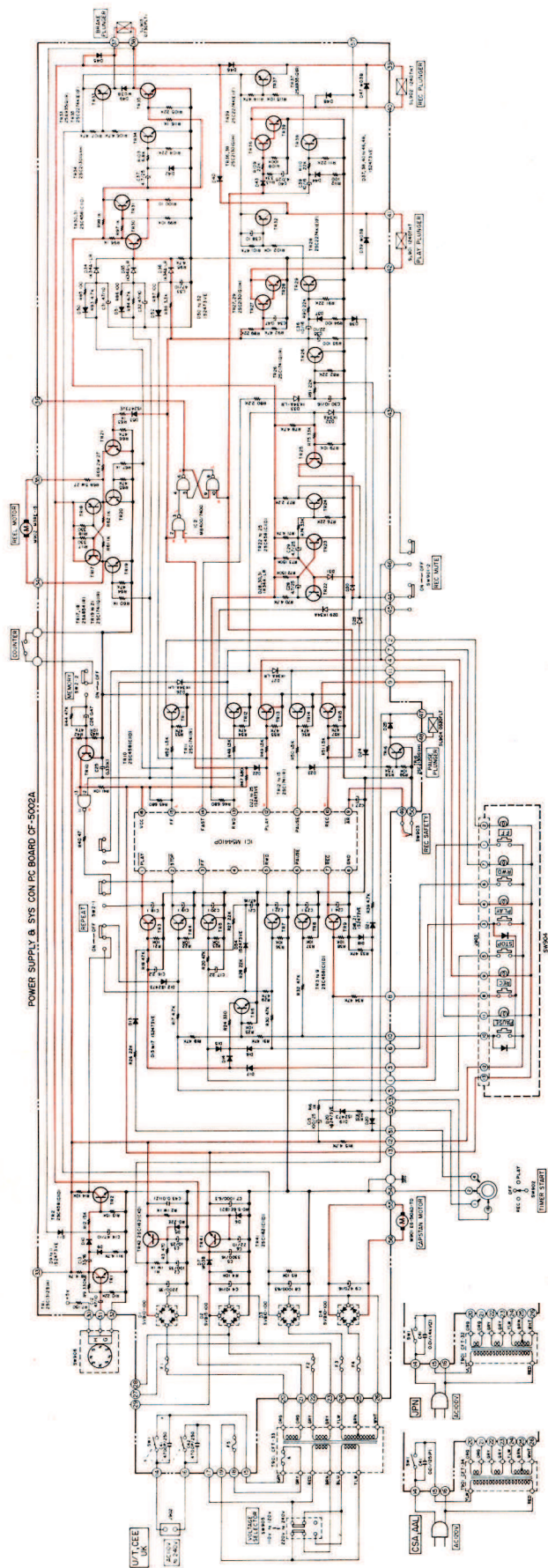


0 = LOW LEVEL
1 = HIGH LEVEL

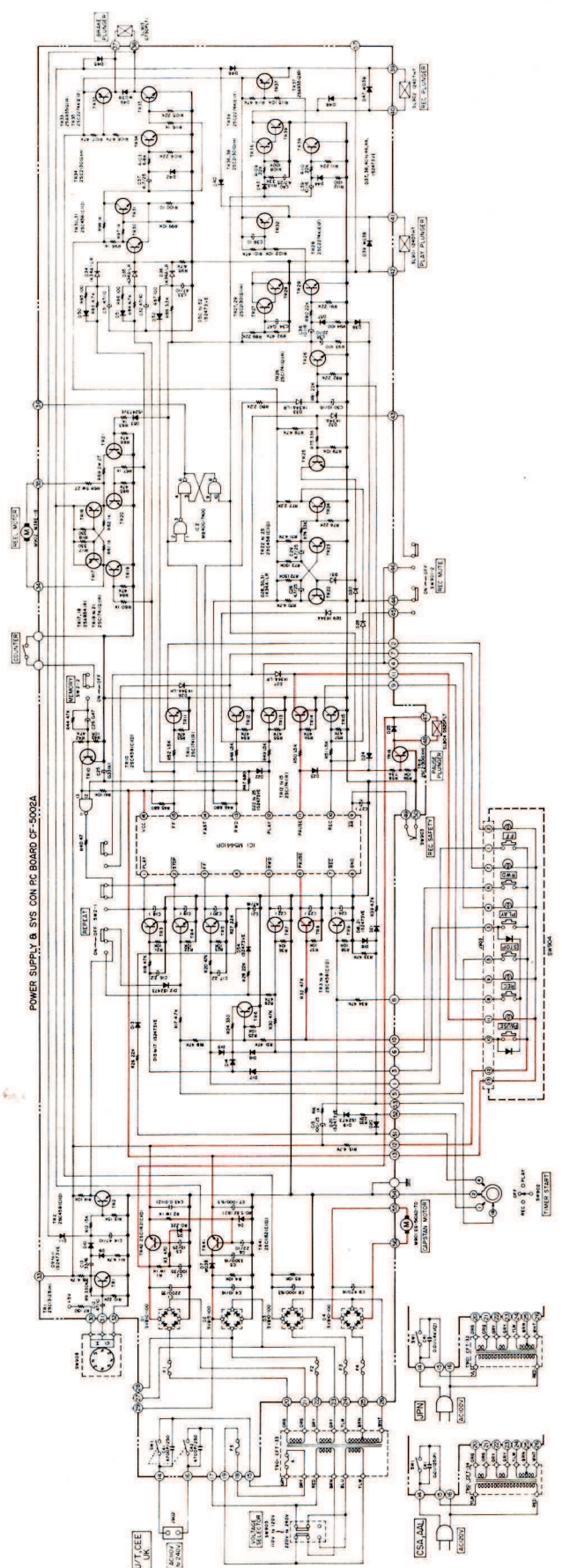
Chart-1



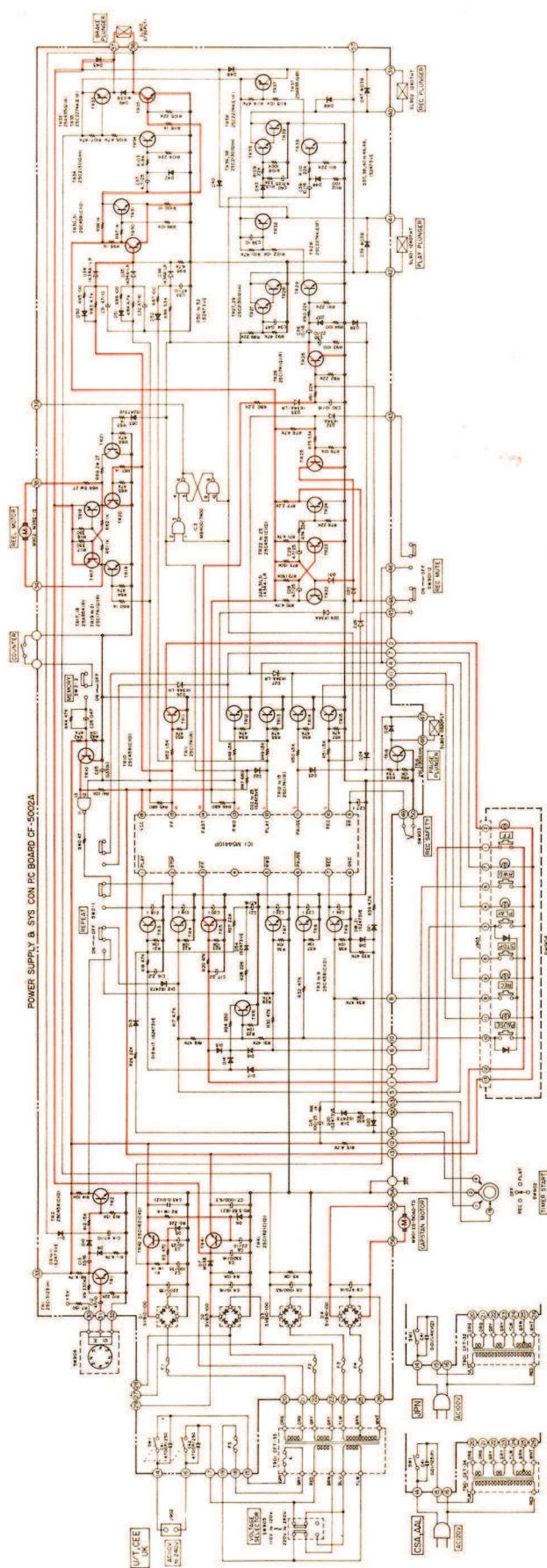
Schematic-1 PLAY MODE



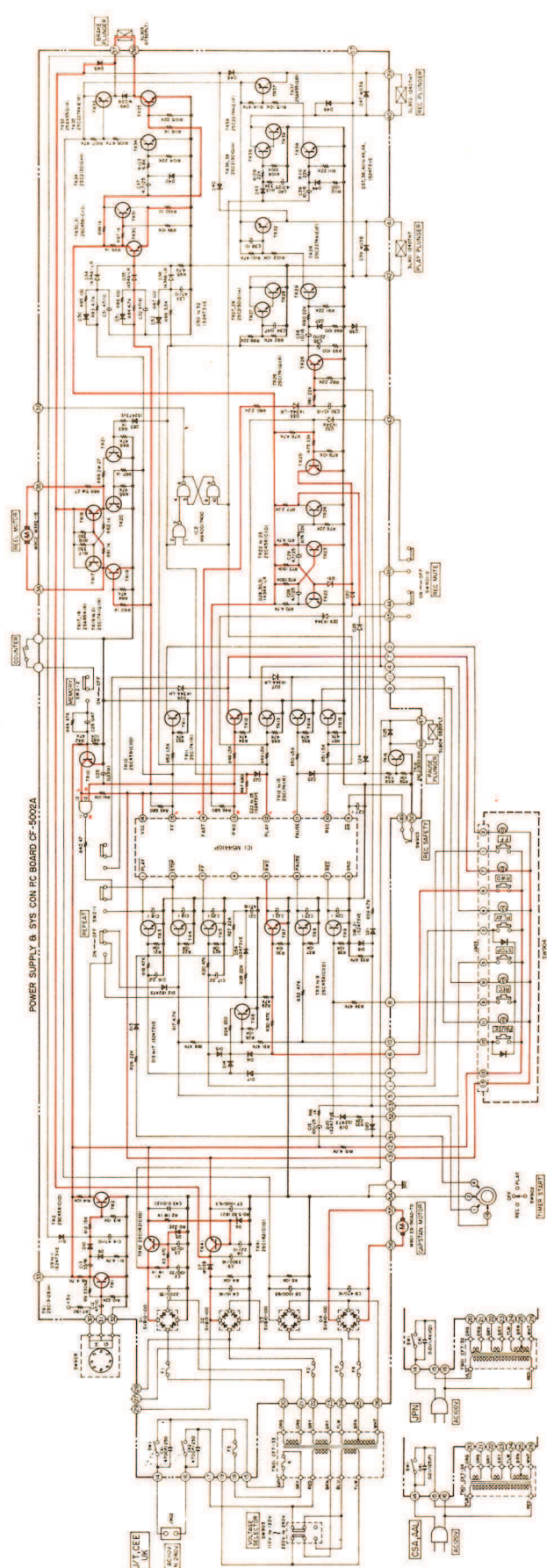
Schematic-2 REC/PLAY MODE



Schematic-3 PAUSE MODE



Schematic-4 FF MODE



Schematic-5 RWD MODE

1-1. CIRCUIT CONSTRUCTION OF IC1 M54410P

This logic IC has been developed for an operation key that will maintain a HIGH output level by even a momentary low level in the desired input terminal.

1) Block Diagram

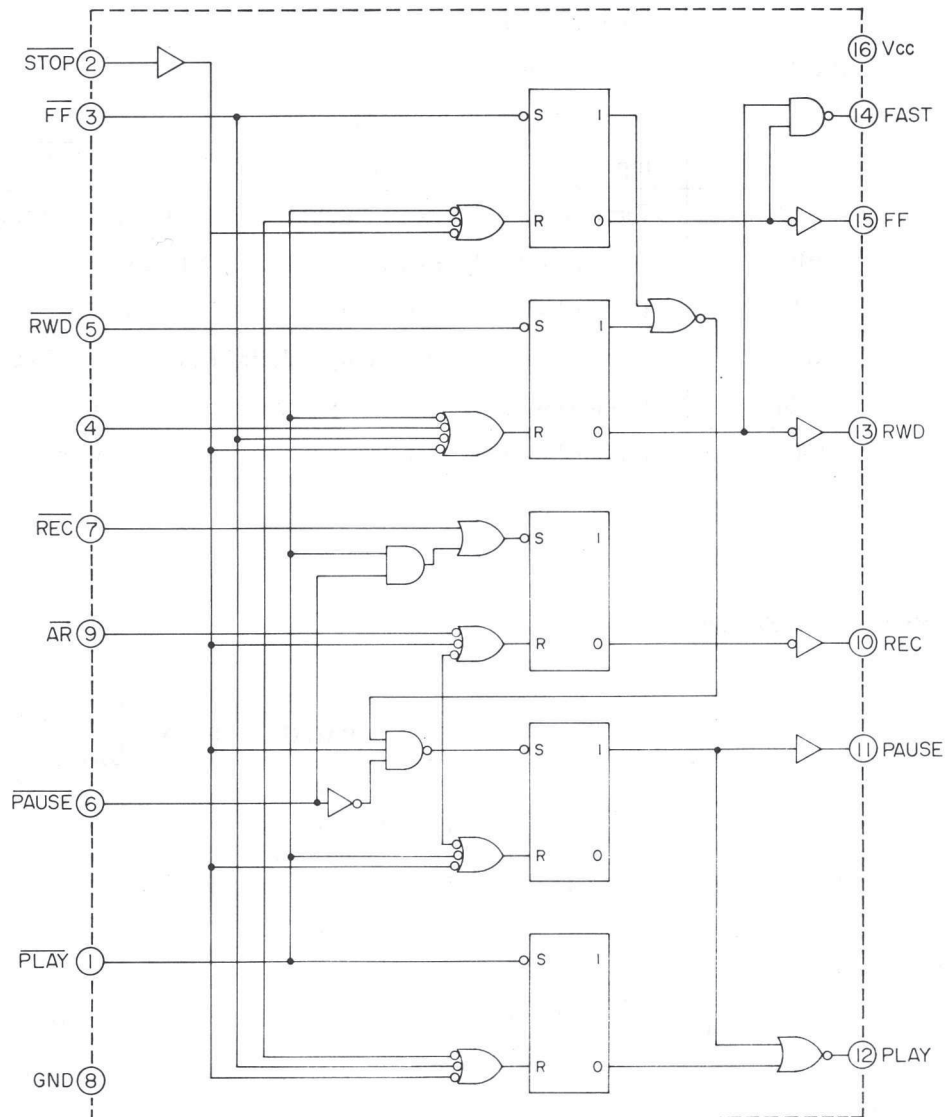


Fig.4 M54410P

2) Terminals and their functions

	Terminal Name	Terminal Function
Operation input terminals	$\overline{\text{STOP}}$	Input terminal for stopping operation
	$\overline{\text{FF}}$	Input terminal for fast forward
	$\overline{\text{RWD}}$	Input terminal for rewind
	$\overline{\text{REC}}$	Input terminal for recording
	$\overline{\text{PAUSE}}$	Input terminal for pause
	$\overline{\text{PLAY}}$	Input terminal for playback
Control input terminal $\overline{\text{AR}}$		Input terminal for preventing recording
Output terminals	FAST	Terminal with "H" signal output during fast forward or rewind mode
	FF	Terminal with "H" signal output during fast forward mode
	REW	Terminal with "H" signal output during rewind mode
	REC	Terminal with "H" signal output during REC/PLAY or REC/Pause mode
	PAUSE	Terminal with "H" signal output during pause mode
	PLAY	Terminal with "H" signal output during playback mode

Chart-2

3) Operation activated by each input

Input Signal	Output						Output Mode
	FAST	FF	REW	REC	PAUSE	PLAY	
$\overline{\text{STOP}}$	L	L	L	L	L	L	STOP Mode
$\overline{\text{FF}}$	H	H	L	L	L	L	FF Mode
$\overline{\text{REW}}$	H	L	H	L	L	L	REW Mode
$\overline{\text{PLAY}}$	L	L	L	L	L	H	PLAY Mode
$\overline{\text{PAUSE}}$	L	L	L	L	H	L	PAUSE Mode
$\overline{\text{REC/PLAY}}$	L	L	L	H	L	H	REC/PLAY Mode
$\overline{\text{REC/PAUSE}}$	L	L	L	H	H	L	REC/PAUSE Mode

Chart-3

- NOTES:**
1. The input signal is activated by the fall of $\overline{\text{L}}$.
 2. The output is maintained until the next input signal.
 3. $\overline{\text{AR}}$ is a control input terminal and the REC output is not "H" when $\overline{\text{AR}} = \text{"L"}$.
 4. When $\overline{\text{AR}} = \text{"L"}$ signal is supplied during the REC output is "H", REC output becomes "L".
 5. At the moment the power is on, all output will be "L" and the Stop mode will be effected.

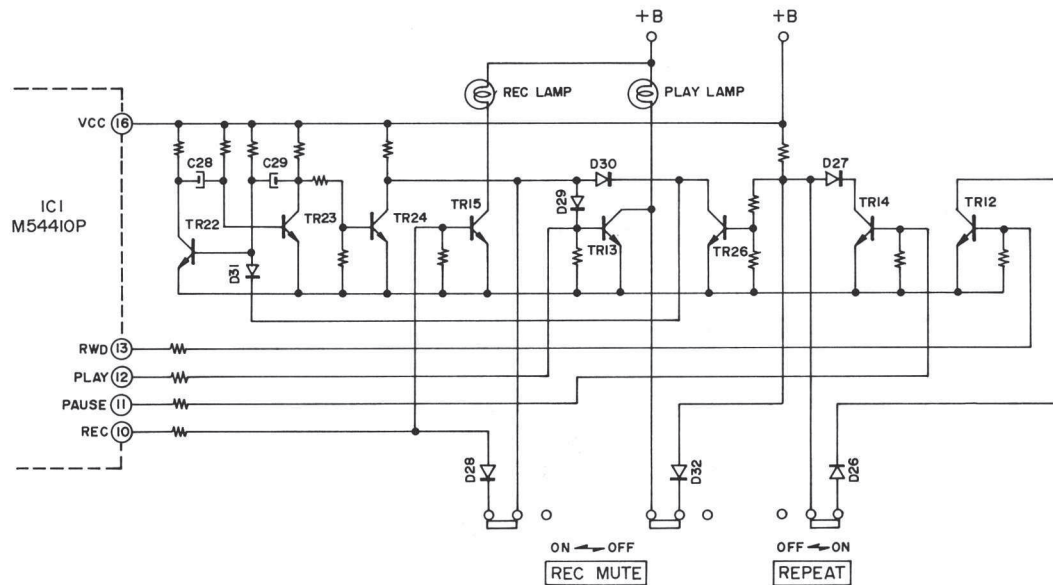


Fig. 5

1-2. PLAY AND RECORDING INDICATOR

LAMP CIRCUITS

At the Stop Mode, TR25 is ON and the output TR24 of the Astable Multivibrator is OFF. The Astable Multivibrator is made up of TR22 and TR23 which as held at OFF and ON conditions, respectively.

When the Pause Button is depressed, IC 1 Pause Output ⑪ reaches the "H" level and turns on TR14. This in turn reduces the base potential of TR25 and turns OFF TR25. When TR25 is turned OFF, the Astable Multivibrator made up of TR22 and TR23 starts to oscillate.

First, when TR25 is turned OFF; TR22 turns ON, TR23 turns OFF and TR24 turns ON. But because the base potential of TR23 rises by the means of C28; TR22 turns OFF, TR23 turns ON, and TR24 turns OFF again. The base potential of TR13 rises and turns ON TR13, and the Play Lamp illuminates at this time.

Next, TR22 base potential increases through C29; and TR22 turns ON, TR23 turns OFF, and TR24 turns ON again. This turns off the Play Lamp. The Play Lamp flashes resulting from repeated operation of the above.

When the Rewind Button is depressed with the Repeat Button ON, IC 1 Rwd Output ⑬ reaches

the "H" level and turns ON TR12. Because TR25 base potential becomes ground potential through D26, TR25 is cut OFF and the above operation takes place.

At Recording Mode; TR25 is ON, TR22 and TR23 of the Astable Multivibrator are held OFF and ON respectively, and the output of TR24 of the Astable Multivibrator is cut off. As IC 1 Rec Output 10 reaches the "H" level, TR15 turns ON and the Rec Lamp illuminates. Similarly, as IC 1 Play Output ⑫ reaches the "H" level, TR13 turns ON and Play Lamp illuminates. When the Rec Mute Button is depressed at this time, TR25 base potential becomes ground potential through D32 and turns TR25 OFF. Astable Multivibrator made up of TR22 and TR23 thereby oscillates because TR22 turns ON, TR23 turns OFF and TR24 turns ON when the TR25 turns OFF and increases the TR22 base potential. During the time TR24 is ON, TR15 base potential becomes ground potential through D28 and TR15 is cut off. The Rec Lamp is thus turned OFF.

Later TR23 base potential increases through C28 and turns off TR22, TR23 ON and TR24 OFF. While TR24 is OFF TR15 turns ON again and Rec Lamp illuminates. The Rec Lamp flashes as a result of repeated above operation.

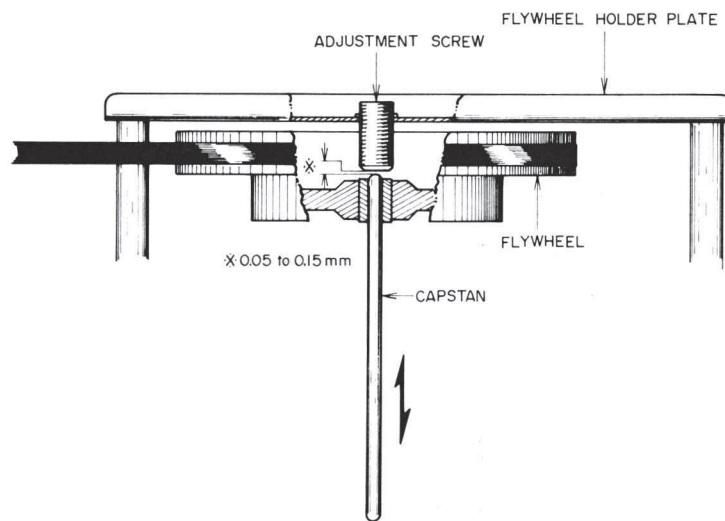


Fig. 13 Flywheel Loose Play Adjustment

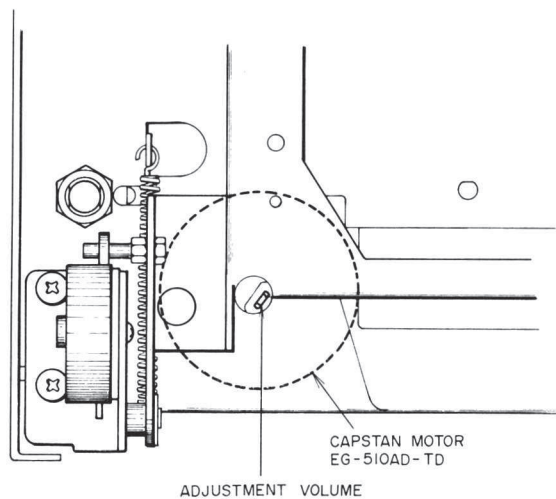


Fig. 14 Tape Speed Adjustment

6. FLYWHEEL LOOSE PLAY

ADJUSTMENT (Refer to Fig. 13)

Adjust by turning flywheel loose play adjustment screw to obtain a 0.05 to 0.15 mm of loose play when the flywheel is moved as indicated by the arrow mark. Paint lock the adjustment screw after adjustment.

7. TAPE SPEED ADJUSTMENT

Connect the frequency counter to the line output terminals. Playback a 1,000 Hz prerecorded test tape and adjust tape speed adjustment volume to obtain a tape speed of 1,000 Hz $\pm$ 1%.

VII. MECHANISM ADJUSTMENT

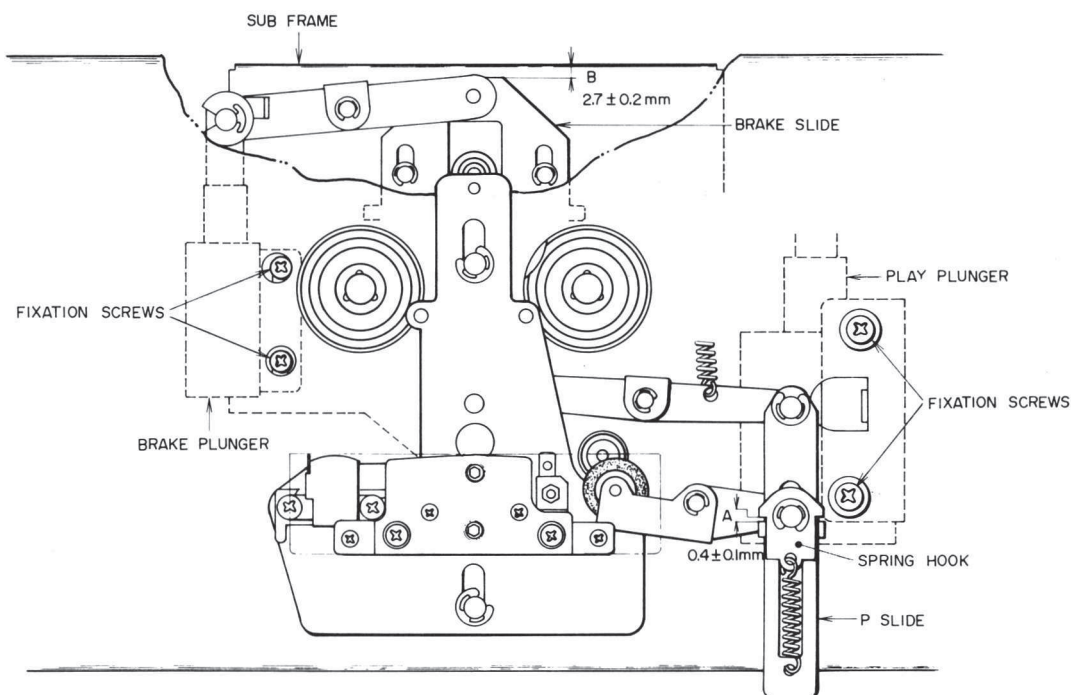


Fig. 9

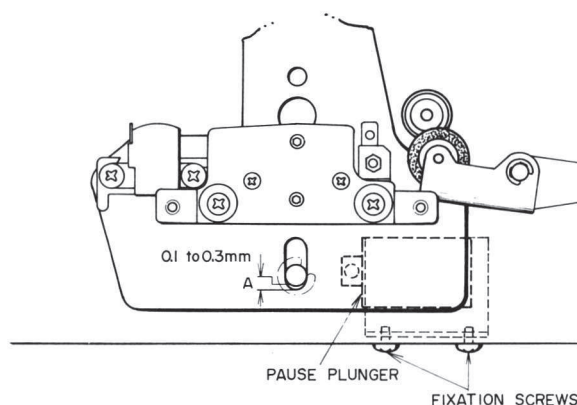


Fig. 10

1. PLAY PLUNGER INSTALLATION

POSITION ADJUSTMENT (Refer to Fig. 9)

Put in Play Mode. Adjust by turning the two screws holding the Play Plunger so that there is a gap (A) of $0.4 \pm 0.1 \text{ mm}$ between the bendable part of the P slide and the Spring Hook.

2. BRAKE PLUNGER INSTALLATION

POSITION ADJUSTMENT (Refer to Fig. 9)

Put in a mode where the brake is off (for example REW). Adjust by turning the 2 screws which hold the brake plunger so that there is a gap (B) of $2.7 \pm 0.2 \text{ mm}$ between the tip of the brake slide and the sub frame.

3. PAUSE PLUNGER INSTALLATION

POSITION ADJUSTMENT (Refer to Fig. 10)

Adjust by turning the two screws holding the Pause Plunger so that there is a head base fall leeway of $0.1 \text{ to } 0.3 \text{ mm}$ when going into the Pause mode from the Play Mode. (In Fig. 10 the specified distance is A).

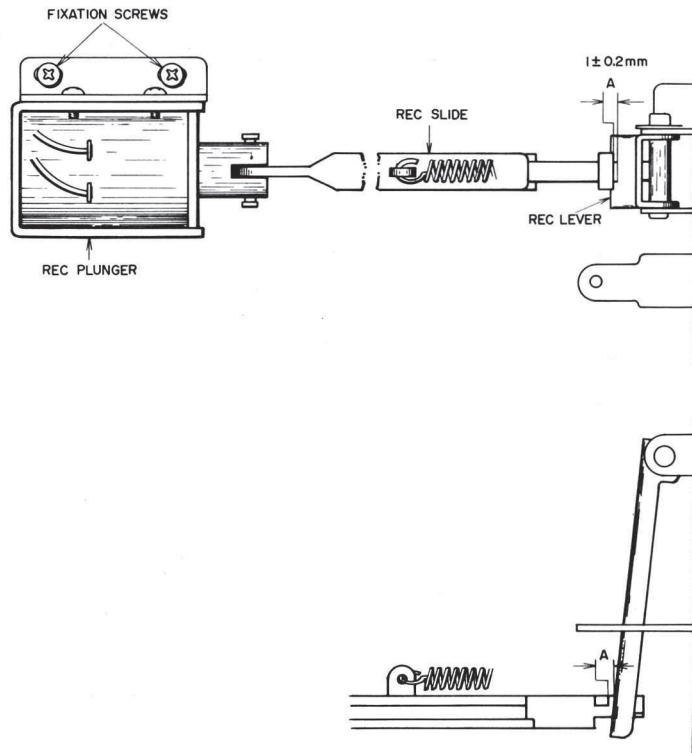


Fig. 11

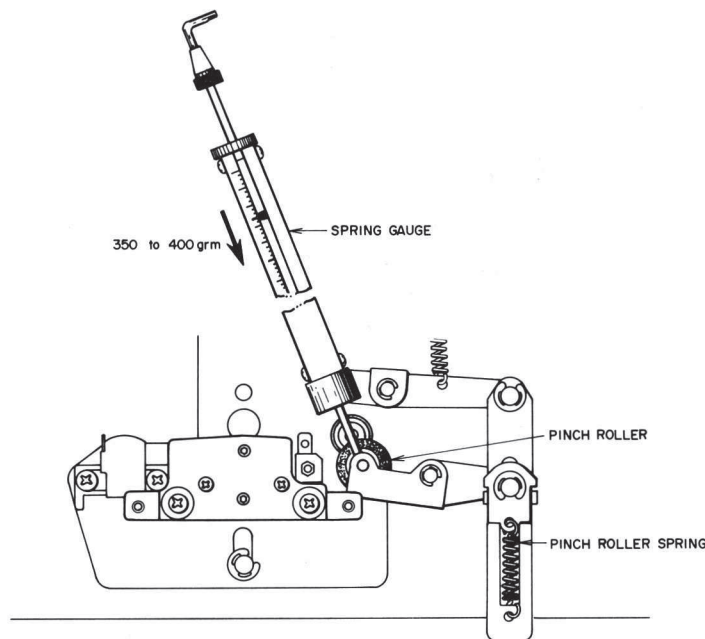


Fig. 12 Pinch Roller Pressure Measurement

4. REC PLUNGER INSTALLATION

POSITION ADJUSTMENT (Refer to Fig. 11)

Put in REC Mode. Adjust the 2 screws holding the REC Plunger so that there is a gap (A) of 1 ± 0.2 mm between the tip of the REC slide and the REC lever.

5. PINCH ROLLER PRESSURE

MEASUREMENT (Refer to Fig. 12)

At playback mode, push the pinch roller with a spring gauge until the pinch roller separates from the capstan by about 1 mm to 2 mm and then gently return. Take a reading of the spring gauge indication at the moment the pinch roller touches the capstan and begins to rotate.

Specified Pinch Roller Pressure: 350 to 400 gm
In case specified pressure cannot be attained, replace the pinch roller spring.

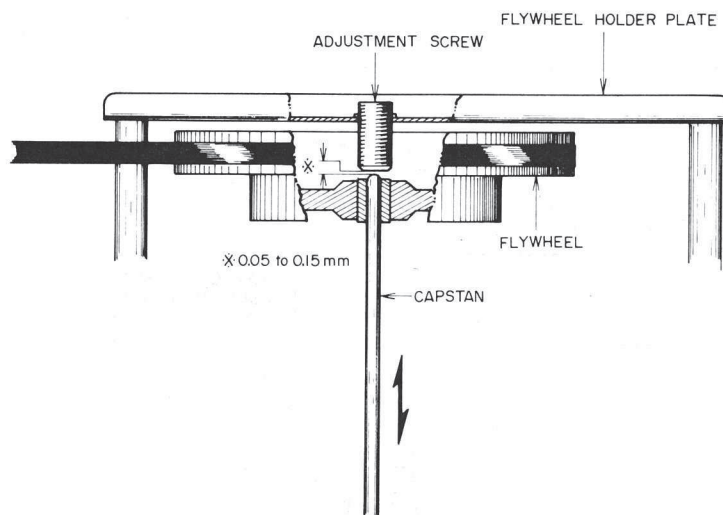


Fig. 13 Flywheel Loose Play Adjustment

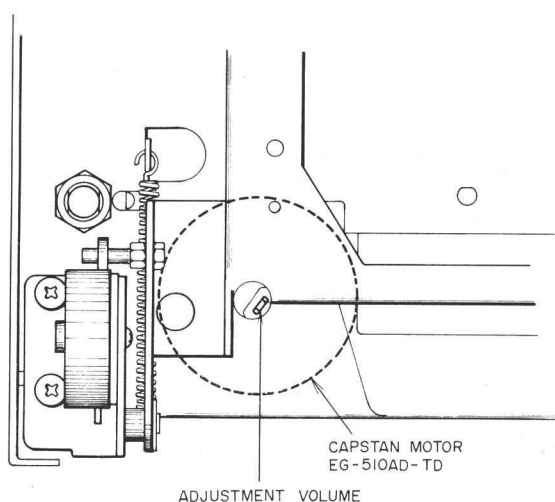


Fig. 14 Tape Speed Adjustment

6. FLYWHEEL LOOSE PLAY

ADJUSTMENT (Refer to Fig. 13)

Adjust by turning flywheel loose play adjustment screw to obtain a 0.05 to 0.15 mm of loose play when the flywheel is moved as indicated by the arrow mark. Paint lock the adjustment screw after adjustment.

7. TAPE SPEED ADJUSTMENT

Connect the frequency counter to the line output terminals. Playback a 1,000 Hz prerecorded test tape and adjust tape speed adjustment volume to obtain a tape speed of 1,000 Hz $\pm$ 1%.

VIII. HEAD ADJUSTMENT

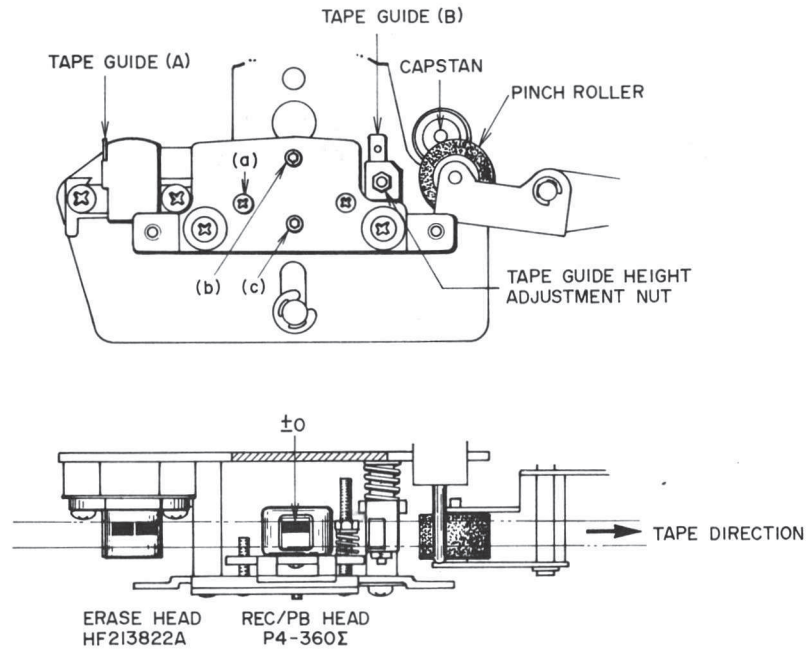


Fig. 15 Head Adjustment

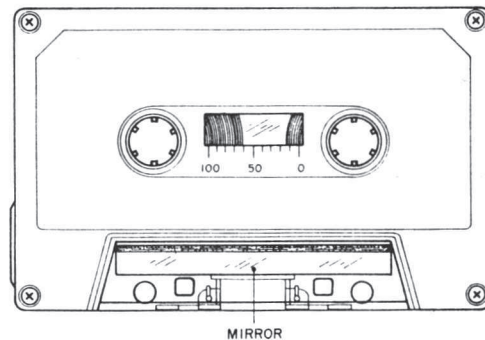


Fig. 16

1. TAPE GUIDE HEIGHT ADJUSTMENT

(Refer to Figs. 15, 16)

- 1) When using an ordinary cassette, the tape guides and heads, etc. are not visible. As shown in Fig. 16 use a cassette tape from which part of the cassette case has been cut out and a mirror installed for easy visibility of the head area when making tape guide height adjustment.
- 2) At playback mode, using the Tape guide (A) shown in Fig. 15 as standard for height, adjust tape guide (B) height with tape guide height adjustment nut so that the tape runs smoothly and does not catch on the tape guides.

2. RECORDING/PLAYBACK HEAD HEIGHT

(Refer to Figs. 15, 16)

- 1) Utilize the cassette tape used in Tape Guide Height Adjustment above, and playback the leader tape part of cassette tape.
- 2) As shown in Fig. 15, adjust head height with screws (a), (b) and (c) until the upper edge of the tape is the same height as the upper edge of the left channel REC/PB head core.
- 3) After completing adjustment step 2, playback the Head Height Adjustment tape (4 track, 1,000 Hz) and adjust Head Height Adjustment screws (a), (b), (c) to put the output power from both channels to maximum.

3. RECORDING/PLAYBACK HEAD AZIMUTH ALIGNMENT ADJUSTMENT

(Refer to Fig. 15)

- 1) Playback a 10 kHz pre-recorded cassette azimuth alignment test tape and adjust screw (a) shown in Fig. 15 to obtain maximum output on both channels.
- 2) Invert cassette and confirm that the output level does not change from that obtained in Item 3-1) above. If the output level differs, adjust in the same way as in Item 3-1) above until both sides of the test tape display equal output.
- 3) After adjustment, better to check again head height and azimuth alignment.

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.
4. When a mirror installed cassette test tape as shown in Fig. 16 is required, it can be ordered from AKAI Electric Co.

IX. AMPLIFIER ADJUSTMENT

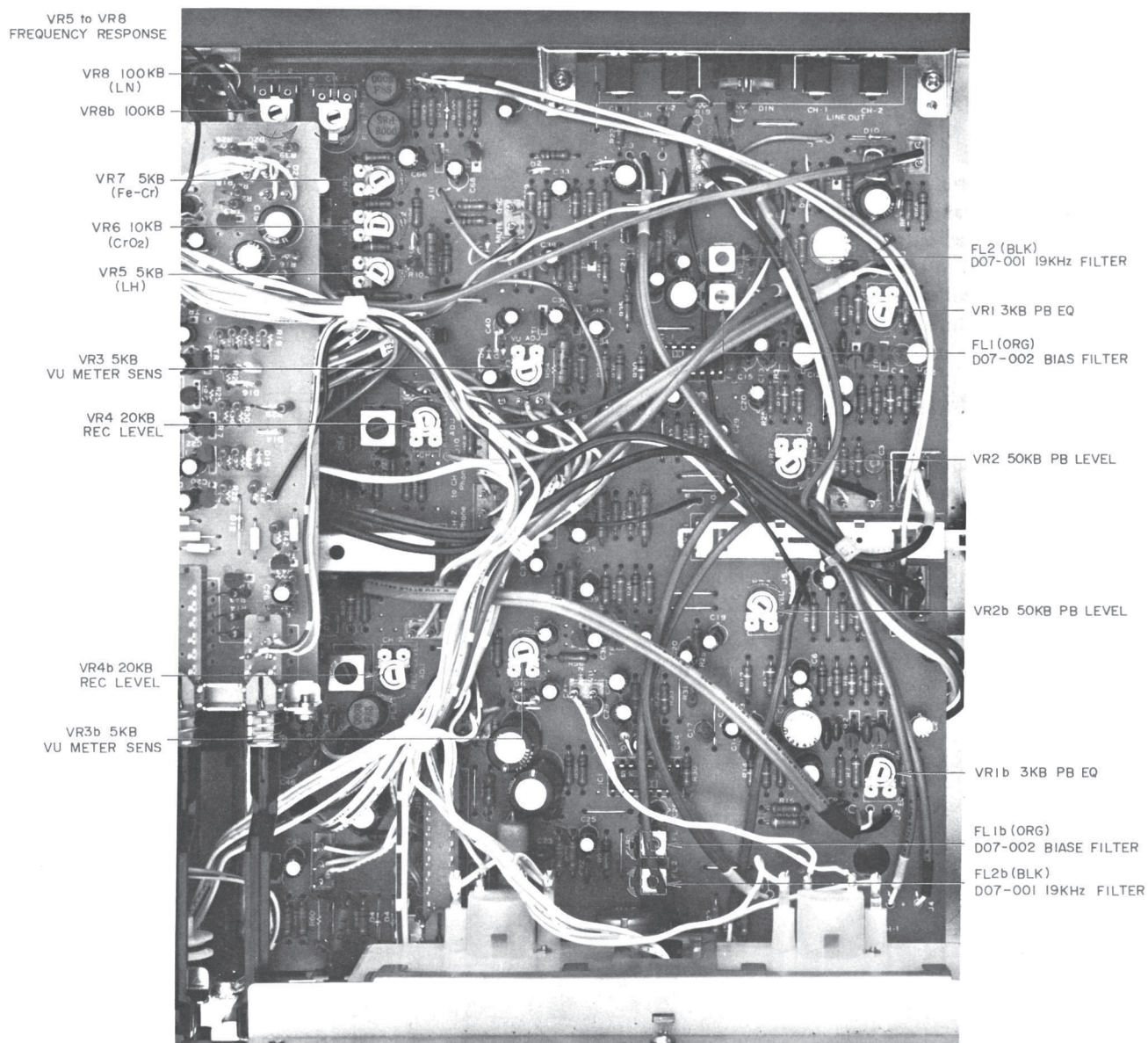


Fig. 17 Pre Amp P.C Board CF-5001

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Result	Remarks
1	Playback level adjustment	333 Hz, 0 VU Test Tape	PLAY	VR2 50 k Ω	-5.5 ± 0.5 dBm (410 mV)	
2	VU Meter sensitivity adjustment	333 Hz, 0 VU Test Tape	PLAY	VR3 5 k Ω	0 VU indication	
3	Playback equalizer adjustment	10 kHz Test Tape	PLAY	VR1 3 k Ω	-19.5 ± 0.5 dBm	
4	LN Position frequency response adjustment	Low Noise Blank tape 1,000 Hz, 10,000 Hz, -25.5 dBm recording	REC/PLAY	VR8 100 k Ω	1,000 Hz to 10,000 Hz flat response	
5	LH Position frequency response adjustment	LH Blank tape, 1,000 Hz 10,000 Hz -25.5 dBm recording	REC/PLAY	VR5 5 k Ω	1,000 Hz to 10,000 Hz flat response	Set tape selector to LH. (Refer to NOTE 6)
6	CrO ₂ Position frequency response adjustment	CrO ₂ Blank tape, 1,000 Hz 10,000 Hz, -25.5 dBm recording	REC/PLAY	VR6 10 k Ω	1,000 Hz to 10,000 Hz flat response	Set tape selector to CrO ₂ . (Refer to NOTE 6)
7	Fe-Cr Position frequency response adjustment	Fe-Cr Blank tape 1,000 Hz, 10,000 Hz -25.5 dBm recording	REC/PLAY	VR7 5 k Ω	1,000 Hz to 10,000 Hz flat response	Set tape selector to Fe-Cr. (Refer to NOTE 6)
8	Recording level adjustment	Low Noise Blank tape, 1,000 Hz -5.5 dBm recording	REC/PLAY	VR4 20 k Ω	-5.5 ± 0.5 dBm (410 mV)	
9	Distortion Factor Confirmation	1,000 Hz -5.5 dBm recording	REC/PLAY	LN: Less than 1.0% LH: Less than 1.0% CrO ₂ : Less than 1.5% Fe-Cr: Less than 1.5% (Refer to NOTE 7)		
10	Bias Filter adjustment	No signal Input	REC	FL1 D07-002 (ORG)	Minimum AC voltmeter indication	Recording volume to maximum. (Refer to NOTE 9)
11	19 kHz filter adjustment	19 kHz from an oscillator	REC	FL2 D07-001 (BLK)	Minimum AC voltmeter indication	DOLBY NR Switch to ON. (Refer to NOTES 8, 9)

Chart-4

-
- NOTES:**
1. Output Level Control should be at maximum.
 2. Because each of these adjustments are vital to perfect Dolby N.R. circuit operation, be sure that they are carried out with as little error as possible.
 3. Except for Steps 5 thru 7 and 9 set tape selector to Low Noise position.
 4. Except for Step 11, set Dolby N.R. switch to OFF position.
 5. Use the following cassette measuring tapes:
 - LN Tape: Fuji FL C-60
 - LH Tape: Maxell UD C-60
 - CrO₂ Tape: TDK SA C-60
 - Fe-Cr Tape: SONY Duad C-60
 6. If a flat characteristic cannot be obtained from 1,000 Hz to 10,000 Hz at LH, CrO₂, or Fe-Cr positions, fine adjust at VR5 (LH), VR6 (CrO₂), or VR7 (Fe-Cr) respectively.
 7. If it does not comply with the specifications, repeat Steps 4 to 8 and re-adjust.
 8. Adjust the oscillators frequency to give a frequency counter reading of 19.00 kHz.
 9. Unless the core is moved intentionally this adjustment is not necessary.

X. DC RESISTANCE OF VARIOUS COILS

Parts	Designation	DC Resistance
Recording/Playback Head	P4-360Σ	370 ohms
Erase Head	HF213822A	4.5 ohms
Play Plunger Solenoid Rec Plunger Solenoid	1240THT	120 ohms ±10%
Pause Plunger Solenoid	0520FLT	600 ohms ±10%
Brake Plunger Solenoid	0730PLTI	200 ohms ±10%

Chart-5

XI. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

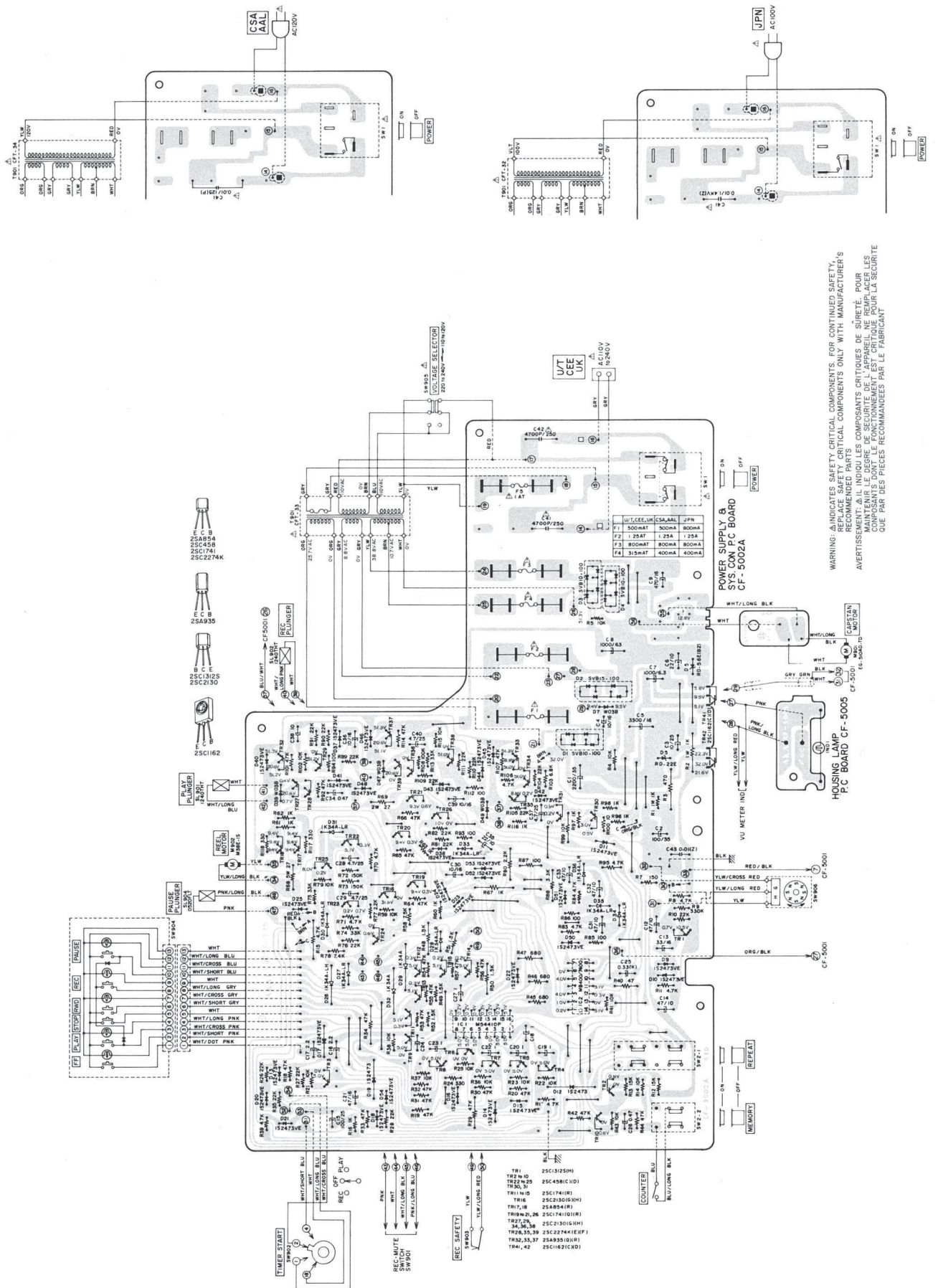
P.C Board Title	P.C Board Number
Pre Amp P.C Board	CF-5001
Power Supply & Sys. Con P.C Board	CF-5002A
Dolby Lamp P.C Board	CF-5003
Peak Lamp P.C Board	CF-5004
Housing Lamp P.C Board	CF-5005

Chart-6

24

**1) PRE AMP P.C BOARD CF-5001 (4ED), PEAK LAMP
P.C BOARD CF-5004 & DOLBY LAMP P.C BOARD CF-5003**

2) POWER SUPPLY & SYS. CON P.C BOARD CF-5002A (4ED) & HOUSING LAMP P.C BOARD CF-5005



SECTION 2

PARTS LIST

TABLE OF CONTENTS

1. RECOMMENDED SPARE PARTS LIST	32
2. HEAD BASE BLOCK	34
3. SUB FRAME BLOCK	35
4. MECHA BLOCK (1)	36
5. MECHA BLOCK (2)	37
6. MECHA BLOCK (3)	39
7. P.C BOARDS	40
(1) PRE AMP P.C BOARD BLOCK	40
(2) POWER & SYS. CON P.C BOARD BLOCK	41
8. AMP BLOCK	42
9. FINAL ASSEMBLY BLOCK	44
10. LIST OF INTERCHANGEABLE SEMICONDUCTORS	45
INDEX	46

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

HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read List

The reference number corresponds with illustration or photo number of that particular parts list.

This number corresponds with the Figure Number.

This number corresponds with the individual parts index number in that figure.

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

Schematic Diagram Number of individual manufactured part.
(not required for parts order)

Ref. No.	Parts No.	Description	Schematic No.
FLYWHEEL BLOCK #13			
12-115x	800425	Flywheel Block Assy. Comp.	RDG #13
12-116	244506	Flywheel Only	RD-233
12-117x	244754	Felt, Flywheel	RD-275
12-118	251324	Main Metal Case	RD-236
12-119	253080	Main Metal	RD-237

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of Components of the Schematic Diagram or Service Manual.
5. Please utilize separate "Common List for Service Parts" for Resistor Parts orders.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. 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. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

CAUTION:

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 Service Manual (Basic Parts List) may be partially changed, please use this parts list for all future reference.

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

AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

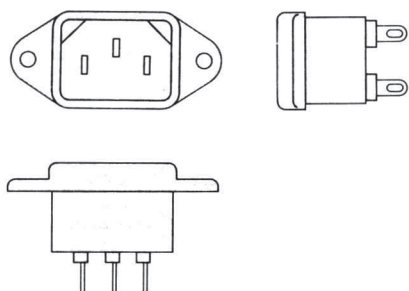
AC INLET SYSTEM

This model is equipped with an AC INLET SYSTEM. Please refer to the AC INLET SYSTEM CHART below for the specific type. By the AC INLET SYSTEM, AC (mains) cord can be connected to and disconnected from the model because the model is provided with socket exclusively for AC (mains) cord on its main body.

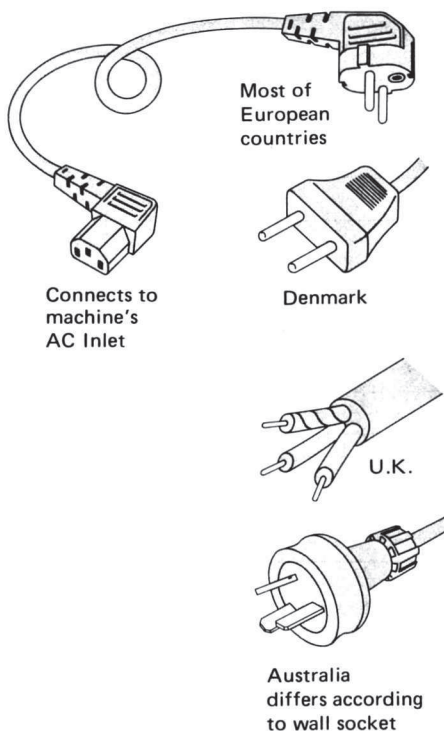
Please note, however, that certain models are not equipped with this system and has a built-in AC (mains) cord as before.

AC INLET SYSTEM CHART

CLASS I

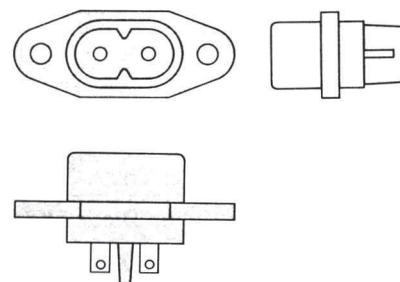


Picture 1
AC INLET
to be
installed
on machines



CLASS II

⊠ This mark indicating double insulation will be attached to machine's rear panel



Connects to
machine's
AC Inlet

Most of the
European
countries

Picture 2
AC (mains)
cord



Parts List for AC (mains) Cord Set

Standard		Description	Type of AC Inlet	Parts No.
Class I	CEE	Cord Set CEE (3 cores)	3P	EW302993
	BEAB	Cord Set BEAB (3 cores)	3P	EW302994
	SAA	Cord Set SAA (3 cores)	3P	EW302996
	U/T	Cord Set U/T (3 cores)	3P	EW302646
Class II	CEE	Cord Set CEE (2 cores)	2P	EW638144
	BEAB	Cord Set BEAB (2 cores)	2P	EW302995
	SAA	Cord Set SAA (2 cores)	2P	EW302991
	U/T	Cord Set U/T (2 cores)	2P	EW302899

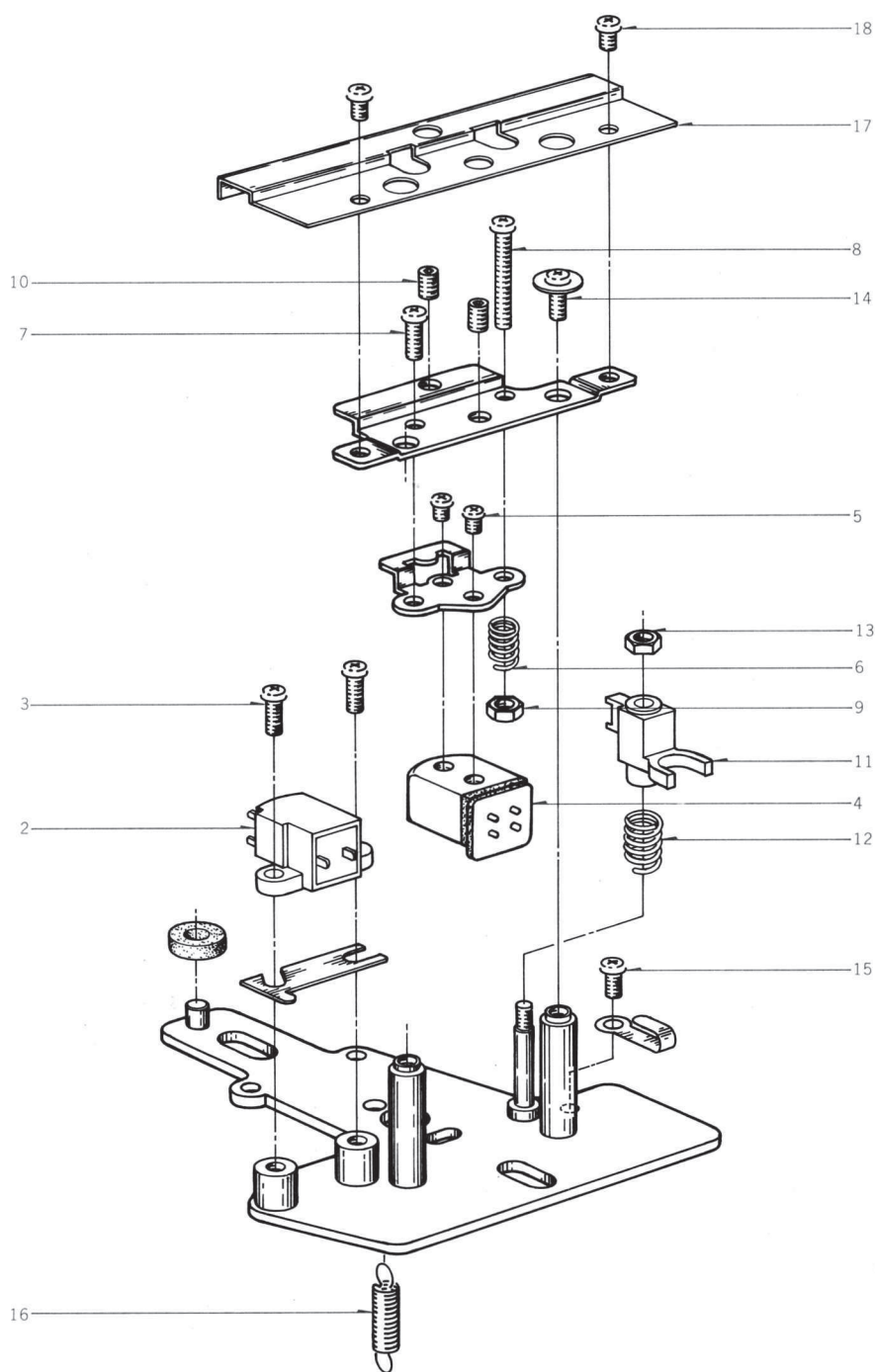
1. RECOMMENDED SPARE PARTS LIST

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.

Parts No.	Description	Note
BA308345	Pre Amp P.C Board Comp. GXC-715D	
BA308345	Power & Sys. Con P.C Board Comp. GXC-715D (AAL)	
BA308384	Power & Sys. Con P.C Board Comp. GXC-715D (JPN)	
BA308383	Power & Sys. Con P.C Board Comp. GXC-715D (U/T)	
BA311319	Power & Sys. Con P.C Board Comp. GXC-715D (CSA)	
BM308368	Capstan Motor Block Comp. GXC-715D	
BM308370	Reel Motor Block Comp. GXC-715D	
BT309345	△ Power Trans. CFT-33	T901
BT309347	△ Power Trans. CFT-32	T901
BT309349	△ Power Trans. CFT-34	T901
ED309341	Germanium Diode 1K34A	
ED308953	Germanium Diode (Home. Type) 1K34A-LH	
ED308952	Germanium Diode (Stop. Type) 1K34A-LR	
ED249377	LED GL-3AR1	D1
ED283138	LED GL-3PG1	D1
ED303005	LED GL-3PY1	D2
ED308945	Silicon Diode SVB10-100	
ED309357	Silicon Diode SVB15-100	
ED306109	Silicon Diode W03B	
ED624903	Silicon Diode 1S2473	
ED560913	Silicon Diode 1S2473 VE	
ED303046	Zener Diode RD-22E	
ED304656	Zener Diode RD-3E(B)	
ED309340	Zener Diode RD5.6E (B2)	
EI304165	IC MB400/7400	IC2
EI605013	IC NE545B	IC1
EI308936	IC M54410P	IC1
EL304025	Lamp (No. 2) 10V110MA	IND1
EL309310	Lamp 145MA 5.5V	
ES309403	Push SW. SUF12	SW901
ES309351	Push SW. SUF12	SW3
ES309355	Push SW. SUF24	SW2
ES309350	Rotary Slide SW. SRZ-L084	SW2
ES305724	Slide SW. CL212K	SW1
ES655806	△ Push SW. SDG-1P	SW1
ES665807	△ Push SW. SDG-5P 5A/80A 250V	SW1
ES665875	△ Push SW. SDG-1P U/L	SW1
ET301464	FET 2SK68 (M) (N)	
ET554657	Transistor 2SA733 (P) (Q)	
ET309338	Transistor 2SA854 (R)	

Parts No.	Description	Note
ET309356	Transistor 2SA935 (Q) (R)	
ET301154	Transistor 2SC1162 (C) (D)	
ET520266	Transistor 2SC1211 (E)	
ET242684	Transistor 2SC1312S (H)	
ET309352	Transistor 2SC1741 (Q) (R)	
ET309337	Transistor 2SC1741 (R)	
ET311832	Transistor 2SC1844 (E)	
ET308954	Transistor 2SC1844 (E) (F)	
ET309343	Transistor 2SC2001 (K) (L)	
ET308937	Transistor 2SC2130 (G) (H)	
ET309353	Transistor 2SC2274 (E) (F)	
ET329218	Transistor 2SC458 (C)	
ET309334	Transistor 2SC458 (C) (D)	
ET308975	Transistor 2SC458 (D)	
ET429748	Transistor 2SC711 (H)	
EV308995	Double-axial 2-throw/Vol. DM20R 50 kA×2	VR9, VR10
EV305640	Semi-fixed/Vol. D10 Axial Type 100 kB	VR8
EV305637	Semi-fixed/Vol. D8 Axial Type 10 kB	VR6
EV305635	Semi-fixed/Vol. D8 Axial Type 5 kB	VR3
EV305635	Semi-fixed/Vol. D8 Axial Type 5 kB	VR5
EV305635	Semi-fixed/Vol. D8 Axial Type 5 kB	VR7
EV305636	Semi-fixed/Vol. D8 Axial Type 50 kB	VR2
EV522797	Semi-fixed/Vol. V8K4-1 20K (B)	VR4
EV620493	Semi-fixed/Vol. V8K4-1 3 kB	VR1
HE266466	ERASE HEAD HF213822A	
HP310933	REC/PB Head P4-361(Sigma)	
MB309185	Capstan Belt	
MB309196	Counter Belt	
MB309197	Revolution SW. Belt	

2. ILLUSTRATION OF HEAD BASE BLOCK

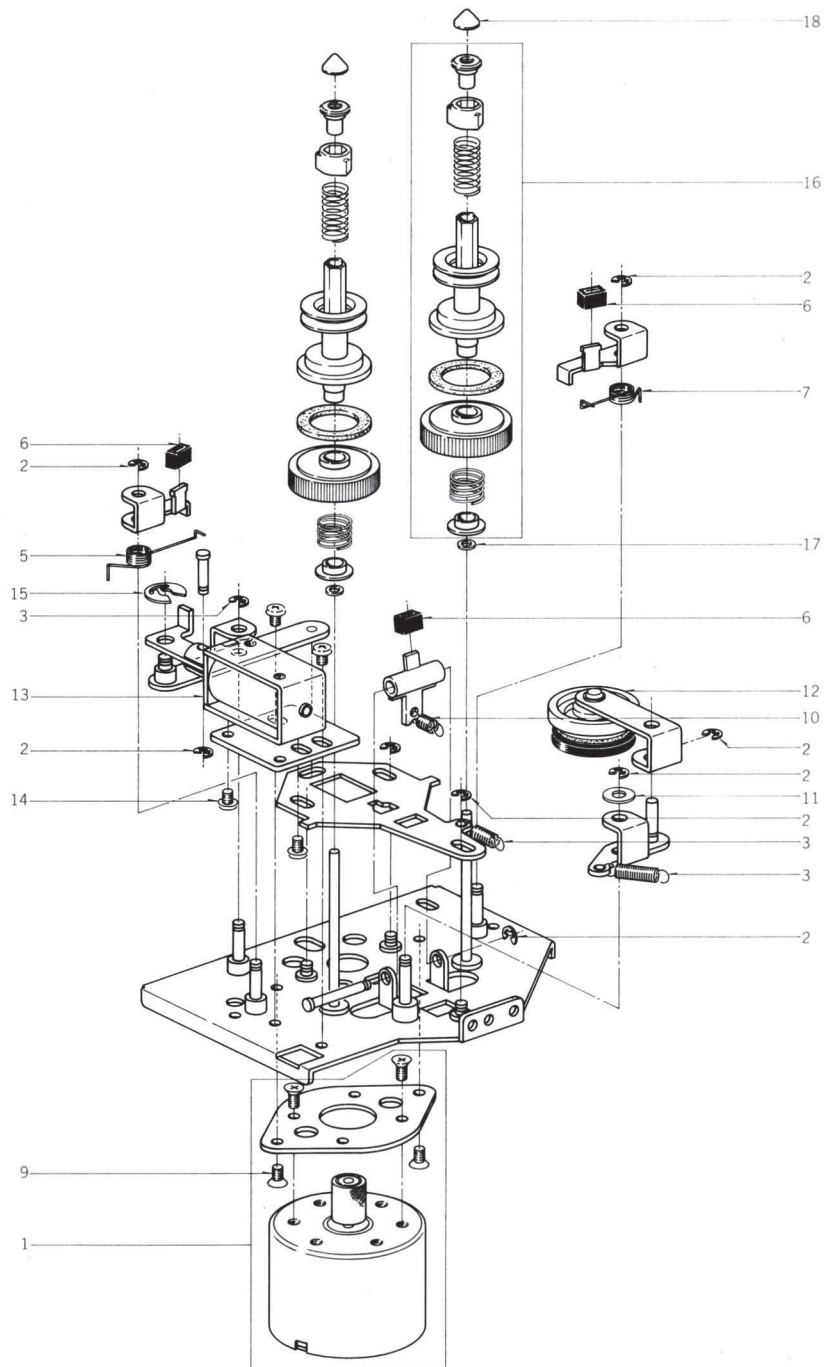


2) HEAD BASE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Ref. No.	Parts No.	Description	Schematic No.
2-1x	BH308377	Head Base Block Comp. GXC-715D		2-10	ZS356804	Set Screw, Hexagon Socket 3x4 (Cup/P.)	
2-2	HE266466	ERASE HEAD HF213822A	37-2-8	2-11	HZ309128	Tape Guide	CF-0006
2-3	ZS375118	Screw, Binding Head 2.3x6		2-12	ZG289236	Tape Guide Spring	CM-0005
2-4	HP310933	REC/PB Head P4-360 Sigma		2-13	ZW273688	Nut M2.3 #1	
2-5	ZS300626	Screw, Pan Head 2x2.5 (Camera Standard)	CG-0029	2-14	ZS296482	Screw, Pan Head 2.6x6 PW	
2-6	ZG465636	Angle Adjust Spring		2-15	ZS356782	Screw, Pan Head 2.3x4	CH-3007
2-7	ZS356848	Screw, Pan Head 2.3x6		2-16	ZG595506	Stop Spring	
2-8	ZS303625	Screw, Pan Head 2.3x16					
2-9	ZW273688	Nut M2.3 #1		2-17	SZ309289	Head Decoration Plate	CF-6021
				2-18	ZS391386	Screw, Pan Head 2.3x3	

When ordering parts, please describe Parts Number, Description, and Model Number in detail.

3. ILLUSTRATION OF SUB FRAME BLOCK

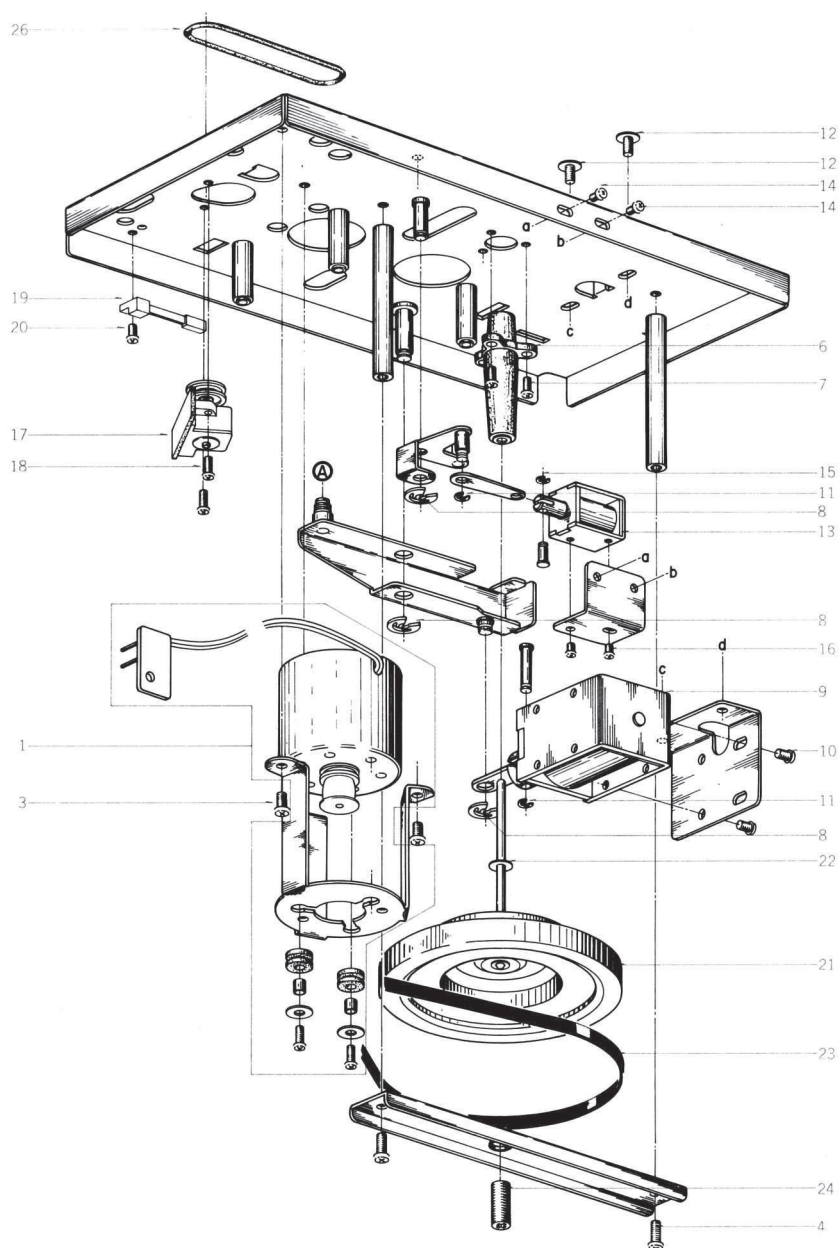


3) SUB FRAME BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Ref. No.	Parts No.	Description	Schematic No.
REEL MOTOR BLOCK				3-8x	ZS313823	S-Tight Screw, 3x4 (Pan)	
3-1	BM308370	Reel Motor Block Comp.		3-9	ZS430413	Screw, Countersunk Head 2.6x4	
		GXC-715D		3-10	ZG469315	Take-up Lever Spring	CG-1091
SUB FRAME BLOCK				3-11	ZW432753	Washer (PBP) D3.1x8x0.2t	
3-2	ZW270088	'E' Ring 1.9M	6-1-9	3-12	MI309414	Idler Part	13-2-42
3-3	ZG365433	Idler Tension Spring	RCC-1365	3-13	EP313497	Plunger 0730THT	44-1-108
3-4x	ZG313392	Head Return Spring	CX-1064	3-14	ZS592378	Screw, Pan Head 2.6x3	
3-5	ZG309225	Brake Spring (L)	CF-2022	3-15	ZW290283	'U' Ring 2.85M	6-1-1
3-6	MB282104	Brake Rubber	CN-1020	3-16	MT312122	Reel Table Part GXC-715D	13-2-41
3-7	ZG309226	Brake Spring (R)	CF-2023	3-17	ZW474581	Washer (Teflon) D2.05x3.5x0.2t	
				3-18	MT305793	Reel Cap	CF-2039

When ordering parts, please describe Parts Number, Description, and Model Number in detail.

4. ILLUSTRATION OF MECHA BLOCK (1)

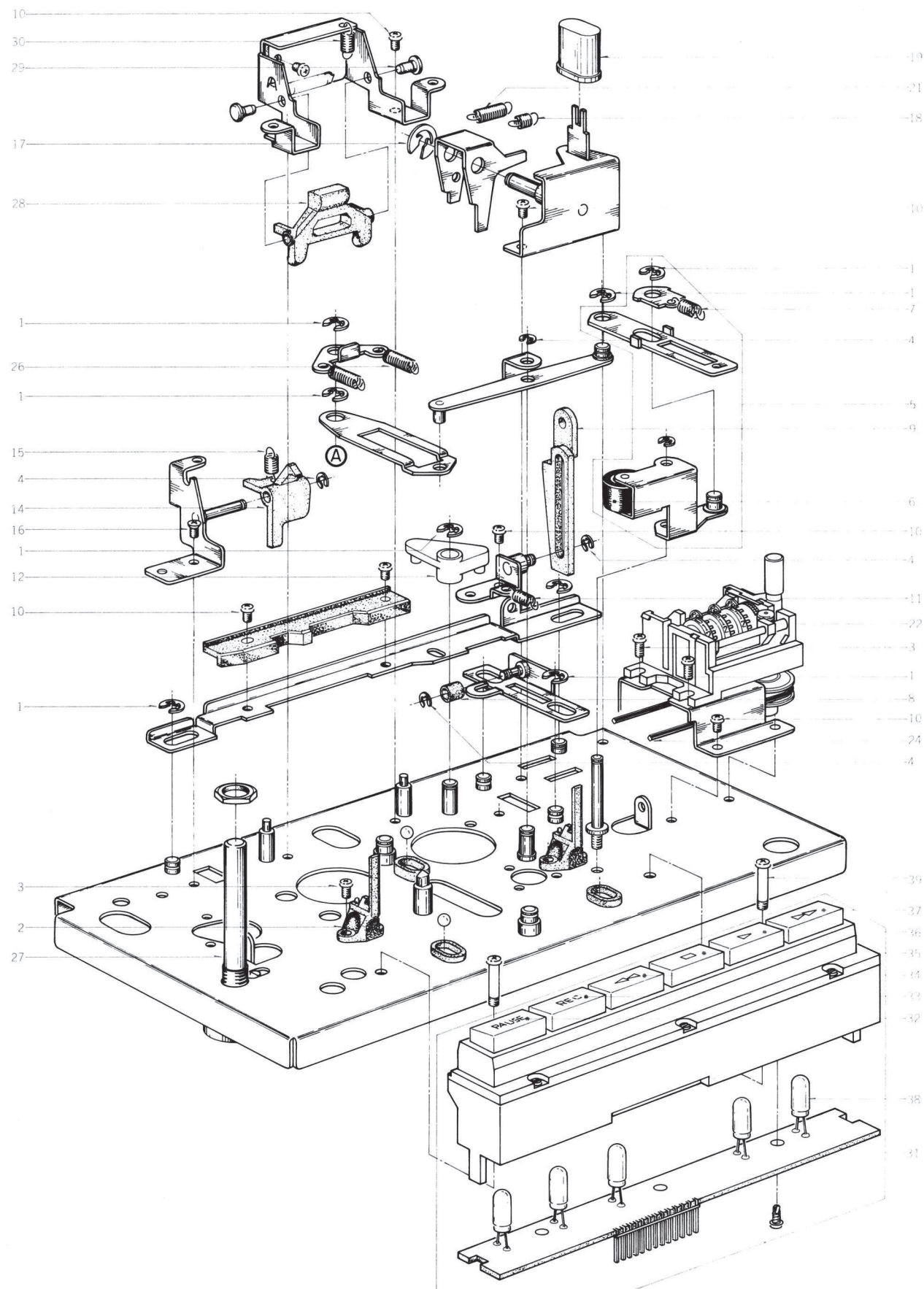


4) MECHA BLOCK (1)

Ref. No.	Parts No.	Description	Schematic No.	Ref. No.	Parts No.	Description	Schematic No.
4-1	BM308368	Capstan Motor Block Comp. GXC-715D		4-13	EP309396	Plunger 0520FLT	44-1-98
4-2x	ZS325495	Tapping Screw #2, 3x6 (BR)		4-14	ZS477876	Screw, Pan Head 2x3	
4-3	ZS422076	Screw, Pan Head 3x5		4-15	ZW356657	'E' Ring	6-1-9
4-4	ZS421806	Screw, Pan Head 3x8		4-16	ZS442585	Screw, Binding Head 2.6x4	
4-5x	ZW273756	Nut M3, #1		4-17	ES302508	Revolution SW. HRZ1006	25-9-5
4-6	MV309146	Main Case	CY-1042	4-18	ZS608106	Screw, Pan Head 2x6	
4-7	ZS479474	Screw, Pan Head 2.6x5		4-19	ES309393	Leaf SW. MSW-0046U	25-10-32
4-8	ZW290283	'U' Ring 2.85M	6-1-1	4-20	ZS460440	Screw, Pan Head 2x4	
4-9	EP309395	Plunger 1240THT	44-1-97	4-21	BF308400	Flywheel (A) Part GXC-715D	CF-1050
4-10	ZS417216	Screw, Pan Head 3x4		4-22	ZW309295	Thrust Washer (Nylon)	CY-1037
4-11	ZW270088	'E' Ring 1.9M	6-1-9	4-23	MB309185	Capstan Belt	CF-1051
4-12	ZS608321	Screw, Pan Head 3x6, W=8		4-24	ZS302318	Holder Screw	CI-1258
				4-25x	MS302191	Ball Guide	CI-1209
				4-26	MB309197	Revolution SW. Belt	CF-1062

When ordering parts, please describe Parts Number, Description, and Model Number in detail.

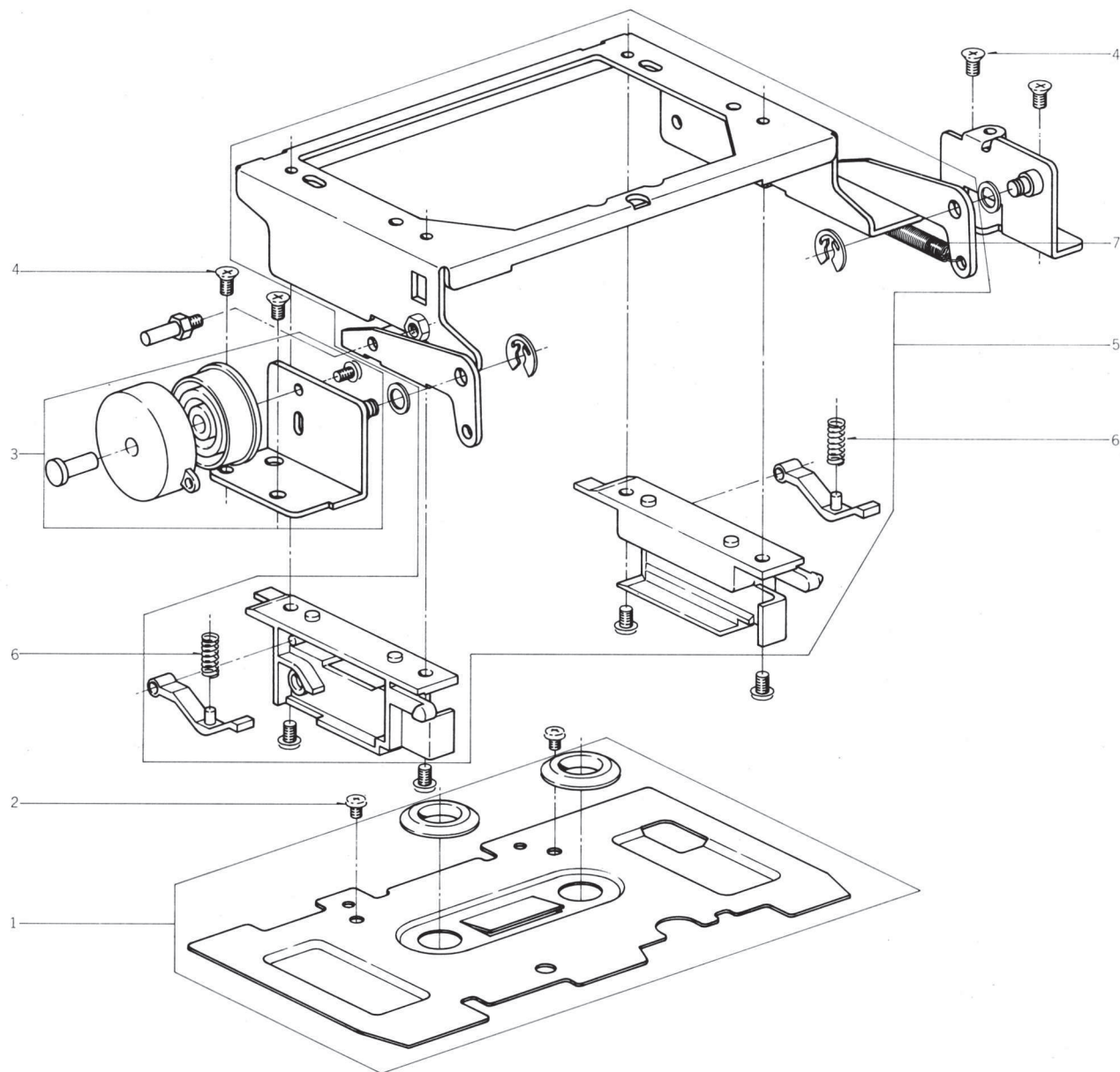
5. ILLUSTRATION OF MECHA BLOCK (2)



5) MECHA BLOCK (2)

Ref. No.	Parts No.	Description	Schematic No.
5-1	ZW270101	'E' Ring	6-1-9
5-2	TC309145	Cassette Guide	CF-1015
5-3	ZS479474	Screw, Pan Head 2.6x5	
5-4	ZW270088	'E' Ring 1.9M	6-1-9
5-5	BL308371	Pinch Roller Lever Assy	
		GXC-715D	
5-6	MP468292	Pinch Roller, CG	CG-0032
5-7	ZG309171	Pinch Roller Spring	CF-1039
5-8	MR309189	Eject Roller	CF-1055
5-9	ML309193	Eject Stopper	CF-1059
5-10	ZS592378	Screw, Pan Head 2.6x3	
5-11	ZG309174	Joint Return Spring	CF-1041
5-12	ML309190	Joint Lever	CF-1056
5-13x	ZW601075	Washer (PBP) D4.1x7x0.1t	
5-14	ML309151	REC. Safety Lever	CF-1020
5-15	ZG309212	Lever Spring (B)	CF-1079
5-16	ZS430413	Screw, Countersunk Head 2.6x4	
5-17	ZW290283	'U' Ring 2.85M	6-1-1
5-18	ZG309152	Lever Spring (A)	CF-1021
5-19	SK305674	Power SW. Cap	CN-6338
5-20x	SK306130	Power SW. Cap (BL)	CN-6338
5-21	ZG309161	Slide Return Spring	CF-1030
5-22	MC309369	Counter SM0-390-002	9-1-61
5-23x	MC309370	Counter SM0-390-003 (BL)	9-1-61
5-24	MB309196	Counter Belt	CF-1061
5-25x	MV269965	Steel Ball D4	
5-26	ZG367110	SST Spring	RCC-1240
5-27	ES309397	Rotary SW. SRN1013S	25-6-120
		CASSETTE HOLDER BLOCK	
5-28	TC309154	Cassette Holder	CF-1023
5-29	MS309155	Cassette Holder Shaft	CF-1024
5-30	ZG309156	Cassette Holder Spring	CF-1025
5-31	BK308381	Operation SW. Assy GXC-715D	25-5-290
5-32	SK309176	Key Top (A)	25-5-290
5-33	SK309305	Key Top (B)	25-5-290
5-34	SK309306	Key Top (C)	25-5-290
5-35	SK309307	Key Top (D)	25-5-290
5-36	SK309308	Key Top (E)	25-5-290
5-37	SK309309	Key Top (F)	25-5-290
5-38	EL309310	Lamp 145MA 5.5V	25-5-290
5-39	ZS310152	Graduated Screw	CF-1078

6. ILLUSTRATION OF MECHA BLOCK (3)



6) MECHA BLOCK (3)

Ref. No.	Parts No.	Description	Schematic No.
6-1	TC308378	Decoration Plate Assy GXC-715D	
6-2	ZS608174	Screw, Pan Head 2.6×3	
6-3	BZ308379	Hinge Stay (L) Assy GXC-715D	CF-1077
6-4	ZS327835	Screw, Countersunk Head 3×5	
6-5	BZ308380	Cassette Base Assy GXC-715D	
6-6	ZG309207	Setting Spring	CF-1073
6-7	ZG359515	FF Slide Lever Spring	PX-134
6-8x	ZS608488	Screw, Pan Head 3×5	

7. P.C BOARDS

(1) PRE AMP P.C BOARD BLOCK

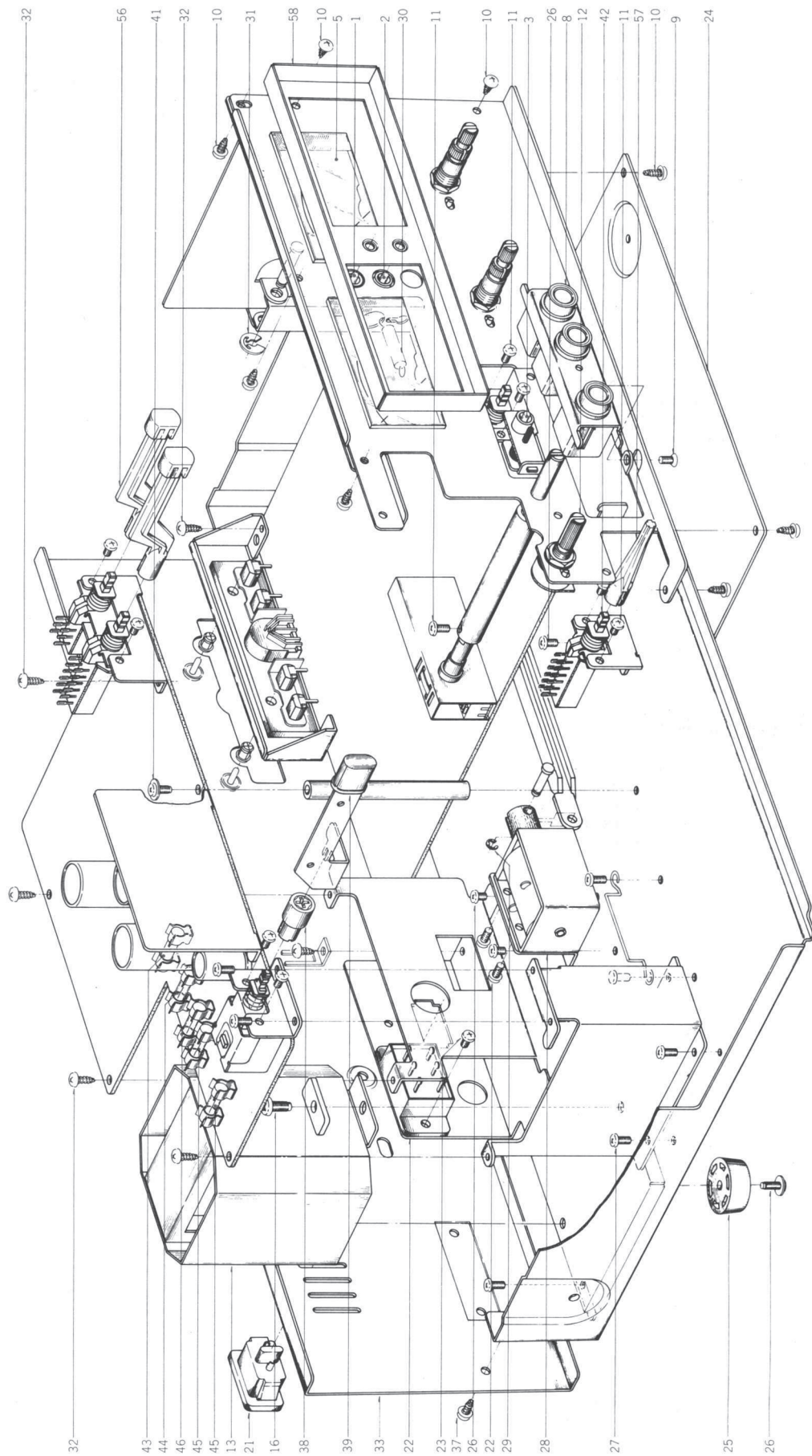
Symbol No.	Parts No.	Description	Schematic No.	Symbol No.	Parts No.	Description	Schematic No.
(1)-1	BA308345	Pre Amp P.C Board Comp. GXC-715D		(1)-C1	EC476965	Elect./C. (Vert. Type) 47 μ F 25WV NL	24-20-4
(1)-IC1	EI605013	IC NE545B	45-8-117	(1)-C2	EC432810	Elect./C. (Vert. Type) 10 μ F 16WV NL	24-20-4
(1)-TR1	ET311832	Transistor 2SC1844(E)	45-1-327	(1)-C3	EC309416	Styrol/C. (Homing) 200PF (J) 50WV	24-11-14
(1)-TR2,3	ET308954	Transistor 2SC1844(E)(F)	45-1-327	(1)-C4	EC692122	Styrol/C. (w/rubber) 470PF (J) 50WV	24-11-13
(1)-TR4	ET309334	Transistor 2SC458(C)(D)	45-1-26	(1)-C17	EC295683	Styrol/C. (w/rubber) 200PF (J) 50WV	24-11-13
(1)-TR5	ET429748	Transistor 2SC711 (H)	45-1-67	(1)-C45	EC662308	Solid Aluminum/C. (Vert. Type) 0.15 μ F (K) 25WV	24-19-2
(1)-TR6	ET301464	FET 2SK68(M)(N)	45-12-14	(1)-C55	EC295683	Styrol/C. (w/rubber) 200PF (J) 50WV	24-11-13
(1)-TR7	ET308975	Transistor 2SC458(D)	45-1-26	(1)-C60	EC295683	Styrol/C. (w/rubber) 200PF (J) 50WV	24-11-13
(1)-TR8to10	ET329218	Transistor 2SC458(C)	45-1-26	(1)-C61	EC284163	Styrol/C. (w/rubber) 1000PF (J) 250WV	24-11-13
(1)-TR11	ET309334	Transistor 2SC458(C)(D)	45-1-26	(1)-2	ZW263946	Nylon Rivet 4x5	2-7-57
(1)-TR12	ET520266	Transistor 2SC1211(E)	45-1-95	(1)-3	ZS325495	Tapping Screw #2, 3x6 (BR)	
(1)-TR13	ET309343	Transistor 2SC2001(K)(L)	45-1-272				
(1)-TR14to16	ET309334	Transistor 2SC458(C)(D)	45-1-26				
(1)-TR17	ET554657	Transistor 2SA733(P)(Q)	45-1-124				
(1)-TR18	ET309334	Transistor 2SC458(C)(D)	45-1-26				
(1)-D1	ED308952	Germanium Diode (Stop. Type) 1K34A-LR	45-3-47				
(1)-D2,3	ED560913	Silicon Diode 1S2473 VE	45-3-23				
(1)-D4	ED624903	Silicon Diode 1S2473	45-3-28				
(1)-D5,6	ED308952	Germanium Diode (Stop. Type) 1K34A-LR	45-3-47				
(1)-D7	ED309340	Zener Diode RD-5.6E(B2)	45-6-83				
(1)-D8,9	ED560913	Silicon Diode 1S2473 VE	45-3-23				
(1)-D10	ED624903	Silicon Diode 1S2473	45-3-28				
(1)-D11,12	ED304656	Zener Diode RD-3E (B)	45-6-72				
(1)-D13	ED624903	Silicon Diode 1S2473	45-3-28				
(1)-D14to16	ED560913	Silicon Diode 1S2473 VE	45-3-23				
(1)-VR1	EV620493	Semi-fixed/Vol. V8K4-1 B3K	36-10-266				
(1)-VR2	EV305636	Semi-fixed/Vol. D8 Axial Type 50 k Ω	36-10-273				
(1)-VR3	EV305635	Semi-fixed/Vol. D8 Axial Type 5 k Ω	36-10-273				
(1)-VR4	EV522797	Semi-fixed/Vol. V8K4-1 20K (B)	36-10-266				
(1)-VR5	EV305635	Semi-fixed/Vol. D8 Axial Type 5 k Ω	36-10-273				
(1)-VR6	EV305637	Semi-fixed/Vol. D8 Axial Type 10 k Ω	36-10-273				
(1)-VR7	EV305635	Semi-fixed/Vol. D8 Axial Type 5 k Ω	36-10-273				
(1)-VR8	EV305640	Semi-fixed/Vol. D10 Axial Type 100 k Ω	36-10-274				
(1)-VR9	EV308995	Double Axial 2 throw Vol. DM20R 50kA $\times$ 2	36-18-9				
(1)-VR10	EV308995	Double Axial 2 throw Vol. DM20R 50kA $\times$ 2	36-18-9				
(1)-T1	EO283050	OSC. Coil 09A-1359	23-4-40				
(1)-T2	BT309336	Headphone Trans. N14-7Z12S	38-1-12				
(1)-L1	EO302464	Inductor RX-9P 33MH(J)	23-1-275				
(1)-FL1	ER309361	Dolby Filter D07-002	53-1-143				
(1)-FL2	ER309119	Dolby Filter D07-001	53-1-143				
(1)-FL3,4	EO309363	Trap Coil 8AAP-0008	23-1-302				
(1)-VL1	EO346230	Inductor RX 22MH	23-1-15				
(1)-J1	EJ306985	4P Pin Jack	31-5-142				
(1)-SW1	ES305724	Slide SW. CL212K	25-3-147				
(1)-SW2	ES309350	Rotary Slide SW. SRZ-L084	25-6-121				
(1)-SW3	ES309351	Push SW. SUF12	25-5-288				
(1)-R37	ER305716	Metal Oxide Film/R. (Homing Type) 3W 180 ohms (J)	35-11-23				
(1)-R52	ER309417	Metal Oxide Film/R. 1W 1K (J)	35-15-10				
(1)-R54	ER309417	Metal Oxide Film/R. 1W 1K (J)	35-15-10				
(1)-R60	ER309417	Metal Oxide Film/R. 1W 1K (J)	35-15-10				
(1)-R67	ER309417	Metal Oxide Film/R. 1W 1K (J)	35-15-10				

When ordering parts, please describe Parts Number, Description, and Model Number in detail.

(2) POWER & SYS. CON P.C BOARD BLOCK

Symbol No.	Parts No.	Description	Schematic No.	Symbol No.	Parts No.	Description	Schematic No.
(2)-1	BA308383	Power & Sys. Con P.C Board Comp. GXC-715D (U/T) (CEE, UK)		(2)-R68	ER313587	Cement/R. (Wire-wound) 5W 27 ohms (J)	35 16-3
(2)-2	BA308384	Power & Sys. Con P.C Board Comp. GXC-715D (JPN)		(2)-C1	EC295997	Elect./C. (Vert. Type) 2200μF 35WV	24 12-9
(2)-3	BA311319	Power & Sys. Con P.C Board Comp. GXC-715D (CSA)		(2)-C5	EC307260	Elect./C. (Vert. Type) 3300μF 16WV	24 12-30
(2)-4	BA308385	Power & Sys. Con P.C Board Comp. GXC-715D (AAL)		(2)-C41	EC301320	MP/C. 4700PF (M) 250WV (U/T, CEE, UK)	24 9-122
(2)-IC1	EI308936	IC M54410P	45 8-304	(2)-C41	EC551160	Ceramic/C. DB821 NA 0.01μF (Z) 1.4KWV (JPN)	24 5-55
(2)-IC2	EI304165	IC MB400/7400	45 8-252	(2)-C41	EC294118	Ceramic/C. DPN6600 YM 0.01μF (P) 125WV (CSA)	24 5-70
(2)-TR1	ET242684	Transistor 2SC1312S(H)	45 1-182	(2)-C42	EC301320	MP/C. 4700PF (M) 250WV (U/T, CEE, UK)	24 9-122
(2)-TR2to10	ET309334	Transistor 2SC458(C)(D)	45 1-26	(2)-5	ZS422076	Screw, Pan Head 3×5	
(2)-TR11to15	ET309337	Transistor 2SC1741(R)	45 1-325	(2)-6	ZS421806	Screw, Pan Head 3×8	
(2)-TR16	ET308937	Transistor 2SC2130(G)(H)	45 1-317	(2)-7	ZW273756	Nut M3, #1	
(2)-TR17,18	ET309338	Transistor 2SA854(R)	45 1-326				
(2)-TR19to21	ET309352	Transistor 2SC1741(Q)(R)	45 1-325				
(2)-TR22to25	ET309334	Transistor 2SC458(C)(D)	45 1-26				
(2)-TR26	ET309352	Transistor 2SC1741(Q)(R)	45 1-325				
(2)-TR27	ET308937	Transistor 2SC2130(G)(H)	45 1-317				
(2)-TR28	ET309353	Transistor 2SC2274(E)(F)	45 1-335				
(2)-TR29	ET308937	Transistor 2SC2130(G)(H)	45 1-317				
(2)-TR30,31	ET309334	Transistor 2SC458(C)(D)	45 1-26				
(2)-TR32,33	ET309356	Transistor 2SA935(Q)(R)	45 1-336				
(2)-TR34	ET308937	Transistor 2SC2130(G)(H)	45 1-317				
(2)-TR35	ET309353	Transistor 2SC2274(E)(F)	45 1-335				
(2)-TR36	ET308937	Transistor 2SC2130(G)(H)	45 1-317				
(2)-TR37	ET309356	Transistor 2SA935(Q)(R)	45 1-336				
(2)-TR38	ET308937	Transistor 2SC2130(G)(H)	45 1-317				
(2)-TR39	ET309353	Transistor 2SC2274(E)(F)	45 1-335				
(2)-TR41,42	ET301154	Transistor 2SC1162(C)(D)	45 1-268				
(2)-D1	ED308945	Silicon Diode SVB10-100	45 2-82				
(2)-D2	ED309357	Silicon Diode SVB15-100	45 2-83				
(2)-D3,4	ED308945	Silicon Diode SVB10-100	45 2-82				
(2)-D5	ED303046	Zener Diode RD-22E	45 6-78				
(2)-D6	ED309340	Zener Diode RD5.6E(B2)	45 6-83				
(2)-D7	ED306109	Silicon Diode W03B	45 2-78				
(2)-D9to11	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-D12	ED624903	Silicon Diode 1S2473	45 3-28				
(2)-D13to18	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-D19	ED624903	Silicon Diode 1S2473	45 3-28				
(2)-D20to25	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-D26	ED308953	Germanium Diode (Home. Type) 1K34A-LH	45 3-46				
(2)-D27,28	ED308952	Germanium Diode (Stop. Type) 1K34A-LR	45 3-47				
(2)-D29	ED309341	Germanium Diode 1K34A	45 3-45				
(2)-D30,31	ED308952	Germanium Diode (Stop. Type) 1K34A-LR	45 3-47				
(2)-D32	ED309341	Germanium Diode 1K34A	45 3-45				
(2)-D33to36	ED308952	Germanium Diode (Stop. Type) 1K34A-LR	45 3-47				
(2)-D37,38	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-D39	ED306109	Silicon Diode W03B	45 2-78				
(2)-D40to46	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-D47	ED306109	Silicon Diode W03B	45 2-78				
(2)-D48	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-D49	ED306109	Silicon Diode W03B	45 2-78				
(2)-D50to54	ED560913	Silicon Diode 1S2473 VE	45 3-23				
(2)-J903	EJ309359	13P Connector Part	26 6-290				
(2)-SW1	ES665807	△ Push SW. SDG-5P 5A/80A 250V (U/T, CEE, UK)	25 5-182				
(2)-SW1	ES655806	△ Push SW. SDG-1P (JPN, CSA)	25 5-187				
(2)-SW1	ES665875	△ Push SW. SDG-1P U/L (AAL)	25 5-199				
(2)-SW2	ES309355	Push SW. SUF24	25 5-289				
(2)-R1,2	ER309417	Metal Oxide Film/R. 1W 1K (J)	35 15-10				

8. ILLUSTRATION OF AMP BLOCK



8) AMP BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Ref. No.	Parts No.	Description	Schematic No.
	PEAK LAMP P.C BOARD BLOCK						
8-1	ED249377	LED GL-3AR1	45-15-14	8-50x	EF309388	△ Fuse 800MA 250V (JPN)	39-1-64
8-2	ED303005	LED GL-3PY1	45-15-18	8-51x	EF309389	△ Fuse 400MA 250V (JPN)	39-1-64
	DOLBY LAMP P.C BOARD BLOCK			8-52x	EF309390	△ Fuse 500MA 125V (CSA, AAL)	39-1-65
8-3	ED283138	LED GL-3PG1	45-15-15	8-53x	EF309392	△ Fuse 1.25A 125V (CSA, AAL)	39-1-65
	HOUSING LAMP P.C BOARD BLOCK			8-54x	EF309391	△ Fuse 800MA 125V (CSA, AAL)	39-1-65
8-4x	EL304025	Lamp (No. 2) 10V110MA	28-2-66	8-55x	EF308848	△ Fuse 400MA 125V (CSA, AAL)	39-1-65
	FRONT CHASSIS BLOCK			8-56	TC309268	Push Rod	CF-6005
8-5	EM309051	VU Meter VU-50-003 (U/T, CSA, AAL)	46-1-209	8-57	TC304935	Push Rod	CN-5031
8-6x	EM309050	VU Meter VU-50-005 (JPN)	46-1-199	8-58	SP309278	Meter Panel	CF-6014,6015
8-7x	EM309404	VU Meter VU-50-004 (BL)	46-1-208	8-59x	SP309279	Meter Panel (BL)	CF-6014,6015
8-8	EJ309405	3 Throw Jack	31-2-97				
8-9	ZS200384	Screw, Countersunk Head 3×6					
8-10	ZS325495	Tapping Screw #2, 3×6 (BR)					
8-11	ZS422076	Screw, Pan Head 3×5					
8-12	EV309406	Single Axial 2 Throw Vol. GM70A 10kBX2	36-1-57				
	TRANS. BASE BLOCK						
8-13	BT309345	△ Power Trans. CFT-33 (U/T, CEE)	38-4-620				
8-14x	BT309347	△ Power Trans. CFT-32 (JPN)	38-4-622				
8-15x	BT309349	△ Power Trans. CFT-34 (CAS, AAL)	38-4-624				
8-16	ZS301398	S-tight Screw, 4×8 (Bind)					
8-17x	ZS432674	Screw, Pan Head 3×3					
8-18x	EW306427	△ AC Cord (JPN)	26-3-63				
8-19x	EW305691	△ AC Cord CUL (CSA, AAL)	26-3-65				
8-20x	EZ631945	Strain Relief SR-4N-4 (JPN, CSA, AAL)	2-7-49				
8-21	EJ301513	△ 2P Inlet	31-1-200				
8-22	ES309312	△ Slide SW. 22293B (U/T, CEE)	25-3-150				
8-23	ZS417216	Screw, Pan Head 3×4					
	AMP BLOCK						
8-24	SP309242	Bottom Plate	CF-5008				
8-25	SA306240	Rubber Foot (B)	LE-6740				
8-26	ZS312375	S-tight Screw, 3×8 (Pan) w/flange	7-1-71				
8-27	ZS306021	S-tight Screw, 3×6 (Pan)					
8-28	EP309395	Plunger 1240THT	44-1-97				
8-29	ZW270088	'E' Ring 1.9M	6-1-9				
8-30	ZG309260	REC. Spring	CF-5025				
8-31	ZW290283	'U' Ring 2.85M	6-1-1				
8-32	ZS447840	Tapping Screw #2, 3×8 (BR)					
8-33	SP309267	Rear Panel (D) (U/T, CEE, UK)	CF-6001,6003				
8-34x	SP309265	Rear Panel (B) (JPN)	CF-6001,6002				
8-35x	SP309264	Rear Panel (A) (CSA)	CF-6001,6002				
8-36x	SP309266	Rear Panel (C) (AAL)	CF-6001,6003				
8-37	ZS447761	Tapping Screw #2, 3×6 (BR) (Black)					
8-38	TC289484	SW. Joint	CM-6015				
8-39	SK305674	Power SW. Cap	CN-6338				
8-40x	SK306130	Power SW. Cap (BL)	CN-6338				
8-41	ZS608321	Screw, Pan Head 3×6, W=8					
	FINAL ASSEMBLY BLOCK						
8-42	ES309403	Push SW. SUF-12	25-5-287				
8-43	EF593706	△ Fuse (SEMKO T Type) 500MAT (U/T, CEE)	39-1-53				
8-44	EF602550	△ Fuse (SEMKO T Type) 1.25AT 250V (U/T, CEE)	39-1-53				
8-45	EF258344	△ Fuse (SEMKO T Type) 800MAT (U/T, CEE)	39-1-53				
8-46	EF695766	△ Fuse (SEMKO T Type) 315MAT (U/T, CEE)	39-1-53				
8-47	EF623103	△ Fuse (SEMKO T Type) 1AT (U/T, CEE)	39-1-53				
8-48x	EF309388	△ Fuse 800MA 250V (JPN)	39-1-64				
8-49x	EF306949	△ Fuse 1.25A 250V (JPN)	39-1-64				

9. PHOTO OF FINAL ASSEMBLY BLOCK



9) FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.
FRONT PANEL BLOCK			
9-1	BD308359	Front Panel Block Comp. GXC-715D	
9-2x	BD308360	Front Panel Block Comp. GXC-715D-BL	
9-3x	SE309271	Panel Escutcheon	CF-6009
9-4x	ZS455207	Tapping Screw #2, 3x5 (BR)	
9-5x	ZS447840	Tapping Screw #2, 3x8 (BR)	
9-6	SE309648	Button Escutcheon	CY-6014
9-7	SE309275	Counter Escutcheon	CF-6012
9-8x	SE309276	Counter Escutcheon (BL)	CF-6012
9-9	SZ309272	Double Knob Ring	CF-6010,6011
9-10x	SZ309274	Double Knob Ring (BL)	CF-6010,6011
9-11	SE306143	Button Escutcheon (A)	CN-6308
9-12x	SE306144	Button Escutcheon (A-BL)	CN-6308
9-13	SE305651	Button Escutcheon (B)	CN-6352
9-14x	SE306936	Button Escutcheon (B-BL)	CN-6352
9-15x	ZG305657	Button Spring	CN-6310
9-16	SE304814	LED Escutcheon (A)	CN-6036
9-17x	SE304815	LED Escutcheon (B) (BL)	CN-6036
9-18	SK305653	Push Button (A)	CN-6309
9-19	SK305654	Push Button (B)	CN-6309
9-20x	SK305656	Push Button (D) (BL)	CN-6309
9-21	SZ309277	Meter Plate	CF-6013
9-22x	ZS447840	Tapping Screw #2, 3x8 (BR)	
9-23	BC309290	Upper Cover (A) (Except AAL)	CF-6023
9-24x	BC309291	Upper Cover (B) (AAL)	CF-6023
9-25	ZS306798	S-tight Screw, 4x8 (Bind) (Black)	
9-26x	ZS447761	Tapping Screw #2, 3x6 (BR) (Black)	
9-27x	ZS325495	Tapping Screw #2, 3x6 (BR)	
9-28	BZ308361	Lid Escutcheon Assy GXC-715D	
9-29x	BZ308362	Lid Escutcheon Assy GXC-715D-BL	
9-30	SK309287	Double Knob (Lower)	CF-6020
9-31x	SK309288	Double Knob (Lower-BL)	CF-6020
9-32	SK309285	Double Knob (Upper)	CF-6019
9-33x	SK309286	Double Knob (Upper-BL)	CF-6019
9-34	SK308419	Knob (A) Part GXC-715D	CX-6008
9-35x	SK308491	Knob (A-BL) Part GXC-715D	CX-6008
9-36	SK309299	Knob (B)	CX-6014
9-37x	SK309300	Knob (B-BL)	CX-6014
9-38x	EW306152	AC Cord Set U/T Type 2	26-3-71

When ordering parts, please describe Parts Number, Description, and Model Number in detail.

10. LIST OF INTERCHANGEABLE SEMICONDUCTORS

If, while servicing, the original parts cannot be obtained, the interchangeable parts listed below can be substituted.

Original Parts			Interchangeable Parts	
Description	Parts No.	Utilizing P.C Board	Description	Parts No.
2SC458 (C) 2SC458 (C) (D)	ET329218 ET309334	CF-5001 CF-5001	2SC945L (P) (Q)	ET639437
1K34A-LR	ED308952	CF-5001	1N34A	ED219464
W03B	ED306109	CF-5002A	10D05	ED494583

INDEX

Parts No.	Ref. No. & Symbol No.	Parts No	Ref No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
BA308345	(1)-1	EF309389	8-51x	ET520266	(1)-TR12	SZ309277	9-21	ZW270101	5-1
BA308383	(2)-1	EF309390	8-52x	ET554657	(1)-TR17	TC289484	8-38	ZW273688	2-9
BA308384	(2)-2	EF309391	8-54x	EV305635	(1)-VR3	TC304935	8-57	ZW273688	2-13
BA308385	(2)-4	EF309392	8-53x	EV305635	(1)-VR5	TC308378	6-1	ZW273756	4-5x
BA311319	(2)-3	EF593706	8-43	EV305635	(1)-VR7	TC309145	5-2	ZW273756	(2)-7
BC309290	9-23	EF602550	8-44	EV305636	(1)-VR2	TC309154	5-28	ZW290283	3-15
BC309291	9-24x	EF623103	8-47	EV305637	(1)-VR6	TC309268	8-56	ZW290283	4-8
BD308359	9-1	EF695766	8-46	EV305640	(1)-VR8	ZG289236	2-12	ZW290283	5-17
BD308360	9-2x	EI304165	(2)-IC2	EV308995	(1)-VR9	ZG305657	9-15x	ZW290283	8-31
BF308400	4-21	EI308936	(2)-IC1	EV308995	(1)-VR10	ZG309152	5-18	ZW309295	4-22
BH308377	2-1x	EI605013	(1)-IC1	EV309406	8-12	ZG309156	5-30	ZW356657	4-15
BK308381	5-31	EJ301513	8-21	EV522797	(1)-VR4	ZG309161	5-21	ZW432753	3-11
BL308371	5-5	EJ306985	(1)-J1	EV620493	(1)-VR1	ZG309171	5-7	ZW474581	3-17
BM308368	4-1	EJ309359	(2)-J903	EW305691	8-19x	ZG309174	5-11	ZW601075	5-13x
BM308370	3-1	EJ309405	8-8	EW306152	9-38x	ZG309207	6-6		
BT309336	(1)-T2	EL304025	8-4x	EW306427	8-18x	ZG309212	5-15		
BT309345	8-13	EL309310	5-38	EZ631945	8-20x	ZG309225	3-5		
BT309347	8-14x	EM309050	8-6x	HE266466	2-2	ZG309226	3-7		
BT309349	8-15x	EM309051	8-5	HP310933	2-4	ZG309260	8-30		
BZ308361	9-28	EM309404	8-7x	HZ309128	2-11	ZG313392	3-4x		
BZ308362	9-29x	EO283050	(1)-T1	MB282104	3-6	ZG359515	6-7		
BZ308379	6-3	EO302464	(1)-L1	MB309185	4-23	ZG365433	3-3		
BZ308380	6-5	EO309363	(1)-FL3,4	MB309196	5-24	ZG367110	5-26		
EC284163	(1)-C61	EO346230	(1)-VL1	MB309197	4-26	ZG465636	2-6		
EC294118	(2)-C41	EP309395	4-9	MC309369	5-22	ZG469315	3-10		
EC295683	(1)-C17	EP309395	8-28	MC309370	5-23x	ZG595506	2-16		
EC295683	(1)-C55	EP309396	4-13	MI309414	3-12	ZS200384	8-9		
EC295683	(1)-C60	EP313497	3-13	ML309151	5-14	ZS296482	2-14		
EC295997	(2)-C1	ER305716	(1)-R37	ML309190	5-12	ZS300626	2-5		
EC301320	(2)-C41	ER309119	(1)-FL2	ML309193	5-9	ZS301398	8-16		
EC301320	(2)-C42	ER309361	(1)-FL1	MP468292	5-6	ZS302318	4-24		
EC307260	(2)-C5	ER309417	(1)-R52	MR309189	5-8	ZS303625	2-8		
EC309416	(1)-C3	ER309417	(1)-R54	MS302191	4-25x	ZS306021	8-27		
EC432810	(1)-C2	ER309417	(1)-R60	MS309155	5-29	ZS306798	9-25		
EC476965	(1)-C1	ER309417	(1)-R67	MT305793	3-18	ZS310152	5-39		
EC551160	(2)-C41	ER309417	(2)-R1,2	MT312122	3-16	ZS312375	8-26		
EC662308	(1)-C45	ER313587	(2)-R68	MV269965	5-25x	ZS313823	3-8x		
EC692122	(1)-C4	ES302508	4-17	MV309146	4-6	ZS325495	4-2x		
ED249377	8-1	ES305724	(1)-SW1	SA306240	8-25	ZS325495	(1)-3		
ED283138	8-3	ES309312	8-22	SE304814	9-16	ZS325495	8-10		
ED303005	8-2	ES309350	(1)-SW2	SE304815	9-17x	ZS325495	9-27x		
ED303046	(2)-D5	ES309351	(1)-SW3	SE305651	9-13	ZS327835	6-4		
ED304656	(1)-D11,12	ES309355	(2)-SW2	SE306143	9-11	ZS356782	2-15		
ED306109	(2)-D7	ES309393	4-19	SE306144	9-12x	ZS356804	2-10		
ED306109	(2)-D39	ES309397	5-27	SE306936	9-14x	ZS356848	2-7		
ED306109	(2)-D47	ES309403	8-42	SE309271	9-3x	ZS375118	2-3		
ED306109	(2)-D49	ES655806	(2)-SW1	SE309275	9-7	ZS391386	2-18		
ED308945	(2)-D1	ES665807	(2)-SW1	SE309276	9-8x	ZS417216	4-10		
ED308945	(2)-D3,4	ES665875	(2)-SW1	SE309648	9-6	ZS417216	8-23		
ED308952	(1)-D1	ET242684	(2)-TR1	SK305653	9-18	ZS421806	4-4		
ED308952	(1)-D5,6	ET301154	(2)-TR41,42	SK305654	9-19	ZS421806	(2)-6		
ED308952	(2)-D27,28	ET301464	(1)-TR6	SK305656	9-20x	ZS422076	4-3		
ED308952	(2)-D30,31	ET308937	(2)-TR16	SK305674	5-19	ZS422076	(2)-5		
ED308952	(2)-D33to36	ET308937	(2)-TR27	SK305674	8-39	ZS422076	8-11		
ED308953	(2)-D26	ET308937	(2)-TR29	SK306130	5-20x	ZS430413	3-9		
ED309340	(1)-D7	ET308937	(2)-TR34	SK306130	8-40x	ZS430413	5-16		
ED309340	(2)-D6	ET308937	(2)-TR36	SK308419	9-34	ZS432674	8-17x		
ED309341	(2)-D29	ET308937	(2)-TR38	SK308491	9-35x	ZS442585	4-16		
ED309341	(2)-D32	ET308954	(1)-TR2,3	SK309176	5-32	ZS447761	8-37		
ED309357	(2)-D2	ET308975	(1)-TR7	SK309285	9-32	ZS447761	9-26x		
ED560913	(1)-D2,3	ET309334	(1)-TR4	SK309286	9-33x	ZS447840	8-32		
ED560913	(1)-D8,9	ET309334	(1)-TR11	SK309287	9-30	ZS447840	9-5x		
ED560913	(1)-D14to16	ET309334	(1)-TR14to16	SK309288	9-31x	ZS447840	9-22x		
ED560913	(2)-D9to11	ET309334	(1)-TR18	SK309289	2-17	ZS455207	9-4x		
ED560913	(2)-D13to18	ET309334	(2)-TR2to10	SK309299	9-36	ZS460440	4-20		
ED560913	(2)-D20to25	ET309334	(2)-TR22to25	SK309300	9-37x	ZS477876	4-14		
ED560913	(2)-D37,38	ET309334	(2)-TR30,31	SK309305	5-33	ZS479474	4-7		
ED560913	(2)-D40to46	ET309337	(2)-TR11to15	SK309306	5-34	ZS479474	5-3		
ED560913	(2)-D48	ET309338	(2)-TR17,18	SK309307	5-35	ZS592378	3-14		
ED560913	(2)-D50to54	ET309343	(1)-TR13	SK309308	5-36	ZS592378	5-10		
ED624903	(1)-D4	ET309352	(2)-TR19to21	SK309309	5-37	ZS608106	4-18		
ED624903	(1)-D10	ET309352	(2)-TR26	SP309242	8-24	ZS608174	6-2		
ED624903	(1)-D13	ET309353	(2)-TR28	SP309264	8-35x	ZS608321	4-12		
ED624903	(2)-D12	ET309353	(2)-TR35	SP309265	8-34x	ZS608321	8-41		
ED624903	(2)-D19	ET309353	(2)-TR39	SP309266	8-36x	ZS608488	6-8x		
EF258344	8-45	ET309356	(2)-TR32,33	SP309267	8-33	ZW263946	(1)-2		
EF306949	8-49x	ET309356	(2)-TR37	SP309278	8-58	ZW270088	3-2		
EF308848	8-55x	ET311832	(1)-TR1	SP309279	8-59x	ZW270088	4-11		
EF309388	8-48x	ET329218	(1)-TR8to10	SZ309272	9-9	ZW270088	5-4		
EF309388	8-50x	ET429748	(1)-TR5	SZ309274	9-10x	ZW270088	8-29		

SECTION 3

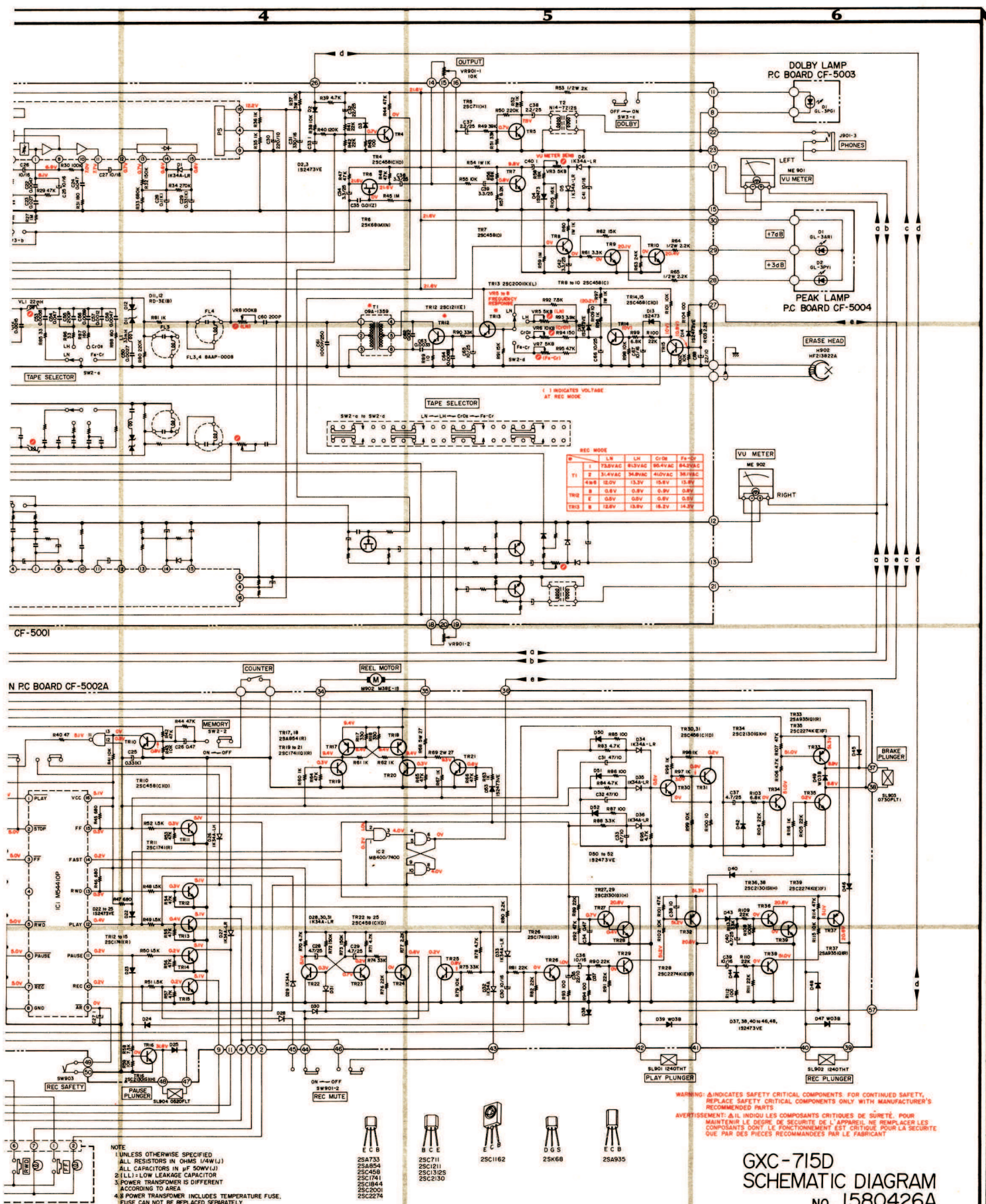
SCHEMATIC DIAGRAM

1. NO. 1580426A GXC-715D SCHEMATIC DIAGRAM



NOTE

1. UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
2. ALL CAPACITORS IN μ F 50WV(J)
2. (L): LOW LEAKAGE CAPACITOR
3. POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA
4. X POWER TRANSFORMER INCLUDES TEST
FUSE CAN NOT BE REPLACED SEPARATELY



GXC-715D
SCHEMATIC DIAGRAM
No. 1580426A