

# SERVICE MANUAL

## PARTS LIST

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**MODEL GXC-710D**

**AKAI**



## STEREO CASSETTE DECK

### MODEL GXC-710D

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SECTION 1

# SERVICE MANUAL

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL OPERATING PRINCIPLES AND ADJUSTMENTS.

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# I. SPECIFICATIONS

An asterisk next to a figure indicates the minimum guaranteed performance.

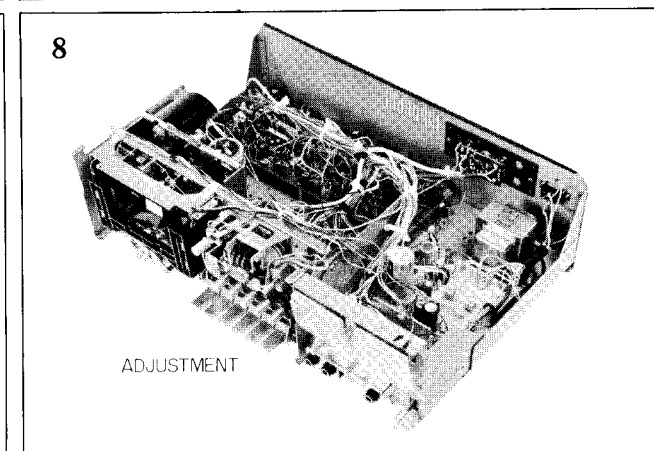
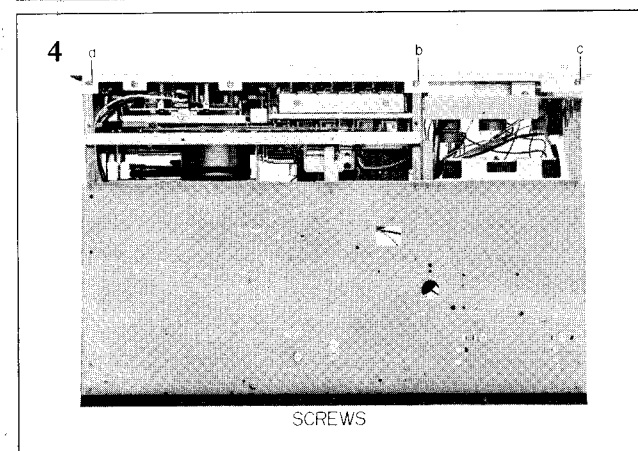
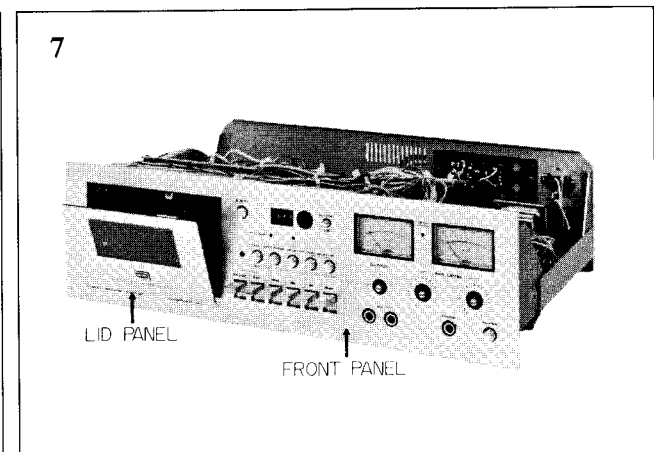
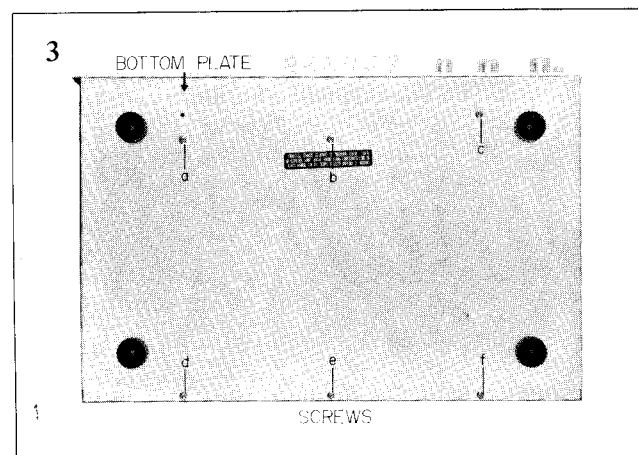
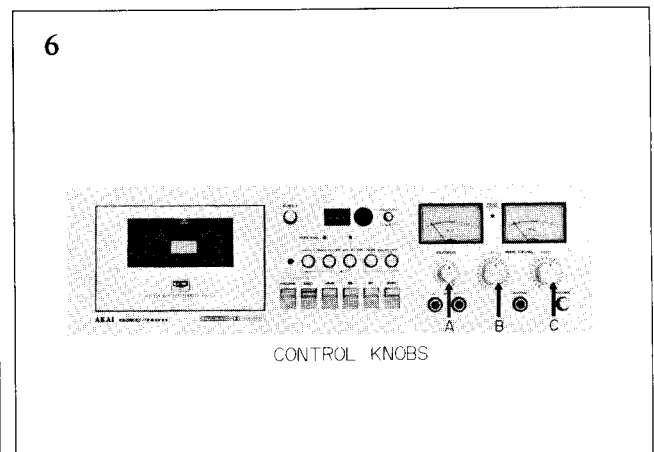
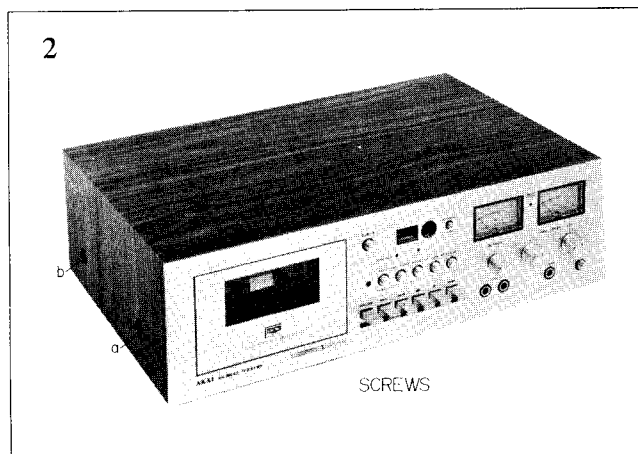
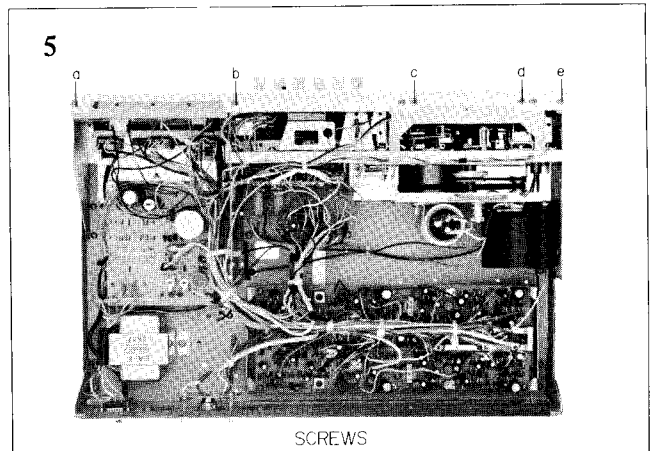
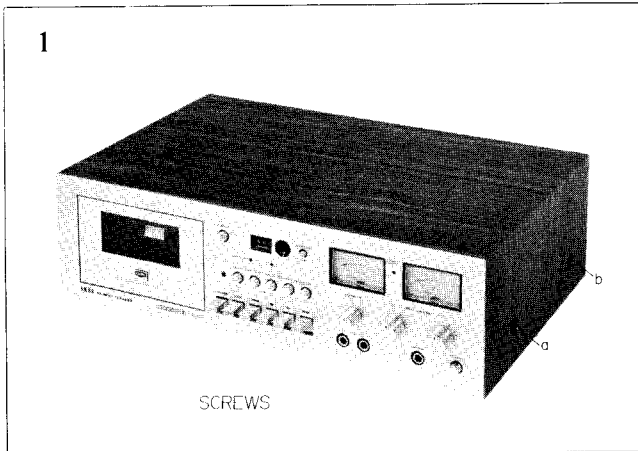
TRACK SYSTEM	4 track, 2 channel stereo system						
TAPE SPEED	1-7/8 ips (4.75 cm/sec) $\pm 2\%$						
WOW AND FLUTTER	Less than 0.08% WRMS *Less than 0.2% RMS						
TOTAL WOW AND FLUTTER	*Less than 0.22% RMS						
FREQUENCY RESPONSE	<table border="0"> <tr> <td>LOW NOISE TAPE</td> <td>30 to 14,000 Hz <math>\pm 3</math> dB *50 to 13,000 Hz <math>\pm 4</math> dB</td> </tr> <tr> <td>Cr-O<sub>2</sub> TAPE</td> <td>30 to 16,000 Hz <math>\pm 3</math> dB *50 to 14,000 Hz <math>\pm 4</math> dB</td> </tr> <tr> <td>Fe-Cr TAPE</td> <td>30 to 17,000 Hz <math>\pm 3</math> dB *50 to 16,000 Hz <math>\pm 4</math> dB</td> </tr> </table>	LOW NOISE TAPE	30 to 14,000 Hz $\pm 3$ dB *50 to 13,000 Hz $\pm 4$ dB	Cr-O <sub>2</sub> TAPE	30 to 16,000 Hz $\pm 3$ dB *50 to 14,000 Hz $\pm 4$ dB	Fe-Cr TAPE	30 to 17,000 Hz $\pm 3$ dB *50 to 16,000 Hz $\pm 4$ dB
LOW NOISE TAPE	30 to 14,000 Hz $\pm 3$ dB *50 to 13,000 Hz $\pm 4$ dB						
Cr-O <sub>2</sub> TAPE	30 to 16,000 Hz $\pm 3$ dB *50 to 14,000 Hz $\pm 4$ dB						
Fe-Cr TAPE	30 to 17,000 Hz $\pm 3$ dB *50 to 16,000 Hz $\pm 4$ dB						
DISTORTION FACTOR	Less than 1.5% at 1,000 Hz "0" VU recording						
TOTAL DISTORTION FACTOR	<table border="0"> <tr> <td>LOW NOISE TAPE</td> <td>*Less than 3% at 1,000 Hz "0" VU recording</td> </tr> <tr> <td>Cr-O<sub>2</sub> TAPE</td> <td>*Less than 5% at 1,000 Hz "0" VU recording</td> </tr> <tr> <td>Fe-Cr TAPE</td> <td>*Less than 3% at 1,000 Hz "0" VU recording</td> </tr> </table>	LOW NOISE TAPE	*Less than 3% at 1,000 Hz "0" VU recording	Cr-O <sub>2</sub> TAPE	*Less than 5% at 1,000 Hz "0" VU recording	Fe-Cr TAPE	*Less than 3% at 1,000 Hz "0" VU recording
LOW NOISE TAPE	*Less than 3% at 1,000 Hz "0" VU recording						
Cr-O <sub>2</sub> TAPE	*Less than 5% at 1,000 Hz "0" VU recording						
Fe-Cr TAPE	*Less than 3% at 1,000 Hz "0" VU recording						
SIGNAL TO NOISE RATIO	Better than 50 dB (Dolby N.R. OFF) *Better than 44 dB (Dolby N.R. OFF) Better than 60 dB (Dolby N.R. ON) *Better than 48 dB (Dolby N.R. ON)						
TOTAL SIGNAL TO NOISE RATIO	*Better than 43 dB						
OUTPUT	<table border="0"> <tr> <td>LINE</td> <td>0.775V (0 <math>\pm 1</math> dBm), using a 333 Hz "0" VU pre-recorded tape</td> </tr> <tr> <td>DIN</td> <td>0.55V</td> </tr> <tr> <td>HEADPHONE</td> <td>50 mV/8 ohms, using a 333 Hz "0" VU pre-recorded tape</td> </tr> </table>	LINE	0.775V (0 $\pm 1$ dBm), using a 333 Hz "0" VU pre-recorded tape	DIN	0.55V	HEADPHONE	50 mV/8 ohms, using a 333 Hz "0" VU pre-recorded tape
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DIN	0.55V						
HEADPHONE	50 mV/8 ohms, using a 333 Hz "0" VU pre-recorded tape						
INPUT IMPEDANCE	<table border="0"> <tr> <td>MIC</td> <td>More than 0.3 mV/4.7 k ohms *0.5 mV/4.7 k ohms</td> </tr> <tr> <td>LINE</td> <td>More than 70 mV/100 k ohms *80 mV/100 k ohms</td> </tr> <tr> <td>DIN</td> <td>More than 3 mV/30 k ohms *4 mV/30 k ohms</td> </tr> </table>	MIC	More than 0.3 mV/4.7 k ohms *0.5 mV/4.7 k ohms	LINE	More than 70 mV/100 k ohms *80 mV/100 k ohms	DIN	More than 3 mV/30 k ohms *4 mV/30 k ohms
MIC	More than 0.3 mV/4.7 k ohms *0.5 mV/4.7 k ohms						
LINE	More than 70 mV/100 k ohms *80 mV/100 k ohms						
DIN	More than 3 mV/30 k ohms *4 mV/30 k ohms						
RECORDING/PLAYBACK LEVEL	<table border="0"> <tr> <td>LOW NOISE TAPE</td> <td>0 <math>\pm 2</math> dBm, 1,000 Hz "0" VU recording</td> </tr> <tr> <td>Cr-O<sub>2</sub> TAPE</td> <td>-3 <math>\pm 1.5</math> dBm, 1,000 Hz "0" VU recording</td> </tr> </table>	LOW NOISE TAPE	0 $\pm 2$ dBm, 1,000 Hz "0" VU recording	Cr-O <sub>2</sub> TAPE	-3 $\pm 1.5$ dBm, 1,000 Hz "0" VU recording		
LOW NOISE TAPE	0 $\pm 2$ dBm, 1,000 Hz "0" VU recording						
Cr-O <sub>2</sub> TAPE	-3 $\pm 1.5$ dBm, 1,000 Hz "0" VU recording						
CROSS TALK	Better than 25 dB, 1,000 Hz +3 VU recording						
ERASE RATIO	Better than 70 dB, 1,000 Hz +3 VU recording						
RECORDING BIAS FREQUENCY	61 $\pm 5$ kHz						
BIAS LEAK	*Less than -25 dB (Dolby N.R. OFF) *Less than -40 dB (Dolby N.R. ON)						
FAST FORWARD AND REWIND TIME	Approximately 1 min and 45 seconds using a C-90 cassette tape						
HEAD	<table border="0"> <tr> <td>RECORDING/PLAYBACK HEAD</td> <td>4 track 2 channel recording/playback head Type: P4-341 Impedance: 1,000 ohms at 1 kHz DC Resistance: 190 ohms</td> </tr> <tr> <td>ERASE HEAD</td> <td>2 track 1 channel erase head Type: HF213853 Impedance: 330 ohms at 50 kHz DC Resistance: 5.0 ohms</td> </tr> </table>	RECORDING/PLAYBACK HEAD	4 track 2 channel recording/playback head Type: P4-341 Impedance: 1,000 ohms at 1 kHz DC Resistance: 190 ohms	ERASE HEAD	2 track 1 channel erase head Type: HF213853 Impedance: 330 ohms at 50 kHz DC Resistance: 5.0 ohms		
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ERASE HEAD	2 track 1 channel erase head Type: HF213853 Impedance: 330 ohms at 50 kHz DC Resistance: 5.0 ohms						
MOTOR	Hysteresis Synchronous outer rotor motor Type: HM1-12CS Revolutions: 1,500/1,800 rpm at 50/60 Hz						

TRANSISTOR	2SA628(E) (F) . . . 2 2SA733 (P) (Q) . . . 1 2SC458LG (C) . . . 4 2SC458LG (D) . . . 2 2SC945L (P) . . . 3 2SC945L (P) (Q) . . . 4	2SC945L (Q) (R) . . . 12 2SC1061 (C) . . . 1 2SC1096 (K) (L) . . . 1 2SC1247A(B) (V) . . . 3 2SC1312 R (G) (H) . . . 4
FET	2SK30A (D) . . . 2	
DIODE	1S1588 . . . 2 1S2473VE . . . 26 WZ085A . . . 4 1N34A . . . 6	10D05 . . . 5 SEL-103R . . . 1 SEL-303E . . . 2 WZ-240 . . . 1
POWER REQUIREMENT	Universal Models: 110 to 240V AC 50/60 Hz JPN Models: 100V AC 50/60 Hz CSA Models: 120V AC 60 Hz CEE Models: 220V AC 50 Hz BSI Models: 240V AC 50 Hz	
POWER CONSUMPTION	30W	
DIMENSIONS	440 (W) x 142 (H) x 304 (D) mm (17.3" x 5.6" x 12")	
WEIGHT	8.8 kg (19.4 lbs)	

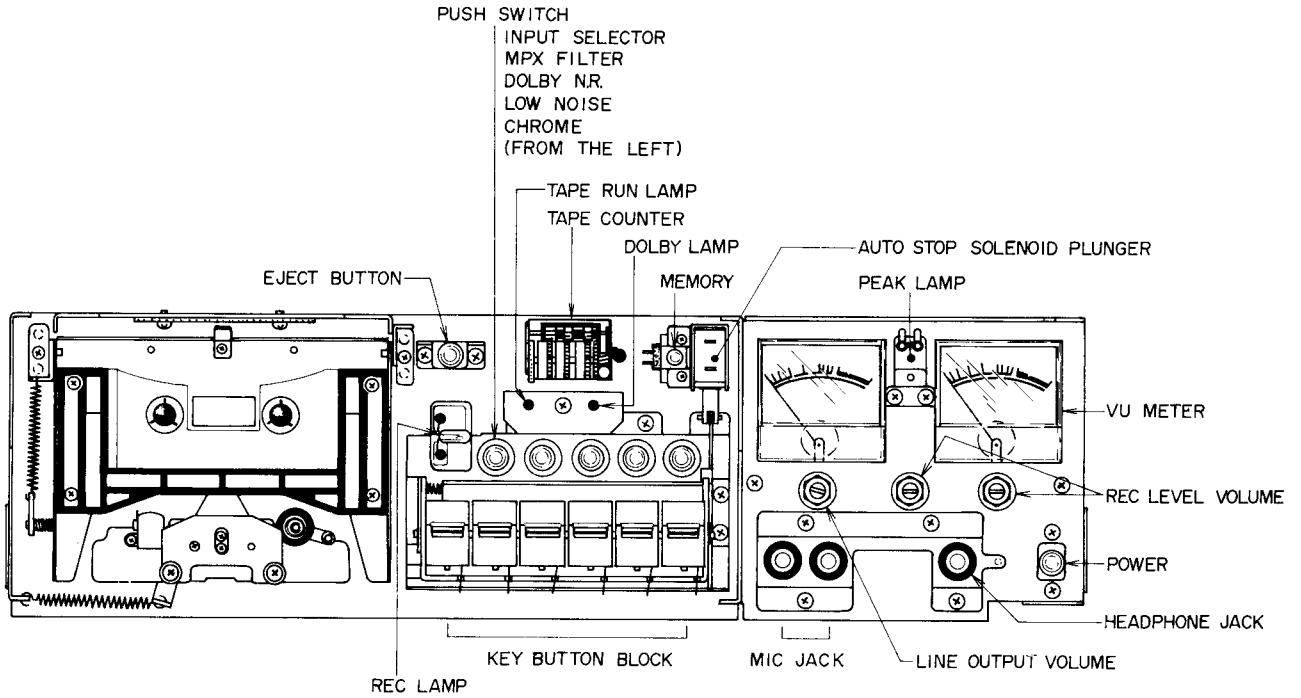
NOTE: Specifications subject to change without notice.

## II. DISMANTLING OF UNIT

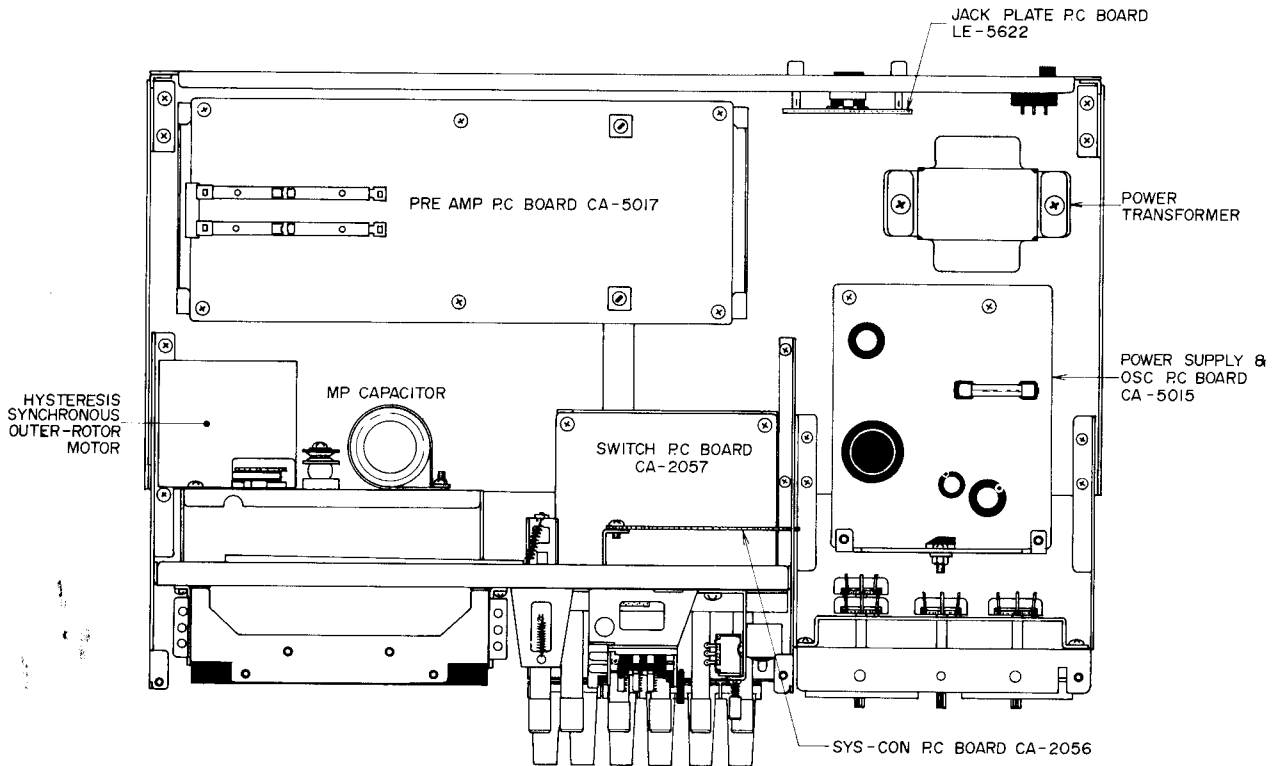
In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemble in reverse order.



### III. ARRANGEMENT OF PRINCIPAL PARTS



FRONT VIEW



TOP VIEW

# IV. MECHANISM ADJUSTMENT

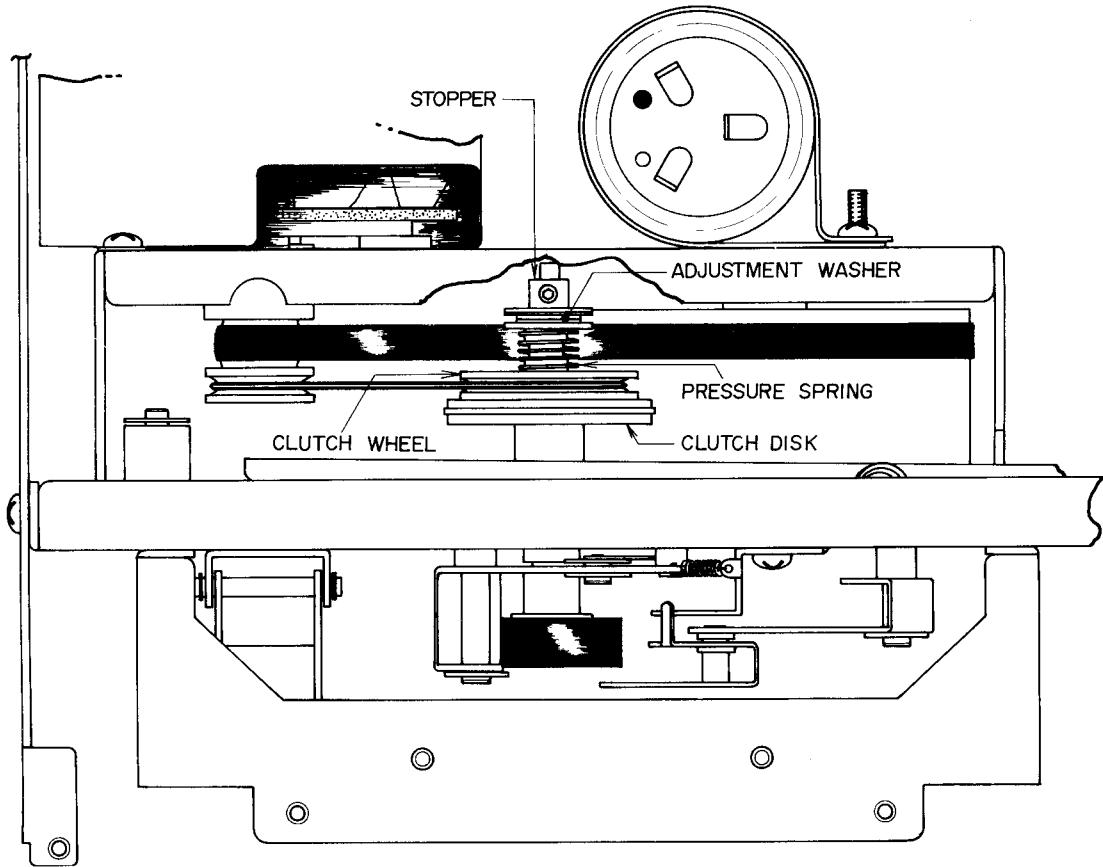


Fig. 1

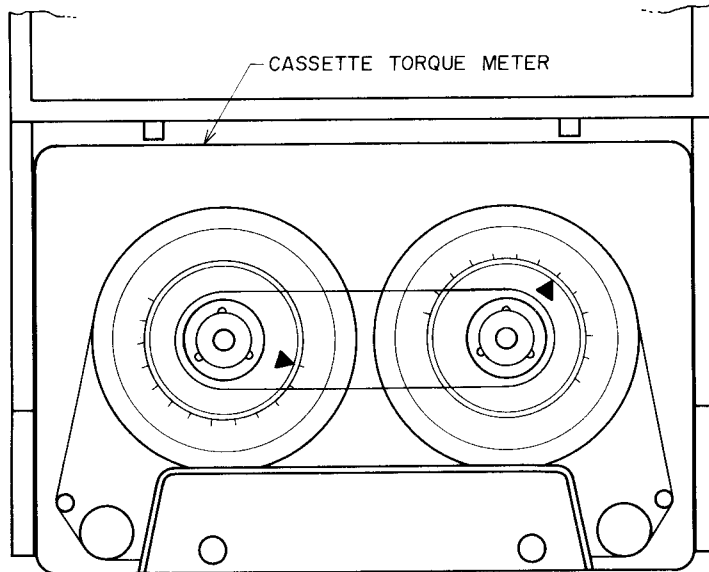


Fig. 2



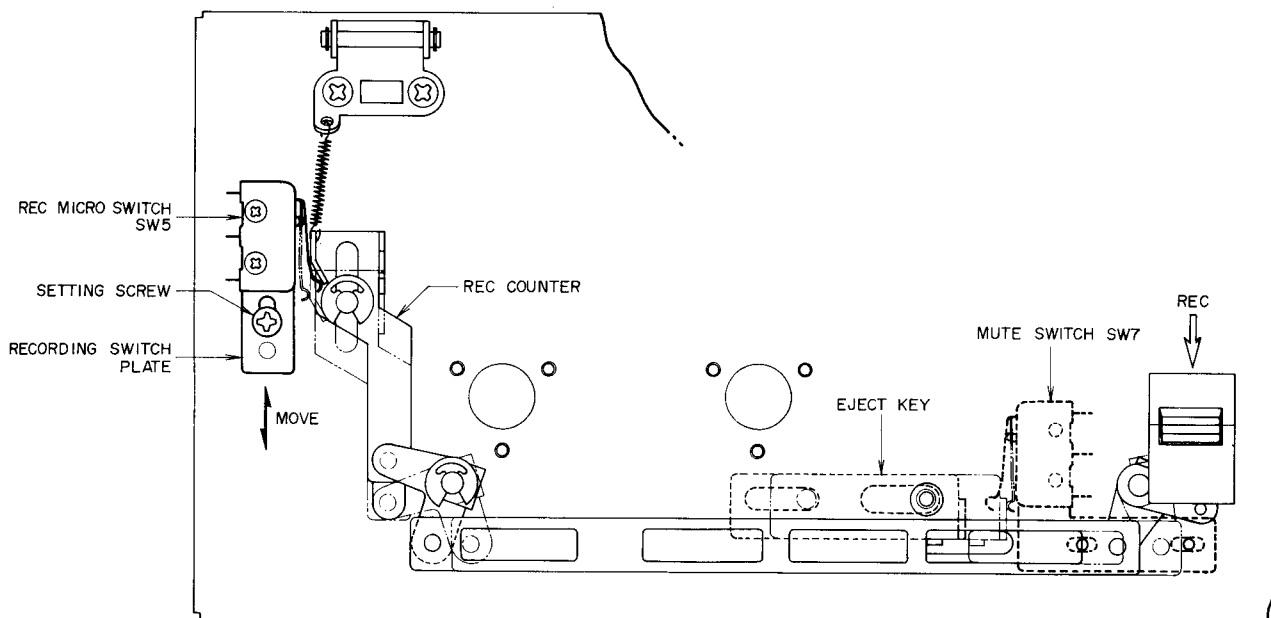


Fig. 3

### 1. FAST FORWARD AND REWIND TORQUE MEASUREMENT (Refer to Figs. 1 and 2)

Use a cassette torque meter and measure torque at the point at which the tape ends and stop mode is effected from Rewind and Fast Forward mode respectively.

Proper rewind and fast forward torque is  $100 \pm 20$  gr-cm.

If torque is not within specifications, adjust friction pressure by changing the number of washers inserted between the pressure spring and stopper.

In case specified torque cannot be attained after above adjustment, replace clutch disk assembly.

NOTE: In case of replacement of clutch disc only, be sure to adjust torque only after aging (after the new clutch disc has been used for awhile).

### 2. TAKE-UP AND SUPPLY REEL TABLE TORQUE MEASUREMENT

Use a cassette torque meter as shown in Fig. 2, and at play mode, measure the reel table torque of both reels during tape travel.

Take-up reel table:  $50 \pm 10$  gr-cm

Supply reel table:  $10 \pm 3$  gr-cm

If torque of each reel table is not within specifications, replace reel table assembly.

NOTE: When adjusting clutch disk, because Fast Forward and Rewind Torque as well as Take-up and Supply table torque is changed, it is necessary to adjust Fast Forward and Rewind torque first and then Take-up and Supply reel table torque.

### 3. REC MICRO SWITCH POSITION ADJUSTMENT (Refer to Fig. 3)

When the Recording Button is depressed, Recording Switch SW-5 and Mute Switch SW-7 are turned ON. Move Recording Switch Plate as indicated by the arrow mark in the figure, and adjust so that Recording Switch SW-5 is activated first and then Mute Switch SW-7 is activated. Tighten setting screw to maintain optimum adjusted position.

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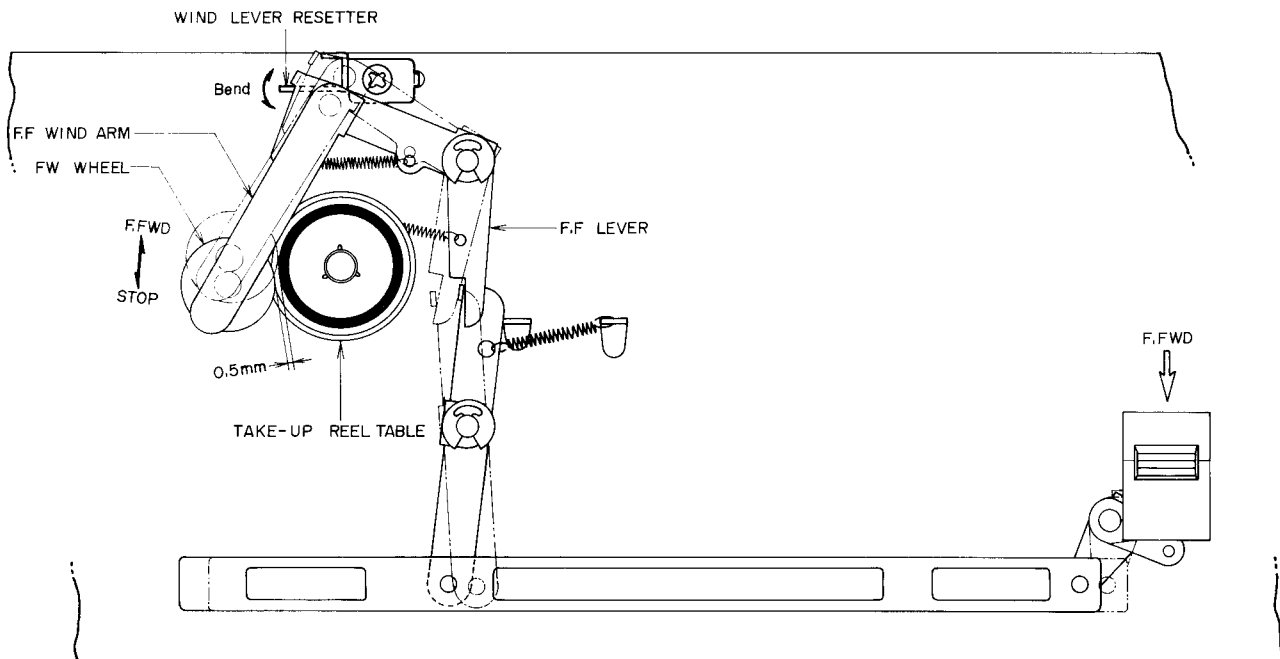


Fig. 4

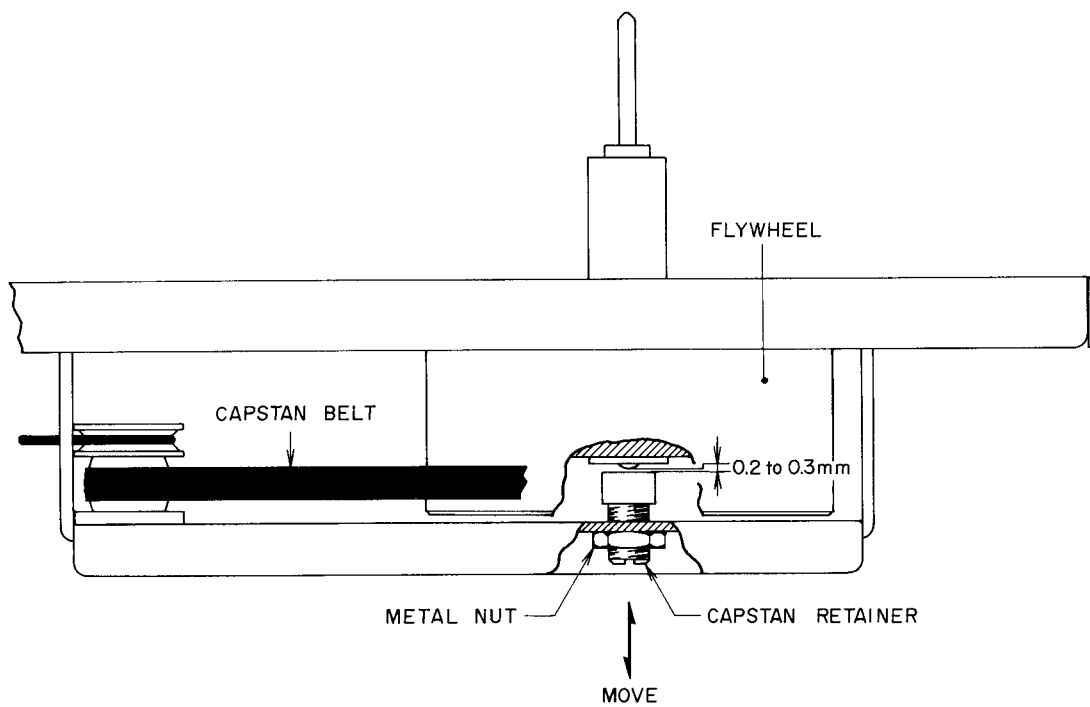


Fig. 5

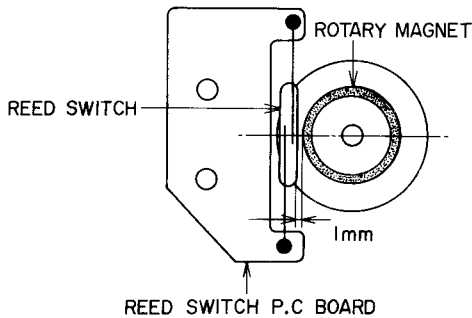


Fig. 6

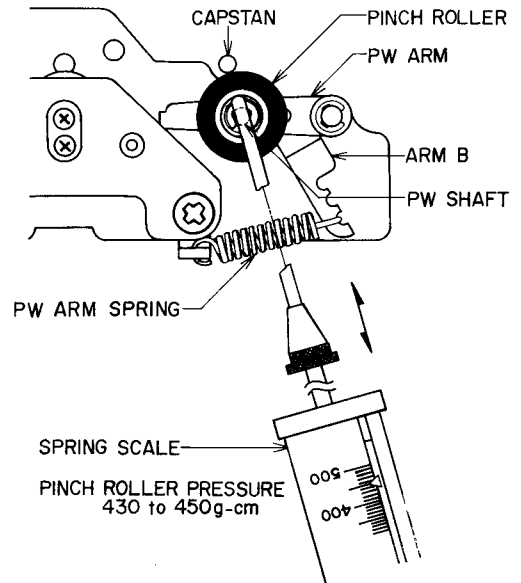


Fig. 7

#### 4. FW WHEEL POSITION ADJUSTMENT

(Refer to Fig. 4)

At stop and rewind modes, adjust by bending Wind Lever Resetter so that the gap width between FW Wheel and Take-up table is 0.5 mm.

#### 5. FLYWHEEL LOOSE PLAY ADJUSTMENT

(Refer to Fig. 5)

Adjust by turning Capstan Retainer to obtain a 0.2 to 0.3 mm flywheel gap. Tighten Metal Nut to stabilize Capstan Retainer and maintain optimum adjusted position.

#### 6. REED SWITCH POSITION ADJUSTMENT

(Refer to Fig. 6)

Adjust installation position of reed switch to obtain a 1 mm gap between the reed switch and rotary magnet and so that both parts are perfectly centered in relation to each other. If centering is off, reed switch operation becomes unstable, and automatic stop may also be effected.

#### 7. PINCH ROLLER PRESSURE ADJUSTMENT

(Refer to Fig. 7)

At playback mode, pull back the Pinch Roller Arm in the direction of arrow mark with a spring gauge, and then gently return. Take a reading of the spring gauge at the time the Pinch Roller touches the capstan and begins to rotate.

Proper pressure is 430 to 450 gr-cm. If pressure is not within specifications, bring to within specifications by adjusting position of the PW ARM SPRING on Arm B.

## V. HEAD ADJUSTMENT

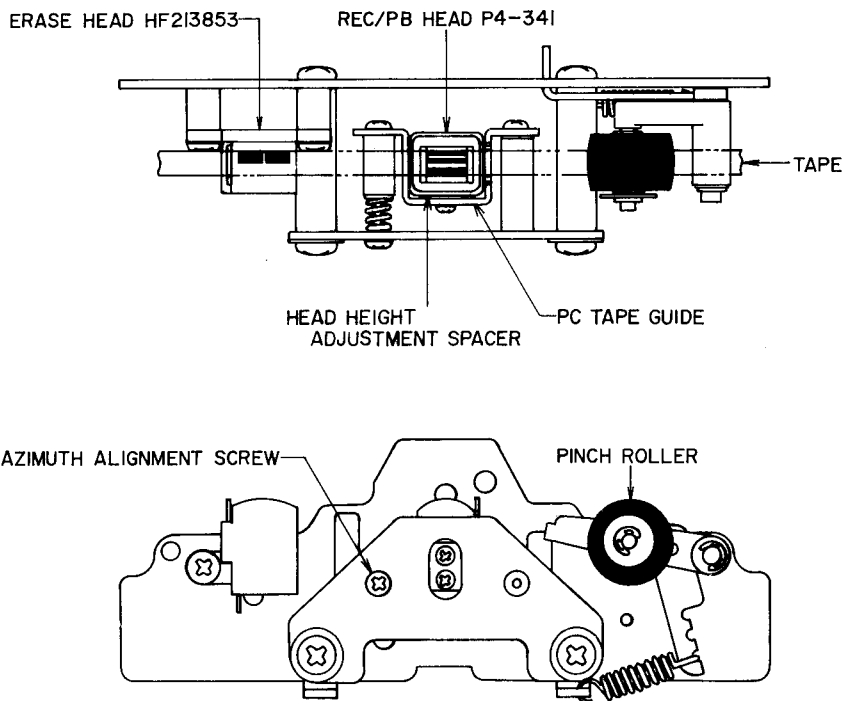


Fig. 8

### 1. RECORDING/PLAYBACK HEAD HEIGHT ADJUSTMENT (Refer to Fig. 8)

Playback a 1,000 Hz recorded test tape and adjust the number of spacers between the head and P.C tape guide so that equal maximum output level between 0 +1 VU to 3 VU is obtained on both channels.

### 2. RECORDING/PLAYBACK HEAD AZIMUTH ALIGNMENT ADJUSTMENT (Refer to Fig. 8)

Playback a 10 kHz recorded test tape and adjust Azimuth Alignment Screw shown in Fig. 8 to obtain maximum output on both channels.

#### 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) Use only new tape as level variation is likely to occur when using old tape.
- 4) Be sure to demagnetize the heads with a Head Demagnetizer before and after head adjustment.

## VI. AMPLIFIER ADJUSTMENT

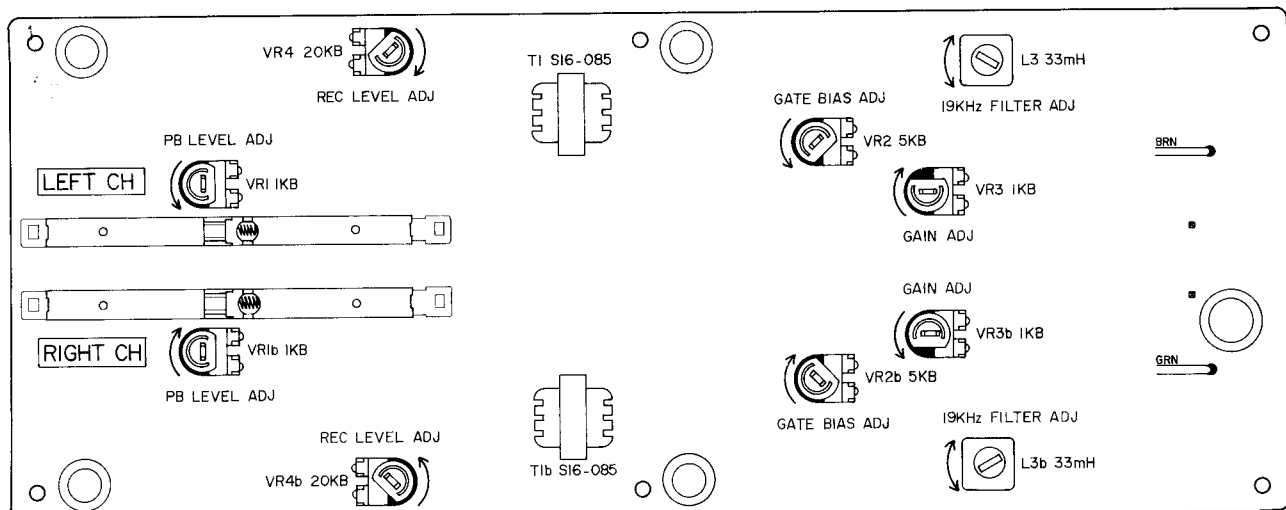


Fig. 9 Pre Amp P.C Board CA-5017

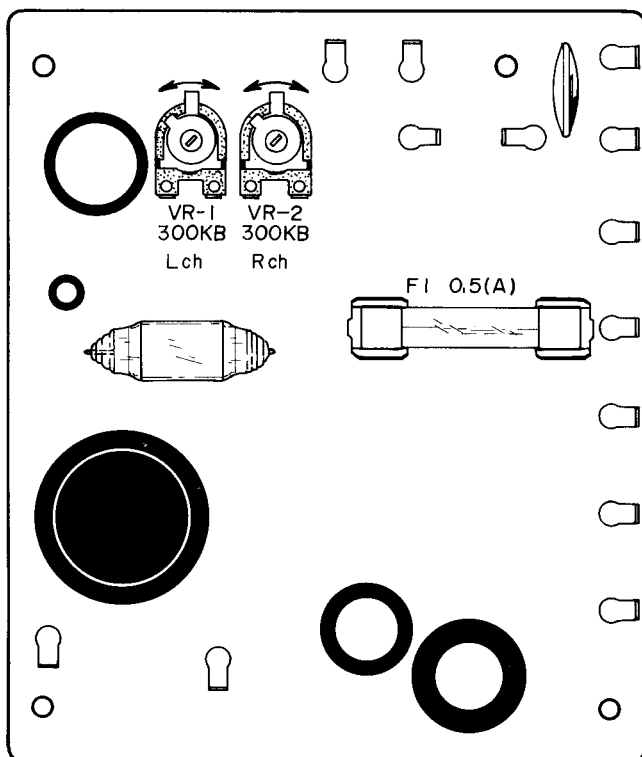


Fig. 10 Power Supply & OSC P.C Board CA-5015

## RECORDING/PLAYBACK LEVEL ADJUSTMENT

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Result	Remarks
1	Playback Level Adjustment	333 Hz 0 VU Test Tape	PLAY	VR1, 1 kB CA-5017	$0 \pm 1.5$ dBm	
2	Recording Level Adjustment (low noise tape)	Low Noise Blank Tape 1,000 Hz 0 VU recording	REC and PLAY	VR4, 20 kB CA-5017	$0 \pm 2$ dBm	Set Tape Selector to LOW NOISE
3	Recording Level Adjustment (chrome tape)	Chromium Dioxide Blank Tape 1,000 Hz 0 VU recording	REC and PLAY		$-3 \pm 1.5$ dBm	Set Tape Selector to CHROME
4	Frequency Response Adjustment (low noise tape)	Low Noise Blank Tape 1,000 Hz 10,000 Hz -20VU recording	REC and PLAY	VR1, 300 kB VR2, 300 kB CA-5015	Flat frequency response from 1,000 Hz to 10,000 Hz	Deviation $\pm 1.5$ dB (See Note 5)

**NOTE:**

- 1) Set output volume to maximum position.
- 2) Set Dolby Noise Reduction switch to "OFF".
- 3) Use only new tape as level variation is likely to occur when using old tape.
- 4) Set tape selector switch to "LOW NOISE" except in Step 3.
- 5) Following frequency response adjustment, check to confirm that recording/playback level is the same. If levels differ, carry out Step 2 adjustment again.

Chart-1

## VII. DOLBY N.R. CIRCUIT ADJUSTMENT

Connect measuring instruments as shown in Fig. 11.

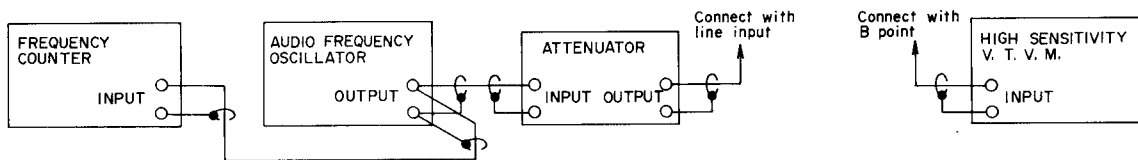


Fig. 11

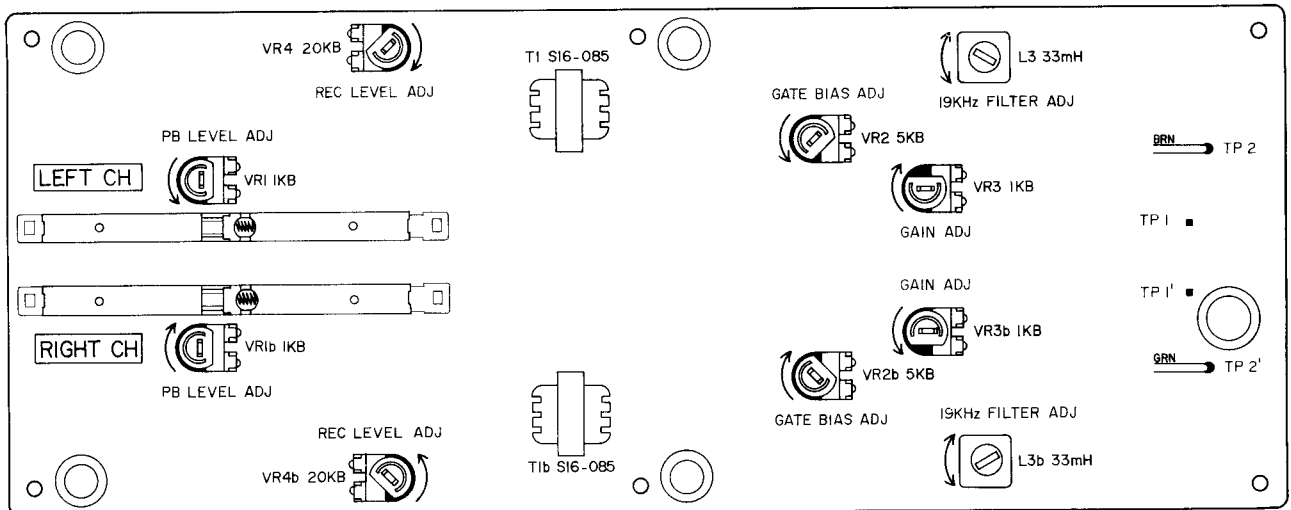


Fig. 12

### 1. 19 kHz FILTER ADJUSTMENT

(Refer to Fig. 12)

- 1) Set Monitor Switch to "SOURCE" and set Dolby Noise Reduction Switch to "ON" position. With Recording Level Control set to 12 o'clock position, supply a 19 kHz signal to the line input to obtain a 0 dBm line output level.
- 2) Set MPX Filter switch to "ON" and adjust core of ferri-inductor L-3, 33 mH to obtain minimum level at test point 2.

### 2. RECORDING DOLBY NOISE REDUCTION AMPLIFIER ADJUSTMENT

(Refer to Fig. 12)

- 1) Set Monitor Switch to "SOURCE", Dolby N.R. Switch to "OFF", Tape Selector Switch to "LOW NOISE" and Recording Level Control to 12 o'clock position.
- 2) Ground test point 1. and supply a 5 kHz signal to the line input through an attenuator to obtain a +2 dBm level at test point 2.
- 3) Decrease input level by 30.5 dBm to obtain a -28.5 dBm level at test point 2.
- 4) Set Dolby N.R. switch to "ON" and adjust semi-fixed resistor VR3 (1 kB) to obtain a -18.5 dBm level at test point 2.
- 5) Disconnect test point A from ground and adjust semi-fixed resistor VR2 (5 kB) to obtain -20.5 dBm (a decrease of 2 dBm) level at test point 2.

### 3. PLAYBACK DOLBY NOISE REDUCTION AMPLIFIER CONFIRMATION

- 1) Set Dolby switch to "OFF" and record a 1 kHz -20 dBm signal.
- 2) Rewind the cassette tape and set Dolby switch to "ON".
- 3) Playback the signal recorded in Item-1) and confirm that when the Dolby switch is switched to "ON" position, the line output level is decreased by 6 dB as compared to when the Dolby switch is turned "OFF". (Line output should be -26 dBm with Dolby N.R. Switch at ON).

If level differs less or more than 6 dB, repeat Recording Dolby Noise Reduction amplifier adjustment.

- NOTE:
1. When making Dolby Noise Reduction circuit adjustments, use only calibrated measuring instruments.
  2. Level deviation must be within  $\pm 0.5$  dBm.
  3. Paint lock semi-fixed resistors following adjustment.
  4. To prevent adjustment discrepancy caused by recording bias leakage, disconnect power supply (+B) lead wire from oscillator circuit prior to adjustment.

## VIII. DC RESISTANCE OF VARIOUS COILS

Part	Designation	DC Resistance
Oscillator Coil	OT-903	Between 1-3: 0.04 ohms Between 4-6: 0.14 ohms Between 7-9: 0.65 ohms
Motor	HM1-12CS	Between YLW-BLU: 205 ohms Between BLU-RED: 186 ohms Between RED-YLW: 193 ohms
Headphone Output Transformer	S16-083	Primary: 205 ohms Secondary: 1.3 ohms
Auto Stop Solenoid	0730THT1	15 ohms
Recording/Playback Head	P4-341	190 ohms
Erase head	HF213853	5.0 ohms

NOTE: The resistance values shown in this chart are average values.

Chart - 2

## IX. CLASSIFICATION OF VARIOUS P.C BOARDS

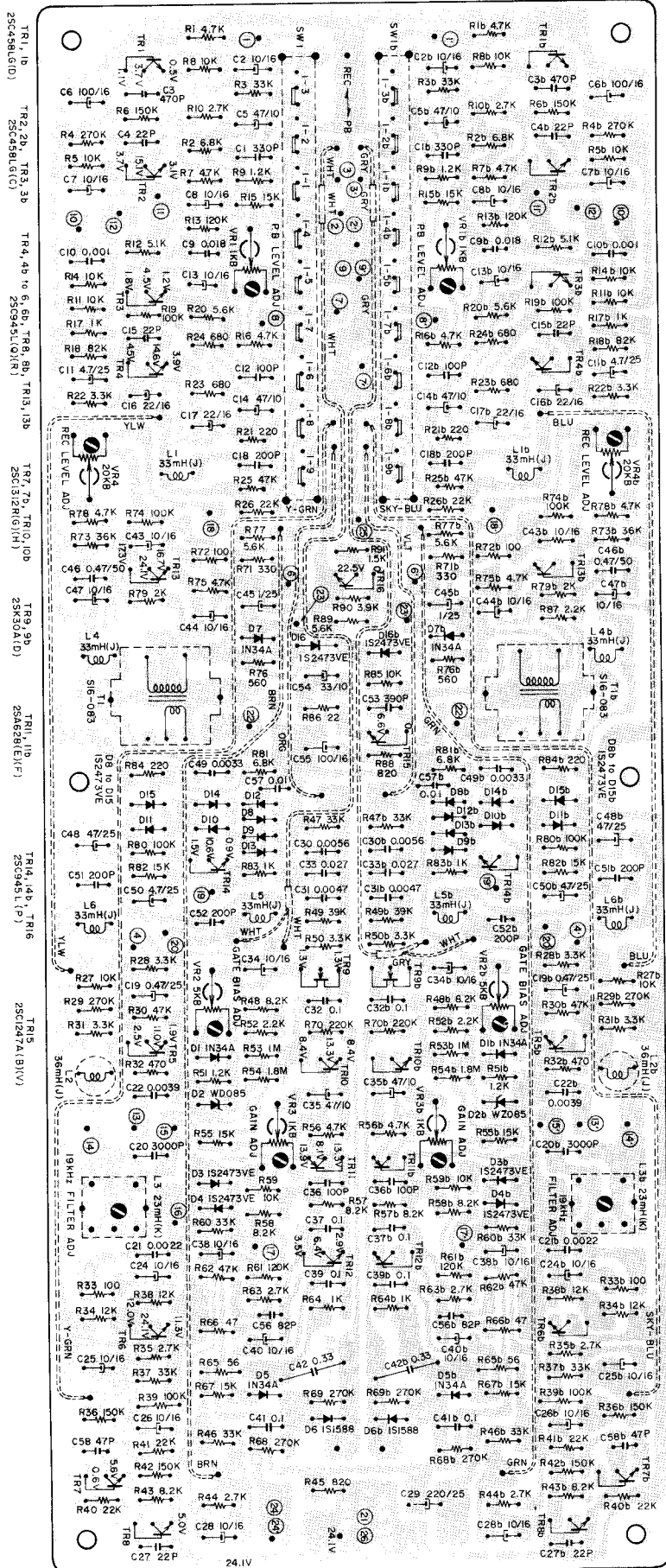
### 1. RELATION OF P.C BOARD TITLE AND NUMBER

P.C Board	Number of P.C Board
Pre Amp P.C Board	CA-5017
Power Supply/OSC P.C Board	CA-5015
Sys. Con P.C Board	CA-2056
Switch P.C Board	CA-2057
Reed Switch P.C Board	CA-1095
Jack Plate P.C Board	LE-5622
Lamp P.C Board	CA-2069
Lamp P.C Board	CG-5003
Peak Lamp P.C Board	CA-2051

Chart - 3

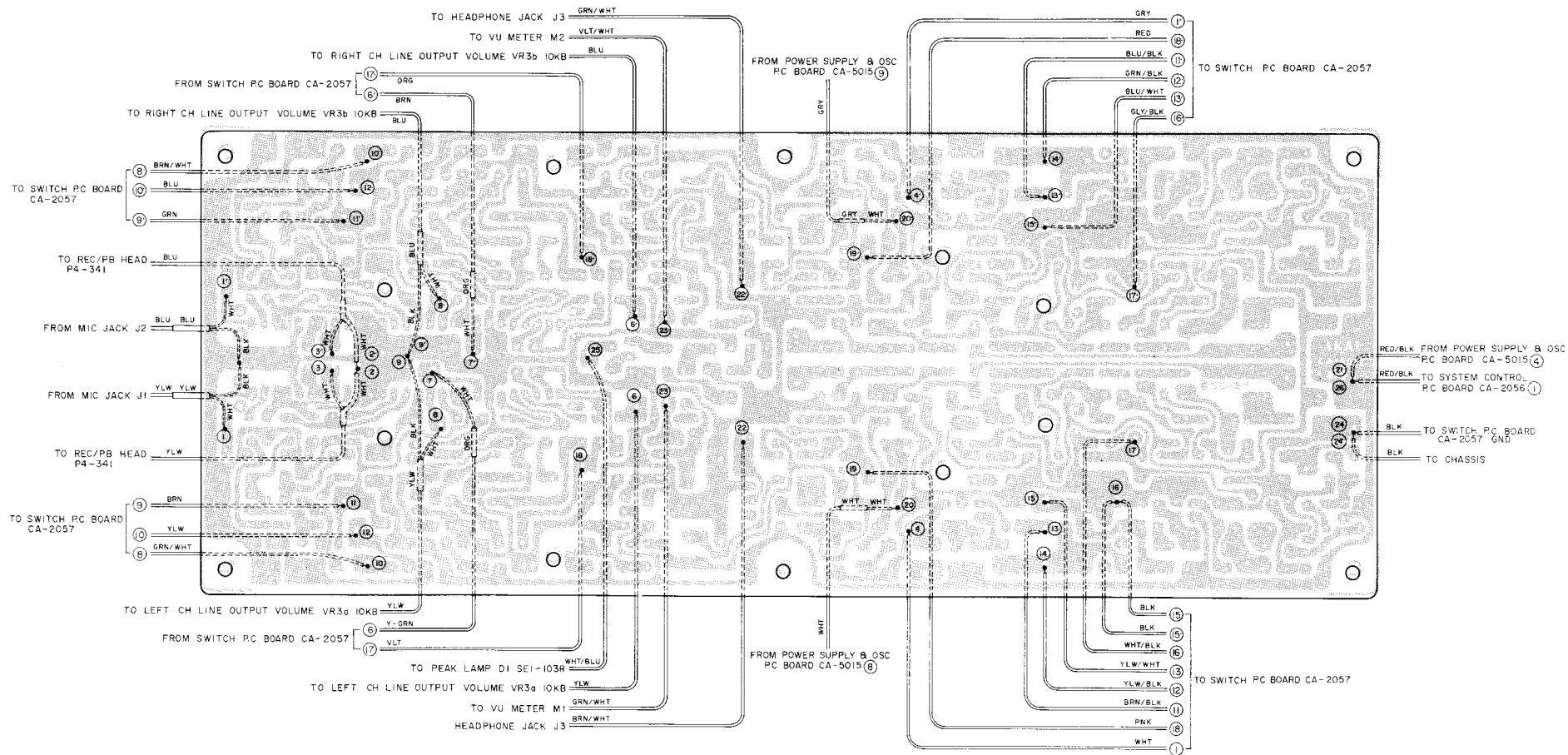
## 2. COMPOSITION OF VARIOUS P.C BOARDS

### 1. PRE AMP P.C BOARD CA-5017

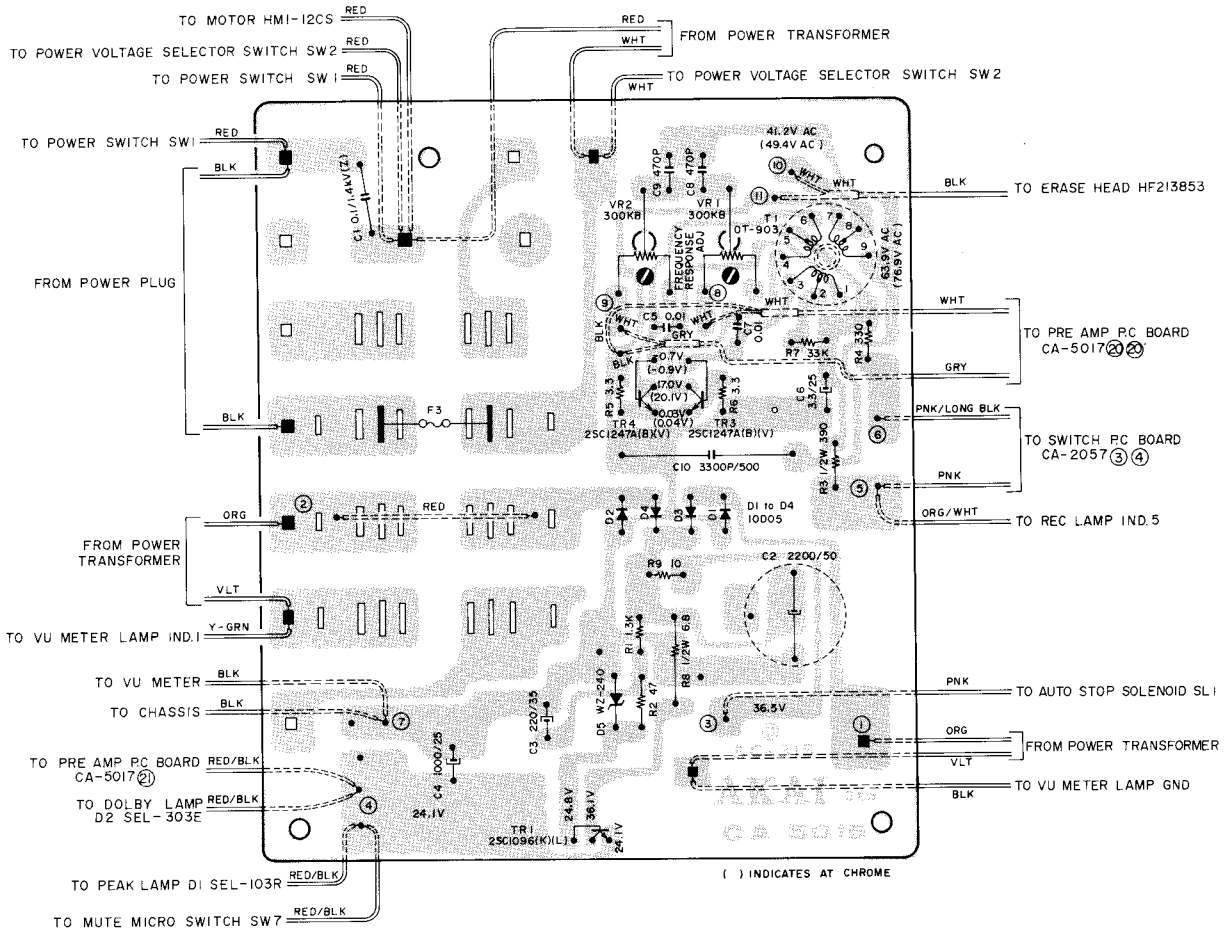




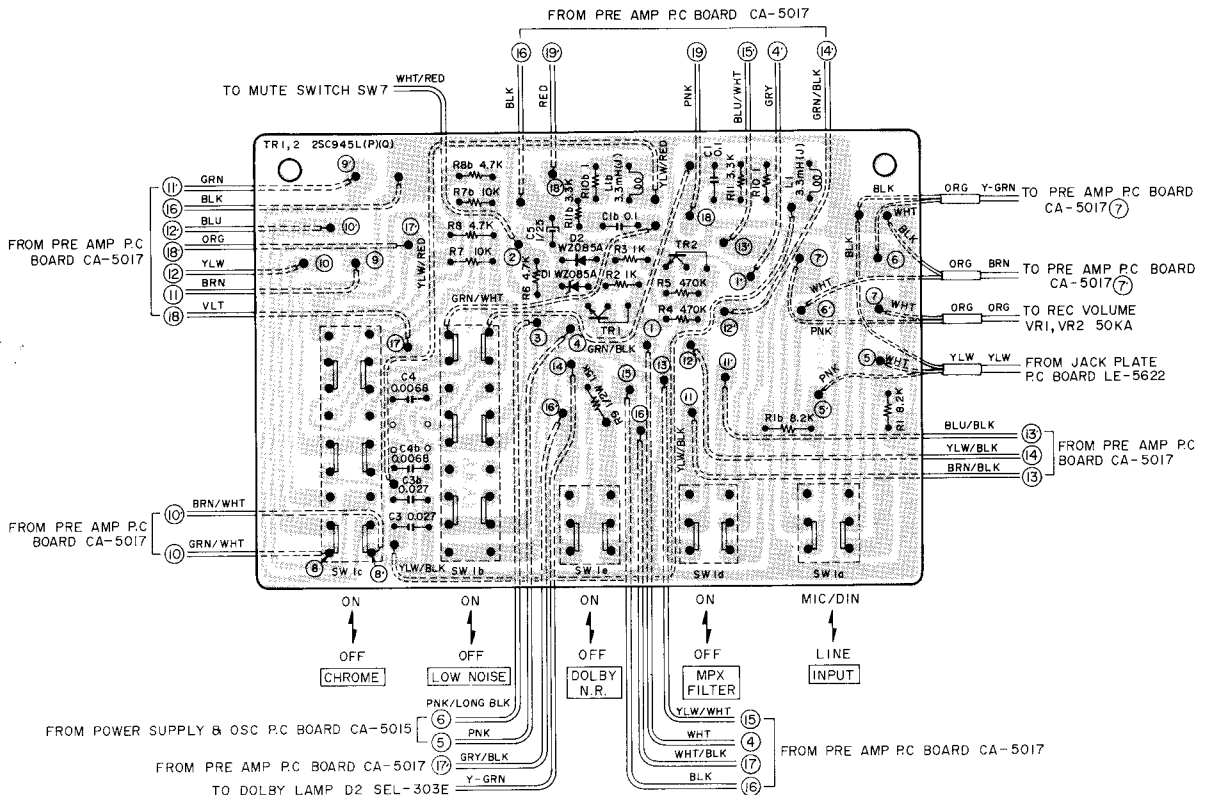
PRE AMP P.C BOARD CA-5017



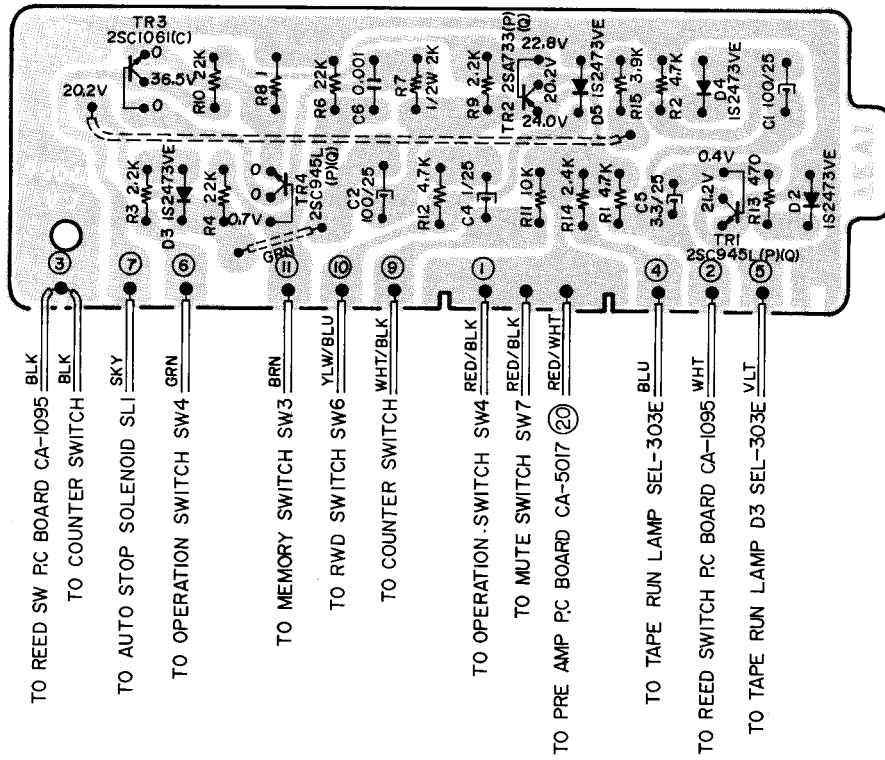
## 2. POWER SUPPLY & OSC P.C BOARD CA-5015



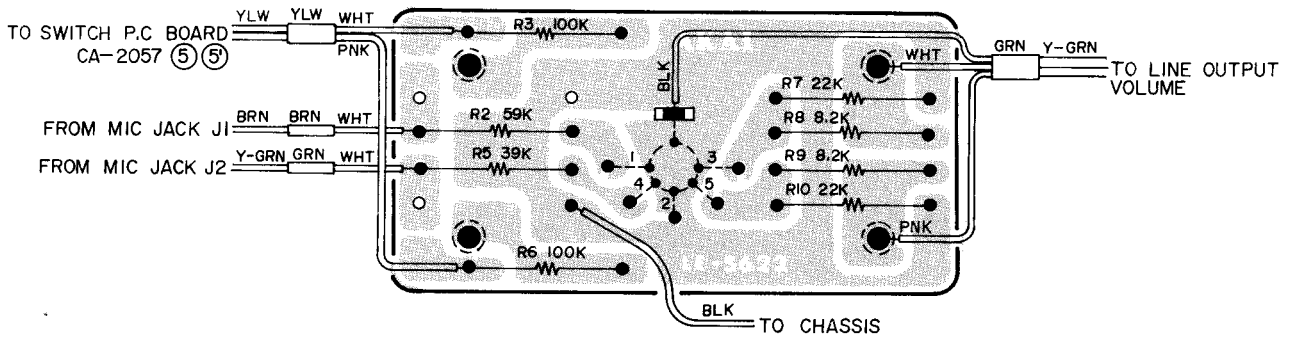
## 3. SWITCH P.C BOARD CA-2057



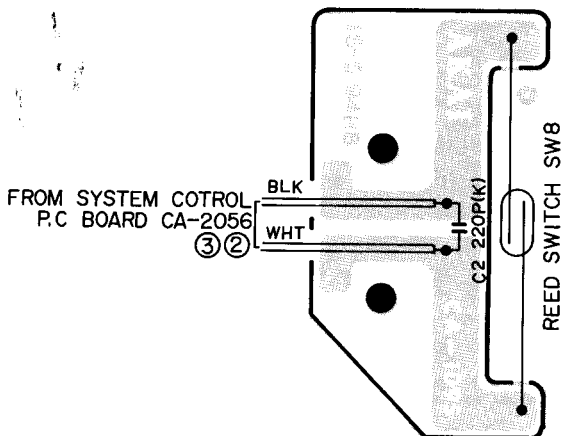
4. SYS. CON P.C BOARD CA-2056



5. JACK PLATE P.C BOARD LE-5622



6. REED SWITCH P.C BOARD CA-1095



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SECTION 2

**PARTS LIST**

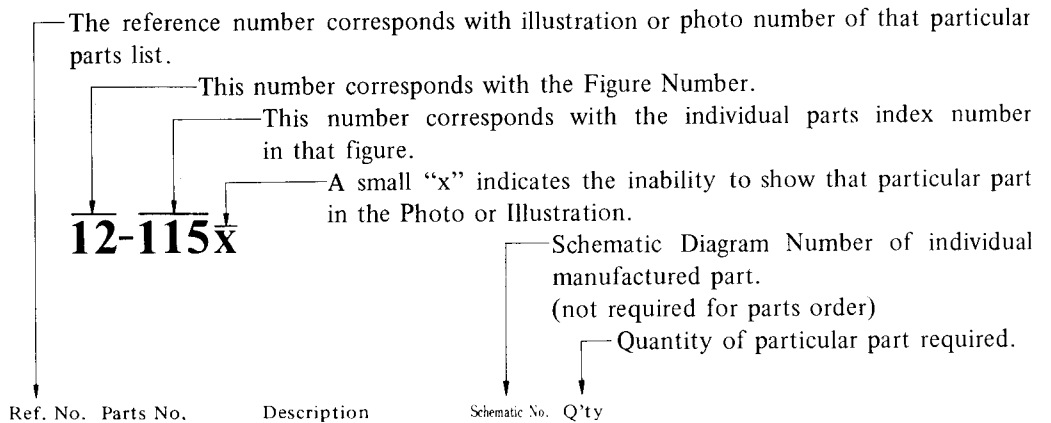
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Some of the parts in this parts list are only available as a complete assembly, and can not be supplied as individual parts.

## 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.



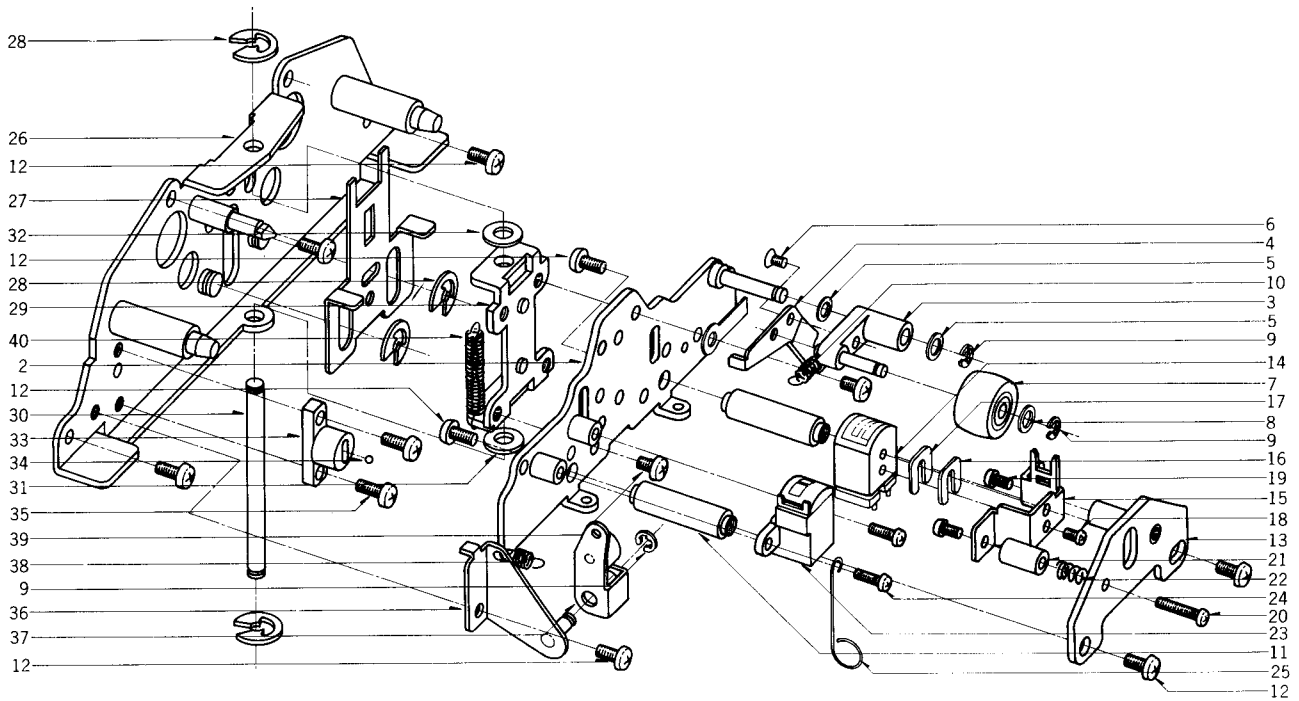
Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>FLYWHEEL BLOCK #13</b>				
12-115x	800425	Flywheel Block Assy. Comp.	RDG #13	1
12-116	244506	Flywheel Only	RD-233	1
12-117x	244754	Felt, Flywheel	RD-275	1
12-118	251324	Main Metal Case	RD-236	1
12-119	253080	Main Metal	RD-237	1

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.

## ELECTRICAL PARTS LIST TABLE

<p>Because the indication of resistors and capacitors in the P. C. Board photos are being eliminated, please confirm parts name and shape by comparing them with the parts shown in this table.</p>	<p>1</p>  <p style="text-align: center;">Solid Resistor</p>	<p>2</p> <p style="text-align: right;">Stopper Type</p>  <p style="text-align: center;">Carbon Resistor</p>	<p>3</p>  <p style="text-align: center;">Metal Oxide Film Resistor</p>	
	<p>4</p>  <p style="text-align: center;">Cement Resistor</p>	<p>5</p>  <p style="text-align: center;">Wire-Wound Resistor</p>	<p>6</p>  <p style="text-align: center;">Thermister</p>	<p>7</p>  <p style="text-align: center;">Enamel Resistor</p>
	<p>1</p>  <p style="text-align: center;">MP Capacitor (Tubular Type)</p>	<p>2</p>  <p style="text-align: center;">Plastic Capacitor</p>	<p>3</p>  <p style="text-align: center;">Mylar Capacitor</p>	<p>4</p>  <p style="text-align: center;">VFM (Hi-Q) Capacitor</p>
	<p>5</p>  <p style="text-align: center;">Mylar Capacitor</p>	<p>6</p>  <p style="text-align: center;">Tantalum Capacitor</p>	<p>7</p>  <p style="text-align: center;">Oil Capacitor (Tubular Type)</p>	<p>8</p> <p style="text-align: right;">Vertical Type</p> <p>(Tubular Type)</p>  <p style="text-align: center;">Styrol Capacitor</p>
<p>9</p>  <p style="text-align: center;">Electrolytic Capacitor (Tubular Type)</p>	<p>10</p> <p style="text-align: right;">Vertical Type</p> <p>(Tubular Type)</p>  <p style="text-align: center;">Electrolytic Capacitor</p>	<p>11</p>  <p style="text-align: center;">Ceramic Capacitor</p>	<p>12</p>  <p style="text-align: center;">Metalized Mylar (Paper) Capacitor</p>	
<p>13</p>  <p style="text-align: center;">Trimmer Condenser</p>		<p>VR</p>  <p style="text-align: center;">Semi-Fixed Volume</p>		
<p>LI</p>  <p style="text-align: center;">Ferri Inductor</p>	<p>TR</p>  <p style="text-align: center;">Transistor</p>			
<p>CR</p>  <p style="text-align: center;">Spark Quencher</p>	<p>D</p>  <p style="text-align: center;">Diode (Silicon, Zener, Germanium)</p>			

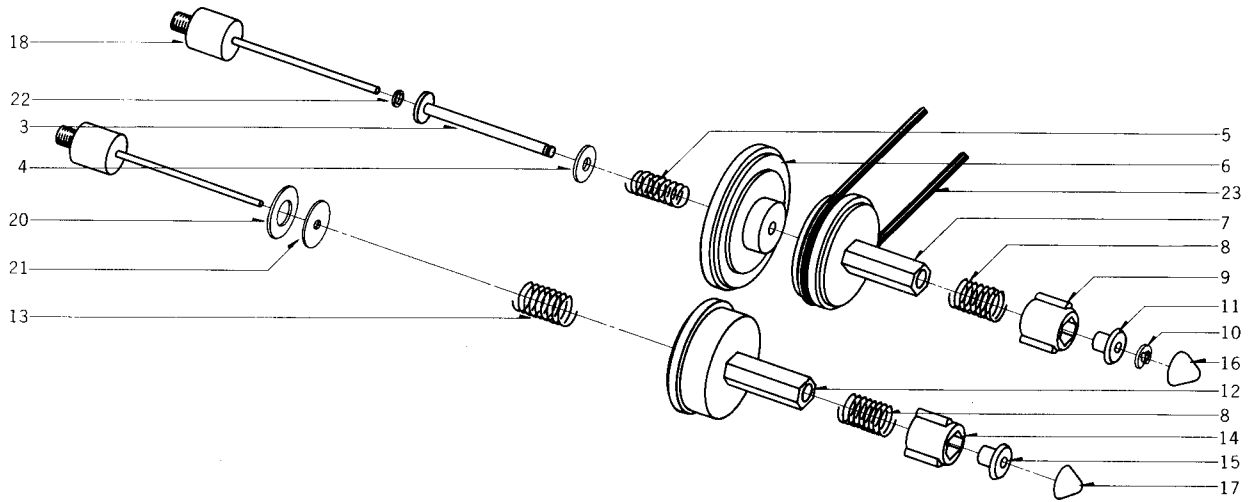
# 1. ILLUSTRATION OF HEAD BASE/SUB FRAME BLOCK



## 1) HEAD BASE/SUB FRAME BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>HEAD BASE BLOCK</b>					<b>SUB FRAME BLOCK</b>				
1-1x	BH661061	Head Base Block Comp.	CA-1	1	1-26	TC646942	Sub Frame	CA-2009	1
1-2	HZ646907	Head Base	CA-0001	1	1-27	ML642082	Pause Slider	CA-2014	1
1-3	TC645063	PW Arm, w/shaft	CA-0004	1	1-28	ZW290283	'U' Ring 2.85M	6-1-1	4
1-4	TC641632	Arm B	CA-0006	1	1-29	HZ642093	Head Base Guide	CA-2015	1
1-5	ZW364364	Washer (Polyslider) D3.1x5x0.25t		1	1-30	MS644872	Guide Shaft	CA-2012	1
1-6	ZS399148	Screw, countersunk head 2x3		1	1-31	ZW434338	Washer (Nylon) D4.1x8x1t		1
1-7	MP468292	Pinch Roller CG D=13	CG-0032	1	1-32	ZW675753	Washer D4.1x8x0.5t		1
1-8	ZW364364	Washer (Polyslider) D3.1x5x0.25t		1	1-33	MS645153	Ball Guide	CA-2013	1
1-9	ZW270088	'E' Ring 1.9M	6-1-9	2	1-34	MV522235	Steel Ball 3/32"		1
1-10	ZG644411	PW Arm Spring	CA-0009	1	1-35	ZS379350	Screw, pan head 3x6		2
1-11	HZ644400	Head Hanger Post	CA-0007	2	1-36	MZ642104	Arm Shaft Bracket, w/shaft	CA-2016	1
1-12	ZS323728	Screw, binding head 3x5		4	1-37	TC642115	Pressure Roller Arm, w/roller	CA-2018	1
1-13	HZ641643	Head Hanger A	CA-0012	1	1-38	ZG569384	Selector Spring	CP-1166	1
1-14	HP564085	REC/PB HEAD P4-341	CG-2.4.7.CH	1	1-39	ZS417216	Screw, pan head 3x4		1
1-15	MS366625	PC Tape Guide	RCC-1012	1					
1-16	ZW414235	Height Adjust Washer A	CS-0025	1	1-40	ZG365218	Brake Lever Return Spring	RCC-1374	2
1-17	ZW414246	Height Adjust Washer B	CS-0025	1					
1-18	ZS477876	Screw, pan head 2x3		2					
1-19	ZS391386	Screw, pan head 2.3x3		2					
1-20	ZS364397	Screw, pan head 2.3x10		1					
1-21	ZS644433	Space Screw B	CA-0011	1					
1-22	ZG465636	Angle Adjust Spring	CG-0029	1					
1-23	HE656098	ERASE HEAD HF213853	37-2-2	1					
1-24	ZS464692	Screw, binding head 2.3x6		2					
1-25	HZ668327	Head Wire Retainer	CA-0014	1					

## 2. ILLUSTRATION ON SUPPLY/TAKE-UP REEL TABLE BLOCK



### 2) SUPPLY/TAKE-UP REEL TABLE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
2-1x	BR637716	Take-up Reel Table Block		
		Comp.	CA-1, 2	1
2-2x	BR637705	Supply Reel Table Block		
		Comp.	CA-1	1
2-3	MS387573	Take-up Reel Table Shaft		1
2-4	ZW355307	Washer (BSP) D2.6x6.9x0.5t	CS-2007	1
2-5	ZG387584	Clutch Spring	CS-2008	1
2-6	TC668305	Take-up Reel Table Pulley		
		B Comp.	CA-2089	1
2-7	MT387630	Take-up Reel Table Comp.	CS-2012B	1
2-8	ZG385075	Reel Table Spring	CS-2014	2
2-9	MT370361	C Type Reel Table Blade	RCC-1345	1
2-10	ZW270088	'E' Ring 1.9M	6-1-9	1
2-11	MT387641	Take-up Reel Table Bush	CS-2015	1
2-12	TC389790	Supply Reel Table Comp.	CS-2016B	1
2-13	ZG615205	Back Tension Spring	CH-1072	1
2-14	MT605766	Reel Table Blade (V Type)	CH-1070	1
2-15	MT370348	C Type Reel Table Bush	RCC-1343	1
2-16	MT394200	Take-up Reel Cap	CS-2105	1
2-17	MT370372	C Type Reel Shaft Cap	RCC-1346	1
2-18	MT644534	Reel Table Shaft	CA-1012	2
2-19x	ZW413188	Nut M4		2
2-20	ZW615216	Reel Table Washer 1	CH-1073	1
2-21	ZW615227	Reel Table Washer 2	CH-1074	1
2-22	ZW621426	Washer D1.7x3.2x0.25t		1
2-23	MB415743	Counter Belt D96x1x1	CC-1034	1

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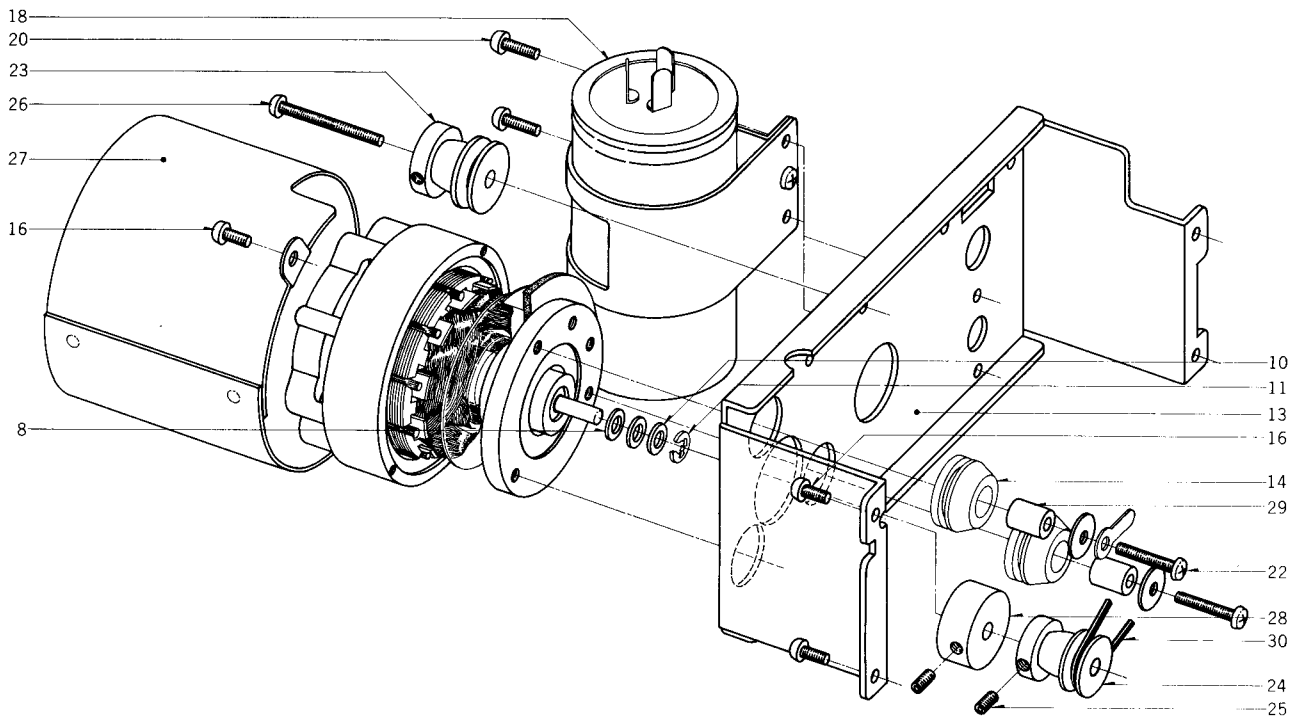
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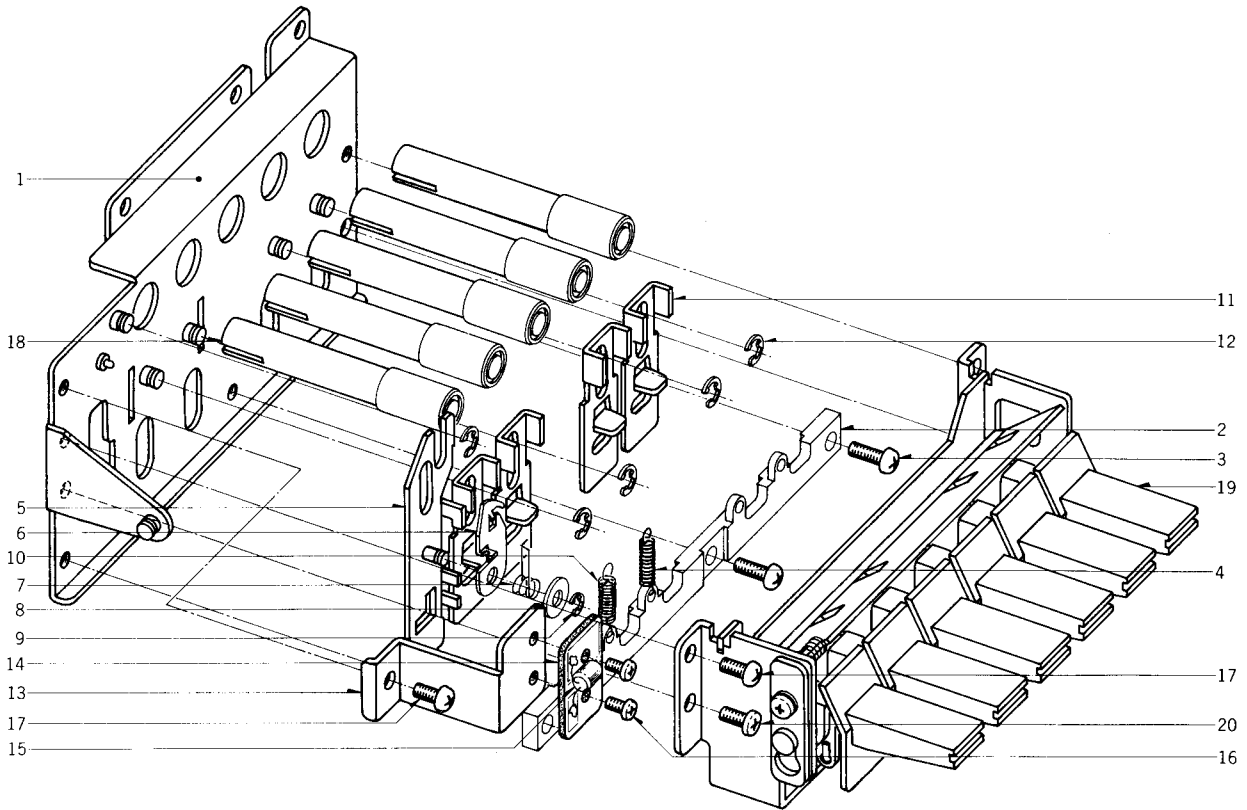
### 3. ILLUSTRATION OF MOTOR BLOCK



### 3) MOTOR BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
3-1x	BM637683	Motor Block (HM1-12CS) Comp.	CA	1	3-18	EC641316	MP/C. 7+1μF 150WV AC (Lug Type Uni/D.)	24-9-96	1
3-2x	BM637694	Motor Block (HM1-12CS) Comp. (CSA)	CA	1	3-19x	EC648538	MP/C. 7μF 150WV AC (Lug Type Uni/D.) (CSA)	24-9-108	1
3-3x	BM663434	Motor Block (HM1-12CS). Comp. (CEE)	CA	1	3-20	ZS447840	Tapping Screw #2 3x8 (BR)		2
3-4x	EA391331	Motor Lead Terminal P.C. Board	CS-7025	1	3-21x	ZW406247	Washer (SUP) D3.2x10x0.5t		3
3-5x	ZS422076	Screw, pan head 3x5		2	3-22	ZS422965	Screw, pan head 3x15		3
3-6x	MZ414224	CS Insulating Fiber A	CS-7030	1	3-23	MR645041	Motor Pulley A	CA-7002	1
3-7x	ZS356804	Set Screw, hexagon socket 3x4 (Cup/p.)		2	3-24	MR645052	Motor Pulley B	CA-7003	1
3-8	ZW396415	Thrust Washer A, CS (Teflon) 0.5t	CS-7029	3	3-25	ZS356815	Set Screw, hexagon socket 3x6 (Cup/P.)		3
3-9x	ZW396426	Thrust Washer B, CS (Nylon) 0.5t	CS-7029	3	3-26	ZS650013	Tapping Screw #1 3x25 BR		1
3-10	ZW259738	Washer (Polyslider) D4.1x7x0.25t		2	3-27	MZ642385	Motor Shield	CA-7005	1
3-11	ZW270101	'E' Ring 3M	6-1-9	1	3-28	MZ676440	Oil Cut B	CA-7008	1
3-12x	TC394075	Oil Cut	CS-7028	1	3-29	MZ646290	Spacer 3x8.5	7-2-6	3
3-13	MZ646918	Motor Mt. Base	CA-7004	1	3-30	MB666123	Drive Belt 41x1.4x1.4	CA-1100	1
3-14	TC384164	Rubber Cushion Bush	24X0-717	3					
3-15x	ZW562476	Earth Lug M3		6					
3-16	ZS325495	Tapping Screw #2 3x6 (BR)		5					
3-17x	SM582210	Motor Name Plate	CP-7004	1					

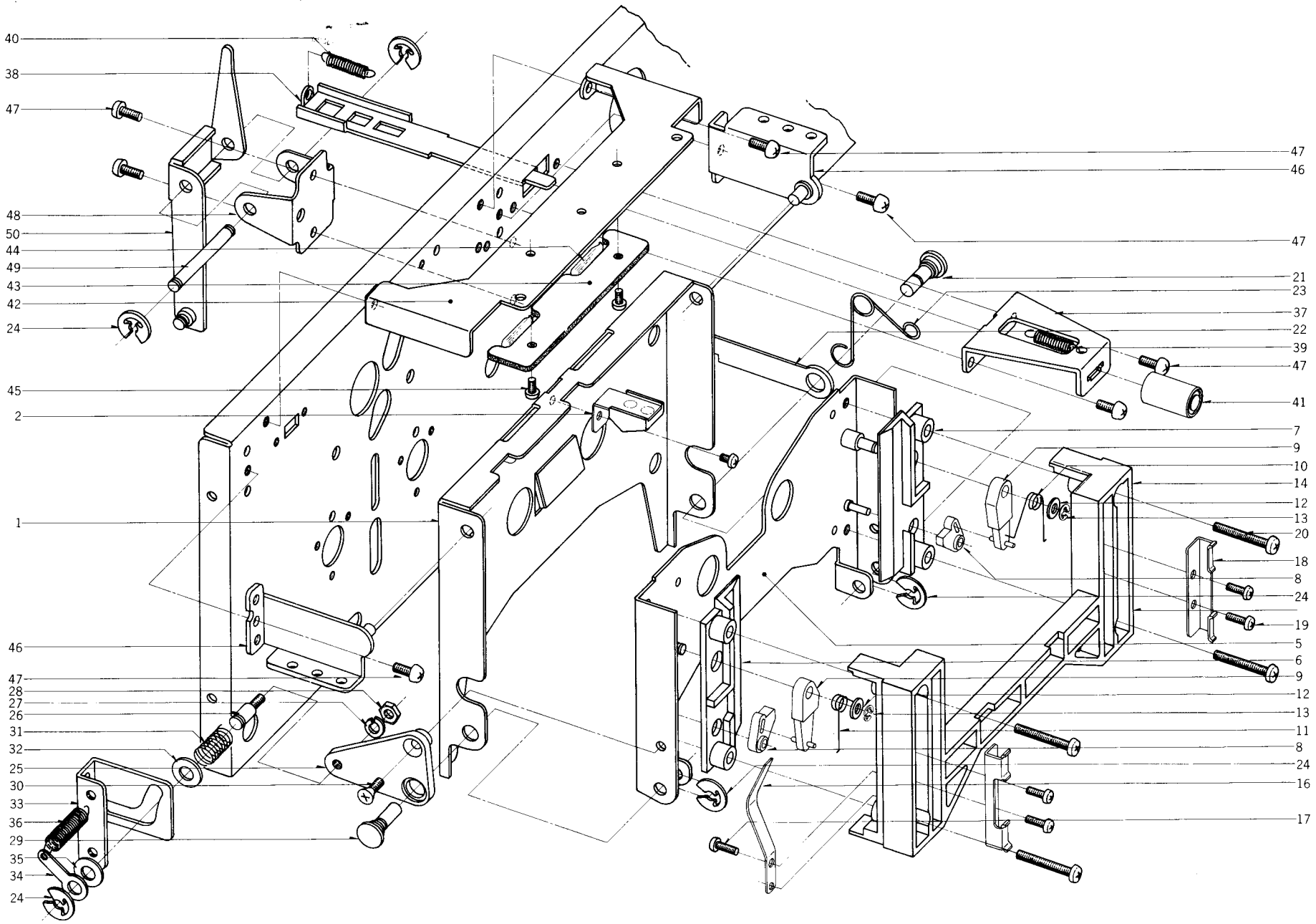
#### 4. ILLUSTRATION OF SUB CHASSIS BLOCK



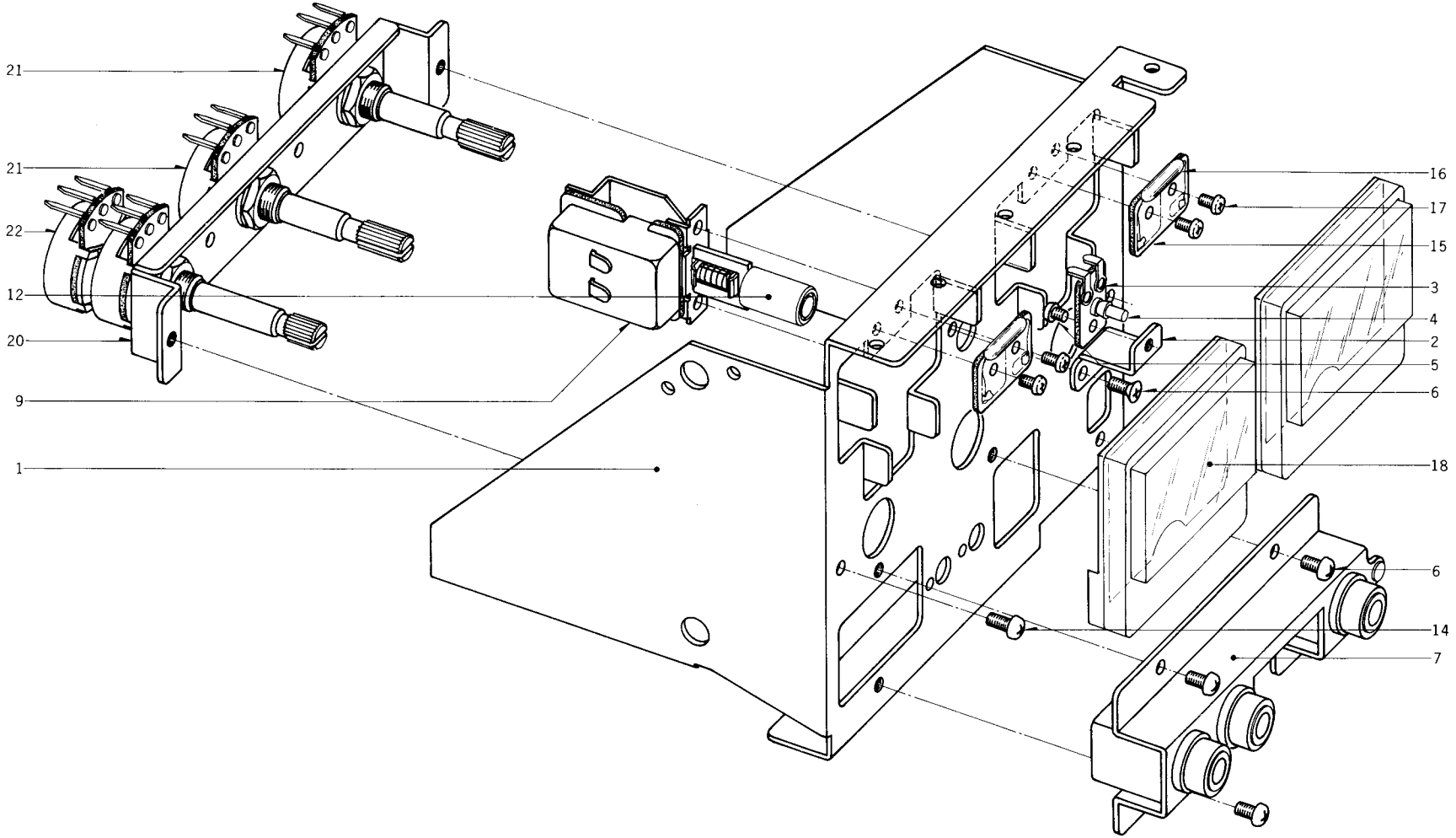
#### 4) SUB CHASSIS BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
4-1	MZ646953	Sub Chassis	CA-2032	1
4-2	MS645175	Slider Guide	CA-2035	1
4-3	ZS609208	Tapping Screw #2 3x8 (PAN)		3
4-4	ZG525306	Spring 2	CV-2070	1
4-5	MZ642172	Pause Slider	CA-2034	1
4-6	TC515575	SW. Lock Cam B	CG-2301	1
4-7	ZG632553	Button Lock Spring C	CG-2303	1
4-8	ZW425002	Washer (SPC) D3.1x8x0.5t		1
4-9	ZW270088	'E' Ring 1.9M	6-1-9	1
4-10	ZG392848	Operation Lever Spring	CS-2102	1
4-11	MZ642161	Inter Lock Slide	CA-2033	4
4-12	ZW270101	'E' Ring 3M	6-1-9	5
4-13	MZ642183	LP Mount	CA-2036	1
4-14	EA457176	Lamp P.C Board	CG-5003	1
4-15	EL390576	Lamp (L/T) RM6-24V-50MA	28-2-6	1
4-16	ZS417161	Screw, pan head 2.3x4		2
4-17	ZS325495	Tapping Screw #2 3x6 (BR)		5
4-18	SB645232	Selector Button		5
4-19	BK650070	Keyboard	CA-6011	1
4-20	ZS379350	Screw, pan head 3x6	25-5-200	2

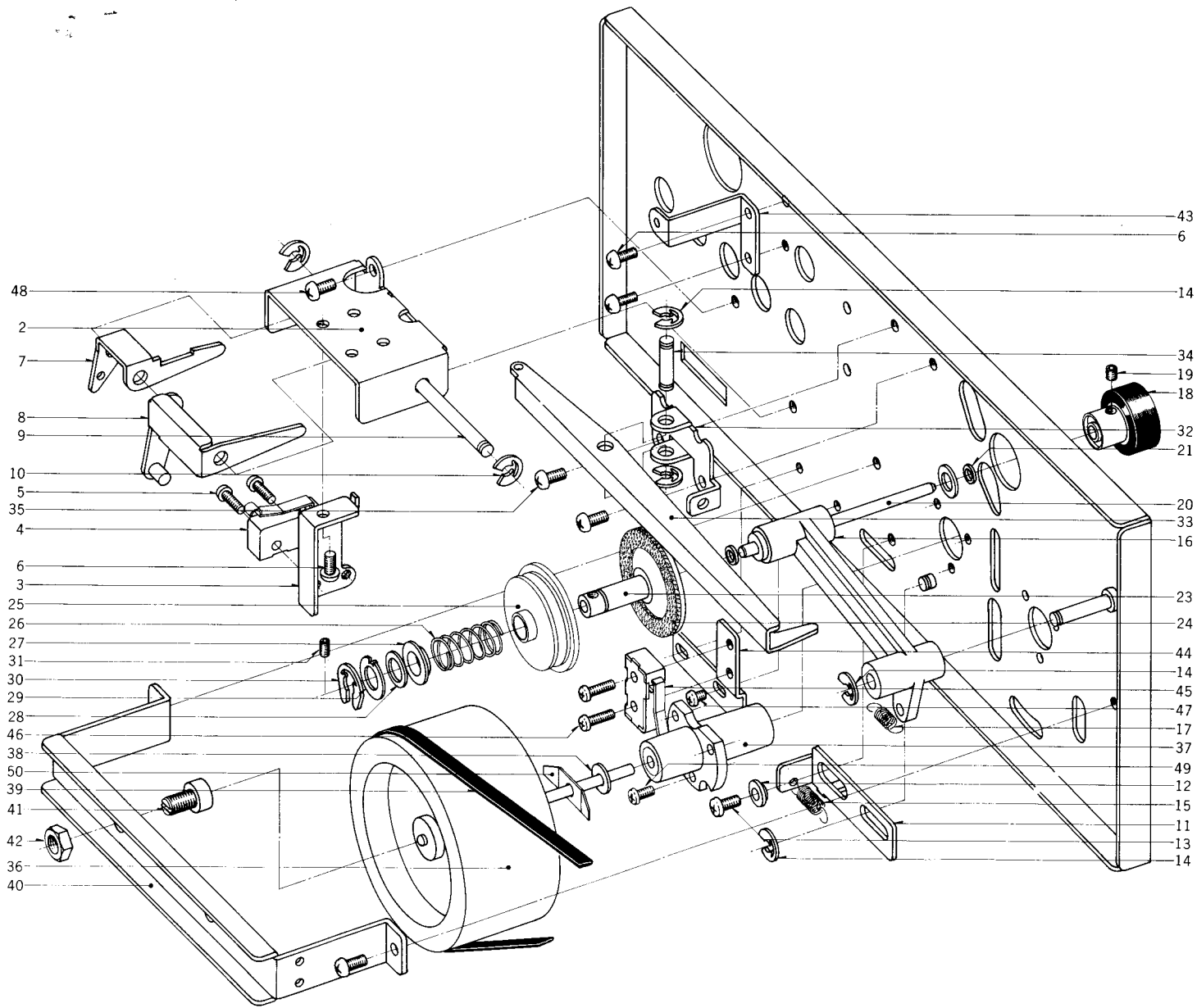
5. ILLUSTRATION OF CASSETTE HOLDER BLOCK



6. ILLUSTRATION OF FRONT CHASSIS BLOCK



7. ILLUSTRATION OF MECHA. FRAME BLOCK (1)



## 5) CASSETTE HOLDER BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>CASSETTE HOLDER BLOCK</b>				
5-1	MZ646931	Trap, w/boss	CA-2020	1
5-2	ZG642126	Set Spring	CA-2022	1
5-3x	ZS201407	Screw, pan head 2.3x3		1
5-4x	TC678475	Cassette Retainer	CA-2091	1
5-5	MZ646920	Cassette Rack, w/pin	CA-2023	1
5-6	MS595563	Cassette Guide L	CH-2007	1
5-7	MS595552	Cassette Guide R	CH-2006	1
5-8	ML595574	Detector Lever A	CH-2008	2
5-9	ML595585	Cassette Lever B	CH-2009	2
5-10	ZG595618	Spring A	CH-2004	1
5-11	ZG595620	Spring B	CH-2005	1
5-12	ZW592391	Washer (PBP) D3.2x6x0.3t		2
5-13	ZW270088	'E' Ring 1.9M	6-1-9	2
5-14	SZ647065	Cassette Case	CA-2024	1
5-15x	MZ645186	Reflector	CA-2071	1
5-16	ZG642137	Sheet Spring	CA-2025	2
5-17	ZS669104	Tapping Screw #2 2.3x6 pan head		2
5-18	MZ642148	Lid Chuck	CA-2026	2
5-19	ZS669104	Tapping Screw #2 2.3x6 pan head		4
5-20	ZS592402	Screw, pan head 3x18		4
5-21	MH664064	Hinge Pin B	CB-2029	1
5-22	TC666156	Band Plate B	CB-2024	1
5-23	ZG644938	Click Spring	CA-2031	1
5-24	ZW290283	'U' Ring 2.85M	6-1-1	5
5-25	MZ645164	Eject Guide Arm	CA-2027	1
5-26	MH644927	Guide Pin	CA-2029	1
5-27	ZW273914	Spring Washer M4		1
5-28	ZW516993	Nut M3		1
5-29	MH644916	Hinge Pin	CA-2028	1
5-30	ZS414033	Screw, countersunk head 3x8		1
5-31	ZG316765	REC. Button Spring	MR-252	1
5-32	ZW345442	Washer (Nylon) D4.2x9x1t		1
5-33	MS642374	Eject Guide	CA-2066	1
5-34	ZW273881	Earth Lug M4		1
5-35	ZW420682	Washer (Nylon) D4.2x9x0.5t		1
5-36	ZG580746	Tension Spring	TD-2074	1
<b>EJECT BUTTON BLOCK</b>				
5-37	TC642273	Eject Slot	CA-2052	1
5-38	TC642284	Eject Key	CA-2053	1
5-39	ZG542204	Spring A	CZ-1010	1
5-40	ZG422223	Return Spring	PX-A132	1
5-41	SK631304	Push Button Knob I	91-5051	1
<b>LAMP STAND BLOCK</b>				
5-42	TC642363	Lamp Stand	CA-2065	1
5-43	EA647190	Lamp P.C Board	CA-2064	1
5-44	EL295312	Lamp (L/T) 8V 0.2A	28-2-8	2
5-45	ZS417161	Screw, pan head 2.3x4		3
5-46	MZ642071	Pin Stand, w/pin	CA-1099	2
5-47	ZS325495	Tapping Screw #2 3x6 (BR)		12
5-48	MZ614700	Eject Lever Pillow	CA-1038	1
5-49	MH644646	Eject Lever Pin	CA-1036	1
5-50	ML641698	Eject Lever, w/pin	CA-1037	1

## 6) FRONT CHASSIS BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>FRONT CHASSIS BLOCK</b>				
6-1	MZ647021	Front Chassis	CA-5009	1
6-2	MZ644343	P.C Board Mount B	CA-5011	1
6-3	EA647188	LED P.C Board	CA-2051	1
6-4	ED645816	Luminous Diode SEL-103R	45-15-5	1
6-5	ZS499331	Screw, pan head 2.3x5		1
6-6	ZS325495	Tapping Screw #2 3x6 (BR)		6
6-7	EJ645827	3-throw Jack B	31-2-70	1
6-8x	BS665706	Power SW. Comp.	CA-5026	1
6-9	ES469541	Push SW. TV-3 JB52	25-5-60	1

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
6-10x	ES499972	Push SW. JS-09 (CEE)	25-5-67	1
6-11x	ZS422076	Screw, pan head 3x5		2
6-12	SK631304	Push Button Knob I	91-5051	1
6-13x	TC666134	Illumination for Acrylic	CA-5019	1
6-14	ZS422076	Screw, pan head 3x5		2
6-15	EA457176	Lamp P.C Board	CG-5003	2
6-16	EL295312	Lamp (L/T) 8V 0.2A	28-2-8	2
6-17	ZS417161	Screw, pan head 2.3x4		4

6-18	EM666450	VU Meter D18A68R	46-1-118	2
6-19x	EM619705	VU Meter D18A41R (JPN)	46-1-96	2
<b>VOL. RETAINING BASE BLOCK</b>				
6-20	MZ647087	Volume Mt. Base A	CA-5012	1
6-21	EV645840	Volume VJ10E 50 kA	36-2-38	2
6-22	EV645851	Co-axial 2-throw Volume GJ10E 10 kBx2	36-1-40	1

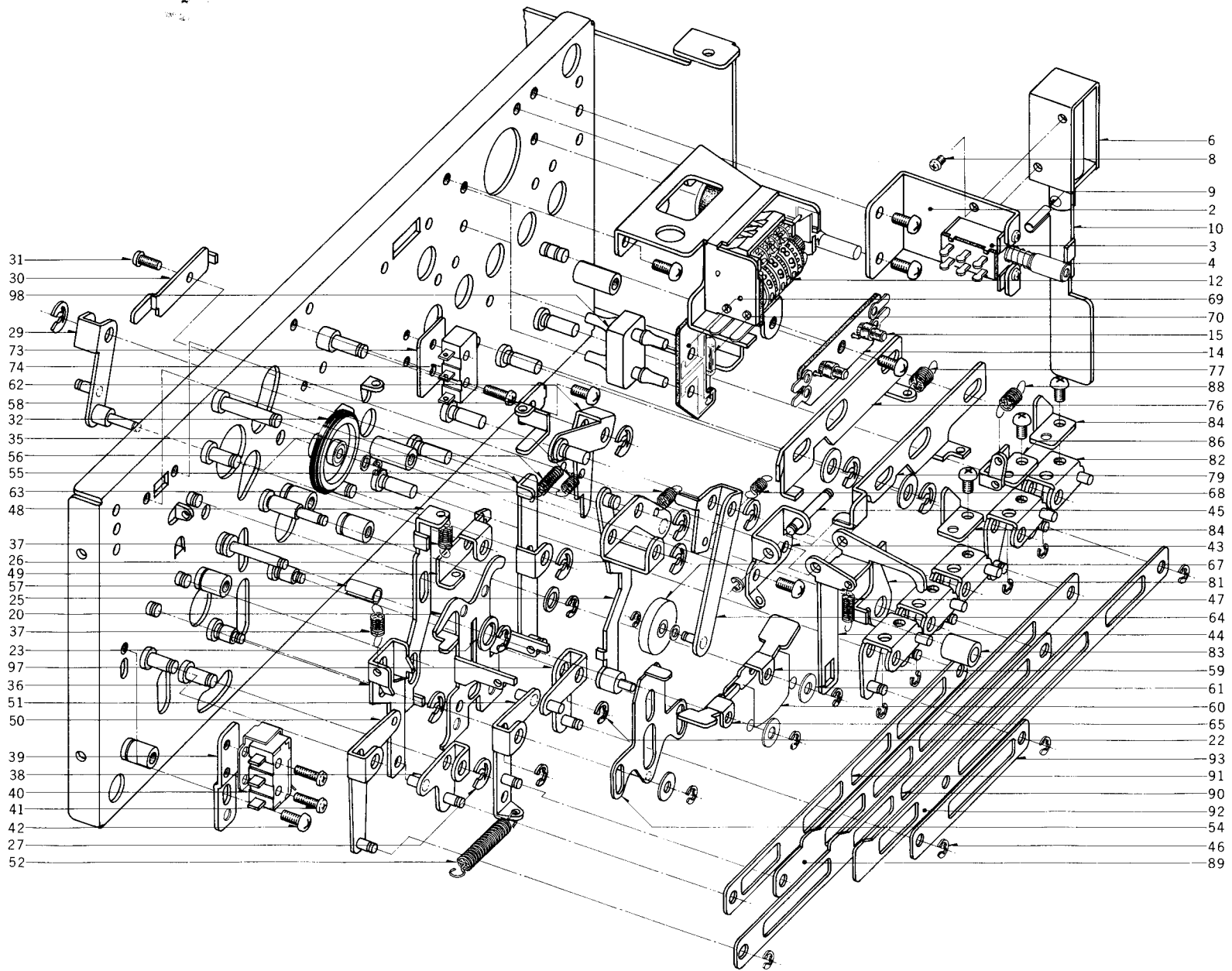
## 7) MECHA. FRAME BLOCK (1)

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>SWITCH BOX BLOCK</b>				
7-1x	BS637828	SW. Box Block Comp.	CA-1	1
7-2	EZ642328	SW. Box	CA-2059	1
7-3	MZ642341	Switch Bracket	CA-2061	1
7-4	ES494188	Micro SW. SS-5GL-13	25-1-25	1
7-5	ZS487091	Screw, pan head 2.3x8		2
7-6	ZS325495	Tapping Screw #2 3x6 (BR)		4
7-7	ML642330	Switch Lever A	CA-2060	1
7-8	ML642352	Switch Lever B-1, w/pin	CA-2062	1
7-9	MS644962	Switch Lever Shaft	CA-2063	1
7-10	ZW290283	'U' Ring 2.85M	6-1-1	2

### MECH. FRAME BLOCK

7-11	MZ641654	Eject Key	CA-1018	1
7-12	ZW644578	Step Washer	CA-1019	1
7-13	ZS379350	Screw, pan head 3x6		1
7-14	ZW290283	'U' Ring 2.85M	6-1-1	4
7-15	ZG394378	Return Spring	CS-2106	1
7-16	MZ645074	Wheel Arm	CA-1020	1
7-17	ZG580252	Lock Plate A Spring	TD-2015	1
7-18	M1644624	Driving Wheel	CA-1030	1
7-19	ZS434160	Set Screw, hexagon socket 3x3 (CUP/P.)		1
7-20	MS644613	Drive Wheel Shaft	CA-1028	1
7-21	ZW484762	Washer (Teflon) D3.1x5x0.2t		2
7-22x	BZ687453	Clutch Disk Block Comp.	CA-1118	1
7-23	MZ641665	Clutch Disk, w/shaft	CA-1026	1
7-24	MZ644591	Clutch Felt	CA-1025	1
7-25	M1645085	Clutch Wheel	CA-1027	1
7-26	ZG651183	Clutch Spring	CA-1104	1
7-27	MZ651194	Spring Holder	CA-1105	1
7-28	ZW560215	Washer (Teflon) D6.1x10x0.5t		1
7-29	ZW231693	Thrust Washer, w/claw	900-235	1
7-30	ZW659766	'U' Ring 5	6-1-15	1
7-31	ZS521987	Set Screw, hexagon socket 2.6x4 (CUP/P)		1
7-32	MZ641676	Escapement Pillow	CA-1034	1
7-33	MZ641687	Escapement	CA-1035	1
7-34	MH644635	Escapement Pin	CA-1033	1
7-35	ZS325495	Tapping Screw #2 3x6 (BR)		2
7-36	M1644681	Capstan Flywheel, w/shaft	CA-1042	1
7-37	MZ644657	Capstan Metal Case, w/metal	CA-1039	1
7-38	ZW675246	Washer D3.1x8x0.5t		1
7-39	MB645107	Capstan Belt	CA-1044	1
7-40	MZ641711	Flywheel Table	CA-1045	1
7-41	TC653218	Capstan Support	CH-1078	1
7-42	ZW413278	Nut M5		1
7-43	MZ641722	Sys. Con P.C Board Table	CA-1046	1
7-44	MZ642060	Micro SW. Table	CA-1096	1
7-45	ES494188	Micro SW. SS-5GL-13	25-1-25	1
7-46	ZS587091	Screw, pan head 2.3x8		2
7-47	ZS201407	Screw, pan head 2.3x3		2
7-48	ZS422076	Screw, pan head 3x5		2
7-49	ZS499331	Screw, pan head 2.3x5		3
7-50	MZ678486	Thrust For Plate Spring	CA-1109	1

8. ILLUSTRATION OF MECHA. FRAME BLOCK (2)



## 8) MECHA. FRAME BLOCK (2)

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>MEMORY SWITCH BLOCK</b>				
8-1x	BS637795	Memory Switch Block Comp.	CA-1, 2	1
8-2	TC642295	Memory SW. Bracket	CA-2054	1
8-3	ES619053	Push SW. SPJ-10114B	25-5-144	1
8-4	SZ645221	Memory Cap	CA-6010	1
8-5x	ZS460440	Screw, pan head 2x4		2
8-6	EP494425	Plunger Solenoid 0730THT1	44-1-48	1
8-7x	ED494583	Silicon Diode 10D05	45-2-42	1
8-8	ZS592378	Screw, pan head 2.6x3		2
8-9	MH620572	Spring Pin SPP 2.5x12		1
8-10	TC642306	Auto Stop Slider	CA-2055	1

### COUNTER BLOCK

8-11x	TC642262	Counter Mount	CA-2049	1
8-12	MC645985	Counter SMP-390-62	9-1-42	1
8-13x	ZS422076	Screw, pan head 3x5		2
8-14	EA647166	Luminous Diode P.C Board	CA-2069	1
8-15	ED656346	Luminous Diode SEL-305-GC	45-15-10	2

### MECHA. FRAME BLOCK

8-16x	MZ647100	Mecha. Side Plate A	CA-1015	1
8-17x	MZ647111	Mecha. Side Plate B	CA-1015	1
8-18x	ZS325495	Tapping Screw #2 3x6 (BR)		4
8-19x	MZ644567	Sub Frame Post	CA-1017	1
8-20	MZ641733	Play Slider	CA-1047	1
8-21x	ZW270123	'E' Ring 4M	6-1-9	1
8-22	ZW270101	'E' Ring 3M	6-1-9	10
8-23	ZW260008	Washer (SUP) D6.1x10.3x0.15t		1
8-24x	ZW601075	Washer (PBP) D4.1x7x0.1t		1
8-25	MZ641755	Relay Plate, w/pin	CA-1049	1
8-26	ML641744	Play Idler Lever, w/shaft	CA-1048	1
8-27	ZW290283	'U' Ring 2.85M	6-1-1	20
8-28x	ZG385986	Safety Lever Return Spring	CS-2539	1
8-29	MZ641766	Play Idler Arm, w/pin	CA-1051	1
8-30	TC651161	Set Plate	CA-1106	1
8-31	ZS201407	Screw, pan head 2.3x3		1
8-32	MI644736	Idler, w/metal	CA-1054	1
8-33x	ZW645952	Washer D2.1x4x0.2t		2
8-34x	ZW356657	'E' Ring 1.5M	6-1-9	2
8-35	ZG469315	Take-up Lever Spring	CG-1091	1
8-36	MC641845	REC Counter	CA-1069	1
8-37	ZG567696	Azimuth Spring 2	CP-0041	2
8-38	ML641856	Rec Lever, w/pin	CA-1070	1
8-39	MZ641880	Rec SW. Table	CA-1074	1
8-40	ES494188	Micro SW. SS-5GL-13	25-1-25	1
8-41	ZS487091	Screw, pan head 2.3x8		2
8-42	ZS325495	Tapping Screw #2 3x6 (BR)		10
8-43	MZ641867	Rec Detector Lever Holder	CA-1071	1
8-44	ML641878	Rec Detector Lever	CA-1072	1
8-45	ML644815	Rec Detector Lever Pin	CA-1073	1
8-46	ZW270088	'E' Ring 1.9M	6-1-9	9
8-47	ZG394378	Return Spring	CS-2106	1
8-48	MZ641812	RWD Slide Beam	CA-1065	1
8-49	ML641823	RWD Lever	CA-1066	1
8-50	ML641834	RWD Lever B, w/pin	CA-1067	1
8-51	ML641935	Play Lever A, w/pin	CA-1080	1
8-52	ZG644848	PR Spring	CA-1081	1
8-53x	ZW317171	Washer (PBP) D3.1x8x0.1t		1
8-54	ML641902	Brake Slide, w/senser	CA-1076	1
8-55	ML641788	F.F. Joint Lever, w/pin	CA-1058	1
8-56	ZG595506	Stop Spring	CH-3007	1
8-57	MZ653308	Spacer 3x9	7-2-6	1
8-58	MZ641801	Wind Lever Resetter	CA-1064	1
8-59	ML641924	Brake Lever B	CA-1078	1
8-60	ZG644837	Brake Spring	CA-1079	1
8-61	ZW259468	Washer D3.1x8x0.2t	BT-104	2
8-62	ML641777	F.F. Lever, w/pin	CA-1056	1
8-63	ZG469315	Take-up Lever Spring	CG-1091	1
8-64	MZ641790	F.F. Wind Arm, w/shaft	CA-1060	1
8-65	ML675022	Brake Lever C	CA-1097	1
8-66x	ZW645952	Washer D2.1x4x0.2t		2
8-67	MI644804	FW Wheel, w/metal	CA-1063	1
8-68	ZG385986	Safety Lever Return Spring	CS-2539	1

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
8-69	EA647201	Reed SW. P.C Board	CA-1095	1
8-70	ES516036	Reed SW. ORD-225	25-11-1	1
8-71	EC290564	VFM/C. 220PF(K) 50WV	24-6-2	1
8-72x	EC350875	Mylar/C. 0.001μF(J) 50WV (Vert. Type)	24-1-1	1
8-73	EZ595653	Insulator Plate	CH-1055	1
8-74	ES494188	Micro SW. SS-5GL-13	25-1-25	1
8-75x	ZS487091	Screw, pan head 2.3x8		2
8-76	MZ641957	Switch Slider	CA-1083	1
8-77	ZG385413	Auto. Stop Spring B	CS-1033	1
8-78x	ZW450753	Washer (Nylon) D4.1x9x1t		2
8-79	MZ641968	Switch Slider B	CA-1084	1
8-80x	ZW659755	Washer D4.3x11x0.5t		2
8-81	ML641992	Pause Lever B	CA-1087	1
8-82	MZ641970	Joint Arm, w/pin	CA-1085	5
8-83	MZ675202	Spacer 4x9	7-2-6	1
8-84	MZ641981	Joint Arm Side A	CA-1086	2
8-85x	ZS455207	Tapping Screw #2 3x5(BR)		2
8-86	MZ642003	Joint Arm Side B	CA-1088	1
8-87x	ZS455207	Tapping Screw #2 3x5 (BR)		6
8-88	ZG580285	Button Lever Spring	TD-2018	1
8-89	MZ642025	Play Joint	CA-1090	1
8-90	MZ642047	RWD Joint	CA-1092	1
8-91	MZ642036	REC Joint	CA-1091	1
8-92	MZ642058	F.F. Joint	CA-1093	1
8-93	MZ642014	Pause Joint	CA-1089	1
8-94x	ZS422076	Screw, pan head 3x5		8
8-95x	ZS417216	Screw, pan head 3x4		2
8-96x	ZS421806	Screw, pan head 3x8		1
8-97	ML641946	Pause Lever, w/pin	CA-1082	1
8-98	MZ645118	P.C Board Retainer	CA-1094	2



## 9. P.C BOARDS

### (1) PRE AMP. P.C BOARD (CA-5017) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(1)-1	BA637615	Pre-Amp P.C Board Comp.	1
(1)-TR1	ET352146	Transistor 2SC458LG(D)	2
(1)-TR2,3	ET234854	Transistor 2SC458LG(C)	4
(1)-TR4to6	ET398711	Transistor 2SC945L(Q)(R)	6
(1)-TR7	ET517263	Transistor 2SC1312(G)(H)	2
(1)-TR8	ET398711	Transistor 2SC945L(Q)(R)	2
(1)-TR9	ET645917	FET Transistor 2SK30A(D)	2
(1)-TR10	ET517263	Transistor 2SC1312(G)(H)	2
(1)-TR11	ET557976	Transistor 2SA628(E)(F)	2
(1)-TR12to14	ET398711	Transistor 2SC945L(Q)(R)	6
(1)-TR15	ET511920	Transistor 2SC1247A(B)(V)	1
(1)-TR16	ET638504	Transistor 2SC945(L)(P)	2
(1)-D1	ED219464	Germanium Diode 1N34A	2
(1)-D2	ED491130	Zener Diode WZ-085	2
(1)-D3, 4	ED560913	Silicon Diode 1S2473 VE	4
(1)-D5	ED219464	Germanium Diode 1N34A	2
(1)-D6	ED557447	Silicon Diode 1S1588	2
(1)-D7	ED219464	Germanium Diode 1N34A	2
(1)-D8to16	ED560913	Silicon Diode 1S2473 VE	17
(1)-VR1	EV478686	Semi-fixed/Vol. V8K4-1 1 kB	2
(1)-VR2	EV464207	Semi-fixed/Vol. V8K4-1 5 kB	2
(1)-VR3	EV523620	Semi-fixed/Vol. V8K4-1 500B	2
(1)-VR4	EV522797	Semi-fixed/Vol. V8K4-1 20 kB	2
(1)-SW1	ES494076	Slide SW. CL-109B	2
(1)-T1	BT667394	Headphone Trans. S16-083	2
(1)-L1	EO368403	Ferri Inductor FL9H 33 MH(J)	2
(1)-L2	EO496350	Inductor 146LY 36 MH(J)	2
(1)-L3	EO624857	Inductor GE6070A 23 MH	2
(1)-L4to6	EO368403	Ferri Inductor FL9H 33MH(J)	6
(1)-2	EJ539662	Wrapping Post 1x17	36
<b>Capacitor, Vertical Type</b>			
(1)-C1	EC516745	Styrol 330PF(K) 50WV	2
(1)-C2	EC432810	Elect. 10μF 16WV NL	2
(1)-C3	EC516767	Styrol 470PF(K) 50WV	2
(1)-C4	EC556525	FM 22PF(K) 500WV	2
(1)-C5	EC493637	Elect. 47μF 10WV	2
(1)-C6	EC220127	Elect. 100μF 16WV	2
(1)-C7, 8	EC320051	Elect. 10μF 16WV	4
(1)-C9	EC389485	Mylar 0.018μF(J) 50WV	2
(1)-C10	EC350875	Mylar 0.001μF(J) 50WV	2
(1)-C11	EC450527	Elect. 4.7μF 25WV	2
(1)-C12	EC290531	VFM 100PF(K) 50WV	2
(1)-C13	EC320051	Elect. 10μF 16WV	2
(1)-C14	EC493637	Elect. 47μF 10WV	2
(1)-C15	EC556525	FM/C. 22PF(K) 500WV	2
(1)-C16, 17	EC331705	Elect. 22μF 16WV	4
(1)-C18	EC539842	VFM 200PF(K) 50WV	2
(1)-C19	EC648628	Elect. 0.47μF 16WV	2
(1)-C20	EC495865	Styrol 3000PF(J) 50WV	2
(1)-C21	EC250683	Mylar 0.0022μF(J) 50WV	2
(1)-C22	EC379787	Mylar 0.0039μF(J) 50WV	2
(1)-C24to26	EC320051	Elect. 10μF 16WV	6
(1)-C27	EC556525	FM22PF(K) 500WV	2
(1)-C28	EC320051	Elect. 10μF 16WV	2
(1)-C29	EC313121	Elect. 220μF 25WV	2
(1)-C30	EC329883	Mylar 0.0056μF(J) 50WV	2
(1)-C31	EC337500	Mylar 0.0047μF(J) 50WV	2
(1)-C32	EC251291	Mylar 0.01μF(K) 50WV	2
(1)-C33	EC329861	Mylar 0.027μF(J) 50WV	2
(1)-C34	EC320051	Elect. 10μF 16WV	2
(1)-C35	EC493637	Elect. 47μF 10WV	2
(1)-C36	EC290531	VFM 100PF(K) 50WV	2
(1)-C37	EC251291	Mylar 0.1μF(K) 50WV	2
(1)-C38	EC320051	Elect. 10μF 16WV	2
(1)-C39	EC251291	Mylar 0.1μF(K) 50W V	2
(1)-C40	EC320051	Elect. 10μF 16WV	2
(1)-C41	EC251291	Mylar 0.1μF(K) 50WV	2
(1)-C42	EC395504	Mylar 0.33μF(K) 50WV	2
(1)-C43,44	EC320051	Elect. 10μF 16WV	4
(1)-C45	EC450055	Elect. 1μF 25WV	2
(1)-C46	EC487157	NP 0.47μF(M) 50WV	2
(1)-C47	EC320051	Elect. 10μF 16WV	2

Symbol No.	Parts No.	Description	Q'ty
(1)-C48	EC220678	Elect. 47μF 25WV	2
(1)-C49	EC391004	Mylar 0.0033μF(J) 50WV	2
(1)-C50	EC450527	Elect. 4.7μF 25WV	2
(1)-C51, 52	EC539842	VFM 200PF(K) 50WV	4
(1)-C53	EC516756	Styrol 390PF(K) 50WV	1
(1)-C54	EC220590	Elect. 33μF 10WV	1
(1)-C55	EC220127	Elect. 100μF 16WV	1
(1)-C56	EC392332	VFM 82PF(J) 50WV	2
(1)-C57	EC250841	Mylar 0.01μF(J) 50WV	2
(1)-C58	EC377212	VFM 47PF(J) 50WV	2

Carbon Resistor Omitted

### (2) POWER SUPPLY & OSC P.C BOARD (CA-5015) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(2)-1	BA637571	Power Supply & OSC P.C Board Comp. (CA-5015)	1
(2)-2	BA637582	Power Supply & OSC P.C Board Comp. (CA-5015) (CEE)	1
(2)-3	BA637593	Power Supply & OSC P.C Board Comp. (CA-5015) (CSA)	1
(2)-4	BA637604	Power Supply & OSC P.C. Board Comp. (CA-5015) (JPN)	1
(2)-TR1	ET453611	Transistor 2SC1096 (L) (K) (Z Type)	1
(2)-TR2, 3	ET511920	Transistor 2SC1247A (B)(V)	2
(2)-D1 to 4	ED494583	Silicon Diode 10D05	4
(2)-D5	ED511918	Zener Diode WZ-240	1
(2)-VR1, 2	EV499882	Semi-fixed/Vol. V10K8-4-2 300 kB	2
(2)-T1	EC496844	OSC Coil OT-903	1
(2)-5	EZ644354	Power Supply Heat-sink Plate	1
(2)-6	ZW273756	Nut M3	1
(2)-7	ZS421806	Screw, pan head 3x8	1
(2)-8	ZS379350	Screw, pan head 3x6	2
(2)-9	EJ514822	Fuse Holder, P.C Board S-N5051	2
(2)-10	EJ592503	Fuse Clip, P.C Board H0426 (CEE)	6
(2)-11	EJ539662	Wrapping Post 1x17	14
(2)-R8	ER672502	Wire Wound/R. RW1/2W 6.8 ohms (K) (P Type)	1
<b>Capacitor, Vertical Type</b>			
(2)-C1	EC551160	Ceramic NB821YZ 0.01μF(Z) 1.4 kWV	1
(2)-C2	EC645895	Elect. 2200μF 50WV	1
(2)-C3	EC372148	Elect. 220μF 35WV	1
(2)-C4	EC450270	Elect. 1000μF 25WV	1
(2)-C5	EC250841	Mylar 0.01μF(J) 50WV	1
(2)-C6	EC331828	Elect. 3.3μF 25WV	1
(2)-C7	EC250841	Mylar 0.01μF(J) 50WV	1
(2)-C8, 9	EC516767	Styrol 470PF(K) 50WV	2
(2)-C10	EC460091	Plastic Film 3300PF(J) 500WV	1
(2)-C11	EC379214	Mylar 0.047μF(J) 50WV	1

Carbon Resistor Omitted

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### (3) SW. P.C BOARD (CA-2057) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(3)-1	BA637817	SW. P.C Board Comp.	1
(3)-TR1	ET639437	Transistor 2SC945L(Q)(P)	2
(3)-D1, 2	ED674605	Zener Diode WZ-085A	2
(3)-SW1	ES645930	Push SW. 5FT-0003 EF1320	1
(3)-L1, 2	EO243988	Ferri Inductor FL7H 3.3MH(J)	2
(3)-2	TC642317	P.C Board Bracket	1
(3)-3	EJ539662	Wrapping Post 1x17	33
Capacitor, Vertical Type			
(3)-C1	EC379170	Mylar 0.1 $\mu$ F(J) 50WV	2
(3)-C3	EC329861	Mylar 0.027 $\mu$ F(J) 50WV	2
(3)-C4	EC380621	Mylar 0.0068 $\mu$ F(J) 50WV	2
(3)-C5	EC450055	Elect. 1 $\mu$ F 25WV	1

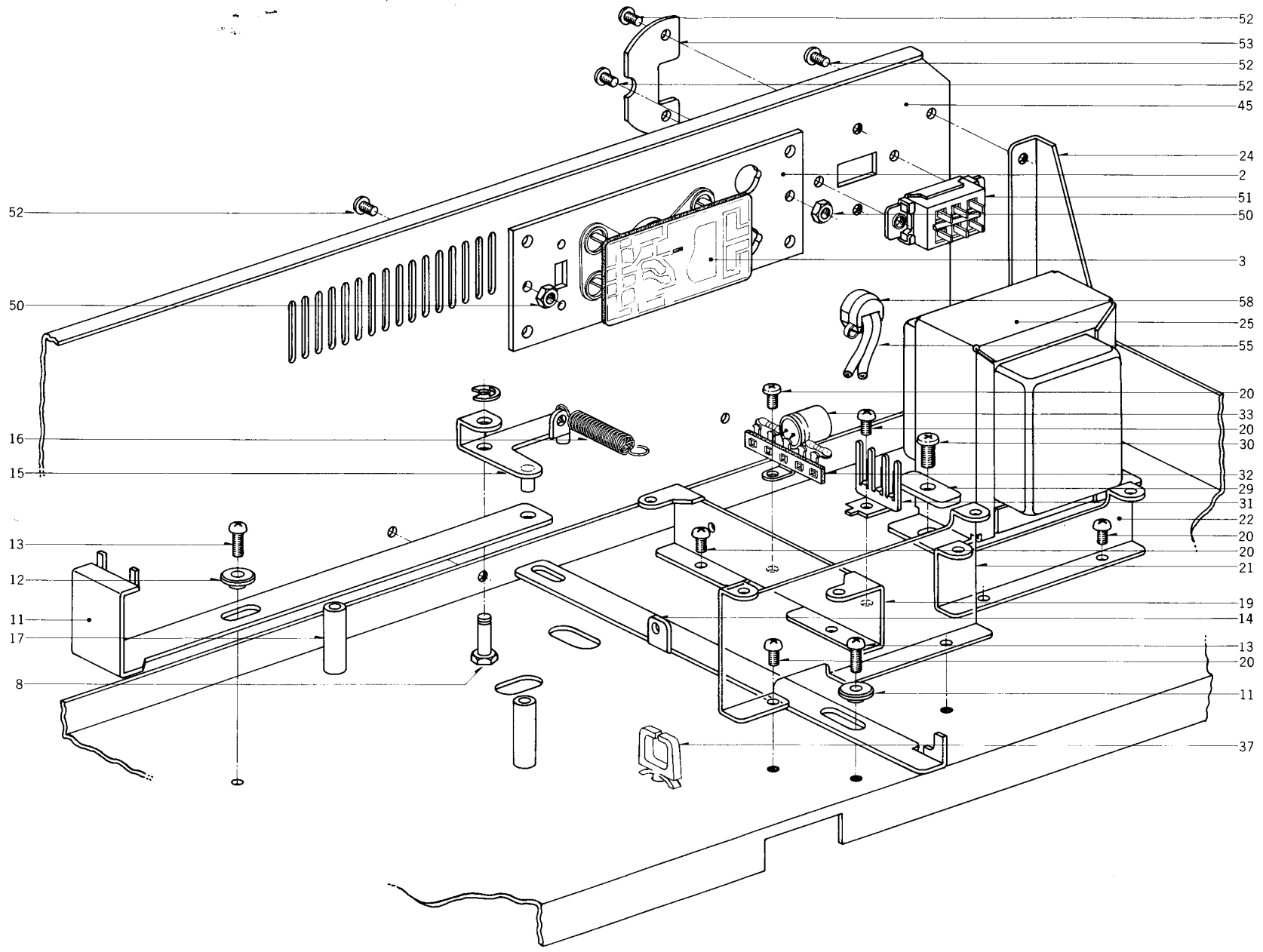
Carbon Resistor Omitted

### (4) SYS. CON P.C BOARD (CA-2056) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(4)-1	BA637806	Sys. Con P.C Board Comp. (CA-2056)	1
(4)-TR1	ET639437	Transistor 2SC945L(Q)(P)	1
(4)-TR2	ET554657	Transistor 2SA733(P)(Q)	1
(4)-TR3	ET402682	Transistor 2SC1061(C)	1
(4)-TR4	ET639437	Transistor 2SC945L(Q)(P)	1
(4)-D2to5	ED624903	Silicon Diode 1S2473	4
Capacitor, Vertical Type			
(4)-C1, 2	EC220151	Elect. 100 $\mu$ F 25WV	2
(4)-C4	EC450055	Elect. 1 $\mu$ F 25WV	1
(4)-C5	EC331828	Elect. 3.3 $\mu$ F 25WV	1
(4)-C6	EC350875	Mylar 0.001 $\mu$ F(J) 50WV	1

Carbon Resistor Omitted

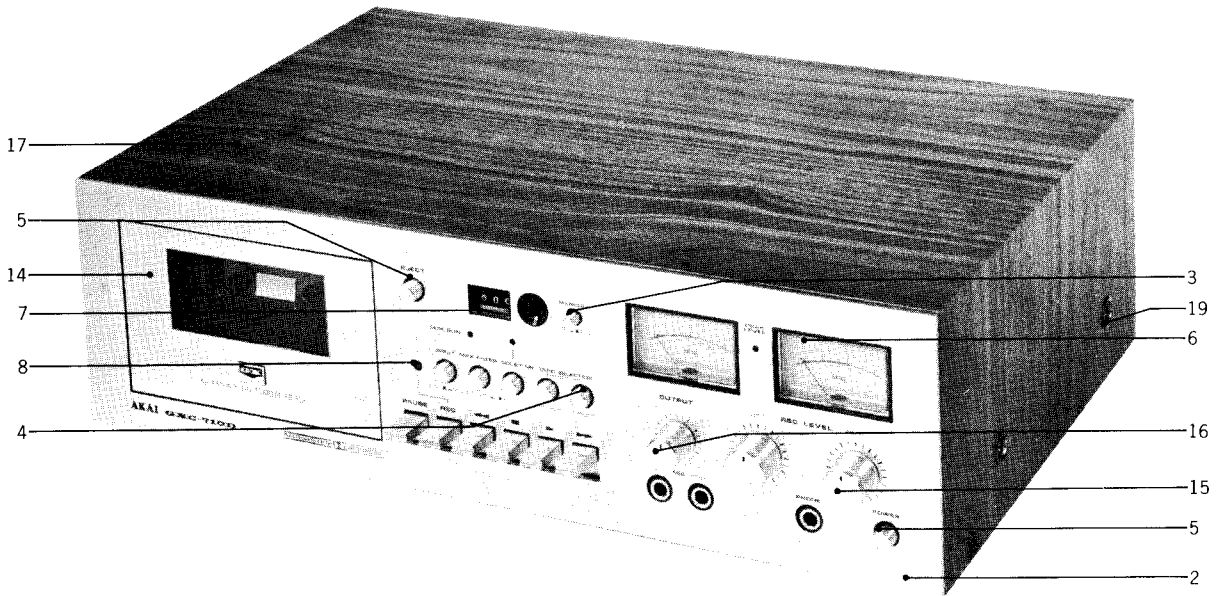
10. ILLUSTRATION OF AMP ASSEMBLY BLOCK



## 10) AMP ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>JACK PLATE BLOCK</b>					<b>REAR CHASSIS BLOCK</b>				
10-1x	BJ637661	Jack Plate Block Comp.	CA-1	1	10-45	SP675292	Rear Panel B	CA-5208	1
10-2	EJ624104	Jack Plate J-2	31-5-121	1	10-46x	SP647008	Rear Panel 2 (CSA)	CA-5013	1
10-3	EA628222	P.C Board For Jack	1.E-5622	1	10-47x	SP648450	Rear Panel 3 (CEE)	CA-5013	1
10-4x	ER364994	Carbon/R. RD1/4 39k(J) (Insu. Type)	35-9-5	2	10-48x	SP648448	Rear Panel 5 (JPN)	CA-5013	1
10-5x	ER213715	Carbon/R. RD1/4 100k(J) (Insu. Type)	35-9-5	2	10-49x	EJ669745	4P Jack Plate	31-5-130	1
10-6x	ER315213	Carbon/R. RD1/4 8.2k(J) (Insu. Type)	35-9-5	2	10-50	ZW516993	Nut M3		1
10-7x	ER345712	Carbon/R. RD1/4 22k(J) (Insu. Type)	35-9-5	2	10-51	ES479485	Slide SW. S-1	25-3-66	1
<b>AMP CHASSIS BLOCK</b>					10-52	ZS608488	Screw, pan head 3x5		2
10-8	MS645017	REC Lever Shaft	CA-5020	1	10-53	TC613697	Volt Indication Palte	CW-5018	1
10-9x	ZW273892	Toothed Lock Washer M4		1	10-54x	ZS447761	Tapping Screw #2 3x6(BR) (Black)		2
10-10x	ZW413188	Nut M4		3	10-55	EW374894	AC Cord U/L 3M	26-3-19	1
10-11	MZ644264	REC Slide Plate	CA-5002	1	10-56x	EW524845	AC Cord 2.5M (JPN)	26-3-31	1
10-12	ZW628288	Graduated Collar	1.E-5602	2	10-57x	EW516600	AC Cord VM-0065 (CEE)	26-3-28	1
10-13	ZS447840	Tapping Screw #2 3x8 (BR)		2	10-58	EJ631945	Strain Relief SR-4N-4	2-7-49	1
10-14	MZ644275	REC Joint Slide	CA-5003	1	10-59x	EZ246936	Strain Relief SR-6W-1 (CEE)	2-7-8	1
10-15	ML644286	REC Lever, w/pin	CA-5004	1	10-60x	ZW273881	Earth Lug M4 (CEE)		1
10-16	ZG369606	Field Lever, Sping	RCC-110	1	10-61x	ZW273992	Toothed Lock Washer M4 (CEE)		1
10-17	MH421986	Assy. Base Prop	PX-A153	2	10-62x	ZW413188	Nut M4 (CEE)		1
10-18x	ZS421806	Screw, pan head 3x8		2	10-63x	ZS413201	Screw, pan head 4x8 (CEE)		1
10-19	MZ644310	P.C Board Base	CA-5006	2					
10-20	ZS325495	Tapping Screw #2 3x6 (BR)		15					
10-21	MZ644321	SW. P.C Board Foot	CA-5007	1					
10-22	MZ644332	Power Supply P.C Board Foot	CA-5008	1					
10-23x	HZ644297	Panel Angle A	CA-5005	1					
10-24x	TC644308	Panel Angle B	CA-5005	1					
10-25	BT645805	Power Trans. CA-1	38-4-344	1					
10-26x	BT648617	Power Tans. CA-4 (CEE)	38-4-372	1					
10-27x	BT648595	Power Trans. CA-3 (CSA)	38-4-371	1					
10-28x	BT648606	Power Trans. CA-2 (JPN)	38-4-370	1					
10-29	TC516598	Trans. Retainer	CS-5337	2					
10-30	ZS413201	Screw, pan head 4x8		2					
10-31	EJ551035	Wrapping Terminal, 4P T-5251	32-1-36	1					
10-32	EJ255115	Lug Plate VB2L2	33-4-3	1					
10-33	EC662422	Elect./C. 47μF 25WV (Vert. Type)	24-12-21	1					
10-34x	ER664863	Carbon/R. F 1/4W 100 ohms (J) (Insu. Type)	35-11-12	1					
10-35x	ZW273802	Toothed Lock Washer M3		1					
10-36x	EJ510333	Wire Clip 220-JD481610-0104 (Nylon)	2-7-17	1					
10-37	EJ618524	Wire Clip 220-JD482010-0010 (Nylon)	2-7-45	1					
10-38x	EZ638965	Cord Support	2-7-50	1					
10-39x	EF601953	Fuse (SEMKO T Type) 800MAT (CEE)	39-1-53	3					
10-40x	EF623103	Fuse (SEMKO T Type) 1 AT (CEE)	39-1-53	1					
10-41x	EF277413	Fuse ST-2 2A (CSA)	39-1-26	1					
10-42x	EF539515	Fuse ST-2 1.2A (CSA)	39-1-26	2					
10-43x	EF558066	Fuse 2A 125V (JPN)	39-1-47	1					
10-44x	EF662207	Fuse 1.2A 125V (JPN)	39-1-47	2					

## 11. PHOTO OF FINAL ASSEMBLY BLOCK



### 11) FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
<b>FRONT PANEL BLOCK</b>				
11-1x	BZ637492	Front Panel Block Comp.	CA-1	1
11-2	SP647032	Front Panel A	CA-6001	1
11-3	SE613585	Button Escutcheon D	CG-6814	1
11-4	ZW526577	Collar B, Jack	MC-5006	5
11-5	SE613888	Button Escutcheon A	CW-6021	2
11-6	SE645210	VU Escutcheon	CA-6004	2
11-7	SE630156	Counter Escutcheon	CJ-6007	1
11-8	SZ639685	Lamp Lens B-1	NE-6005	1
11-9x	TC494267	Lamp Cover	CG-2206	1
11-10x	ZS325495	Tapping Screw #2 3x6 (BR)		8
11-11x	MZ646986	Frame (Black)	CA-6005	1
11-12x	ZS447840	Tapping Screw #2 3x8 (BR)		8
11-13x	ZW603797	Adjust. Washer (U) D4x13x0.5t		2
11-14	BD681120	Lid Case Block Comp.	CA-6023	1
11-15	SK645028	Single Knob A	CA-6012	2
11-16	SK645030	Single Knob B	CA-6013	1
11-17	BC647076	Cabinet	CA-6008	1
11-18x	ZW548010	Spot Facing Washer	MU-6028	4
11-19	ZS510344	Screw, binding head 4x12		4
11-20x	SP647054	Bottom Plate	CA-6009	1
11-21x	SZ645243	Circular Foot A, w/rubber	CA-6014	4
11-22x	ZS417150	Screw, pan head 4x6		4
11-23x	EF563670	Fuse 0.5A 250V	39-1-50	1
11-24x	MT553948	Wire Band B	2-35-3	3

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## 12. LIST OF INTERCHANGEABLE SEMICONDUCTORS

As far as service is concerned, in case 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.
2SA628(E)(F)	ET557976	CA-5017	2SA640(E)(F) 2SA733(Q)(R)	ET623790 ET557965
2SA733(P)(Q)	ET554657	CA-2056	2SA628(D)(E)(F) 2SA640(E)(F)	ET515700 ET623790
2SC458LG(C)	ET234854	CA-5017	2SC1000(GR)(BL)	ET622181
2SC458LG(D)	ET352146	CA-5017	2SC1312S(G)(H) 2SC693U(F)	ET603257 ET315472
2SC945L(P)	ET639448	CA-5017	2SC711(E)(F)	ET453486
2SC945L(P)(Q)	ET639437	CA-2056	2SC1647(R)(S)	ET658181
2SC945L(Q)(R)	ET635837	CA-2057	2SC1641(Q)(R)(S)(E)	ET603843
2SC1061(C)	ET402682	CA-2056		
2SC1096(K)(L)	ET471025	CA-5015	2SD325(D)(E) 2SD360(D)(E)	ET631855 ET517375
2SC1247A(B)(V)	ET511920	CA-5015	2SC1211(D)(E)	ET511694
2SC1312R(G)(H)	ET517263	CA-5017	2SC458LG(C)(D) 2SC1000(GR)(BL)	ET391768 ET622181
2SK30A(D)	ET645917	CA-5017		
1N34A	ED417442	CA-5017	1N60	ED428264
10D05	ED494583	CA-5015	1N4001	ED511097
WZ240	ED511918	CA-5015		
WZ085	ED491130	CA-5017 CA-2057	RD6A(M)	ED468303
1S2473VE	ED560913	CA-2056 CA-5017	1S1588 WG599	ED557447 ED514721
SEL-103R	ED645816			
SEL-303E	ED645996			

# 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.
BA637571	(2)-1	EC395504	(1)-C42	ER672502	(2)-R8	ML641878	8-44	MZ645074	7-16
BA637582	(2)-2	EC432810	(1)-C2	ES469541	6-9	ML641902	8-54	MZ645118	8-98
BA637593	(2)-3	EC450055	(1)-C45	ES479485	10-51	ML641924	8-59	MZ645164	5-25
BA637604	(2)-4	EC450055	(3)-C5	ZS487091	8-75x	ML641935	8-51	MZ645186	5-15x
BA637615	(1)-1	EC450055	(4)-C4	ES494076	(1)-SW1	ML641946	8-97	MZ646290	3-29
BA637806	(4)-1	EC450270	(2)-C4	ES494188	7-4	ML641992	8-81	MZ646918	3-13
BA637817	(3)-1	EC450527	(1)-C11	ES494188	7-45	ML642082	1-27	MZ646920	5-5
BC647076	11-17	EC450527	(1)-C50	ES494188	8-40	ML642330	7-7	MZ646931	5-1
BD681120	11-14	EC460091	(2)-C10	ES494188	8-74	ML642352	7-8	MZ646953	4-1
BH661061	1-1x	EC487157	(1)-C46	ES499972	6-10x	ML644286	10-15	MZ646986	11-11x
BJ637661	10-1x	EC493637	(1)-C5	ES516036	8-70	ML644815	8-45	MZ647021	6-1
BK650070	4-19	EC493637	(1)-C14	ES619053	8-3	ML675022	8-65	MZ647087	6-20
BM637683	3-1x	EC493637	(1)-C35	ES645930	(3)-SW1	MP468292	1-7	MZ647100	8-16x
BM637694	3-2x	EC495865	(1)-C20	ET234854	(1)-TR2,3	MR645041	3-23	MZ647111	8-17x
BM663434	3-3x	EC516745	(1)-C1	ET352146	(1)-TR1	MR645052	3-24	MZ651194	7-27
BR637705	2-2x	EC516756	(1)-C53	ET398711	(1)-TR4to6	MS366625	1-15	MZ653308	8-57
BR637716	2-1x	EC516767	(1)-C3	ET398711	(1)-TR8	MS387573	2-3	MZ675202	8-83
BS637795	8-1x	EC516767	(2)-C8,9	ET398711	(1)-TR12to14	MS595552	5-7	MZ676440	3-28
BS637828	7-1x	EC539842	(1)-C18	ET402682	(4)-TR3	MS595563	5-6	MZ678486	7-50
BS665706	6-8x	EC539842	(1)-C51,52	ET453611	(2)-TR1	MS642374	5-33	SB645232	4-18
BT645805	10-25	EC551160	(2)-C1	ET511920	(1)-TR15	MS644613	7-20	SE613888	11-5
BT648595	10-27x	EC556525	(1)-C4	ET511920	(2)-TR2,3	MS644872	1-30	SE630156	11-7
BT648606	10-28x	EC556525	(1)-C15	ET517263	(1)-TR7	MS644962	7-9	SE631585	11-3
BT648617	10-26x	EC556525	(1)-C27	ET517263	(1)-TR10	MS645017	10-8	SE645210	11-6
BT667394	(1)-T1	EC641316	3-18	ET554657	(4)-TR2	MS645153	1-33	SK631304	5-41
BZ637492	11-1x	EC645895	(2)-C2	ET557976	(1)-TR11	MS645175	4-2	SK631304	6-12
BZ687453	7-22x	EC648538	3-19x	ET638504	(1)-TR16	MT370348	2-15	SK645028	11-15
EA391331	3-4x	EC648628	(1)-C19	ET639437	(3)-TR1	MT370361	2-9	SK645030	11-16
EA457176	4-14	EC662422	10-33	ET639437	(4)-TR1	MT370372	2-17	SM582210	3-17x
EA457176	6-15	ED219464	(1)-D1	ET639437	(4)-TR4	MT387630	2-7	SP647008	10-46x
EA628222	10-3	ED219464	(1)-D5	ET645917	(1)-TR9	MT387641	2-11	SP647032	11-2
EA647166	8-14	ED219464	(1)-D7	EV464207	(1)-VR2	MT394200	2-16	SP647054	11-20x
EA647188	6-3	ED491130	(1)-D2	EV478686	(1)-VR1	MT553948	11-24x	SP648448	10-48x
EA647190	5-43	ED494583	(2)-D1to4	EV499882	(2)-VR1,2	MT605766	2-14	SP648450	10-47x
EA647201	8-69	ED494583	8-7x	EV522797	(1)-VR4	MT644534	2-18	SP675292	10-45
EC220127	(1)-C6	ED511918	(2)-D5	EV523620	(1)-VR3	MV522235	1-34	SZ639685	11-8
EC220127	(1)-C55	ED557447	(1)-D6	EV645840	6-21	MZ414224	3-6x	SZ645221	8-4
EC220151	(4)-C1, 2	ED560913	(1)-D3,4	EV645851	6-22	MZ641654	7-11	SZ645243	11-21x
EC220590	(1)-C54	ED560913	(1)-D8to16	EW374894	10-55	MZ641665	7-23	SZ647065	5-14
EC220678	(1)-C48	ED624903	(4)-D2to5	EW516600	10-57x	MZ641676	7-32	TC384164	3-14
EC250683	(1)-C21	ED645816	6-4	EW524845	10-56x	MZ641687	7-33	TC389790	2-12
EC250841	(1)-C57	ED656346	8-15	EZ246936	10-59x	MZ641700	5-48	TC394075	3-12x
EC250841	(2)-C5	ED674605	(3)-D1,2	EZ595653	8-73	MZ641711	7-40	TC494267	11-9x
EC250841	(2)-C7	EF277413	10-41x	EZ638965	10-38x	MZ641722	7-43	TC515575	4-6
EC251291	(1)-C32	EF539515	10-42x	EZ642328	7-2	MZ641733	8-20	TC516598	10-29
EC251291	(1)-C37	EF558066	10-43x	EZ644354	(2)-5	MZ641755	8-25	TC613697	10-53
EC251291	(1)-C39	EF563670	11-23x	HA644297	10-23x	MZ641766	8-29	TC641632	1-4
EC251291	(1)-C41	EF601953	10-39x	HE656098	1-23	MZ641790	8-64	TC642115	1-37
EC290531	(1)-C12	EF623103	10-40x	HP644085	1-14	MZ641801	8-58	TC642262	8-11x
EC290531	(1)-C36	EF662207	10-44x	HZ641643	1-13	MZ641812	8-48	TC642273	5-37
EC290564	8-71x	EJ255115	10-32	HZ642093	1-29	MZ641867	8-43	TC642284	5-38
EC313121	(1)-C29	EJ510333	10-36x	HZ644400	1-11	MZ641880	8-39	TC642295	8-2
EC320051	(1)-C7, 8	EJ514822	(2)-9	HZ646907	1-2	MZ641957	8-76	TC642306	8-10
EC320051	(1)-C13	EJ539662	(1)-2	HZ668327	1-25	MZ641968	8-79	TC642317	(3)-2
EC320051	(1)-C24to26	EJ539662	(2)-11	MB415743	2-23	MZ641970	8-82	TC642363	5-42
EC320051	(1)-C28	EJ539662	(3)-3	MB645107	7-39	MZ641981	8-84	TC644308	10-24x
EC320051	(1)-C34	EJ551035	10-31	MB666123	3-30	MZ642003	8-86	TC645063	1-3
EC320051	(1)-C38	EJ592503	(2)-10	MC641845	8-36	MZ642014	8-93	TC646942	1-26
EC320051	(1)-C40	EJ618524	10-37	MC645985	8-12	MZ642025	8-89	TC651161	8-30
EC320051	(1)-C43,44	EJ624104	10-2	MH421986	10-17	MZ642036	8-91	TC653218	7-41
EC320051	(1)-C47	EJ631945	10-58	MH620572	8-9	MZ642047	8-90	TC666134	6-13x
EC329861	(1)-C33	EJ645827	6-7	MH644635	7-34	MZ642058	8-92	TC666156	5-22
EC329861	(3)-C3	EJ669745	10-49x	MH644646	5-49	MZ642060	7-44	TC668305	2-6
EC329883	(1)-C30	EL295312	5-44	MH644916	5-29	MZ642071	5-46	TC678475	5-4x
EC331705	(1)-C16,17	EL295312	6-16	MH644927	5-26	MZ642104	1-36	ZG316765	5-31
EC331828	(2)-C6	EL390576	4-15	MH664064	5-21	MZ642148	5-18	ZG365218	1-40
EC331828	(4)-C5	EM619705	6-19x	MI644624	7-18	MZ642161	4-11	ZG369606	10-16
EC337500	(1)-C31	EM666450	6-18	MI644681	7-36	MZ642172	4-5	ZG385075	2-8
EC350875	(1)-C10	EO243988	(3)-L1, 2	MI644736	8-32	MZ642183	4-13	ZG385413	8-77
EC350875	(4)-C6	EO368403	(1)-L1	MI644804	8-67	MZ642341	7-3	ZG385986	8-28x
EC350875	8-72x	EO368403	(1)-L4to6	MI645085	7-25	MZ642385	3-27	ZG385986	8-68
EC372148	(2)-C3	EO496350	(1)-L2	ML595574	5-8	MZ644264	10-11	ZG387584	2-5
EC377212	(1)-C58	EO496844	(2)-T1	ML595585	5-9	MZ644275	10-14	ZG392848	4-10
EC379170	(3)-C1	EO624857	(1)-L3	ML641698	5-50	MZ644310	10-19	ZG394378	7-15
EC379214	(2)-C11	EP494425	8-6	ML641744	8-26	MZ644321	10-21	ZG394378	8-47
EC379787	(1)-C22	ER213715	10-5x	ML641777	8-62	MZ644332	10-22	ZG422223	5-40
EC380621	(3)-C4	ER315213	10-6x	ML641788	8-55	MZ644343	6-2	ZG465636	1-22
EC389485	(1)-C9	ER345712	10-7x	ML641823	8-49	MZ644567	8-19x	ZG469315	8-35
EC391004	(1)-C49	ER364994	10-4x	ML641834	8-50	MZ644591	7-24	ZG469315	8-63
EC392332	(1)-C56	ER664863	10-34x	ML641856	8-38	MZ644657	7-37	ZG525306	4-4





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**SECTION 3**

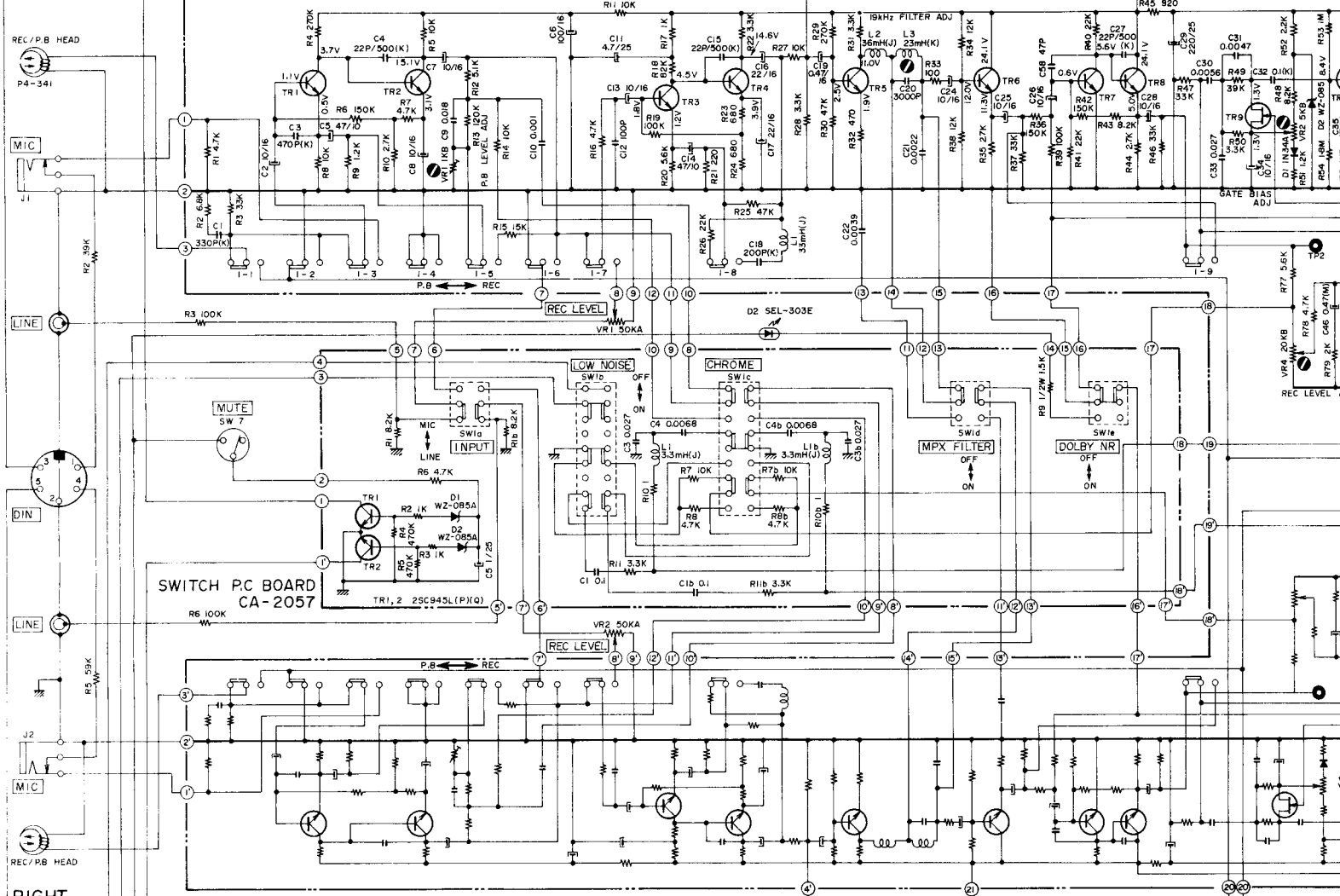
**SCHEMATIC DIAGRAM**

**1. GXC-710D SCHEMATIC DIAGRAM**

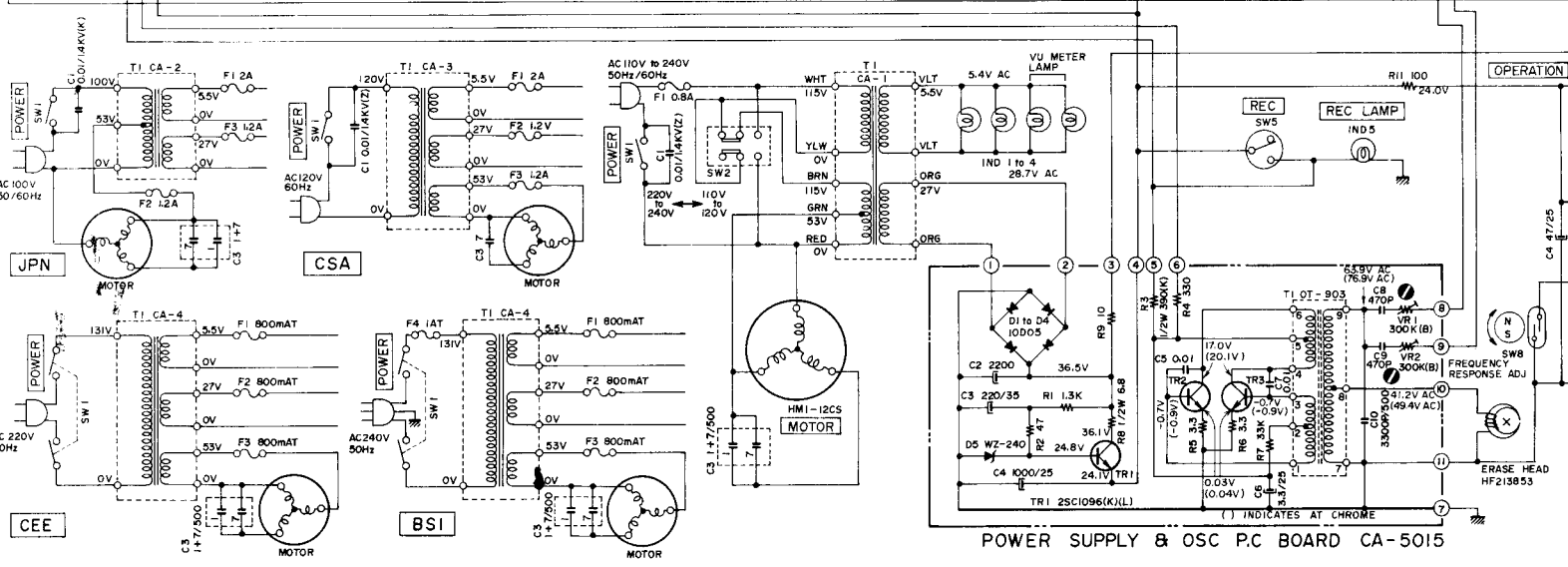
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GXC-710D

LEFT



RIGHT



POWER SUPPLY & OSC P.C BOARD CA-5015

