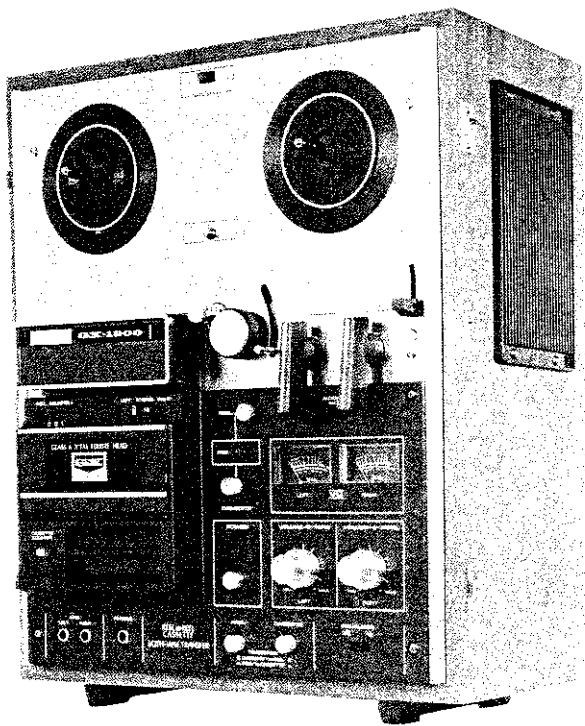


SERVICE MANUAL

PARTSLIST



AKAI STEREO TAPE RECORDER
GX-1900
MODEL
ALSO APPLICABLE TO MODEL GX-1900D



**REEL/CASSETTE COMBINATION
STEREO TAPE RECORDER**
MODEL GX-1900

ALSO APPLICABLE TO MODEL
GX-1900D STEREO TAPE DECK

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SECTION 1

SERVICE MANUAL

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I. SPECIFICATIONS

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

TRACK SYSTEM	Open reel Cassette	4-track, 2-channel stereo / monaural system 4-track, 2-channel stereo system
REEL CAPACITY		Up to 7" reel
TAPE SPEED	Reel Cassette	7-1/2 and 3-3/4 ips $\pm 1\%$ (* $\pm 1.5\%$) 1-7/8 ips $\pm 1\%$ (* $\pm 3\%$)
WOW AND FLUTTER	Reel Cassette	Less than 0.12% RMS at 7-1/2 ips (*0.15%) Less than 0.15% RMS at 3-3/4 ips (*0.25%) Less than 0.2% RMS (*0.3%)
FREQUENCY RESPONSE	Reel Cassette	30 to 22,000 Hz ± 3 dB (*40 to 20,000 Hz ± 3 dB) at 7-1/2 ips 30 to 15,000 Hz ± 3 dB (*40 to 14,000 Hz ± 3 dB) at 3-3/4 ips 40 to 15,000 Hz ± 3 dB (*40 to 14,000 Hz ± 3 dB)
SIGNAL TO NOISE RATIO	Reel Cassette	Better than 50 dB (*48 dB) Better than 41 dB
DISTORTION		Less than 2% (*3%), 1000 Hz "0" VU recording
CROSS TALK	Reel Cassette	Better than 45 dB (Stereo) Better than 65 dB (Monaural) Better than 25 dB
ERASE RATIO		Better than 70 dB, 1,000 Hz +3 VU recording
BIAS FREQUENCY		62 kHz ± 5 kHz
INPUTS	Mic input Line input Din input	0.5 mV Impedance: 5 k Ω 50 mV Impedance: 200 k Ω 50 mV (High), 3 mV (Low)
OUTPUTS	Speaker output Line output	10W/8 Ω each (*5W/8 Ω each, using a 250 Hz "0" VU recorded tape) Reel: 1,228V ± 1 dB, using a 250 Hz "0" VU recorded tape Cassette: 1,228V ± 1.5 dB, using a 333 Hz "0" VU recorded tape
RECORDING CAPACITY	Reel Cassette	60 min. stereo recording, using a 1,200 ft. tape at 7-1/2 ips 60 min. stereo recording, using a C-60 tape
FAST FORWARD AND REWIND TIME	Reel Cassette	95/76 sec., using a 1,200 ft. tape at 50/60 Hz 65/52 sec., using a C-60 tape at 50/60 Hz
MOTOR		Hysteresis synchronous 2-speed motor Tape: HMZ-16SX Revolutions: 3,000/1,500 r.p.m. at 50 Hz 3,600/1,800 r.p.m. at 60 Hz
HEADS	Reel Cassette	Recording/Playback Head In-line 4-track 2-channel Rec/P.B. Head Gap: 2/1,000 mm Impedance: 1,250 Ω $\pm 15\%$ at 1,000 Hz Erase Head In-line 4-track 2-channel Erase Head Gap: 0.6 mm Impedance: 200 Ω $\pm 5\%$ at 100 kHz Recording/Playback Head In-line 4-track 2-channel Glass and Ferrite Rec/P.B. Head Gap: 1.4 to 1.9 μ m Impedance: 1,200 Ω $\pm 20\%$ at 1,000 Hz Erase Head In-line 4-track 2-channel Erase Head Gap: 0.3 mm Impedance: 195 Ω $\pm 10\%$ at 100 kHz
TRANSISTORS		8 . . . 2SC458LG (C) 2 . . . 2SC871 (E, F) 2 . . . 2SC945 (Q, R) 2 . . . 2SC971 (2, 3) (Red) 2 . . . 2SC1098 (K, L, M)
IC		2 . . . LD-3141 2 . . . STK-011 (GX-1900 only)
DIODES		1 . . . 10DC-1 (Black) 5 . . . 10D-1 or V06B (GX-1900 only) 5 . . . 1N34A 1 . . . RD-24AM or 1S339A
POWER SUPPLY		100 to 240V AC, 50/60 Hz
POWER CONSUMPTION		65W (GX-1900D: 60W)
INSULATION RESISTANCE		More than 50 M Ω
INSULATION DURABILITY		1,000V AC for more than 1 minute duration
DIMENSIONS		375 (W) \times 435 (H) \times 248 (D) mm (15" \times 17.5" \times 9.9")
WEIGHT		20.5 kg (45 lbs.) GX-1900 18.4 kg (40.5 lbs.) GX-1900D

Remark: Specifications subject to change without notice.

II. MEASURING METHOD

1. TAPE SPEED DEVIATION

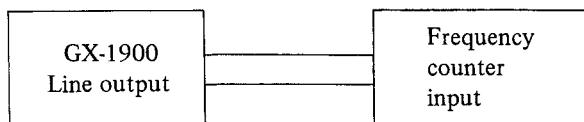


Fig. 1

As shown in Fig. 1, connect a Frequency Counter to the Line Output of Model GX-1900. Take a frequency counter reading at the beginning, middle, and end of tape winding during playback. The maximum value of these respective readings will represent tape speed deviation.

2. WOW AND FLUTTER

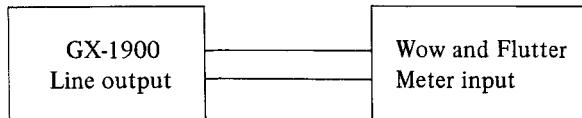


Fig. 2

Method A

As shown in Fig. 2, connect the Line Output of Model GX-1900 to the Input of a Wow and Flutter Meter. Use a 3,000 Hz pre-recorded test tape and take a wow and flutter meter reading at the beginning, middle, and end of tape winding. The maximum value of these respective readings will represent the wow and flutter.

Method B

Supply a 3,000 Hz sine wave signal from an Audio Frequency Oscillator and make a recording on a blank tape at the beginning, middle, and end of tape winding. Rewind and play tape. Measure wow and flutter with a Wow and Flutter Meter. (The wow and flutter value of Method B will be close to twice that of Method A.)

3. FREQUENCY RESPONSE

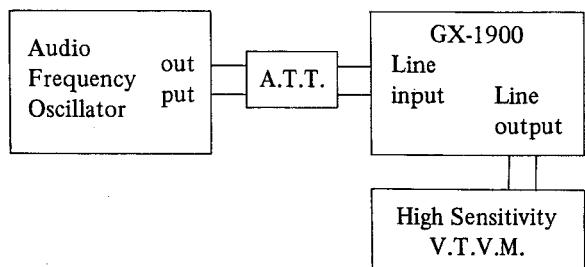


Fig. 3

For measuring frequency response, connect instruments as shown in Fig. 3 and proceed as follows.

- 1) Supply a 1,000 Hz sine wave to the Line Input of Model GX-1900 from an Audio Frequency Oscillator through an Attenuator. Set recorder to recording mode and turn recording level volume control to maximum. Adjust Attenuator to obtain a +4 dB V.T.V.M. reading.
- 2) Under conditions described in 1) above, re-adjust Attenuator so that the Line Output is -16 dB, and record 40 to 14,000 Hz spot frequencies.
- 3) Rewind tape and playback from the beginning. Take V.T.V.M. spot frequency readings and plot values on a graph.

Note: When measuring frequency response, new tape should be used.

4. SIGNAL TO NOISE RATIO

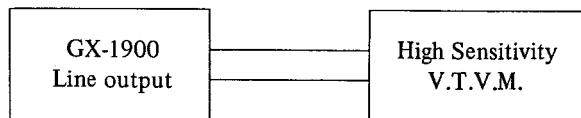


Fig. 4

As shown in Fig. 4, connect a High Sensitivity V.T.V.M. to the Line output of Model GX-1900. Playback a 250 Hz (333 Hz cassette) "0" VU pre-recorded test tape and measure the output. Then remove the tape and measure the noise level under the same condition. Convert each of the measured values into decibels.

5. TOTAL HARMONIC DISTORTION FACTOR

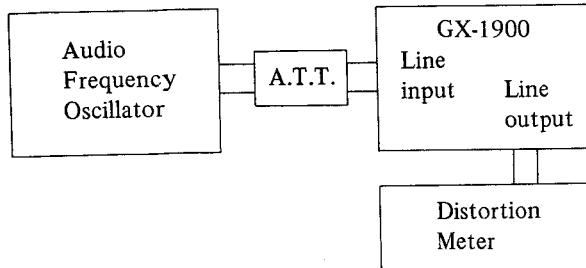


Fig. 5

Connect the measuring instruments as shown in Fig. 5 and record a 1,000 Hz sine wave signal at "0" VU. Playback the resultant signal and measure the overall distortion factor. Measure the noise level of the tape recorder without the tape. Connect the audio frequency oscillator directly to the distortion meter for measurement of the distortion factor of the oscillator. The required distortion factor can be obtained from the results of the above measurement by the following formula:

$$d_0 = d - d_1 - d_2$$

where, d_0 — Required distortion factor
 d — Overall distortion factor
 d_1 — Noise level.
 d_2 — Distortion factor of the oscillator

Note: When measuring the distortion factor, new tape should be used.

6. CROSS TALK(Cross talk between the tracks)



Fig. 6

As shown in Fig. 6, first record a 1,000 Hz sine wave signal on Track No. 3 at +3 VU level. Next, record under a non-input condition. Then, playback the tape on Tracks No. 3 and 4 through the B.P.F. (band pass filter sensitivity 1:1) and obtain a ratio between the two from the following formula:

$$C = 20 \log \frac{E_0}{E_2 - E_1} (\text{dB})$$

where, C — Desired cross talk ratio (dB)

E_0 — 1,000 Hz signal output level

E_2 — 1,000 Hz cross talk level

E_1 — Non-input signal recorded level



7. ERASE RATIO

As shown in Fig. 4, connect a High Sensitivity V.T.V.M. to the Line Output of Model GX-1900. Playback a virgin tape and take a V.T.V.M. reading of the output level. Next, record a 1,000 Hz sine wave signal at +3 dB, then playback this recorded signal and take a V.T.V.M. reading of the output level. Next, using this pre-recorded tape, record under a non-input condition and take a reading of the noise level output of the erased signal and obtain a ratio between the two from the following formula:

$$Er = 20 \log \frac{E_0}{E_2 - E_1} (\text{dB})$$

where, Er — Desired erase ratio (dB)

E_0 — 1,000 Hz signal output level

E_2 — Non-input signal recorded level

E_1 — Virgin tape noise output level

8. POWER OUTPUT

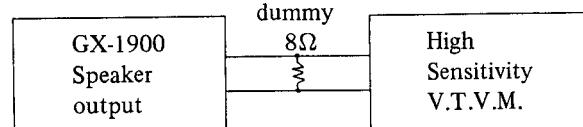


Fig. 7

As shown in Fig. 7, connect an 8Ω dummy load resistor to the speaker output of Model GX-1900 and connect this terminal to a High Sensitivity V.T.V.M. Playback a 250 Hz "0" VU pre-recorded test tape and take a V.T.V.M. reading of the output level. The resultant output can be obtained from the results of the above measurement by using the following formula:

$$P = \frac{E^2}{R} (\text{W})$$

where, P — Desired power output (watts)

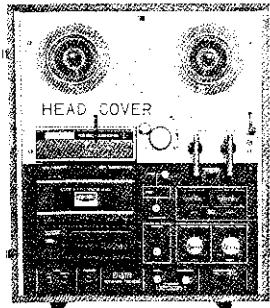
E — Measured voltage (R.M.S.)

$R = 8\Omega$

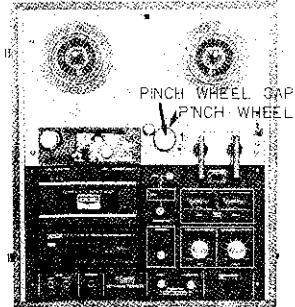
III. DISMANTLING OF TAPE TRANSPORT UNIT & AMPLIFIER

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

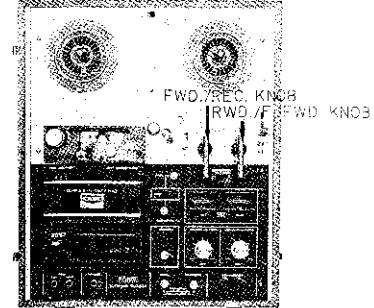
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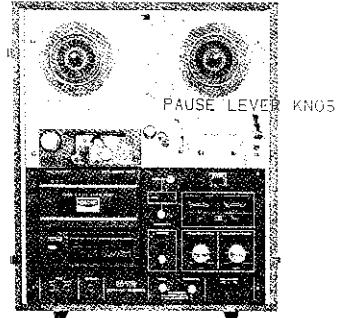
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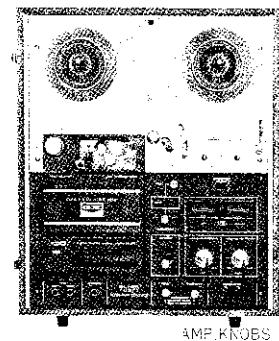
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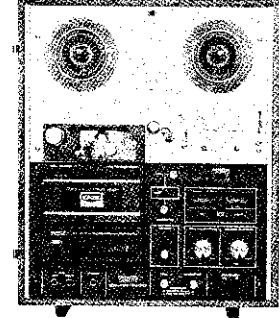
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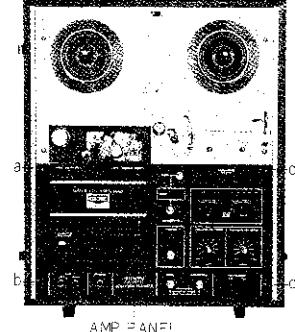
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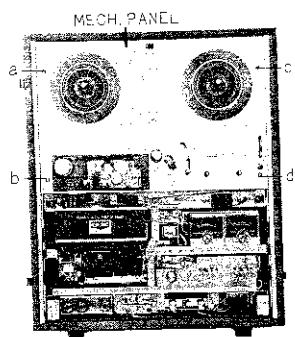
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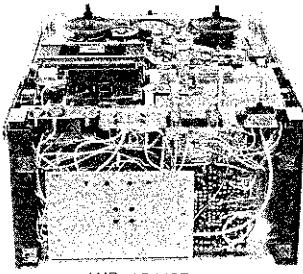
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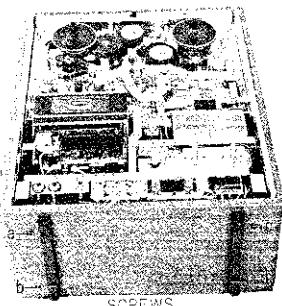
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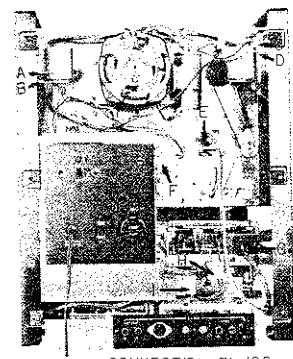
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9



13



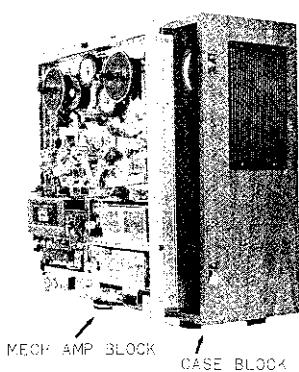
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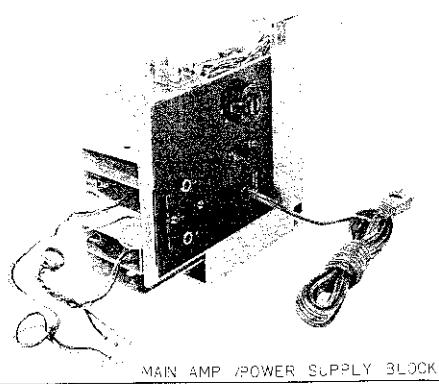
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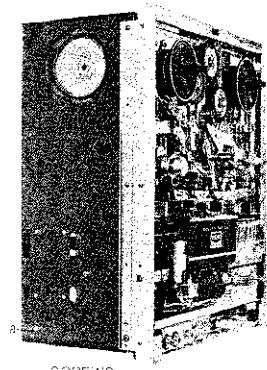
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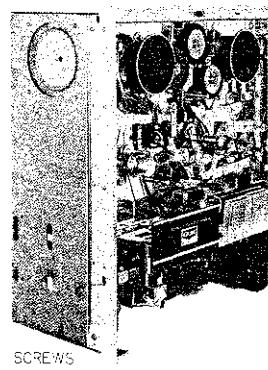


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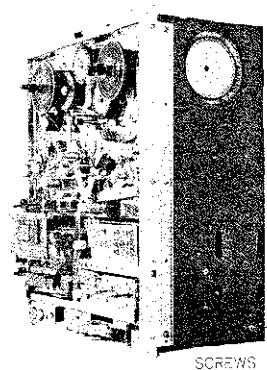
SCREWS

20



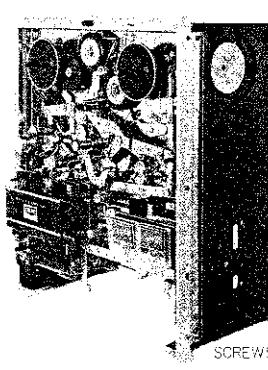
SCREWS

17



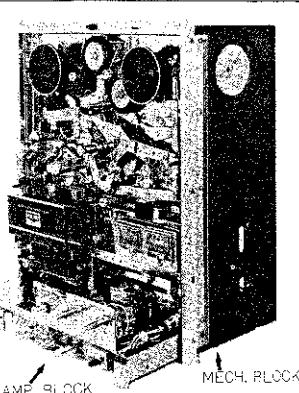
SCREWS

21



SCREWS

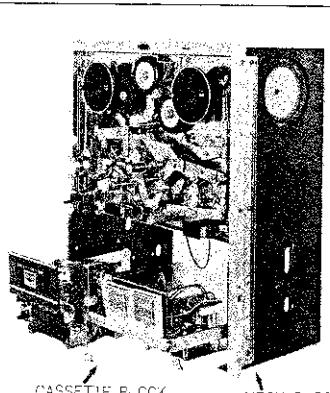
18



AMP. BLOCK

MECH. BLOCK

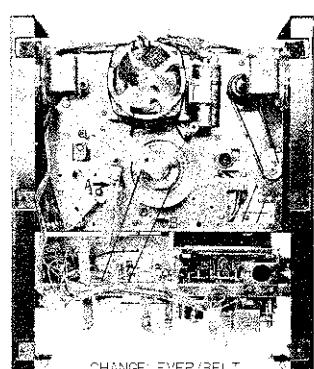
22



CASSETTE BLOCK

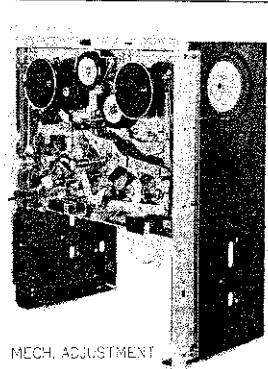
MECH. BLOCK

19



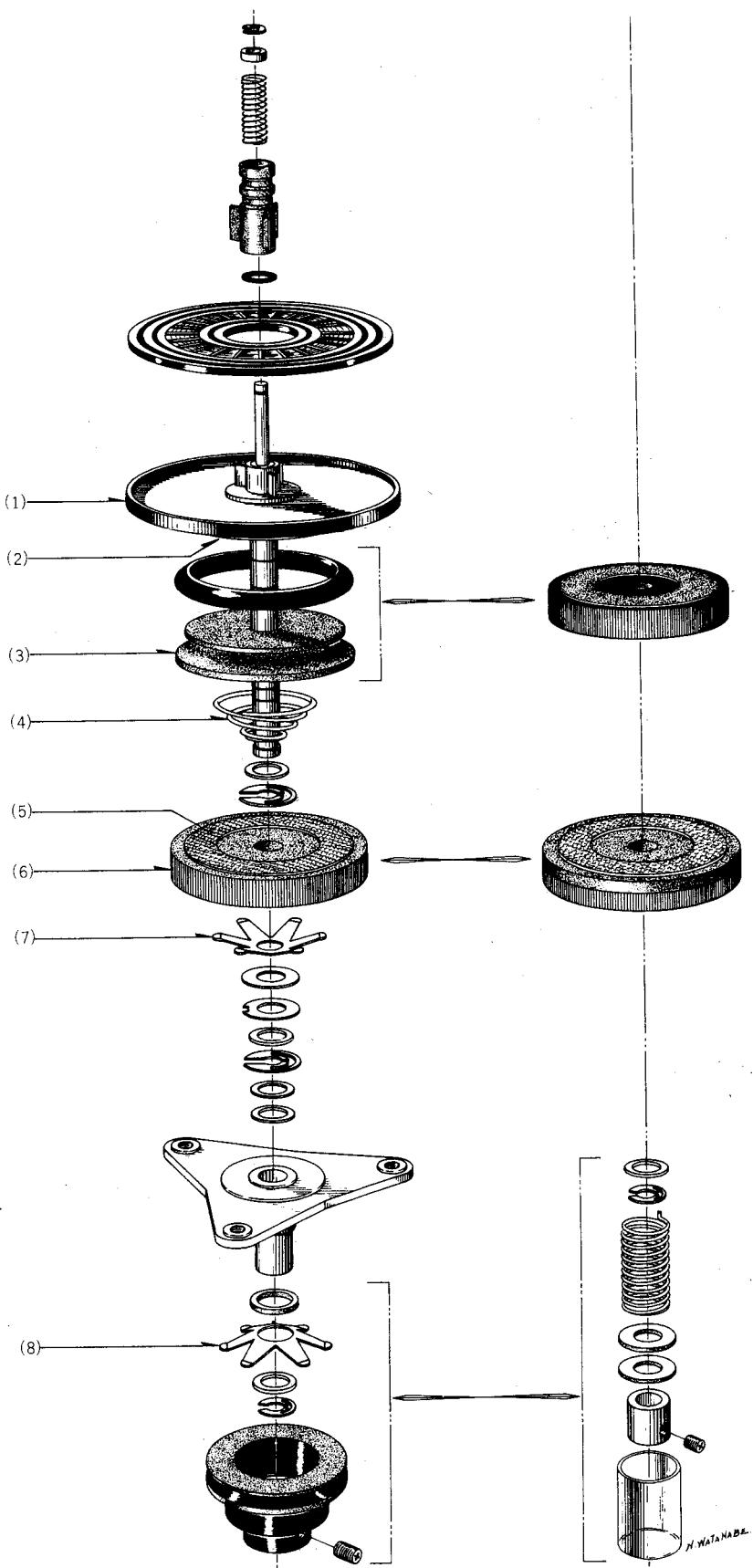
CHANGELEVER/BELT

23



MECH. ADJUSTMENT

IV. OPEN REEL MECHANISM ADJUSTMENTS



1. PINCH WHEEL ADJUSTMENT

It is important that the pinch wheel shaft be kept in perfect alignment with the capstan shaft. Proper pinch wheel pressure is between 1,000 and 1,150 grams when the unit is operated at the tape speed of 7-1/2 ips. Any deviation from this specification will result in wow and flutter. Check pinch wheel pressure with a spring scale, and if necessary, adjust the pinch wheel load spring.

2. SUPPLY REEL SHAFT ASSEMBLY ADJUSTMENT (See Fig. 8 at left)

Felt clutch material (2) is used between the lower side of the reel table base plate (1) and the rewind pulley (3) to protect recording tape from excessive tension during rewind operation. To check the amount of friction of this part, install a 5-inch reel with a 60 mm diameter tape, and gently pull the end of the tape upward with a spring scale. Adjust the conical spring (4) so that the amount of tension is kept between 400 and 500 grams. Other felt clutch material (5) is attached to the supply roller (6) to provide proper slippage during FWD and REC operation. The procedure for checking friction of this part is the same as the foregoing, and between 80 and 100 grams of tension gives best result. Adjust the spring (7) just under the supply roller (6). When the unit is set to fast forward operation, the amount of friction will decrease to from 15 to 20 grams. Check to see whether this is satisfactory. If not, adjust the spring plate (8) and the pressure of the pulley (9)

3. TAKE-UP REEL SHAFT ASSEMBLY ADJUSTMENT (See Fig. 8 at right)

Felt clutch material (2) is attached to the bottom side of the reel table base plate (1) so that the recording tape will not stretch during fast forward operation due to excessive tension. To check the amount of friction of this part, install a 5-inch reel with a 60 mm diameter tape, and gently pull the end of tape upward with a spring scale. Adjust the conical spring (4) so that the amount of tension at this part is kept between 400 and 500 grams. Other felt clutch material (10) is attached to the take-up roller (11). This is to provide proper slippage during FWD or REC operation. The procedure for checking friction of this part is the same as the foregoing, and between 150 and 180 grams of friction provides the best results. Adjust the spring plate (7) just under the take-up roller (11). When the unit is set to rewind operation, the amount of friction of this part will decrease to from 15 to 20 grams. Check to see whether this is satisfactory. If not, adjust the spring (12) and the pressure of the set sleeve (13).

V. CASSETTE MECHANISM ADJUSTMENTS

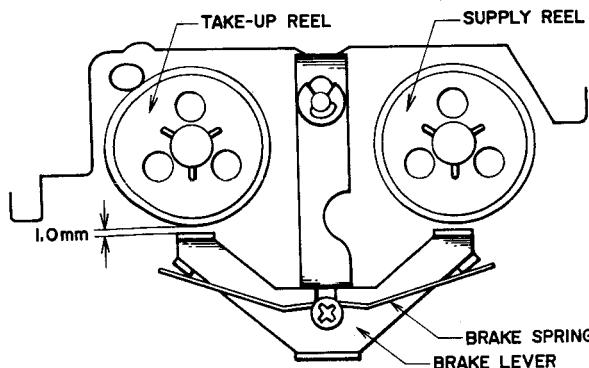


Fig. 9

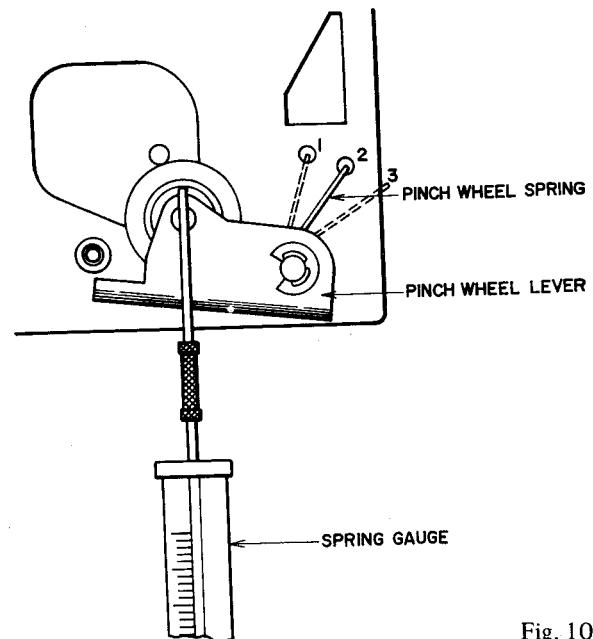


Fig. 10

1. BRAKE ADJUSTMENT

If operation of brake is weak when stopped from Playback, Fast Forward and Rewind mode, strengthen by bending Brake spring. Further, during each mode, the brake lever must be separated from the rubber surface of both reel tables by more than 1mm.

2. PINCH WHEEL PRESSURE ADJUSTMENT

- 1) With recorder at playback mode, connect a 0 to 500 gram Spring Gauge to the pinch wheel lever as shown in Fig. 10 and measure the pinch wheel pressure.
- 2) Proper pinch wheel pressure is between 280 to 300 grams. Pinch wheel pressure can be adjusted by changing the position of the pinch wheel spring.

3. MICRO SWITCH (SW 11) POSITION ADJUSTMENT (See Figs. 11 & 12)

Loosen screws (A) (B) and adjust position of microswitch plate by moving to left and right so that Micro Switch (SW 11) functions perfectly when the operating keys are depressed.

4. STOP CHIP POSITION ADJUSTMENT

Adjust Lock Rod Nut (C) so that the recording safety lever does not function during cassette playback mode.

5. AUTOMATIC STOP SOLENOID POSITION ADJUSTMENT

Loosen Solenoid fixation screws (D) (E) and adjust position of Solenoid by moving to left and right so that when the tape is stopped from each mode, the Plunger of Solenoid SL-1 pulls Keyboard Lever A for stop mode.

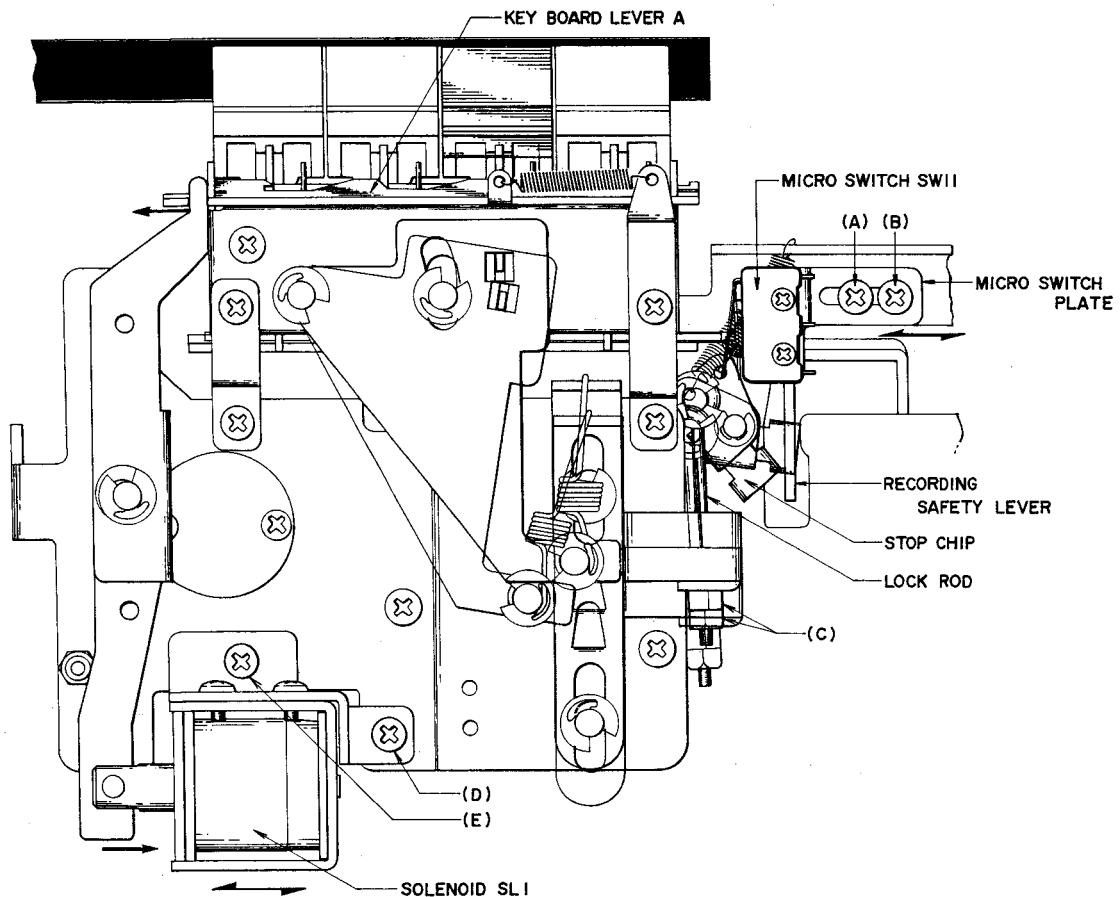


Fig. 11 "Stop" mode

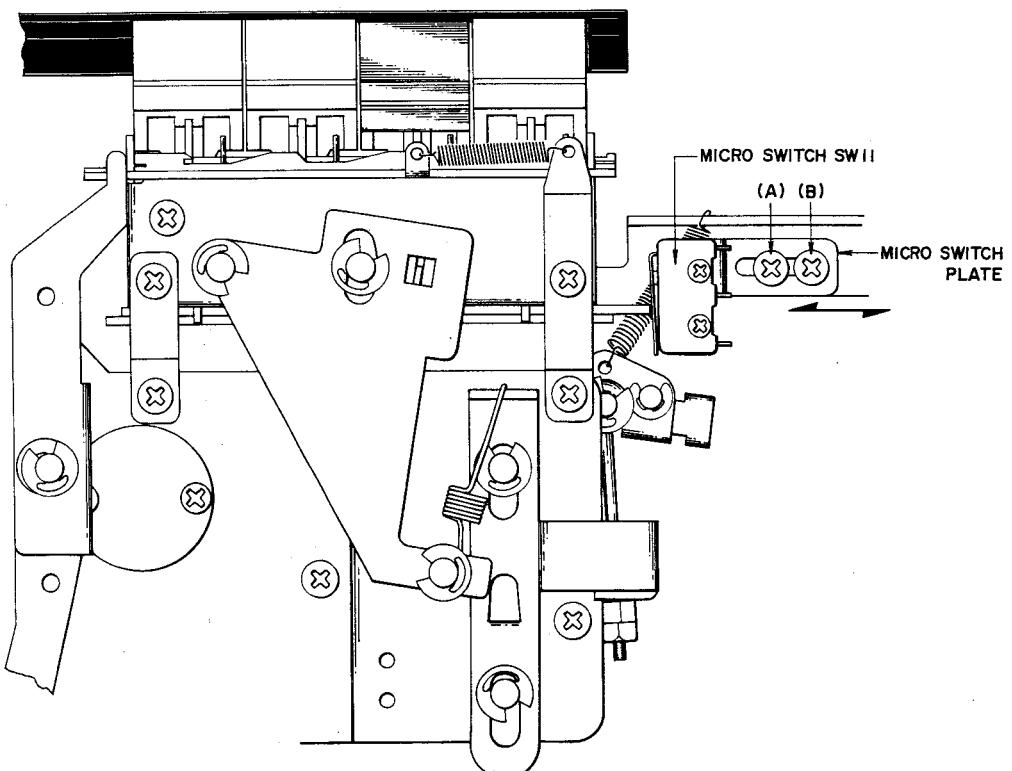


Fig. 12 "Play" mode

VI. OPEN REEL HEAD ADJUSTMENTS

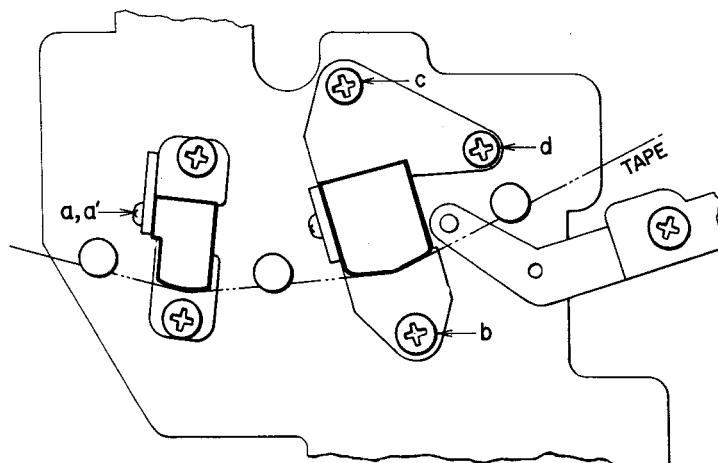


Fig. 13

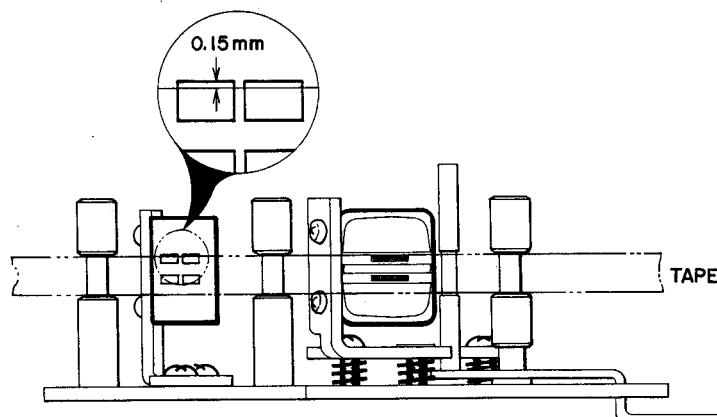


Fig. 14

1. HEAD HEIGHT ADJUSTMENTS

(See Figs. 13 & 14)

1) Erase Head

Loosen Erase Head screws (a) (a') and adjust erase head height, so that the upper edge of the tape is 0.15 mm lower than the upper edge of the upper erase head core.

2) Recording/Playback Head

Adjust Recording/Playback Head height by turning Recording/Playback Head Height Adjustment screws (b) (c) to left and right until the width between the upper edge of channel 1 head core and the upper edge of the tape is equal.

2. RECORDING/PLAYBACK HEAD SLANT ADJUSTMENT (See Figs. 13 & 14)

Adjust Recording/Playback Head slant by turning screws (b) (c) to left and right so that the Recording/Playback head contacts the tape surface at a right angle.

3. RECORDING/PLAYBACK HEAD AZIMUTH ALIGNMENT ADJUSTMENTS

Connect a High Sensitivity V.T.V.M. (Model 161A) to the line output and playback a Head Alignment test tape (8,000 Hz 3-3/4 ips. at 7-1/2 ips.). Adjust screw (d) by turning to left and right until the various line outputs are maximum.

4. Repeat adjustments outlined in Items 1, 2, and 3 above 2 or 3 times to obtain optimum adjusted condition.

VII. CASSETTE HEAD ADJUSTMENT

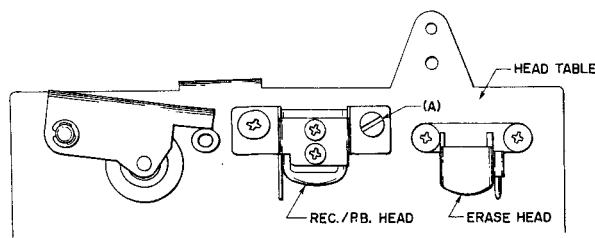


Fig. 15

RECORDING/PLAYBACK HEAD AZIMUTH ADJUSTMENT (See Fig. 15)

Connect a High Sensitivity V.T.V.M. (Model 161A) to the line output and playback a 10 kHz test tape. Adjust screw (A) by turning to left and right until the various line outputs are maximum.

VIII. AMPLIFIER ADJUSTMENT

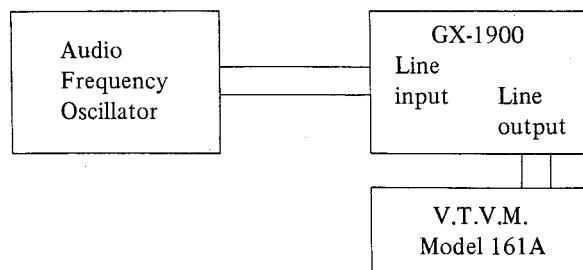


Fig. 16

1. REEL PLAYBACK LEVEL ADJUSTMENT (See Figs. 16 & 17)

- 1) Connect a High Sensitivity V.T.V.M. (Model 161A) to the line output.
- 2) Set main volume control (10k A) to maximum.
- 3) Playback a 250 Hz "0" VU pre-recorded test tape and turn Semi-fixed resistor VR 1 and VR 1b (2k B) to obtain a +4 dB reel playback level.

2. REEL RECORDING LEVEL ADJUSTMENT (See Figs. 16 & 17)

- 1) Load a blank test tape. Set recorder to recording mode and set main volume control (10k A) to maximum.
- 2) Supply a 1,000 Hz sine wave signal from an Audio Frequency Oscillator through an Attenuator to the line input, adjust the Attenuator so that the V.T.V.M. indicates +4 dB (VU meter indicates "0" VU).
- 3) After a few seconds of recording, playback the recorded tape from the starting point and check the V.T.V.M. indication.
- 4) If the line output is not +4 dB, repeat recording level adjustment procedure from Item 2), and adjust Semi-fixed resistor VR 3 and VR 3b (10k B), to obtain a +4 dB recording level.

3. CASSETTE PLAYBACK LEVEL ADJUSTMENT

- 1) Set mode switch to "CASSETTE" and playback a 333 Hz "0" VU pre-recorded test tape.
- 2) Follow Item 1 of Reel playback level adjustment procedure and adjust VR 2 and VR 2b (2k B) to obtain a +4 dB cassette playback level.

4. CASSETTE RECORDING LEVEL ADJUSTMENT

- 1) Follow Item 2 of Reel recording level adjustment procedure.
- 2) Load a blank low noise test tape and adjust Semi-fixed resistor VR 4 and VR 4b (10k B) so that the recording level is +4 dB.

IX. BLOCK DIAGRAM OF TRANSFER SYSTEM

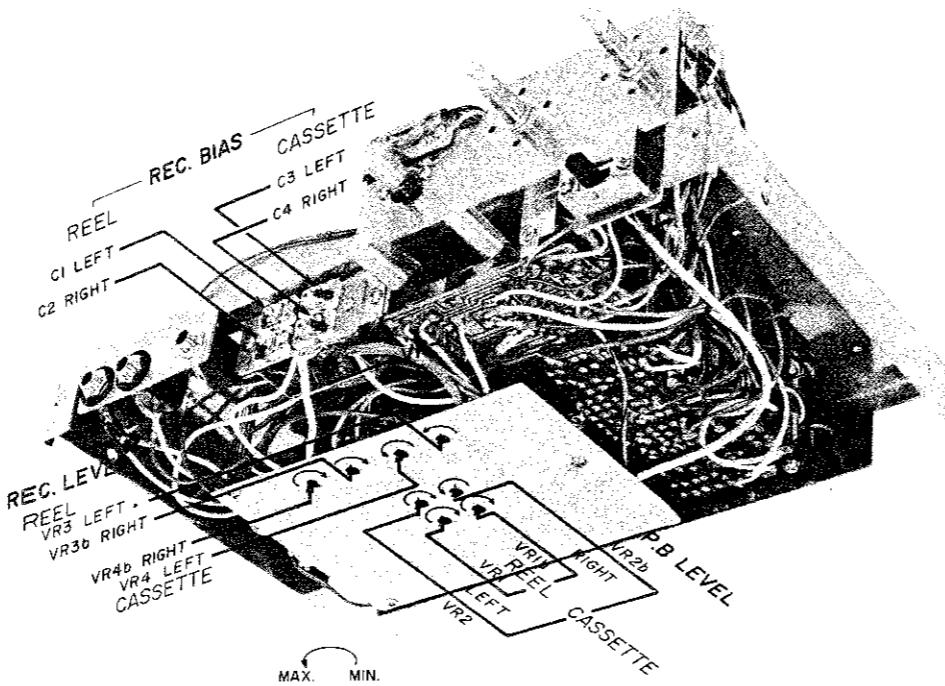


Fig. 17

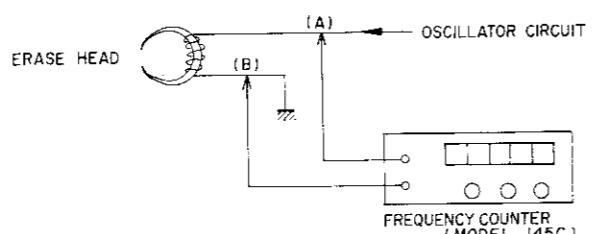


Fig. 18

5. REEL RECORDING BIAS VOLTAGE ADJUSTMENT (FREQUENCY RESPONSE ADJUSTMENT)

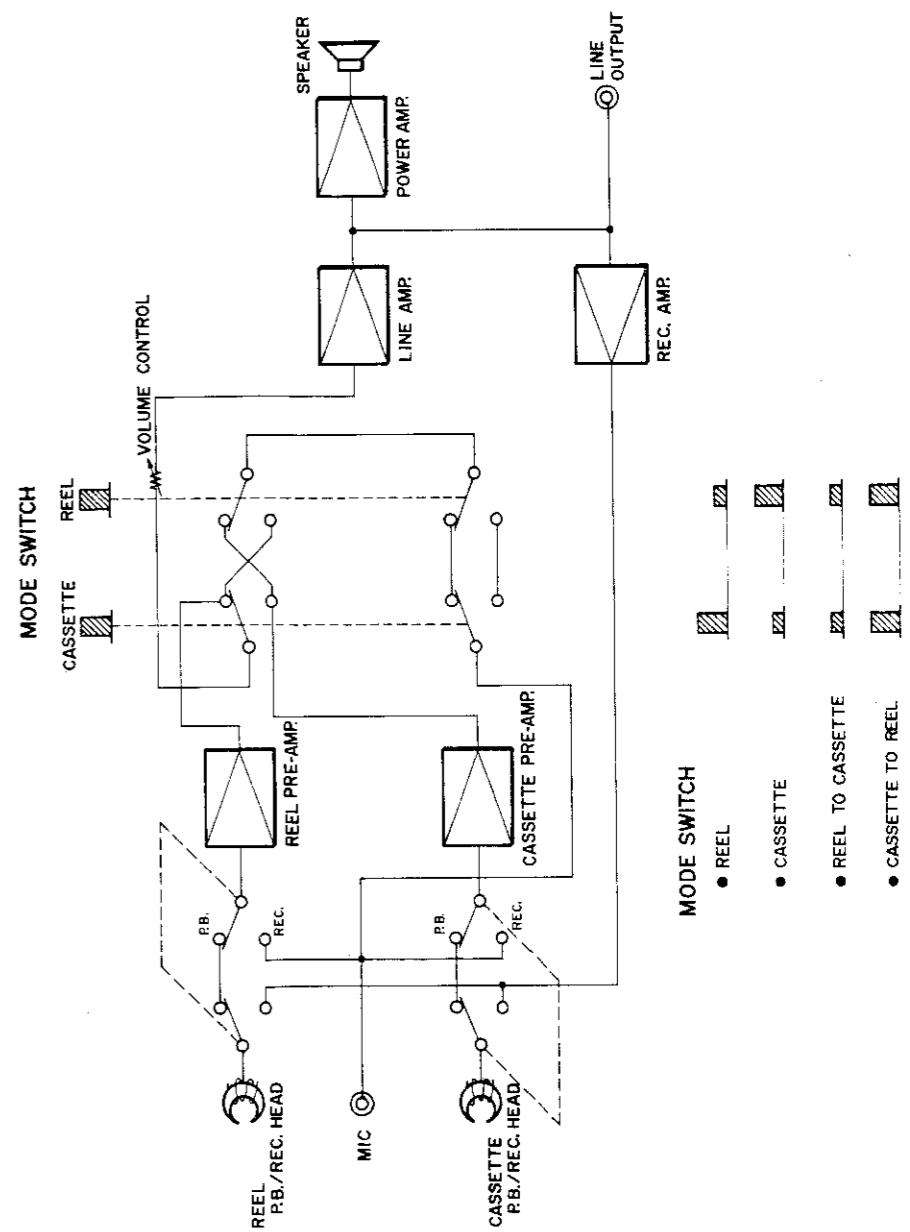
Playback the 1,000 Hz and 10,000 Hz signals recorded in Frequency Response Measuring Method procedure and adjust Bias Adjustment Semi-fixed condenser C1 and C2 (70 PF) so that the output level of these two frequencies are equal. The Bias voltage at this time is around 16V AC.

6. CASSETTE RECORDING BIAS VOLTAGE ADJUSTMENT (FREQUENCY RESPONSE ADJUSTMENT)

- 1) Follow Item 4 of Reel recording bias voltage adjustment procedure.
- 2) First adjust VR 1 (100k B) and next adjust Semi-fixed condenser C3 and C4 (70 PF) so that the output of these two frequencies are equal. The Bias voltage at this time is between 4 to 20V AC.

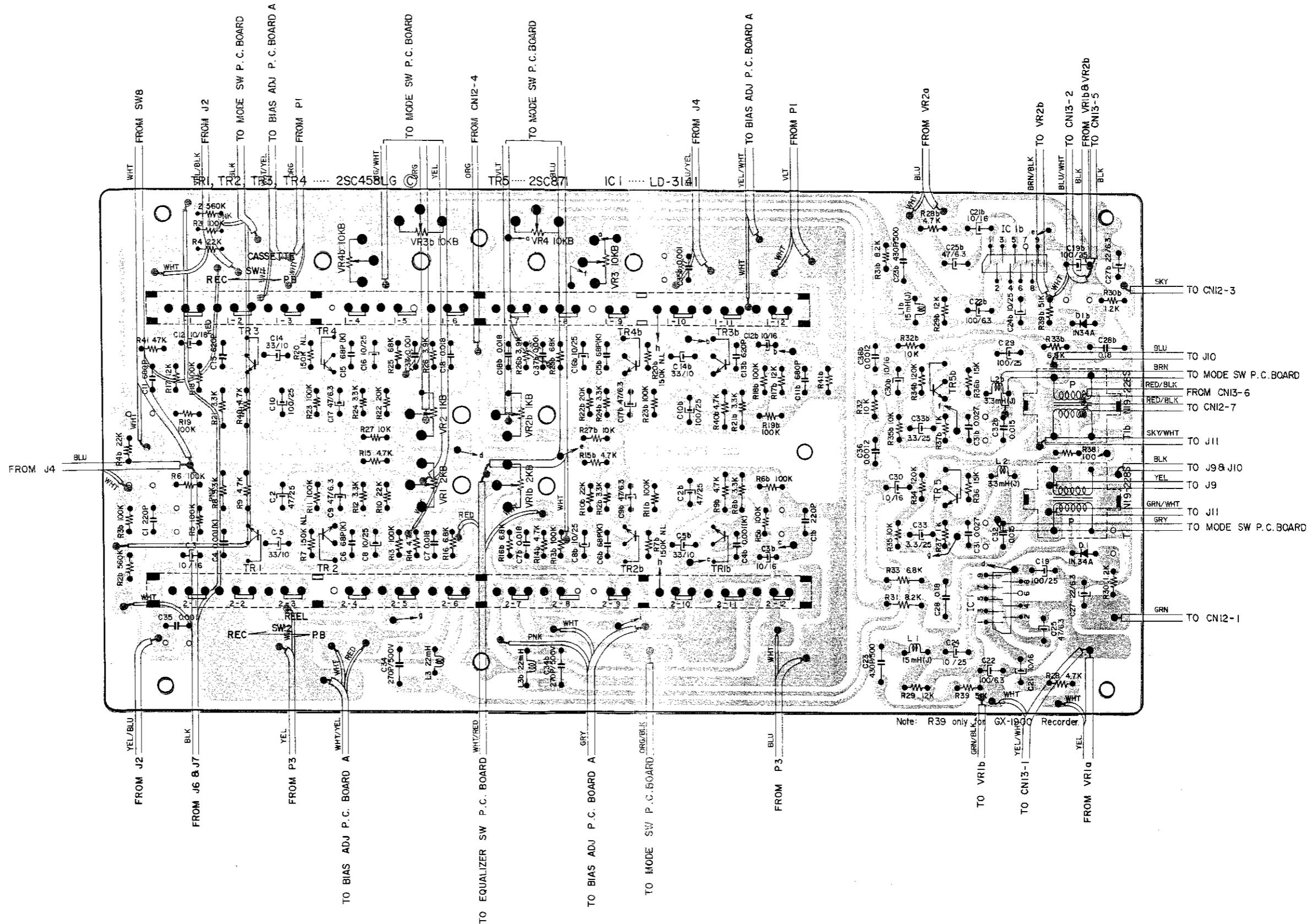
7. RECORDING BIAS FREQUENCY ADJUSTMENT

Connect a Frequency Counter to points (A) and (B) in Fig. 18 of the Erase Head and read the frequency indication. If the Frequency counter reading is 62 ± 5 kHz, the recording bias frequency is correct. If the recording bias frequency is incorrect, it can be adjusted by changing the value of condenser C 402 (2000P 500 WV) of the oscillator circuit.

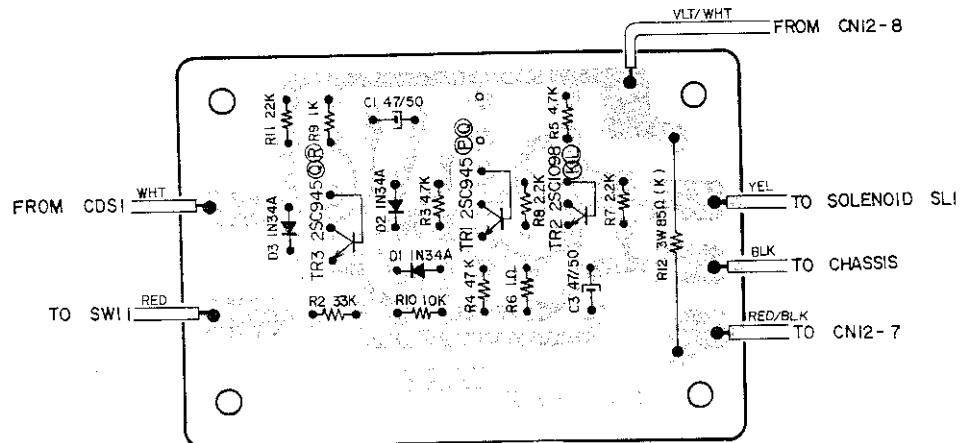


X. COMPOSITE VIEWS OF COMPONENTS

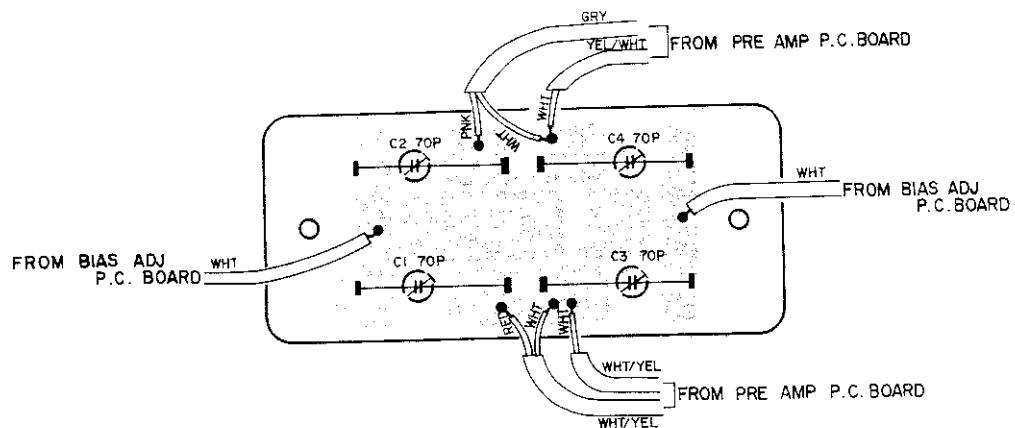
PRE-AMP. P.C. BOARD (RS-5018)



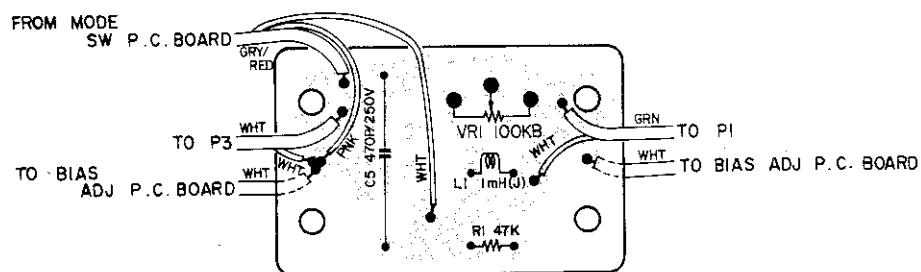
SYS. CON. P.C. BOARD (RS-1142)



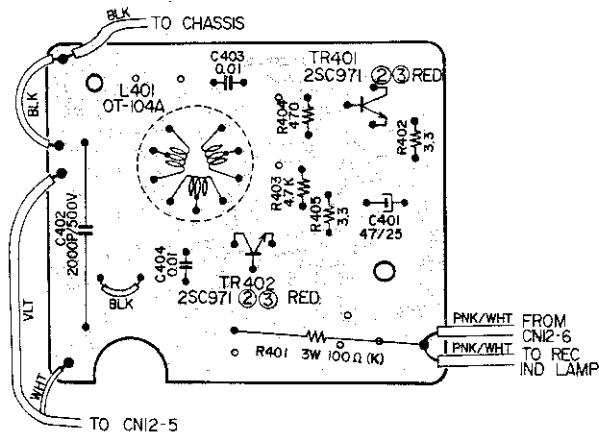
BIAS ADJUST P.C. BOARD A (RS-5015)



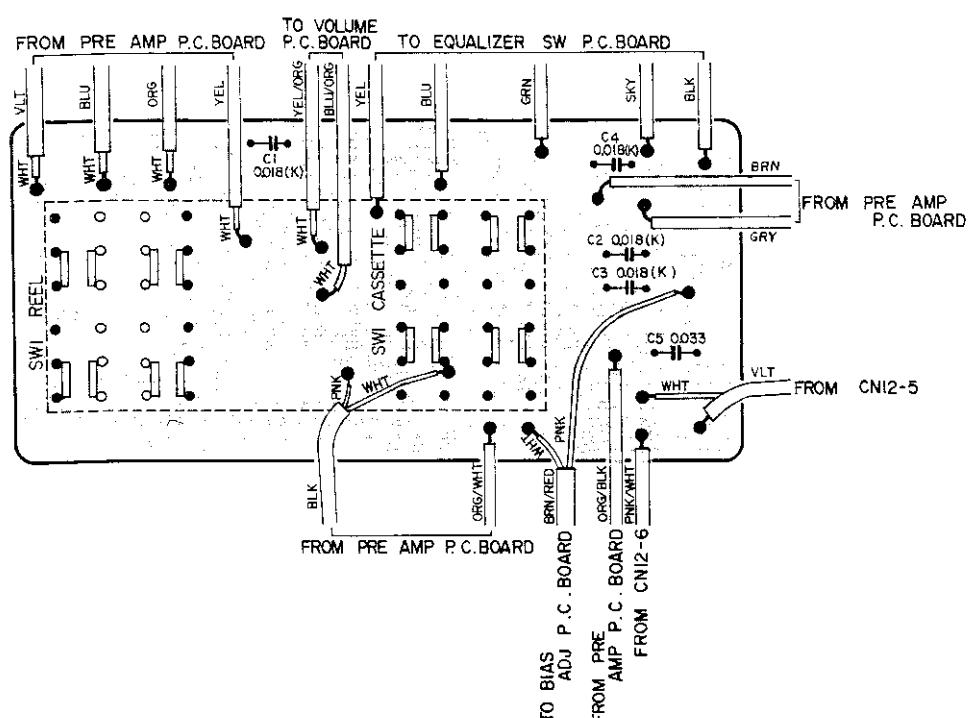
BIAS ADJUST P.C. BOARD B (RS-5016)



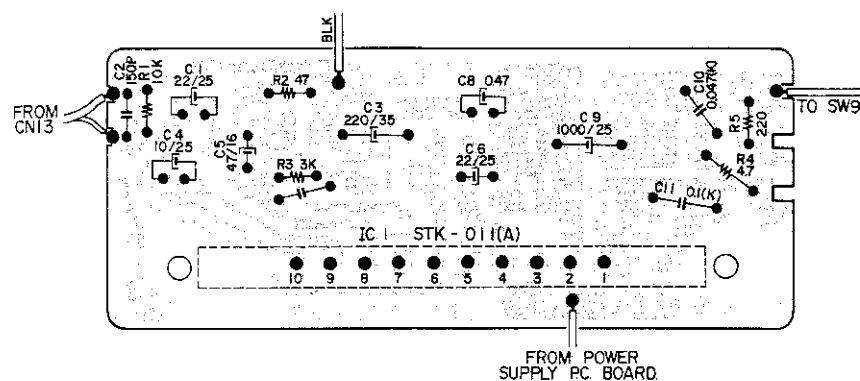
OSC. P.C. BOARD (MR-505)



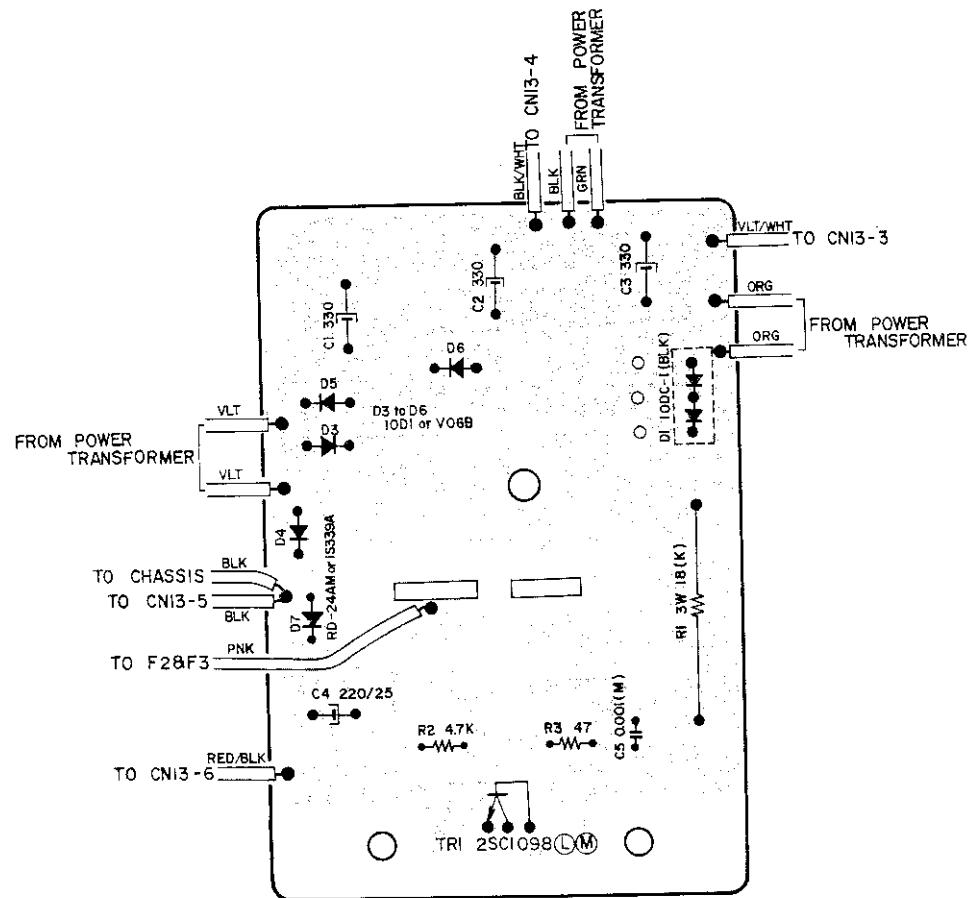
MODE SWITCH P.C. BOARD (RS-5017)



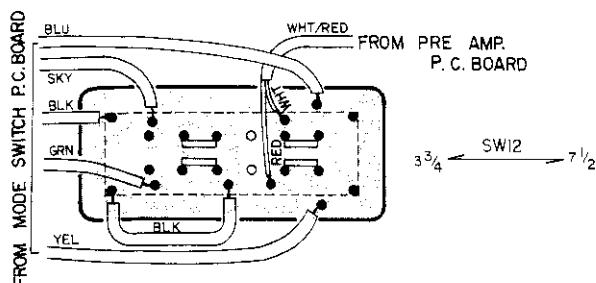
POWER AMP. P.C. BOARD (ED-515 3ED)



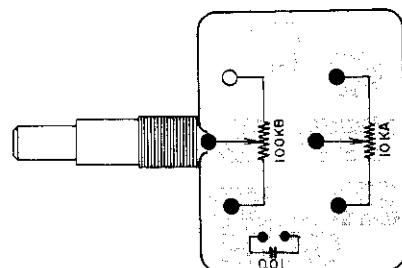
POWER SUPPLY P.C. BOARD (RS-5025)



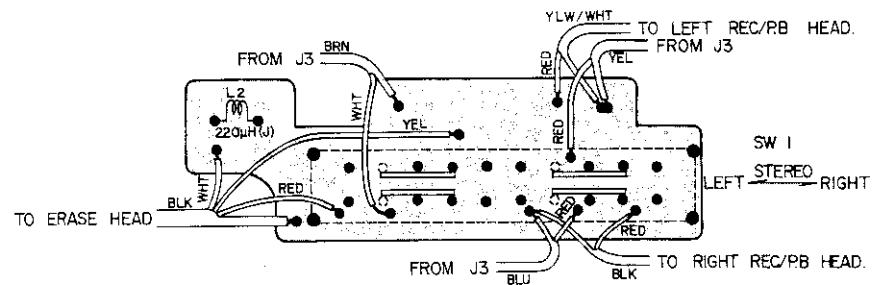
EQUALIZER SWITCH P.C. BOARD (RS-5010)



VOLUME & TONE P.C. BOARD (BS-5009 2ED)



TRACK SELECTOR P.C. BOARD (RS-0003)



SECTION 2

PARTS LIST

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FIG. 22	CASE BLOCK	51
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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.

12-115x 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)

↓ Quantity of particular part required.

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
FLYWHEEL BLOCK #13				
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. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts List 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.

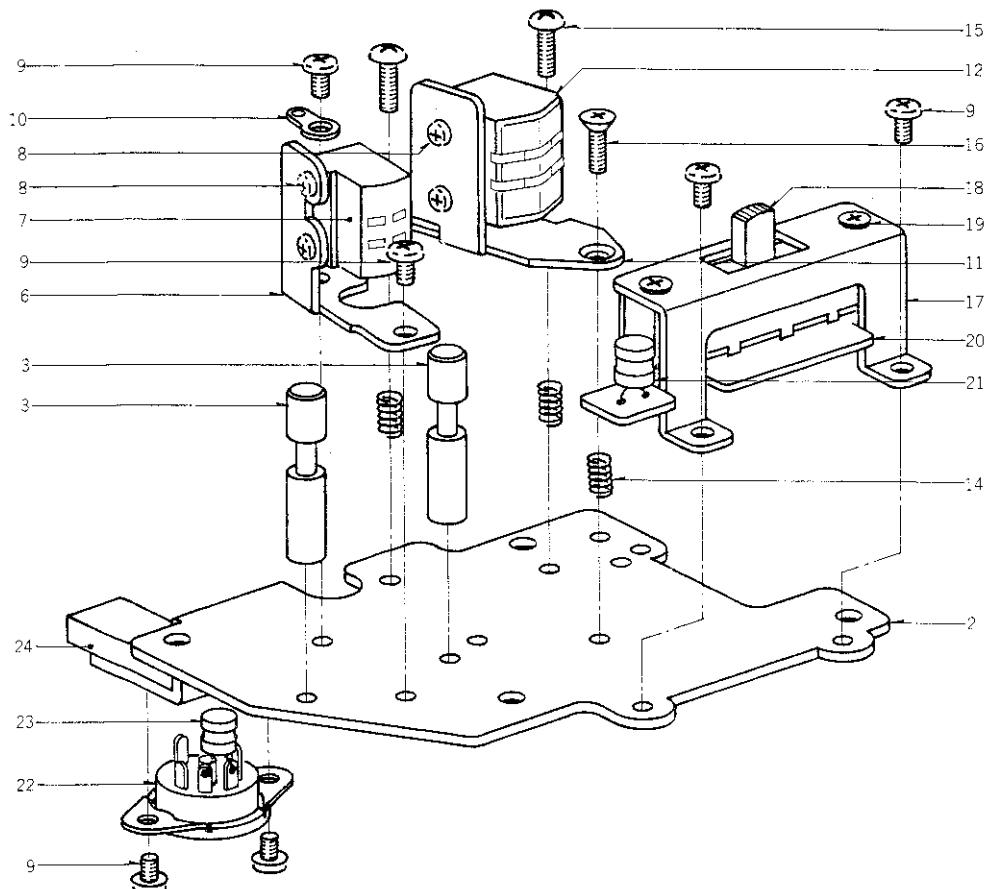
It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in item 3 above).

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

	1	2	Stopper Type	3
ELECTRICAL PARTS LIST TABLE 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.	Solid Resistor	Insulator Type		Metal Oxide Film Resistor
4	5	6	7	
Cement Resistor	Wire-Wound Resistor	Thermistor	Enamel Resistor	
1	2	3	4	
MP Capacitor (Tubler Type)	Plastic Capacitor	Mylar Capacitor	VFM (Hi-Q) Capacitor	
5	6	7	8	
Mylar Capacitor	Tantalum Capacitor	Oil Capacitor (Tubler Type)	Vertical Type	
9	10	11	12	
Electrolytic Capacitor (Tubler Type)	Vertical Type	Ceramic Capacitor	Styrol Capacitor	
13		VR		
L	TR			
Ferric Inductor				
CR	D			
Spark Quencher				
			Diode (Silicon, Zener, Germanium)	

FIG. 1 ILLUSTRATION OF HEAD BLOCK

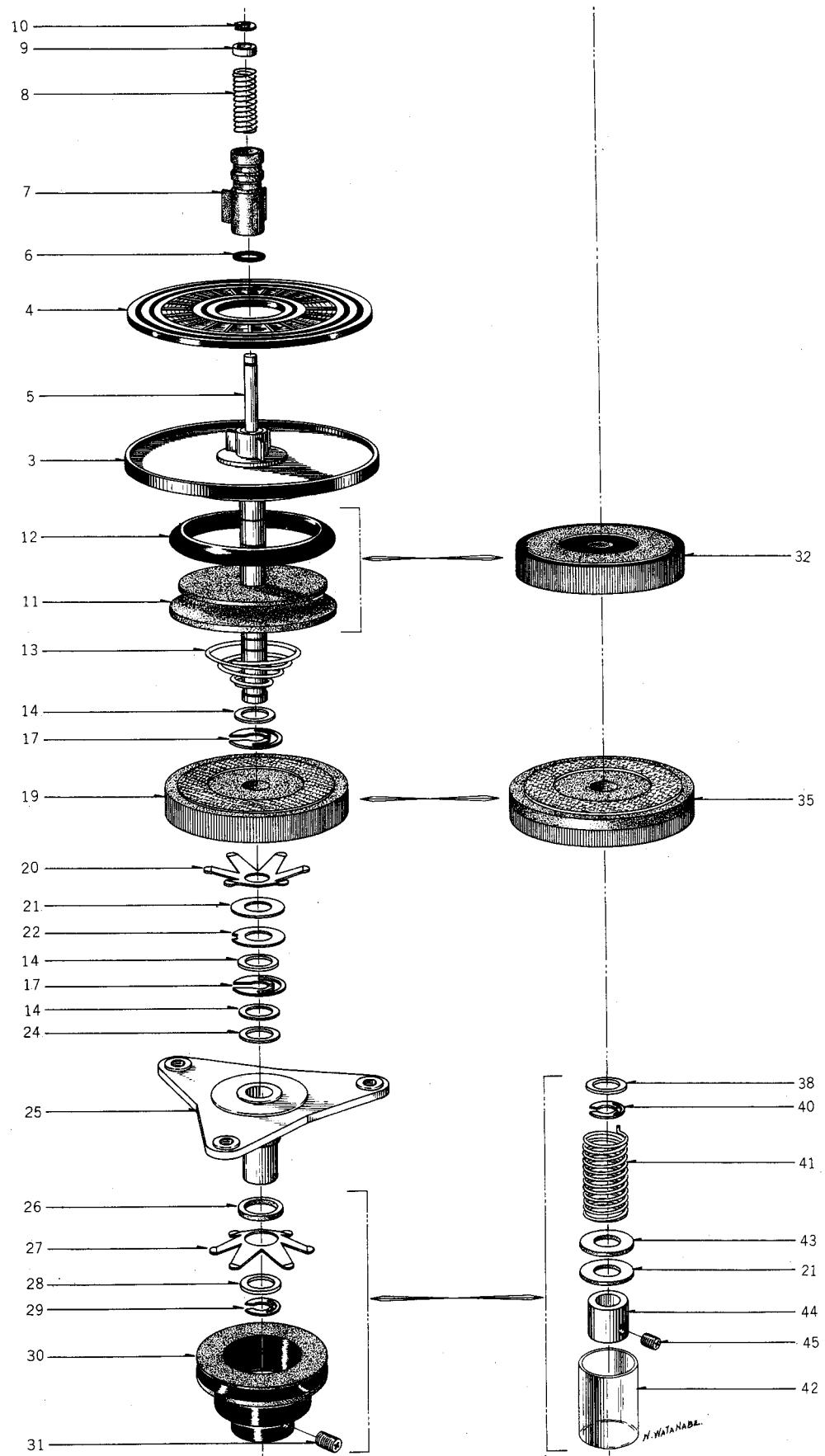


HEAD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
1-1x	BH478372	Head Block Comp.	RS	1	1-17	HZ473837	Switch Retaining Table	RS-0002	1
1-2	HZ473848	Head Base	RS-0001	1	1-18	ES471914	Slide Switch SL243B4	25-3-64	1
1-3	HZ328421	Tape Guide A (SX)	SX-3	3	1-19	ZW477887	Screw, countersunk head		
1-4x	ZW417025	Screw, binding head 3x8, w/washer		3	1-20	EA473850	Track Selector P.C. Board	RS-0003	1
1-5x	ZW273767	Earth Lug D3x20L		1	1-21	E0346500	Ferri Inductor FL7H		
1-6	HZ382680	Erase Head Base	RD-A5	1	1-22	EJ392567	M type Molded Socket	220μH(J)	1
1-7	HE384693	ERASE HEAD E4-200		1	1-23	E0243977	Ferri Inductor FL7H 1MH(J)	SB-5202	1
1-8	ZW477876	Screw, pan head 2x3		4	1-24	SZ461632	Rubber, Speaker	31-1-75	1
1-9	ZW323728	Screw, binding head 3x5		6	1-25x	MZ219576	Cord Retainer D	BS-6044	1
1-10	ZW273778	M3 Earth Lug		1	1-26x	ZW323728	Screw, binding head 3x5	M9-123	1
1-11	HZ473861	Rec./P.B. Head Mt. Base	RS-0004	1					
1-12	HP375131	REC./P.B. HEAD P4-150		1					
1-13x	HZ393974	1-MK Head Terminal Plate	RC-89	1					
1-14	ZG364656	Angle Adjust Spring C	RD-57	3					
1-15	ZW425114	Screw, round head 3x10		2					
1-16	ZW425103	Screw, countersunk head							
		3x10		1					

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

FIG. 2 ILLUSTRATION OF SUPPLY/TAKE-UP REEL TABLE BLOCK



SUPPLY/TAKE-UP REEL TABLE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
2-1x	BR364037	Supply Reel Table Block		1
		Comp.	RS.RCCSD	1
2-2x	BR364048	Take-up Reel Table Block		
		Comp.	RS.RCCSD	1
2-3	MT368684	Reel Table Disk A, w/shaft A	XR-101	2
2-4	MT317463	MR Reel Table Rubber	MR-250	2
2-5	MS255600	Reel Shaft B	XR-103	2
2-6	MT297663	3R 'O' Ring 2.9x1.65M	3R-139	2
2-7	MT255420	Reel Retainer	3R-102	2
2-8	ZG255633	Reel Spring	3R-109	2
2-9	MT255565	Reel Shaft Ring	XR-177	2
2-10	ZW270088	'E' Ring 1.9M	6-1-9	2
2-11	MR251460	Rewind Pulley	900-222	1
2-12	MT222366	Rubber Ring	900-234	1
2-13	ZG227553	Spring G2 (L)	900-230	1
2-14	ZW260021	Washer (SUP) D6.1x10x0.13t		6
2-15x	ZW260054	Washer (SUP) D6.1x10x0.25t		5
2-16x	ZW260065	Washer (SUP) D6.1x10x0.35t		7
2-17	MT255870	Reel Table Thrust Pin	900-237	4
2-18x	MT252101	Friction Cloth A	900-224	1
2-19	MR252066	Take-up Roller C	900-220	1
2-20	MT255971	Reel Table Spring Plate A	900-227	1
2-21	MT438647	Reel Torque Adjust Thrust 7 D6.2x13x0.5t	101022	2
2-22	ZW231693	Claw Thrust Washer	900-235	2
2-23x	MT438592	Reel Torque Adjust Thrust 2 D6.1x10x0.3t	101017	2
2-24	MT438603	Reel Torque Adjust Thrust 3 D6.1x10x0.5t	101018	2
2-25	MT292386	XR Reel Metal Mt. Part, w/metal B	XR-191	2
2-26	MZ437804	Flywheel Thrust A D7.9x13x1t	101024	2
2-27	MT255993	Reel Table Spring Plate C	M8-207	2
2-28	ZW260065	Washer (SUP) D6.1x10x0.35t		1
2-29	ZW270000	Retaining Pin D4	900-257	1
2-30	MR256094	Reel Table Pulley	900-239	1
2-31	ZW434171	Set Screw, hexagon socket 4x7 (cup)		1
2-32	MR252044	Take-up Roller A	900-218	1
2-33x	ZG227542	Spring G2 (R)	900-230	1
2-34x	MT255881	Reel Table Slip Plate A	MH-219	1
2-35	MR252077	Take-up Roller D (lower)	M8-204	1
2-36x	MT255982	Reel Table Spring Plate B	900-228	1
2-37x	MT438581	Reel Torque Adjust Thrust 5 D5.8x10.3x1t	101016	1
2-38	MT438614	Reel Torque Adjust Thrust 4 D6.1x10x0.8t	101019	1
2-39x	MT438625	Reel Torque Adjust Thrust 5 D6.1x10x1t	101020	1
2-40	ZW312693	'E' Ring 4M	6-1-4	1
2-41	ZG414077	Spring F4	CD-67	1
2-42	MT440313	Nylon Tube D12		19
2-43	MT438636	Reel Torque Adjust Thrust 6 D6.2x13x1t	101021	1
2-44	MT228598	Set Sleeve B	CD-66	1
2-45	ZW434160	Set Screw, hexagon socket 3x3 (cup)		1

MOTOR/BELT CHANGE LEVER BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
MOTOR BLOCK				
3-1x	BM478585	Motor Block Comp.	RS	1
3-2	MZ448222	24 Motor Cover, w/metal	24X-781	2
3-3	ZW427037	Screw, pan head 4x50, w/washer		4
3-4	MZ254316	24 Motor Prop B	24X-729	4
3-5	MZ254373	Motor Mt. Plate L	24X-733	1
3-6	MZ254305	Motor/R. Table	RC-112	1
3-7	MZ254160	Motor Prop A	24X-730	2
3-8	MZ254182	Motor Prop B	24X-731	1
3-9	ZW424056	Screw, pan head 4x10		4
3-10	ZW272395	M-7 Motor Prop Set Screw	24X-732	1
3-11	ZW427026	Screw, countersunk head 4x10		2
3-12x	MZ296144	24 Oil-cut	24X-735	2
3-13x	ZW222388	Rubber Washer	24X-739	1
3-14x	ZW259885	Washer (PBP) D5.1x10.3x0.1t		1
3-15	MR477472	Motor Pulley (RS), w/pin	RS-7001	1
3-16	MR257984	Knurling Pulley, w/retainer B	24X-740	1
3-17	ZW413921	Screw, oval countersunk head 3x15		1
3-18x	MZ292364	XR Motor Shield Plate B	XR-705	1
3-19	MZ316326	Motor Out-side Shield (large)	A 10R-714	1
			B 10R-716	1
3-20x	MZ337724	Motor Out-side Shield (large)	MH-636	1
3-21	MZ256882	Motor Fan D, w/boss		1
3-22	ZW476987	Set Screw, hexagon socket 5x4		1
3-23	EC411682	MP/C. 2+0.8μF 250WV AC (Lug type Uni/D.)	24-9-53	1
3-24x	EC330401	MP/C. 2+1μF 250WV AC (Lug type Uni/D.) (AAL)	24-9-38	1
3-25	ZW323728	Screw, binding head 3x5		2

BELT CHANGE LEVER BLOCK

3-26x	BL204445	Belt Change Lever Block	Comp. B	1
3-27	ML217462	Belt Change Lever B (small), w/roller B	AT-25	1
3-28	MZ248354	Belt Guide Stop, w/metal	4TR-221	1
3-29	ZG217337	Belt Return Spring	4TR-224	1
3-30	ZW413201	Screw, pan head 4x8		1
3-31x	ZG217394	Belt Change Spring B	MH-125	1
3-32x	ZW260054	Washer (SUP) D6.1x10x0.25t		1
3-33x	ZW290283	'U' Ring 2.85M	6-1-1	1

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

FIG. 3 ILLUSTRATION OF MOTOR/BELT CHANGE LEVER BLOCK

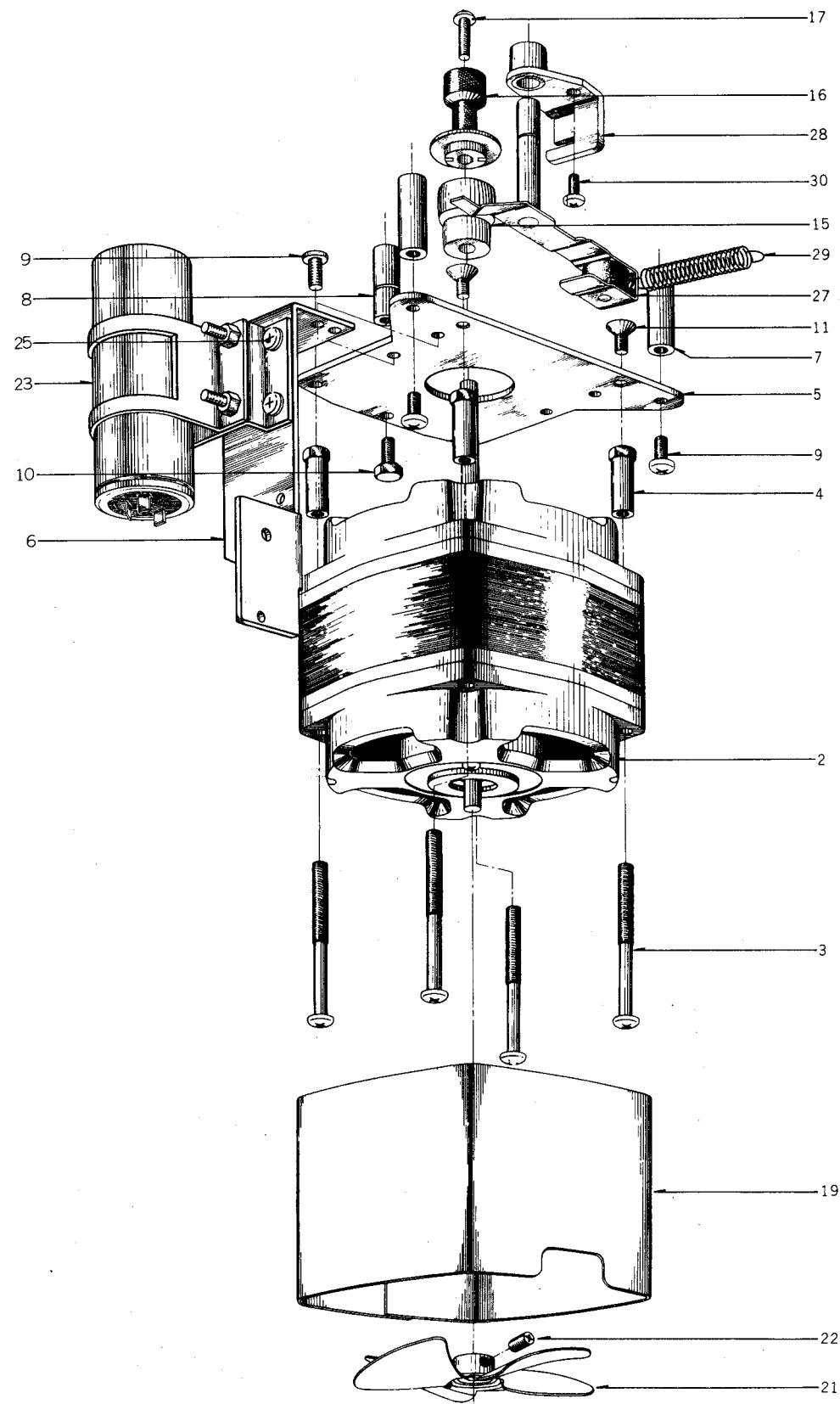
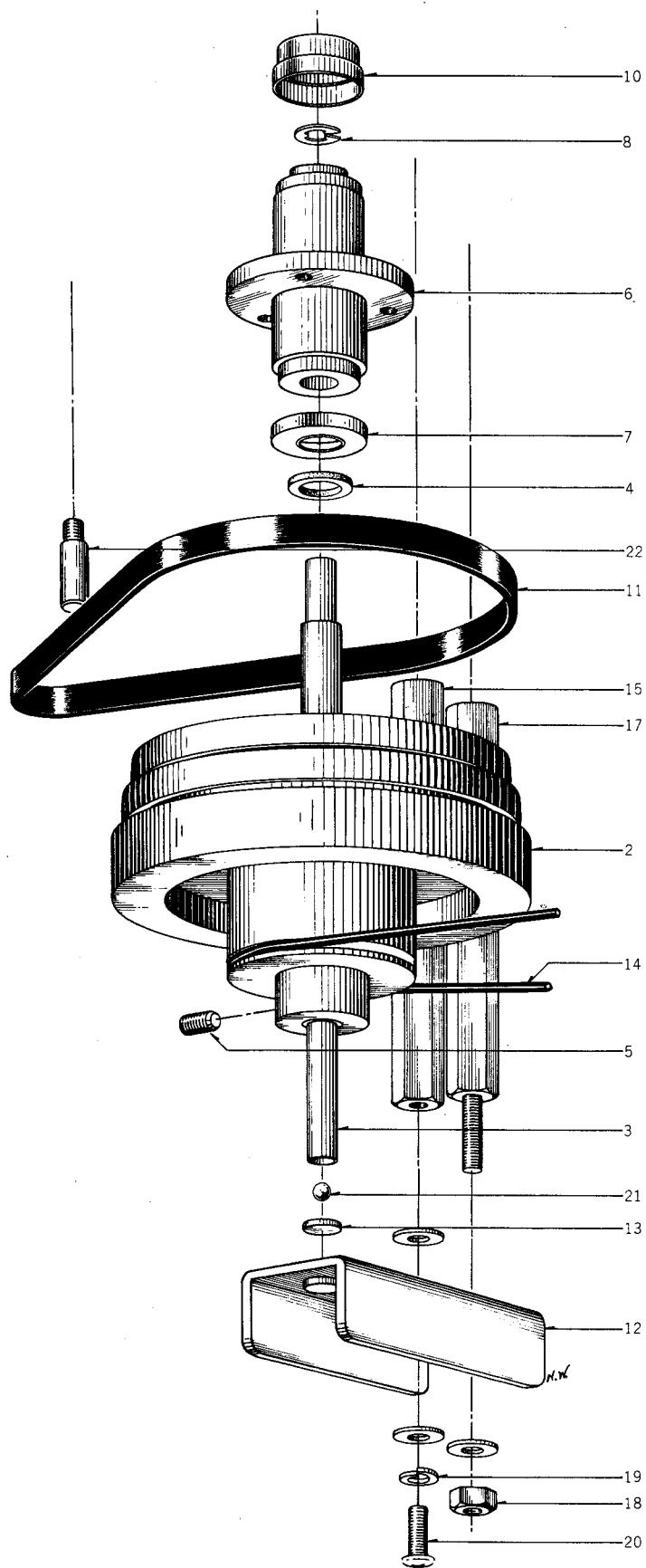


FIG. 4 ILLUSTRATION OF FLYWHEEL BLOCK



FLYWHEEL BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
4-1x	BF478618	Flywheel Block Comp.	RS	1
4-2	MZ369854	RCC Flywheel	RCC-201	1
4-3	MS471903	RS Main Shaft	RS-2002	1
4-4	MZ437804	Flywheel Thrust A D7.9x13x1t	101024	1
4-5	ZW373577	Set Screw, hexagon socket 5x6 (flat)		2
4-6	MZ275725	RC Main Case Comp.	RC-101	1
4-7	MZ446635	Thrust Cap, Main Metal B2	LF-2006	1
4-8	ZW244710	Flywheel Fixing Pin	900-250	1
4-9x	MZ244113	Felt D12.5x16x2t		1
4-10	MZ253113	Main Metal Cap B	MH-208	1
4-11	MB256590	Double Face Flat Belt D110	100912	1
4-12	MZ244517	Flywheel Support Plate	RC-108	1
4-13	ZW373331	Washer, without Hole D10.3x1t		1
4-14	MB377256	Flywheel Belt B	RCC-204	1
4-15	MZ471778	Flywheel Prop 1	RS-1008	1
4-16x	ZW479463	Screw, truss head 4x10		2
4-17	MZ471780	Flywheel Prop 2	RS-1009	1
4-18	ZW369494	Flange Nut M4		2
4-19	ZW273914	M4 Spring Washer		1
4-20	ZW413201	Screw, pan head 4x8		1
4-21	MV269965	Steel Ball D4		1
4-22	MZ248343	Belt Guide Pin	4TR-109	1
4-23x	ZW413188	M4 Nut		1

SWITCH BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	
5-1x	BS478596	Switch Block Comp.	RS	1	
5-2	MZ316901	Switch Table A-2 (SX), w/props	MR-201	1	
5-3	ES316934	RWD Shaft (Y type)	25-8-5	1	
5-4	ES369865	RCC Y type RWD Shaft	RCC-202	1	
5-5	MZ316945	Nut Plate	MR-245	2	
5-6	ZW202138	Screw, binding head 3x6, w/washer		4	
5-7	MZ316956	Cam A-3	MR-242	1	
5-8	ZW413201	Screw, pan head 4x8		4	
5-9x	ZW260133	Washer (Fiber) D6.1x10x1t		3	
5-10	MZ327341	Cam Trap Plate B	SX-201	1	
5-11	ZG227586	Spring K	900-214	1	
5-12	MZ327352	Cam C-2	SX-202	1	
5-13	ZW201778	Screw, pan head 4x8		1	
5-14x	ZW434215	Washer (Nylon) D6.1x10.3x0.3t		1	
5-15x	ZW434193	Washer (Nylon) D6.1x10.3x0.5t		1	
5-16	MV270066	Steel Ball D8		1	
5-17	MZ217293	Cam B-2, without Tap	1630-201	1	
5-18	ZW416687	Screw, binding head 4x8		1	
5-19	ML257128	Lever I, w/shaft B	900-209	1	
5-20	MZ217203	Cam Roller A	900-153	1	
5-21	ZW290283	'U' Ring 2.85M	6-1-1	2	
5-22	ZW217877	Pause Lever Set Screw	900-136	1	
5-23	ZW260166	Washer (Nylon) D6.2x13x0.125t		2	
5-24x	ZW273892	M4 Toothed Lock Washer		1	
5-25	ZW273960	M4 Nut		1	
5-26	MZ225720	Switch Table B-2	M9-308	1	
5-27	MZ358581	Rec. Lever Prop	M9-303	1	
5-28	MZ317068	Amp. Switch Cam B	MR-243	1	
5-29	MZ217686	Pause Lever Cushion	LC-102	1	
5-30x	BL478607	Switch Lever Block Comp.	RS	1	
5-31	ML226080	Switch Lever A, w/shaft B	900-255	1	
5-32	MZ217203	Cam Roller A	900-153	1	
5-33x	ZW290283	'U' Ring 2.85M	6-1-1	1	
5-34	ML471892	Adjust Lever B	RS-2001	1	
5-35	ZW437545	Hexagon Bolt 4x7, w/washer		2	
5-36	ZG227564	Spring H		900-120	1
5-37	EG227485	Spring E		900-119	1

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

FIG. 5 ILLUSTRATION OF SWITCH BLOCK

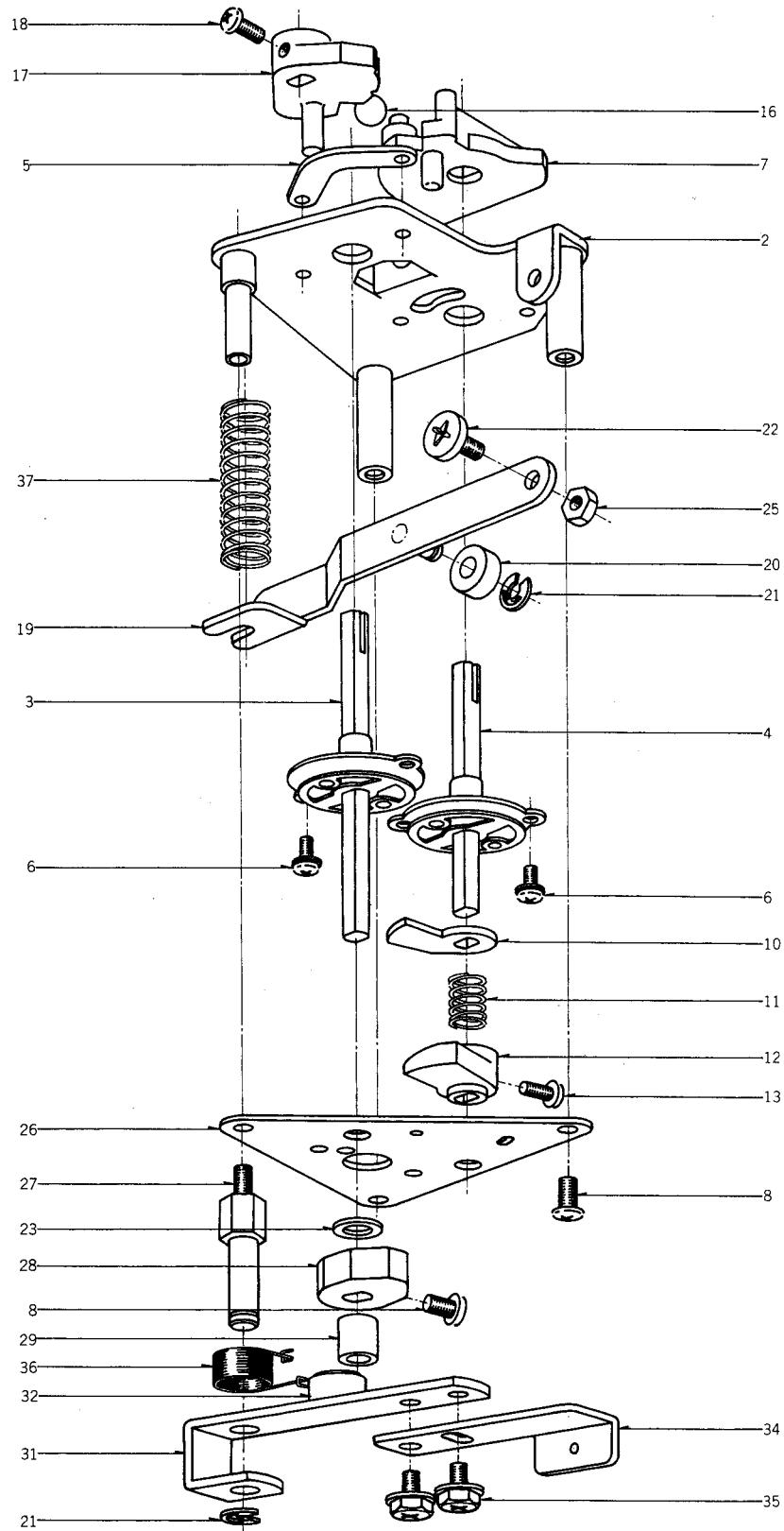


FIG. 6 ILLUSTRATION OF MECHANISM ASSEMBLY BLOCK

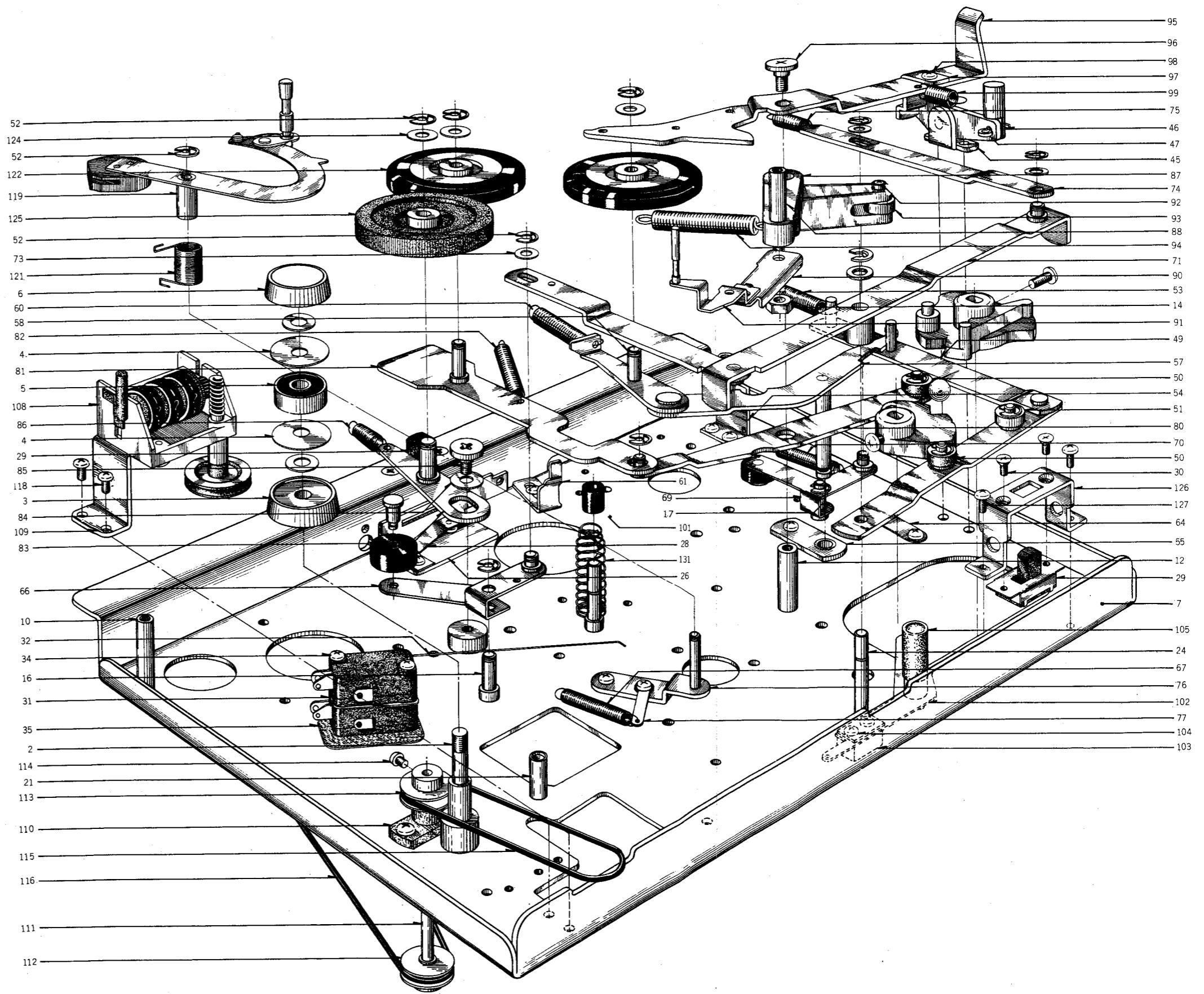
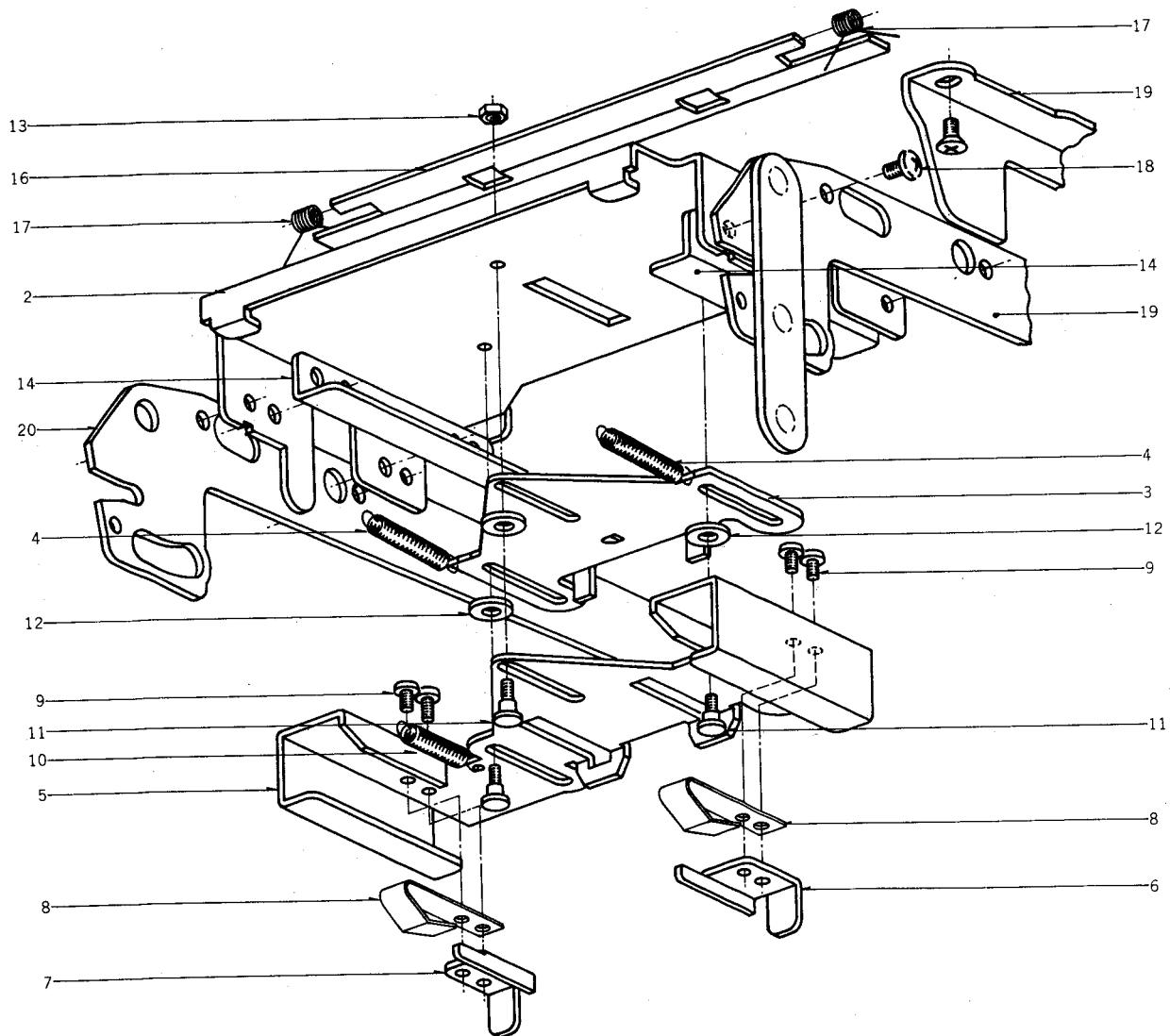


FIG. 8 ILLUSTRATION OF CASSETTE CASE BLOCK

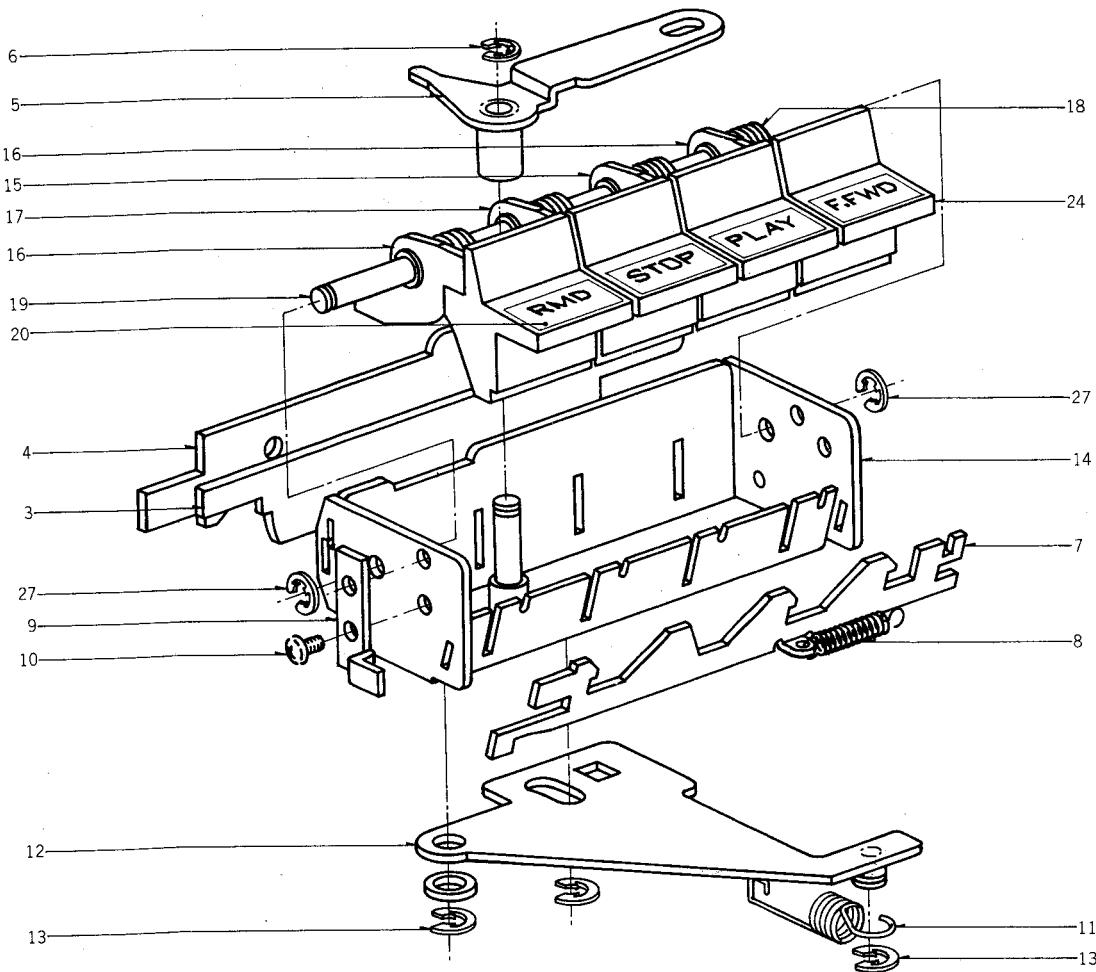


CASSETTE CASE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
8-1x	BZ363960	Cassette Case Block Comp.	RS,RCC	1
8-2	UC366737	Cassette Case Cover	RCC-1206	1
8-3	UC366748	Slider D	RCC-1207	1
8-4	ZG451574	Slider Pull Spring	RCC-1207B	2
8-5	UC366772	Slider C	RCC-1210	1
8-6	UC493558	Retaining Plate A	RS-1225	1
8-7	UC493560	Retaining Plate B	RS-1225	1
8-8	ZG366783	Retaining Spring	RCC-1211	2
8-9	ZW417273	Screw, binding head 2.3x4	RCC-1212	4
8-10	ZG366794	Cassette Return Spring	RCC-1212	2
8-11	ZW366750	Slider Graduated Screw	RCC-1208	3
8-12	ZW465254	Slide Washer D3.1x8x1t	RCC-1427	3
8-13	ZW273688	M2.3 Nut		3
8-14	UC494818	Slider Guide	RS-1228	2
8-15x	ZW417137	Screw, binding head 3x4		4
8-16	UC366895	Cassette Lock Lever	RCC-1219	1
8-17	ZG366906	Cassette Lock Spring	RCC-1220	2
8-18	ZW323728	Screw, binding head 3x5		4
8-19	UC366816	Main Lever A, w/lever D, bracket B	RCC-1214	1
8-20	UC364443	Main Lever B, w/bracket A	RCC-1214	1

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

FIG. 9 ILLUSTRATION OF KEYBOARD BLOCK

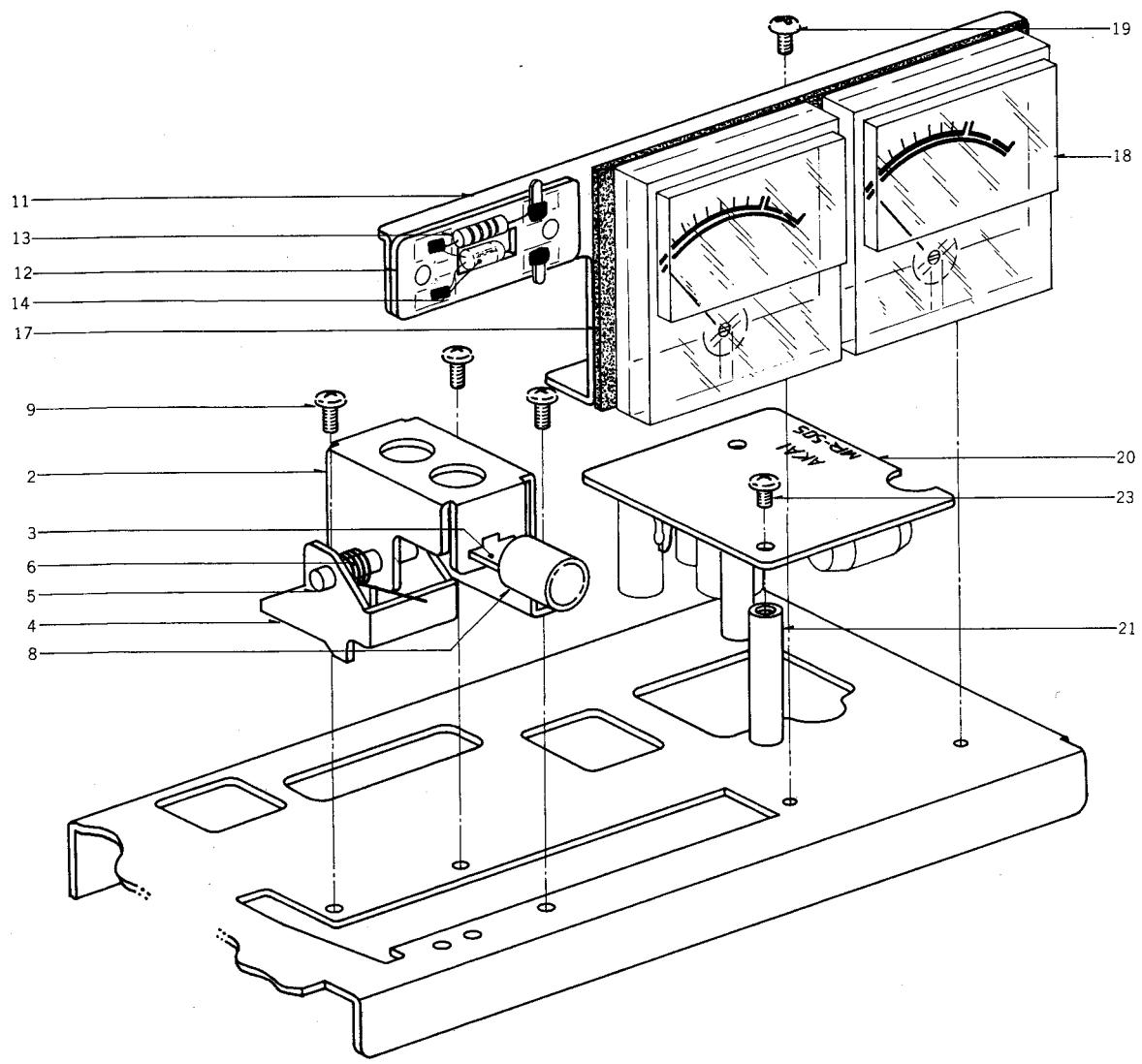


KEYBOARD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Maker No.	Q'ty	
9-1x	BZ478552	Keyboard Block Comp.	RS	1	9-2x	ES477505	Keyboard Switch Comp.	RS	25-5-53	1
9-2x	ES477505	Keyboard Switch Comp.	RS	1	9-14	RS-K01	Keyboard Holder, w/shaft, pins	ME1-0104	1	
9-3	UC367468	Keyboard Lever B	RCC-1275	1	9-15	RS-K05	Keyboard Lock Lever B, w/metal	ME2-0110	1	
9-4	UC367470	Keyboard Lever C	RCC-1276	1	9-16	RS-K06	Keyboard Lock Lever A, w/metal	ME2-0120	2	
9-5	UC367481	F. FWD Lever, w/metal	RCC-1277	1	9-17	RS-K07	Keyboard Lock Lever D, w/metal	ME2-0130	1	
9-6	ZW290283	'U' Ring 2.85M	6-1-1	1	9-18	RS-K08	Keyboard RWD Spring C	ME2-2100	4	
9-7	UC367558	Keyboard Lever A	RCC-1281	1	9-19	RS-K09	Keyboard Shaft	ME2-4100	1	
9-8	ZG367110	SST Spring	RCC-1240	1	9-20	RS-K11	Keyboard Name Plate A (RWD)	ME2-0510	1	
9-9	UC477516	Keyboard Stopper	RS-1133	1	9-21x	RS-K12	Keyboard Name Plate B (Stop)	ME2-0520	1	
9-10	ZW417273	Screw, binding head 2.3x4		2	9-22x	RS-K13	Keyboard Name Plate C (Play)	ME2-0530	1	
9-11	ZG493514	Operation Lever Spring	RS-1227	1	9-23x	RS-K14	Keyboard Name Plate D (F.FWD)	ME2-0540	1	
9-12	UC495595	Operation Lever A, w/pin	RS-1226	1	9-24	RS-K15	Cassette Knob	ME2-6100	4	
9-13	ZW290283	'U' Ring 2.85M	6-1-1	3	9-25x	RS-K16	Keyboard Stop	ME4-0100	1	
					9-26x	RS-K17	Graduated Screw	ME9-4300	1	
					9-27	RS-K18	'E' Ring	ME9-0600	2	

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

FIG. 10 ILLUSTRATION OF CASSETTE REC. BUTTON/METER BASE BLOCK

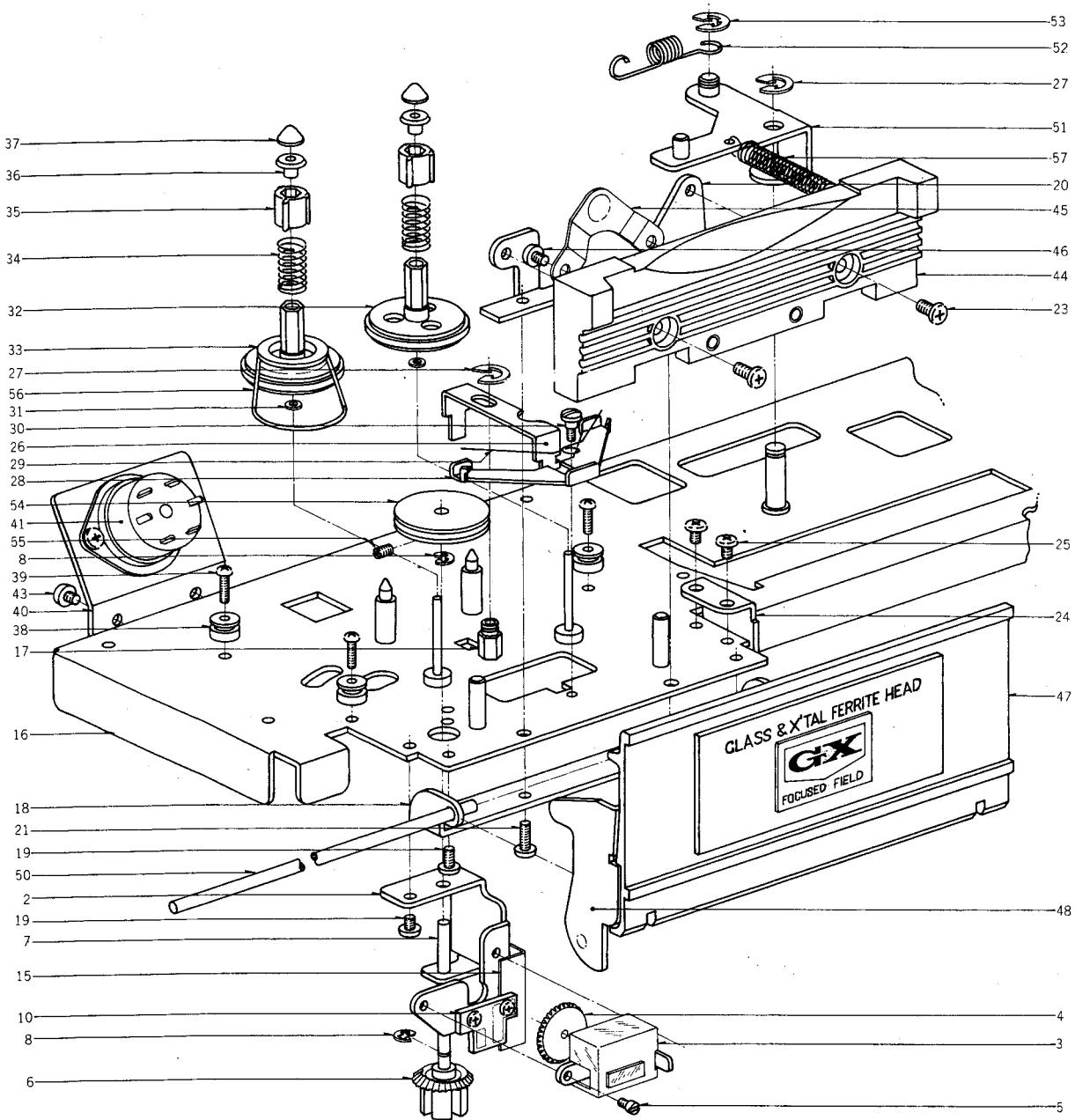


CASSETTE REC. BUTTON/METER BASE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
CASSETTE REC. BUTTON BLOCK									
10-1x	BZ478394	Cassette Rec. Button Block Comp.	RS	1	10-10x	BZ478416	Meter Base Block Comp.	RS	1
10-2	UC471284	Button Holder	RS-1201	1	10-11	UC471060	Meter Base	RS-1102	1
10-3	UC471295	Button Lever	RS-1202	1	10-12	EA479384	Lamp Board	RS-5014	2
10-4	UC471306	Safety Lever	RS-1203	1	10-13	ER347130	Solid/R. RC1/2W 82(K)	35-5-4	1
10-5	UC471317	Holder Shaft	RS-1204	1	10-14	EL295312	No. 2 Lamp 8V 0.2A	28-2-8	1
10-6	ZG471330	Cassette Rec. Spring	RS-1215	1	10-15x	ZW484738	Insulated Washer	RS-5049	2
10-7x	ZW290283	'U' Ring 2.85M	6-1-1	2	10-16x	EL390576	Pilot Lamp RM6-24V-50MA	28-2-6	1
10-8	SB471328	Cassette Rec. Button	RS-1205	1	10-17	UC471420	VU Meter Cushion	RS-1216	1
10-9									
	ZW323728	Screw, binding head 3x5		3	10-18	EM471273	VU Meter D-1914R	46-1-55	2
					10-19	ZW447772	Tapping Screw 3x6 (BR)		2
					10-20	BA478574	OSC. P.C. Board Comp. (MR-505)		1
					10-21	UC366210	P.C. Board Prop	RCC-1102	2
					10-22x	ZW413223	Screw, binding head 3x5, w/washer		1
					10-23	ZW323728	Screw, binding head 3x5		1
					10-24x	ZW413741	Screw, binding head 3x8		2

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

FIG. 11 ILLUSTRATION OF CASSETTE ASSEMBLY BLOCK I

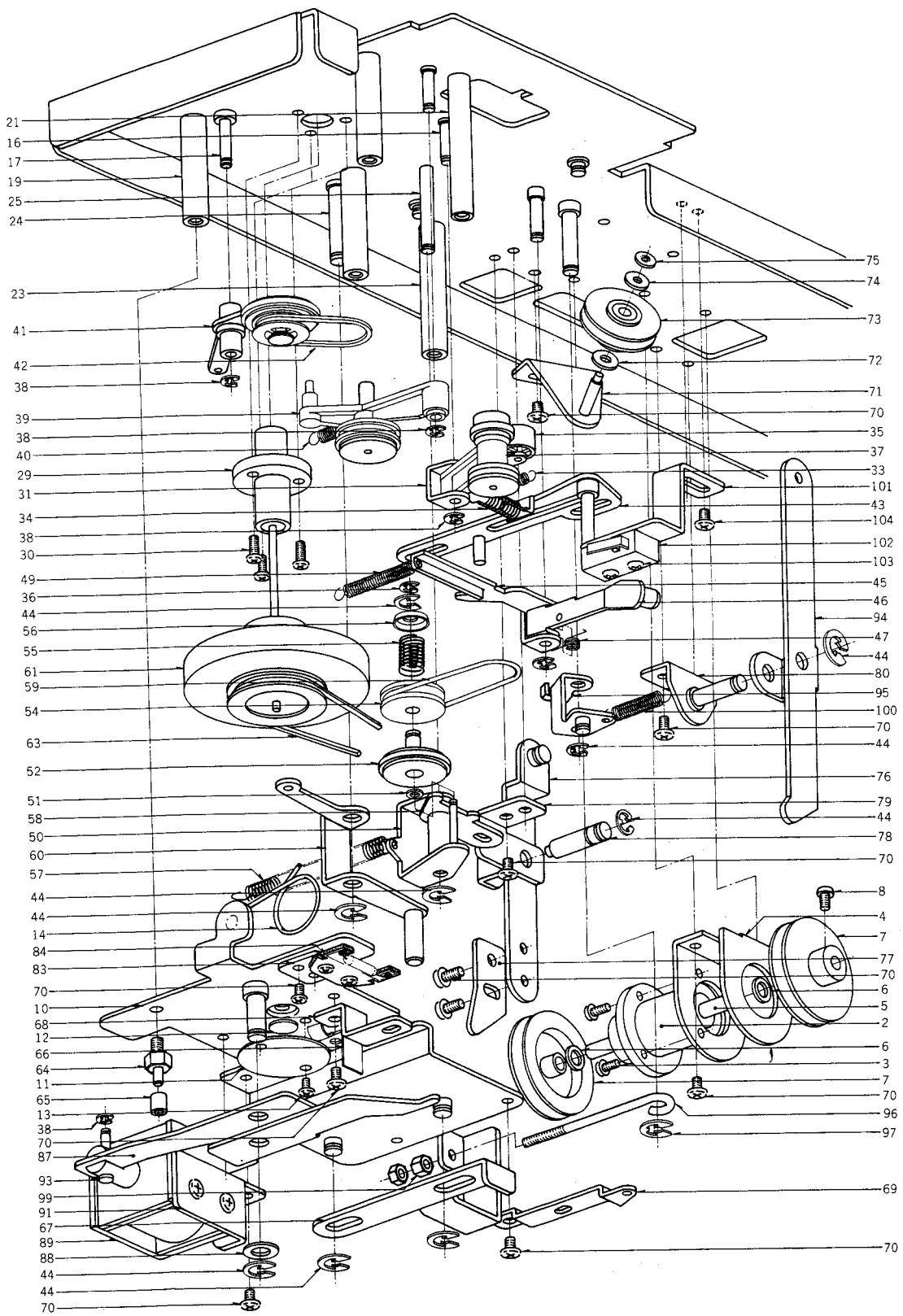


CASSETTE ASSEMBLY BLOCK I

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
CASSETTE COUNTER BASE BLOCK				
11-1x	BZ478405	Cassette Counter Base Block	Comp.	1
11-2	UC471374	Counter Mt. Plate	RS-1207	1
11-3	MC471363	Counter KMP-3813	9-1-22	1
11-4	UC471385	Counter Gear 2	RS-1210	1
11-5	ZW486268	Counter Set Screw	RS-1137	2
11-6	UC471396	Counter Gear 1	RS-1212	1
11-7	MS471407	Counter Shaft	RS-1208	1
11-8	ZW270088	'E' Ring 1.9M	6-1-9	2
11-9x	ZW484762	Washer (Teflon)	D3.1x5x0.2t	1
11-10	EA471418	CDS P.C. Board	RS-1013	1
11-11x	ET368921	CDS P-320	45-9-1	1
11-12x	UC472263	CDS Cushion	RS-1130	1
11-13x	ZW417273	Screw, binding head 2.3x4		2
11-14x	ZW269785	M2.3 Toothing Lock Washer		1
11-15	UC488902	Lamp Mask	RS-1139	1
CASSETTE ASSEMBLY BLOCK				
11-16	HZ471047	Cassette Frame, w/shafts	RS-1101	1
11-17	VM370023	Brake Lever Prop	RCC-1308	1
11-18	UC370080	Cover Bearing	RCC-1311	1
11-19	ZW323728	Screw, binding head 3x5		4
11-20	UC370091	Decorative Cover Angle	RCC-1312	1
11-21	ZW417025	Screw, binding head 3x8, w/washer		2
11-22x	UC366210	P.C. Board Prop	RCC-1102	2
11-23	ZW413741	Screw, binding head 3x8		4
11-24	UC370181	Keyboard Holder Retaining Plate	RCC-1321	1
11-25	ZW323728	Screw, binding head 3x5		2
11-26	UC370236	Brake Lever A	RCC-1326	1
11-27	ZW290283	'U' Ring 2.85M	6-1-1	2
11-28	UC370247	Brake Lever	RCC-1327	1
11-29	ZG370258	Brake Spring	RCC-1328	1
11-30	ZW344812	2.3 Graduated Screw	BT-126	1
11-31	ZW364342	Washer (Polyslider)	D1.7x3.2x0.25t	1
11-32	UC370315	C type Reel Table A	RCC-1340	1
11-33	UC370337	C type Reel Table B	RCC-1342	1
11-34	ZG370350	Reel Table Spring	RCC-1344	2
11-35	ZG370361	C type Reel Table Blade	RCC-1345	2
11-36	UC370348	C type Reel Table Bush	RCC-1343	2
11-37	UC370372	C type Reel Shaft Cap	RCC-1346	2
11-38	UC488070	Head Base Guide	RX-1138	3
11-39	ZW417306	Screw, round head 2.3x8		3
11-40	UC365567	Connector Base A	RCC-1360	1
11-41	EJ365703	6P Socket	31-1-67	1
11-42x	EJ369077	Lug Plate VBL1	33-4-7	1
11-43	ZW447840	Tapping Screw #2 3x8(BR)		2
11-44	UC366388	Decorative Cover	RCC-1120	1
11-45	ZG366401	Cassette Retaining Spring	RCC-1122	1
11-46	ZW323728	Screw, binding head 3x5		2
11-47	UC471071	Cassette Cover, w/rivet, pin	RS-1213	1
11-48	UC488733	Cam Angle (RS), w/pin	RS-1224	1
11-49x	ZW464747	Screw, countersunk head	3x6	2
			2.6x3 (cup)	1
11-50	MS366480	Cassette Cover Shaft	RCC-1129	1
11-51	UC471082	Rec. Lever 2, w/pins	RS-1109	1
11-52	ZG471126	Adjust Spring 1	RS-1110	1
11-53	ZW270101	'E' Ring 3M	6-1-9	2
11-54	MR471150	Counter Pulley 1	RS-1211	1
11-55	ZW499454	Set Screw, hexagon socket		1
11-56	MB471161	Counter Belt	RS-1122	1
11-57	ZG217337	Belt Return Spring	4TR-224	1

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

FIG. 12 ILLUSTRATION OF CASSETTE ASSEMBLY BLOCK II

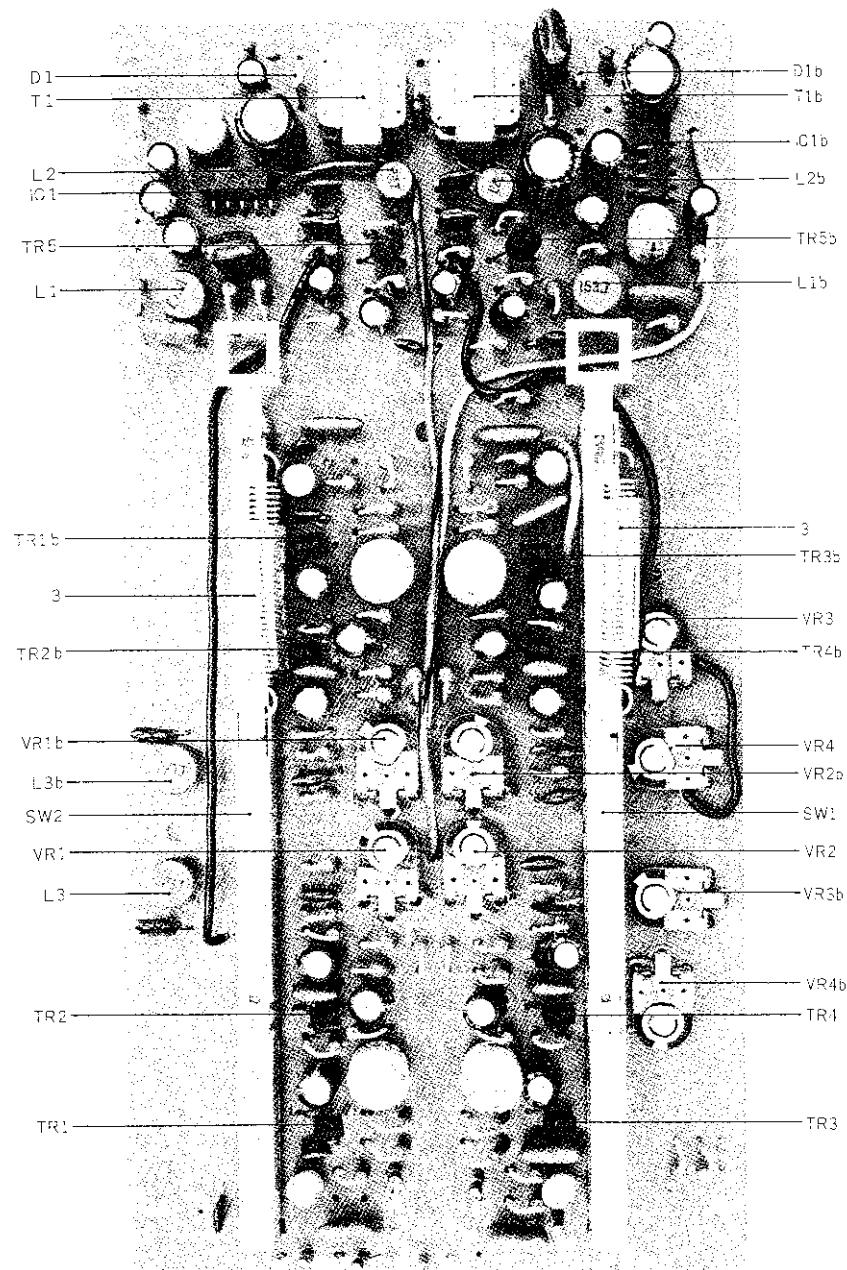


CASSETTE ASSEMBLY BLOCK II

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
MIDDLE PULLEY BLOCK									
12-1x	BZ478563	Middle Pulley Block Comp.	RS	1	12-62x	ZW259334	Washer (Polyslider) D2.05x3.5x0.25t		1
12-2	UC367312	Pulley Metal Case, w/metal	RCC-1260	1	12-63	MB366287	Flywheel Belt A	RCC-1110	1
12-3	ZW464692	Screw, binding head 2.3x6		3	12-64	UC476820	Stopper Pin	RS-1131	1
12-4	UC472195	RS Metal Case Holder	RS-1125	1	12-65	UC486044	Stopper Pin Tube	RS-1223	1
12-5	UC367356	Pulley Shaft	RCC-1264	1	12-66	SZ226282	Cord Holder, Standard	900-180	1
12-6	ZW259738	Washer (Polyslider) D4.1x7x0.25t		2	12-67	UC471352	Operation Lever	RS-1206	1
12-7	UC367345	Middle Pulley	RCC-1263	2	12-68	UC366491	Keyboard Supporting Plate A	RCC-1130	1
12-8	ZW461935	Screw, round head 2.6x4		4	12-69	UC366502	Keyboard Supporting Plate B	RCC-1131	1
FLYWHEEL SUPPORT PLATE BLOCK									
12-9x	BZ478541	Flywheel Support Plate Block Comp.	RS	1	12-70	ZW323728	Screw, binding head 3x5		4
12-10	MZ477494	Flywheel Support Plate B, w/shaft	RCC-1291 900-721	1	12-71	UC366232	Middle Pulley Bracket, w/shaft	RCC-1104	1
12-11	UC254250	Motor Bottom Plate		1	12-72	ZW429276	Washer (Rubber) D3.1x8x0.5t		1
12-12	ZW235776	Nylon Plate D8		1	12-73	UC366243	Flywheel Middle Pulley, w/metal	RCC-1105	1
12-13	ZW427048	Screw, round head 3x3		2	12-74	ZW377414	Washer (SUP) D2.1x7x0.5t		1
12-14	ZG451552	Reject Spring	RCC-1145	1	12-75	ZW377425	Push Nut CS 2.0		1
12-15x	ZW270101	'E' Ring 3M	6-1-9	1	12-76	UC471104	Rec. Lever 1, w/pin	RS-1108	1
CASSETTE ASSEMBLY BLOCK									
12-16	MS370034	Idler Lever Shaft A	RCC-1309	1	12-77	UC471115	Adjust Lever	RS-1107	1
12-17	UC373353	Idler Arm Shaft	RCC-1133	1	12-78	MS477922	Angle Shaft	RS-1127	1
12-18x	ZW273756	M3 Nut		1	12-79	UC477933	Lever Angle	RS-1124	1
12-19	UC370102	Flywheel Prop A	RCC-1313	3	12-80	UC471137	Lever Mt. Plate, w/prop	RS-1103	1
12-20x	ZW413741	Screw, binding head 3x8		7	12-81x	EJ477944	9P Mate-N-Lock Comp.	RS-1129	1
12-21	UC370113	Keyboard Holder Prop	RCC-1314	1	12-82x	MB229138	Side Wire Band	2-33-1	2
12-22x	ZW414033	Screw, countersunk head 3x8		1	12-83	UC471172	CDS Lamp Table	RS-1117	1
12-23	UC370124	Flywheel Prop B	RCC-1315	1	12-84	EA488867	Stop Lamp P.C. Board (RS)	RS-1140	1
12-24	UC370135	Operation Lever Shaft	RCC-1316	1	12-85x	EL295312	No. 2 Lamp 8V 0.2A	28-2-8	1
12-25	UC370146	Idler Lever Shaft	RCC-1317	1	12-86x	ZW417137	Screw, binding head 3x4		2
12-26x	ZW273688	M2.3 Nut		1	12-87	UC471262	Keyboard Return Lever	RS-1126	1
12-27x	ZW417227	Screw, binding head 2.3x5		1	12-88	ZW399137	Washer (PBP) D5.1x10.3x0.25t		1
12-28x	ZW273633	M2.3 Earth Lug		1	12-89	EP471183	Plunger Solenoid	44-1-46	1
12-29	UC370192	Flywheel Metal Case, w/metal	RCC-1322	1	12-90x	ED224526	Silicon Diode 10D1	45-2-11	1
12-30	ZW464692	Screw, binding head 2.3x6		3	12-91	UC471194	Plunger Plate	RS-1118	1
12-31	UC370260	Idler Lever C, w/shaft	C	1	12-92x	EJ373623	Pin Contact 61116-1	52-1-1	1
12-32x	ZW474581	Washer (Teflon) D2.05x3.5x0.2t		2	12-93	ZW257477	Connecting Pin	RD-211	1
12-33	ZG365422	Idler Lever B Spring	RCC-1394	1	12-94	UC471205	Rec. Lever 5	RS-1105	1
12-34	ZG451530	Take-up Spring	RCC-1144	1	12-95	UC471216	Stop Tip, w/pin	RS-1112	1
12-35	UC370282	Idler C	RCC-1337	1	12-96	UC471238	Lock Rod	RS-1113	1
12-36	ZW356657	'E' Ring 1.5M	6-1-9	2	12-97	ZW270101	'E' Ring 3M	6-1-9	1
12-37	UC368932	Idler Lever B Comp.	2-20-6	1	12-98x	ZW485728	M2.3 Nut		1
12-38	ZW270088	'E' Ring 1.9M	6-1-9	5	12-99	ZW415956	Lock Nut	CG-1036	1
12-39	UC368910	Idler Lever A Comp.	2-20-5	1	12-100	ZG232121	Tension Lever Spring	MH-143	1
12-40	ZG365433	Idler Tension Spring	RCC-1365	1	12-101	MZ471240	Micro Switch Table	RS-1120	1
12-41	BZ373972	Take-up Arm Comp.	2-20-7	1	12-102	ES477966	Micro Switch SS-5L	25-1-23	1
12-42	MB373386	Idler Arm Belt	RCC-1396	1	12-103	ZW202230	Screw, round head 2.3x10		2
12-43	UC370427	Take-up Lever, w/pin	RCC-1351	1	12-104	ZW417137	Screw, binding head 3x4		2
12-44	ZW290283	'U' Ring 2.85M	6-1-1	10					
12-45	UC365207	Brake Lever D	RCC-1373	1					
12-46	UC451631	Lock Lever, w/pin	RCC-1140	1					
12-47	ZG451563	Lock Lever Spring	RCC-1142	1					
12-48x	ZW270088	'E' Ring 1.9M	6-1-9	1					
12-49	ZG365218	Brake Lever Return Spring	RCC-1374	1					
12-50	UC365220	Idler Lever D, w/shaft	RCC-1375	1					
12-51	ZW381644	Washer (Polyslider) D2.1x4.0x0.13t		2					
12-52	UC365242	Idler E, w/metal	RCC-1377	1					
12-53x	UC365264	Friction Felt B	RCC-1379	1					
12-54	UC365275	Idler Pulley B	RCC-1380	1					
12-55	ZG365297	Clutch Spring B	RCC-1382	1					
12-56	UC365670	Spring Holder	RCC-1371	1					
12-57	ZG365321	Idler Lever Spring	RCC-1385	1					
12-58	UC365308	Brake Lever C, w/metal	RCC-1383	1					
12-59	MB365332	Idler Belt	RCC-1386	1					
12-60	UC365376	Operation Lever B, w/prop	RCC-1390	1					
12-61	UC366254	Flywheel, w/shaft	RCC-1107	1					

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

FIG. 13 PHOTO OF PRE-AMP. P.C. BOARD (RS-5018)



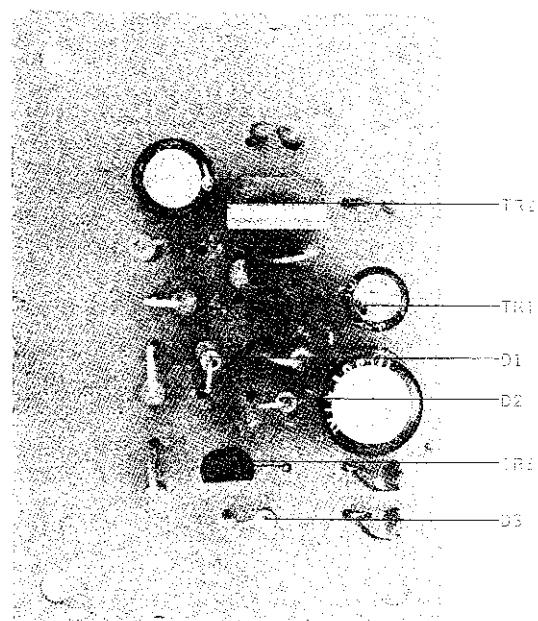
PRE-AMP. P.C. BOARD (RS-5018) BLOCK

Symbol No.	Parts No.	Description	Q'ty	Symbol No.	Parts No.	Description	Q'ty
13-1x	BA478462	Pre-amp. P.C. Board Comp. (RS-5018)	1	13-VR3, 4	EV472184	Semi-fixed Volume TR93R105-10k B	4
13-2x	BA478473	Pre-amp. P.C. Board Comp. (RS-5018) (D)	1	13-L1	E0478181	Ferri Inductor FL9H 15MH(J)	2
13-IC1	EL412413	Line Amp. I.C. LD-3141	2	13-L2	E0243988	Ferri Inductor FL7H 3.3MH(J)	2
13-TR1, 2	ET234854	Transistor 2SC458LG(C)	4	13-L3	E0244012	Ferri Inductor FL9H 22MH(J)	2
13-TR3, 4	ET234854	Transistor 2SC458LG(C)	4	13-D1	ED219464	Germanium Diode 1N34A	2
13-TR5	ET398845	Transistor 2SC871(E, F)	2	13-T1	BT247746	Head Phone Trans. N19-228S	2
13-VR1	EV472162	Semi-fixed Volume TR93R103-2k B	2	13-SW1, 2	ES227867	Slide Switch CL 1122B3500 (special)	2
13-VR2	EV472173	Semi-fixed Volume TR93R102-1k B	2	13-3	ZG227441	Spring C	2

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

Symbol No.	Parts No.	Description	Q'ty
Capacitor, Vertical Type			
13-C1	EC329850	VFM 220PF(J) 50WV	2
13-C2	EC476965	Elect. 47μF 25WV (noiseless)	2
13-C3	EC432810	Elect. 10μF 16WV (noiseless)	2
13-C4	EC250604	Mylar 0.001μF(K) 50WV	2
13-C5	EC220590	Elect. 33μF 10WV	2
13-C6	EC478124	VFM 68PF(K) 50WV	2
13-C7	EC389485	Mylar 0.018μF(J) 50WV	2
13-C8	EC220994	Elect. 10μF 25WV	2
13-C9	EC329771	Elect. 47μF 6.3WV	2
13-C10	EC476954	Elect. 100μF 25WV (noiseless)	2
13-C11	EC429851	VFM 680PF(J) 50WV	2
13-C12	EC432810	Elect. 10μF 16WV (noiseless)	2
13-C13	EC478124	VFM 68PF(K) 50WV	2
13-C14	EC220590	Elect. 33μF 10WV	2
13-C15	EC478124	VFM 68PF(K) 50WV	2
13-C16	EC220994	Elect. 10μF 25WV	2
13-C17	EC329771	Elect. 47μF 6.3WV	2
13-C18	EC389485	Mylar 0.018μF(J) 50WV	2
13-C19	EC220151	Elect. 100μF 25WV	2
13-C21	EC320051	Elect. 10μF 16WV	2
13-C22	EC220364	Elect. 100μF 6.3WV	2
13-C23	EC478146	FM 430PF(J) 500WV	2
13-C24	EC220994	Elect. 10μF 25WV	2
13-C25	EC329771	Elect. 47μF 6.3WV	2
13-C27	EC220465	Elect. 22μF 6.3WV	2
13-C28	EC446297	Mylar 0.18μF(J) 50WV	2
13-C29	EC220151	Elect. 100μF 25WV	1
13-C30	EC320051	Elect. 10μF 16WV	2
13-C31	EC329861	Mylar 0.027μF(J) 50WV	2
13-C32	EC250975	Mylar 0.015μF(J) 50WV	2
13-C33	EC331828	Elect. 3.3μF 25WV	2
13-C34	EC478168	FM 270PF(J) 500WV	2
13-C35	EC350875	Mylar 0.001μF(J) 50WV	2
13-C36	EC379721	Mylar 0.0012μF(J) 50WV	2
13-C37	EC350875	Mylar 0.001μF(J) 50WV	2
Resistor, Stopper Type			
13-R2	ER430086	Carbon RD1/4 560k(J)	2
13-R3	ER211757	Carbon RD1/4 100k(J)	2
13-R4	ER212264	Carbon RD1/4 22k(J)	2
13-R5, 6	ER211757	Carbon RD1/4 100k(J)	4
13-R7	ER424855	Carbon RD1/4 150k(J) (noiseless)	2
13-R8	ER212477	Carbon RD1/4 3.3k(J)	2
13-R9	ER212883	Carbon RD1/4 4.7k(J)	2
13-R10	ER212264	Carbon RD1/4 22k(J)	2
13-R11	ER211757	Carbon RD1/4 100k(J)	2
13-R12	ER212477	Carbon RD1/4 3.3k(J)	2
13-R13	ER211757	Carbon RD1/4 100k(J)	2
13-R14, 15	ER212883	Carbon RD1/4 4.7k(J)	4
13-R16	ER306360	Carbon RD1/4 6.8k(J)	2
13-R17	ER211858	Carbon RD1/4 12k(J)	2
13-R18, 19	ER211757	Carbon RD1/4 100k(J)	4
13-R20	ER424855	Carbon RD1/4 150k(J) (noiseless)	2
13-R21	ER212477	Carbon RD1/4 3.3k(J)	2
13-R22	ER349828	Carbon RD1/4 20k(J)	2
13-R23	ER211757	Carbon RD1/4 100k(J)	2
13-R24	ER212477	Carbon RD1/4 3.3k(J)	2
13-R25	ER350100	Carbon RD1/4 68k(J)	2
13-R26	ER352045	Carbon RD1/4 3.9k(J)	2
13-R27	ER336442	Carbon RD1/4 10k(J)	2
13-R28	ER212883	Carbon RD1/4 4.7k(J)	2
13-R29	ER211858	Carbon RD1/4 12k(J)	2
13-R30	ER306843	Carbon RD1/4 1.2k(J)	2
13-R31	ER349942	Carbon RD1/4 8.2k(J)	2
13-R32	ER336442	Carbon RD1/4 10k(J)	2
13-R33	ER306360	Carbon RD1/4 6.8k(J)	2
13-R34	ER450011	Carbon RD1/4 120k(J)	2
13-R35	ER336442	Carbon RD1/4 10k(J)	2
13-R36	ER306887	Carbon RD1/4 15k(J)	2
13-R37	ER211465	Carbon RD1/4 1k(J)	2
13-R38	ER211667	Carbon RD1/4 100(J)	1
13-R39	ER379675	Carbon RD1/4 51k(J)	2
13-R40	ER212883	Carbon RD1/4 4.7k(J)	2
13-R41	ER346601	Carbon RD1/4 47k(J)	2

FIG. 14 PHOTO OF
SYS. CON. P.C. BOARD (RS-1142)

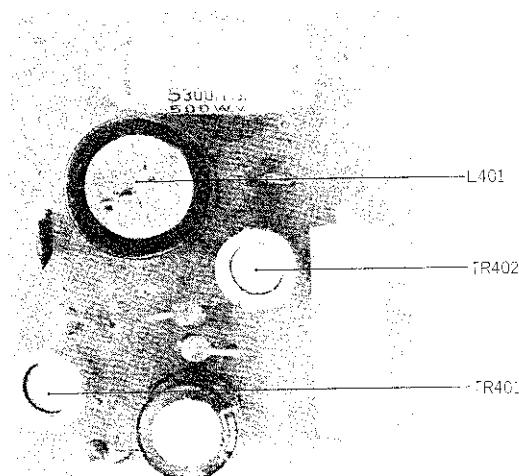


SYS. CON. P.C. BOARD (RS-1142) BLOCK

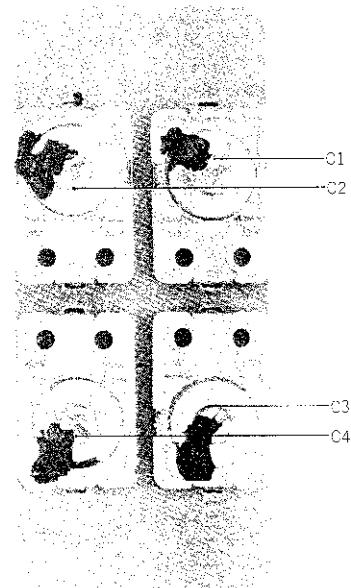
Symbol No.	Parts No.	Description	Q'ty
Capacitor, Vertical Type			
14-1x	BA478427	Sys. Con. P.C. Board Comp. (RS-1142)	1
14-TR1	ET478001	Transistor 2SC945(P, Q)	1
14-TR2	ET465208	Transistor 2SC1098(L, K)	1
14-TR3	ET398711	Transistor 2SC945(Q, R)	1
14-D1, 2, 3	ED219464	Germanium Diode 1N34A	3
Resistor, Stopper Type			
14-C1	EC346735	Elect. 47μF 50WV	1
14-C3	EC320040	Elect. 47μF 16WV	1
Capacitor, Vertical Type			
14-R1	ER212883	Carbon RD1/4 4.7k(J)	1
14-R2	ER349907	Carbon RD1/4 33k(J)	1
14-R3	ER212883	Carbon RD1/4 4.7k(J)	1
14-R4	ER346601	Carbon RD1/4 47k(J)	1
14-R5	ER212883	Carbon RD1/4 4.7k(J)	1
14-R6	ER430018	Carbon RD1/4 1(J)	1
14-R7, 8	ER357456	Carbon RD1/4 2.2k(J)	2
14-R9	ER211465	Carbon RD1/4 1k(J)	1
14-R10	ER336442	Carbon RD1/4 10k(J)	1
14-R11	ER212264	Carbon RD1/4 22k(J)	1
14-R12	ER477527	Cement S3W 85(K) (Wire-wound type)	1

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

**FIG. 15 PHOTO OF
OSC. P.C. BOARD (MR-505)**

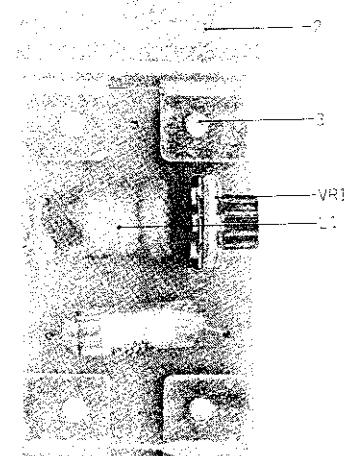


**FIG. 16 PHOTO OF BIAS ADJUST
P.C. BOARD (RS-5015, 16)**



OSC. P.C. BOARD (MR-505) BLOCK

Symbol No.	Parts No.	Description	Q'ty
15-1x	BA478574	OSC. P.C. Board Comp. (MR-505)	1
15-TR401,2	ET304255	Transistor 2SC971(2, 3) (red)	2
15-L401	E0315898	OSC. Coil OT-104A	1
		Capacitor, Vertical Type	
15-C401	EC220678	Elect. 47μF 25WV	1
15-C402	EC246137	Plastic Film 2000PF(J) 500WV	1
15-C403,4	EC250841	Mylar 0.01μF(J) 50WV	2
		Resistor, Stopper Type	
15-R401	ER492952	Cement S3W 100(K) (Wire-wound type)	1
15-R402	ER315944	Carbon RD1/4 3.3(J)	1
15-R403	ER212883	Carbon RD1/4 4.7k(J)	1
15-R404	ER304378	Carbon RD1/4 470(J)	1
15-R405	ER315944	Carbon RD1/4 3.3(J)	1

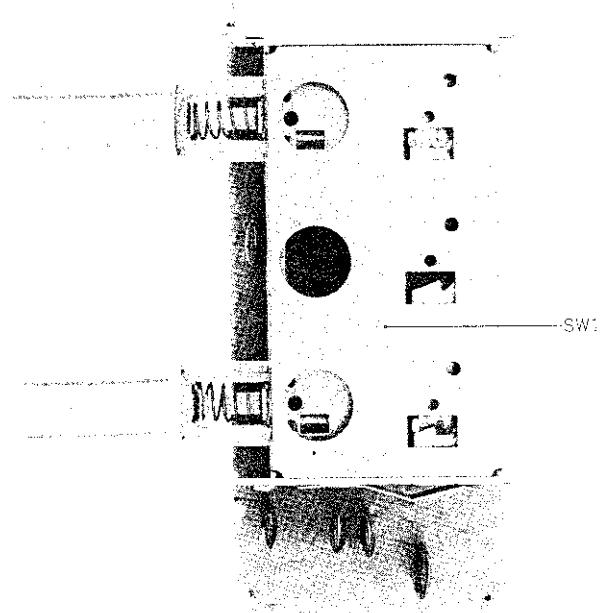


BIAIS ADJUST P.C. BOARD (RS-5015, 16) BLOCK

Symbol No.	Parts No.	Description	Q'ty
16-1x	BA478451	Bias Adjust P.C. Board Comp. (RS-5015, 16)	1
16-L1	E0443722	Ferri Inductor FL9H 1MH(J)	1
16-VR1	EV406901	Semi-fixed Volume V10K-5 100k B	1
16-2	EZ478113	Bias Adjust Card Mt. Metal	2
16-3	ZW419782	Screw, binding head 2.6×5	4
16-4x	ZW317801	M2.6 Toothed Lock Washer	2
		Capacitor, Vertical Type	
16-C1,2,3,4	EC398878	Trimmer C-1P-2 70PF	4
16-C5	EC489014	Styrol 470PF(J) 250WV (tubular type)	1
		Carbon Resistor RD1/4 47k(J)	
16-R1	ER346601		1

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

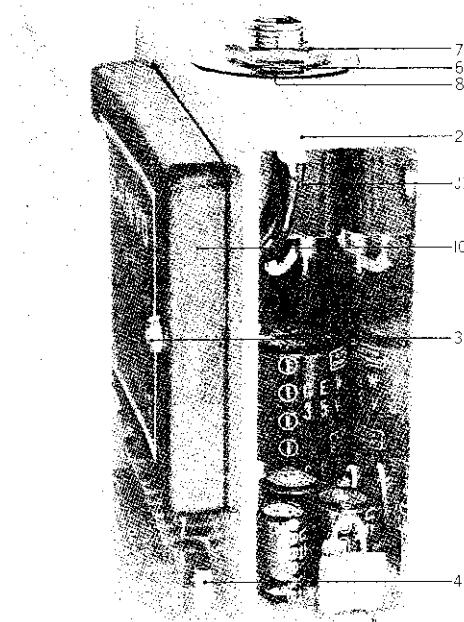
**FIG. 17 PHOTO OF MODE SWITCH
P.C. BOARD (RS-5017)**



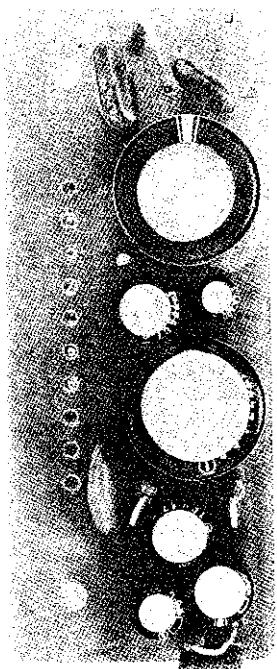
**MODE SWITCH P.C. BOARD
(RS-5017) BLOCK**

Symbol No.	Parts No.	Description	Q'ty
17-1x	BA478484	Mode Switch P.C. Board Comp. (RS-5017)	1
17-SW1	ES447827	Push Switch UM32420	1
		Capacitor, Vertical Type	
17-C1,2,3,4	EC302297	Mylar 0.018 μ F(K) 50WV	4
17-C5	EC379157	Mylar 0.033 μ F(J) 50WV	1

**FIG. 18 PHOTO OF
POWER AMP. P.C. BOARD (ED-515)**



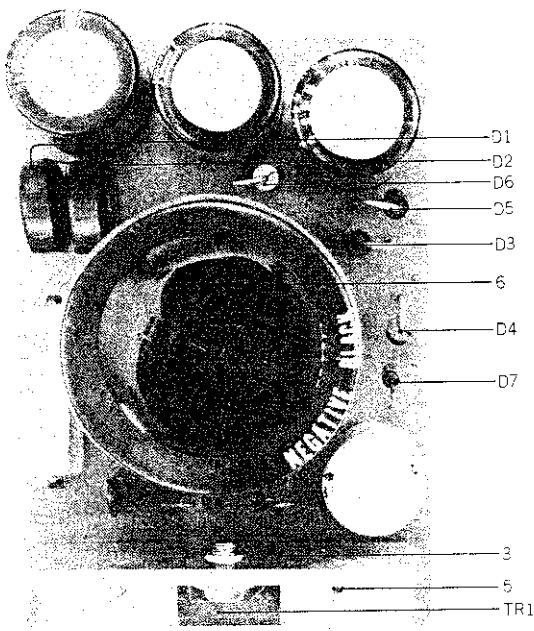
POWER AMP. P.C. BOARD (ED-515) BLOCK



Symbol No.	Parts No.	Description	Q'ty
18-1x	BA478528	Power Amp. P.C. Board Comp. (ED-515)	1
18-IC1	EI372126	I.C. STK-011(A)	1
18-J1	EJ454858	Mic. Jack 2PMJ1	1
18-2	BC371428	Power Amp. Case	1
18-3	ZW375085	Tapping Screw #2 2.6x12 (round)	2
18-4	ZW447772	Tapping Screw 3x6(BR)	2
18-5x	ZW272722	M9 Toothed Lock Washer D9.3x13x0.5t	1
18-6	ZW376481	Jack Thin Washer (SUP) D9.1x11.7x0.25t	1
18-7	ZW375153	E Jack Nut	1
18-8	ZW446984	Washer (Polyslider) D9x22x0.25t	1
18-9x	EZ328331	Fasten Receptacle 170043-2	2
18-C1	EC350684	Capacitor, Vertical Type Elect. 22 μ F 25WV	1
18-C2	EC290507	VFM 150PF(K) 50WV	1
18-C3	EC372148	Elect. 220 μ F 35WV	1
18-C4	EC220994	Elect. 10 μ F 25WV	1
18-C5	EC320040	Elect. 47 μ F 16WV	1
18-C6	EC350684	Elect. 22 μ F 25WV	1
18-C7	EC290507	VFM 150PF(K) 50WV	1
18-C8	EC450281	Elect. 0.47 μ F 50WV	1
18-C9	EC450270	Elect. 1000 μ F 25WV	1
18-C10	EC308711	Mylar 0.047 μ F(K) 50WV	1
18-C11	EC251291	Mylar 0.1 μ F(K) 50WV	1
18-R1	ER336442	Resistor, Stopper Type Carbon RD1/4 10k(J)	1
18-R2	ER361642	Carbon RD1/4 47(J)	1
18-R3	ER346544	Carbon RD1/4 3k(J)	1
18-R4	ER399723	Carbon RD1/4 4.7(J)	1

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

**FIG. 19 PHOTO OF
POWER SUPPLY P.C. BOARD (RS-5025)**

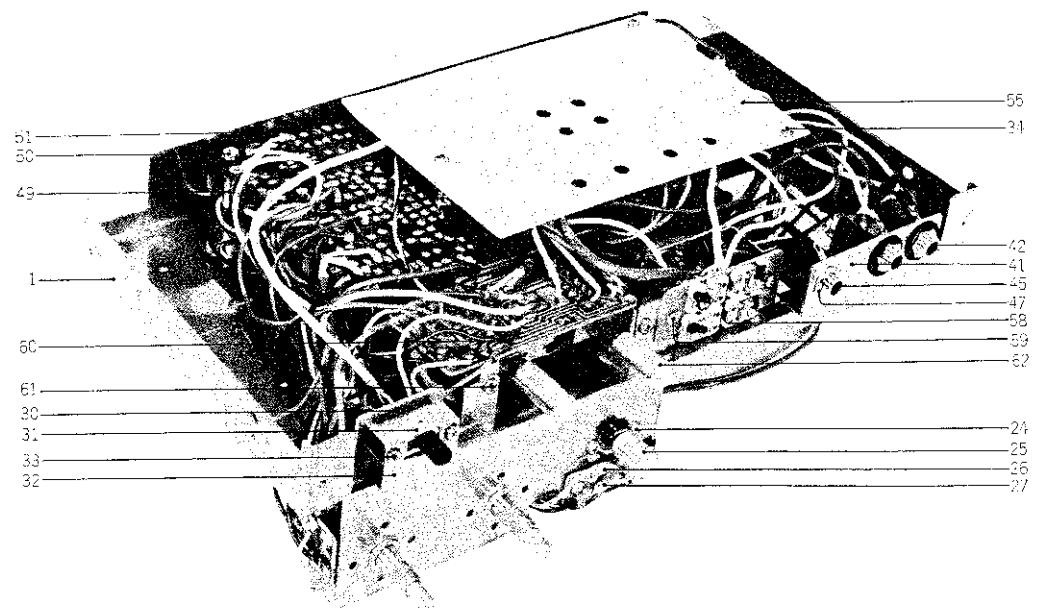
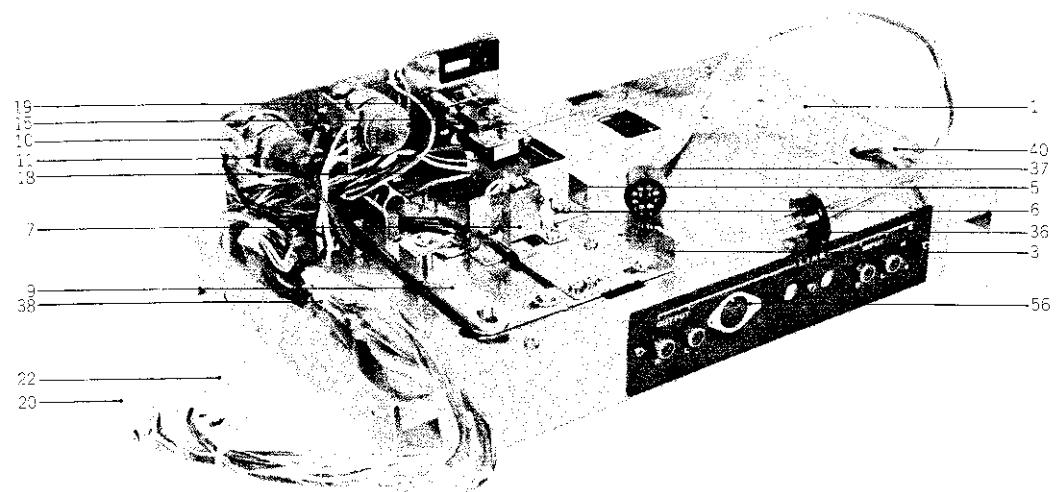


**POWER SUPPLY P.C. BOARD
(RS-5025) BLOCK**

Symbol No.	Parts No.	Description	Q'ty
19-1x	BA478350	Power Supply P.C. Board Comp. (RS-5025)	1
19-2x	BA478361	Power Supply P.C. Board Comp. (RS-5025) (D)	1
19-D1, 2	ED329130	Silicon Diode 10DC-1 (black)	1
19-D3, 4, 5, 6	ED375592	Silicon Diode V06B	4
19-D7	ED315415	Zener Diode RD-24A (MN)	1
19-TR1	ET476886	Transistor 2SC1098(L, M)	1
19-3	EZ471767	Heat-sink Plate	1
19-4x	ZW392940	Insulated Washer G-473025-1	1
19-5	ZW413155	Screw, binding head 3x6	3
Capacitor, Vertical Type			
19-C1, 2, 3	EC403468	Elect. 330 μ F 50WV	3
19-C4	EC313121	Elect. 220 μ F 25WV	1
19-C5	EC383501	Mylar 0.001 μ F(M) 50WV	1
Resistor, Stopper Type			
19-R1	ER395741	Cement 3W 18(K) (Wire-wound type)	1
19-R2	ER212883	Carbon RD1/4 4.7k(J)	1
19-R3	ER361642	Carbon RD1/4 47(J)	1
19-6	EC368695	Elect. Capacitor 2200 μ F 50WV (Lug type) (C1) (GX-1900)	1

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

FIG. 20 PHOTO OF AMP. ASSEMBLY BLOCK

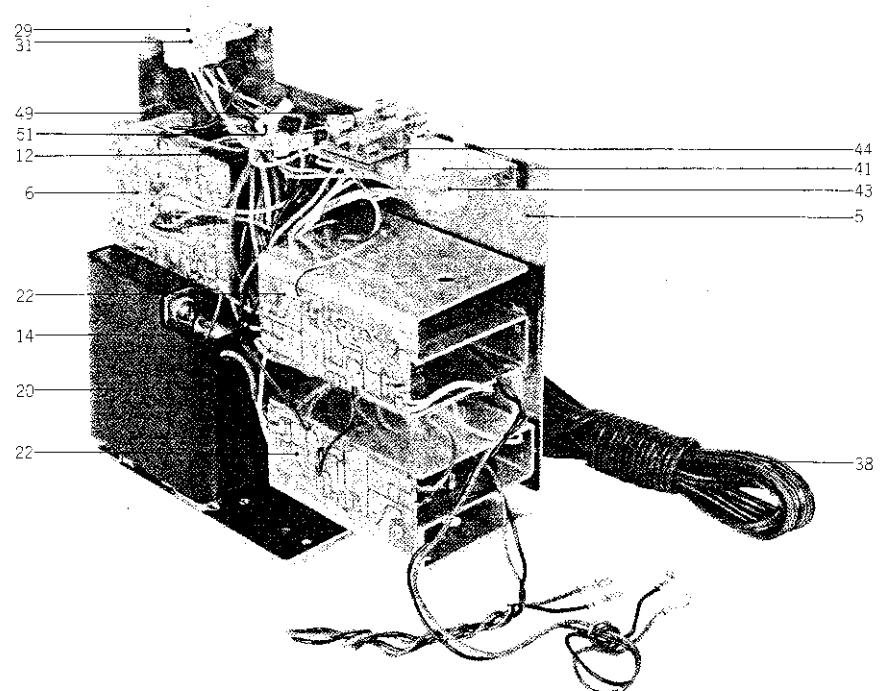
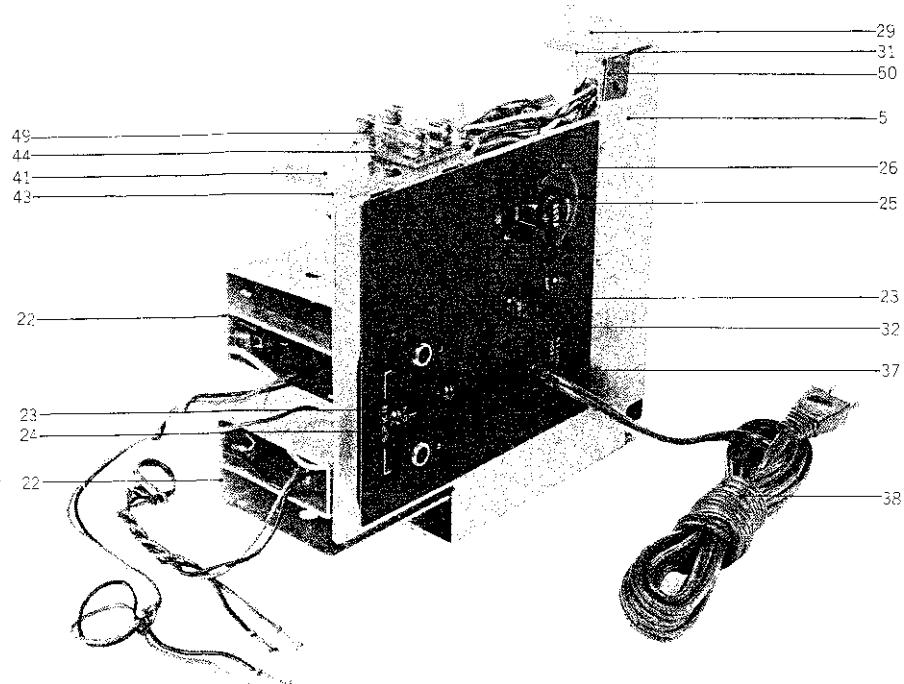


AMP. ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
20-1	EZ471925	Amp. Chassis A, w/prop	RS-5001	1	20-55	EZ472004	Pre Amp. Shield	RS-5019	1
20-2x	EZ471936	Amp. Chassis D, w/prop (D, CEE)	RS-5001	1	20-56	BZ478495	Jack Plate Comp.	RS-5036	1
20-3	ML472050	Rec. Lever 4, w/pin	RS-5005	1	20-57x	EZ471947	Jack Shield	RS-5011	1
20-4x	ZW290283	'U' Ring 2.85M	6-1-1	4	20-58	BA478451	Bias Adjust P.C. Board Comp. (RS-5015,16)		1
20-5	ML472048	Rec. Lever 3, w/pin	RS-5004	1	20-59	ZW419782	Screw, binding head 2.6x5		2
20-6	EZ471958	Mute Switch Table	RS-5029	1	20-60	BA478484	Mode Switch P.C. Board Comp. (RS-5017)		1
20-7	EZ486753	Snap Switch SAR-21HB	25-9-2	1	20-61	ZW379405	Iso Screw, binding head 3x6		2
20-8x	ZW447772	Tapping Screw 3x6 (BR)		4	20-62	SK441628	Knob A	KF-2013	2
20-9	ML472072	Rec. Lever 6	RS-5007	1	20-63x	SZ226282	Cord Holder, Standard B (D, CEE)	900-180	1
20-10	EA449460	Volume P.C. Board	BS-5009	2	20-64x	ZW447772	Tapping Screw 3x6(BR) (D, CEE)		1
20-11	EV472026	Double Volume D24R-100k B, 10k A	36-3-40	2					
20-12x	EV249298	Volume V24L5N 25R 10k A (D, CEE)	36-2-16	2					
20-13x	EC250841	Mylar/C. 0.01 μ F(J) 50WV (Vert. type)	24-1-1	2					
20-14x	EZ488237	Insulated Seat (D, CEE)	RS-5051	1					
20-15	ES468426	Push Switch UEH-12BFN (Power)	25-5-58	1					
20-16x	ES499972	Push Switch JS-09 (Power) (D, CEE)	25-5-67	1					
20-17x	EJ299823	6P Mate-N-Lock Cap Housing 1-480276-0 (D, CEE)	52-1-2	1					
20-18	ER376413	Spark Quencher U/L 0.033 μ +120 500WV	41-1-37	1					
20-19	EZ472037	Switch Prop	RS-5002	2					
20-20	EJ368796	9P Mate-N-Lock Plug Housing	52-1-2	1					
20-21x	EJ373634	Socket Contact 61115-1	52-1-1	9					
20-22	EJ373691	9P Mate-N-Lock Cap Housing 1-480277-0	52-1-2	1					
20-23x	EJ373623	Pin Contact 61116-1	52-1-1	9					
20-24	ZW323728	Screw, binding head 3x5		2					
20-25	SK436274	Knob B	MC-5011	1					
20-26	EA488856	Power Indicating Lamp Board	RS-5053	1					
20-27	EL295312	No. 2 Lamp 8V 0.2A	28-2-8	1					
20-28x	ZW484738	Insulated Washer	RS-5049	1					
20-29x	BA478056	Equalizer Switch Comp. RS	RS-5046	1					
20-30	EA472138	Equalizer P.C. Board	RS-5010	1					
20-31	ES446973	Slide Switch SL-242B4D	25-3-51	1					
20-32	EZ472127	Equalizer Switch Retaining Metal	RS-5009	1					
20-33	ZW442585	Screw, binding head 2.6x4		2					
20-34	ZW417137	Screw, binding head 3x4		8					
20-35x	ER488711	Carbon/R. RD1/4 2(J) (Insu. type)	35-9-5	1					
20-36	EJ303805	6P Connector Plug	42-1-21	1					
20-37	EJ390453	7P Connector Plug S-17302	42-1-40	1					
20-38	EZ419760	Nylon Clip HP-7N		2					
20-39x	ZW462194	Tapping Screw #2 3x8 (pan), w/washer		3					
20-40	EZ328320	Nylon Clip HP-5N		1					
20-41	EZ472015	Front Jack Mt. Metal	RS-5008	1					
20-42	EJ315281	Mic. Jack 2PMJ1	31-2-19	2					
20-43x	EZ225180	Nylon Collar, Jack	1.D-520	2					
20-44x	ZW260368	Washer (Fiber) D9.2x18x0.5t		2					
20-45	EJ376604	Mic. Jack 3PMJ1	31-2-17	1					
20-46x	ZW224976	Jack Thin Washer	DX-509	1					
20-47	ZW391680	E Jack Nut	7-1-20	3					
20-48x	ER214290	Carbon/R. RD1/4 4.7k(J) (Insu. type)	35-9-5	2					
20-49	EZ246644	P.C. Board Prop B	RD-519	7					
20-50	ZW413155	Screw, binding head 3x6		7					
20-51	BA478462	Pre-amp. P.C. Board Comp. (RS-5018)		1					
20-52x	BA478473	Pre-amp. P.C. Board Comp. (RS-5018) (D)		1					
20-53x	EZ327047	P.C. Board Prop	SX-513	3					
20-54x	ZW413728	Screw, binding head 3x6, w/washer		4					

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

FIG. 21 PHOTO OF POWER SUPPLY BLOCK

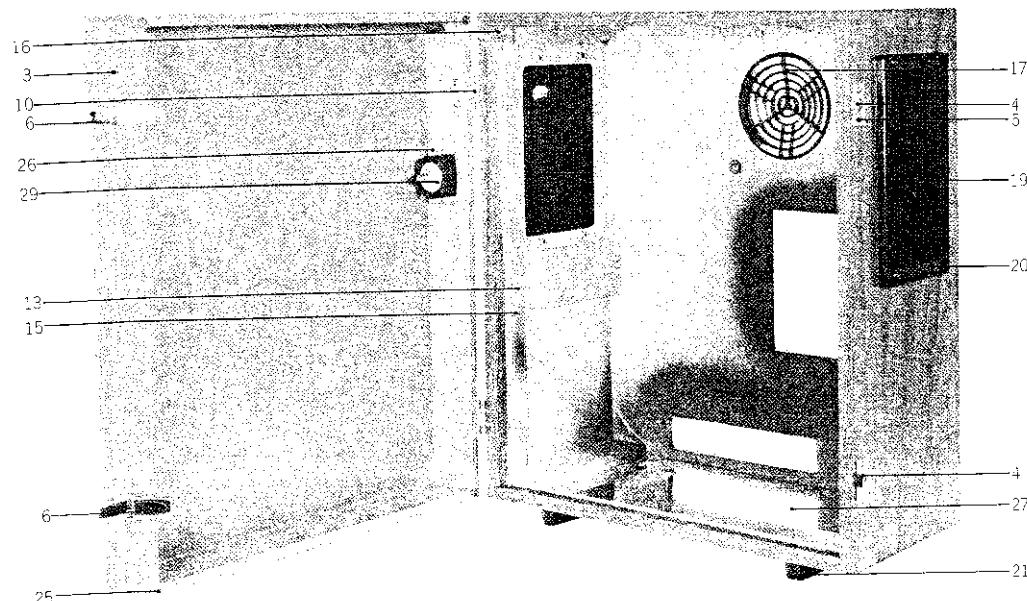


POWER SUPPLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
21-1x	BP478337	Power Supply Block Comp.		1	21-54x	EF295188	Fuse (T type) 630MAT (D, CEE)		1
21-2x	BP478348	Power Supply Block Comp. (D)		1	21-55x	ZW201183	Screw, truss head 3x8 (D, CEE)		2
21-3x	BP488272	Power Supply Block Comp. (D, CEE)		1	21-56x	ZW273756	M3 Nut (D, AAL)		1
21-4x	BP510243	Power Supply Block Comp. (D, AAL)		1	21-57x	EZ315448	Australia Cord (3 core)	26-3-11	1
21-5	EZ471677	Power Chassis, w/angle	RS-5020	1	21-58x	ZW273778	M3 Earth Lug		2
21-6	BA478350	Power Supply P.C. Board Comp. (RS-5025)		1					
21-7x	BA478361	Power Supply P.C. Board Comp. (RS-5025) (D)		1					
21-8x	ZW447772	Tapping Screw 3x6 (BR)		11					
21-9x	HZ305460	Cartridge Prop	RC-135	1					
21-10x	ZW413741	Screw, binding head 3x8		1					
21-11x	ZW413728	Screw, binding head 3x6, w/washer		1					
21-12	EC368695	Elect. 2200μF 50WV	24-10-45	1					
21-13x	ZW413256	Washer (SPC) D3.4x7.8x0.5t		2					
21-14	BT471688	Power Trans. RST-1	38-4-164	1					
21-15x	BT471690	Power Trans. RST-2 (D)	38-4-165	1					
21-16x	BT471712	Power Trans. RST-4 (D, CEE)	38-4-159	1					
21-17x	BT499915	Power Trans. RST-6 (D, AAL)	38-4-182	1					
21-18x	EJ373634	Socket Contact 61115-1 (D, CEE)	52-1-1	4					
21-19x	ZW200700	Tapping Screw #2 4x8 (round)		4					
21-20	EZ368548	Trans. Shield	RCC-543	1					
21-21x	ZW417137	Screw, binding head 3x4		1					
21-22	BA478528	Power Amp. P.C. Board Comp. (ED-515)		1					
21-23	ES375478	Slide Switch ESD-279DU	25-3-23	2					
21-24	ZW372025	Iso Screw, truss head 3x6 (black)		4					
21-25	EJ233370	Power Plug Socket S-18010	40-2-3	1					
21-26	ZW374128	Iso Screw, truss head 3x8		2					
21-27x	EF338387	Fuse ST-2 1.5A	39-1-26	1					
21-28x	EF277402	Fuse ST-2 1A (D)	39-1-26	1					
21-29	EJ477808	9P Mate-N-Lock Comp.	RS-5040	1					
21-30x	EJ477810	9P Mate-N-Lock Comp. (D, D, CEE)	RS-5040	1					
21-31	EZ368526	Mate-N-Lock Cap. Mt. Plate	RCC-541	1					
21-32	SM471723	Power Supply Name Plate A	RS-5021	1					
21-33x	SM471734	Power Supply Name Plate D (D)	RS-5022	1					
21-34x	SM488171	Power Supply Name Plate (D, CEE)	RS-5050	1					
21-35x	SM499926	Power Supply Name Plate (D, AAL)	RS-5058	1					
21-36x	ZW201150	Screw, truss head 3x6		1					
21-37	EZ382263	Strain Relief SR-4K-4	2-7-12	1					
21-38	EZ374894	U/L AC Cord 3M	26-3-19	1					
21-39x	EZ354240	Power Supply Cord ER0150 (D, CEE)		1					
21-40x	EZ246936	Strain Relief SR-6W-1(3 core)	2-7-8	1					
21-41	EJ477821	6P Mate-N-Lock Comp.	RS-5041	1					
21-42x	EJ477832	6P Mate-N-Lock Comp. (D)	RS-5041	1					
21-43	EZ471745	Fuse Holder Mt. Metal	RS-5024	1					
21-44	EJ302062	2P Fuse Holder	40-1-1	1					
21-45x	EJ254970	Lug Plate KP1L1 (D, AAL)	33-3-3	1					
21-46x	EF460653	Fuse ST-1 1A (D, AAL)	39-1-25	1					
21-47x	EZ499432	Mate-N-Lock Mt. Table Comp. (D, CEE)	RS-5057	1					
21-48x	EZ498936	Mate-N-Lock Mt. Angle (D, CEE)	RS-5056	1					
21-49	EF428815	Fuse 0.9A 0.9	39-1-38	2					
21-50	ZW290250	U type Speed Nut M4 #1 (large)	6-3-2	1					
21-51	EJ205975	Cramp Terminal 1-SD	32-1-7	2					
21-52x	EJ488193	Fuse Holder (D, CEE)	101060	1					
21-53x	EF375647	Fuse (T type) 500MAT (D, CEE)		2					

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

FIG. 22 PHOTO OF CASE BLOCK

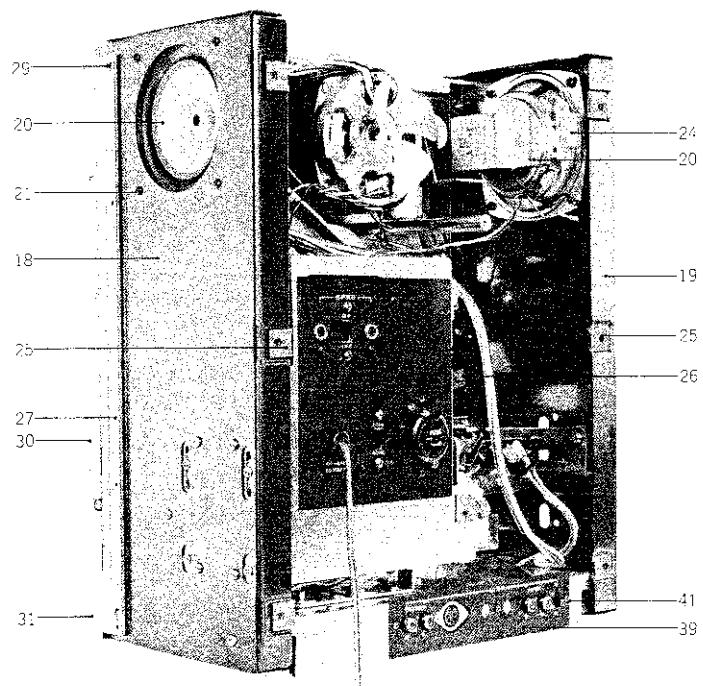


CASE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
22-1x	BC478271	Case Block Comp.		1	22-17	SZ382217	Fan Grill	RD-A402	1
22-2x	BC478282	Case Block Comp.		1	22-18x	ZW324448	Tapping Screw #1 3x10 (truss)		3
22-3	BC867126	RS Wood Case Front Cover		1	22-19	SZ369393	Speaker Grill	RCC-405	2
22-4	SZ237993	Hooking Holder B	100737	2	22-20	ZW419714	Screw, without Grooved 3x15 (truss)		8
22-5	ZW203218	Wood Screw, round head 2.7x10		4	22-21	SZ316620	MR Square Foot	MR-402	2
22-6	SZ304964	Hooking #1700	AT-37	2	22-22x	ZW413886	Screw countersunk head 4x15		4
22-7x	ZW202375	Screw, round head 3x10		8	22-23x	ZW273756	M3 Nut		8
22-8x	ZW231704	Claw Hinge Nut	7-1-8	4	22-24x	ZW425002	Washer (SPC) D3.1x8x0.5t		8
22-9x	ZW203218	Wood Screw, round head 2.7x10		2	22-25	EZ377583	Felt D9	CD-60	4
22-10	VM293883	Hinge #1700	AT-38	2	22-26	SZ477696	Accessory Parts Mt. Plate, w/shaft	RS-4004	1
22-11x	ZW366197	Screw, round head 3x17		2	22-27	EZ482207	Shield Plate	RS-4006	1
22-12x	ZW231715	Claw Frame Fixing Nut	7-1-7	6	22-28x	MR436364	1 5 Inch Pinch Roller	MC-6014	1
22-13	SZ484806	Anti Warping Angle	RS-4007	1	22-29	MP424023	Pinch Roller (KD)	KD-1084	1
22-14x	SE447873	Upper Anti Warping Part	1.3'-4005	2					
22-15	ZW392141	Tapping Screw #1 3x8 (truss)		22					
22-16	SZ439694	Case Corner Angle	KD-6031	2					

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

FIG. 23 PHOTO OF FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
MECH. PANEL BLOCK									
23-1x	BZ478293	Mech. Panel Block Comp.	RS	1	23-53x	SM471576	Head Cover Name Plate D (D)	RS-6015	1
23-2x	BZ478304	Mech. Panel Block Comp. (D)	RS	1	23-54x	ZW201150	Screw, truss head 3x6 (black)		2
23-3x	BZ488261	Mech. Panel Block Comp. (D, CEE)	RS	1	23-55x	MP424023	Pinch Roller (KD)	KD-1084	1
23-4	SP473383	Mech. Panel B	RS-6001	1	23-56	SK465197	Pinch Roller Cap	MC-6017	1
23-5x	SP471622	Mech. Panel A (D)	RS-6001	1	23-57	SK471587	Mech. Knob	RS-6009	2
23-6x	SP488160	Mech. Panel C (D, CEE)	RS-6001	1	23-58x	SK486055	RS Mech. Knob Screw	RS-6021	2
23-7	SZ477720	Spin Plate		2	23-59x	ZW260166	Washer (Nylon)		
23-8	SC471633	Head Cover Base	RS-6003	1			D6.2x13x0.125t		
23-9x	ZW491332	Screw, countersunk head 2.3x7		4	23-60	SK314100	Pause Knob B	MR-612	1
23-10x	ZW273690	M 2.3 Nut		4	23-61x	ZW433001	Set Screw, hexagon socket 3x5 (cup)		
AMP. PANEL BLOCK									
23-11x	BZ478315	Amp. Panel Block Comp.	RS	1	23-62	ZW201150	Screw, truss head 3x6		4
23-12x	BZ478326	Amp. Panel Block Comp. (D)	RS	1	23-63x	ZW259560	Washer (BSP)		
23-13	SP471644	Amp. Panel A	RS-6005	1			D3.3x5.8x0.25t		
23-14x	SP471655	Amp. Panel D (D)	RS-6005	1	23-64x	SK471532	Amp. Knob C (D)	RS-6010	2
23-15	SM471666	Automatic Name Plate	RS-6008	1	23-65	SK361956	Amp. Knob B	10R-639	2
23-16	EZ435104	Illumination Escutcheon (green)	61-5023	1	23-66x	ZW492928	Set Screw, hexagon socket 3x7 (cup)		
23-17	EZ426780	Illumination Escutcheon (red)	61-5023	1	23-67	SK361945	Amp. Knob A	10R-638	2
FINAL ASSEMBLY BLOCK									
23-18	SZ471442	RS Side Chassis A (right)	RS-6011	1	23-68x	ZW492917	Set Screw, hexagon socket 3x5 (cup)		
23-19	SZ471453	RS Side Chassis B (left)	RS-6011	1	23-69x	ZW483208	Washer (Nylon)		
23-20	SS484740	Speaker 10F-6B	29-5-13	2			D8.5x20x0.5t		
23-21	ZW366186	Screw, round head 3x12 (black)		8	23-70x	EF304626	Fuse ST-4 1A	39-1-28	1
23-22x	ZW413256	Washer (SPC)D3.4x7.8x0.5t		8	23-71	MY436307	Capstan	MC-6010	1
23-23x	ZW273756	M3 Nut		8	23-72	ZW436353	Capstan Set Screw	MC-6012	1
23-24	ER395741	Cement/R. 3W 18(K) (Wire-wound type)	35-16-2	2	23-73	MR436364	15 Inch Pinch Roller	MC-6014	1
23-25	ZW290250	U type Speed Nut M4 #1 (large)	6-3-2	1	23-74x	EF277402	Fuse ST-2 1A	39-1-26	1
23-26	ZW290248	U type Speed Nut M4 #1 (small)	6-3-1	4	23-75x	EF338387	Fuse ST-2 1.5A	39-1-25	1
23-27	SZ471464	RS Sash Mt. Plate A (right)	RS-6012	1	23-76x	EF304626	Fuse ST-4 1A	39-1-28	1
23-28x	SZ473872	RS Sash Mt. Plate B (left)	RS-6012	1					
23-29	ZW447772	Tapping Screw 3x6 (BR)		10					
23-30	SZ471475	RS Sash	RS-6013	2					
23-31	ZW323728	Screw, binding head 3x5		10					
23-32x	SZ471486	Panel Retainer A (right)	RS-1005	1					
23-33x	SZ471497	Panel Retainer B (left)	RS-1005	1					
23-34x	ZW200610	Tapping Screw #1 4x12 (truss)		4					
23-35	SM471510	Cassette Name Plate	RS-1214	1					
23-36x	ZG473905	Adjust Spring 2 (Cassette/Amp.)	RS-1106	1					
23-37x	SZ471521	Reinforcement Plate (Cassette)	RS-2005	1					
23-38x	ZW200676	Tapping Screw #2 3x6 (countersunk)		1					
23-39	SM471543	Jack Name Plate	RS-5013	1					
23-40x	ZW477617	Washer (SPC)D2.4x4.2x0.3t		3					
23-41	ZW488068	Tapping Screw #2 2.6x5 (truss)		3					
23-42	BC478271	Case Block Comp.		1					
23-43x	BC478282	Case Block Comp. (D)		1					
23-44x	SZ377190	LM Rubber Foot	LM-404	4					
23-45x	ZW419646	Washer (SPC)D4.5x9.8x0.5t		4					
23-46x	ZW448288	Tapping Screw #1 4x35 (truss)		4					
23-47x	ZW488327	Tapping Screw #1 4x25 (truss), w/washer		3					
23-48x	ZW488338	Tapping Screw #1 4x25 (truss), w/washer		4					
23-49x	ZW259560	Washer (BSP) D3.3x5.8x0.25t		4					
23-50	ZW201148	Screw, truss head 3x6		4					
23-51	SC471554	Head Cover	RS-6004	1					
23-52	SM471565	Head Cover Name Plate A	RS-6015	1					

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

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.
ZW369090	7-14	ZW432843	6-114						
ZW369494	4-18	ZW433001	23-61x						
ZW369595	6-73	ZW434160	2-45						
ZW369900	6-11x	ZW434171	2-31						
ZW372025	21-24	ZW434193	5-15x						
ZW373331	4-13	ZW434215	5-14x						
ZW373577	4-5	ZW436353	23-72						
ZW374128	21-26	ZW437545	5-35						
ZW374646	7-11	ZW440291	6-30						
ZW375085	18-3	ZW442585	20-33						
ZW375153	18-7	ZW446984	18-8						
ZW376380	6-72x	ZW447772	10-19						
ZW376380	6-123x	ZW447772	18-4						
ZW376481	18-6	ZW447772	20-8x						
ZW377414	12-74	ZW447772	20-64x						
ZW377425	12-75	ZW447772	21-8x						
ZW379405	20-61	ZW447772	23-29						
ZW381644	12-51	ZW447840	11-43						
ZW384131	6-48x	ZW448288	23-46x						
ZW391680	20-47	ZW461935	12-8						
ZW392141	22-15	ZW462194	20-39x						
ZW392940	19-4x	ZW462835	6-78x						
ZW399137	12-88	ZW462846	6-79x						
ZW413155	6-127	ZW464692	12-3						
ZW413155	19-5	ZW464692	12-30						
ZW413155	20-50	ZW464747	11-49x						
ZW413188	4-23x	ZW465254	8-12						
ZW413188	6-14	ZW474581	12-32x						
ZW413188	6-20x	ZW476987	3-22						
ZW413201	3-30	ZW477450	6-106x						
ZW413201	4-20	ZW477461	6-107x						
ZW413201	5-8	ZW477617	23-40x						
ZW413201	6-22x	ZW477876	1-8						
ZW413223	6-62x	ZW477887	1-19						
ZW413223	10-22x	ZW479463	4-16x						
ZW413245	6-104	ZW483208	23-69x						
ZW413256	21-13x	ZW484738	10-15x						
ZW413256	23-22x	ZW484738	20-28x						
ZW413267	6-25x	ZW484762	11-9x						
ZW413728	20-54x	ZW485728	12-98x						
ZW413728	21-11x	ZW486268	11-5						
ZW413741	6-117x	ZW488068	23-41						
ZW413741	10-24x	ZW488327	23-47x						
ZW413741	11-23	ZW488338	23-48x						
ZW413741	12-20x	ZW491332	23-9x						
ZW413741	21-10x	ZW492928	23-66x						
ZW413886	22-22x	ZW499454	11-55						
ZW413921	3-17								
ZW414033	12-22x								
ZW414044	6-23x								
ZW414055	6-33x								
ZW414066	6-34								
ZW414235	7-15								
ZW414246	7-16								
ZW415956	12-99								
ZW416687	5-18								
ZW417025	1-4x								
ZW417025	11-21								
ZW417137	8-15x								
ZW417137	12-86x								
ZW417137	12-104								
ZW417137	20-34								
ZW417137	21-21x								
ZW417227	12-27x								
ZW417273	8-9								
ZW417273	9-10								
ZW417273	11-13x								
ZW417306	11-39								
ZW419646	23-45x								
ZW419714	22-20								
ZW419782	16-3								
ZW419782	20-59								
ZW424056	3-9								
ZW425006	22-24x								
ZW425103	1-16								
ZW425114	1-15								
ZW427026	3-11								
ZW427037	3-3								
ZW427048	12-13								
ZW429276	12-72								

SECTION 3

SCHEMATIC DIAGRAM

1. GX-1900 SCHEMATIC DIAGRAM
2. GX-1900D SCHEMATIC DIAGRAM

