

# TC-105

*E Model*

*USA Model*

*Canada Model*



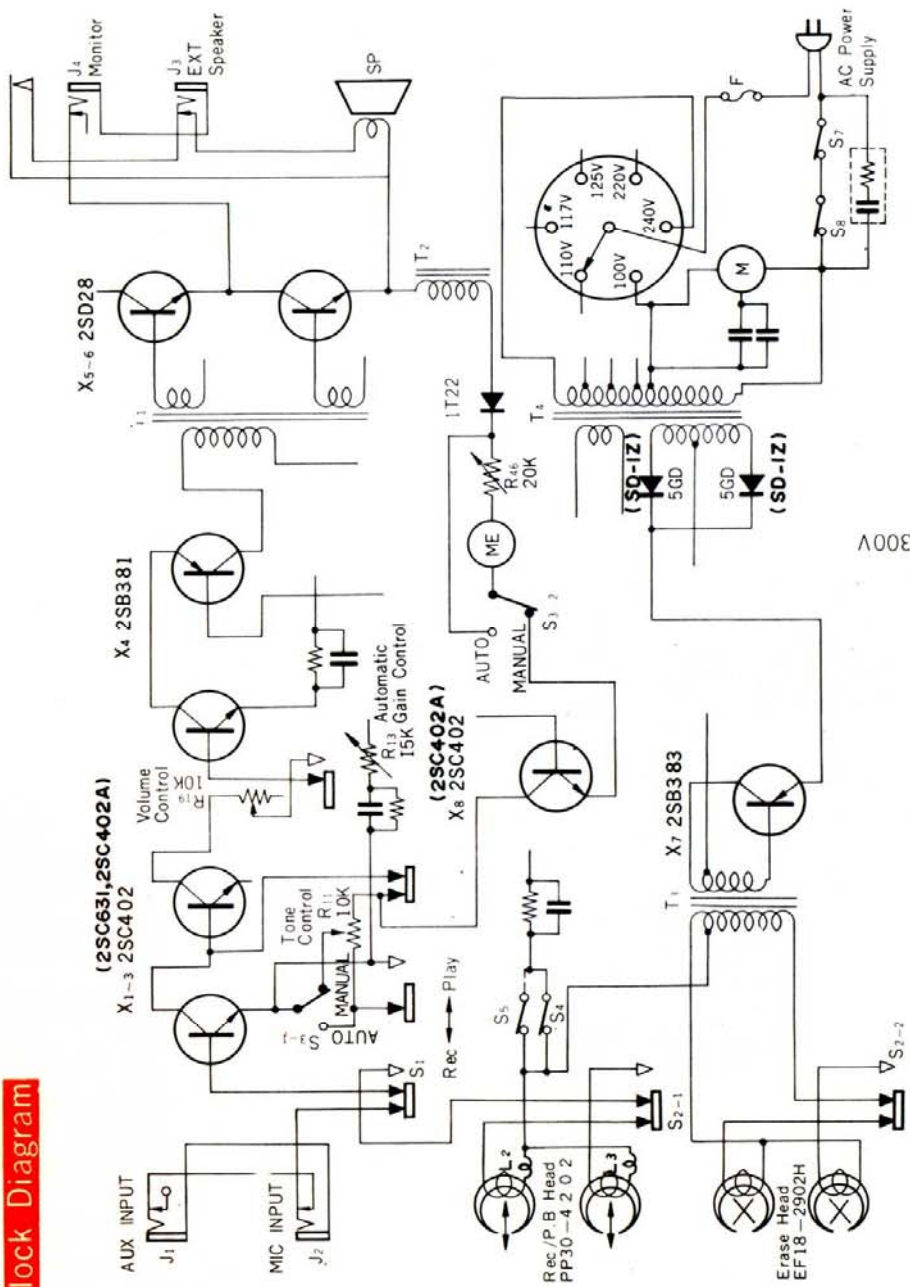
## TAPECORDER

### SPECIFICATIONS

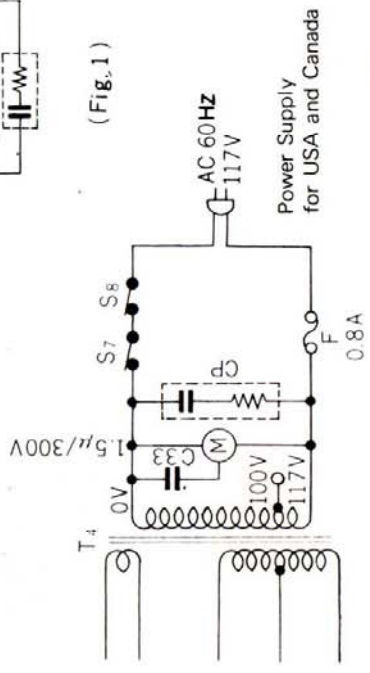
<b>Power requirement:</b>	AC 50/60 Hz, 100, 110, 117, 125, 220 or 240V, 45W Only AC 60 Hz, 117V for USA Only AC 50/60 Hz, 117V for Canada Instantaneous selection 7½, 3¾ or 1⅞ ips (19, 9.5 or 4.8 cm/s)	(1) (1) (1) (1)
<b>Tape speeds:</b>	4 tracks, monophonic	
<b>Tracks:</b>	45 minutes per track, 3 hours in total at 7½ ips 1 hr. 30 min. per track, 6 hours in total at 3¾ ips 3 hours per track, 12 hours in total at 1⅞ ips	
<b>Recording time:</b> (with 1800 ft/550 m tape)	7" (18 cm) or smaller	
<b>Reels:</b>	40 ~ 18,000 Hz at 7½ ips	
<b>Frequency response:</b>	40 ~ 13,000 Hz at 3¾ ips	
<b>Flutter and wow:</b>	50 ~ 6,000 Hz at 1⅞ ips Less than 0.17% at 7½ ips Less than 0.3% at 3¾ ips Less than 0.4% at 1⅞ ips	
<b>Record/Playback head:</b>	In-line quarter track	
<b>Erase head:</b>	In-line quarter track	
<b>Inputs:</b>	Low impedance (600Ω) microphone -77 db (0.11 mV) High impedance (100KΩ) auxiliary input -27 db (34 mV)	(1) (1)
<b>Outputs:</b>	External speaker output 8Ω, 11.2 db (2.83V) High impedance monitor jack 10KΩ, 13 db (3.46V)	(1) (1)
<b>Speaker:</b>	4 x 6" (10 x 15 cm) dynamic	
<b>Power output:</b>	Max. 4W	
<b>Transistors:</b>	2SC402(4)---(2SC631x2, 2SC402Ax2), 2SB381(1), 2SB383(1), 2SD28(2)	
<b>Diodes:</b>	1T22(1), 5G-D(SD-1Z)(2)	
<b>Dimensions:</b>	14¾ (W) x 7¼ (H) x 13¾" (D) (37.5 x 18.5 x 34.0 cm)	
<b>Weight:</b>	21 lb (9.5 kg)	

**SONY**<sup>®</sup>  
**SERVICE MANUAL**

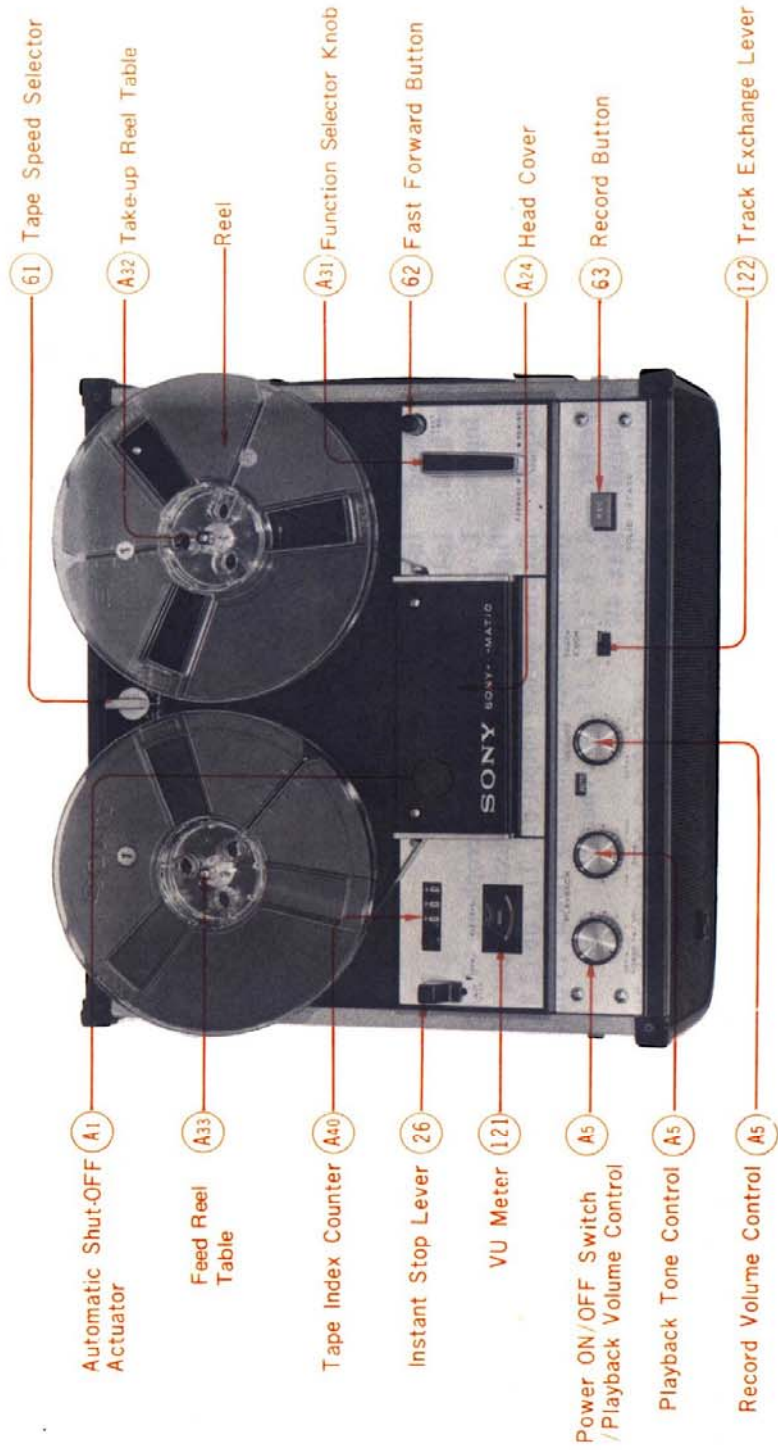
## Block Diagram



(Fig. 1)

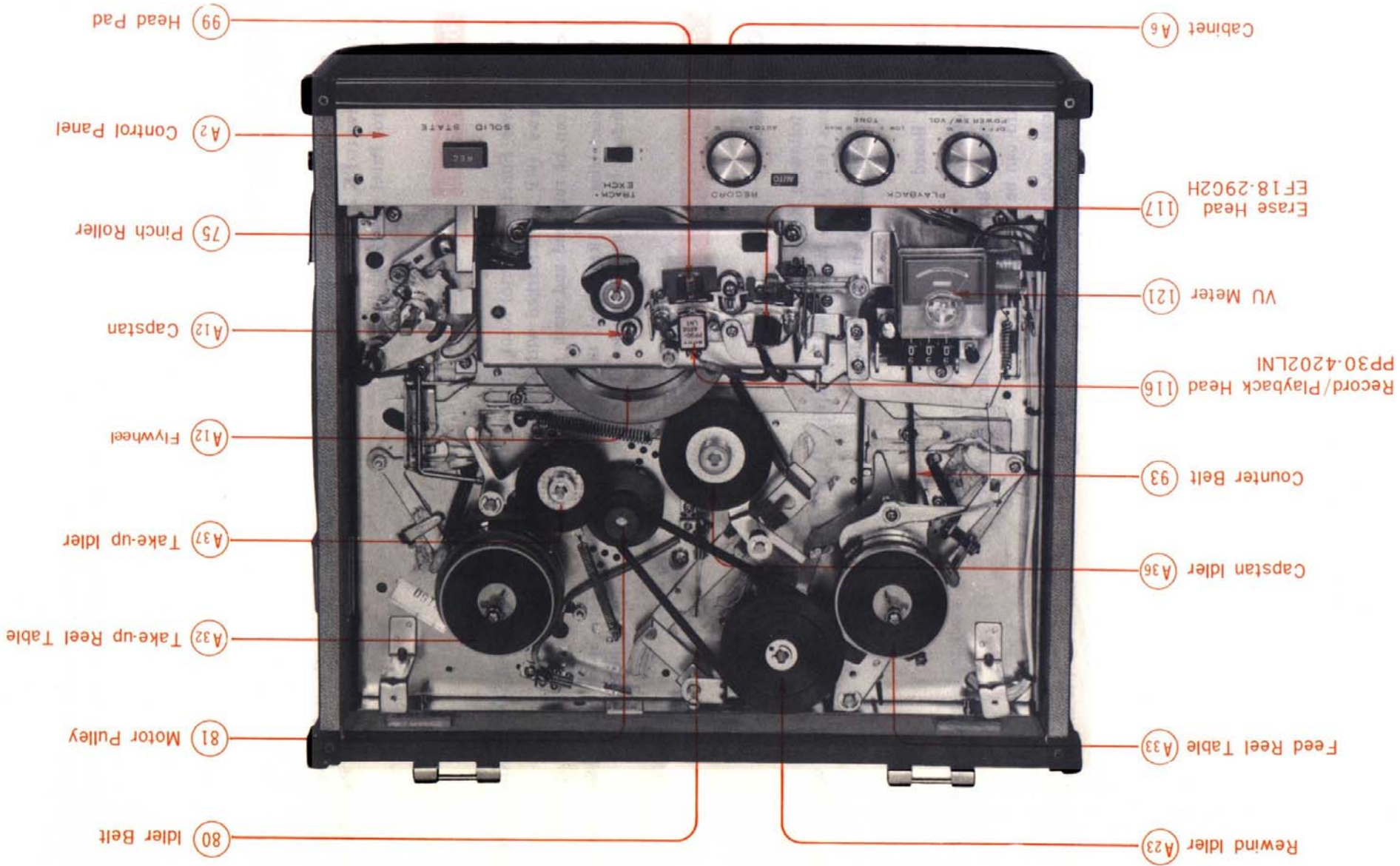


## Cabinet Top View



(Fig. 2)

Chassis Top View



(Fig. 3)

## Removal of Cabinet

- (1) Turn up-side down the Recorder on a Soft Pad.
- (2) Remove two Screws (⊕P 4 x 25 marked with ● in Fig. 4), two Rubber Feet and two Rubber Stoppers.
- (3) Remove four Screws (⊕RK 4 x 25 marked with ○ in Fig. 4), two Washers 4φ, two Handle Holders and one Carrying Handle as shown in Fig. 4.
- (4) Lift up the Cabinet gently.

**NOTE:** Take care not to cut the speaker leads.

## Removal of Control Panel

- (1) Remove Volume Control, Tone Control and Power Switch/Playback Volume Control shown in Fig. 2.
- (2) Remove four Screws (⊕RK 2.6 x 10 marked with ▲ in Fig. 5), four Washers 2.6φ and four Reel Panel Washers 2.6φ.
- (3) Lift up the Control Panel gently.

## Removal of Reel Panel

- (1) Remove Head Cover, Function Selector Knob, Instant Stop Knob, and Tape Speed Selector Knob shown in Fig. 2.
- (2) Remove two Screws (⊕P 3 x 8 marked with △ in Fig. 6).
- (3) Now Reel Panel can be removed and main mechanism can be checked.

**NOTE:** When re-assembling the Reel Panel, the Function Selector Shaft, Tape Speed Selector Shaft and four Holes (in the Circle in Fig. 6) must be located just at the center of the respective holes.

## Removal of Mounted Circuit Board

### Preamplifier Circuit Board

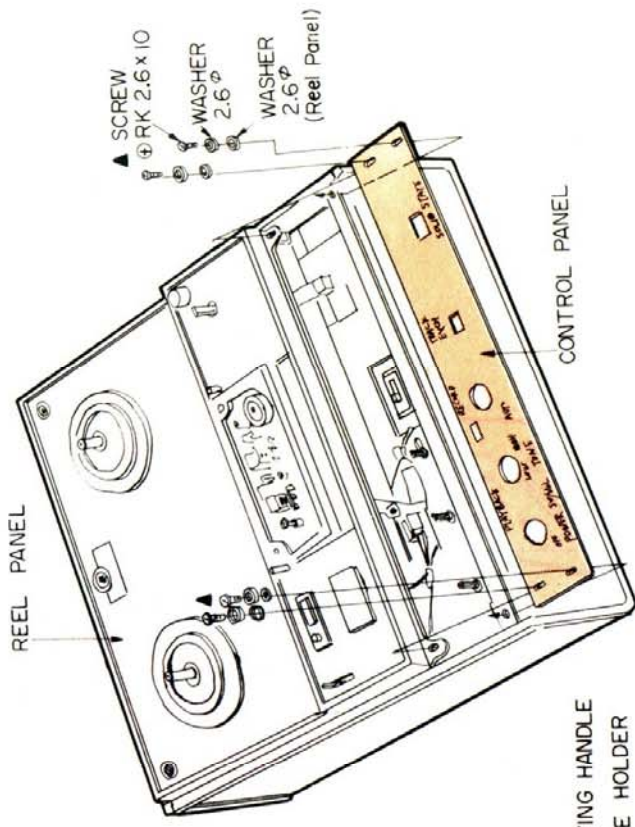
- (1) Remove cabinet following Removal of Cabinet.
- (2) Remove two screws (⊕P 3 x 6 marked with ● in Fig. 7), two spring washers 3φ and two washers 3φ.

**NOTE:** Take care not to cut the attached leads.

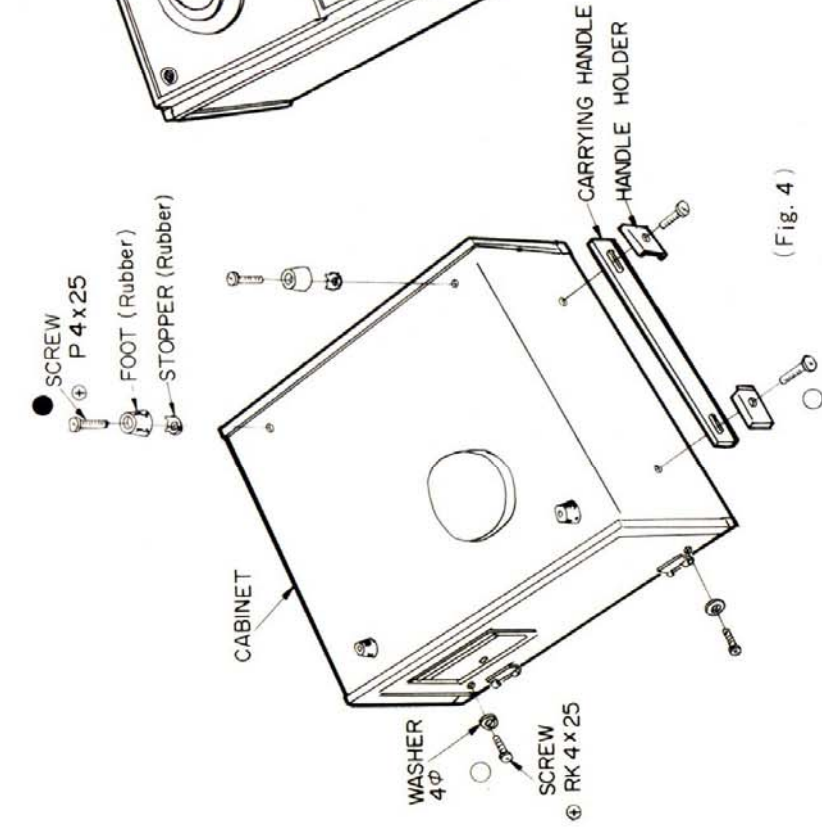
### Main Amplifier Circuit Board

- (1) Remove two Screws (⊕P 3 x 6 marked with ▼ in Fig. 8), two spring washers 3φ and two washers 3φ.
- (2) Twist vertically a part of Bracket at Circuit Board with pliers.
- (3) Now Circuit Board can be removed.

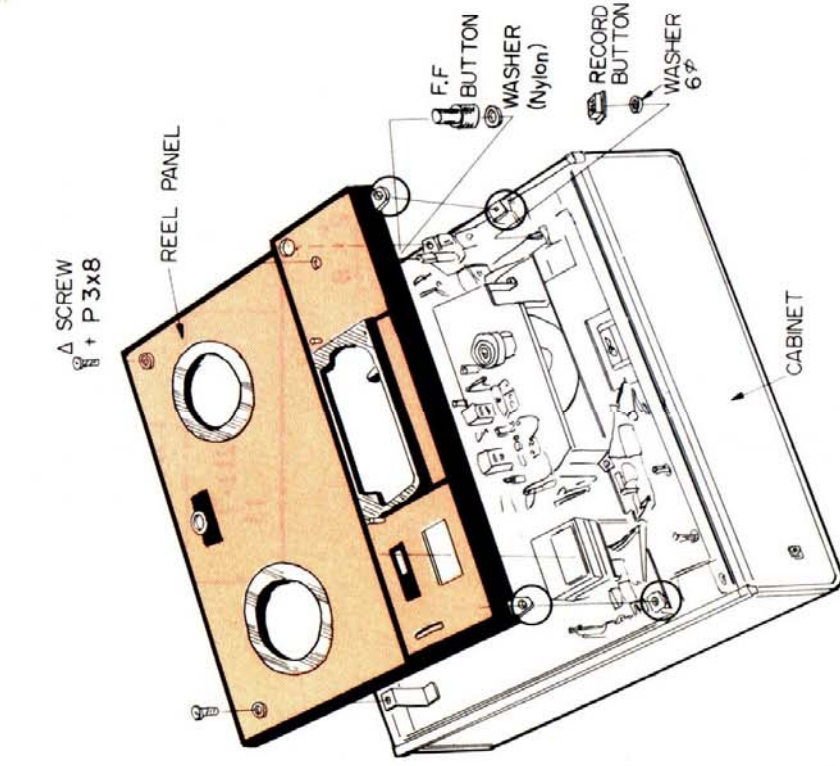
**NOTE:** 1. Take care not to cut the attached leads.  
2. When re-assembling the main amplifier, incline a part of Bracket with care not to break the Circuit Board.



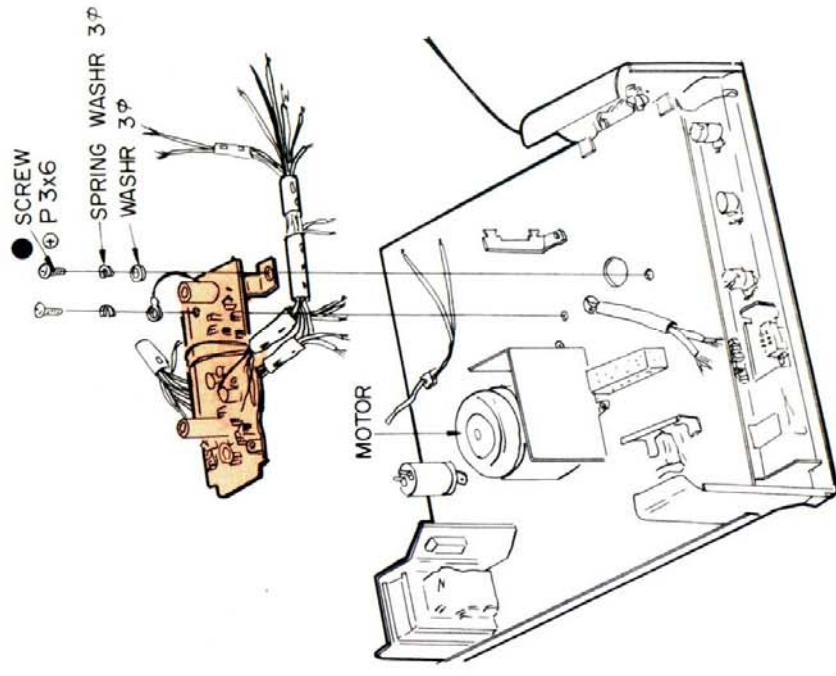
(Fig. 5)



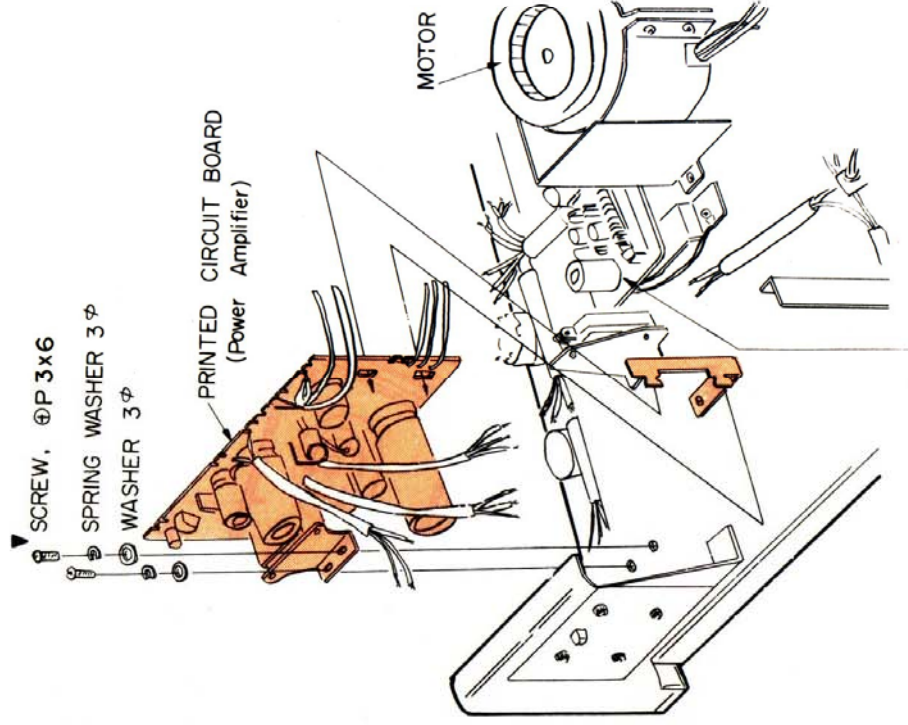
(Fig. 4)



(Fig. 6)



(Fig. 7)

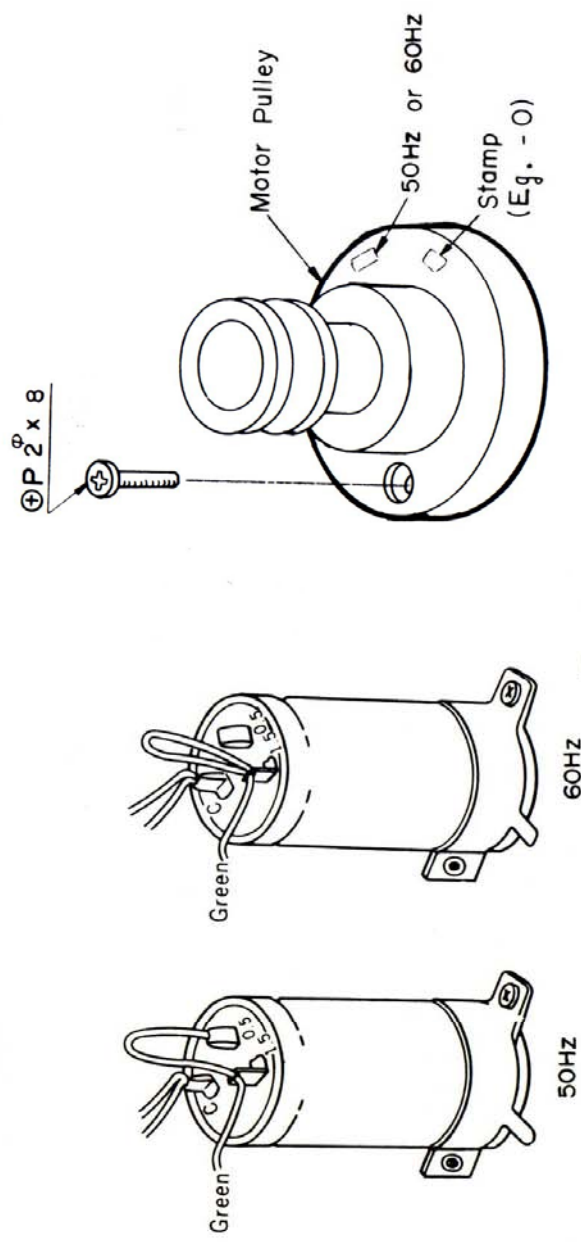


(Fig. 8) PRINTED CIRCUIT BOARD (Preamplifier)

**Modification to different power line frequency**

If the power line frequency is different from what the Tape recorder is adjusted for, the motor pulley and tapping of the motor starting capacitor terminals must be altered as follows:

	For 50 Hz	For 60 Hz
Connection between terminals of the Metalized Paper (MP) Capacitor	Connected 2μF	Disconnected 1.5μF
Motor Pulley	3-418-210- <sup>01</sup> / <sub>13</sub>	3-418-211- <sup>01</sup> / <sub>13</sub>

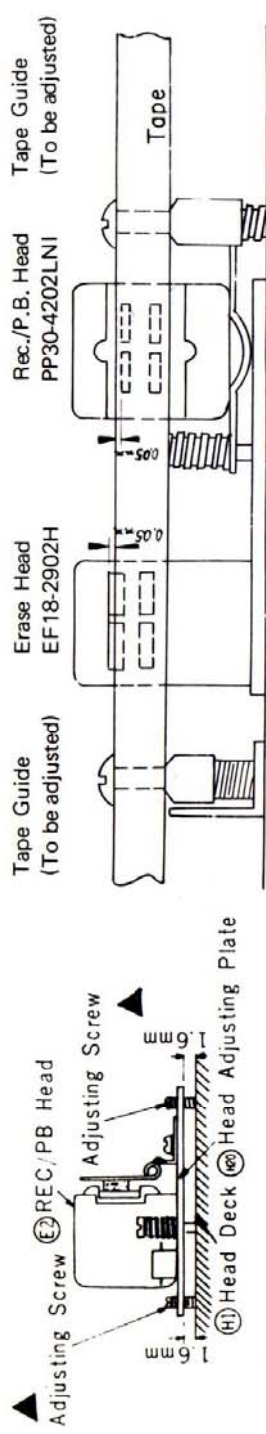


(Fig. 9)

### Elevation Alignment

The exact vertical positioning of Head are adjusted at the factory and should never need readjustment. However, when replacing Head or Tape Guide, height of the replaced part in relation to the tape should be checked as follows:

- (1) Thread a tape.
- (2) Align the upper edges of the Head Cores and upper edge of the tape by turning the Tape Guide located on the left side of the Erase Head.
- (3) Turn the Tape Guide clockwise by approximately  $30^\circ$  from the position obtained in the preceding process, so that the upper edge of the tape is approximately 0.05 mm lower than that of the Erase Head Core.
- (4) Align the upper edges of the Head Cores and upper edges of the tape by turning the Tape Guide located on the right side of the Rec./P.B. Head.
- (5) Turn the Tape Guide counterclockwise by approximately  $30^\circ$  from the position obtained in the preceding process, so that the upper edge of the tape is approximately 0.05 mm higher than that of the Rec./P.B. Head Core.

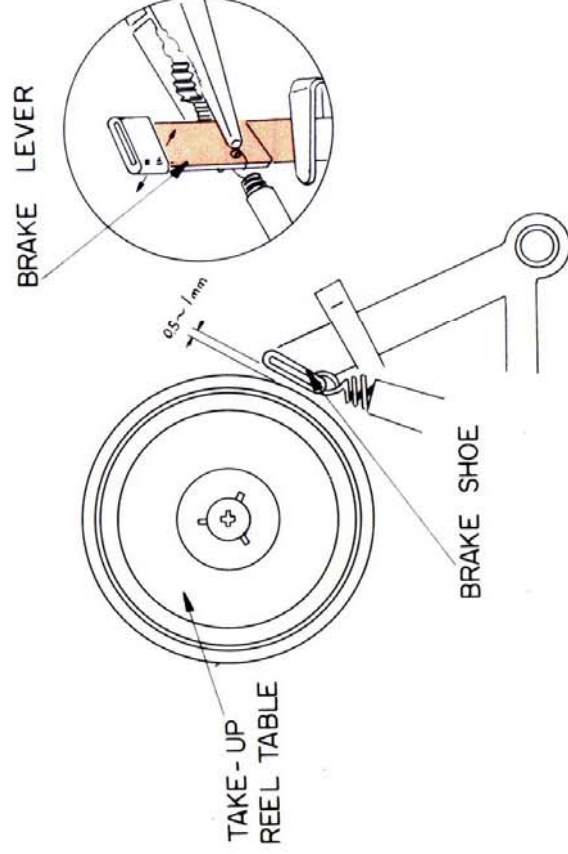


(Fig. 11)

### Brake Adjustment

When the tape slacks at stop mode, adjust the Brake as follows: Refer to Fig. 12.

- (1) Set the Function Selector knob to forward position.
- (2) Bend the Brake Levers to right or left with pliers (as shown in the circle), so that the clearance between the Brake Shoe and the Take-up Reel Table must keep between 0.5~1 mm.



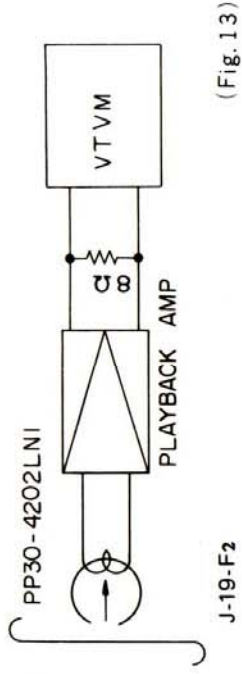
(Fig. 12)

## Electrical Adjustment

The alignment is to be performed at a tape speed of 7½ ips unless otherwise specified. Connect an 8Ω load resistor in parallel with the VTVM terminals and connect the VTVM to the Speaker Output jack. Set the Speaker ON/OFF Switch on.

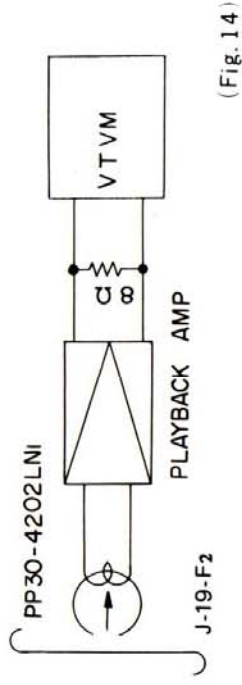
### Playback Azimuth Alignment

- (1) Playback a 10 kHz signal recorded on the first tone of the SONY alignment tape (J-19-F2).
- (2) Adjust the Azimuth Alignment Screw located on the right side of the Playback Head to obtain maximum recording on the VTVM.



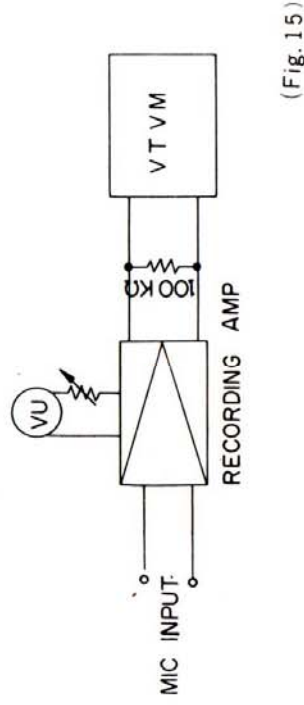
### Playback Output Level Adjustment

- (1) Set the Volume Control and the tone Control to the maximum position.
- (2) Playback a 1 kHz signal of -10 db recorded on the third tone of the SONY alignment tape (J-19-K1) and measure the output with the VTVM.



### Recording Level Adjustment

- (1) Set the Speaker ON/OFF Switch to OFF.
- (2) Set the Machine in Record Mode.
- (3) Feed a 1000 Hz signal of -60 db (0.775 mV) into Mic Input jack.
- (4) Turn the Recording Volume Control R13 so that the pointer of the Level Meter is just at the boundary between the red portion and the black portion.
- (5) Turn the adjustable Resistor R46 so that the pointer of the Level Meter is just at the boundary between

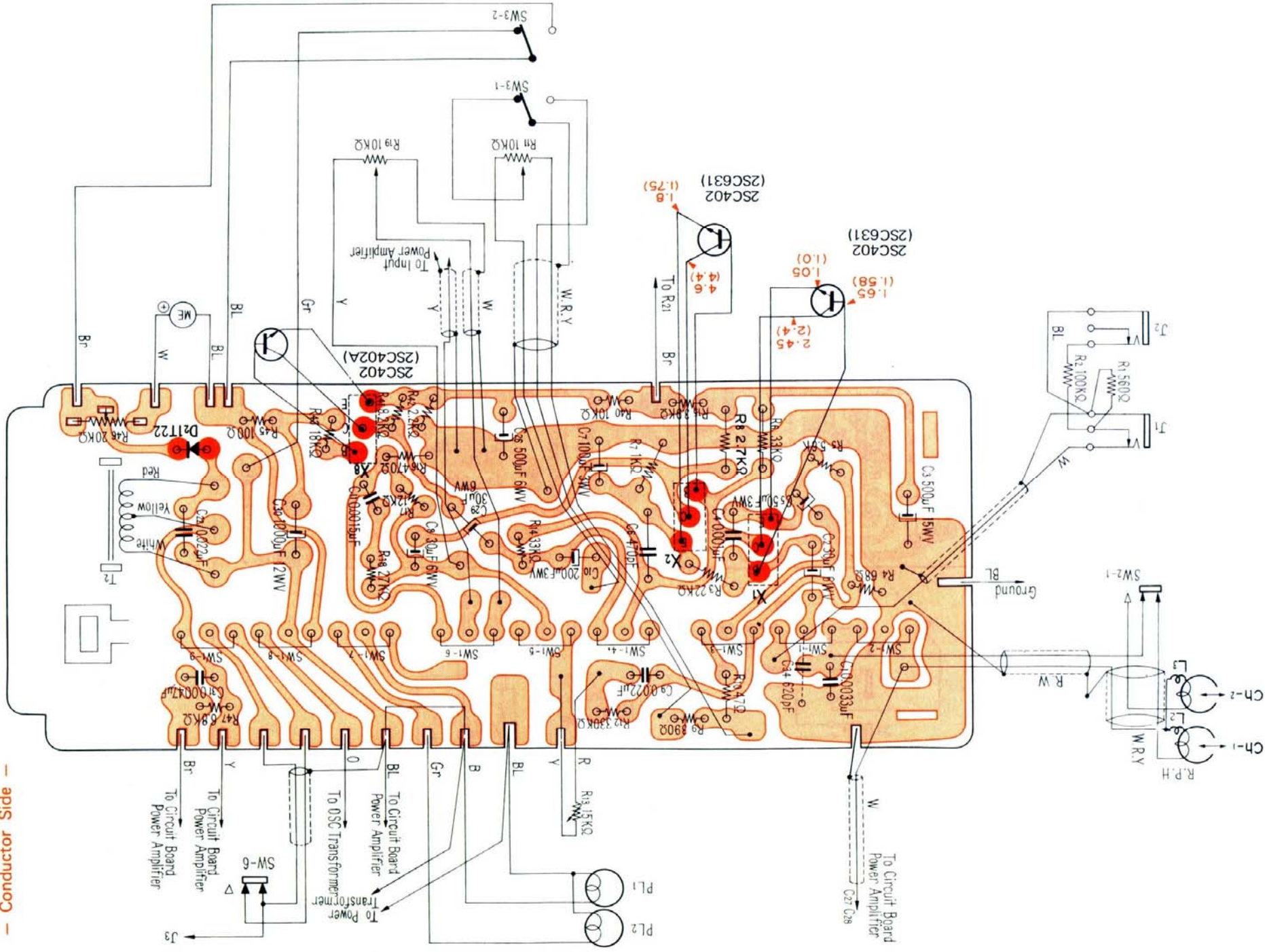




# Mounting Diagram

## Preampifier Section

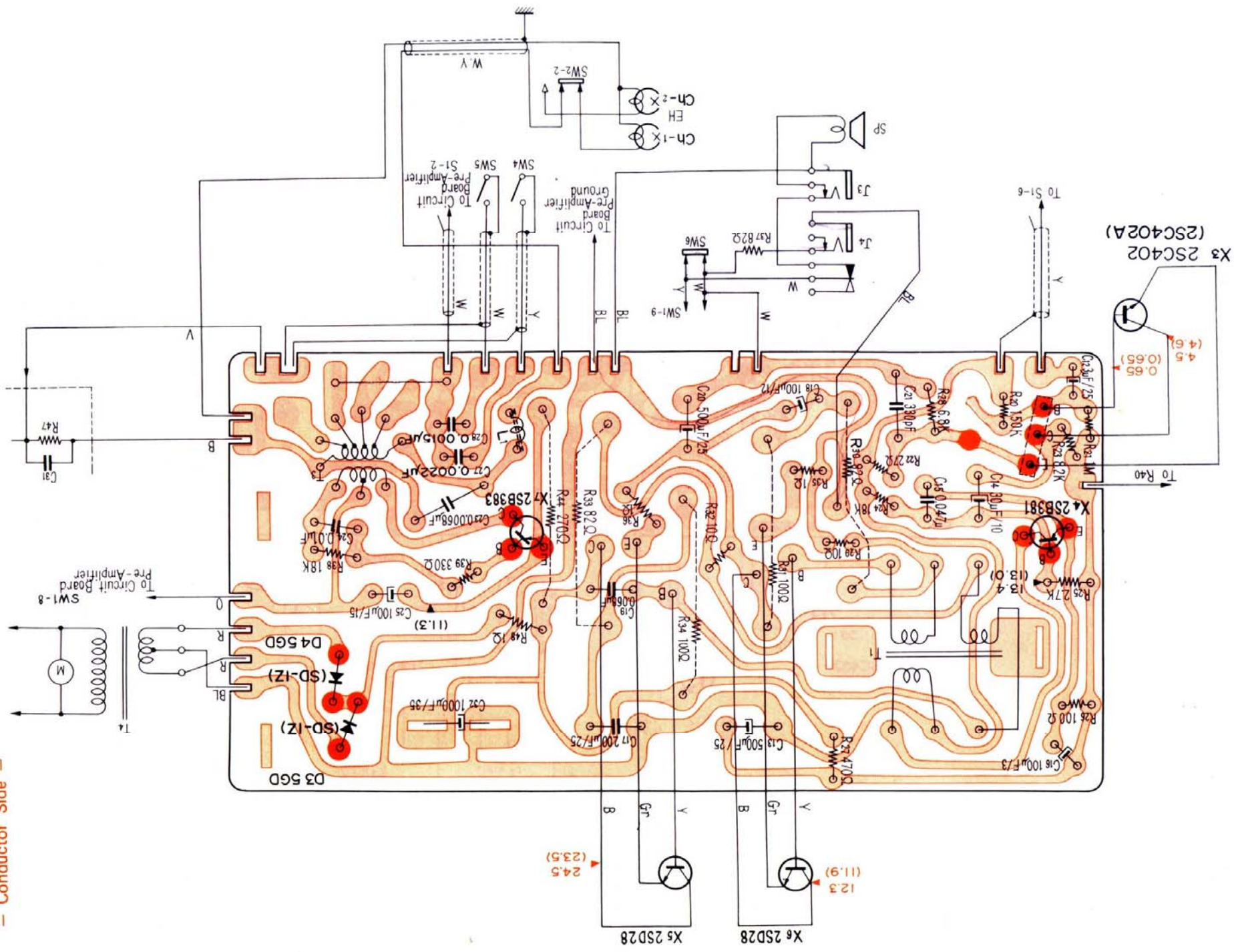
— Conductor Side

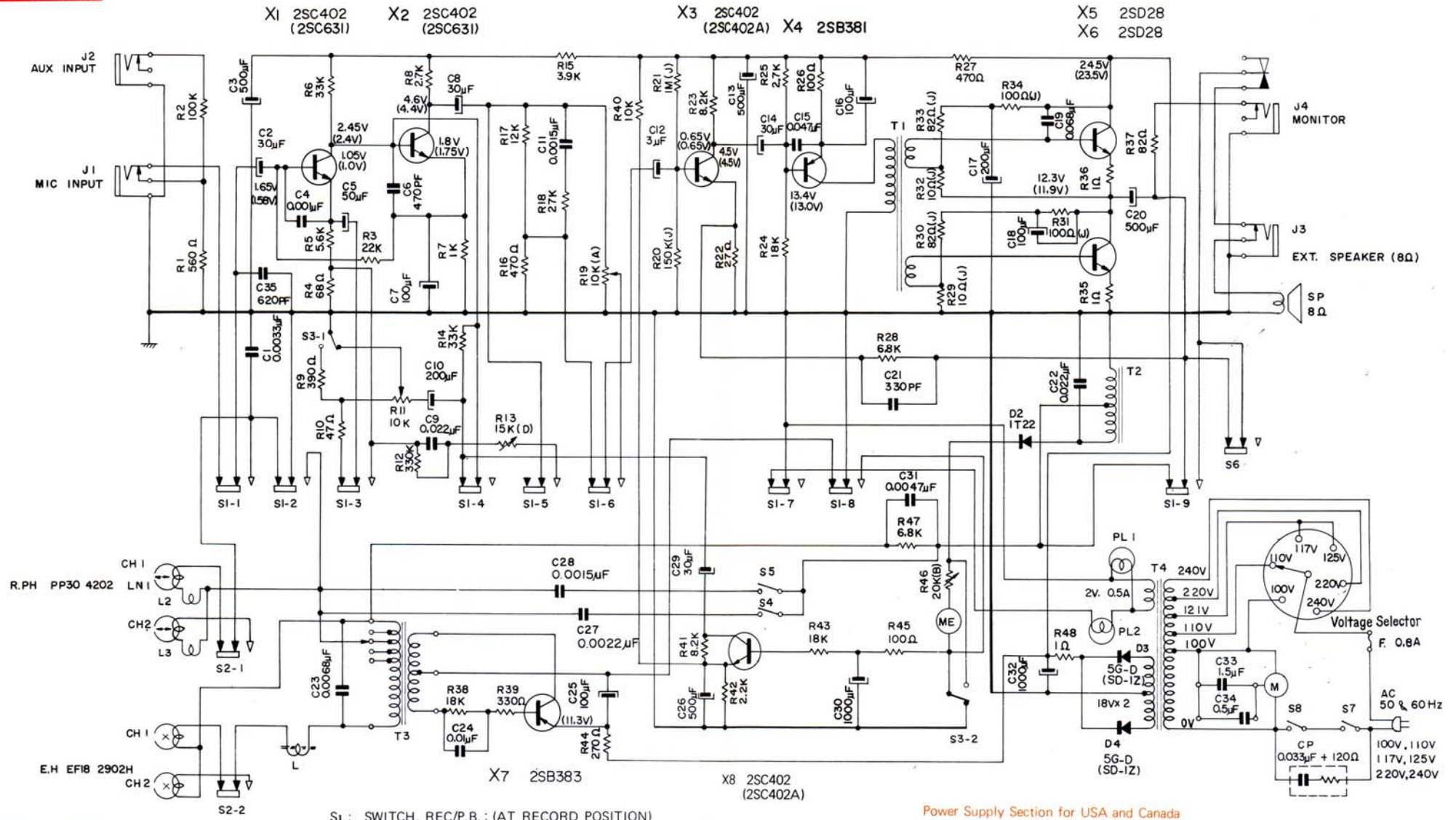


# Mounting Diagram

## Power Amplifier Section

— Conductor Side





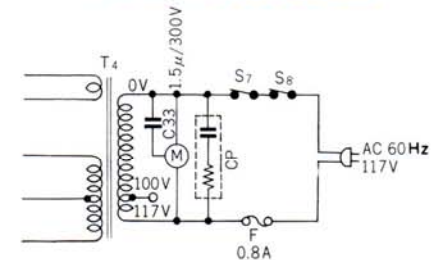
Replacement of Transistors X1, X2, X3 & X8 and Diodes D3 & D4

Symbol	New Type	Former Type	Symbol	New Type	Former Type
X1	2SC631 or 2SC632	2SC402	D3	SD-1Z FR-1P	SG-D
X2	2SC631 or 2SC632	2SC402	D4	SD-1Z FR-1P	SG-D
X3	2SC402A or 2SC403A	2SC402			
X8	2SC403A	2SC402			
	2SC633				
	2SC634				
	2SC631				

- S1 : SWITCH, REC/P.B. : (AT RECORD POSITION)
- S2 : SWITCH, CHANNEL SELECTOR (CHANNEL-1 POSITION)
- S3 : SWITCH, AUTO/MANUAL SELECTOR (MANUAL POSITION)
- S4 : SWITCH, EQUALIZER (ON 3/4 & 1/8 IPS POSITION)
- S5 : SWITCH, EQUALIZER (ON 1/8 IPS POSITION)
- S6 : SWITCH, SPEAKER ON/OFF
- S7 : SWITCH, POWER ON/OFF
- S8 : SWITCH, AUTOMATIC SHUT-OFF

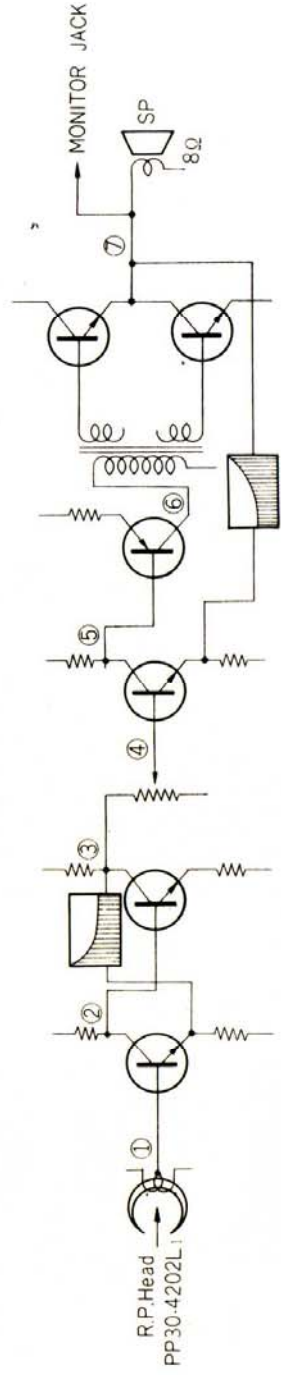
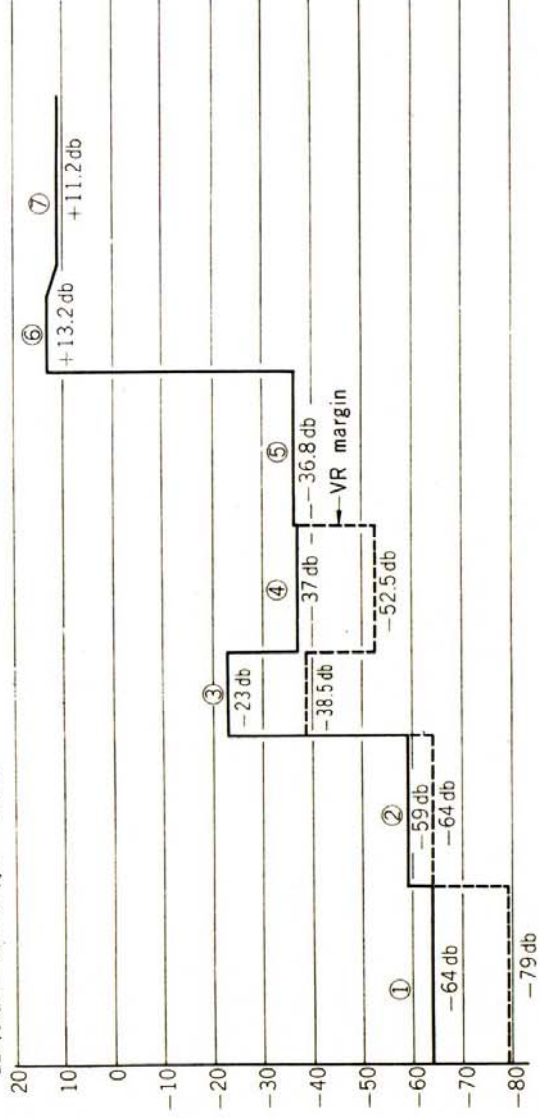
- VALUES IN PARENTHESES ARE MEASURED WITH 0 SIGNAL ON DC.
- TRANSISTOR AND DIODE TYPE IN PARENTHESES ARE NEW TYPE.

Power Supply Section for USA and Canada

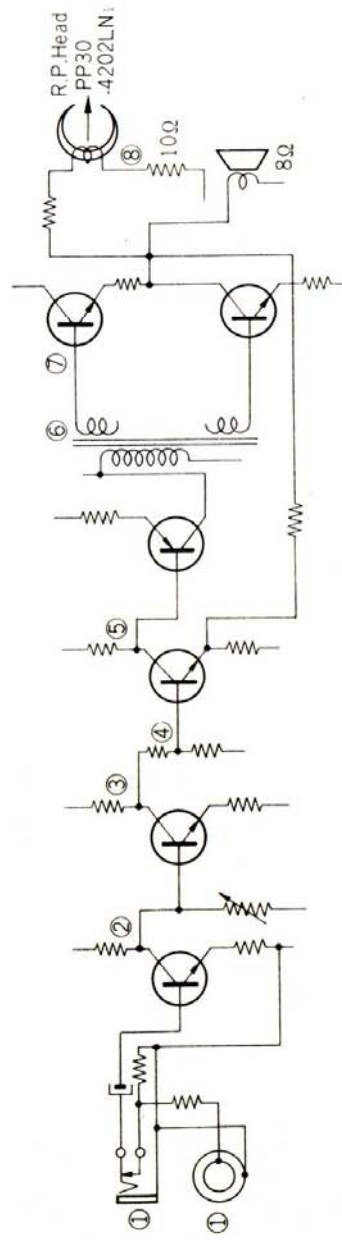
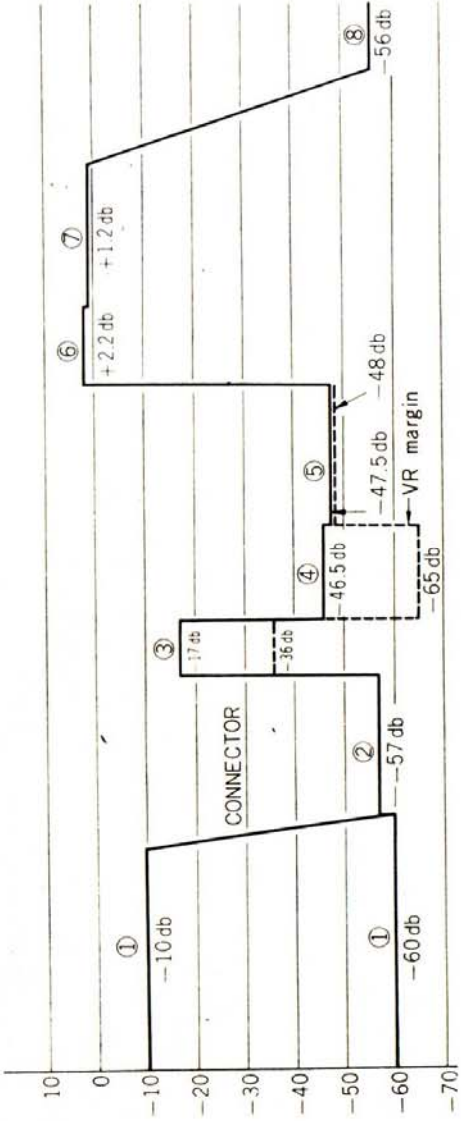


# Level Diagram

dB (0 dB = 0.775V), f = 1 kHz



dB (0 dB = 0.775V), f = 1 kHz



## Parts List

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
A1	X-34290-01-	AUTOMATIC SHUT-OFF ACTUATOR ASS'Y	3	3-429-103-	BRACKET, power transformer for UL & CSA
A2	X-34290-02-	PANEL ASS'Y, control	3	3-429-302-	BRACKET, power transformer for E
A3	X-34290-03-	BRACKET ASS'Y, volume control	4	3-429-104-	HUMBUCK RING, motor
A4	X-34290-04-	BRACKET ASS'Y, auto/manual indicating plate	5	3-429-105-	SUPPORT, humbuck ring
A5	X-34290-05-1	KNOB ASS'Y, control	6	3-429-106-	PLATE, motor noise shield
A6	X-34292-01-	CABINET ASS'Y, main body	7	3-429-107-	BRACKET, printed circuit board
A7	X-34292-02-	CABINET ASS'Y, lid			mounting (preamp)
A8	X-34290-09-	BASE PLATE ASS'Y (chassis)	8	3-429-108-	BRACKET, printed circuit board
A9	X-34290-10-2	CARTON ASS'Y			mounting (preamp)
A9	X-34240-05-	LOCK SLIDE ASS'Y	9	3-429-109-	BRACKET, printed circuit board
A10	X-34240-02-	LEVER ASS'Y, pinch			mounting (main amp)
A11	X-34240-03-	CAM ASS'Y, lock plate	10	30429-110-	BRACKET, printed circuit board (main amp)
A11	X-34240-06-	LOCK SLIDER MECHANISM ASS'Y			
A12	X-34180-04-3	CAPSTAN SHAFT ASS'Y	11	3-429-111-	LEVER, recording button
A13	X-34180-05-3	CAM ASS'Y, function selector			SPRING, auto/manual indicating plate; mounting bracket
A14	X-34180-06-	ARM ASS'Y, capstan idler	12	3-429-113-	CAM, auto/manual selector
A15	X-34300-27-	ARM ASS'Y, take-up idler	13	3-429-114-	SPACER, speaker ON/OFF switch
A16	X-34290-12-	LEVER ASS'Y, speed selector	14	3-429-115-	INDICATING PLATE, jack
A17	X-34180-09-	ARM ASS'Y, rewind idler	15	3-429-116-	HEAT SINK, transistor 2SD28
A18	X-34300-02-	LEVER ASS'Y, capstan idler release	16	3-429-118-	PULL LEVER, rec./p.b. switch
A19	X-34180-11-4	CAM ASS'Y, recording lock plate	17	3-429-119-	PULL ROD, rec./p.b. switch controlling
A20	X-34180-12-	ARM ASS'Y, brake (take-up reel)	18	3-429-120-	PLATE (A), terminal protector
A20	X-34180-36-	LEVER ASS'Y, instant stop brake			SHAFT, function selector
A21	X-34180-14-1	JOINT LEVER ASS'Y, function selector cam & slider			CUSHION, printed circuit board
A22	X-34180-15-	DRUM ASS'Y, take-up spindle			BUFFER SPRING, pull rod
A23	X-34180-17-3	REWIND IDLER ASS'Y			PLATE, insulating for UL & CSA
A24	X-34180-19-3	HEAD COVER ASS'Y for E & CSA			PLATE (B), terminal protector
A25	X-34180-19-4	HEAD COVER ASS'Y for UL			BAG, polyethylene
A25	X-34180-26-	DECK ASS'Y, feed reel table			VIBRATION ABSORBER
A26	X-34180-27-	LEVER ASS'Y, pinch roller shift			COVER, protecting for UL
A28	X-34180-30-1	ARM ASS'Y, stepper			LABEL, specification for UL
A29	X-34180-33-4	MOUNTING PLATE ASS'Y, motor pulley			LABEL, specification for E
A31	X-34180-37-	KNOB ASS'Y, function selector			LABEL, specification for CSA
A32	X-34180-39-	TABLE ASS'Y, take-up reel	19	3-418-009-	SHAFT, pinch roller shifter
A33	X-34180-40-	TABLE ASS'Y, feed reel			JOINT, pinch lever & shifter
A40	X-34180-41-2	COUNTER ASS'Y, tape index	20	3-418-013-	SHIFTER, tape pad
A35	X-34188-02-2	HEAD DECK ASS'Y	22	3-418-018-	SHAFT, take-up reel table
A34	X-34188-03-3	REEL PANEL ASS'Y	21	3-418-019-	SHAFT, feed reel table
A36	X-00270-03-	CAPSTAN IDLER ASS'Y	24	3-418-020-	SPACER, feed reel table shaft
A37	X-34300-25-	IDLER ASS'Y	23	3-418-021-	SPACER, take-up reel table shaft
A41	X-34300-40-	BRAKE ASS'Y, instant stop	25	3-418-023-	PULLEY, tape counter
			26	3-418-033-	LEVER, instant stop knob
			27	3-418-035-	ALIGNING PLATE, instant stop knob
1	3-429-101-	LEG PLATE, deck	28	3-418-044-	LEVER, rewind arm control
2	3-429-102-	BRACKET, jack	29	3-418-051-	LEVER, fast forward lock
			30	3-418-052-	BRACKET, fast forward clank

## Parts List

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
31	3-418-053-	FAST FORWARD CLANK	80	3-418-208-	BELT, idler
32	3-418-054-	SPACER, stepper arm	81	3-418-210-10	PULLEY 50 Hz, motor except UL & CSA
33	3-418-055-	SHAFT, fast forward lock lever	81	3-418-211-10	PULLEY 60 Hz, motor
34	3-418-060-	SHAFT, capstan idler arm	82	0-007-259-	TAPE PAD, rec./p.b. head
35	3-418-061-	SHAFT, speed selector knob	83	0-027-022-	SUPPORT, take-up spindle drum
36	3-418-065-	RECORD LOCK LEVER	85	0-027-134-	SPACER, take-up brake arm etc.
37	3-418-069-	SPRING, capstan idler arm	86	0-027-193-	SPRING, pinch lever
38	3-418-070-	SPRING, fast forward idler arm	87	0-027-216-	OIL RING, rewind & capstan idler
39	3-418-072-	SPRING, record lock lever	88	0-027-220-	PAPER WASHER 5 $\phi$ , rewind idler
40	3-418-073-	SPRING, capstan idler arm shaft	89	0-027-245-	FELT, oil absorber on support
41	3-418-074-	SPRING, speed selector lever	90	0-027-473-	TAPE PAD, erase head
42	3-418-075-	SPRING, capstan idler release lever	91	0-037-249-	SPLIT NUT 2 $\phi$
43	3-418-077-	SPRING, fast forward idler arm shaft	92	0-037-406-	TAPE GUIDE
44	3-418-078-	SPRING, instant stop brake lever		0-049-142-	FELT WASHER, fast forward button
45	3-418-079-	SPRING, instant stop lever		0-051-220-	BUFFER SPRING, pull rod
46	3-418-082-	SPRING, pinch roller shaft	93	0-056-247-01	BELT, tape counter
47	3-418-083-	PIN, fast forward clank holding	94	0-056-322-	OIL RING, fast forward idler
48	3-418-084-	SPRING, buffer for rewind idler arm	95	3-103-206-02	WASHER, chassis fixing (special)
49	3-418-085-	SPACER, function selector cam shaft	96	3-103-527-	RUBBER STAPLE
50	3-418-086-	SPACER, instant stop brake lever	97	3-401-156-	WASHER, mini jack insulating
51	3-418-091-	SPRING, fast forward lock lever shaft	99	3-402-654-	TAPE PAD HINGE, rec./p.b. head
53	3-418-106-	HOLDER, capstan shaft	100	3-402-655-	TAPE PAD HINGE, erase head
54	3-418-107-	SUPPORT, capstan bearing	101	3-402-764-	SPACER, speed selector knob shaft
56	3-418-111-	RING CAP, capstan bearing	102	3-409-902-	ESCUTCHEON, AC adaptor for E
57	3-418-112-	OIL RING, capstan bearing		3-409-102-	NYLON WASHER, fast forward button & pinch roller
58	3-418-113-02	TAPE SUPPORT, right	103	3-409-108-	NYLON WASHER, reel panel
59	3-418-115-	NYLON WASHER 8 $\phi$ , pinch roller	104	3-410-032-	CLAMP, AC power cord except CSA
60	3-418-117-	CUSHION, volume unit meter	105	3-410-044-	CAP, metalized paper
61	3-418-134-	KNOB, speed selector		3-413-072-	SPACER, screw RK 2.6
62	3-418-137-	BUTTON, fast forward	115	3-419-211-	CAP, capstan idler
63	3-418-139-	BUTTON, record	106	3-421-074-	SPRING, rewind release
64	3-418-163-	FIXTURE, carrying handle	107	3-421-126-	SPACER, microphone jack
66	3-418-165-	SHAFT, fast forward idler arm	108	3-424-015-	BRACKET, automatic shut-off actuator lock
67	3-418-166-	SPECIAL WASHER, rewind idler	109	3-424-030-	GUIDE, automatic shut-off actuator
68	3-418-167-	TAPE SUPPORT, left	110	3-424-032-	SPRING, automatic shut-off actuator
70	3-418-168-	SPRING, recording reset	112	3-811-032-	HEAT SINK, transistor 2SB383
71	3-418-171-	SPRING, tape guide height	113	3-005-001-70	SPRING, rec./p.b. head height adjusting
73	3-418-179-	NYLON WASHER, capstan shaft		3-401-179-	LUG, cord stopping for UL & CSA
74	3-418-191-	SCREW, rec./p.b. head height lock		3-401-179-	LUG, cord stopping for E
74	3-418-193-	KNOB, instant stop		3-405-407-	WASHER, thrust; drive wheel
72	3-430-234-	NYLON WASHER 16 $\phi$ , pinch lever		3-409-124-	NYLON WASHER
75	3-430-233-	PINCH ROLLER		3-419-098-	NYLON WASHER 52 for UL
76	3-430-231-	OIL RING, pinch roller			
77	3-430-235-	SPACER, pinch roller			
78	3-418-201-	SPRING, feed brake arm			
79	3-418-204-	CARRYING HANDLE			

## Parts List

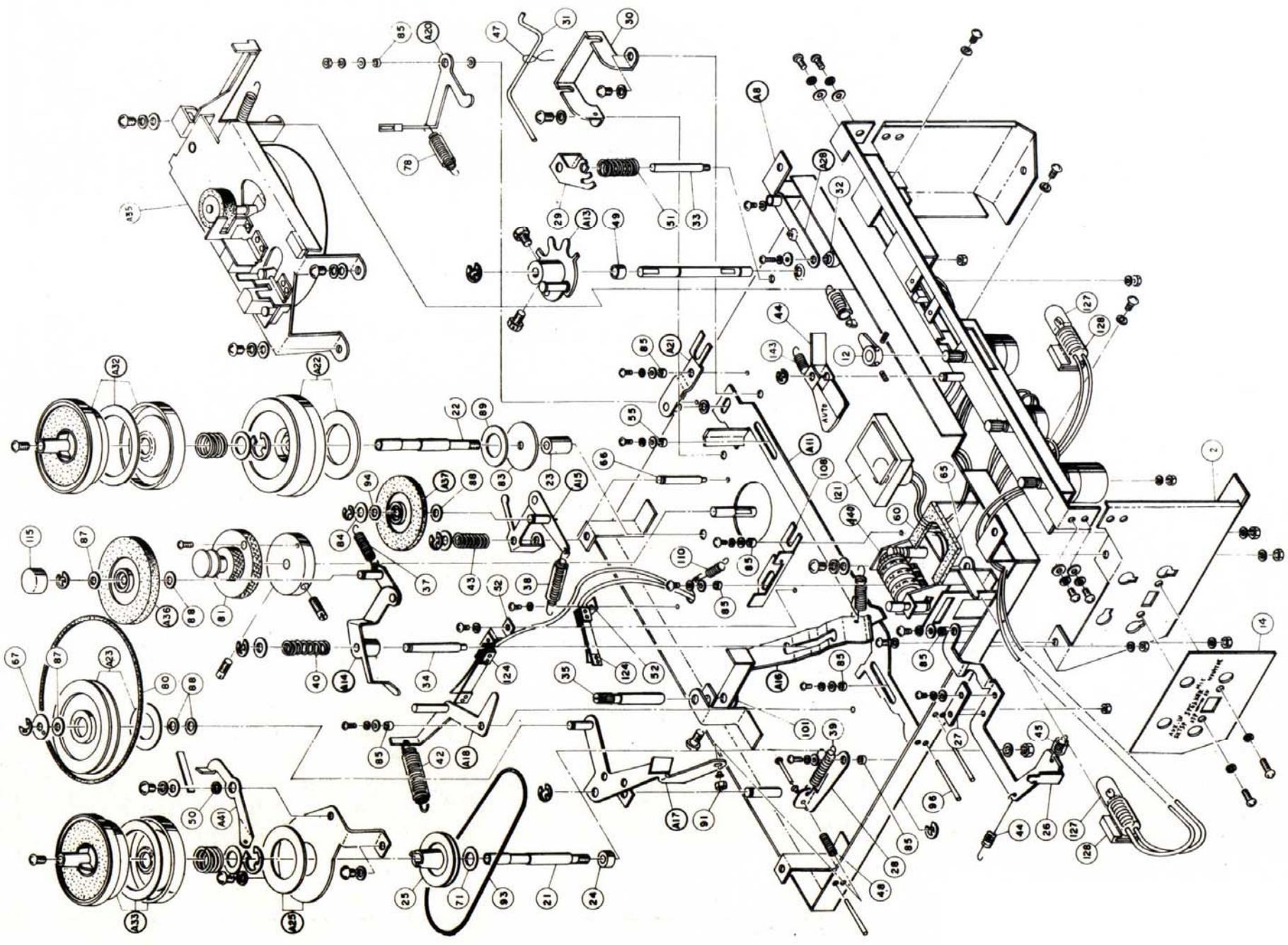
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
113	3-419-438-	COVER, fuse post		7-621-255-56	SCREW, machine; Ⓟ P 2.6x8
	3-424-065-	SPACER, speed selector lever		7-621-261-25	SCREW, machine; Ⓟ P 3x4
	3-430-022-	CUSHION, panel		7-621-265-32	SCREW, machine; Ⓟ P 3x5
	3-430-113-	SHAFT, pinch roller		7-621-261-45	SCREW, machine; Ⓟ P 3x6
	3-430-159-	CAP, capstan shaft oil		7-621-261-62	SCREW, machine; Ⓟ P 3x10
	3-430-214	TAPE GUIDE		7-621-261-65	SCREW, machine; Ⓟ P 3x10
	3-430-215-	SHAFT, tape guide		7-621-261-75	SCREW, machine; Ⓟ P 3x12
	3-430-224-	SPRING, tension coil		7-621-261-85	SCREW, machine; Ⓟ P 3x14
	3-430-232-	CAP, pinch roller		7-621-268-35	SCREW, machine; Ⓟ P 4x5
	0-041-310-	MOLD, terminal strips		7-621-268-45	SCREW, machine; Ⓟ P 4x6
			7-622-268-55	SCREW, machine; Ⓟ P 4x8	
	0-041-127-01	ACCESSORY BAG for 50 Hz		7-621-659-66	SCREW, machine; Ⓟ RK 2.6x8
	0-041-127-02	ACCESSORY BAG for 60 Hz		7-621-269-56	SCREW, machine; Ⓟ P 4x25
	1-504-034-12	MAGNETIC EARPHONE ME-20		7-621-461-52	SCREW, machine; Ⓟ T 3x8
	1-534-033-13	CONNECTION CORD RK-69		7-621-461-56	SCREW, machine; Ⓟ T 3x8
	3-401-193-02	TAPE COTTON		7-621-462-62	SCREW, machine; Ⓟ T 3x30
	3-403-810-	BAG, microphone protecting		7-621-770-78	SCREW, machine; Ⓟ B 3x12
	3-407-956-	LABEL, caution for CSA		7-621-713-35	SCREW, machine; set 3x5
	3-419-752-	SPECIFICATION, fuse capacitor for E & CSA		7-621-840-72	SCREW, machine; wood Ⓟ R 2.1x6.3 for E
	3-427-291-	LABEL, caution for UL		7-623-205-22	WASHER, spring; 2φ
	3-701-020-	BAG, check sheet		7-623-207-22	WASHER, spring; 2.6φ
	3-701-025-01	SPLICING TAPE SP-2 for E		7-623-208-22	WASHER, spring; 3φ
	3-701-030-	LABEL, serial number		7-623-210-22	WASHER, spring; 4φ
	3-701-031-	ENVELOPE, IBM card for UL		7-623-212-02	WASHER, spring; 5φ
	3-701-034-	CARD, quality control for UL		7-623-105-12	WASHER, plain; 2φ
	3-701-035-	WARRANTY CARD for UL		7-623-107-12	WASHER, plain; 2.6φ
	3-701-064-	BAG, accessory		7-623-108-12	WASHER, plain; 3φ
	3-790-224-14	MANUAL, instruction for E		7-623-110-12	WASHER, plain; 4φ
	3-790-224-22	MANUAL, instruction for UL		7-623-112-12	WASHER, plain; 5φ
	3-790-224-43	MANUAL, instruction for CSA		7-622-108-02	NUT 3φ
	3-793-010-20	TAPE TALK		7-622-110-02	NUT 4φ
	3-793-044-	IMPORTANT, carton for UL		7-622-212-01	WASHER 5φ
	3-793-105-	WARRANTY CARD for CSA		7-622-408-11	NUT; speed 3φ
	3-793-106-	GUARANTEE CARD for CSA		7-623-508-01	LUG 3φ
	3-793-183-	INSPECTION CARD		7-623-624-01	EYELET 2.5x5
	8-811-960-30	MICROPHONE F-96 (MTL)		7-623-632-01	EYELET 3x4
	8-813-651-	LABEL, color indicating		7-624-105-05	RETAINING RING E-3
	8-860-105-	SONY-O-MATIC REEL R-5A		7-624-108-05	RETAINING RING E-4
	8-918-212-	TAPE DME-522 except UL		7-624-109-05	RETAINING RING E-5
	X-37010-18-	HEAD CLEANING RIBBON ASS'Y except UL		7-623-308-05	WASHER, lock; int. tooth 3φ
				7-623-408-05	WASHER, lock; ext. tooth 3φ
	7-621-255-22	SCREW, machine; Ⓟ P 2x4			
	7-612-255-42	SCREW, machine; Ⓟ P 2x6			
	7-621-255-52	SCREW, machine; Ⓟ P 2x8			
	7-621-255-72	SCREW, machine; Ⓟ P 2x10			
	7-621-256-22	SCREW, machine; Ⓟ P 2x20			
	7-621-259-12	SCREW, machine; Ⓟ P 2.6x3			
	7-621-259-32	SCREW, machine; Ⓟ P 2.6x5			
	7-621-255-42	SCREW, machine; Ⓟ P 2.6x6			
	7-621-255-52	SCREW, machine; Ⓟ P 2.6x8			
<b>NOTE:</b>					E = STANDARD MODEL UL = U S A CSA = CANADA

Parts List

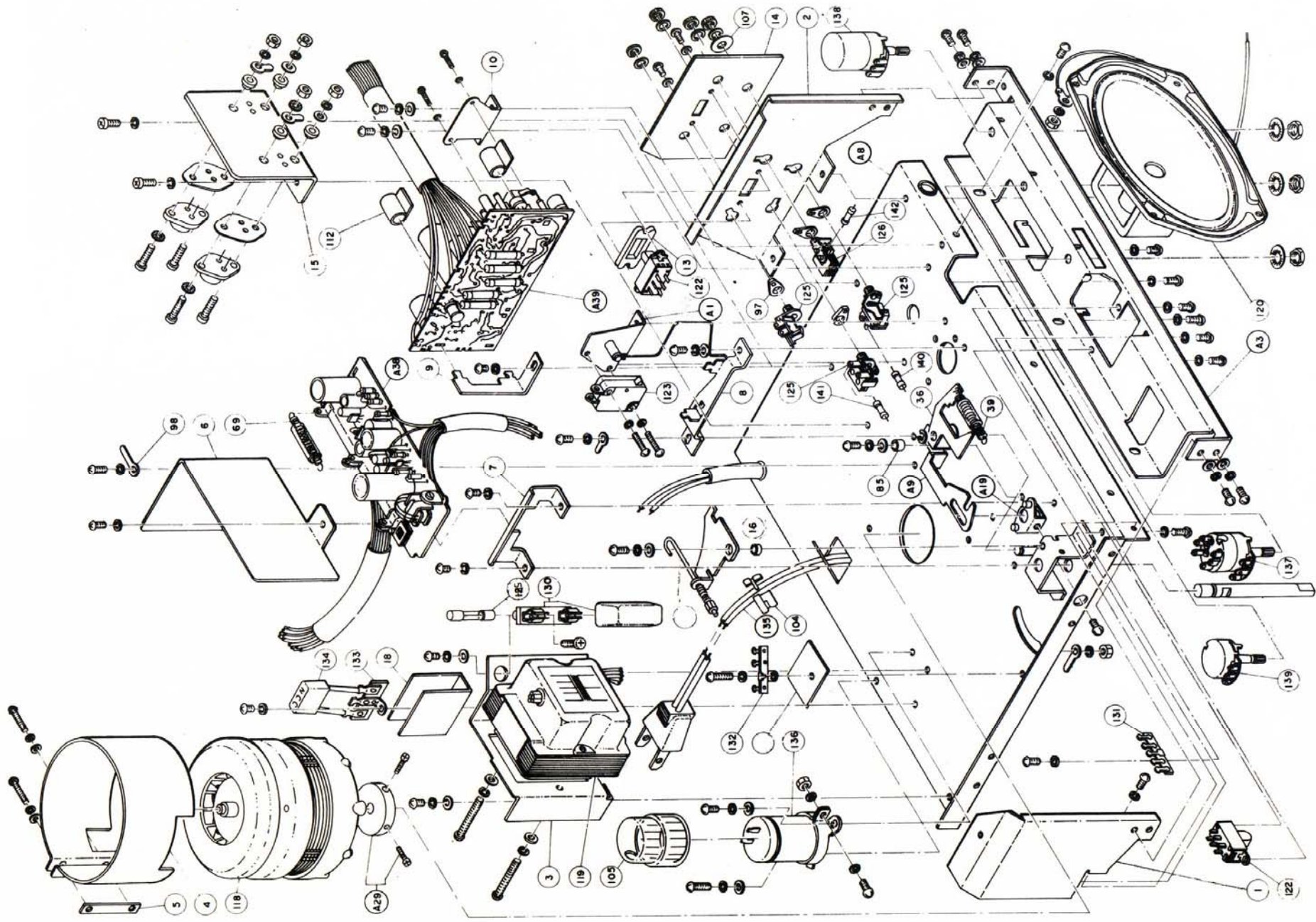
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description				
A38	X-34290-55-1 1-538-416-12  1-427-182-11 1-513-220-14 1-221-630-  1-242-683- 1-242-691- 1-242-709- 1-242-705- 1-242-641- 1-242-645- 1-242-649- 1-242-663- 1-242-665- 1-242-673- 1-242-681- 1-242-687- 1-242-693- 1-242-695- 1-242-697- 1-242-699- 1-242-703- 1-242-707- 1-242-709- 1-242-733-	<b>Preamplifier Block</b> CIRCUIT BOARD, preamplifier; mounted CIRCUIT BOARD, preamplifier; printed TRANSISTOR 2SC631 X1,2 TRANSISTOR 2SC402A X8 (Low Noise) DIODE IT22 D2 TRANSFORMER, output SWITCH, rec./p.b.; slide S1 RESISTOR, adjustable, carbon 22kΩ (B) R46	1-242-649- 1-242-661- 1-242-665- 1-242-683- 1-242-693- 1-242-695- 1-242-703-  1-121-388- 1-121-234- 1-121-081- 1-121-297- 1-121-356- 1-121-292- 1-121-290 1-121-349- 1-121-344-  1-105-745-12 1-105-743-12 1-105-843-12 1-105-841-12 1-105-833-12  1-129-344-  1-107-006-	Description	100Ω	±10%	¼W	R26	
		330Ω			±10%	¼W	R39		
		470Ω			±10%	¼W	R27		
		2.7kΩ			±10%	¼W	R25		
		6.8Ω			±10%	¼W	R28		
		8.2kΩ			±10%	¼W	R23		
		18kΩ			±10%	¼W	R24,38		
		<b>CAPACITOR, electrolytic</b>							
		1000µF			35V	C32			
		500µF			25V	C20			
		500µF			15V	C13			
		200µF			25V	C17			
		100µF			15V	C25			
		100µF			12V	C18			
		100µF			3V	C16			
		30µF			10V	C14			
		3µF			25V	C12			
		<b>CAPACITOR, mylar</b>							
		0.0022µF			±10%	200V	C27		
		0.0015µF			±10%	200V	C28		
		0.068µF			±20%	50V	C19		
		0.047µF			±20%	50V	C15		
		0.01µF			±20%	50V	C24		
		<b>CAPACITOR, polyethylene</b>							
		0.0068µF			±10%	500V	C23		
		<b>CAPACITOR, silvered mica</b>							
		330pF			±10%	500V	C21		
<b>GENERAL BLOCK</b>									
TRANSISTOR 2SD28 X5,6									
Rec./P.B. HEAD PP30-4202 LN1									
ERASE HEAD EF18-2902 H									
MOTOR IC-624S2									
TRANSFORMER, power for UL & CSA									
TRANSFORMER, power for E									
SPEAKER									
VOLTAGE SELECTOR for E									
METER, volume unit									
SWITCH, track change; slide S2.6									
SWITCH, micro S8 -12; UL only									
SWITCH, tape speed equalizer; leaf S4,5									
JACK, microphone & ext. speaker; mini									
JACK, line-out; mini									
LAMP, pilot									
SOCKET, pilot lamp									
FUSE 0.8A									
FUSE HOLDER									
TERMINAL STRIPS; 1-L-1									
TERMINAL STRIPS; 2-L-1 for UL & CSA									
TERMINAL STRIPS; 2-L-2									
ENCAPSULATED COMPONENT									
0.1µF+120Ω, 500V for UL									
CAPACITOR, metalized paper C33 1.5µF for UL & CSA									
AC POWER CORD for UL									
AC POWER CORD for E									
POWER CORD for CSA									
HUMBUCK COIL L2,3									
TONE CONTROL 10kΩ R11 with S11									
VOLUME CONTROL 10kΩ(A) R19 with S7 -12; for UL -13; for CSA & E									
AUTOMATIC GAIN CONTROL									
15kΩ(D) R13									
<b>RESISTOR, carbon</b>									
560Ω ±10% R1									
100kΩ ±10% R2									
82Ω ±10% R37									
A39	X-34290-56-1 1-538-417-14  1-423-087-11 1-433-084-11 1-431-038-  1-204-530- 1-204-521- 1-204-529- 1-242-625- 1-242-725- 1-242-745- 1-242-601- 1-242-635-	<b>Main Amplifier Block</b> CIRCUIT BOARD, main amplifier; mounted CIRCUIT BOARD, main amplifier; printed TRANSISTOR 2SC402A X3 TRANSISTOR 2SB381 X4 TRANSISTOR 2SB383 X7 DIODE SD-1Z D3,4 DRIVER TRANSFORMER T1 TRANSFORMER, bias oscillator T3 DUMMY COIL L1	1-423-087-11 1-433-084-11 1-431-038-  1-204-530- 1-204-521- 1-204-529- 1-242-625- 1-242-725- 1-242-745- 1-242-601- 1-242-635-	Description	12V	C30			
		1000µF			C30				
		500µF			15V	C3			
		500µF			6V	C26			
		200µF			3V	C10			
		100µF			3V	C7			
		50µF			3V	C5			
		30µF			6V	C2,8,29			
		<b>CAPACITOR, electrolytic</b>							
		0.022µF			±10%	50V	C9		
		0.0047µF			±10%	50V	C31		
		0.022µF			±10%	50V	C22		
		0.0033µF			±20%	50V	C1		
		0.0015µF			±20%	50V	C11		
		0.001µF			±20%	50V	C4		
		<b>CAPACITOR, silvered mica</b>							
		470PF			±10%	500V	C6		
		620PF			±10%	500V	C34		
		<b>RESISTOR, carbon</b>							
		82Ω			±5%	1W	R30,33		
		100Ω			±5%	1W	R31,34		
		270Ω			±5%	1W	R44		
		10Ω			±5%	¼W	R29,32		
		150kΩ			±5%	¼W	R20		
		1MΩ			±5%	¼W	R21		
		1Ω			±10%	¼W	R35,36,48		
		27Ω			±10%	¼W	R22		



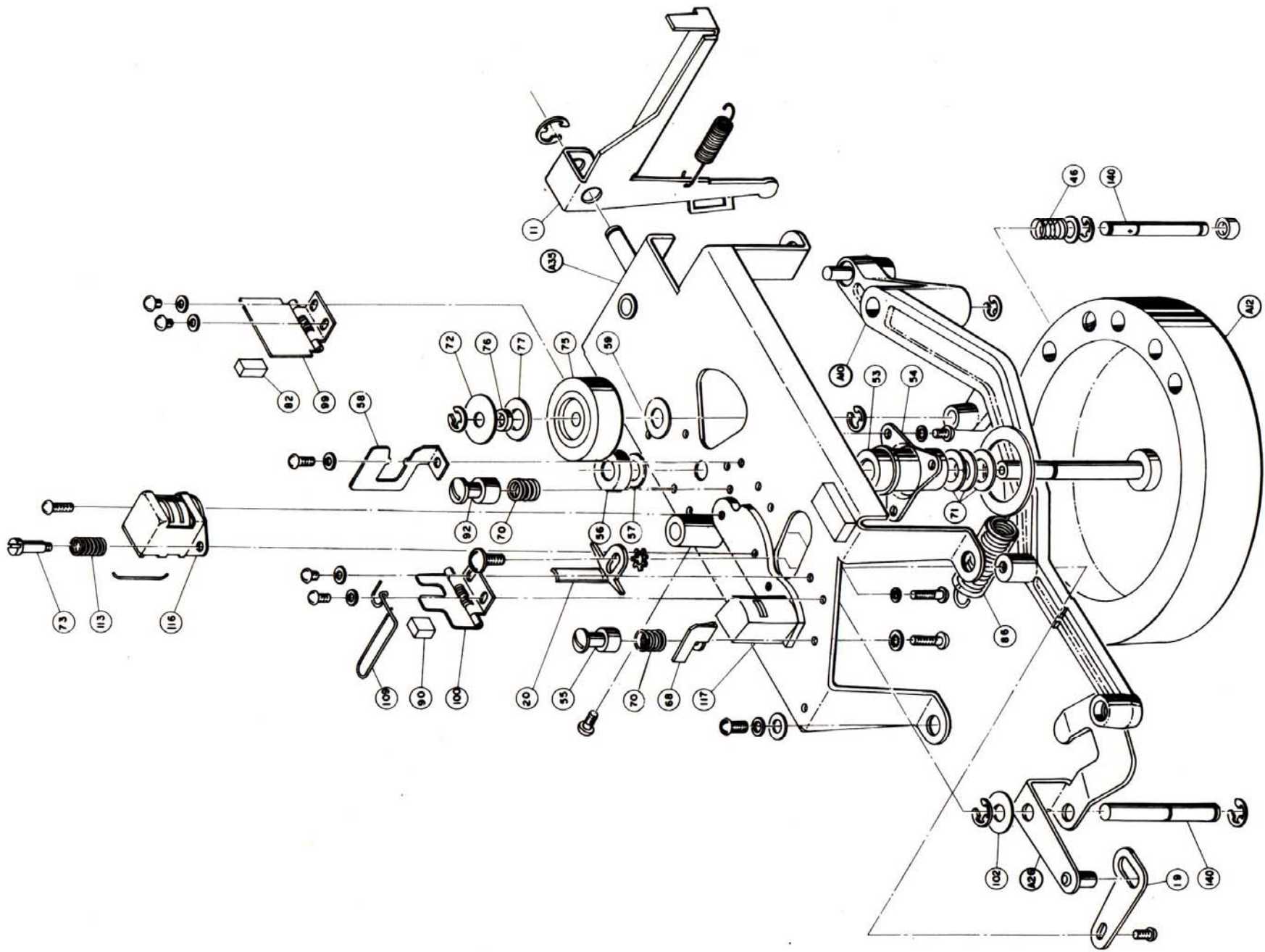
Exploded View

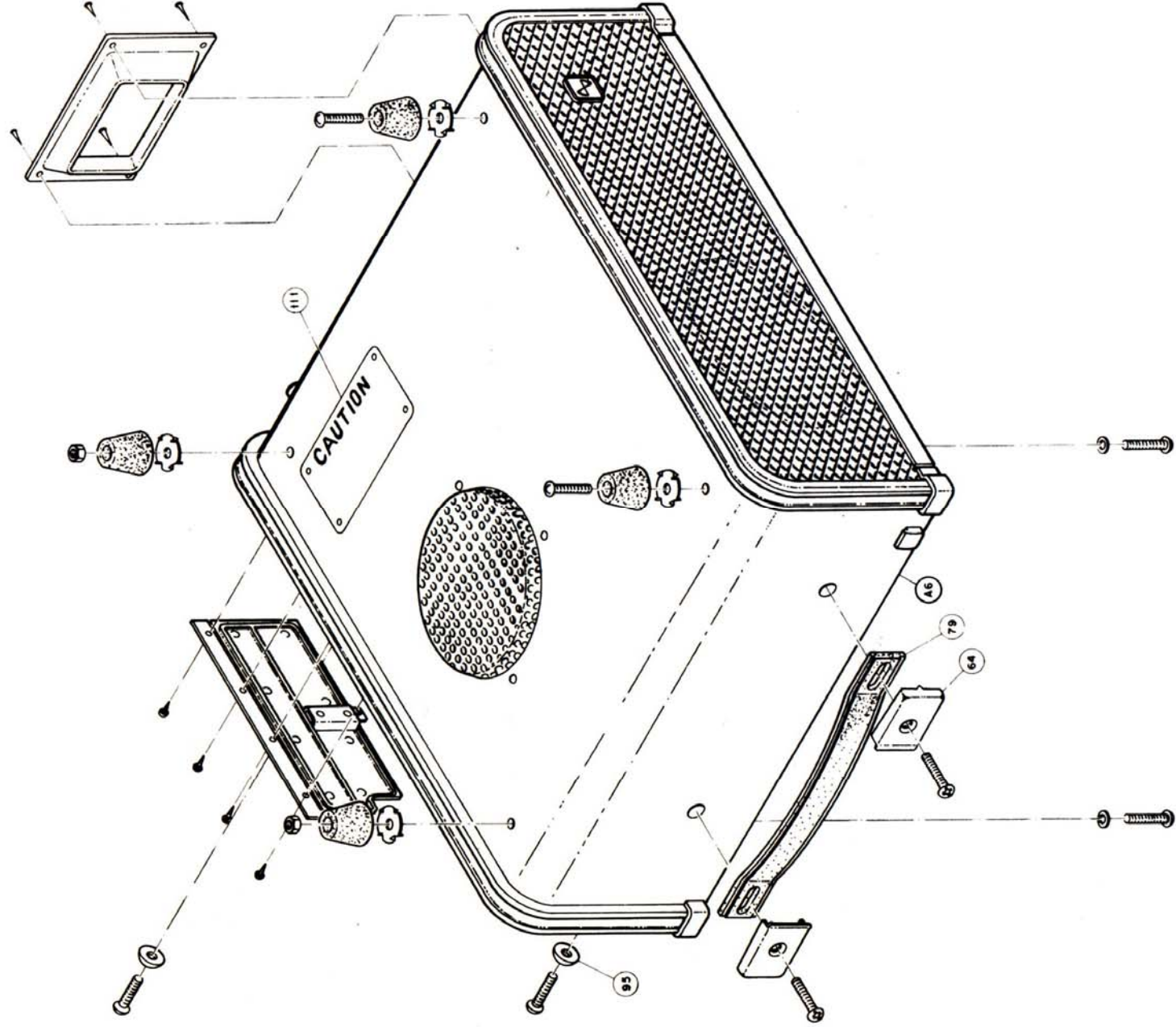


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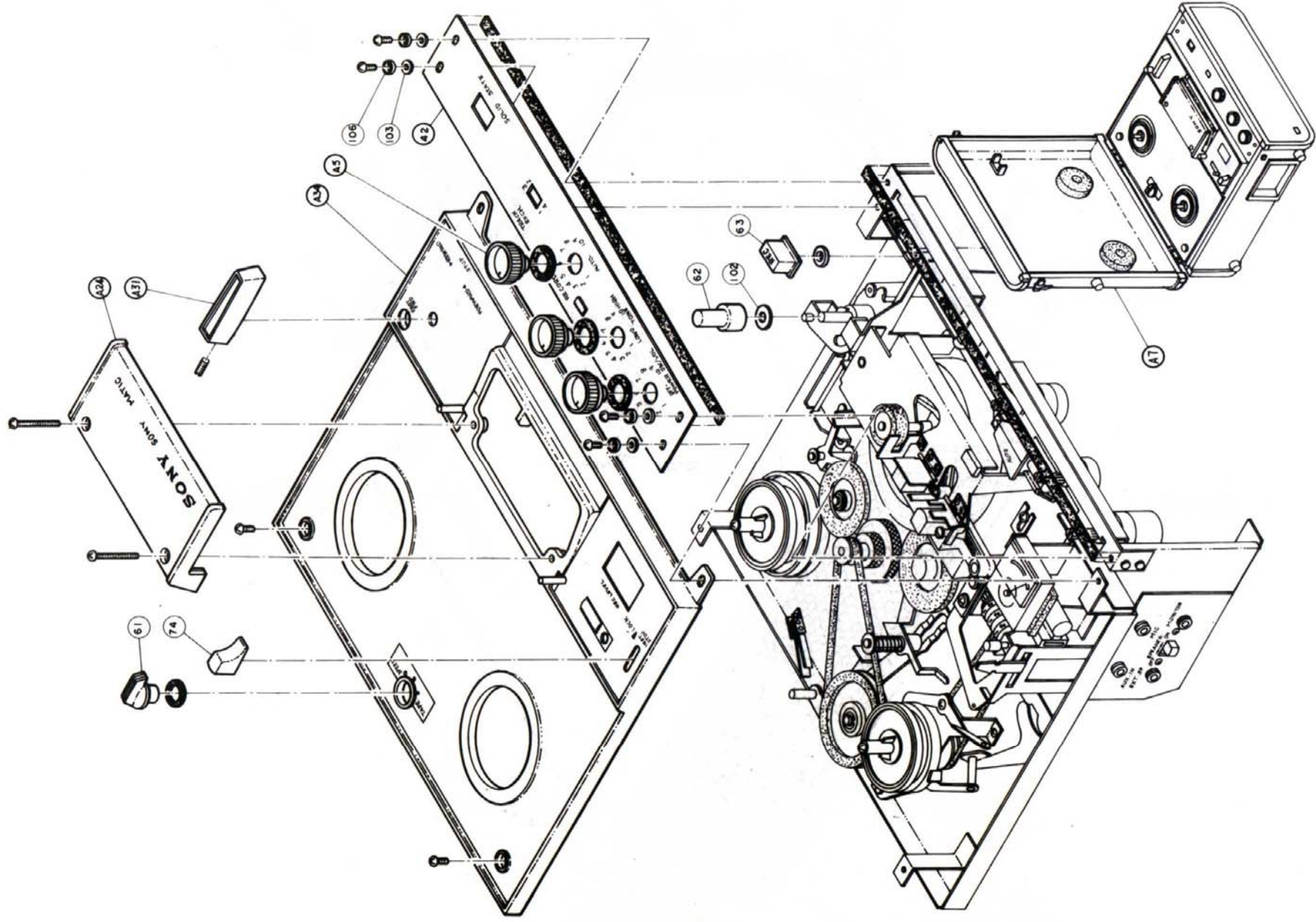


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Exploded View



SONY CORPORATION