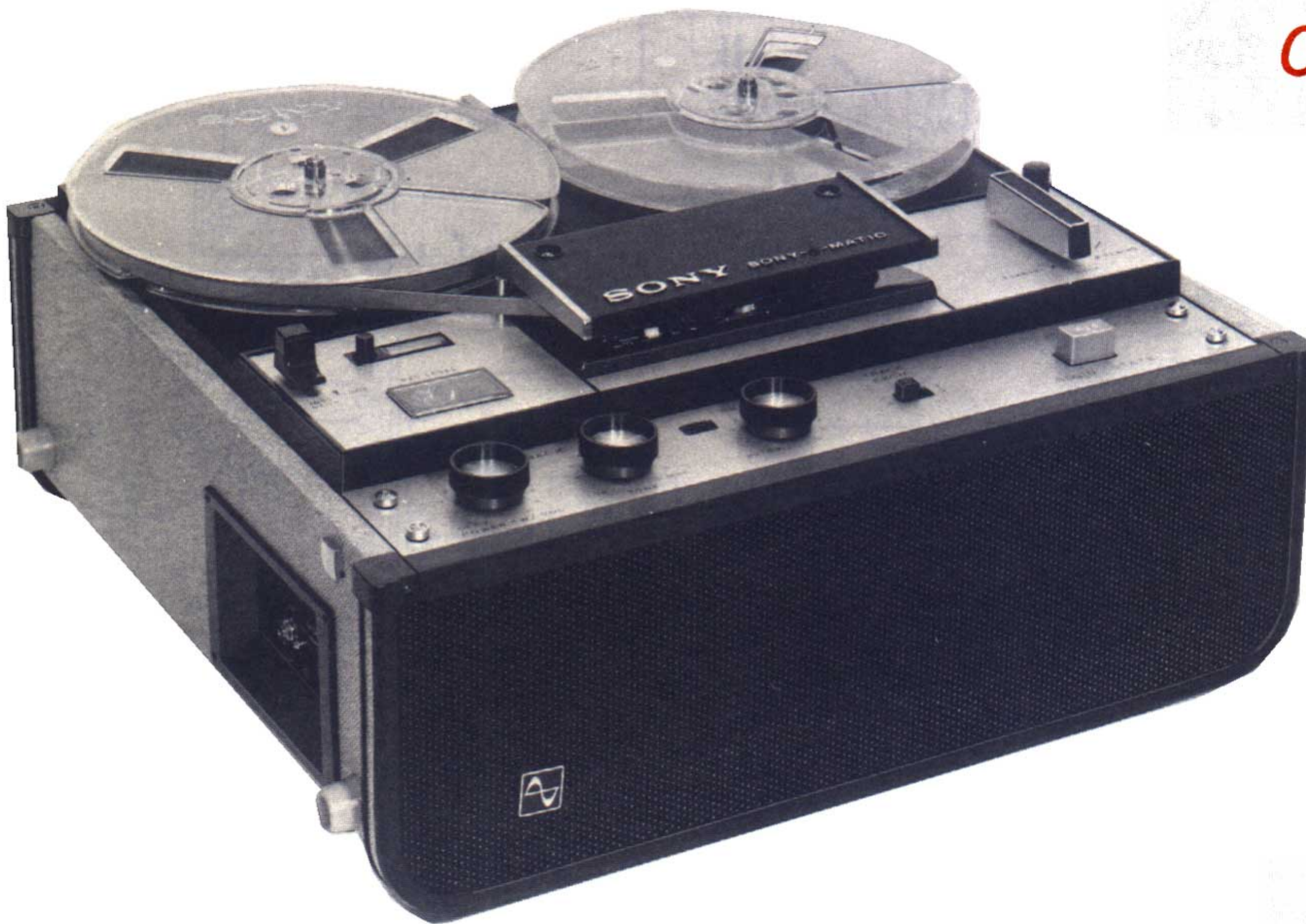


TC-105

E Model
USA Model
Canada Model



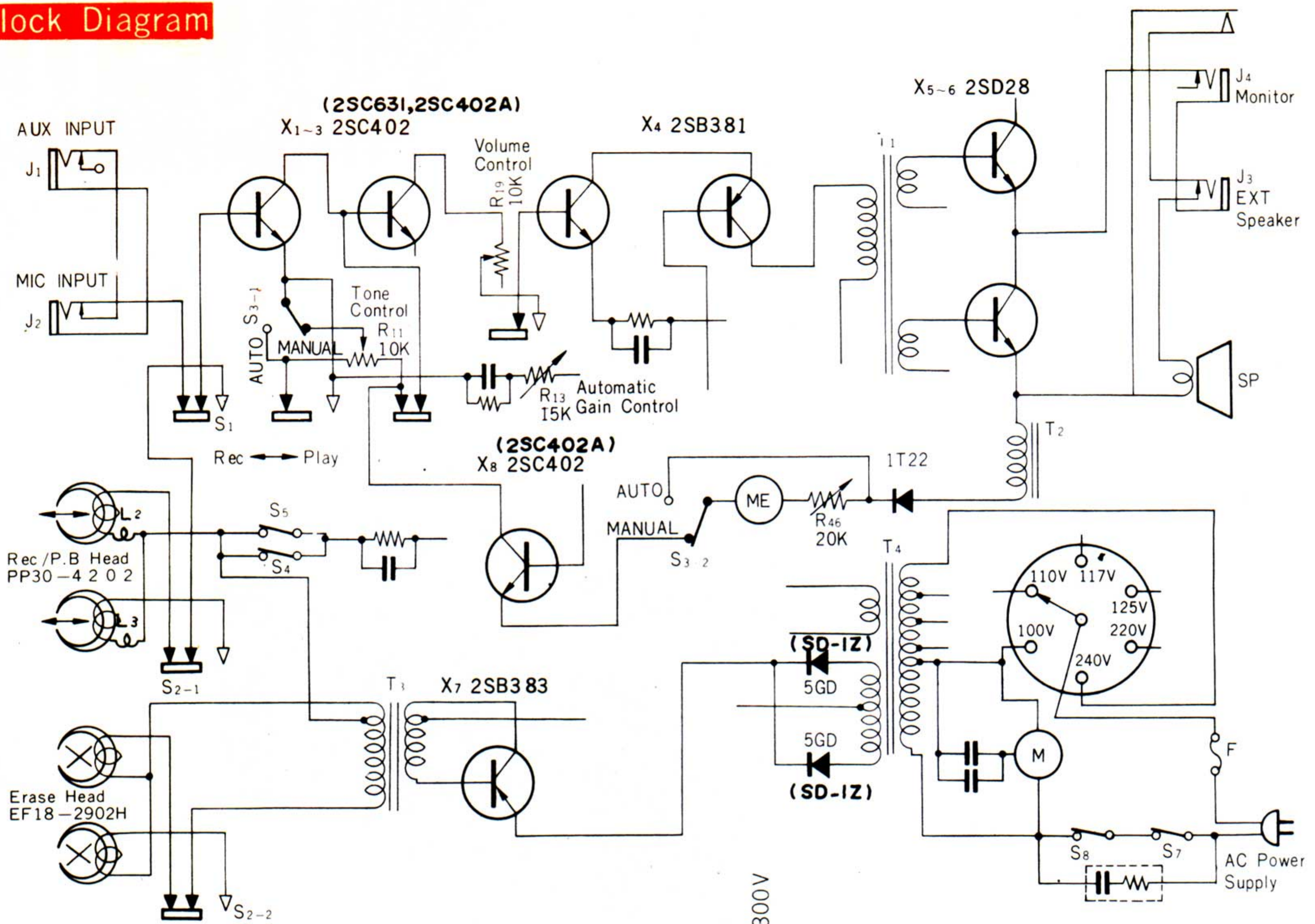
TAPECORDER

SPECIFICATIONS

| | | |
|---|--|--|
| Power requirement: | 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 | |
| Tape speeds: | Instantaneous selection 7 $\frac{1}{2}$, 3 $\frac{3}{4}$ or 1 $\frac{7}{8}$ ips (19, 9.5 or 4.8 cm/s) | |
| Tracks: | 4 tracks, monophonic | |
| Recording time: (with 1800 ft/550 m tape) | 45 minutes per track, 3 hours in total at 7 $\frac{1}{2}$ ips 1 hr. 30 min. per track, 6 hours in total at 3 $\frac{3}{4}$ ips 3 hours per track, 12 hours in total at 1 $\frac{7}{8}$ ips | |
| Reels: | 7" (18 cm) or smaller | |
| Frequency response: | 40 ~ 18,000 Hz at 7 $\frac{1}{2}$ ips 40 ~ 13,000 Hz at 3 $\frac{3}{4}$ ips 50 ~ 6,000 Hz at 1 $\frac{7}{8}$ ips | |
| Flutter and wow: | Less than 0.17% at 7 $\frac{1}{2}$ ips Less than 0.3% at 3 $\frac{3}{4}$ ips Less than 0.4% at 1 $\frac{7}{8}$ ips | |
| Record/Playback head: | In-line quarter track | |
| Erase head: | In-line quarter track | |
| Inputs: | Low impedance (600 Ω) microphone -77 db (0.11 mV) (1) High impedance (100K Ω) auxiliary input -27 db (34 mV) (1) | |
| Outputs: | External speaker output 8 Ω , 11.2 db (2.83V) (1) High impedance monitor jack 10K Ω , 13 db (3.46V) (1) | |
| Speaker: | 4 x 6" (10 x 15 cm) dynamic | |
| Power output: | Max. 4W | |
| Transistors: | 2SC402(4)---(2SC631x2, 2SC402Ax2), 2SB381(1), 2SB383(1), 2SD28(2) | |
| Diodes: | 1T22(1), 5G-D(SD-1Z)(2) | |
| Dimensions: | 14 $\frac{3}{4}$ (W) x 7 $\frac{1}{4}$ (H) x 13 $\frac{3}{8}$ " (D) (37.5 x 18.5 x 34.0 cm) | |
| Weight: | 21 lb (9.5 kg) | |

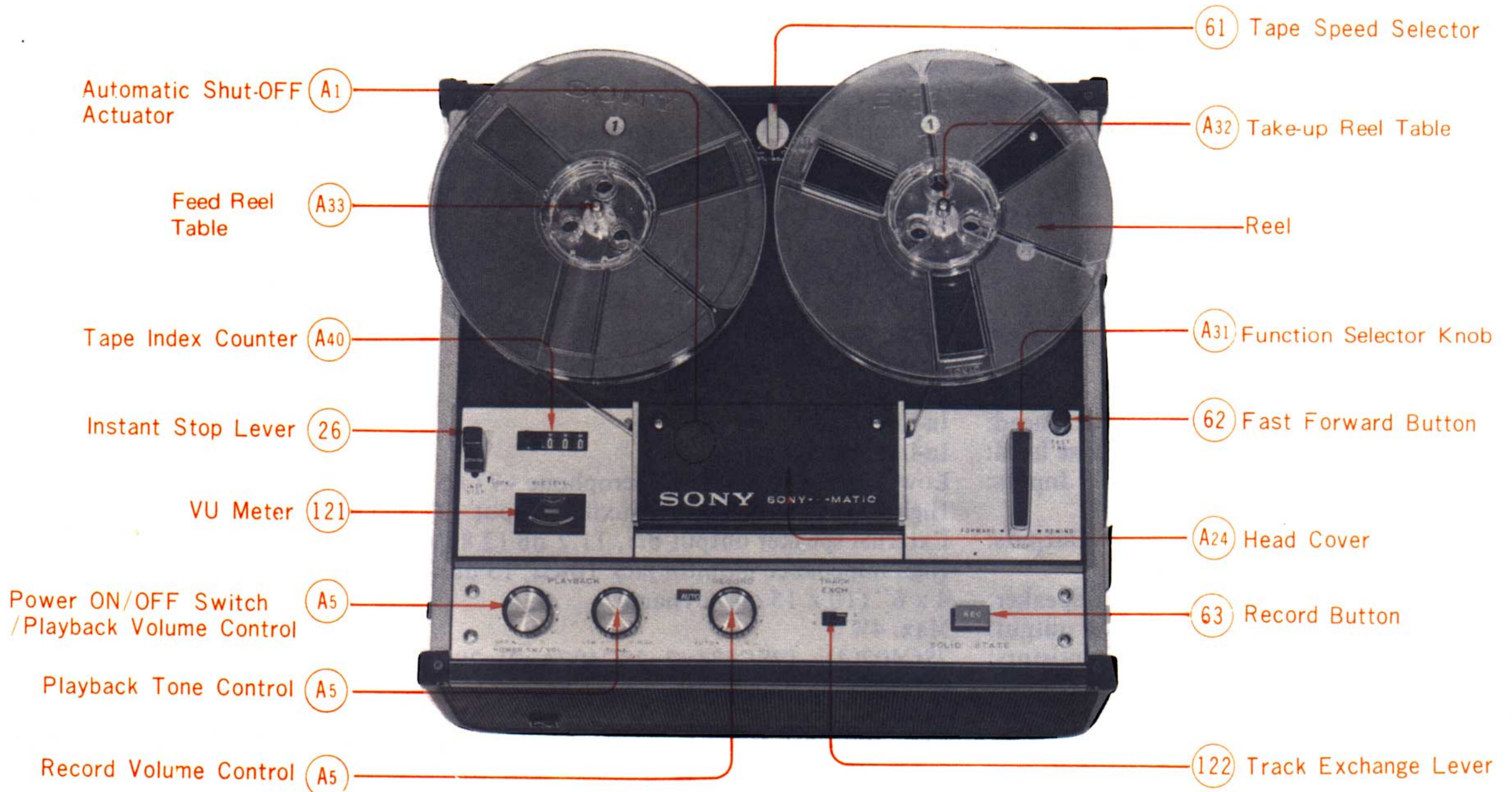
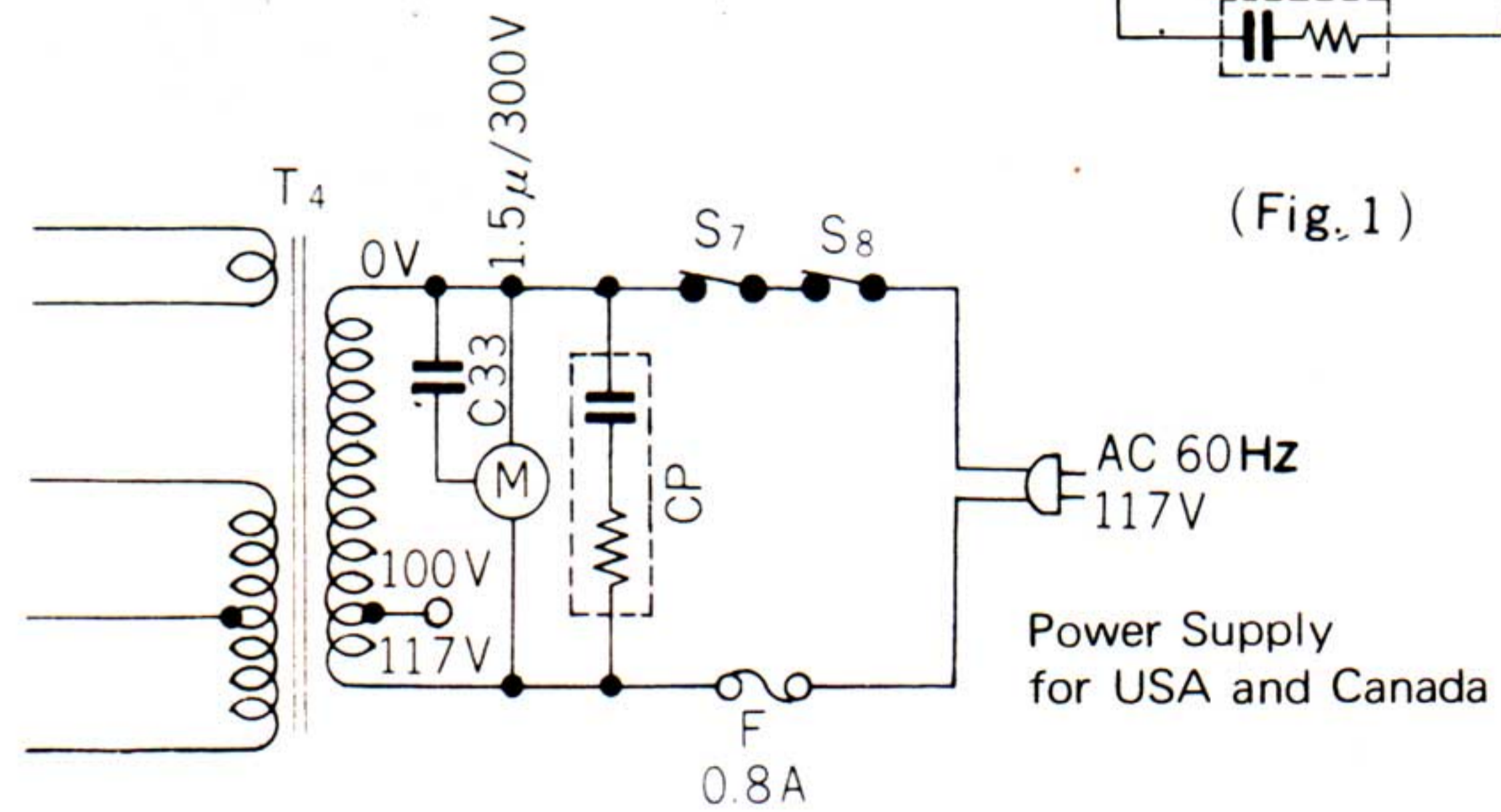
SONY
SERVICE MANUAL

Block Diagram



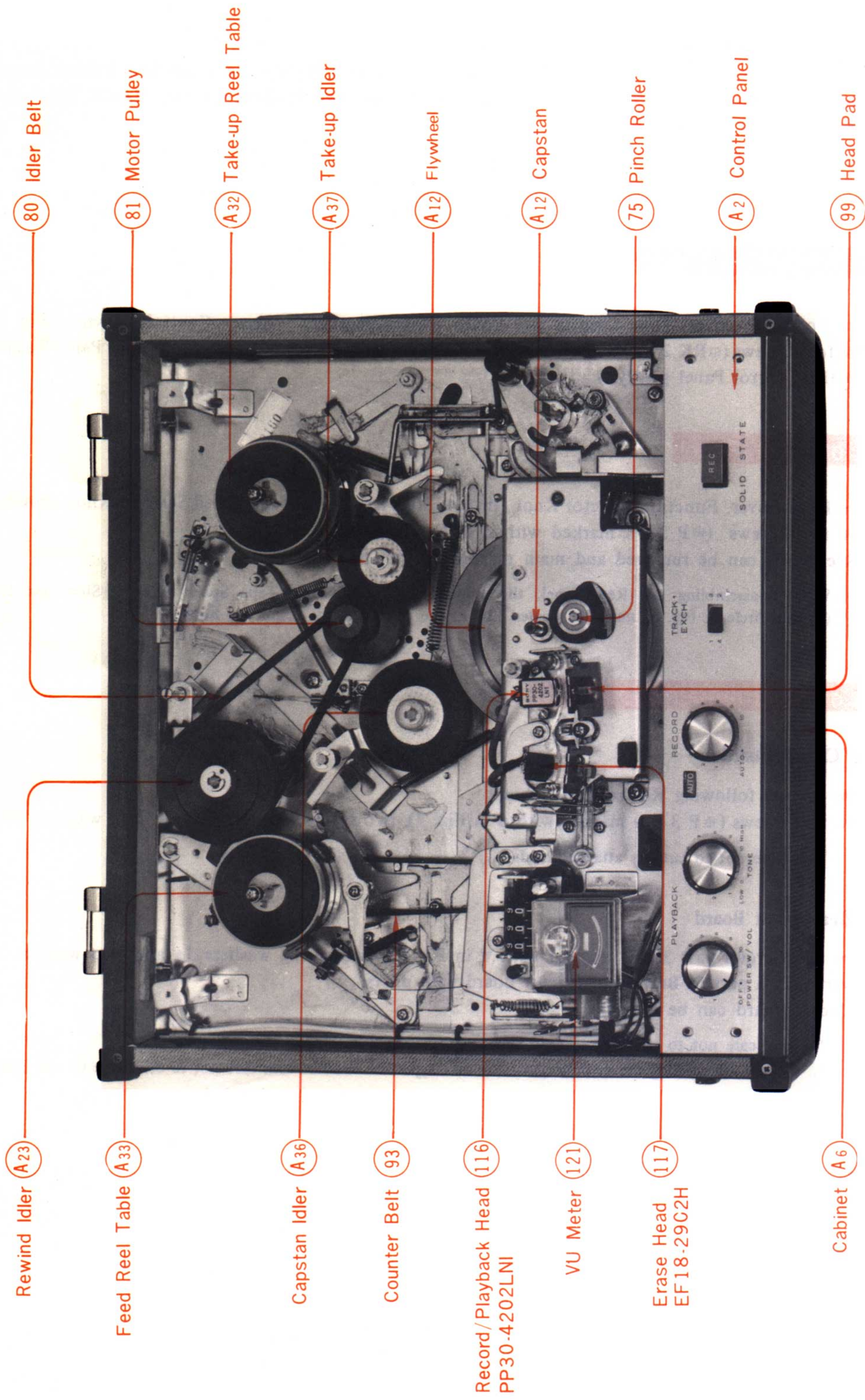
(Fig. 1)

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 ($\oplus P 4 \times 25$ marked with \bullet in Fig. 4), two Rubber Feet and two Rubber Stoppers.
- (3) Remove four Screws ($\oplus RK 4 \times 25$ marked with \circ 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 ($\oplus RK 2.6 \times 10$ marked with \blacktriangle 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 ($\oplus P 3 \times 8$ marked with \triangle 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

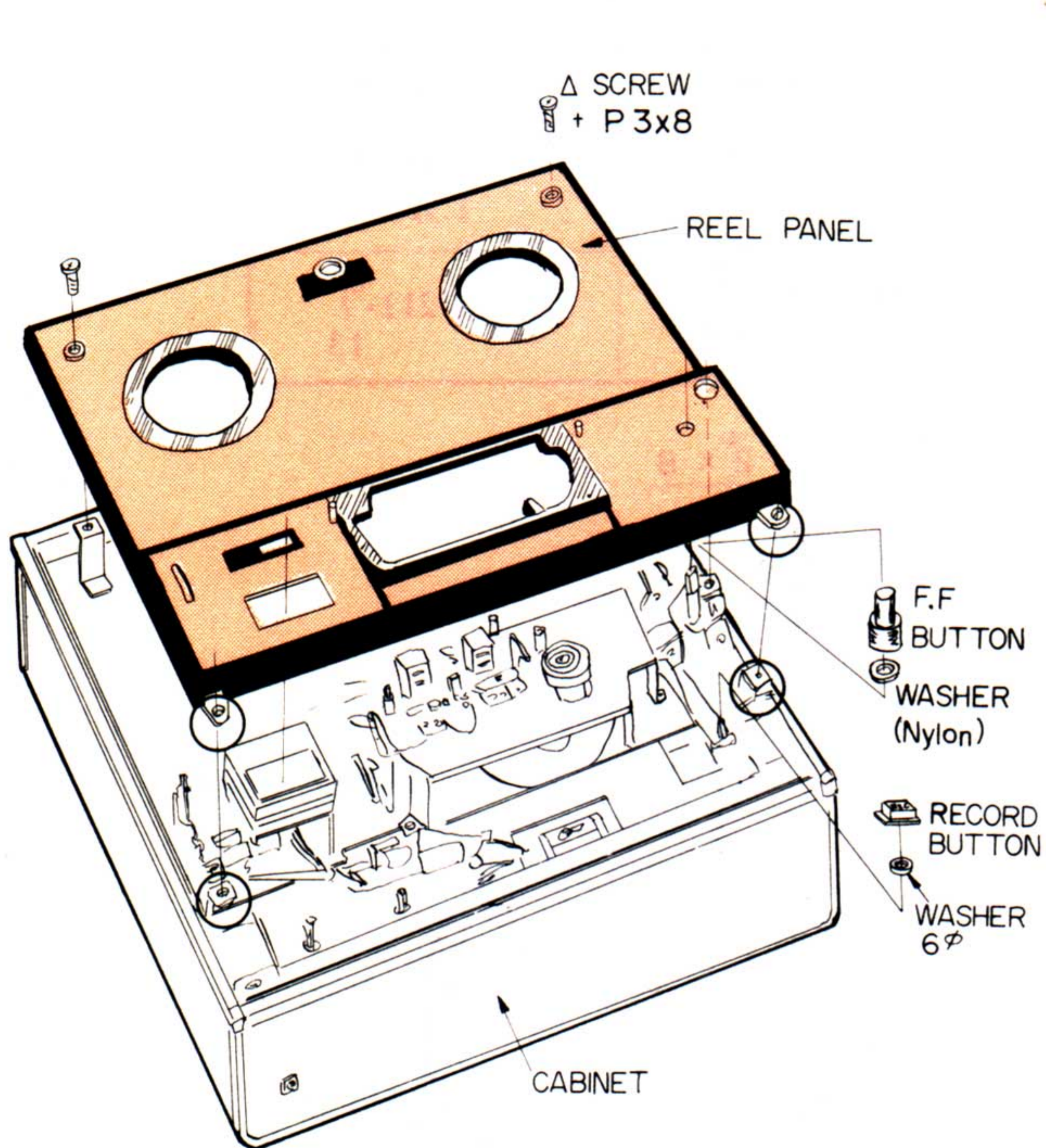
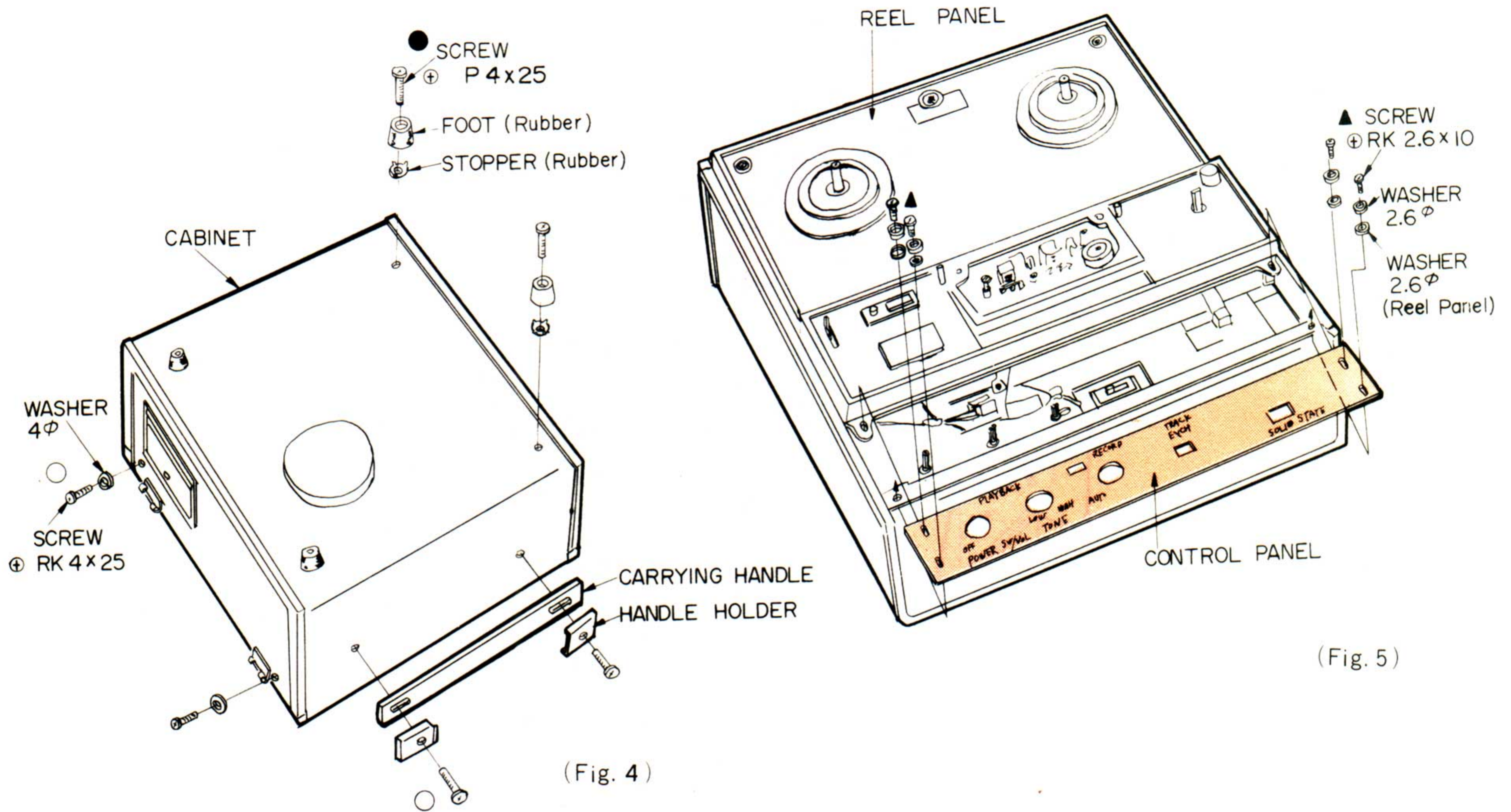
- (1) Remove cabinet following Removal of Cabinet.
- (2) Remove two screws ($\oplus P 3 \times 6$ marked with \bullet in Fig. 7), two spring washers 3ϕ and two washers 3ϕ .

NOTE: Take care not to cut the attached leads.

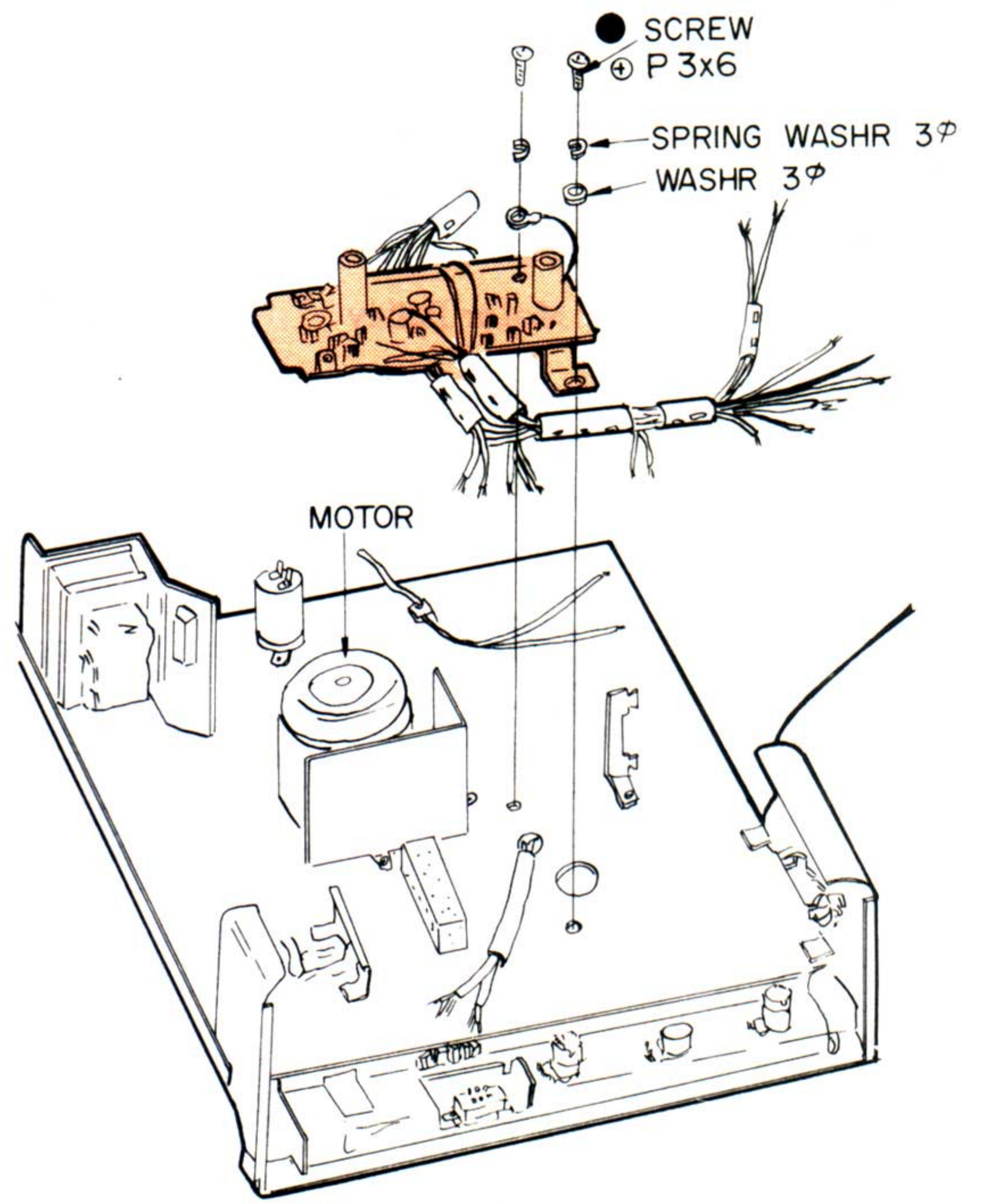
Main Amplifier Circuit Board

- (1) Remove two Screws ($\oplus P 3 \times 6$ marked with \blacktriangledown 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.

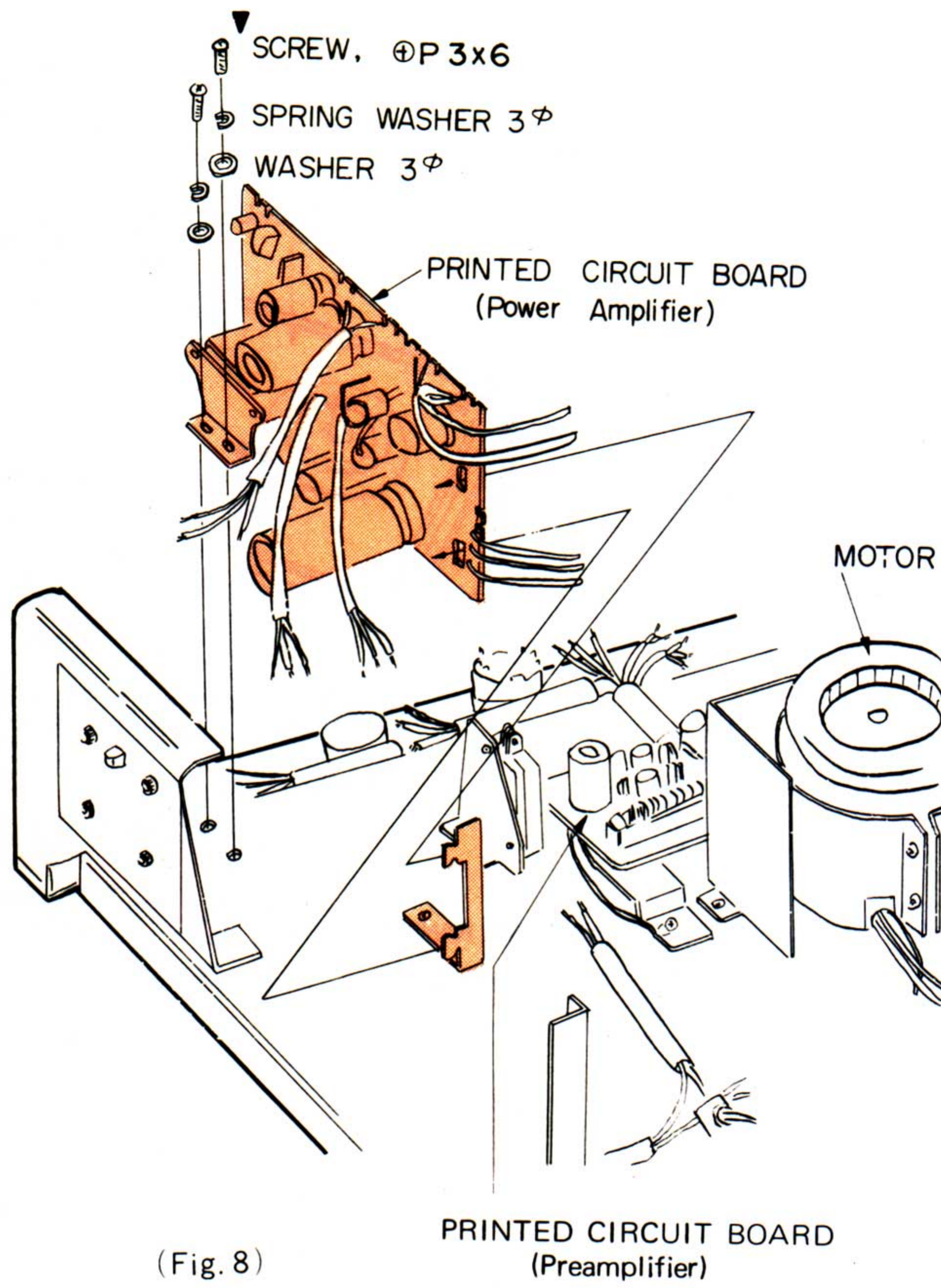
NOTE: 1. Take care not to cut the attached leads.
2. When re-assembling the main amplifier, incline a part of Bracket with care not to break the Circuit Board.



(Fig. 6)



(Fig. 7)

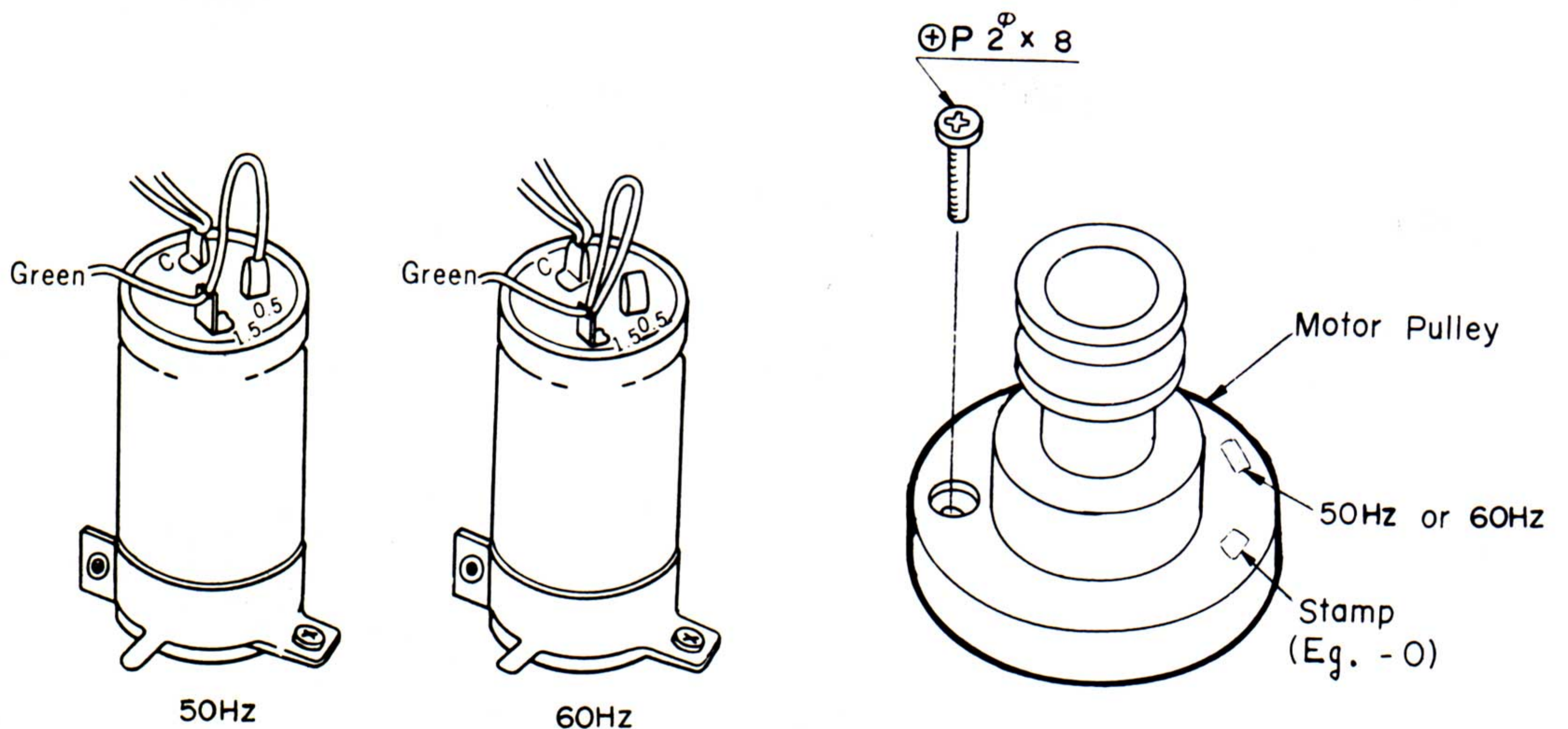


(Fig. 8)

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 2 μ F | Disconnected 1.5 μ F |
| Motor Pulley | 3-418-210- $\left. \begin{matrix} 01 \\ 13 \end{matrix} \right\}$ | 3-418-211- $\left. \begin{matrix} 01 \\ 13 \end{matrix} \right\}$ |

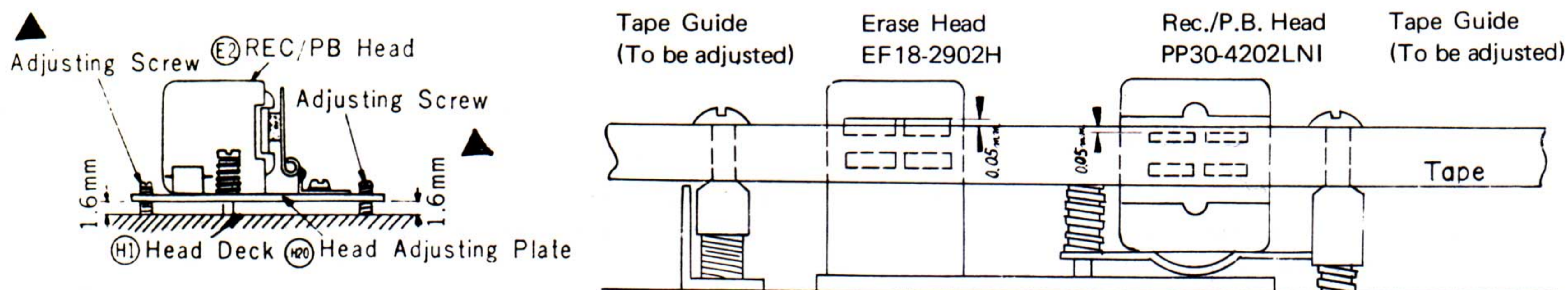


(Fig. 9)

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° 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° 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.

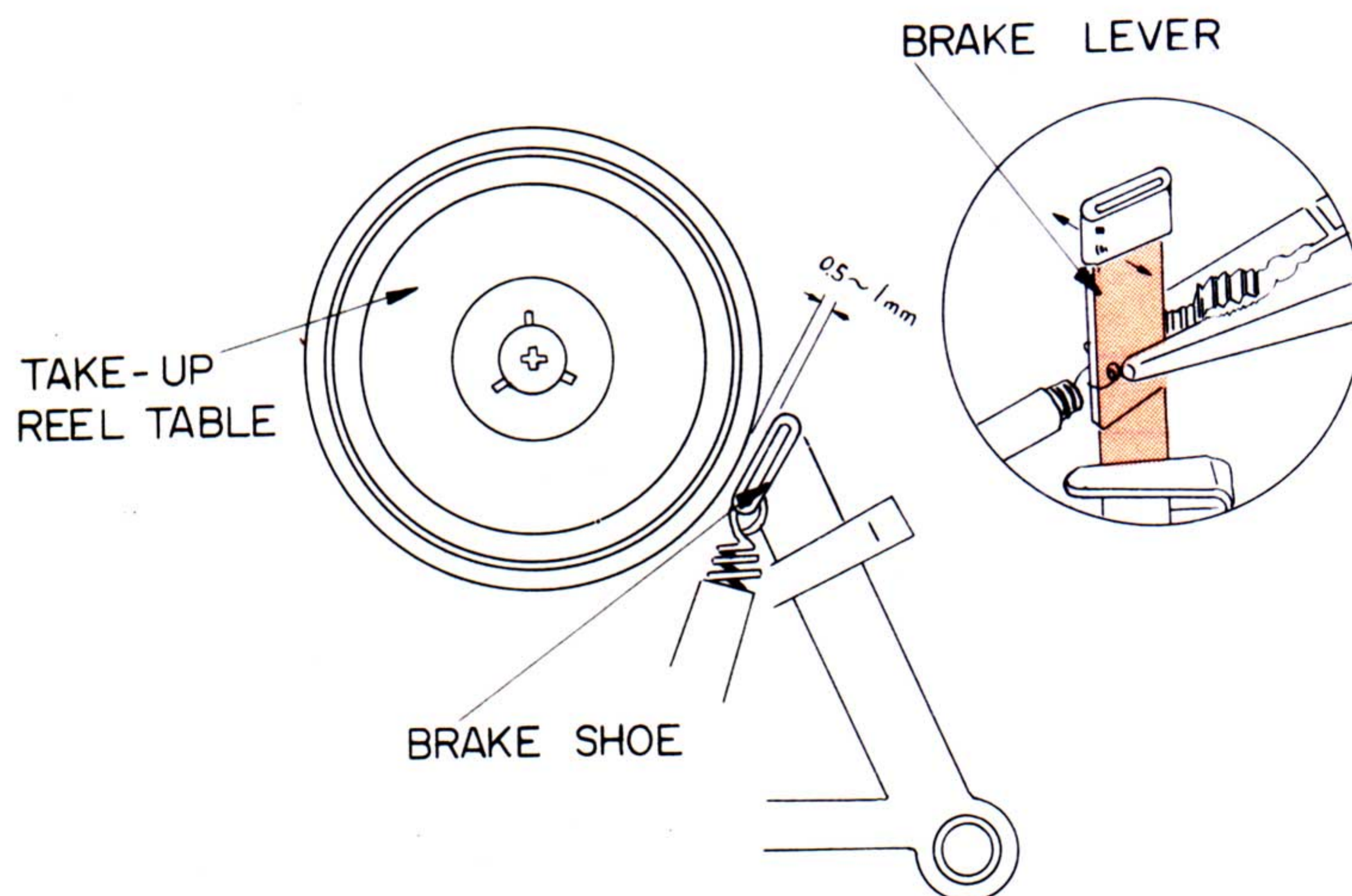


(Fig. 11)

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.



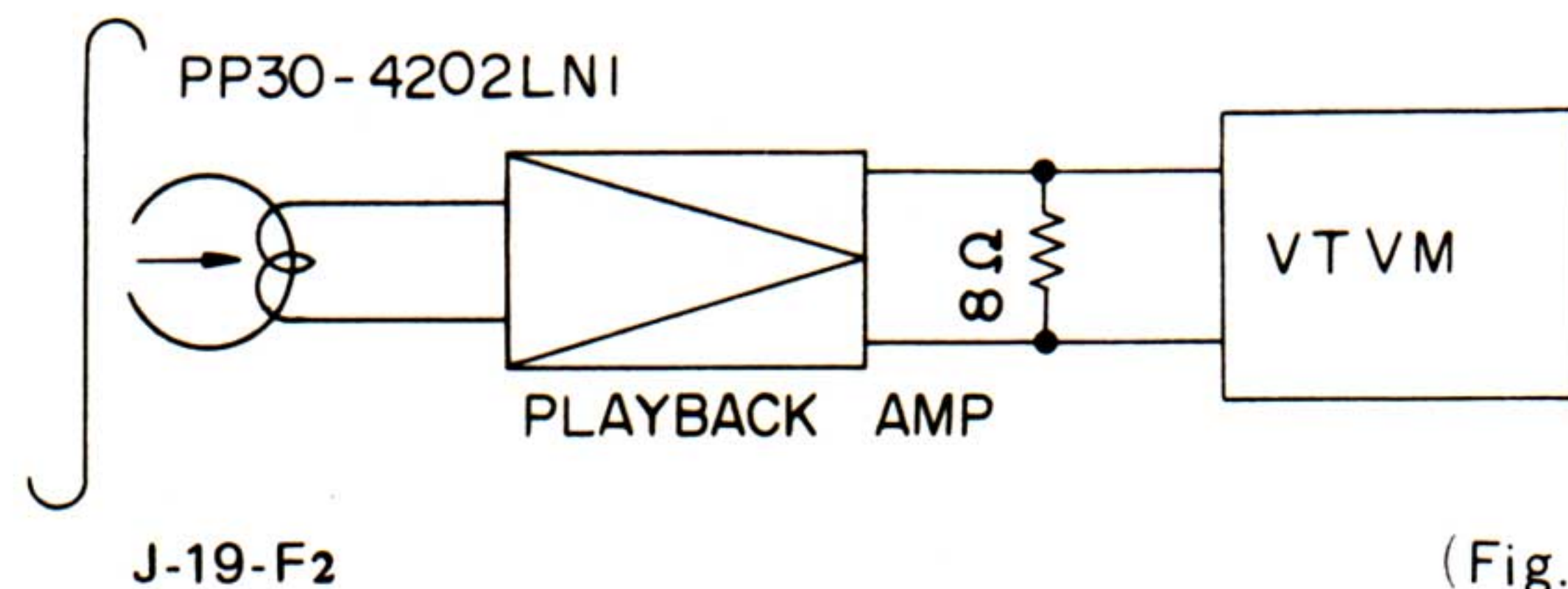
(Fig. 12)

Electrical Adjustment

The alignment is to be performed at a tape speed of $7\frac{1}{2}$ 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

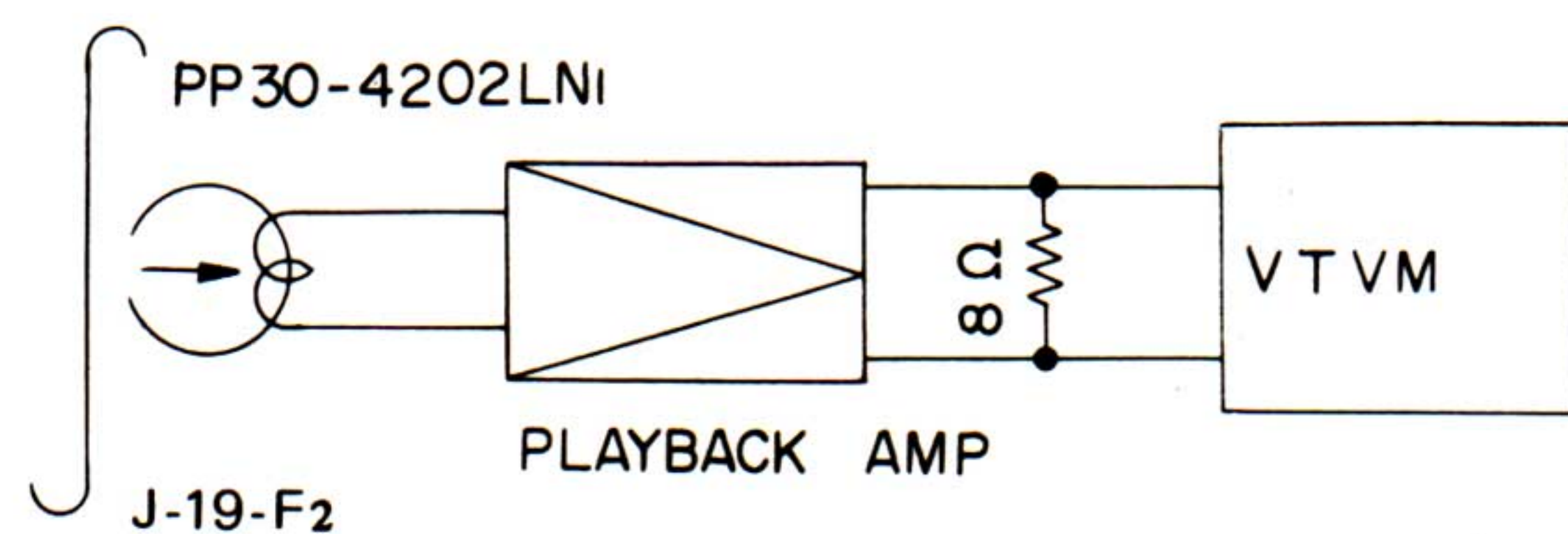
- (1) Playback a 10 kHz signal recorded on the first tone of the SONY alignment tape (J-19-F₂).
- (2) Adjust the Azimuth Alignment Screw located on the right side of the Playback Head to obtain maximum recording on the VTVM.



(Fig. 13)

Playback Output Level Adjustment

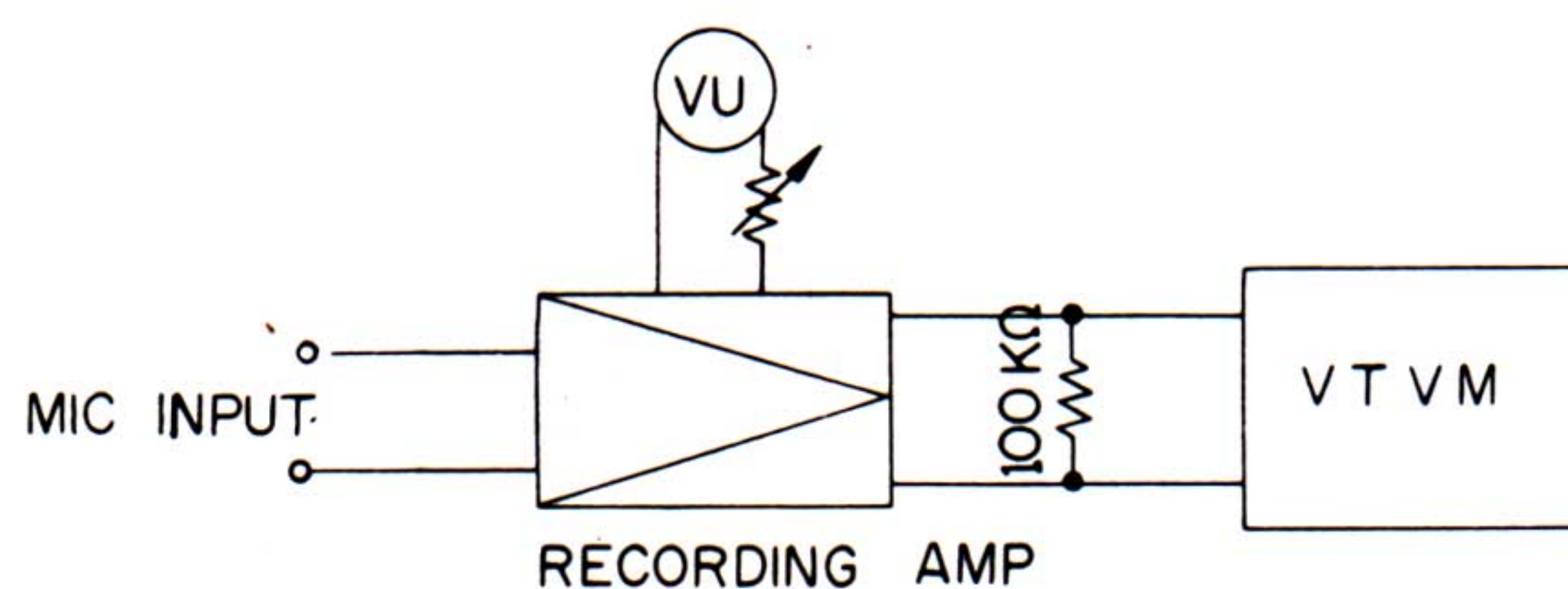
- (1) Set the Volume Control and the tone Control to the maximum position.
- (2) Playback a 1 kHz signal of -10 db recorded on the third tone of the SONY alignment tape (J-19-K₁) and measure the output with the VTVM.



(Fig. 14)

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 VTVM indicates +1.5 db.
- (5) Turn the adjustable Resistor R₄₆ so that the pointer of the Level Meter is just at the boundary between the red portion and the black portion.

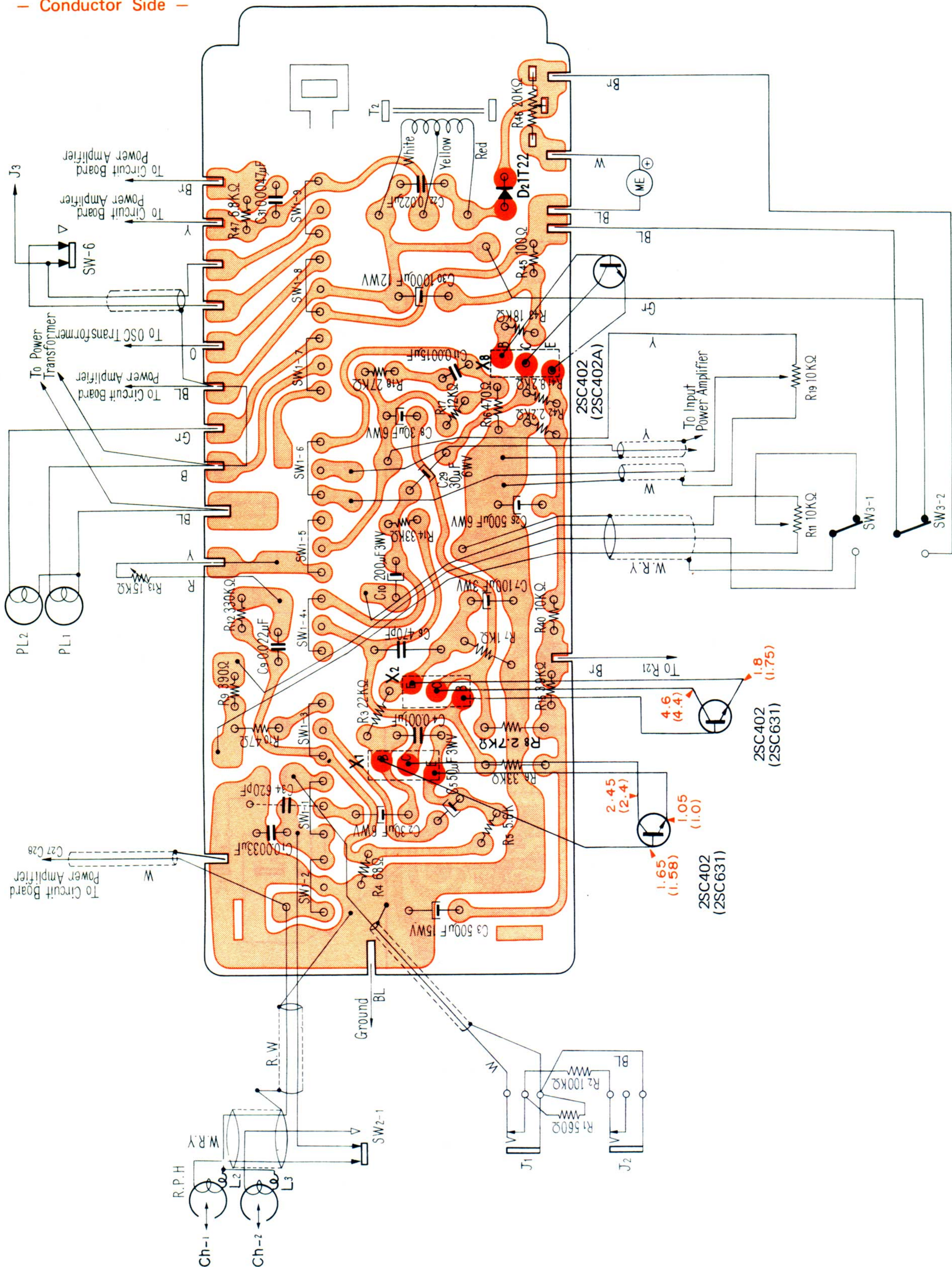


(Fig. 15)

Mounting Diagram

Preamplifier Section

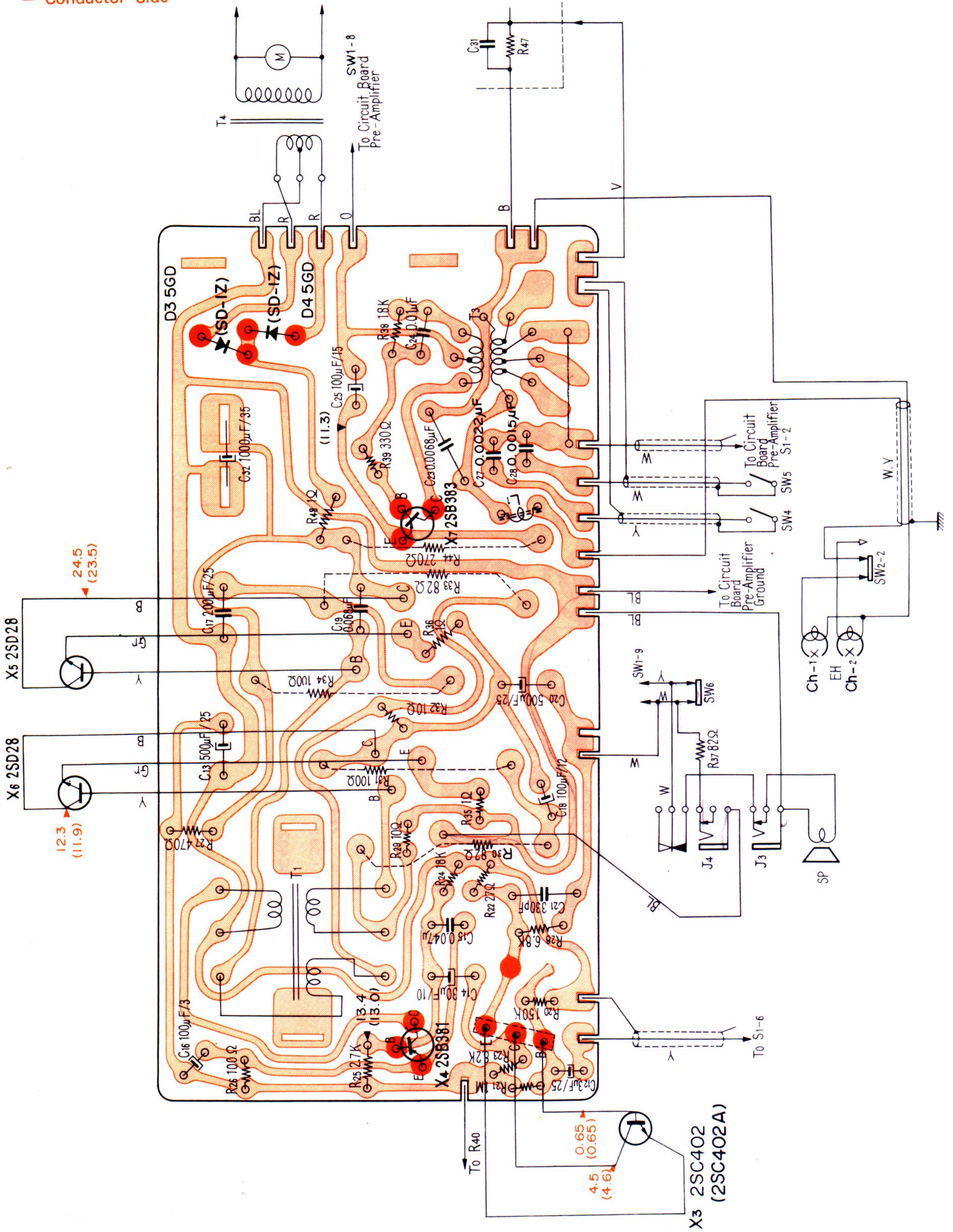
— Conductor Side —

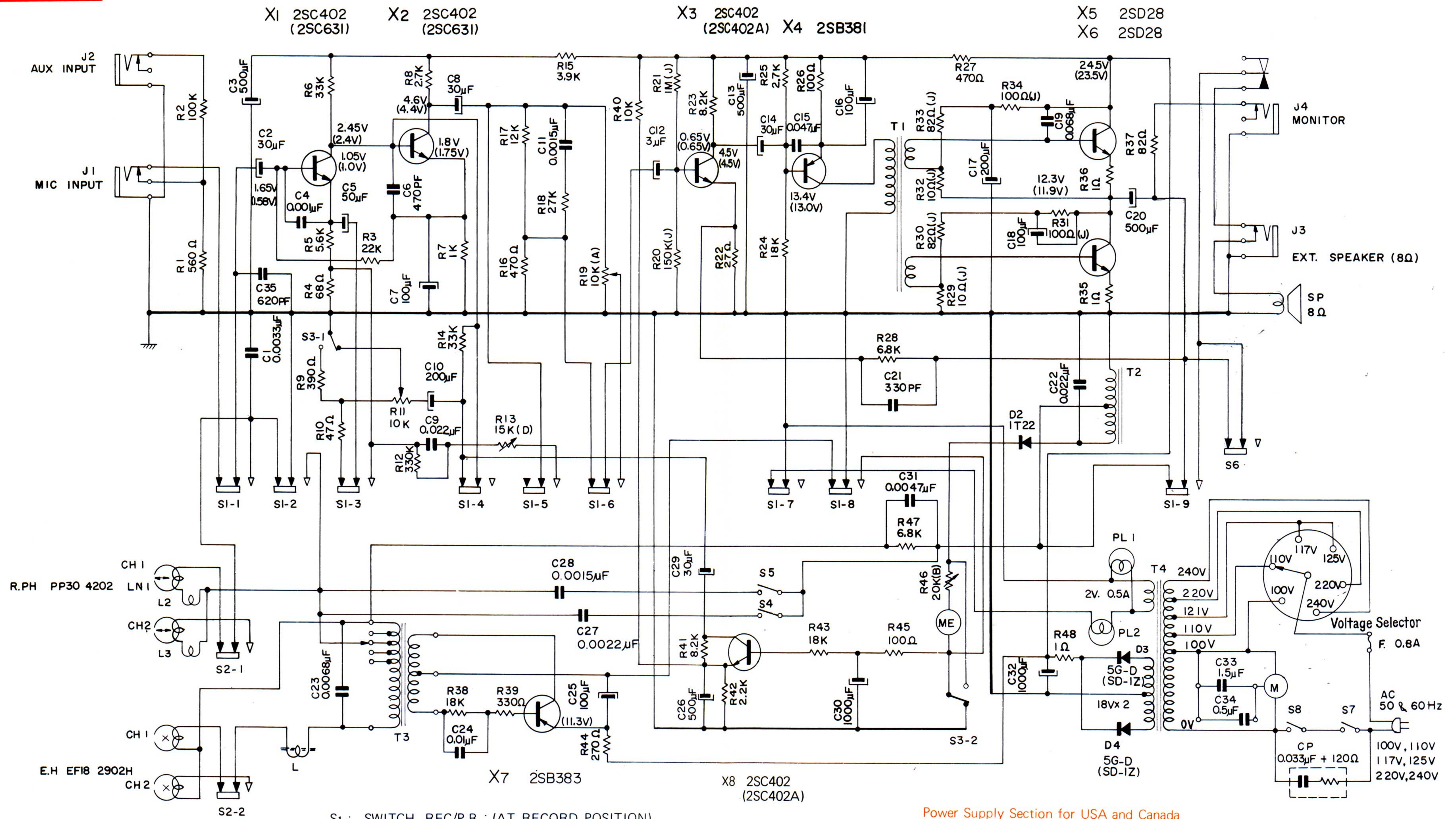


Mounting Diagram

Power Amplifier Section

— Conductor Side —





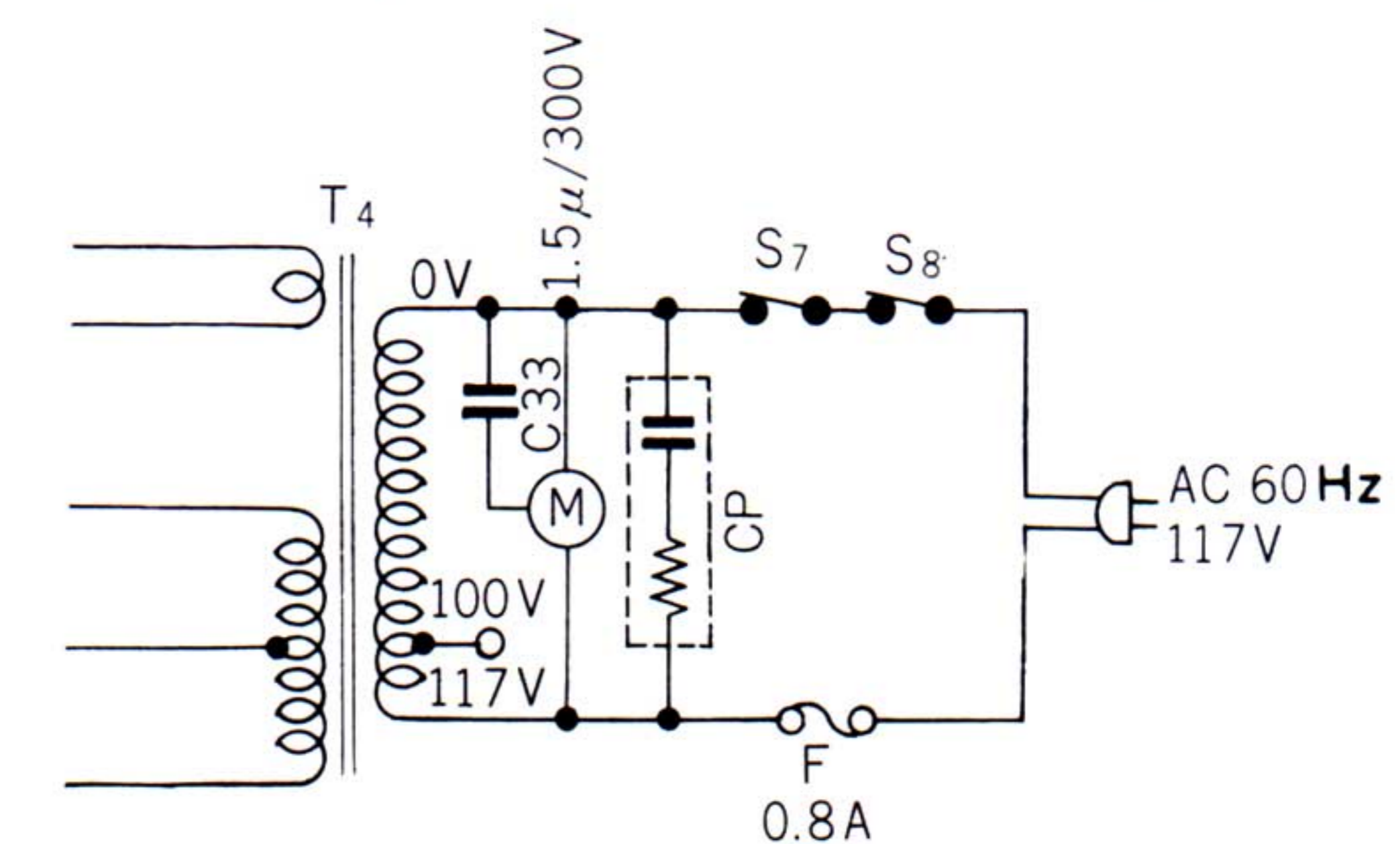
Replacement of Transistors X₁, X₂, X₃ & X₈ and Diodes D₃ & D₄

| Symbol | New Type | Former Type | Symbol | New Type | Former Type |
|----------------|--|-------------|----------------|----------------|-------------|
| X ₁ | 2SC631 or 2SC632 | 2SC402 | D ₃ | SD-1Z FR-1P | 5G-D |
| X ₂ | 2SC631 or 2SC632 | 2SC402 | D ₄ | SD-1Z FR-1P | 5G-D |
| X ₃ | 2SC402A or 2SC403A | 2SC402 | | | |
| X ₈ | 2SC402A 2SC403A 2SC633 2SC634 2SC631 2SC632 | 2SC402 | | | |

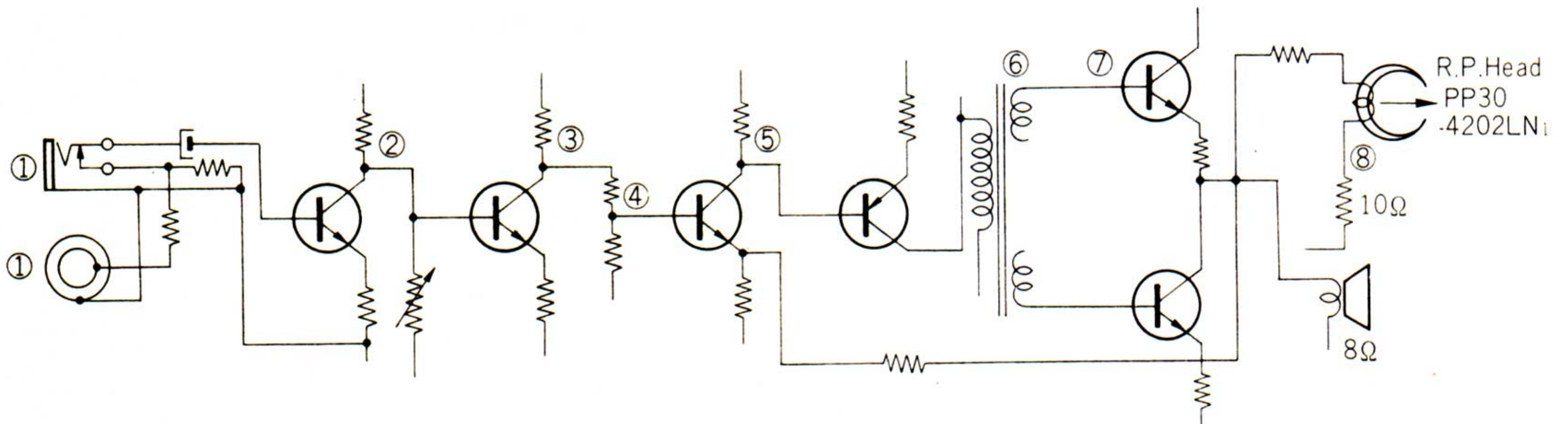
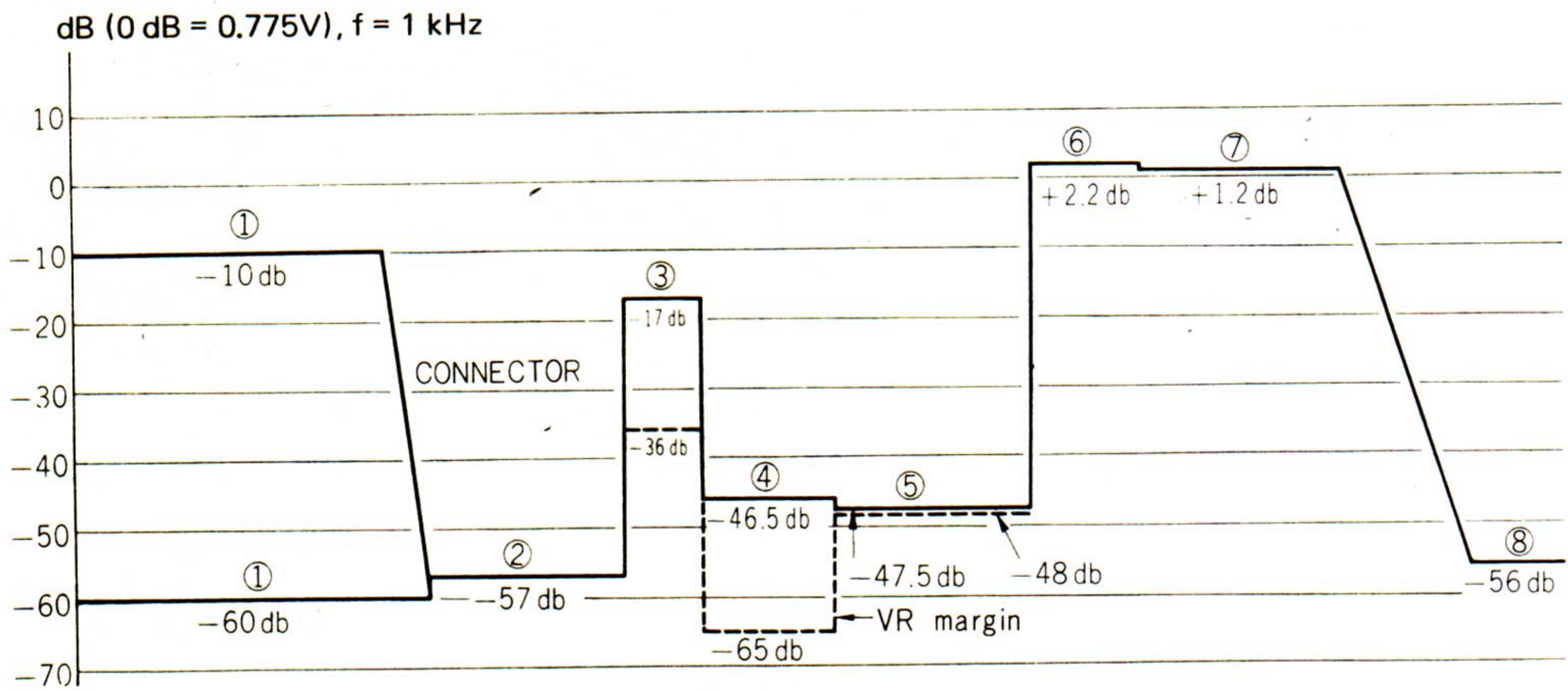
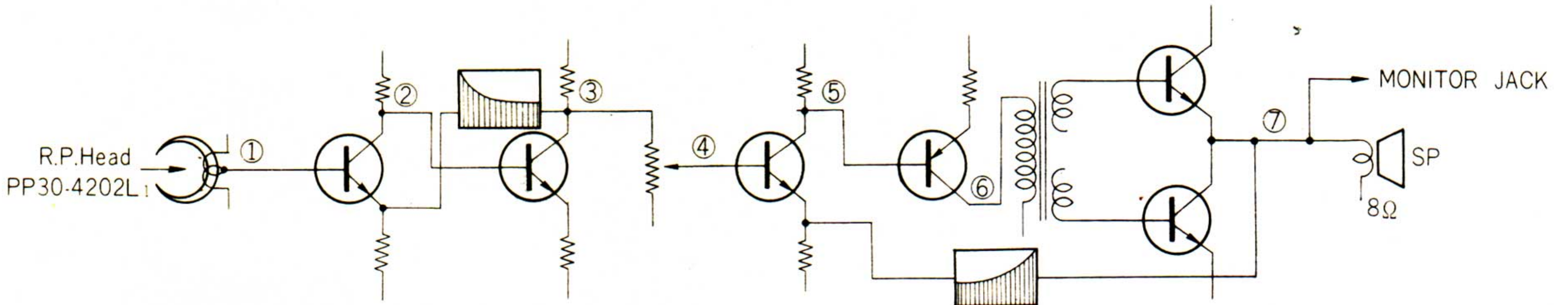
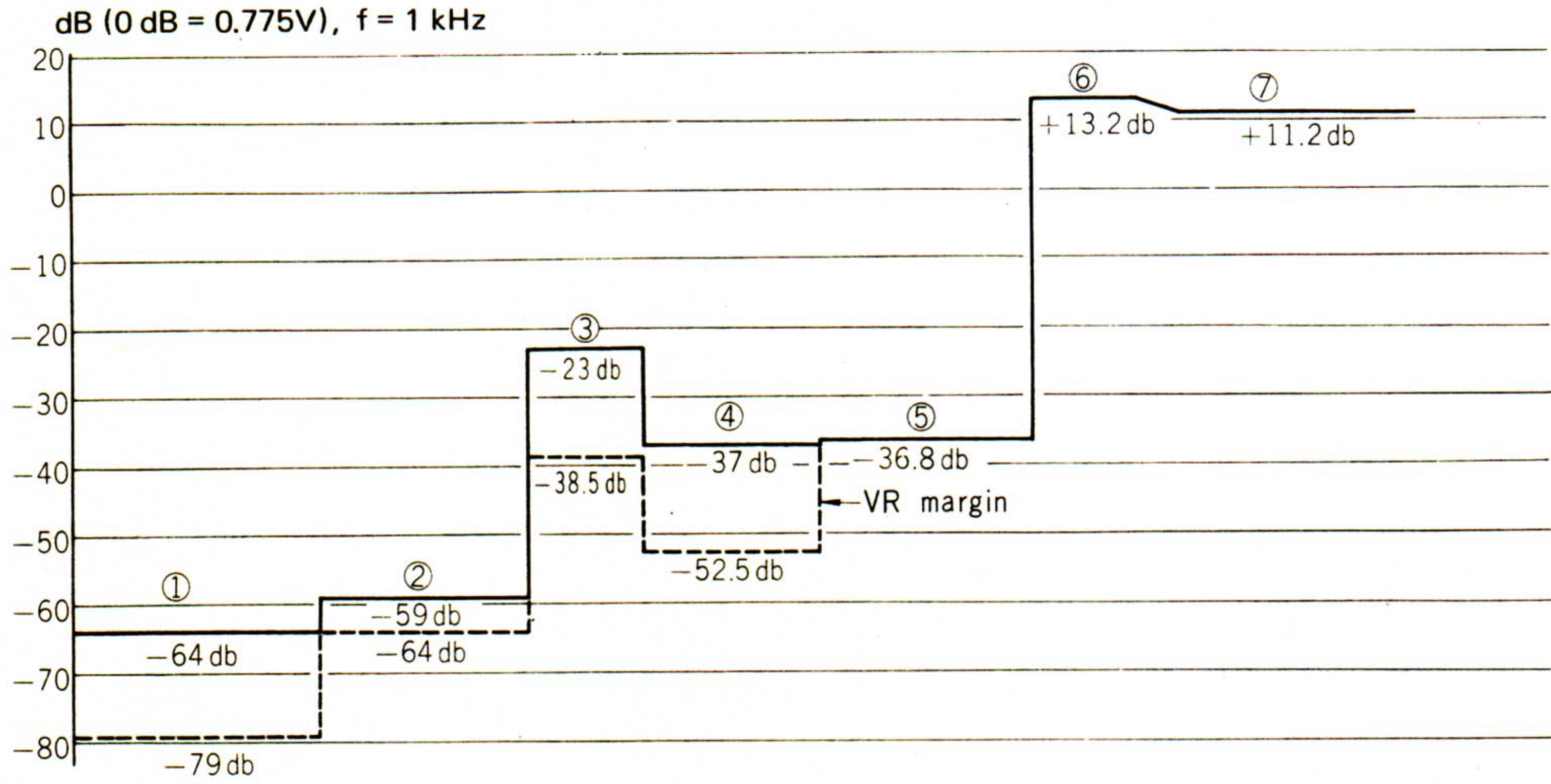
- S₁ : SWITCH, REC/P.B. : (AT RECORD POSITION)
- S₂ : SWITCH, CHANNEL SELECTOR (CHANNEL-1 POSITION)
- S₃ : SWITCH, AUTO/MANUAL SELECTOR (MANUAL POSITION)
- S₄ : SWITCH, EQUALIZER (ON 3³/₄ & 1⁷/₈ IPS POSITION)
- S₅ : SWITCH, EQUALIZER (ON 1⁷/₈ IPS POSITION)
- S₆ : SWITCH, SPEAKER ON/OFF
- S₇ : SWITCH, POWER ON/OFF
- S₈ : SWITCH, AUTOMATIC SHUT-OFF

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

Power Supply Section for USA and Canada



Level Diagram



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 | | | |
| A4 | X-34290-04- | BRACKET ASS'Y, auto/manual indicating plate | 4 | 3-429-104- | HUMBUCK RING, motor |
| A5 | X-34290-05-1 | KNOB ASS'Y, control | 5 | 3-429-105- | SUPPORT, humbuck ring |
| A6 | X-34292-01- | CABINET ASS'Y, main body | 6 | 3-429-106- | PLATE, motor noise shield |
| A7 | X-34292-02- | CABINET ASS'Y, lid | 7 | 3-429-107- | BRACKET, printed circuit board mounting (preamp) |
| A8 | X-34290-09- | BASE PLATE ASS'Y (chassis) | 8 | 3-429-108- | BRACKET, printed circuit board mounting (preamp) |
| | X-34290-10-2 | CARTON ASS'Y | | | |
| A9 | X-34240-05- | LOCK SLIDE ASS'Y | 9 | 3-429-109- | BRACKET, printed circuit board mounting (main amp) |
| A10 | X-34240-02- | LEVER ASS'Y, pinch | | | |
| A11 | X-34240-03- | CAM ASS'Y, lock plate | 10 | 30429-110- | BRACKET, printed circuit board (main amp) |
| | X-34240-06- | LOCK SLIDER MECHANISM ASS'Y | 11 | 3-429-111- | LEVER, recording button |
| A12 | X-34180-04-3 | CAPSTAN SHAFT ASS'Y | | 3-429-112- | SPRING, auto/manual indicating plate; mounting bracket |
| A13 | X-34180-05-3 | CAM ASS'Y, function selector | | | |
| 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 |
| | | | 17 | 3-429-119- | PULL ROD, rec./p.b. switch controlling |
| A19 | X-34180-11-4 | CAM ASS'Y, recording lock plate | | | |
| A20 | X-34180-12- | ARM ASS'Y, brake (take-up reel) | 18 | 3-429-120- | PLATE (A), terminal protector |
| | X-34180-36- | LEVER ASS'Y, instant stop brake | | 3-429-121- | SHAFT, function selector |
| A21 | X-34180-14-1 | JOINT LEVER ASS'Y, function selector cam & slider | | 3-429-122- | CUSHION, printed circuit board |
| | | | | 3-429-123- | BUFFER SPRING, pull rod |
| A22 | X-34180-15- | DRUM ASS'Y, take-up spindle | | 3-429-124- | PLATE, insulating for UL & CSA |
| A23 | X-34180-17-3 | REWIND IDLER ASS'Y | | 3-429-125- | PLATE (B), terminal protector |
| A24 | X-34180-19-3 | HEAD COVER ASS'Y for E & CSA | | 3-429-126- | BAG, polyethylene |
| | X-34180-19-4 | HEAD COVER ASS'Y for UL | | 3-429-127- | VIBRATION ABSORBER |
| A25 | X-34180-26- | DECK ASS'Y, feed reel table | | 3-429-128- | COVER, protecting for UL |
| A26 | X-34180-27- | LEVER ASS'Y, pinch roller shift | | 3-429-201- | LABEL, specification for UL |
| A28 | X-34180-30-1 | ARM ASS'Y, stepper | | 3-429-801- | LABEL, specification for E |
| A29 | X-34180-33-4 | MOUNTING PLATE ASS'Y, motor pulley | | 3-429-901- | LABEL, specification for CSA |
| | | | | 3-418-009- | SHAFT, pinch roller shifter |
| A31 | X-34180-37- | KNOB ASS'Y, function selector | 19 | 3-418-011- | JOINT, pinch lever & shifter |
| A32 | X-34180-39- | TABLE ASS'Y, take-up reel | 20 | 3-418-013- | SHIFTER, tape pad |
| A33 | X-34180-40- | TABLE ASS'Y, feed reel | 22 | 3-418-018- | SHAFT, take-up reel table |
| A40 | X-34180-41-2 | COUNTER ASS'Y, tape index | 21 | 3-418-019- | SHAFT, feed reel table |
| A35 | X-34188-02-2 | HEAD DECK ASS'Y | 24 | 3-418-020- | SPACER, feed reel table shaft |
| A34 | X-34188-03-3 | REEL PANEL ASS'Y | 23 | 3-418-021- | SPACER, take-up reel table shaft |
| A36 | X-00270-03- | CAPSTAN IDLER ASS'Y | 25 | 3-418-023- | PULLEY, tape counter |
| A37 | X-34300-25- | IDLER ASS'Y | 26 | 3-418-033- | LEVER, instant stop knob |
| A41 | X-34300-40- | BRAKE ASS'Y, instant stop | 27 | 3-418-035- | ALIGNING PLATE, instant stop knob |
| | | | 28 | 3-418-044- | LEVER, rewind arm control |
| 1 | 3-429-101- | LEG PLATE, deck | 29 | 3-418-051- | LEVER, fast forward lock |
| 2 | 3-429-102- | BRACKET, jack | 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 5φ, 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 2φ |
| 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 | | 3-406-902- | ESCUTCHEON, AC adaptor for E |
| 57 | 3-418-112- | OIL RING, capstan bearing | 102 | 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 8φ, 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 |
| | 3-418-168- | SPRING, recording reset | 112 | 3-811-032- | HEAT SINK, transistor 2SB383 |
| 70 | 3-418-171- | SPRING, tape guide height | 113 | 3-005-001-70 | SPRING, rec./p.b. head height adjusting |
| 71 | 3-418-179- | NYLON WASHER, capstan shaft | | 3-401-179- | LUG, cord stopping for UL & CSA |
| 73 | 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 16φ, 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 | | | |

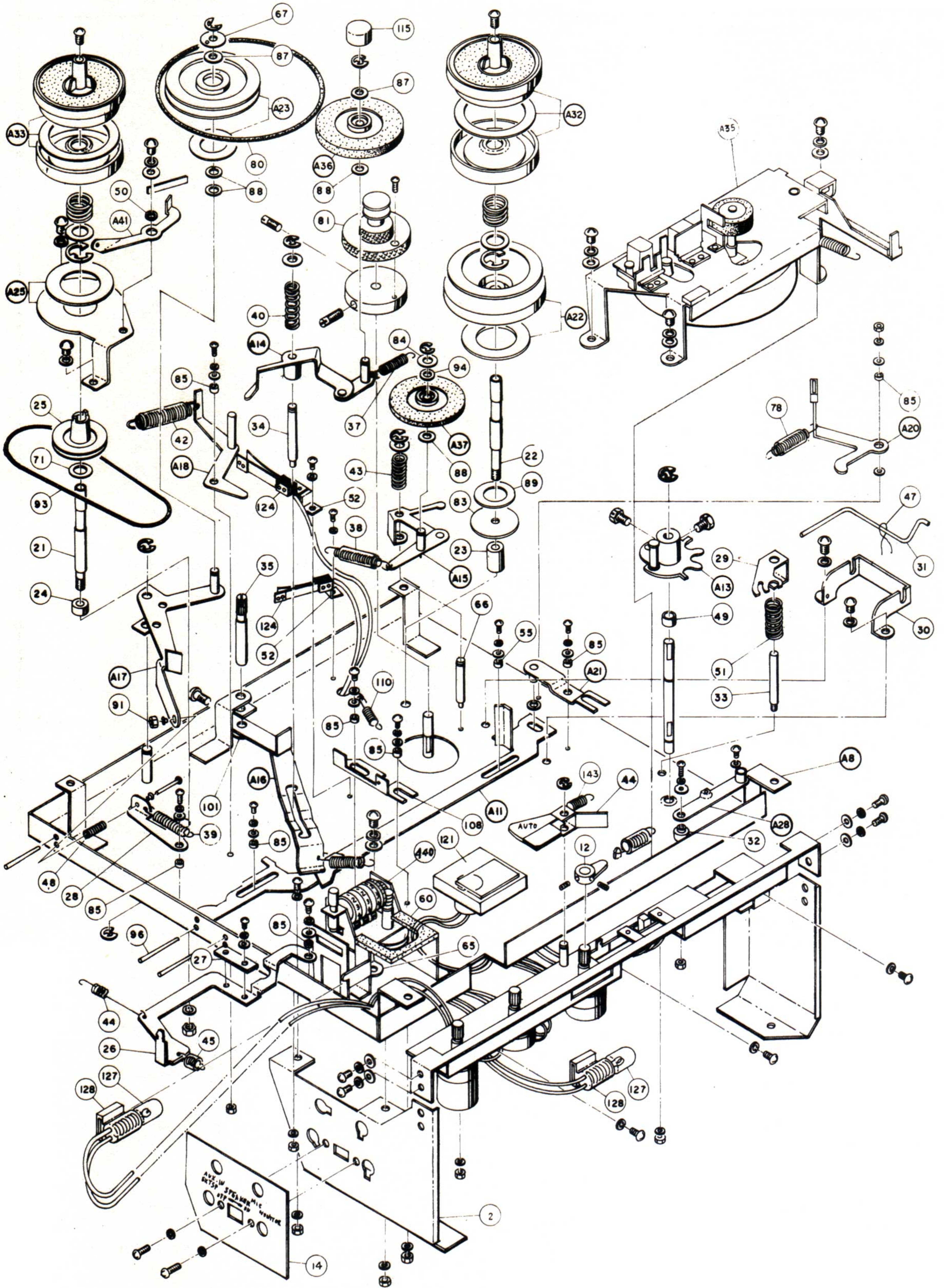
Parts List

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|--|----------|--------------|---|
| 113 | 3-419-438- | COVER, fuse post | | 7-621-255-56 | SCREW, machine; ⊕ P 2.6×8 |
| | 3-424-065- | SPACER, speed selector lever | | 7-621-261-25 | SCREW, machine; ⊕ P 3×4 |
| | 3-430-022- | CUSHION, panel | | 7-621-265-32 | SCREW, machine; ⊕ P 3×5 |
| 140 | 3-430-113- | SHAFT, pinch roller | | 7-621-261-45 | SCREW, machine; ⊕ P 3×6 |
| | 3-430-159- | CAP, capstan shaft oil | | 7-621-261-62 | SCREW, machine; ⊕ P 3×10 |
| | 3-430-214 | TAPE GUIDE | | 7-621-261-65 | SCREW, machine; ⊕ P 3×10 |
| | 3-430-215- | SHAFT, tape guide | | 7-621-261-75 | SCREW, machine; ⊕ P 3×12 |
| | 3-430-224- | SPRING, tension coil | | 7-621-261-85 | SCREW, machine; ⊕ P 3×14 |
| | 3-430-232- | CAP, pinch roller | | 7-621-268-35 | SCREW, machine; ⊕ P 4×5 |
| | 0-041-310- | MOLD, terminal strips | | 7-621-268-45 | SCREW, machine; ⊕ P 4×6 |
| | 0-041-127-01 | ACCESSORY BAG for 50 Hz | | 7-622-268-55 | SCREW, machine; ⊕ P 4×8 |
| | 0-041-127-02 | ACCESSORY BAG for 60 Hz | | 7-621-659-66 | SCREW, machine; ⊕ RK 2.6×8 |
| | 1-504-034-12 | MAGNETIC EARPHONE ME-20 | | 7-621-269-56 | SCREW, machine; ⊕ P 4×25 |
| | 1-534-033-13 | CONNECTION CORD RK-69 | | 7-621-461-52 | SCREW, machine; ⊕ T 3×8 |
| | 3-401-193-02 | TAPE COTTON | | 7-621-461-56 | SCREW, machine; ⊕ T 3×8 |
| | 3-403-810- | BAG, microphone protecting | | 7-621-462-62 | SCREW, machine; ⊕ T 3×30 |
| | 3-407-956- | LABEL, caution for CSA | | 7-621-770-78 | SCREW, machine; ⊕ B 3×12 |
| | 3-419-752- | SPECIFICATION, fuse capacitor for E & CSA | | 7-621-713-35 | SCREW, machine; set 3×5 |
| | 3-427-291- | LABEL, caution for UL | | 7-621-840-72 | SCREW, machine; wood ⊕ R 2.1×6.3 for E |
| | 3-701-020- | BAG, check sheet | | 7-623-205-22 | WASHER, spring; 2φ |
| | 3-701-025-01 | SPLICING TAPE SP-2 for E | | 7-623-207-22 | WASHER, spring; 2.6φ |
| | 3-701-030- | LABEL, serial number | | 7-623-208-22 | WASHER, spring; 3φ |
| | 3-701-031- | ENVELOPE, IBM card for UL | | 7-623-210-22 | WASHER, spring; 4φ |
| | 3-701-034- | CARD, quality control for UL | | 7-623-212-02 | WASHER, spring; 5φ |
| | 3-701-035- | WARRANTY CARD for UL | | 7-623-105-12 | WASHER, plain; 2φ |
| | 3-701-064- | BAG, accessory | | 7-623-107-12 | WASHER, plain; 2.6φ |
| | 3-790-224-14 | MANUAL, instruction for E | | 7-623-108-12 | WASHER, plain; 3φ |
| | 3-790-224-22 | MANUAL, instruction for UL | | 7-623-110-12 | WASHER, plain; 4φ |
| | 3-790-224-43 | MANUAL, instruction for CSA | | 7-623-112-12 | WASHER, plain; 5φ |
| | 3-793-010-20 | TAPE TALK | | 7-622-108-02 | NUT 3φ |
| | 3-793-044- | IMPORTANT, carton for UL | | 7-622-110-02 | NUT 4φ |
| | 3-793-105- | WARRANTY CARD for CSA | | 7-622-212-01 | WASHER 5φ |
| | 3-793-106- | GUARANTEE CARD for CSA | | 7-622-408-11 | NUT; speed 3φ |
| | 3-793-183- | INSPECTION CARD | | 7-623-508-01 | LUG 3φ |
| | 8-811-960-30 | MICROPHONE F-96 (MTL) | | 7-623-624-01 | EYELET 2.5×5 |
| | 8-813-651- | LABEL, color indicating | | 7-623-632-01 | EYELET 3×4 |
| | 8-860-105- | SONY-O-MATIC REEL R-5A | | 7-624-105-05 | RETAINING RING E-3 |
| | 8-918-212- | TAPE DME-522 except UL | | 7-624-108-05 | RETAINING RING E-4 |
| | X-37010-18- | HEAD CLEANING RIBBON ASS'Y except UL | | 7-624-109-05 | RETAINING RING E-5 |
| | 7-621-255-22 | SCREW, machine; ⊕ P 2×4 | | 7-623-308-05 | WASHER, lock; int. tooth 3φ |
| | 7-612-255-42 | SCREW, machine; ⊕ P 2×6 | | 7-623-408-05 | WASHER, lock; ext. tooth 3φ |
| | 7-621-255-52 | SCREW, machine; ⊕ P 2×8 | | | |
| | 7-621-255-72 | SCREW, machine; ⊕ P 2×10 | | | |
| | 7-621-256-22 | SCREW, machine; ⊕ P 2×20 | | | |
| | 7-621-259-12 | SCREW, machine; ⊕ P 2.6×3 | | | |
| | 7-621-259-32 | SCREW, machine; ⊕ P 2.6×5 | | | |
| | 7-621-255-42 | SCREW, machine; ⊕ P 2.6×6 | | | |
| | 7-621-255-52 | SCREW, machine; ⊕ P 2.6×8 | | | |
| | | | | NOTE: | E = STANDARD MODEL UL = U S A CSA = CANADA |

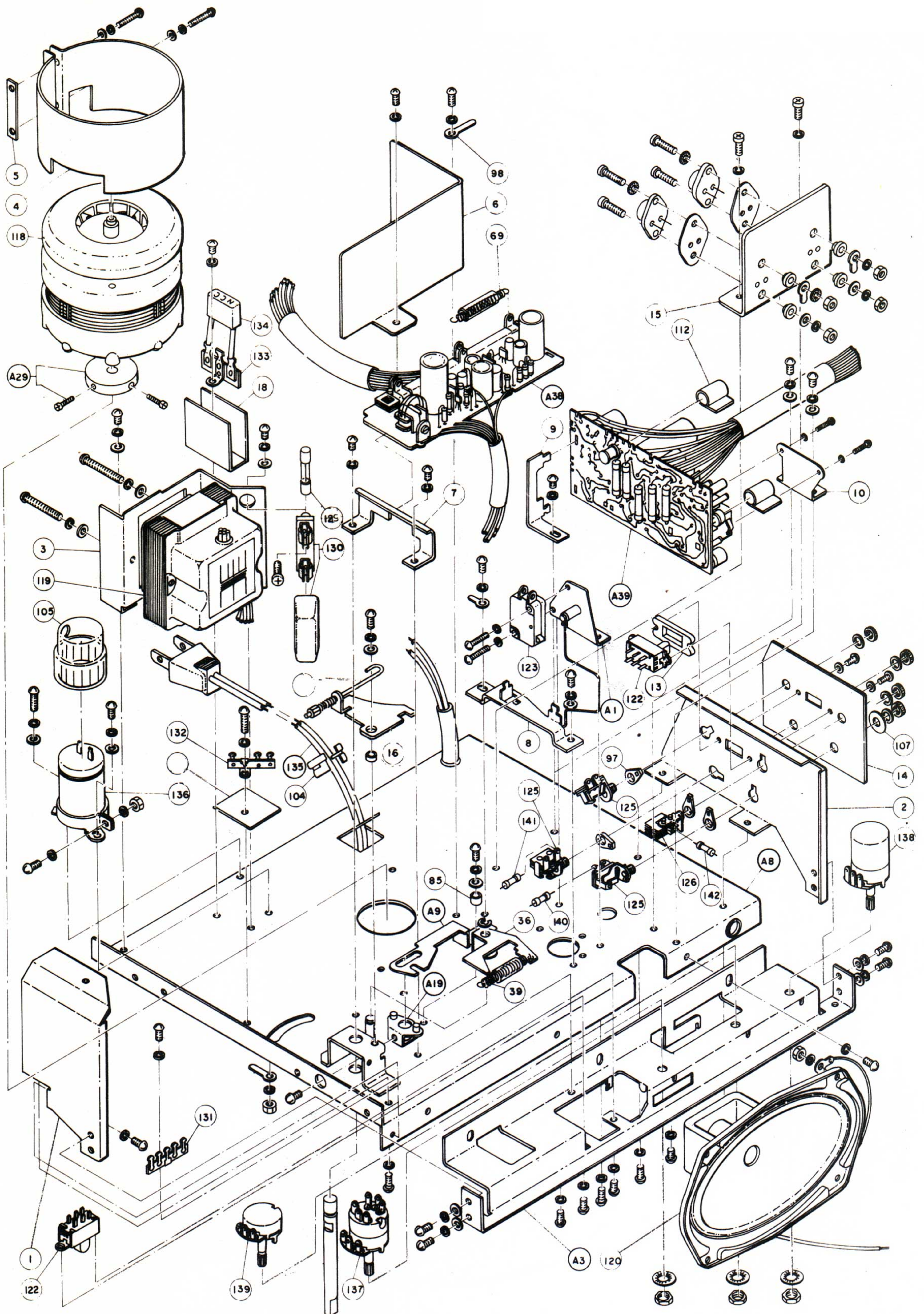
Parts List

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|------------|----------------------------------|--|------------|--|--|
| A38 | X-34290-55-1 | Preamplifier Block | | 1-242-649- | 100Ω ±10% ¼W R26 |
| | 1-538-416-12 | CIRCUIT BOARD, preamplifier; mounted | | 1-242-661- | 330Ω ±10% ¼W R39 |
| | | CIRCUIT BOARD, preamplifier; printed | | 1-242-665- | 470Ω ±10% ¼W R27 |
| | | TRANSISTOR 2SC631 X _{1,2} | | 1-242-683- | 2.7kΩ ±10% ¼W R25 |
| | | TRANSISTOR 2SC402A X ₈ (Low Noise) | | 1-242-693- | 6.8Ω ±10% ¼W R28 |
| | | DIODE 1T22 D ₂ | | 1-242-695- | 8.2kΩ ±10% ¼W R23 |
| | 1-427-182-11 | TRANSFORMER, output | | 1-242-703- | 18kΩ ±10% ¼W R24,38 |
| | 1-513-220-14 | SWITCH, rec./p.b. ; slide S ₁ | | | |
| | 1-221-630- | RESISTOR, adjustable, carbon 22kΩ (B) R ₄₆ | | | |
| | | RESISTOR, carbon | | | CAPACITOR, electrolytic |
| | 1-242-683- | 2.7kΩ ±5% ¼W R ₈ | | 1-121-388- | 1000μF 35V C ₃₂ |
| | 1-242-691- | 5.6kΩ ±5% ¼W R ₅ | | 1-121-234- | 500μF 25V C ₂₀ |
| | 1-242-709- | 33kΩ ±5% ¼W R ₆ | | 1-121-081- | 500μF 15V C ₁₃ |
| | 1-242-705- | 22kΩ ±5% ¼W R ₃ | | 1-121-297- | 200μF 25V C ₁₇ |
| | 1-242-641- | 47Ω ±10% ¼W R ₁₀ | | 1-121-356- | 100μF 15V C ₂₅ |
| | 1-242-645- | 68Ω ±10% ¼W R ₄ | | 1-121-292- | 100μF 12V C ₁₈ |
| | 1-242-649- | 100Ω ±10% ¼W R ₄₅ | | 1-121-290- | 100μF 3V C ₁₆ |
| | 1-242-663- | 390Ω ±10% ¼W R ₉ | | 1-121-349- | 30μF 10V C ₁₄ |
| | 1-242-665- | 470Ω ±10% ¼W R ₁₆ | | 1-121-344- | 3μF 25V C ₁₂ |
| | 1-242-673- | 1kΩ ±10% ¼W R ₇ | | | CAPACITOR, mylar |
| | 1-242-681- | 2.2kΩ ±10% ¼W R ₄₂ | | 1-105-745-12 | 0.0022μF ±10% 200V C ₂₇ |
| | 1-242-687- | 3.9kΩ ±10% ¼W R ₁₅ | | 1-105-743-12 | 0.0015μF ±10% 200V C ₂₈ |
| | 1-242-693- | 6.8kΩ ±10% ¼W R ₄₇ | | 1-105-843-12 | 0.068μF ±20% 50V C ₁₉ |
| | 1-242-695- | 8.2kΩ ±10% ¼W R ₄₀ | | 1-105-841-12 | 0.047μF ±20% 50V C ₁₅ |
| | 1-242-697- | 10kΩ ±10% ¼W R ₁₇ | | 1-105-833-12 | 0.01μF ±20% 50V C ₂₄ |
| | 1-242-699- | 12kΩ ±10% ¼W R ₄₃ | | | CAPACITOR, polyethylene |
| | 1-242-703- | 18kΩ ±10% ¼W R ₁₈ | | 1-129-344- | 0.0068μF ±10% 500V C ₂₃ |
| | 1-242-707- | 27kΩ ±10% ¼W R ₁₈ | | | CAPACITOR, silvered mica |
| | 1-242-709- | 33kΩ ±10% ¼W R ₁₄ | | 1-107-006- | 330pF ±10% 500V C ₂₁ |
| | 1-242-733- | 330kΩ ±10% ¼W R ₁₂ | | | GENERAL BLOCK |
| | | CAPACITOR, electrolytic | | | TRANSISTOR 2SD28 X _{5,6} |
| | 1-121-186- | 1000μF 12V C ₃₀ | | 82-1242-27- | Rec./P.B. HEAD PP30-4202 LN ₁ |
| | 1-121-081- | 500μF 15V C ₃ | | 82-6629-21- | ERASE HEAD EF18-2902 H |
| | 1-121-359- | 500μF 6V C ₂₆ | | 83-2624-07- | MOTOR IC-624S2 |
| | 1-121-294- | 200μF 3V C ₁₀ | | 1-441-241-13S | TRANSFORMER, power for UL & CSA |
| | 1-121-290- | 100μF 3V C ₇ | | 1-441-268-12S | TRANSFORMER, power for E |
| | 1-121-287- | 50μF 3V C ₅ | | 1-502-147- | SPEAKER |
| | 1-121-284- | 30μF 6V C _{2,8,29} | | 1-509-064-13S | VOLTAGE SELECTOR for E |
| | | CAPACITOR, mylar | | 1-524-020- | METER, volume unit |
| | 1-105-677-12 | 0.022μF ±10% 50V C ₉ | | 1-513-091- | SWITCH, track change; slide S _{2.6} |
| | 1-105-669-12 | 0.0047μF ±10% 50V C ₃₁ | | 1-514-039- ⁰² ₁₂ | SWITCH, micro S ₈ -12; UL only |
| | 1-105-837-12 | 0.022μF ±10% 50V C ₂₂ | | 1-514-041- ¹² | SWITCH, tape speed equalizer; leaf S _{4,5} |
| | 1-105-827-12 | 0.0033μF ±20% 50V C ₁ | | 1-507-053- | JACK, microphone & ext. speaker; mini |
| | 1-105-823-12 | 0.0015μF ±20% 50V C ₁₁ | | 1-507-082- | JACK, line-out; mini |
| | 1-105-821-12 | 0.001μF ±20% 50V C ₄ | | 1-518-052- | LAMP, pilot |
| | CAPACITOR, silvered mica | | 1-517-003- | SOCKET, pilot lamp | |
| 1-107-018- | 470PF ±10% 500V C ₆ | | 1-532-163- | FUSE 0.8A | |
| 1-107-028- | 620PF ±10% 500V C ₃₄ | | 1-533-006- | FUSE HOLDER | |
| | Main Amplifier Block | | 1-536-146- | TERMINAL STRIPS; 1-L-1 | |
| A39 | X-34290-56-1 | CIRCUIT BOARD, main amplifier; mounted | | 1-536-181- | TERMINAL STRIPS; 2-L-1 for UL & CSA |
| | 1-538-417-14 | CIRCUIT BOARD, main amplifier; printed | | 1-536-182- | TERMINAL STRIPS; 2-L-2 |
| | | TRANSISTOR 2SC402A X ₃ | | 1-101-534- | ENCAPSULATED COMPONENT 0.1μF+120Ω 500V for UL |
| | | TRANSISTOR 2SB381 X ₄ | | 1-117-035- | CAPACITOR, metalized paper C ₃₃ 1.5μF for UL & CSA |
| | | TRANSISTOR 2SB383 X ₇ | | 1-534-557-21 | AC POWER CORD for UL |
| | | DIODE SD-1Z D _{3,4} | | 1-534-487-22 | AC POWER CORD for E |
| | 1-423-087-11 | DRIVER TRANSFORMER T ₁ | | 1-534-608- | POWER CORD for CSA |
| | 1-433-084-11 | TRANSFORMER, bias oscillator T ₃ | | 1-431-006- | HUMBUCK COIL L _{2,3} |
| | 1-431-038- | DUMMY COIL L ₁ | | 1-221-641- | TONE CONTROL 10kΩ R ₁₁ with S ₁₁ |
| | | RESISTOR, carbon | | 1-221-726- ¹² ₁₃ | VOLUME CONTROL 10kΩ(A) R ₁₉ with S ₇ -12; for UL -13; for CSA & E |
| | 1-204-530- | 82Ω ±5% 1W R _{30,33} | | 1-221-725- | AUTOMATIC GAIN CONTROL 15kΩ(D) R ₁₃ |
| | 1-204-521- | 100Ω ±5% 1W R _{31,34} | | | RESISTOR, carbon |
| 1-204-529- | 270Ω ±5% 1W R ₄₄ | | 1-244-667- | 560Ω ±10% R ₁ | |
| 1-242-625- | 10Ω ±5% ¼W R _{29,32} | | 1-244-721- | 100kΩ ±10% R ₂ | |
| 1-242-725- | 150kΩ ±5% ¼W R ₂₀ | | 1-244-647- | 82Ω ±10% R ₃₇ | |
| 1-242-745- | 1MΩ ±5% ¼W R ₂₁ | | | | |
| 1-242-601- | 1Ω ±10% ¼W R _{35,36,48} | | | | |
| 1-242-635- | 27Ω ±10% ¼W R ₂₂ | | | | |

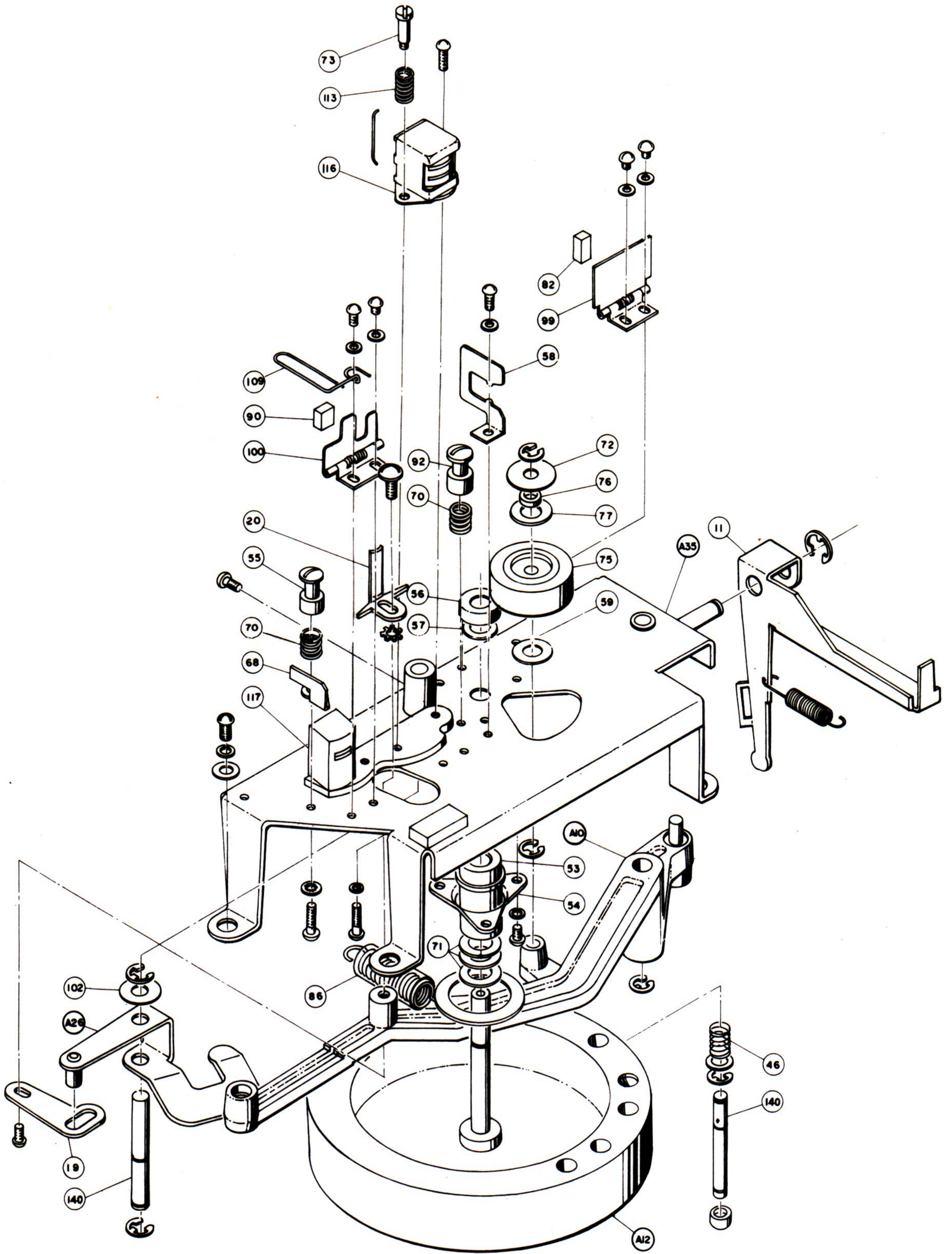
Exploded View



Exploded View



Exploded View



Exploded View

