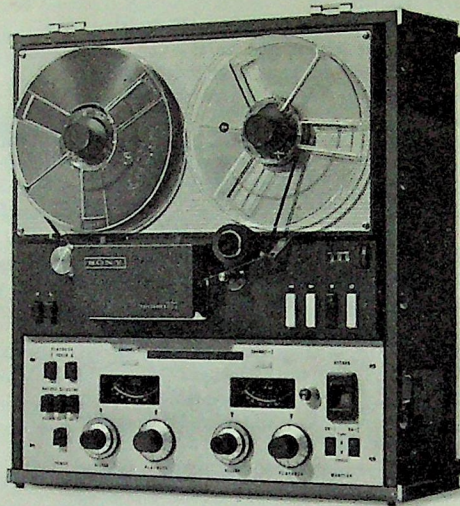


# TC-777-2/-2J -4/-4J



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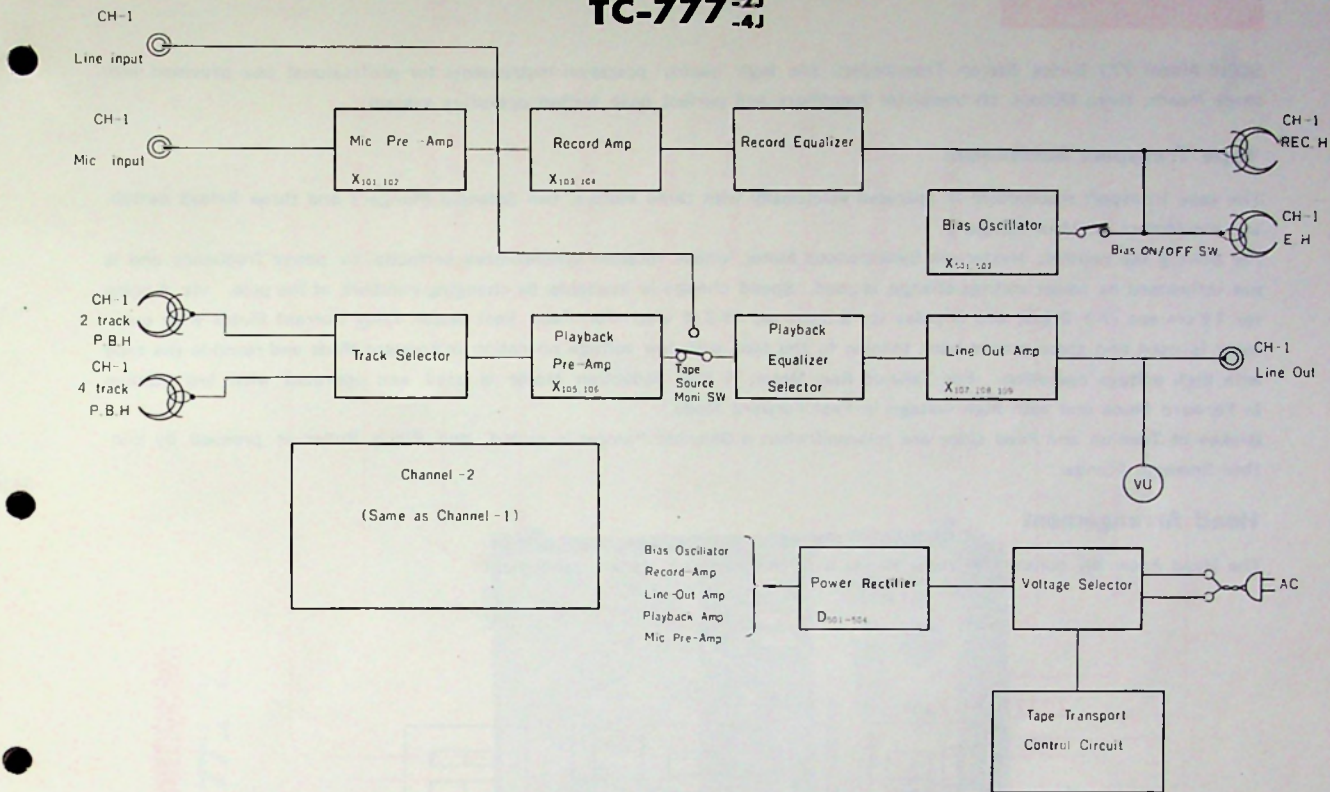
**SONY**<sup>®</sup>  
**SERVICING GUIDE**

## Specifications

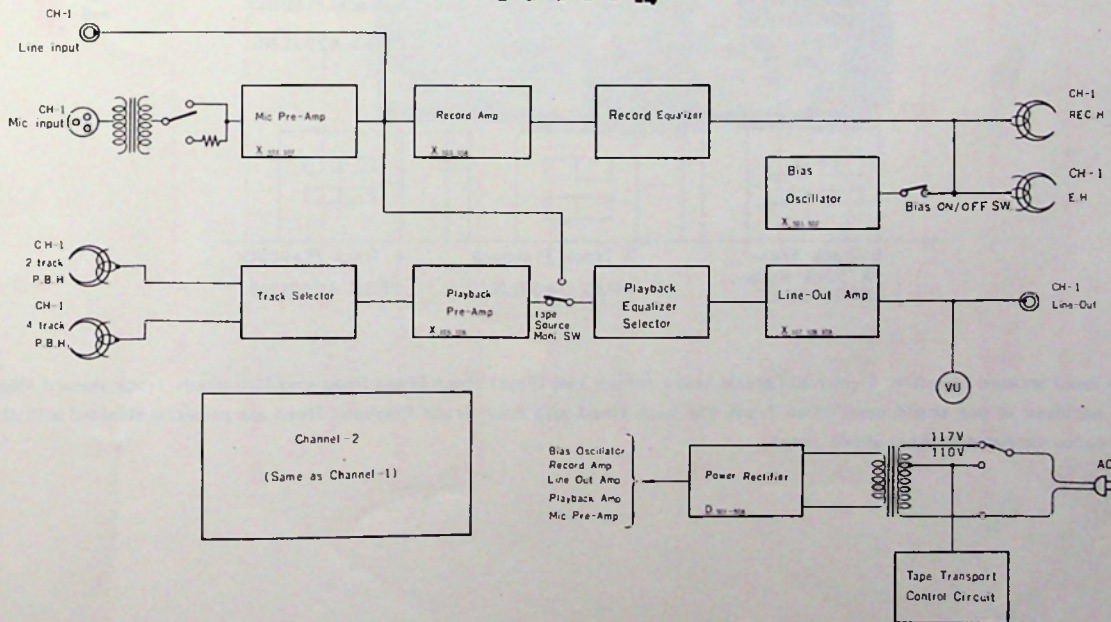
<b>Power Requirements:</b>	AC 100, 110, 117, 125, 220 or 240 Volts 50/60 Hz, 90 Watts		
<b>Tape Speeds:</b>	7½ ips and 3¾ ips		
<b>Reel Size:</b>	Up to 7" (18 cm)		
<b>Frequency Response:</b>	±2 db 40~16,000 Hz at 7½ ips (19 cm/s) 50~9,000 Hz at 3¾ ips (9.5 cm/s)		
<b>Signal-to-Noise Ratio:</b>	Better than 50 db (at peak recording level)		
<b>Flutter and Wow:</b>	Less than 0.1% at 7½ ips (19 cm/s)		
<b>Bias Frequency:</b>	Approx. 92 KHz		
<b>Recording Time:</b>	2 track stereo	2 track monophonic & 4 track stereo	4 track monophonic
(with 1,800 ft tape)	45 min 1 hr 30 min	1 hr 30 min 3 hrs	3 hrs at 7½ ips (19 cm/s) 6 hrs at 3¾ ips (9.5 cm/s)
<b>Head Composition:</b>	<b>Model 777-4 -4J</b>		
	ERP24-2902; 4 track erase/4 track record ..... 1		
	PP30-4202LNS; 4 track playback ..... 1		
	PP30-2802LN; 2 track playback ..... 1		
	<b>Model 777-2 -2J</b>		
	ERP24-2202; 2 track erase/2 track record ..... 1		
	PP30-2802LN; 2 track playback ..... 1		
	PP30-4202LNS; 4 track playback ..... 1		
<b>Inputs:</b>	Microphone ..... 2		
	<b>Model 777-4</b>		
	low impedance (250~600Ω) -72 dbs (0.2 mV)		
	<b>Model 777-4J</b>		
	low impedance (250~600Ω) -60 dbs (0.75 mV)		
	<b>Model 777-2</b>		
	low impedance (250~600Ω) -68 dbs (0.3 mV)		
	<b>Model 777-2J</b>		
	low impedance (250~600Ω) -60 dbs (0.75 mV)		
	Line ..... 2		
	<b>Model 777-4</b>		
	high impedance (100 KΩ) -12 dbs (0.22 V)		
	<b>Model 777-2 and 777-2J -4J</b>		
	high impedance (100 KΩ) -10 dbs (0.25 V)		
<b>Outputs:</b>	Line Outputs ..... 2		
	low impedance (600Ω)		
	high impedance (10 KΩ) 0 dbs (0.775 V)		
	Stereo monitor ..... 1		
	high impedance (10 KΩ)		
	<b>Model 777-2J -4J</b>		
	Record/Playback Connector ..... 1		
	inputs: load impedance 100 KΩ -33 dbs (0.02 V)		
	outputs: load impedance 100 KΩ -3 dbs (0.68 V)		
<b>Motors:</b>	HC-634D <sub>1</sub> ; Capstan ..... 1		
	IC-524R <sub>1</sub> ; Reel ..... 1		
	UC-124R; Reel ..... 1		
<b>Dimensions:</b>	17½ (W) × 17¼ (D) × 8 <sup>11</sup> / <sub>16</sub> " (H) (445 mm × 458 mm × 216 mm)		
<b>Weight:</b>	42 lb 14 oz (19.5 Kg)		

Block Diagram

TC-777-2J  
-4J



TC-777-2



**Technical Feature**

SONY Model 777 Series Stereo Tape recorders are high quality precision instruments for professional use provided with three Heads, three Motors, all transistor Amplifiers and perfect push button operating system.

**Tape Transport Mechanism**

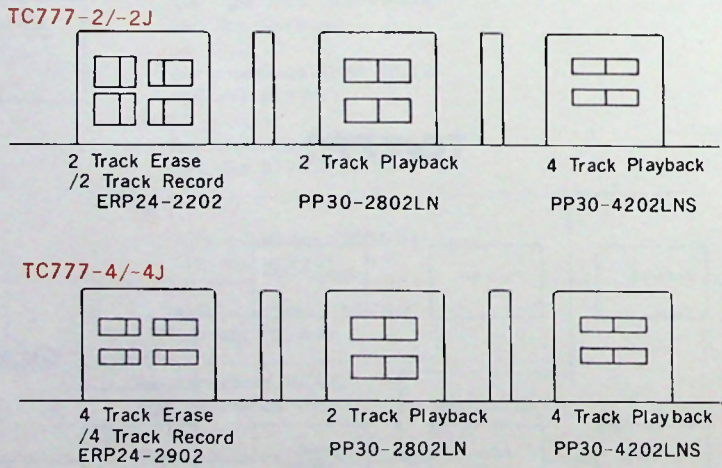
The tape transport mechanism is operated electrically with three Motors, two Solenoid Plungers and three Relays switching the Motors and the Plungers.

For driving the capstan, Hysteresis Synchronous Motor, whose rotation synchronizes perfectly to power frequency and is not influenced by power voltage change, is used. Speed change is available by changing numbers of the pole, viz. 4 poles for 19 cm/sec (7-1/2 ips) and 8 poles for 9.5 cm/sec (3-3/4 ips). For Feed Reel Motor, Eddy Current Motor with outer rotor is used and gives proper back tension to the tape with low voltage operation in Forward Mode and rewinds the tape with high voltage operation. For Take-up Reel Motor, 4 Pole Induction Motor is used and operated with low voltage in Forward Mode and with high voltage in Fast Forward Mode.

Brakes of Take-up and Feed sides are released when a Solenoid Plunger is pulled, and Pinch Roller is pressed by another Solenoid Plunger.

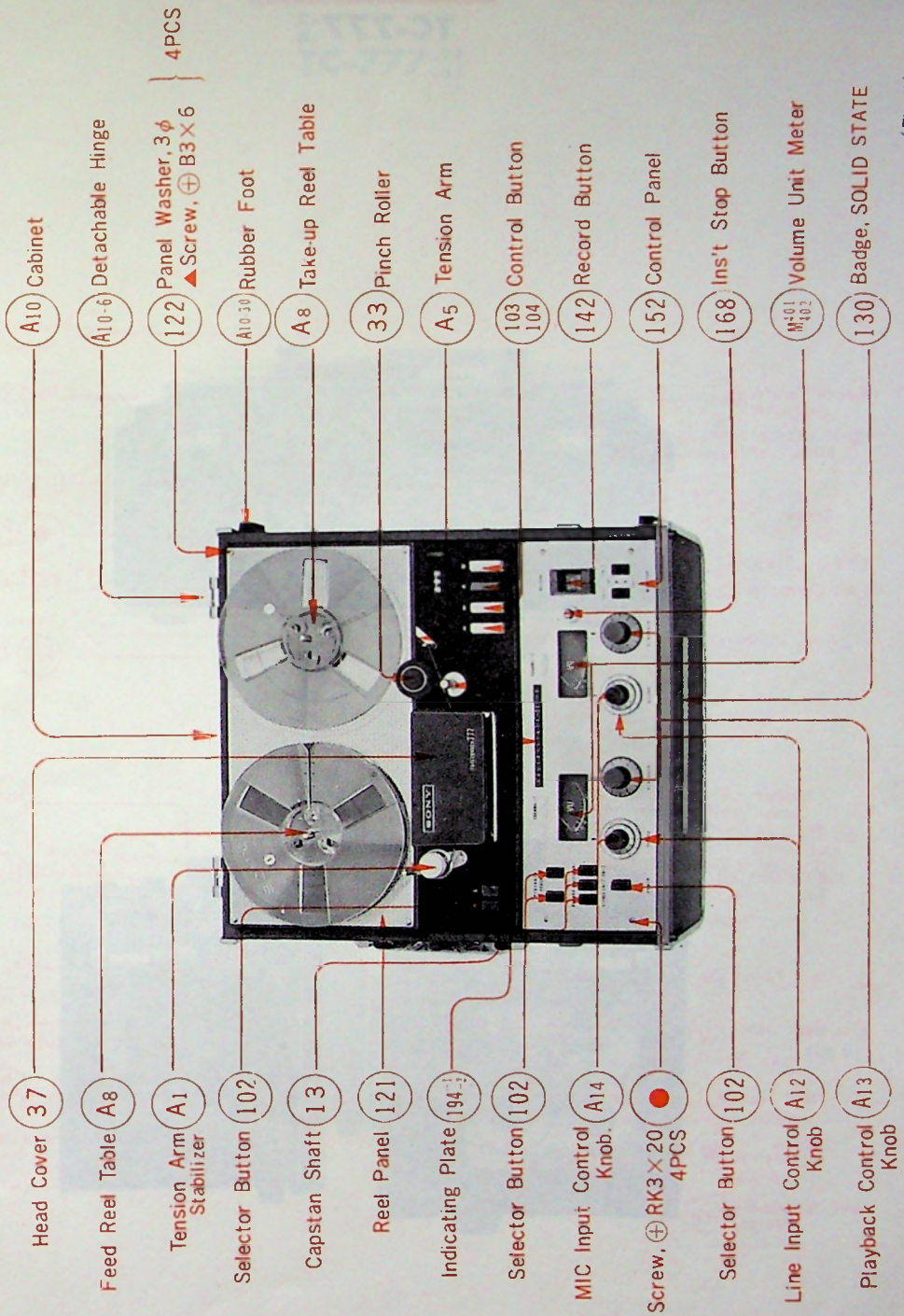
**Head Arrangement**

The Head Assembly consists of three Heads with the following stack arrangement :



The head located at left is Electro-Bi-Lateral Head which Two (Four) Track Erase Head and Two (Four) Track Record Head are enclosed in one shield case. Two Track Playback Head and Four Track Playback Head are perfectly shielded with the permalloy-copper-permalloy shield cases.

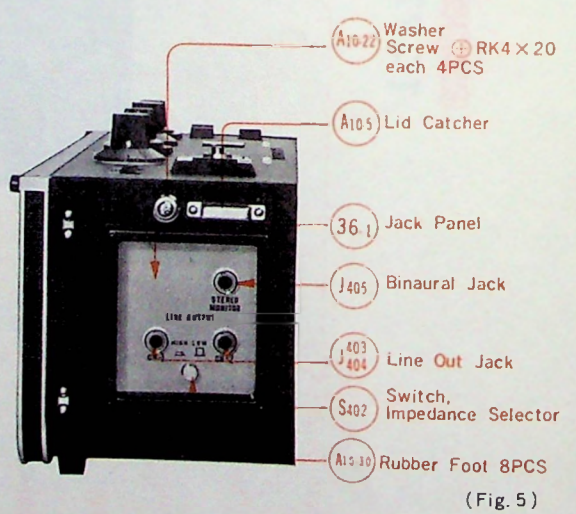
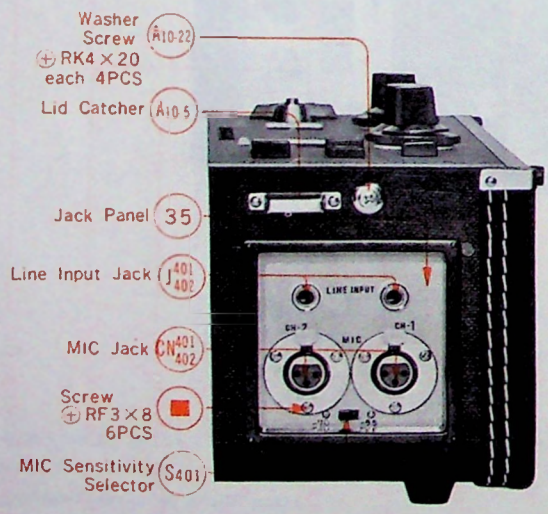
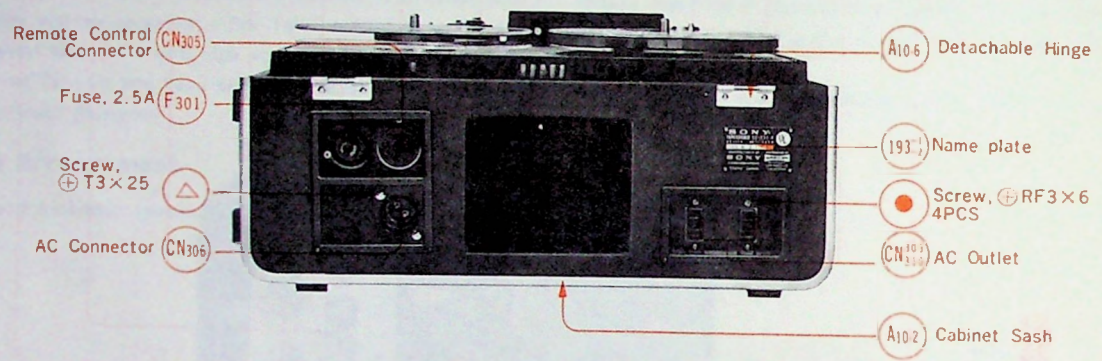
**Cabinet Top View**  
**TC-777-2/-2J**  
**-4/-4J**



(Fig. 4)

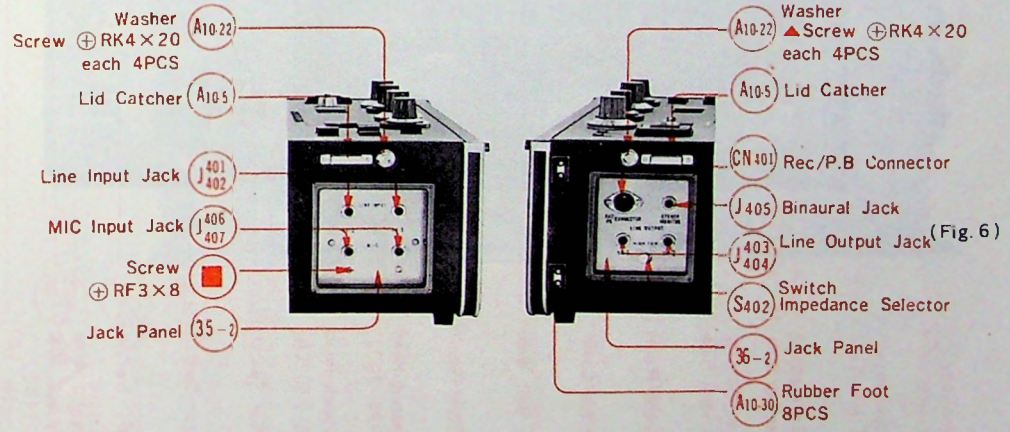
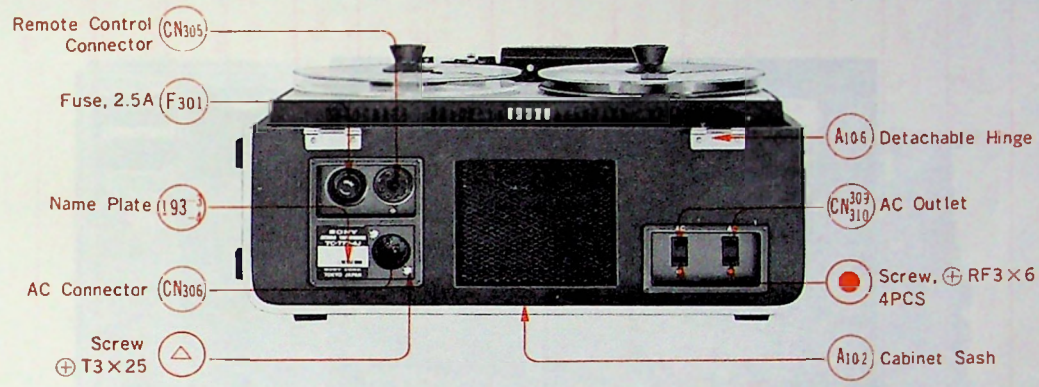
Cabinet Side Views

TC-777-2

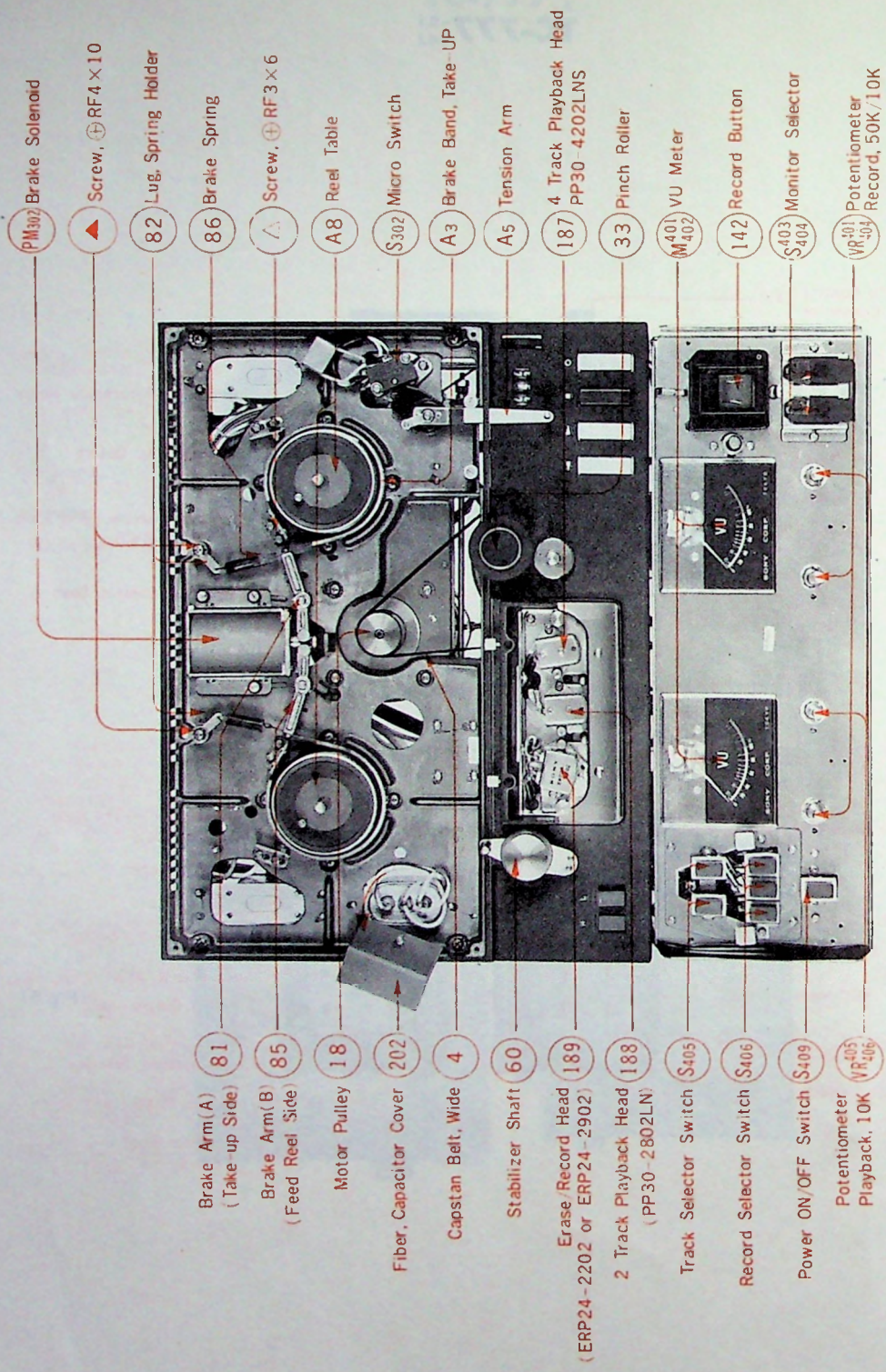


(Fig. 5)

TC-777-2J  
-4J

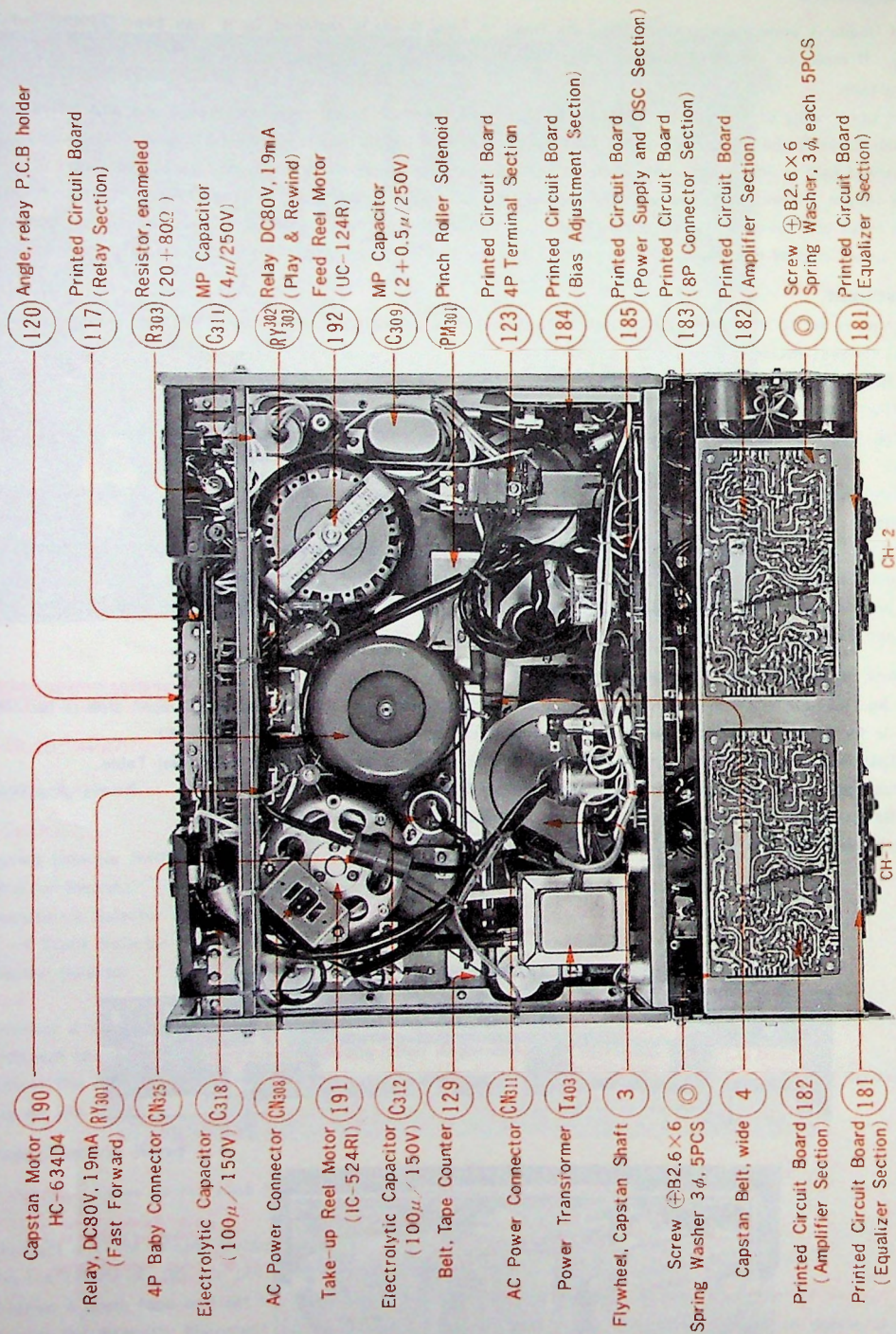


Chassis Top View  
TC-777-2/-2J  
-4/-4J



(Fig. 7)





(Fig. 8)

## Method of Disassembling the Set

## Removal of Cabinet

- (1) Turn up-side down the recorder on a soft pad.
- (2) Pull out the Defeat Plug located on the bottom and Fuse Post Cap located on the right side.
- (3) Remove eight screws ( $\oplus$ RK 4 $\times$ 20 marked with  $\blacktriangle$  in Fig. 9) and eight Ornamental Washers as shown in Fig. 9.
- (4) Lift up the Cabinet gently.

## Removal of Reel Panel

- (1) Remove four Screws ( $\oplus$ B 3 $\times$ 6 marked with  $\blacktriangle$  in Fig. 10) and four 3 $\phi$  Panel Washers as shown in Fig. 10.
- (2) Remove Reel Panel and check main mechanism.

## Removal of Control Panel

- (1) Remove two MIC Input Control Knobs, Line Input Control Knobs, Playback Control Knobs, one Instant Stop Button Guard and four felts by loosening respective Set Screws as shown in Fig. 11.
- (2) Pull out Record Button Guard.
- (3) Loosen four screws ( $\oplus$ RK 3 $\times$ 20 marked with  $\bullet$  in Fig. 11).
- (4) Lift up the Panel gently.

## Removal of Sub Chassis

- (1) Remove six Screws ( $\oplus$ R 3 $\times$ 6 marked with  $\bullet$  in Fig. 12) and six 3 $\phi$  Spring Washers shown in Fig. 12.
- (2) Slide the Sub Chassis leftwards as shown in Fig. 12.

## Removal of Mounted Circuit Board

## Pro-Amplifier Circuit Board Channel-1

- (1) Remove five Screws ( $\oplus$ B 2.6 $\times$ 6 marked with  $\bullet$  in Fig. 8) and five 3 $\phi$  Spring Washers.
- (2) Circuit Board Channel-2 is the same as Channel-1.

## Equalizer Amplifier Circuit Board Channel-1

- (1) Remove three Screws ( $\oplus$ B 2.6 $\times$ 6 marked with  $\blacktriangle$  in Fig. 16) and three 3 $\phi$  Spring Washers.
- (2) Circuit Board Channel-2 is the same as Channel-1.

## Bias Adjustment Circuit Board

Remove four Screws ( $\oplus$ B 2.6 $\times$ 12 marked with  $\triangle$  in Fig. 13) and four 2.6 $\phi$  Spring Washers.

## Power Supply and Oscillator Circuit Board

Remove two Screws ( $\oplus$ B 2.6 $\times$ 12 marked with  $\blacktriangle$  in Fig. 13) and two 2.6 $\phi$  Spring Washers.

**Mechanical Adjustment**

**Elevation Alignment**

Adjustment of Heads is unnecessary except the case Head or Tape Guide is replaced, as it has been exactly adjusted at the factory. If replaced, adjust as follows. (Refer to Fig. 14)

- (1) Thread a tape.
- (2) Align the upper edge of 4 Track (or 2 Track) Record Head Cores, 2 Track Playback Head Cores and 4 Track Playback Head Cores to the upper edge of the tape by turning each of the Height Alignment Screws with Hexagonal Hole (3x5 marked with ▲ in Fig. 14), and each of the Three Heads must be parallel to Capstan Shaft.
- (3) Turn the Height Alignment Screws with Hexagonal Hole of only 4 Track Erase/4 Track Record Head and 4 Track Playback Head counter-clockwise by approximately 45° from the position obtained in the preceding process, so that the upper edge of the tape is approximately 0.075 mm (0.025 mm) higher than that of the Record Head Cores.

**Brake Adjustment**

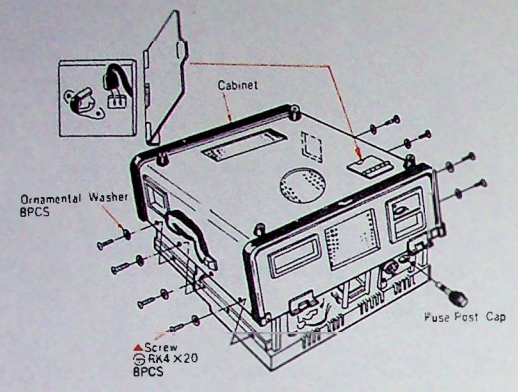
When the machine is set to Stop Mode from other Mode, or after replacing a Brake Band, if the brake function is loose, check as follows: (Refer to Fig. 15)

- (1) Set the Recorder in Playback Mode. (Brake Solenoid Plunger is pulled)
- (2) Loosen four Screws +RF 3x6 marked with ■ and +RF 3x8 marked with ◆
- (3) Adjust the Spacing between the Brake Drum and Felt Lining to approximately 1/25 inches (1 mm) by sliding the brackets.
- (4) Loosen one Screw +RF 4x10 marked with ▲ in Fig. 15 of the Take-up side and move the Spring Holder Lug to upper side.
- (5) Place a Test Hub (or empty reel with 44 mmφ hub) connected to Tension Gauge on Take-up Reel Table and pull the Tension Gauge.
- (6) Reading on the Tension Gauge should be approximately 4 lb 14 oz (2.2 kgs)—Torque: 67.5 oz-inch (4,840 gr-cm)
- (7) Adjust Feed Reel side in the same way as Take-up side.

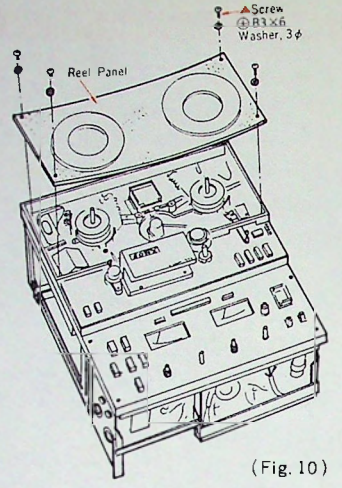
**Tape Holdback and Take-up Tension Adjustment**

Tape holdback and take-up tensions are adjusted by the sliding contact on the Resistor R<sub>303</sub> (upper side is for 50 Hz and lower side is for 60 Hz) located on the base plate above the Feed Reel Motor. (Refer to Fig. 8)

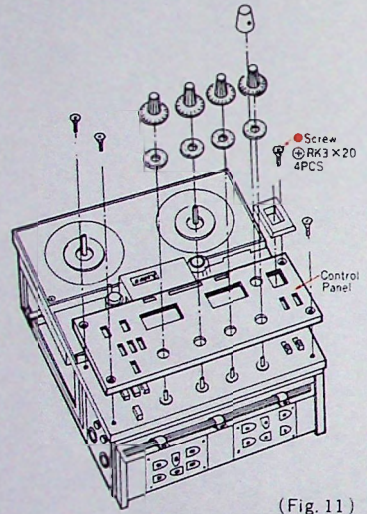
- (1) Place a Test Hub (or empty reel with 44 mmφ hub) connected to Tension Gauge on Feed Reel Table.
  - (2) Set the recorder in Playback Mode and read the Tension Gauge while pulling it.
  - (3) Tension Gauge should indicate 10.6 oz (300 grs).—Torque: 9.2 oz-inch (660 gr-cm)
- If the specified value is not obtained, adjust R<sub>303</sub>.



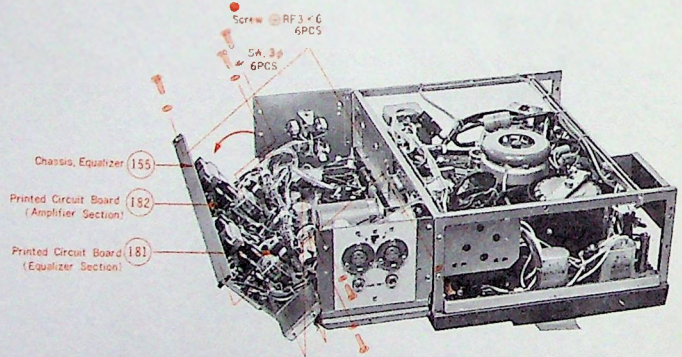
(Fig. 9)



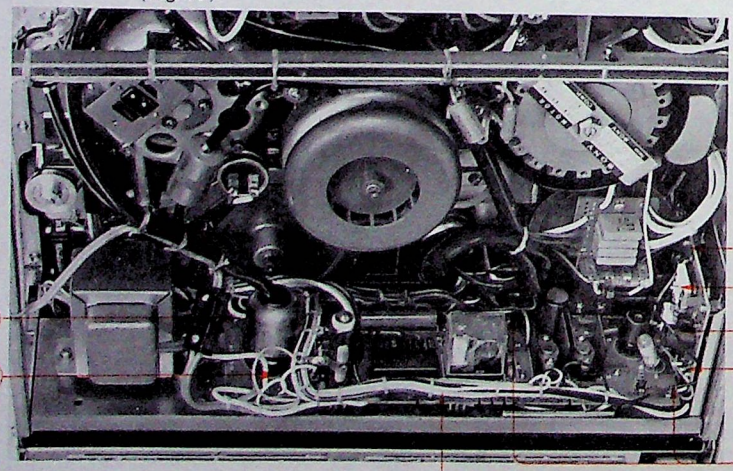
(Fig. 10)



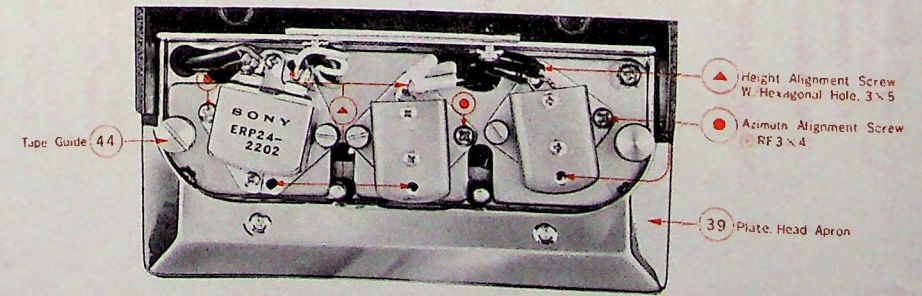
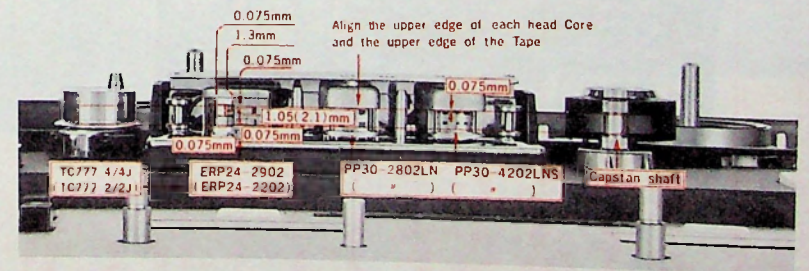
(Fig. 11)



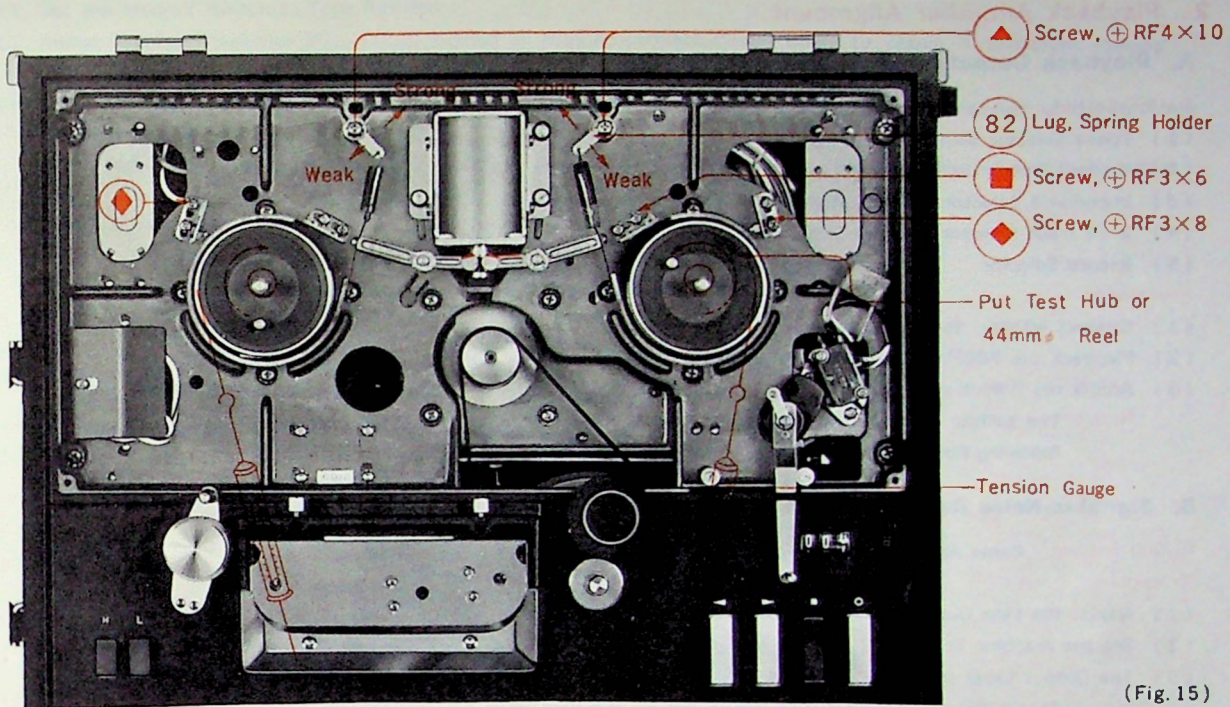
(Fig. 12)



(Fig. 13)



(Fig. 14)



(Fig. 15)

**Electrical Adjustment**

**1. Azimuth Alignment (Refer to Fig. 14)**

**A. Playback Head**

**Switch Setting:**

- (1) Speed Selector Switch —High
- (2) Monitor Switch —Tape
- (3) Impedance Selector Switch —High
- (4) 2~4 Track Selector Switch —Either
- (5) Record Selector —Stereo

**Procedure:**

- (1) Connect a VTVM to Line Output Jack.
- (2) Playback the 15KHz signal recorded on the SONY Alignment Tape (N-19-A2).
- (3) Adjust the Azimuth Alignment Screw located on the right side of the Playback Head to obtain a maximum reading on the VTVM.

**B. Erase/Record Head**

**Switch Setting:** Same as Playback Head

**Procedure:**

- (1) Connect a VTVM to Line Output Jack.
- (2) Feed a 18KHz of -30 db (24.5 mV) to the Line Input Jack.
- (3) Thread a blank tape and set the Recorder in Record Mode and playback at the same time.
- (4) Adjust the Azimuth Alignment Screw located on the left side of the Erase/Record Head to obtain a maximum reading on the VTVM.

## 2. Playback Amplifier Alignment

### A. Playback Output Level Adjustment

Switch Setting:

- (1) Speed Selector Switch —High
- (2) Monitor Switch —Tape
- (3) Impedance Selector Switch —High
- (4) 2~4 track Selector Switch—Either
- (5) Record Selector —Stereo

Procedure:

- (1) Connect VTVMs to Line Out Jacks.
- (2) Playback the 700Hz signal recorded on the first section of the SONY Alignment tape (N-19-F3).
- (3) Adjust the Potentiometer VR<sub>405</sub> (VR<sub>406</sub>) so that Line Output Level is 0 db (0.775V). Standard: 0 db  $\pm$  1.0 db.

**Note:** The setting of potentiometers which was performed through the above process should be kept also in the following Record/Playback Alignment procedure.

### B. Signal-to-Noise Ratio (Playback)

Switch Setting: Same as Playback Output Level Adjustment

Procedure:

- (1) Adjust the Line Output Level with above procedure.
- (2) Set the machine in Forward mode (Be careful of Automatic Shut-OFF Tension Arm) without a tape.
- (3) The Output Level is better than -52 db (1.9 mV) at both channels.

**Note:** Shield Plate and Head Cover should not be removed while performing this measurement.

### C. Meter Calibration

Switch Setting: Same as Playback Output Level Adjustment.

Procedure:

- (1) Connect VTVMs to Line Output Jacks.
- (2) Playback the 700Hz signal recorded on the first Section of SONY Alignment Tape (N-19-F3).
- (3) Adjust the Potentiometers VR<sub>205</sub> and VR<sub>406</sub> to obtain a reading of 0 db (0.775V) on the VTVM and at the same time a reading on the VU Meter should be 0 VU  $\pm$  1VU.

**Note:** If the above reading is not obtained on the VU Meter, adjust VR<sub>301</sub> located on the Equalizer Amplifier Circuit Board.

## 3. Record Amplifier Alignment

### A. Bias Adjustment

Switch Setting:

- (1) Speed Selector —High
- (2) 2~4 Track Selector—2T-777- $\frac{3}{2}$ J 4T-777- $\frac{1}{2}$ J
- (3) Record Selector —Stereo
- (4) Monitor Switch —Source
- (5) Impedance Selector —High

Procedure:

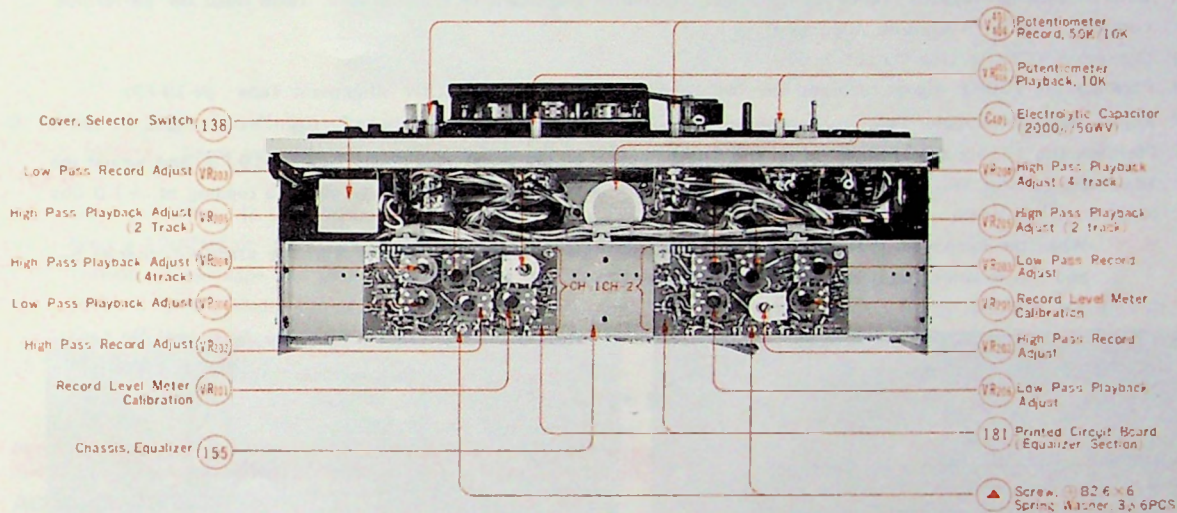
- (1) Feed 1 KHz of -10 db (245 mV) signal into Line Input Jack and adjust the potentiometer VR<sub>401</sub> (VR<sub>402</sub>) so that VU Meters indicate 100%.

- (2) Thread a blank tape and set the recorder in Record Mode.
- (3) Set the Monitor Switch to Tape Position.
- (4) Adjust Trimmer Capacitor VC<sub>e01</sub> (VC<sub>e02</sub>) located on Bias Adjustment Circuit Board to obtain a maximum reading on VU Meter
- (5) When a maximum reading has been obtained, turn VC<sub>e01</sub> (VC<sub>e02</sub>) clockwise a little to obtain a reading of 0.5 db lower than the maximum.

**Note:** After adjustment, measure the voltage across each channel terminal of Erase/Record Head with VTVM.

The voltage values shall be:

Erase Head:	80~100 V	
Record Head Channel-1:	7~9 V	}(Refer to Page 39)
Record Head Channel-2:	12~15 V	



(Fig. 16)

## B. Record Level Meter Calibration

### Switch Setting:

- (1) Speed Selector Switch —High
- (2) 2~4 Track Selector Switch—Either
- (3) Record Selector Switch —Stereo
- (4) Monitor Switch —Tape
- (5) Impedance Selector Switch —High

### Procedure:

- (1) Connect VTVMs and 100KΩ Resistors to LINE OUT Jacks.
- (2) Feed a 1 KHz of -60 db (0.775 mV) to the MIC Input Jack.
- (3) Thread a blank tape and set the recorder in Record Mode.
- (4) Adjust the Potentiometer VR<sub>101</sub> (VR<sub>103</sub>) to obtain a reading of 0 db (0.775 V) on the VTVM and at the same time a reading on the VU Meter should be 0 VU.
- (5) Change the Monitor Switch to "SOURCE" and adjust VR<sub>101</sub> located on Equalizer Amplifier Circuit Board to obtain a reading of 0VU on the VU Meter.

### C. Dummy Coil Adjustment

**Switch Setting:** Same as Bias Adjustment

**Procedure:**

- (1) Connect a VTVM and a 15Ω Resistor in parallel between the ground side terminal of Record Head and Ground
- (2) Thread a blank tape and set the recorder in Record Mode.
- (3) Adjust  $L_{602}$  ( $L_{601}$ ) located on Bias Adjustment Circuit Board carefully so that there will be little variation on the VTVM when the Record Selector Switch is changed from Stereo Mode to Channel-1 (Channel-2).

### D. Playback Frequency Response

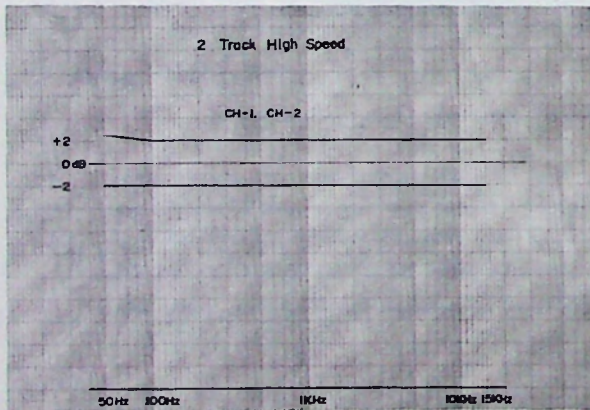
(a) **2 Track & 4 Track High Speed.** [ ] shows 4 Track

**Switch Setting:** Same as Playback Output Level Adjustment.

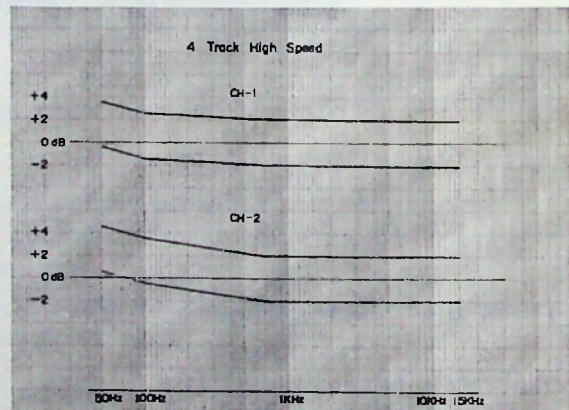
**Procedure:**

- (1) Before checking Playback Frequency Response, Azimuth Alignment of the Playback Head must be performed correctly. (Refer to Azimuth Alignment)
- (2) Connect a VTVM to Line Output Jack.
- (3) Playback the 700Hz signal recorded on the Second Section of the SONY Alignment Tape (N-19-F3).
- (4) Adjust the Potentiometer [ $VR_{405, 406}$ ] to obtain a reading of -10 dbS (0.25V) on the VTVM.
- (5) Playback the 15 KHz signal recorded on the Third Section of the SONY Alignment Tape (N-19-F3) and adjust the adjustable resistor  $VR_{704}$  [ $VR_{705}$ ] located on the Equalizer Amplifier Circuit Board to obtain a reading of +1.0 dbS (0.85 V) on the VTVM.

**Note:** When the Response of between 5 K and 10 KHz is lower (higher) comparing with the standard change  $R_{206}$  and  $R_{207}$  to more (less) resistance value. (Refer to Fig. 17, 18)



(Fig. 17)



(Fig. 18)

## 4. Overall Alignment

### A. Overall Frequency Response

**Switch Setting:**

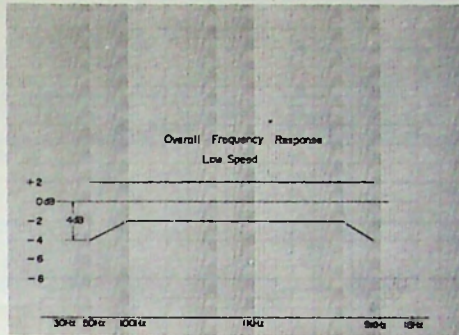
- (1) Speed Selector — High and Low
- (2) 2~4 Track Selector—2T-777-2J, 4T-777-2J
- (3) Record Selector —Stereo
- (4) Monitor Switch —Tape
- (5) Impedance Switch —High

**Procedure:**

- (1) Adjust the Record Level (Refer to 3: B)
- (2) Feed a 1,000 Hz of -30 dbS (24.5 mV) to Line Input Jack.
- (3) Adjust  $VR_{401}$  so that the reading on VTVM shall be 0 dbS.
- (4) Thread a blank tape and set the recorder in Record Mode and playback at the same time.
- (5) Sweep the Signal Generator from 30 Hz to 18 KHz and read the VTVM and the Output Level should be 0 dbS (0.775V)  $\pm 2$ db from 50 Hz to 10 KHz, 0 dbS  $\pm 2$  db at 18 KHz and 0 dbS  $\pm 2$  db at 30 Hz. — High Speed  
When the response is out of the specified values, readjust the adjustable Resistor  $VR_{303}$  located on the Equalizer

Amplifier Circuit Board.

- (6) Sweep the Signal Generator from 50 Hz to 10 KHz and read the VTVM. The Output Level should be 0 db (0.775V)  $\pm 2$  db. from 100 Hz to 5 KHz and 0 db  $\pm \frac{1}{2}$  db at 50 Hz and 9 KHz — **Low Speed**
  - (7) If response is out of the specified values, adjust VR<sub>206</sub>, R<sub>203</sub> and C<sub>203</sub> located on the Equalizer Amplifier Circuit Board.
- Note:** When replaced with capacitor of more than 0.047 $\mu$ F, Frequency Response between 3 KHz and 5 KHz will be up and with capacitor of less than 0.047 $\mu$ F frequency response will be down.



(Fig. 19)

**B. Overall Signal-to-Noise Ratio Measurement**

**Switch Setting:** Same as Overall Frequency Response.

**Procedure:**

- (1) Connect VTVMs to Line Output Jacks.
- (2) Feed a 1000 Hz of -57.7 db (1 mV) signal to MIC Input Jacks.
- (3) Thread a blank tape and record the signal at maximum recording level (0 VU).
- (4) While in Record Mode, adjust the potentiometer VR<sub>101</sub> and VR<sub>103</sub> to obtain a reading 0 db (0.775V) on the VTVM.
- (5) Feed off the signal. Connect 250 ohm dummy resistors in parallel with MIC Jacks and continue recording.
- (6) Playback the tape.

Noise level shall be: Less than -49 dBs (2.8 mV) — High Speed  
Less than -47 dBs (2.45 mV) — Low Speed

**Modification to Different Power Line Frequency**

**AC VOLTAGE**

TC-777-2J  
4J

The AC Voltage Selector located on the bottom of the recorder selects the operating AC power line voltage of any of 100, 110, 117, 125, 220 and 240 volts.

Before operating, check if the Voltage Selector is set to your local power line voltage. If the resetting of the Voltage Selector is necessary, pull out the round selector cap and firmly re-insert it into the Voltage Selector with the proper voltage figure appearing in the cutout part of the Selector Cap.

TC-777-2  
4

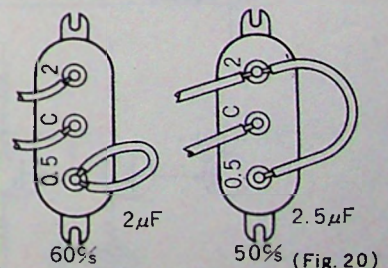
AC power line voltage of either 100 or 117 volts is available.

If the voltage change is necessary, unsolder the jumper wire located on Power Supply & Oscillator Section Printed Circuit Board and solder the jumper wire to the terminal matched to your local power line voltage. (Refer to Page 29)

**LINE FREQUENCY**

TC-777-2/2J  
4/4J

	For 50 Hz	For 60 Hz
1. Connection between two terminals of the metal cased capacitor (MP.)	Connected 2.5 $\mu$ F	Disconnected 2 $\mu$ F
2. Motor Pulley	3-404-214-01	3-404-214-02



(Fig. 20)

The Metal Cased Capacitor is located at the center of the left side of the main chassis, and the Motor Pulley between two reel spindles. (Refer to Fig. 7)

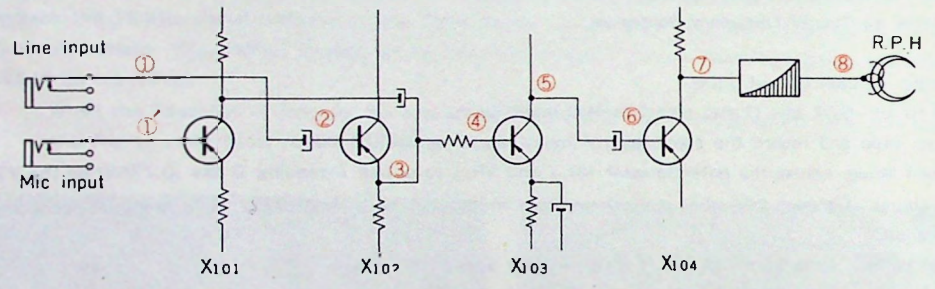
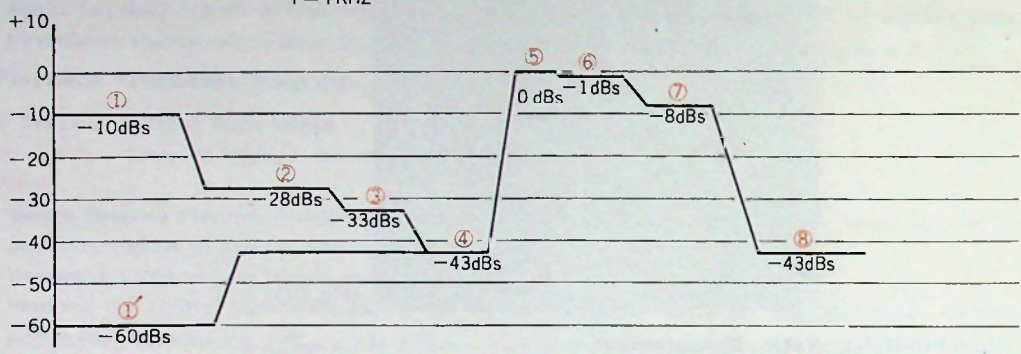
The larger diameter Pulley is for 50 Hz and the smaller one for 60 Hz.

Level Diagram

Recording

dBs (0dBs=0.775V)

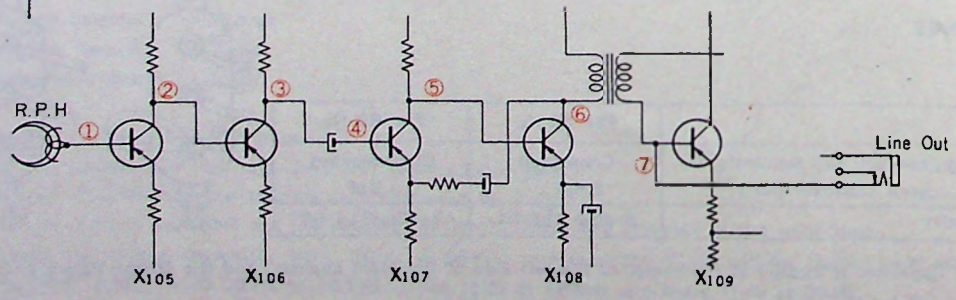
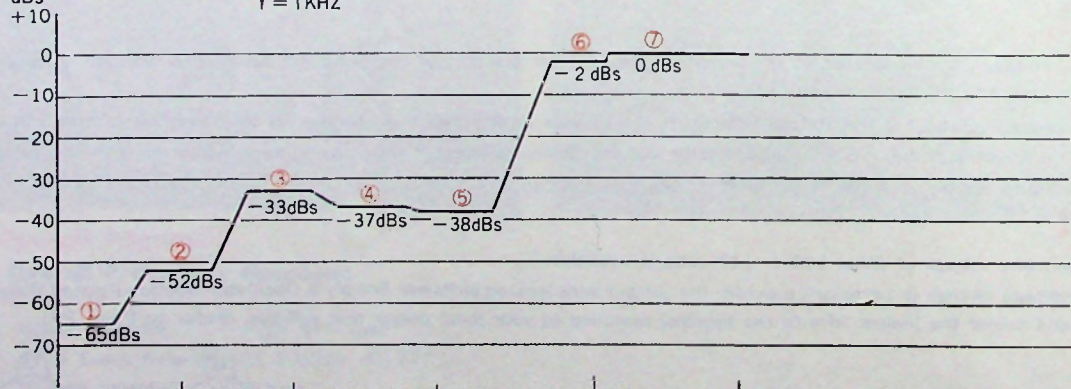
f = 1 KHZ



Playback

dBs (0dBs=0.775V)

f = 1 KHZ



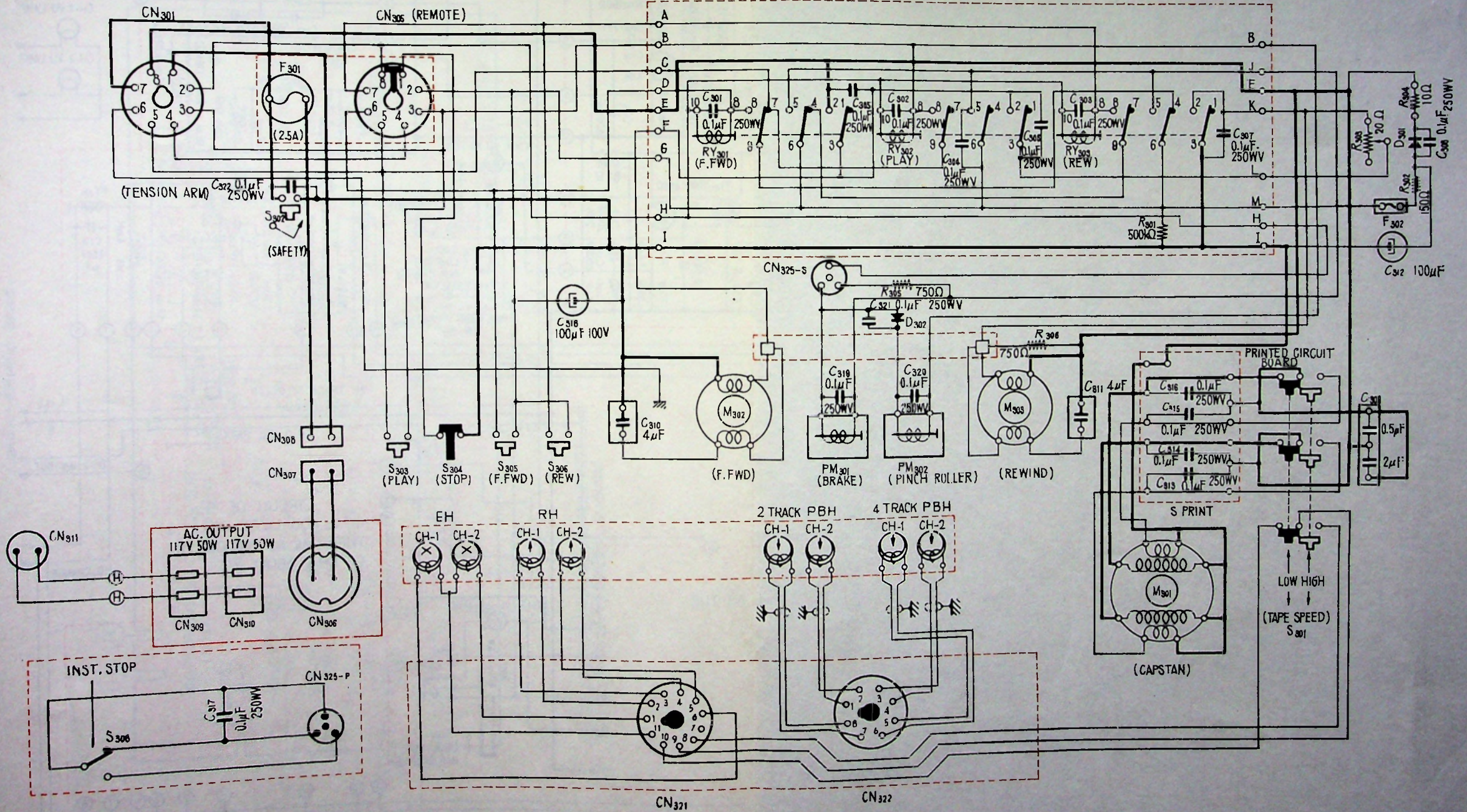


Circuit Schematic

Mechanical Control Section

TC-777-2

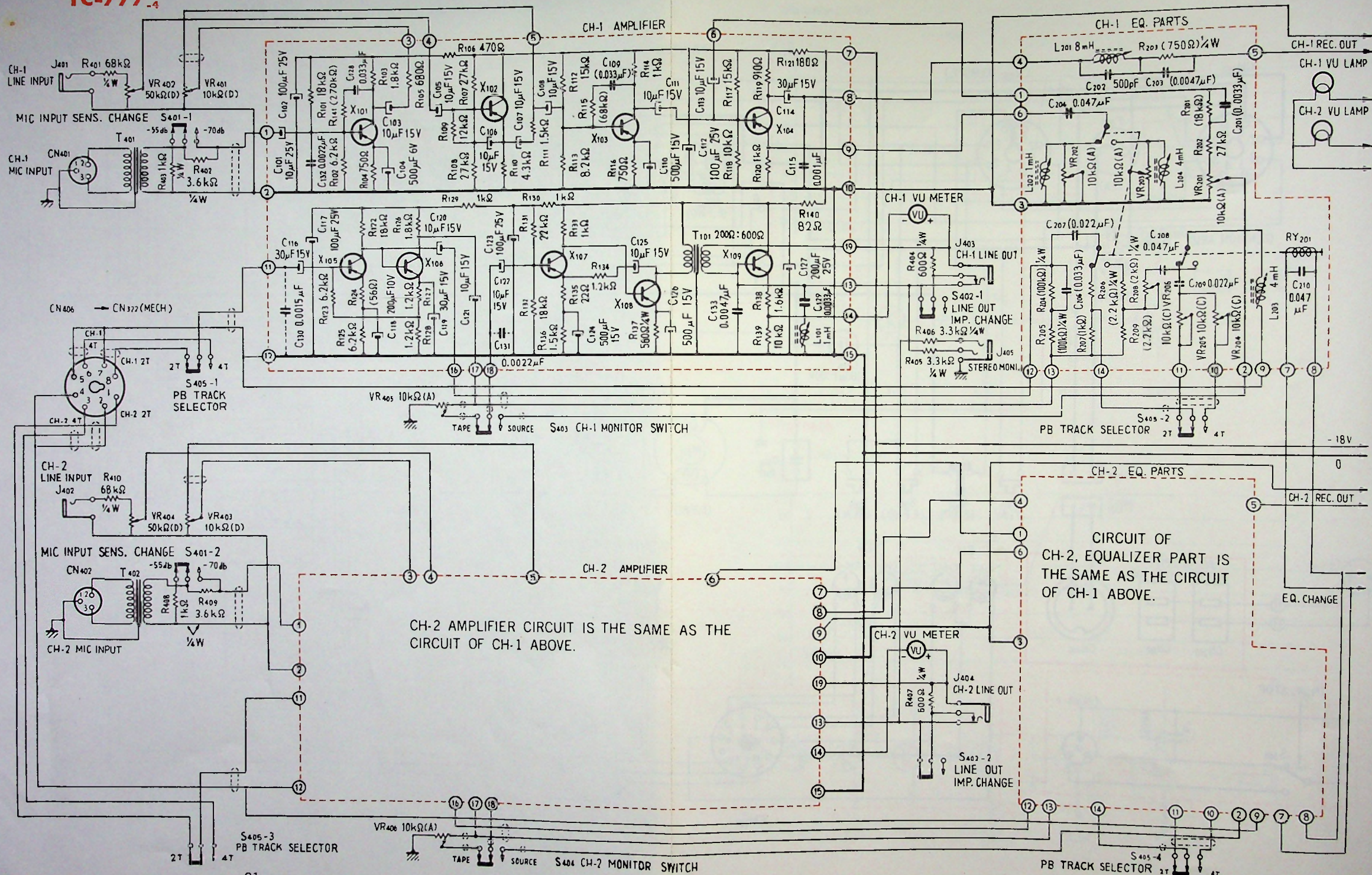
PRINTED CIRCUIT BOARD - 5



**Circuit Schematic**

**Amplifier Section**

**TC-777-2**



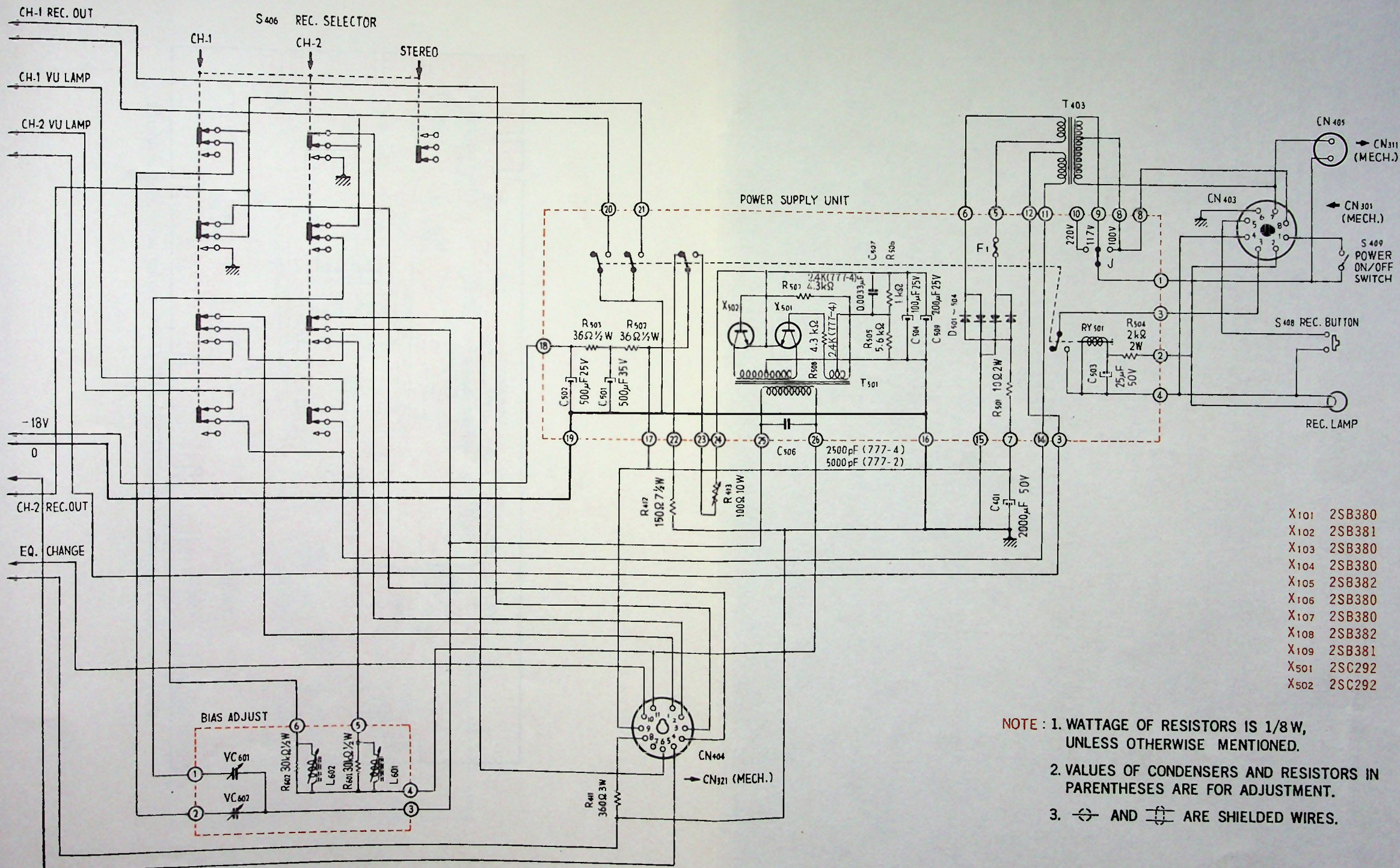
CH-2 AMPLIFIER CIRCUIT IS THE SAME AS THE CIRCUIT OF CH-1 ABOVE.

CIRCUIT OF CH-2, EQUALIZER PART IS THE SAME AS THE CIRCUIT OF CH-1 ABOVE.

Circuit Schematic

Power Supply & Bias Oscillator Board

TC-777-2/-4



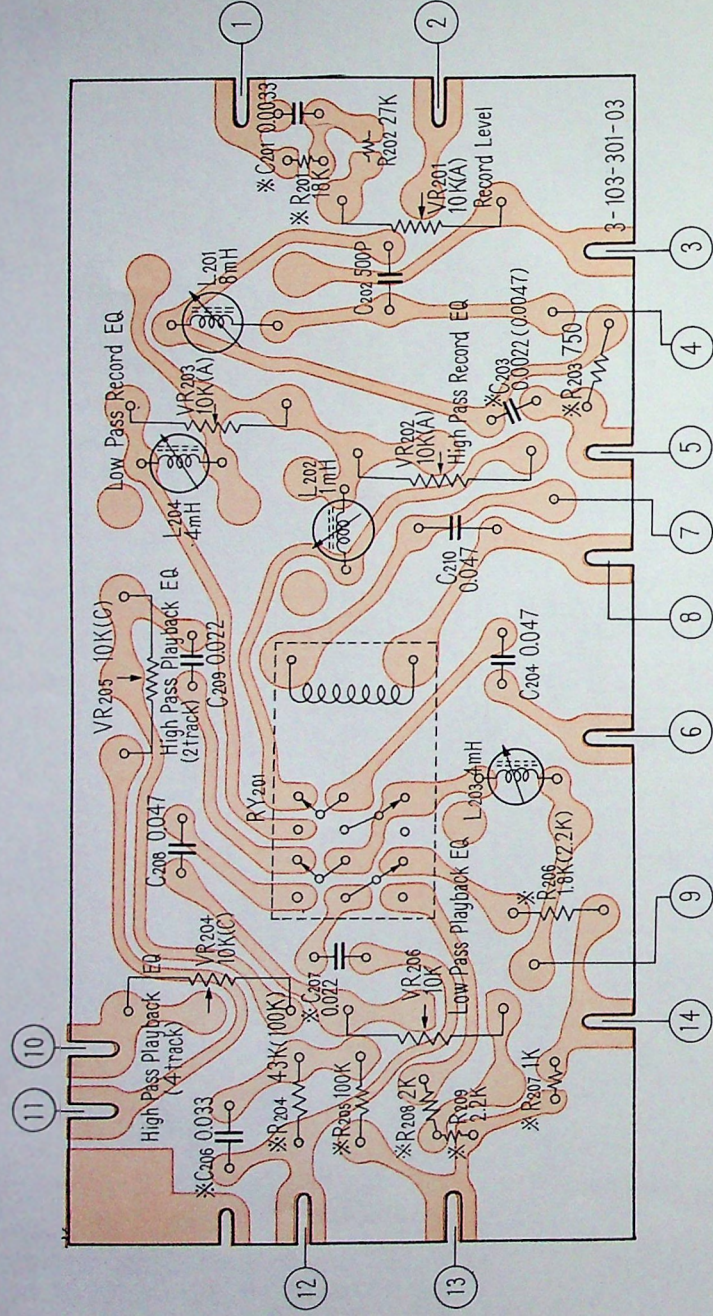
- X101 2SB380
- X102 2SB381
- X103 2SB380
- X104 2SB380
- X105 2SB382
- X106 2SB380
- X107 2SB380
- X108 2SB382
- X109 2SB381
- X501 2SC292
- X502 2SC292

NOTE : 1. WATTAGE OF RESISTORS IS 1/8 W, UNLESS OTHERWISE MENTIONED.  
 2. VALUES OF CONDENSERS AND RESISTORS IN PARENTHESES ARE FOR ADJUSTMENT.  
 3. AND ARE SHIELDED WIRES.

**Mounting Diagram**

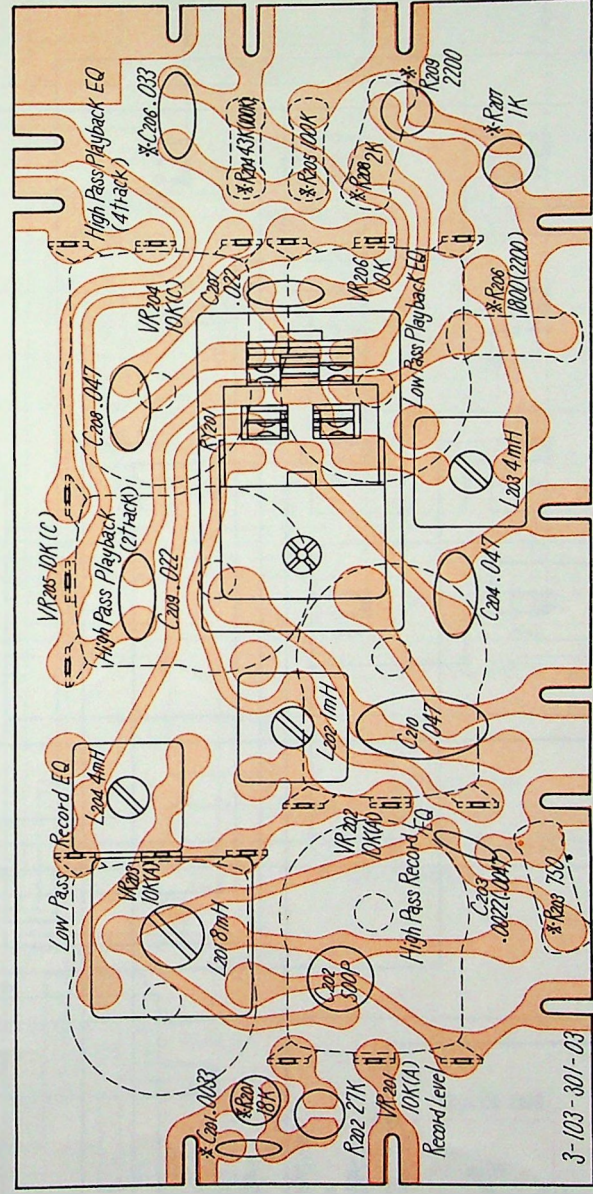
**Equalizer Amplifier Board**

— Conductor Side —



Values in parentheses are shown for Model TC777-2 and 777-4. Parts marked with \* are to be adjusted.

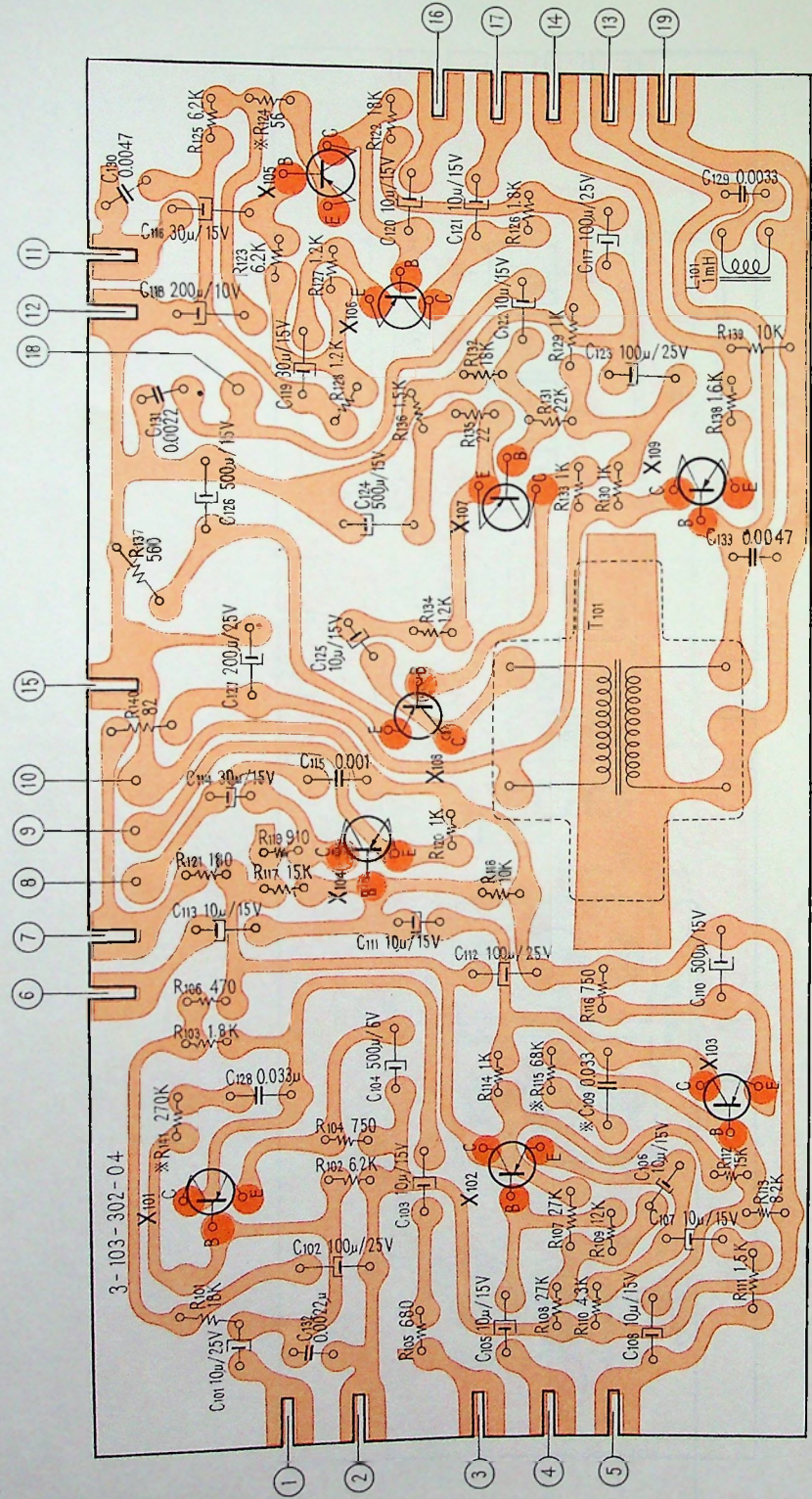
— Components Side —



Values in parentheses are shown for Model TC777-2 and 777-4. Parts marked with \* are to be adjusted.

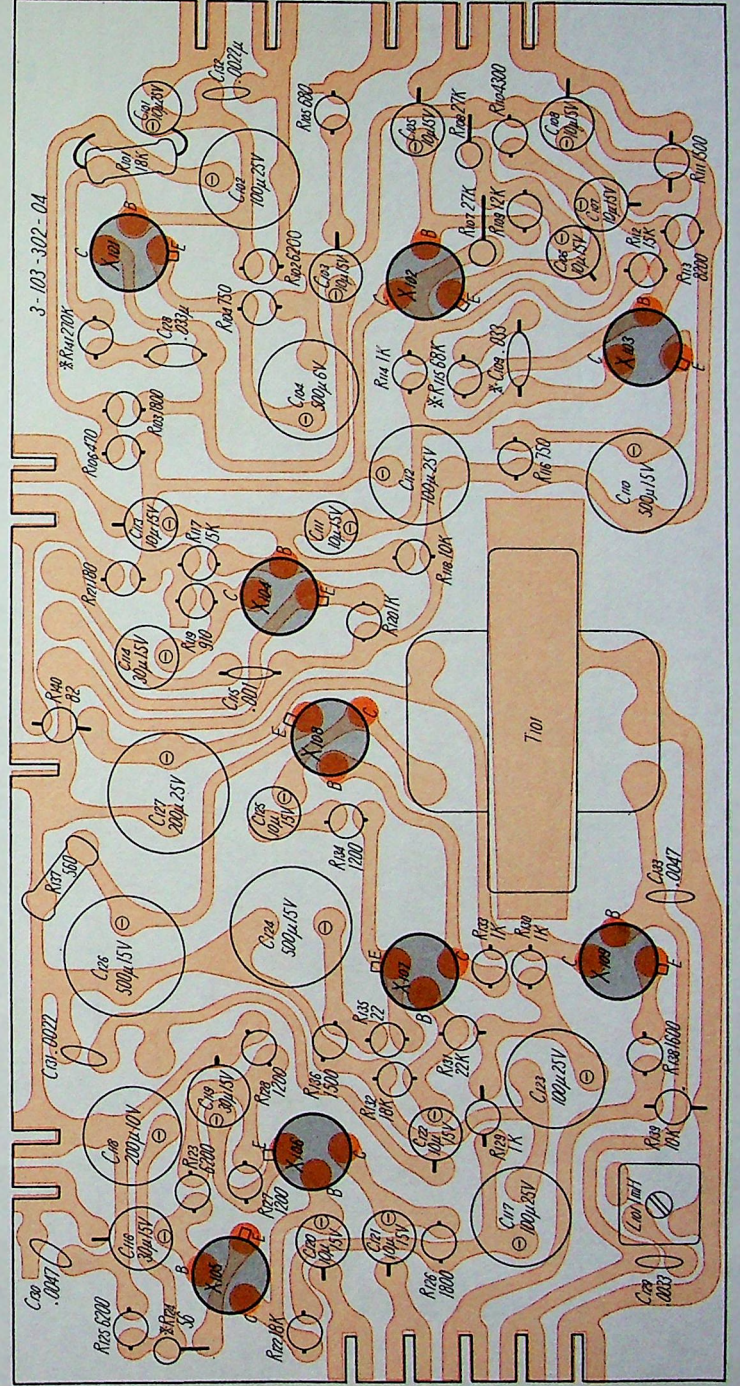
**Mounting Diagram**

Amplifier Board  
Conductor Side



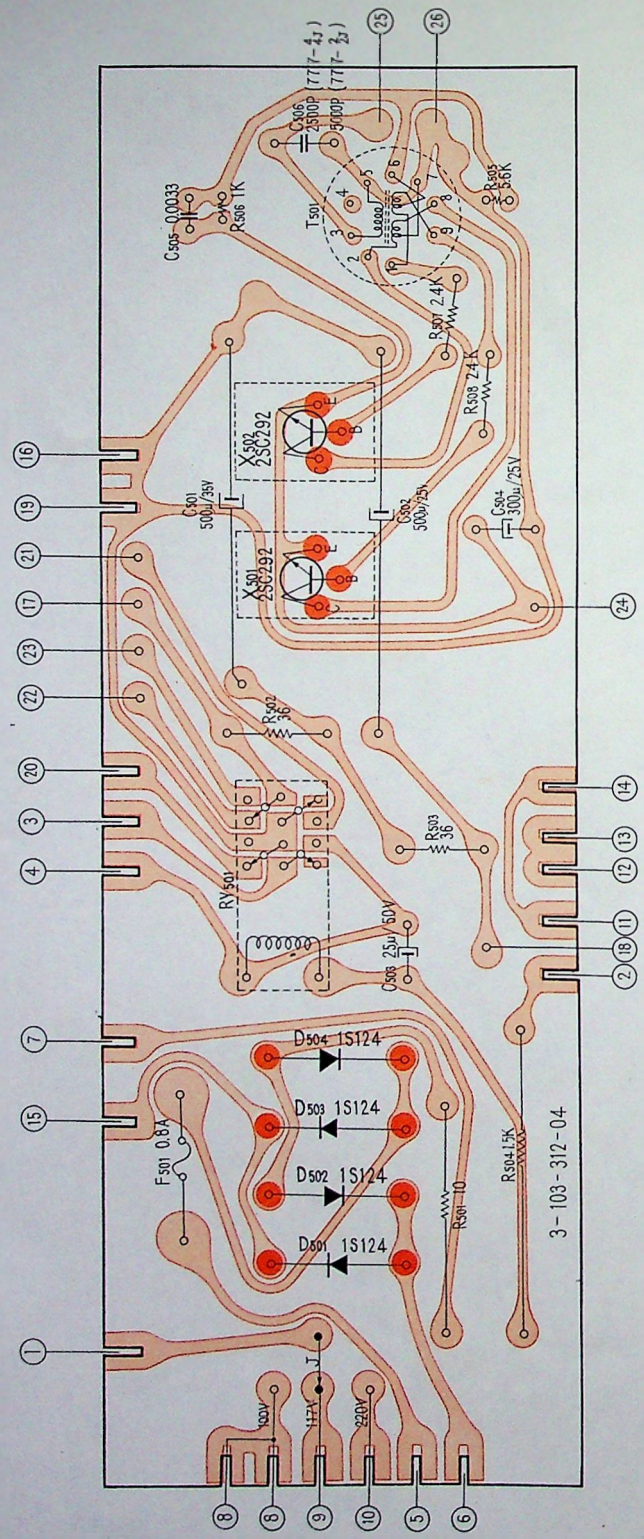
Parts marked with \* are to be adjusted.

Components Side

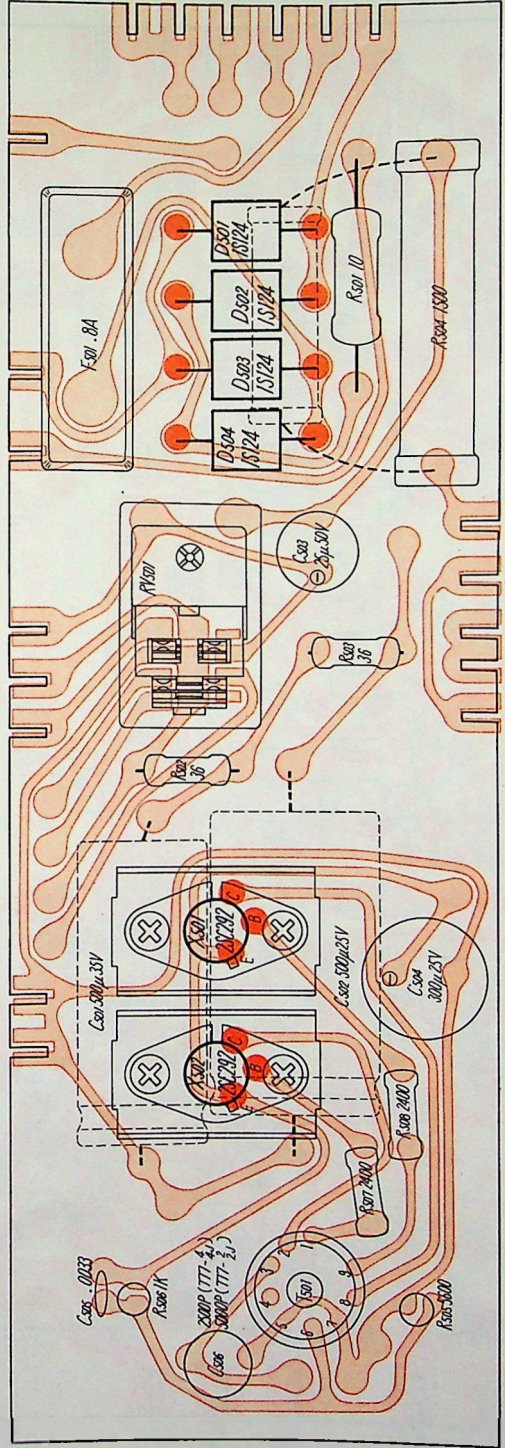


Parts marked with \* are to be adjusted.

**Mounting Diagram**  
Power Supply & Bias Oscillator Board  
--Conductor Side--



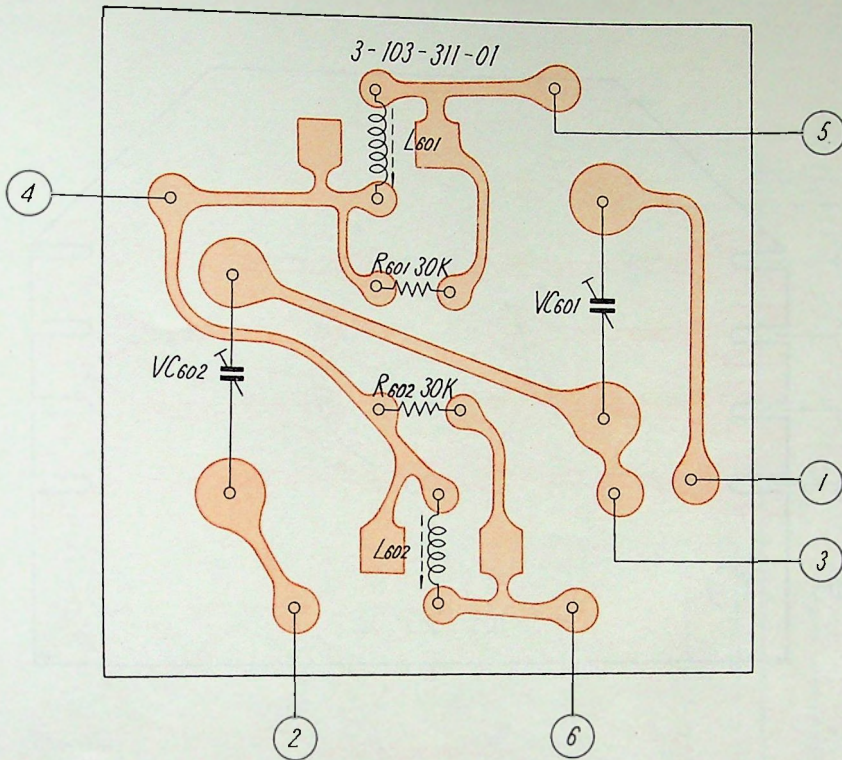
--Components Side--



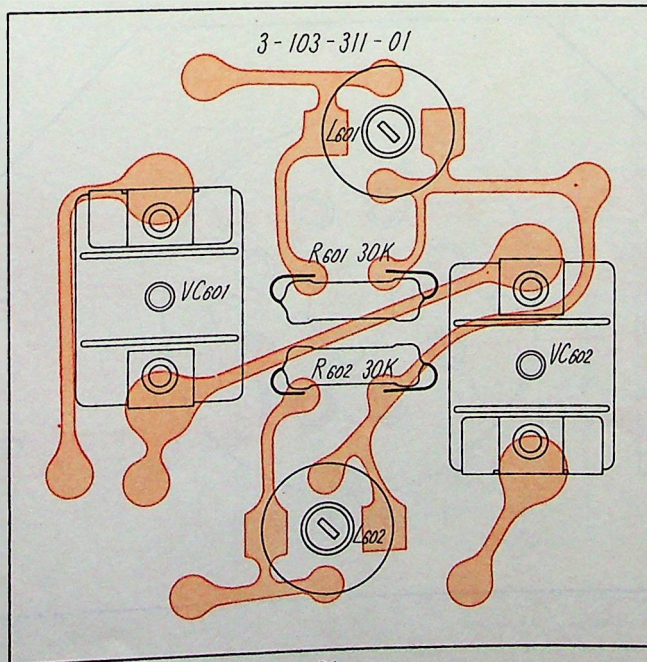
**Mounting Diagram**

**Bias Adjustment Board**

— Conductor Side —



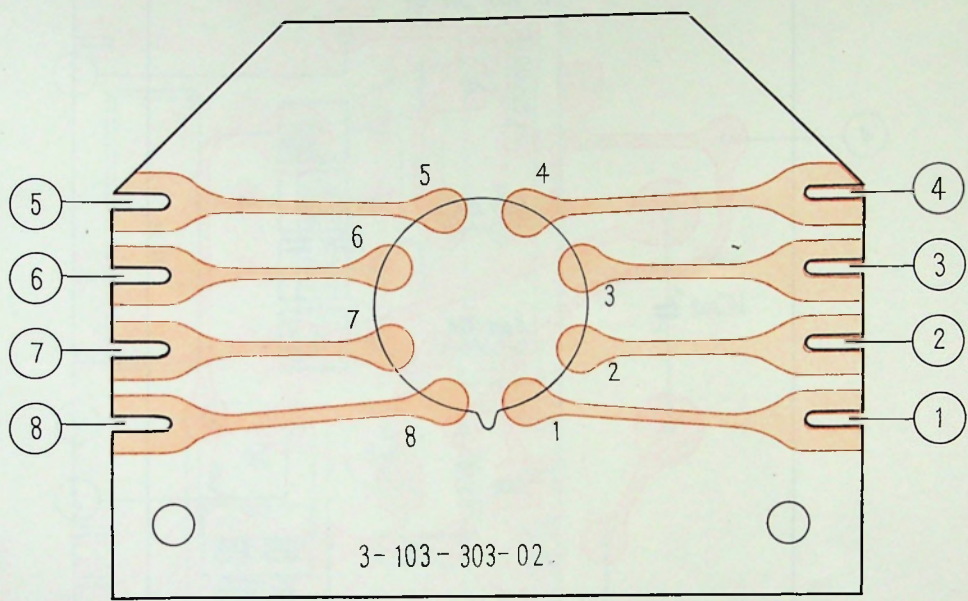
— Components Side —



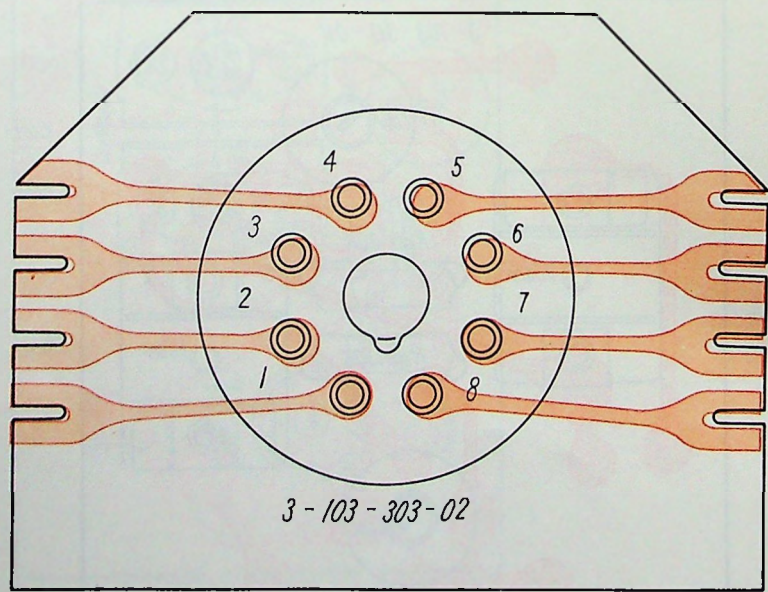
Mounting Diagram

8P Connector Board

--Conductor Side--



--Components Side--

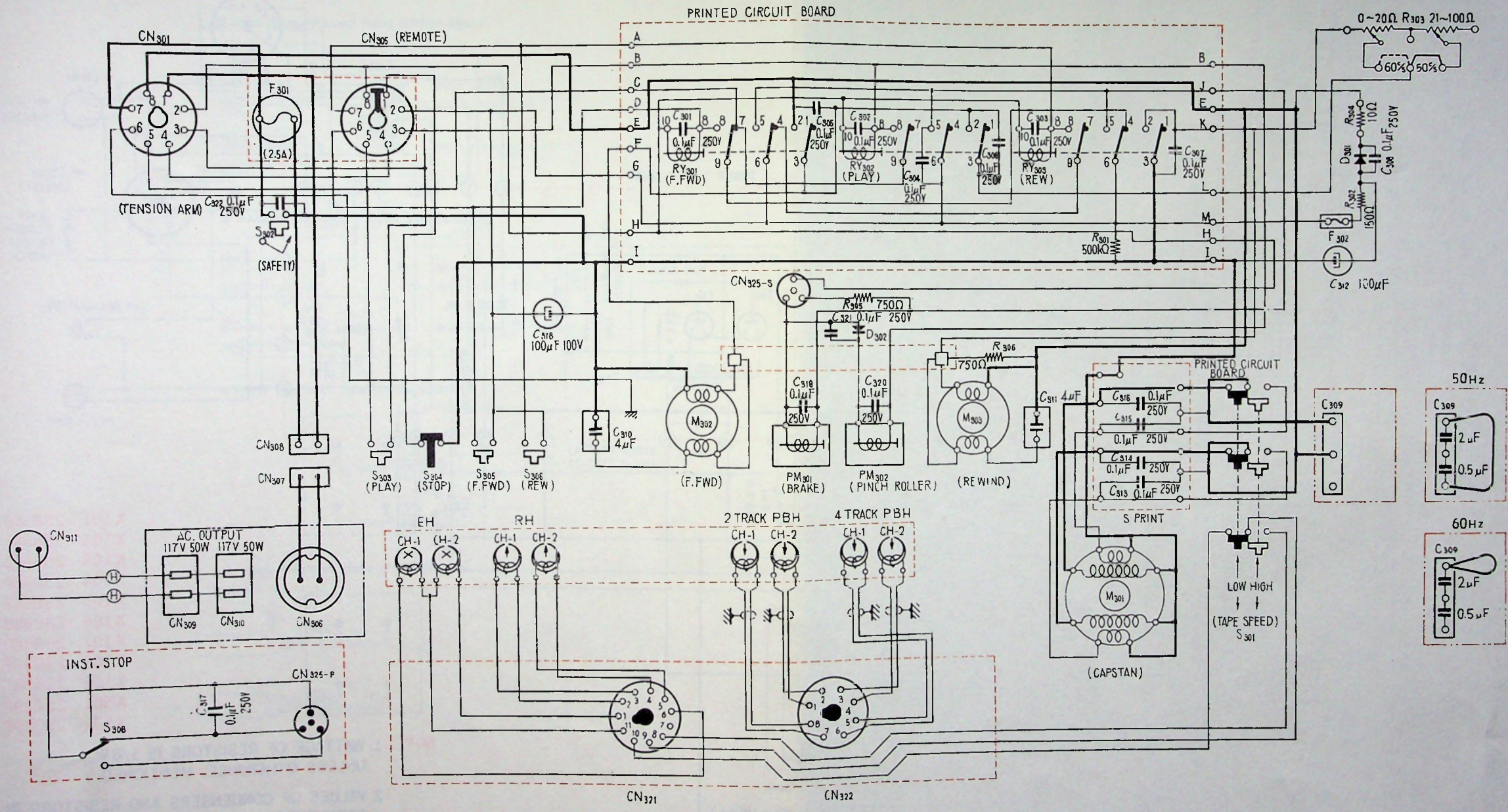




Circuit Schematic

Mechanical Control Section

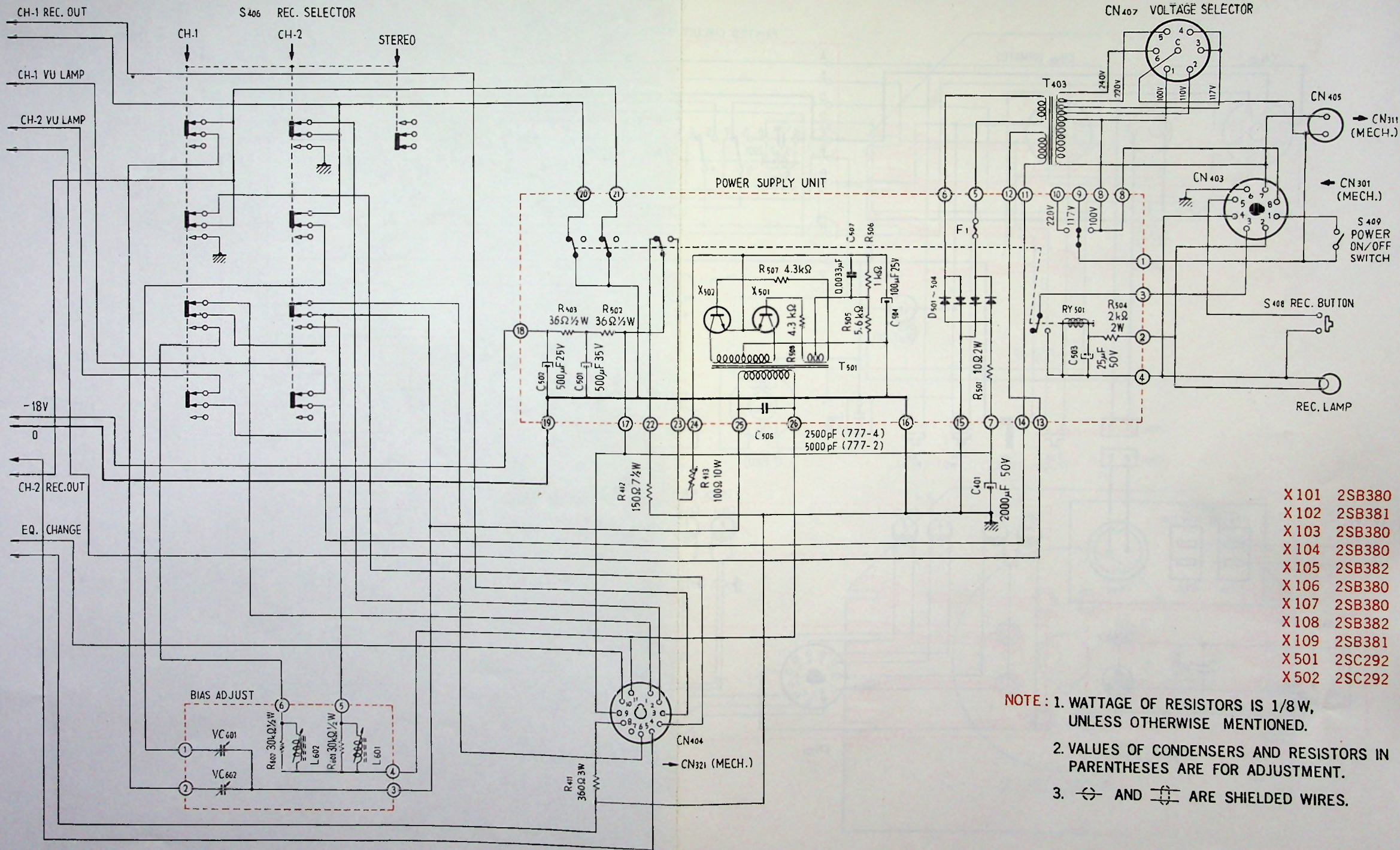
TC-777-2J -4J



Circuit Schematic

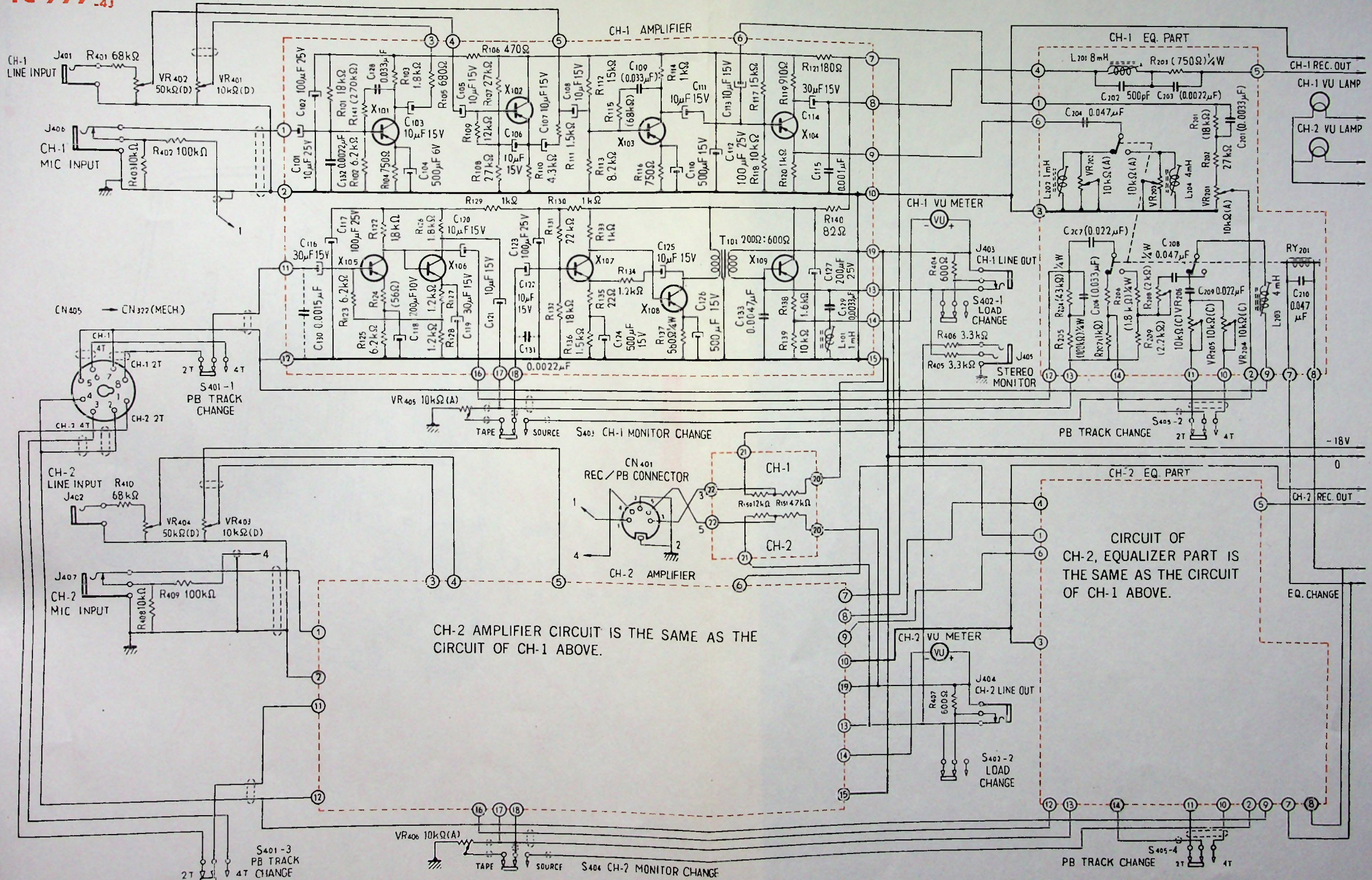
Power Supply Bias OSC Section

TC-777-2J  
-4J



- X 101 2SB380
- X 102 2SB381
- X 103 2SB380
- X 104 2SB380
- X 105 2SB382
- X 106 2SB380
- X 107 2SB380
- X 108 2SB382
- X 109 2SB381
- X 501 2SC292
- X 502 2SC292

NOTE: 1. WATTAGE OF RESISTORS IS 1/8W, UNLESS OTHERWISE MENTIONED.  
 2. VALUES OF CONDENSERS AND RESISTORS IN PARENTHESES ARE FOR ADJUSTMENT.  
 3. AND ARE SHIELDED WIRES.

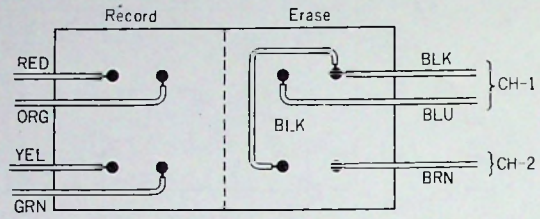


CH-2 AMPLIFIER CIRCUIT IS THE SAME AS THE CIRCUIT OF CH-1 ABOVE.

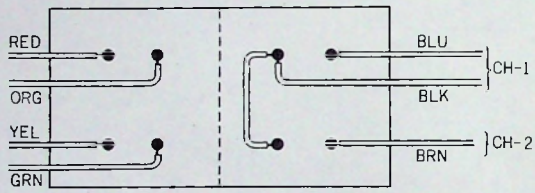
CIRCUIT OF CH-2, EQUALIZER PART IS THE SAME AS THE CIRCUIT OF CH-1 ABOVE.

**Wiring of Heads**

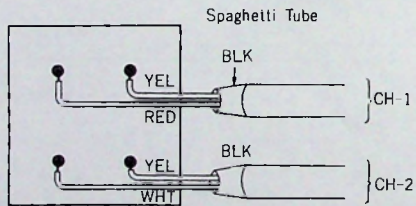
**4 track Erase/Record Head (ERP24-2902)**



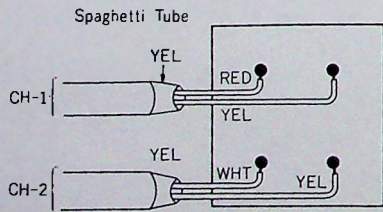
**2 track Erase/Record Head (ERP24-2902)**



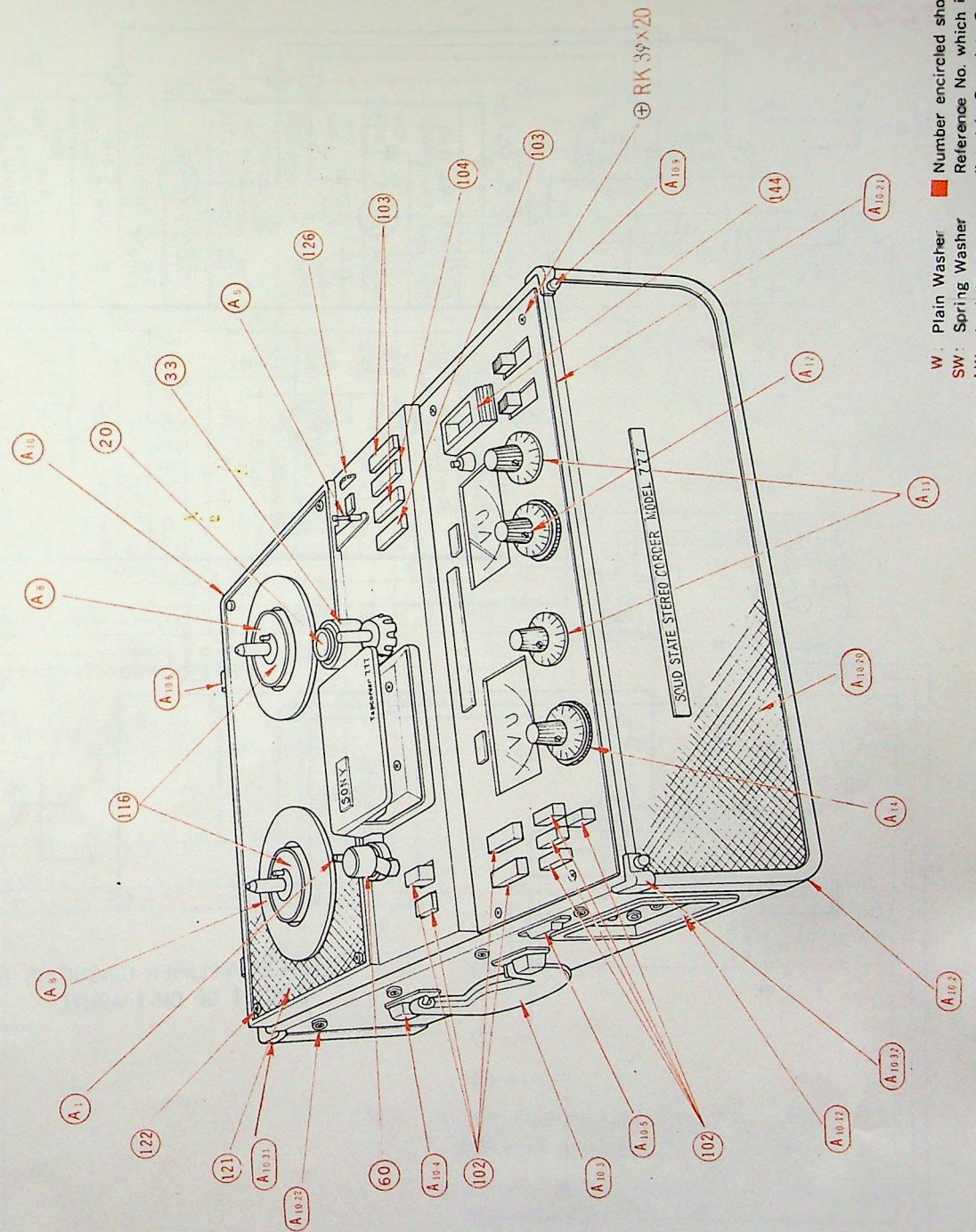
**4 track Playback Head (PP30-4202LNS)**



**2 track Playback Head (PP30-2802LN)**



**Exploded View  
Set—Top View**

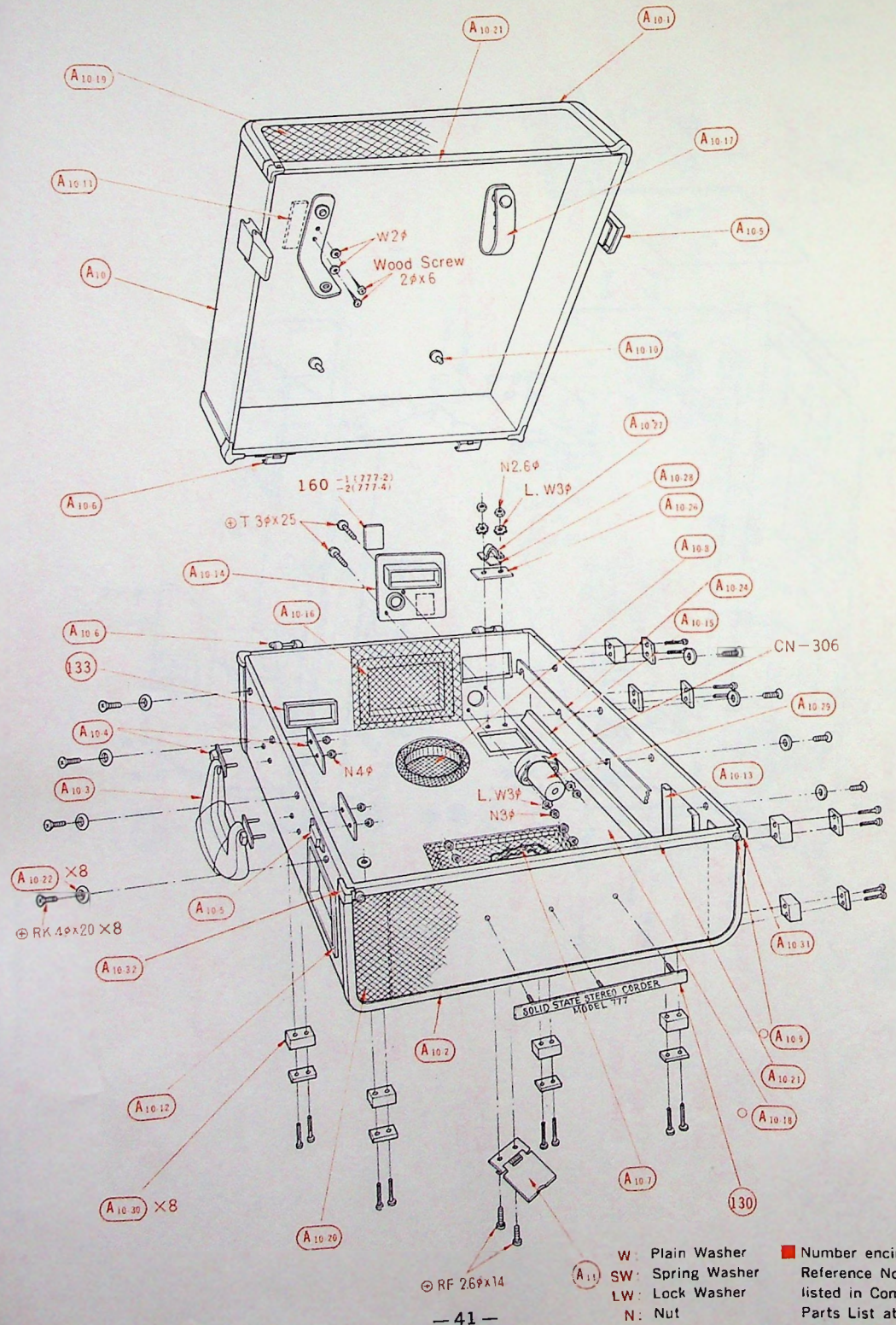


W: Plain Washer  
SW: Spring Washer  
LW: Lock Washer  
N: Nut

Number encircled shows Reference No. which is listed in Complete Spare Parts List attached hereto.

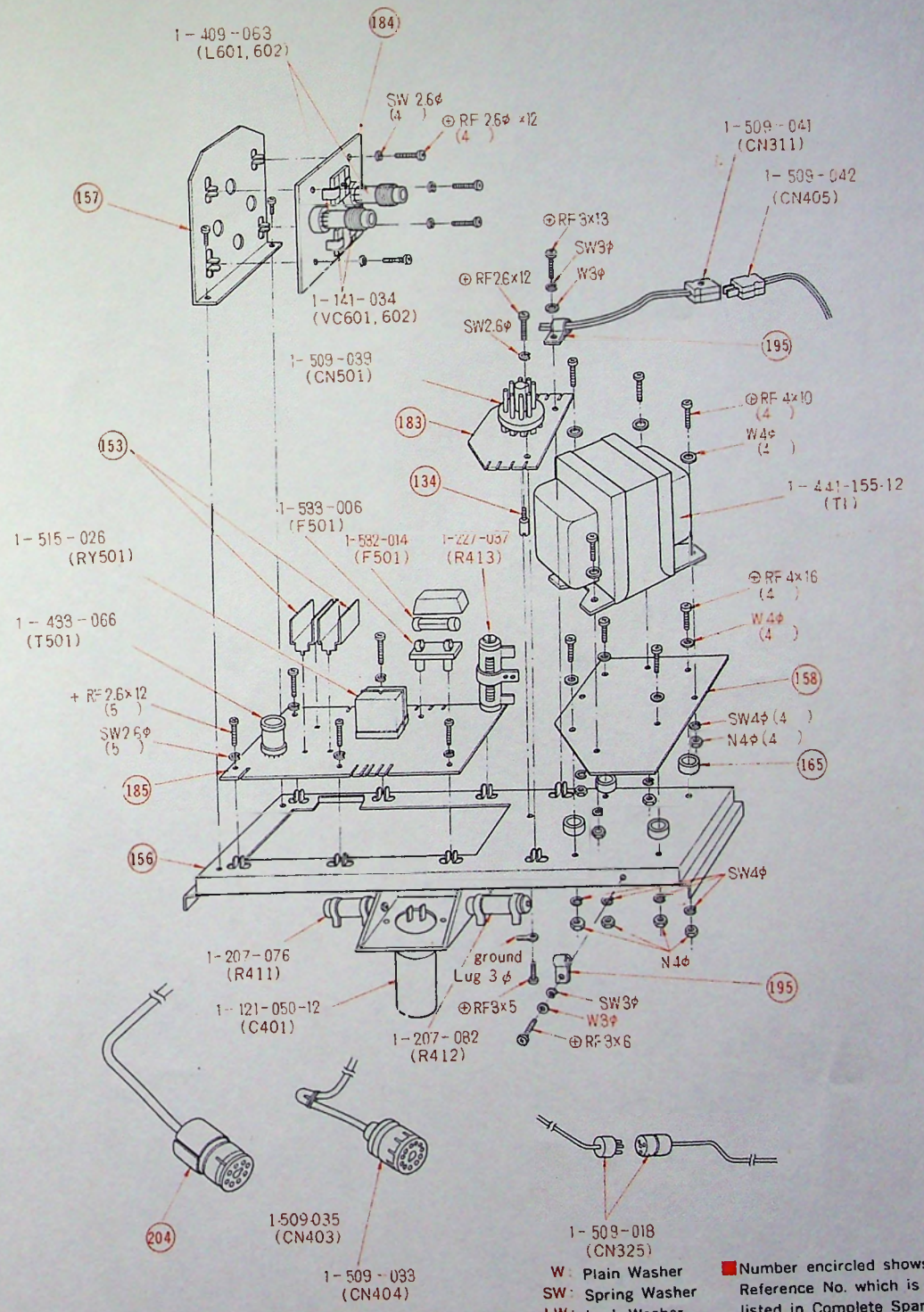
Exploded View

Cabinet — Top View

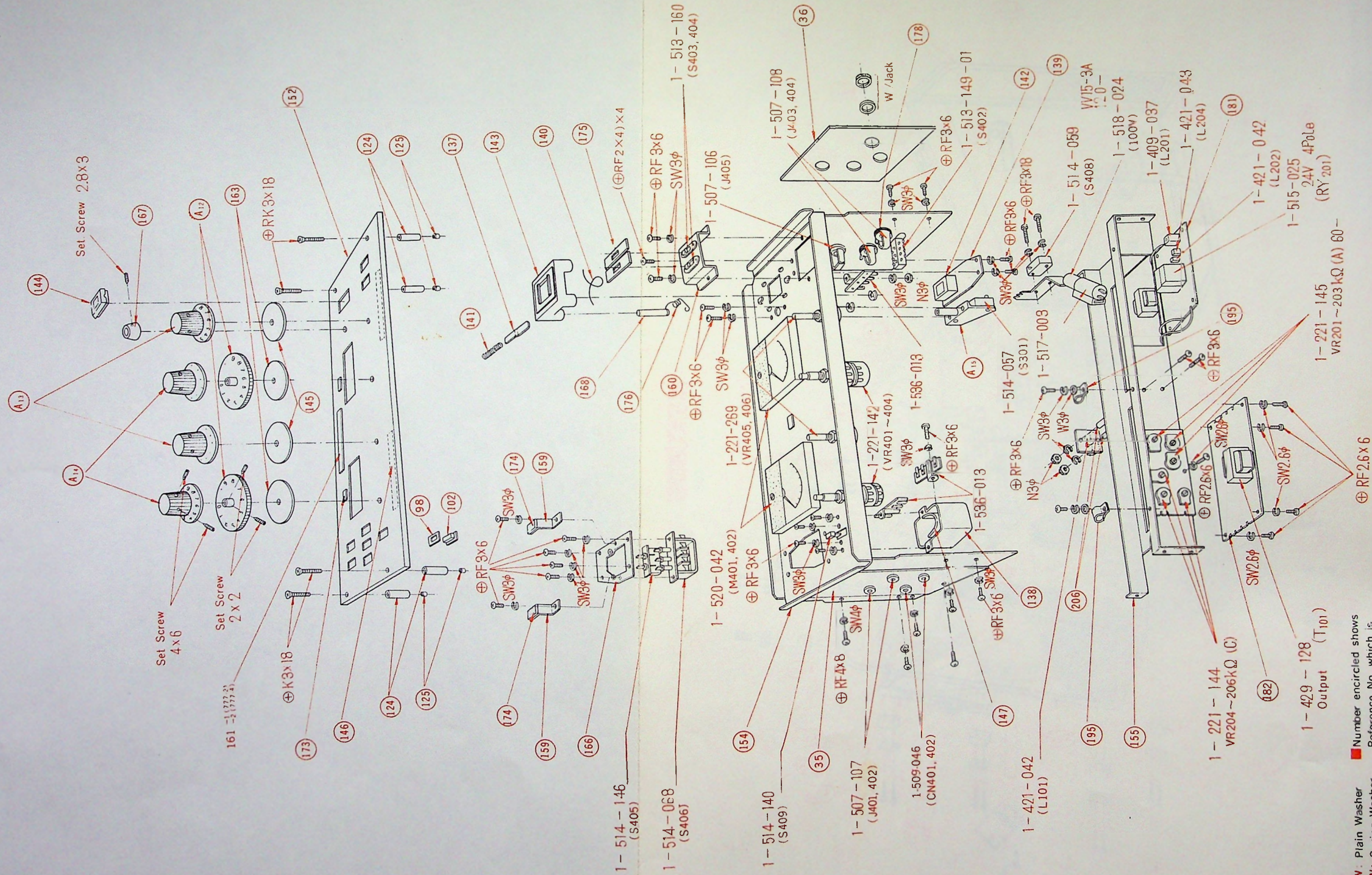


Exploded View

Power Supply Chassis — Top View



Number encircled shows Reference No. which is listed in Complete Spare Parts List attached hereto.

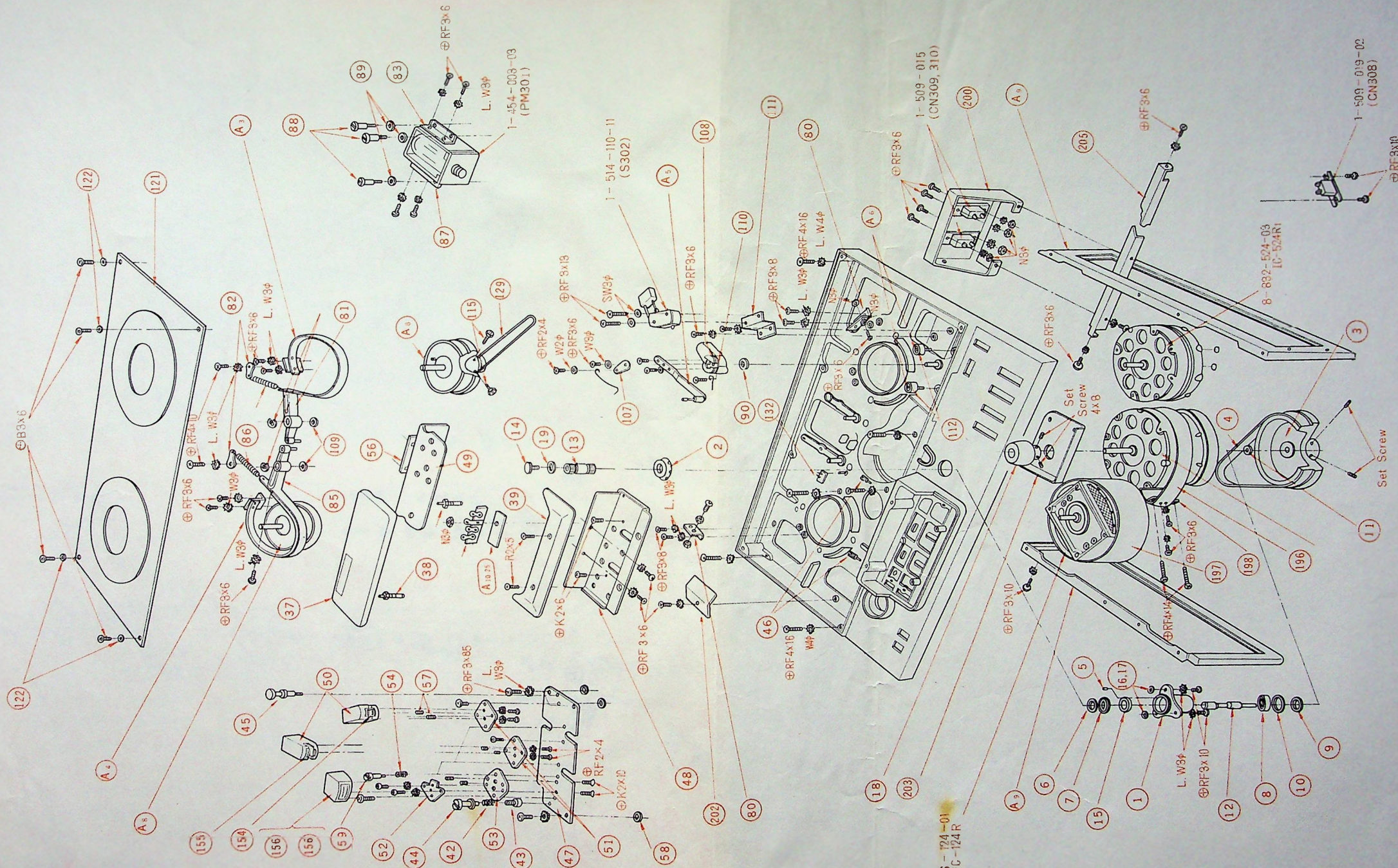


W: Plain Washer  
 SW: Spring Washer  
 LW: Lock Washer  
 N: Nut

Number encircled shows Reference No. which is listed in Complete Spare Parts List attached hereto.

Exploded View

Chassis — Top View



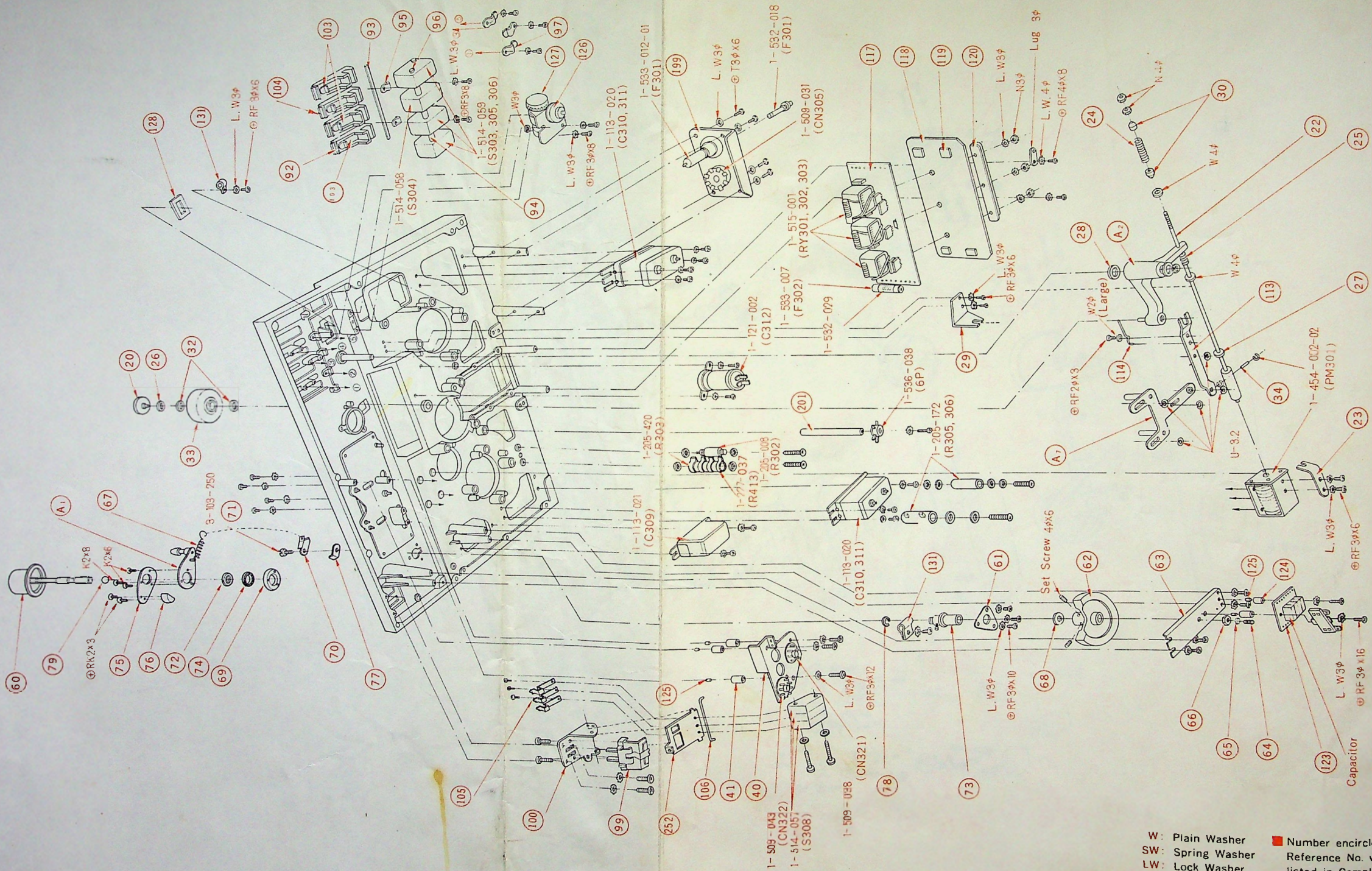
8-836-124-01  
UC-124R

W: Plain Washer  
SW: Spring Washer  
LW: Lock Washer  
N: Nut

Number encircled shows Reference No. which is listed in Complete Spare Parts List attached hereto.

**Exploded View**

**Chassis—Bottom View**



- W : Plain Washer
- SW : Spring Washer
- LW : Lock Washer
- N : Nut
- Number encircled shows Reference No. which is listed in Complete Spare Parts List attached hereto.