

SERVICE MANUAL

CASSETTE RECORDER

**SANYO****M9998****(USA)**

SPECIFICATIONS

| | |
|------------------------------|---|
| Recording system | AC bias, 4-track stereo |
| Erasing system | AC erase, 2-track |
| Tape speed | 4.75 cm/sec (1-7/8 i.p.s.) |
| Rewind and fast forward time | Rewind: 1 min. 35 sec. (C-60) Fast forward: 1 min. 50 sec. (C-60) |
| Frequency range | FM: 88 — 108MHz MW: 525 — 1,615kHz |
| Terminal impedance | MIC: 10 kohms (0.3mV) PHONO: (MM) 50 kohms (3mV) (CERAMIC) 1 Mohms (300mV) LINE IN: 22 kohms (50mV) LINE OUT: 1 kohm (0.775V) EXT SP: 4 — 8 ohms PHONES: 8 ohms |
| Power source | DC: 15V "D" (UM-1) x 10 12 — 15V Car battery adaptor AC: 120V 60Hz |
| Dimensions | 664(W) x 175(D) x 267(H) mm (26-3/16" x 6-15/16" x 10-9/16") |
| Weight | Approx. 9 kg (19 lbs. 14 ozs.) including batteries |

* Specification subject to change without notice.

MODIFICATION NOTICE

CASSETTE RECORDER



M 9998 (USA) M 9998L (UK)
M 9998 (CANADA) M 9998LU (EUROPE)
M 9998K (AUS) M 9998LU (METAL TAPE)
M 9998K M 9998KB (S.AFRICA)

Date Oct. 31, 1982 Issued by _____

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

| | | Section | Key No. | Part No. | Description | Q'ty | Remark | Reason |
|---|------|-----------|---------|------------------|-------------|------|--------|--------|
| 1 | From | Mechanism | 2 | 141-2-742T-25800 | Lever | 1 | | E |
| | To | | 3 | " | " | 1 | | |
| 2 | From | | 3 | 141-2-742T-18300 | Lever | 1 | | E |
| | To | | 2 | " | " | 1 | | |
| 3 | From | | | | | | | |
| | To | | | | | | | |

| | |
|--|--|
| | |
|--|--|

| | | |
|---|----------------------------------|----------------|
| INTERCHANGEABLE NOT INTERCHANGEABLE | Serial No. Chassis No. | Effective from |
| Q'ty of initial production before modification. | Identification of modified unit. | |
| | | |
| REASON FOR MODIFICATION A Standardization C Improvement of reliability E Miss print G B Change of materials D Improvement of performance F Miss register | | |

MODIFICATION NOTICE

CASSETTE RECORDER



SANYO

| | |
|--------------------|----------------------|
| M9998 (USA) | M9998KB (S.AFRICA) |
| M9998 (CANADA) | M9998LU (EUROPE) |
| M9998K (AUSTRALIA) | M9998LU (METAL TAPE) |
| M9998K | M9998LG (UK) |

Date Feb. 15, 1982 Issued by _____

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

IC NE646B (NE646BN) being used in the following models was discontinued of its production, and these models are going to use new IC NE646N instead.

The basic performance of both IC's is identical, but if IC NE646B (NE646BN) is replaced with IC NE646N as it is, there may be the possibility of oscillation to take place. For that reason, eliminate the following condensers simultaneously with IC replacement.

| Model | Condenser to be eliminated |
|----------------------|----------------------------|
| M9998 (U.S.A.) | C403, C603 |
| M9998 (CANADA) | |
| M9998K (AUSTRALIA) | |
| M9998K (GENERAL) | |
| M9998KB (S. AFRICA) | |
| M9998LU (EUROPE) | |
| M9998LU (METAL TAPE) | |
| M9998LG (U.K.) | |

MODIFICATION NOTICE

CASSETTE RECORDER



SANYO

| | |
|----------------|----------------------|
| M9998 (USA) | M9998L (UK) |
| M9998 (CANADA) | M9998LU (EUROPE) |
| M9998K (AUS) | M9998LU (METAL TAPE) |
| M9998K | M9998KB (S.AFRICA) |

Date Dec. 5, 1980 Issued by _____

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

| | | Section | Key No. | Part No. | Description | Q'ty | Remark | Reason |
|---|------|----------|---------|--------------|-----------------|------|--------|--------|
| 1 | From | Main Amp | | 4-235T-01600 | MPX Coil, Dolby | 2 | | E |
| | To | PCB Assy | | 4-255T-01600 | " | 2 | | |

Parts List of SOCKET PCB ASSY. indicated below is supplemented for models other than M9998LU (which is using METAL TAPE) because it has been missing from their Service Manual.

| SOCKET PCB ASSY | | | |
|-----------------|------------------|---------------------------------|---|
| 149 | 141-4-230T-89771 | P.C. Board Ass'y, Socket | 1 |
| | 4-235T-60600 | Socket, Headphone | 1 |
| | 4-235T-60700 | Socket, Mic 3.5φ with Mic | 1 |
| | 123-2-411R-10900 | Plate Nut, Remote | 1 |
| | 4-235T-60800 | Socket, Mic 3.5φ | 1 |
| | 4-235R-15700 | Socket, Remote 2.5φ | 1 |
| | 4-235T-63300 | Socket 3P, AMP PCB | 1 |
| | 4-235T-66700 | Socket 7P, AMP PCB | 1 |
| | 4-235T-64600 | Socket 2P, Output PCB | 1 |
| R818,918 | | Carbon Res. 1.5K ohm ±10% ¼W | 2 |
| R720,721 | | Solid Res. 100 ohm ±10% ½W | 2 |
| R424,624 | | Carbon Res. 1.5K ohm ±10% ¼W | 2 |
| C811,812 | | Electrolytic 0.1μF ±20% 50WV | 4 |
| 911,912 | | | |

| | | | |
|--|--|----------------------------------|----------------|
| INTERCHANGEABLE NOT INTERCHANGEABLE | | Serial No. Chassis No. | Effective from |
| Q'ty of initial production before modification. | | Identification of modified unit. | |
| | | | |
| REASON FOR MODIFICATION | | | |
| A Standardization C Improvement of reliability E Miss print G B Change of materials D Improvement of performance F Miss register | | | |

DISMOUNTING OF CABINET AND CHASSIS

In the first place, take the batteries out of the battery case, or pull off the power cord.

(1) Removing the back lid

Take off 8 screws (pan head tapping screws 3 x 40 mm) from the back lid (of which two are found in the battery case).

Open the back lid, with care not to break the leads inside. Disconnect the lead sockets of the set's PCBs from the back lid's PCBs.

| Back lid side | | Set side |
|--------------------|------|--|
| Beat cancel | 2P | — A Oscillation PCB (Brown socket) |
| Speaker selection | 2P | — B Front socket PCB (Gray-brown socket) |
| External speaker | 4P | — C Speaker (Red-black-brown-orange socket) |
| | 2P | — D Amp PCB (Red-white socket) |
| Line out | 4P | — E Amp PCB (Gray-brown socket) |
| Rod antenna socket | 1Px2 | — F Tuner, switch PCB (Blue-brown socket) |
| Bandy cord | 2P | — G Amp PCB (Brown-white socket) |
| | 7P | — H Tuner, switch PCB (Blue-gray-brown-red sock- et) |
| Power supply PCB | | — I AMSS PCB |

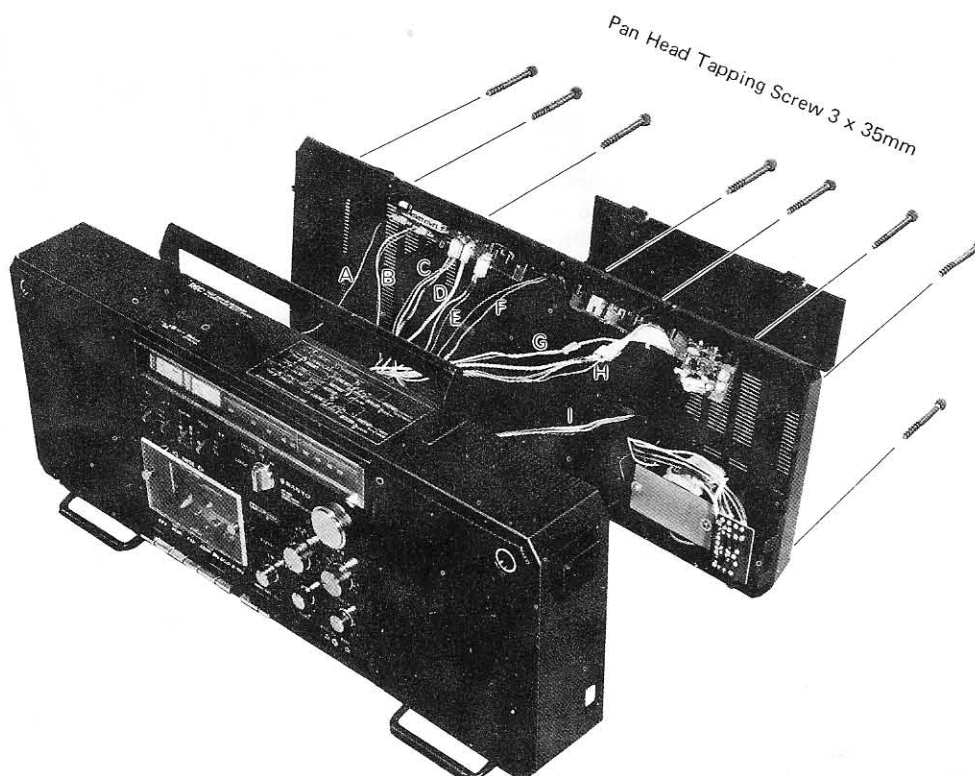
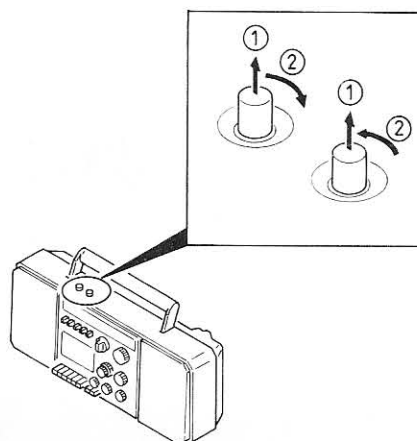
By removing these 10 sockets, the back lid can be taken off.

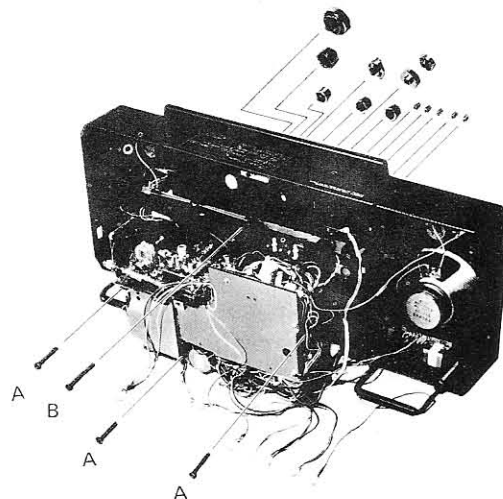
(2) Removing the Cabinet

Remove all control knobs and levers. Pick up power button and battery check/dial light button, and turn them clockwise and counterclockwise (sketch) respectively, then these buttons will be locked in raised positions.

Take off 4 red screws (3 pan head tapping screws 3 x 30 mm, 1 pan head tapping screw 3 x 40 mm) which are joining the chassis and the cabinet together. Separate the microphone socket from the amplifier PCB, and remove screw 209 (pan head tapping screw 3 x 8 mm) from the oscillation PCB (110). Disconnect the three sockets of LED PCB (106) from the AMSS PCB (107).

Lifting the chassis a little, dismount the chassis from the cabinet. Now, the chassis and the cabinet are separated from each other.





A Pan Head Tapping Screw 3 x 30mm
B Pan Head Tapping Screw 3 x 40mm

(3) Removing the printed circuit board

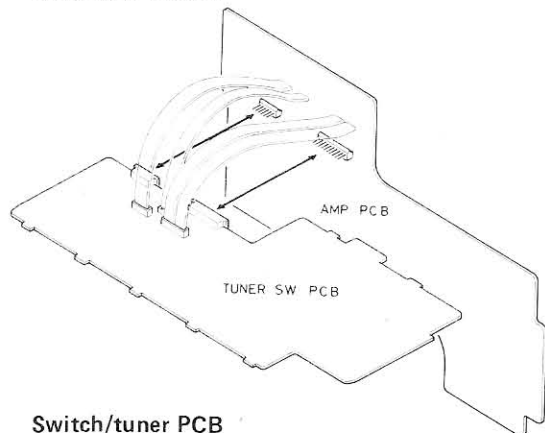
(Referring only the AMP PCB and tuner/switch PCB)

Amplifier PCB

To dismount the AMP PCB, take off 5 screws (pan head tapping screw w/washer 3 x 12 mm) and 2 lugs, 136 and 138 (for shaping up the leads), from the chassis. Since the AMP PCB is connected to the tuner/switch PCB with plugs, it can be separated off by pulling it toward you.

NOTE:

When mounting the AMP PCB, assemble with care so that the AMP side plug may be fitted well with the tuner side socket.



Switch/tuner PCB

After dismounting the AMP PCB, take off three screws (a pan head tapping screw w/washer 3 x 8 mm, two pan head tapping screws 3 x 8 mm) from the tuner/switch PCB. Remove the hexagon head bolt (2.6 x 16 mm) from the dial drum (66) and separate the spring coil (67) for rope threading from the drum. Glue with adhesive cellophane tape, and pull toward the outside, then the switch/tuner PCB will come out loose. Pull out the PCB along the chassis groove with care not to damage the leads, then the disassembly is complete.

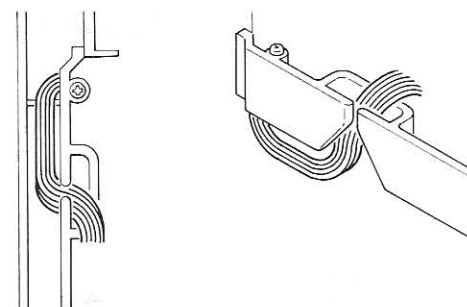
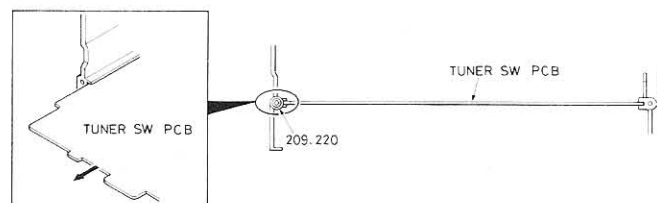
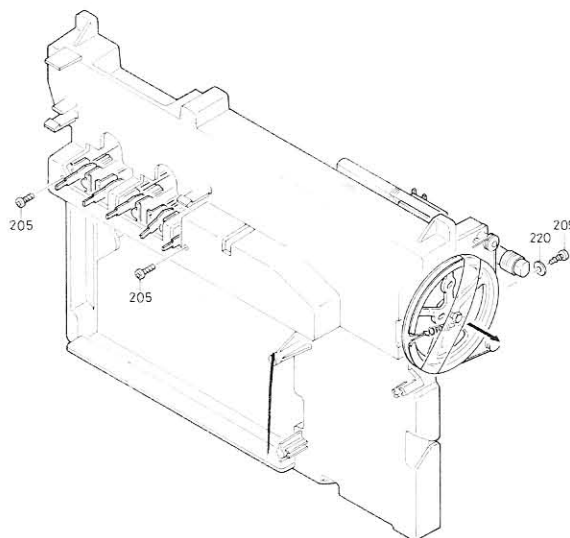
NOTE:

When dismounting the tuner/switch PCB, be careful not to separate the connection bandy cord from the amplifier PCB.

NOTE:

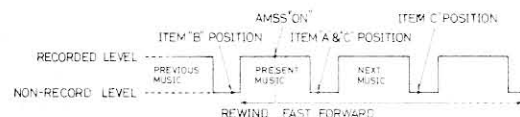
When reassembling the chassis into cabinet, arrange the leads coming from the VR PCB as illustrated above. Unless arranged as specified, the chassis may not settle home in the cabinet or the leads may be pinched and cut by the chassis and cabinet.

* Before checking or repairing the AMP PCB or tuner/switch PCB, make sure other smaller PCBs (INPUT PCB, OUTPUT PCB, OSCILLATION PCB, AMSS PCB, VR PCB) are properly connected.



AMSS: HOW DOES IT WORK?

AMSS stands for Automatic Music Select System, and it is intended to search for the start of a desired music automatically by making use of the unrecorded (no-signal) segment between recorded tunes in a pre-recorded music tape.



Method of use

- A. In playback mode, to skip the tuner being reproduced and play back the next tune:
 - (1) Press AMSS button. (The button is locked.)
 - (2) Press FF-Cue/AMSS button. (This button is locked to fast-forward the tape. At this time AMSS indicator flickers to tell the tape running direction.)
 - (3) Reaching the end of the tune being reproduced, the FF-Cue/AMSS button only is reset automatically, and the playback of the next tune is started after running through the unrecorded segment.
- B. In playback mode, to repeat the tune being reproduced:
 - (1) Press AMSS button. (The button is locked.)
 - (2) Press REW-Review/AMSS button. (This button is locked to rewind the tape. At this time, the other AMSS indication flickers to tell the tape running direction.)
 - (3) Returning to the start of the tune being reproduced, the REW-Review/AMSS button only is reset automatically, and the playback of the same tune is repeated immediately.
- C. In playback mode, to skip several tunes to search for a desired one:
 - (1) Manipulate as in A-(1).
 - (2) Manipulate as in A-(2) and A-(3) repeatedly until the desired tune is located.

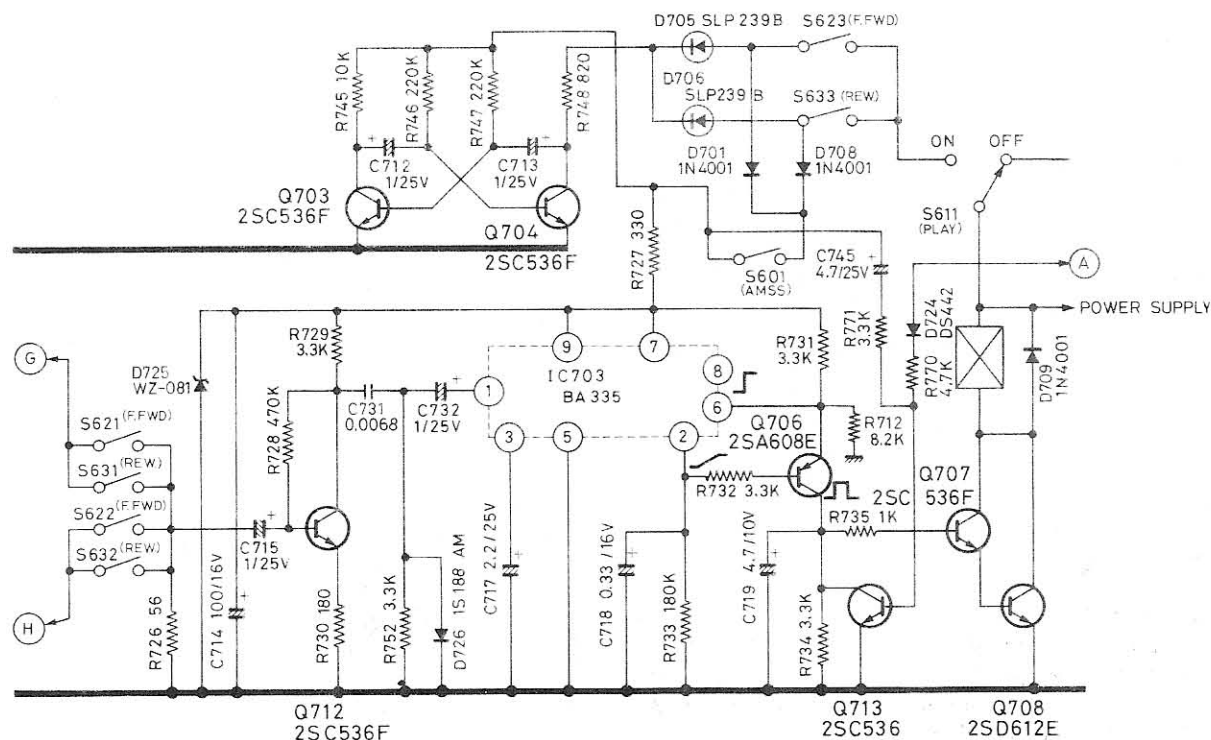
Circuit description

Main behavior

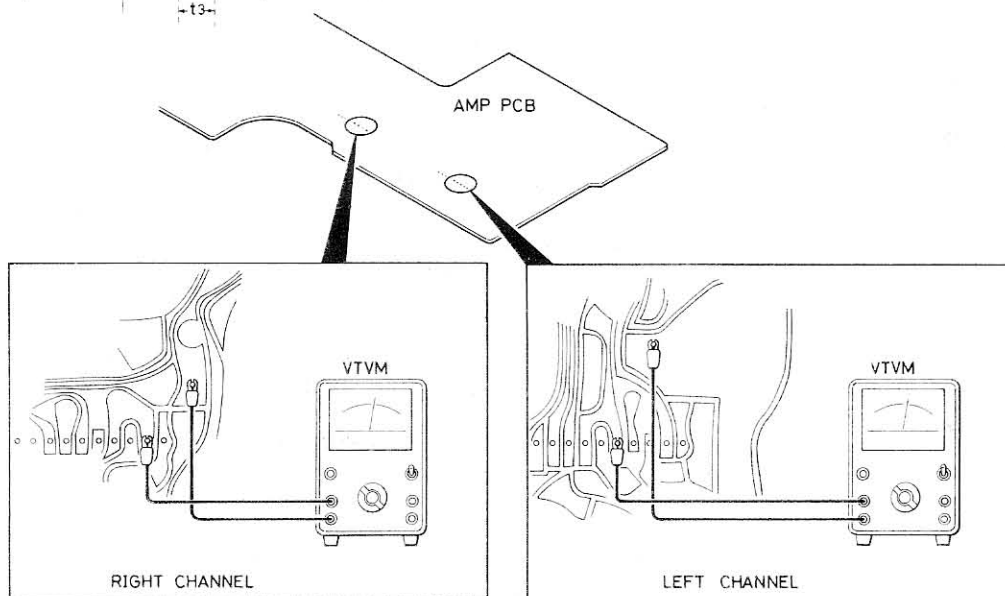
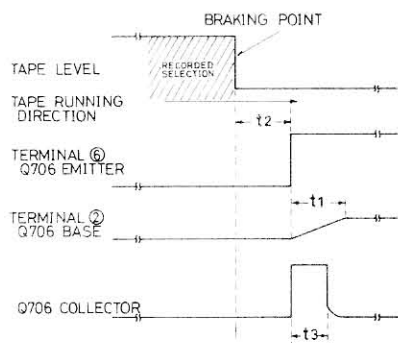
Playback signals from the head are detected in the level detector circuit. When unrecorded level is found, a single shot pulse is generated to operate the plunger.

Briefing on circuits

- (1) Pressing of play button will cause switch S611 to turn on.
Pressing of AMSS button will cause switch S601 to close.
When FF-Cue/AMSS or REW-Review/AMSS button is pressed, switch S623 or S633 will close.
Then, voltage V_{CC} is supplied into circuits.
- (2) Transistors Q703, Q704 are astable multivibrator circuits; when switch S623 or S633 is closed, the power is supplied, and the circuit is activated to be in oscillating state, while either LED (D705 or D706) of tape running direction indicator flickers according to the switch operation. Diodes D707, D708 are intended to prevent over-current.



- (3) In playback mode, the audio sources (playback signals) detected by right and left heads are fed into (G) and (H) by way of tape equalizer amplifier and Dolby amplifier.
 - (4) When FF-Cue/AMSS or REW-Review/AMSS button is pushed in, switches S621, S622, or S631, S632 are closed.
 - (5) Transistor Q712 amplifies the audio sources in the AF (audio frequency) amplifier.
 - (6) Capacitor C731 and resistor R730 compose a low-cut filter in order to eliminate the low frequency components of audio sources.
 - (7) IC703 comprises circuits for AM amplifier, AC-DC converter, comparator and others, being designed to amplify the audio sources again, detect the level, and form pulses.
- The following waveforms are delivered to terminals No. 2 (C, R) and No. 6 (Tr-Out).
- (8) Transistor Q706 is switched on and off due to the differential voltage of emitter and base, composing single-shot pulse in the collector. Times t_1 , t_2 , t_3 are set by the time constant of capacitor C718 and resistor R733.
 - (9) Transistor Q713 prevents erroneous actions in switch operations in the muting circuit.
 - (10) Transistors Q707 and Q708 are linked by Darlington connection, of which single-shot pulses of small current are used to drive the plunger.
 - (11) When the plunger starts to move, the slide (123) of the mechanism is pulled, so that the FF-Cue/AMSS or REW-Review/AMSS button locked in item (1) will be reset.
- Diode D709 is designed to prevent counter-electromotive current during plunger movement.



AMPLIFIER ADJUSTMENTS

Prepare

| | |
|---------------------|--------|
| Power source | DC 15V |
| Mode switch | STEREO |
| Dolby NR/ALC switch | OFF |
| Selector switch | TAPE |
| Tape switch | NORMAL |
| Loudness switch | OFF |

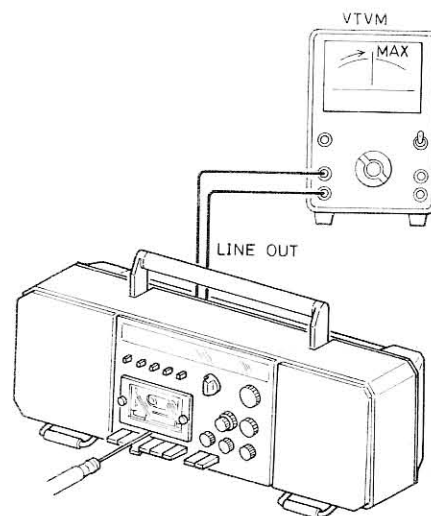
Head azimuth

Tape to be used; (10 kHz, -10 dB)

Load a test tape and press the PLAY button.

Adjust the head azimuth screw so the LINE OUT level becomes maximum.

Repeat the adjustment on both channels and both sides of



Adjustment of playback level

Play back Dolby test tape MTT-115 0dB (TEAC Dolby level calibration tone 200 nWb/m).

Adjust controls SVR801 (L-ch) and SVR901 (R-ch) until the output level from measuring test point becomes 0.58 V.

* Measuring test point means ...

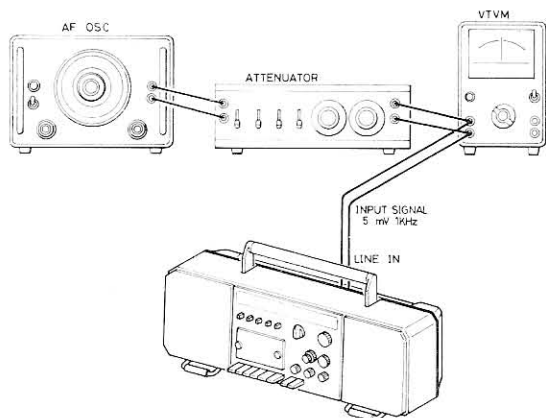
The line (common terminals of record/playback switch of S806 and S906) on point 7 of Dolby IC (LM1011N Dolby), IC801, IC901, and the ground.

Adjustment of record/playback frequency response (Bias adjustment)

Feed input signal of 5 mV (−46 dB) 1 kHz into the line input terminal. Turn the input control knob until the output at measuring test points (see above) becomes 40 mV. Under this condition, turn SVR701 and SVR702 until the difference between record output playback output becomes 0 whether the signal is 1 kHz or 10 kHz.

NOTE:

When adjusting, set the signal of line input at "OFF" state.

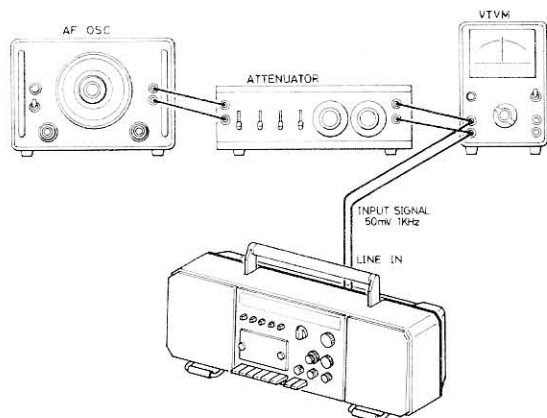


Adjustment of record and playback levels

Feed input signal of 50 mV (−26 dB) 1 kHz into the line input terminal. Turn the input control knob until the output at measuring test points (see above) becomes 0.58 V. Record, Adjust SVR802 and SVR902 so that the record input becomes equal to the playback output.

NOTE:

When playing back, set the signal of line input at "OFF" state.



Adjustment of ALC balance

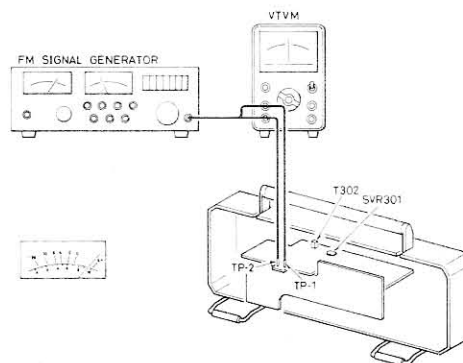
Turn on ALC switch.

Feed input signal of 500 mV (−6 dB) into the line input terminal. Set in record mode. Adjust by turning SVR703 until levels at measuring test points become uniform.

Adjustment of tuning meter

Feed input signal of 98 MHz, 66 dB into the set. Tune in the reception frequency of the set. Adjust SVR301 (10 kΩ) so that the meter swings up to graduation 9.5.

- (1) If the meter swing becomes larger as the input is being increased, adjust after raising the input until the meter is stabilized.
- (2) If the maximum point of meter swing does not coincide with the maximum output point, turn off AFC switch (to short-circuit TP4 and shield case), and tune in to the maximum point of meter swing. In this setting, adjust T302 to obtain the maximum output. At this time, keep the input at 50 dB.



Adjustment of FM MPX (multiplex)

- (1) Set SVR501 (10 kΩ) in the central position.
- (2) Apply modulation input into FM SG through stereo modulator. (* Modulation frequency is 400 Hz.)

| | |
|---------------|---|
| Pilot signal | 7.5 kHz dev. (10% mod.) |
| Stereo signal | 22.5 kHz dev. with "main" signal (30% mod.) |

NOTE:

Since the method of adjusting the modulation differs from one instrument to another, learn the method for the instrument you are going to use.

- (3) Keeping the output signal switch of stereo modulator at MAIN (L + R), set the radio's reception frequency to 98 MHz, and tune in with FM SG. (* Output of FM SG is 66 dB.)
- (4) 19 kHz adjustment (V.C.O. adjustment)
In FM stereo mode, connect frequency counter to TP6, and cut the output of stereo modulator to set in no-modulation state. Turn SVR501 (10 kΩ) to adjust to 19 kHz ± 50 Hz.

* No-modulation state: Turn off PILOT and MAIN & SUB of output signal switch.

Adjustment in no-input state is difficult because 19 kHz signals fluctuate due to noise component, but it is possible to adjust in away that the average of indications be 19 kHz ± 50 Hz.

(5) Adjustment of separation

- (a) Turn tone controls to minimum. Set the balance control in the middle point.
- (b) Turn on MAIN & SUB signal switch and PILOT signal switch, and set the output signal switch to "MAIN" position.
- (c) Connect VTVM to external speaker terminal. (Connect to right and left jacks of external speaker terminal recording to the adjustment or right and left channels.)
- (d) Turning volume controls, adjust the output of both right and left channel to the standard output (50 mW).
- (e) Turn on the RIGHT side and turn off the LEFT side of output signal switch. Adjust SVR502 (1 k Ω) so as to minimize the LEFT side leakage output.
- (f) Turn on the LEFT side and turn off the RIGHT side of output signal switch. Adjust SVR502 so as to minimize the RIGHT side leakage output. If the position of adjustment coincides with that in item 5) above, this is the completion of adjustment.
- (g) If the position of adjustment of SVR502 differs from the right channel to the left channel, adjust so that the separation of both channels becomes nearly equal to each other.

NOTE:

Separation, in both channels, should be:

More than 20 dB at 400 Hz, 1 kHz

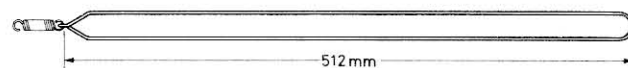
More than 10 dB at 10 kHz

Adjust the separation after adjusting the meter.

THREADING OF DIAL ROPE

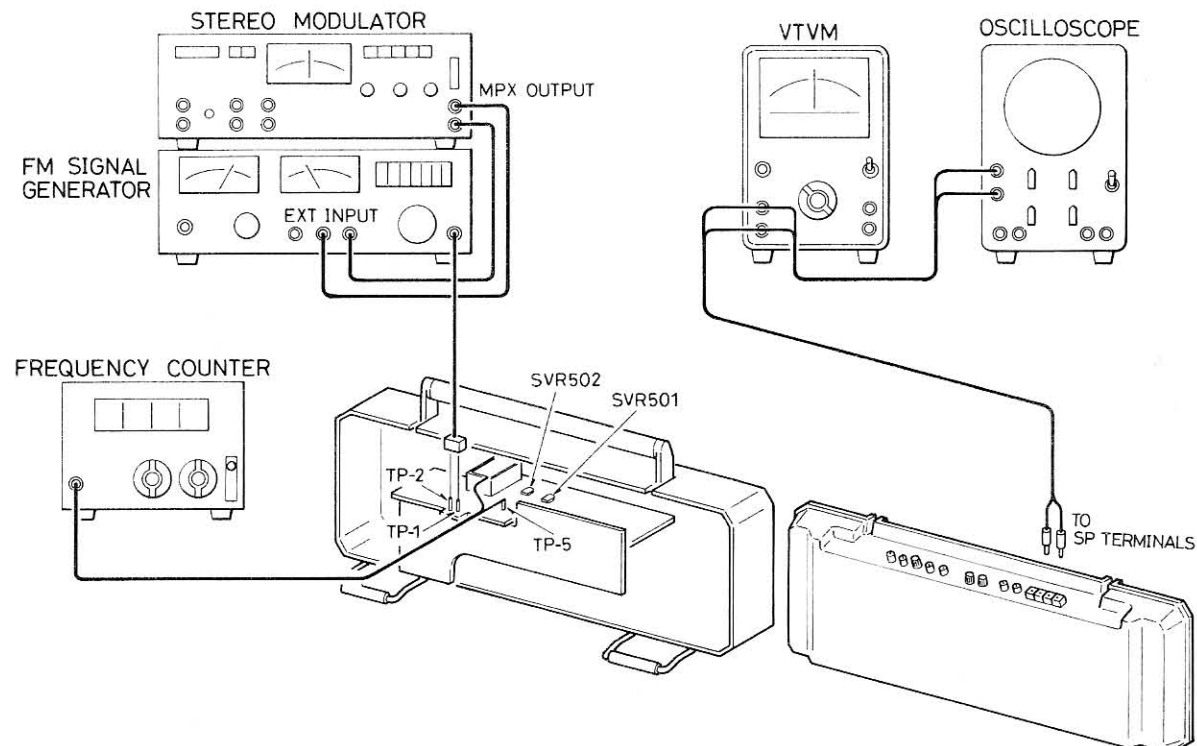
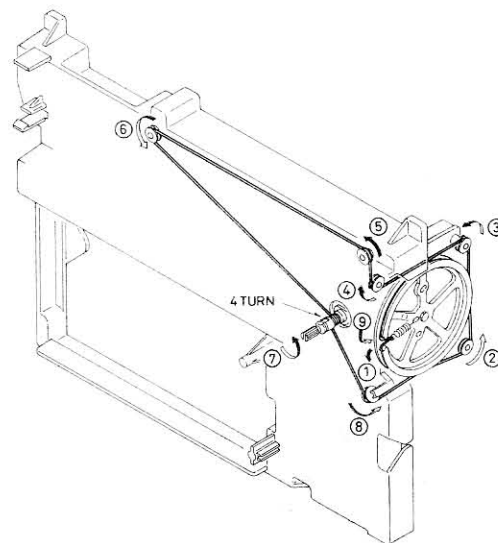
Preparation

Tie the rope to spring coil (67) of drum (66) in a folded length of 512 mm.



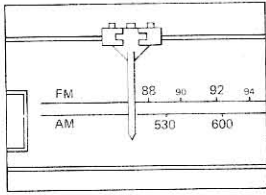
Procedure

Mount the spring coil with rope on the drum, and thread the rope in the direction of arrows (in the numerical sequence). After winding four turns on the tuning shaft, return to the spring coil of the drum.

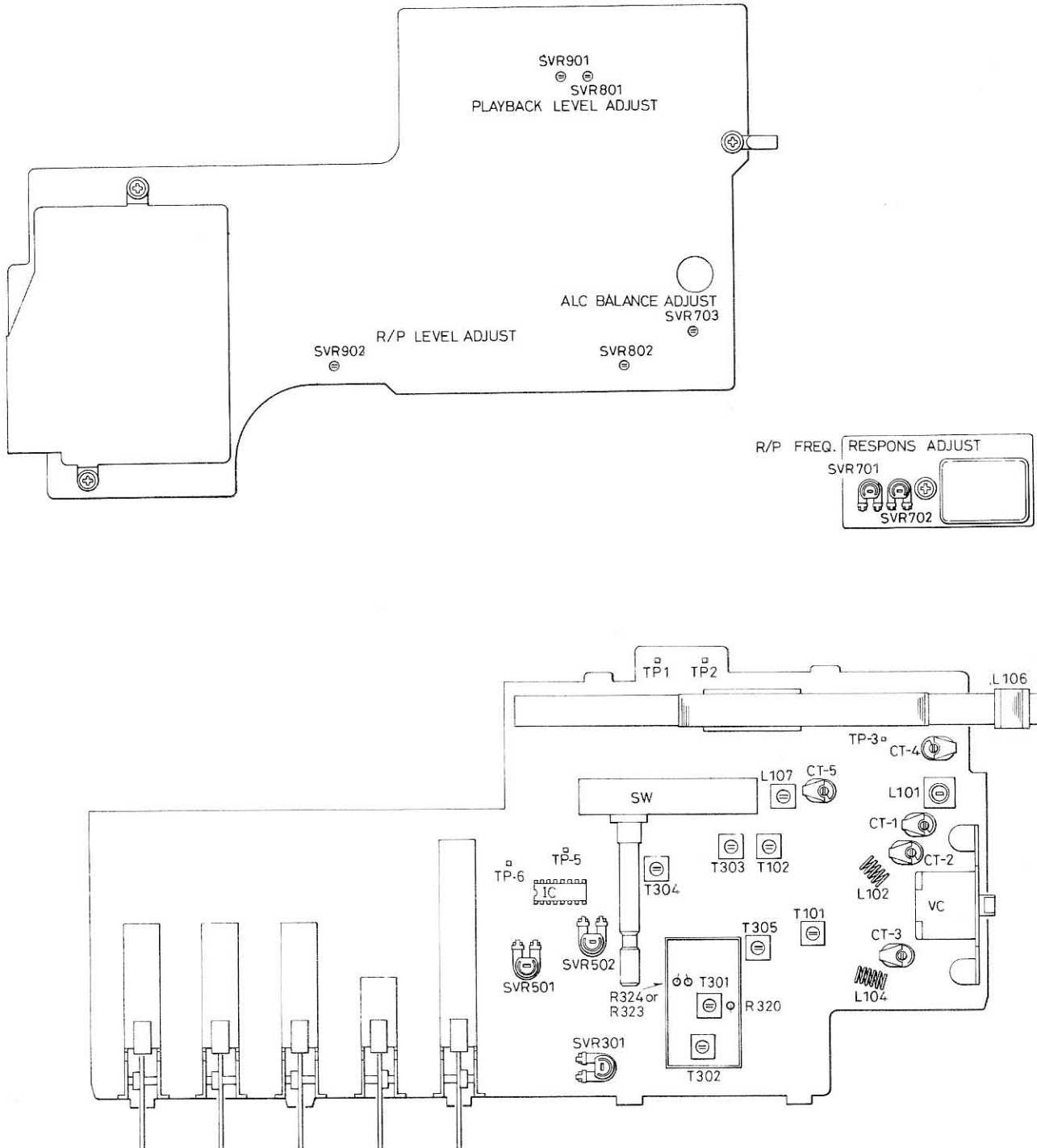


Pointer position adjustment

Rotate the tuning shaft counterclockwise until it turns idle, fit the pointer to the left end point, and secure it firmly.




PARTS LOCATION



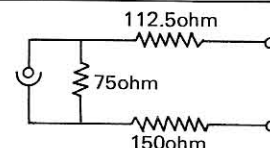
M9998 US

TUNER ADJUSTMENT

FM ALIGNMENT

| Step | Adjusting Circuit | Connections | | SG frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope |
|------|---------------------|---|--|----------------------------------|--|--------------|---|
| | | Input | Output | | | | |
| 1 | I. F. | Connect sweep generator to FM ANT terminal TP1, TP2 | Connect oscilloscope to test point R320(H) Shield case (E) | 10.7MHz | Near max. capacity of VC. at position with no unrequired signal. | T101, T301 | Match waveform with Center of Ceramic Filter |
| 2 | Ratio Det. | | Connect oscilloscope to test point R323(H) Shield case (E) | Tune to ceramic filter frequency | | T302 |  |
| 3 | O. S. C. | Connect FM SG. to FM ANT. Terminals TP1, TP2 | Connect VTVM to speaker terminal. | 87 MHz (400 Hz 30% modulation) | Low end of dial scale | L104 | Max. |
| 4 | | | | 109 MHz (400 Hz 30% modulation) | High end of dial scale | CT3 | |
| 5 | ANT. | Connect FM SG. to FM ANT. Terminals | Connect VTVM to speaker terminal. | 90 MHz (400 Hz 30% modulation) | 90 MHz on dial scale | L101 L102 | Max. |
| 6 | | | | 106 MHz (400 Hz 30% modulation) | 106 MHz on dial scale | CT1, CT2 | |
| 7 | Repeat adjustments. | | | | | | |

- PREPARE: 1. Add to AC120V 60Hz. & AFC SW-OFF.
 2. Set the dial pointer to very left line of dial scale.
 3. Connect sweep generator, FM SG. VTVM and oscilloscope.
 4. Use a screwdriver with plastic grip for all adjustments.
 5. Use a 300 ohm balanced dummy load.



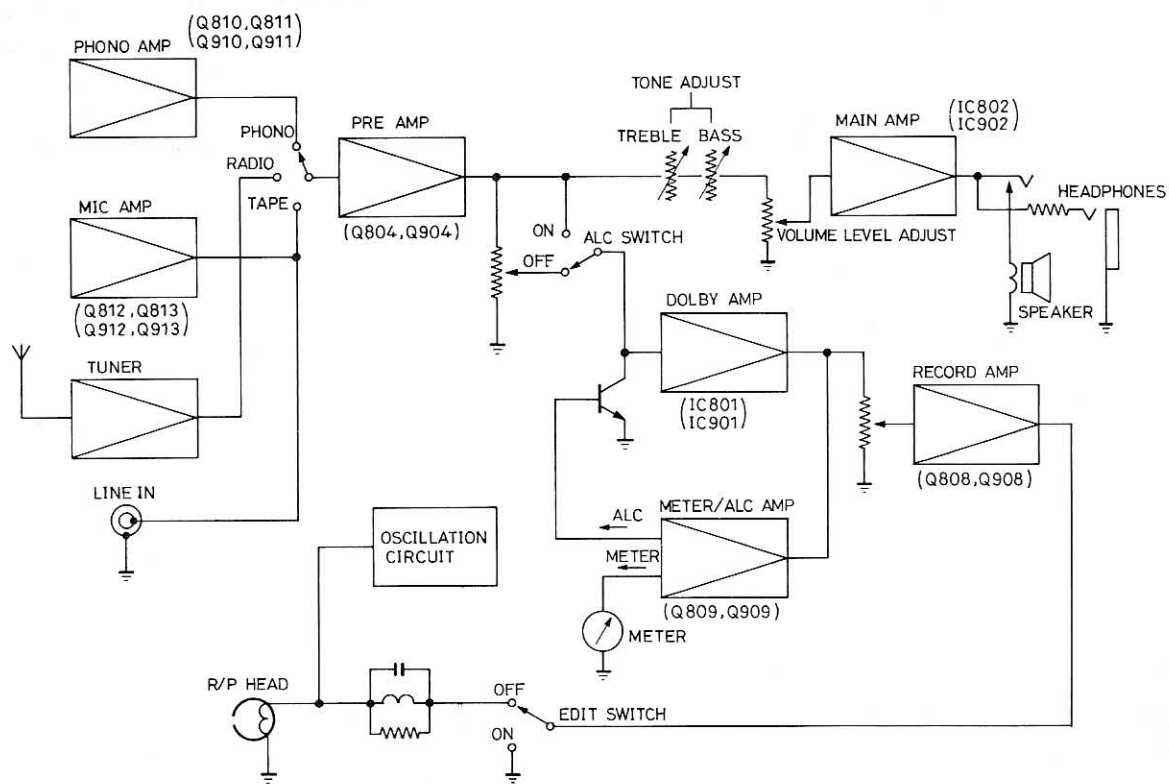
AM ALIGNMENT

| Step | Adjusting Circuit | Connections | | SG frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope |
|------|-------------------|---------------------------------------|-------------------------------------|----------------------------------|---|---------------------|-------------------|
| | | Input | Output | | | | |
| 1 | I. F. | Connect sweep generator to TEST LOOP. | Connect oscilloscope to EXT. SP. | 457 KHz | Low end of dial scale at position of no un-required signal. | T102 T303 ~ T305 | Max. |
| 2 | O. S. C. | Connect AM SG. to TEST LOOP. | Connect VTVM to EXT. SP. terminals. | 505 KHz (400 Hz 30% modulation) | Low end of dial scale | L107 | Max. |
| 3 | | | | 1650 KHz (400 Hz 30% modulation) | High end of dial scale | CT5 | |
| 4 | ANT. | Connect AM SG. to TEST LOOP. | Connect VTVM to EXT. SP. terminals. | 600 KHz (400 Hz 30% modulation) | 600 KHz on dial scale | L106 | Max. |
| 5 | | | | 1400 KHz (400 Hz 30% modulation) | 1400 KHz on dial scale | CT4 | |
| 6 | Repeat adjustment | | | | | | |

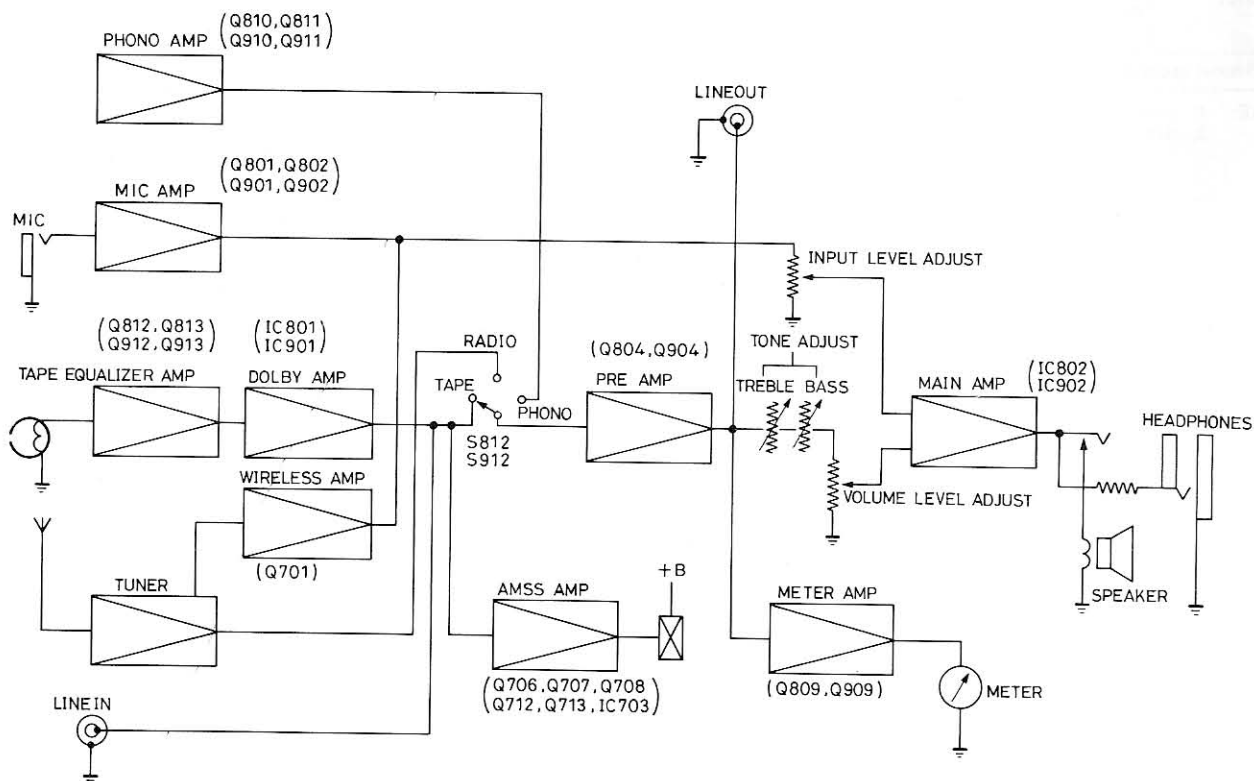
- PREPARE: 1. Add to AC 120V 60 Hz.
 2. Set the dial pointer to very left line on dial scale.
 3. Use a screwdriver with plastic grip for all adjustments.
 4. Selector switch to "AM".
 5. Connect sweep generator, AM SG, VTVM and oscilloscope.

BLOCK DIAGRAM

RECORD BLOCK DIAGRAM



PLAYBACK BLOCK DIAGRAM



MECHANISM ADJUSTMENT

1. TAKE-UP TORQUE

Set the unit to PLAY, F.FWD or REW mode.

Measure each torque with a torque gauge.

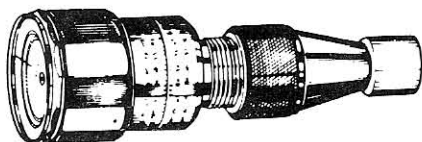
Each torque should be as follows;

PLAY 35 — 60 g/cm

FAST FORWARD 70 — 130 g/cm

REWIND 70 — 130 g/cm

If each torque fails to reach the standard value, clean the drive belt, flywheel, motor pulley, take-up reel idler and rewind roller with a cotton swab soaked in alcohol.



2. BACK TENSION

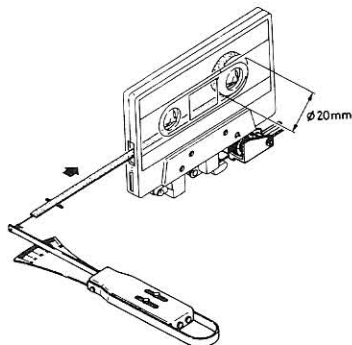
To measure back tension with tension gauge, make a hole in the side of the cassette as shown in figure two.

Be sure the tape does not rub against the edge of the cassette, or correct measurement will be impossible.

PLAY Less than 5 g/cm

FAST FORWARD Less than 5 g/cm

REWIND Less than 5 g/cm



3. TAPE TENSION

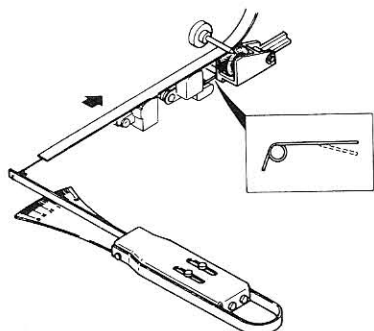
Cut off a length of tape. Tie one end to a thread connected to the tension gauge, and leave the other end hanging loose as shown in figure three.

Operate the unit in PLAY mode and hold the tension gauge steady.

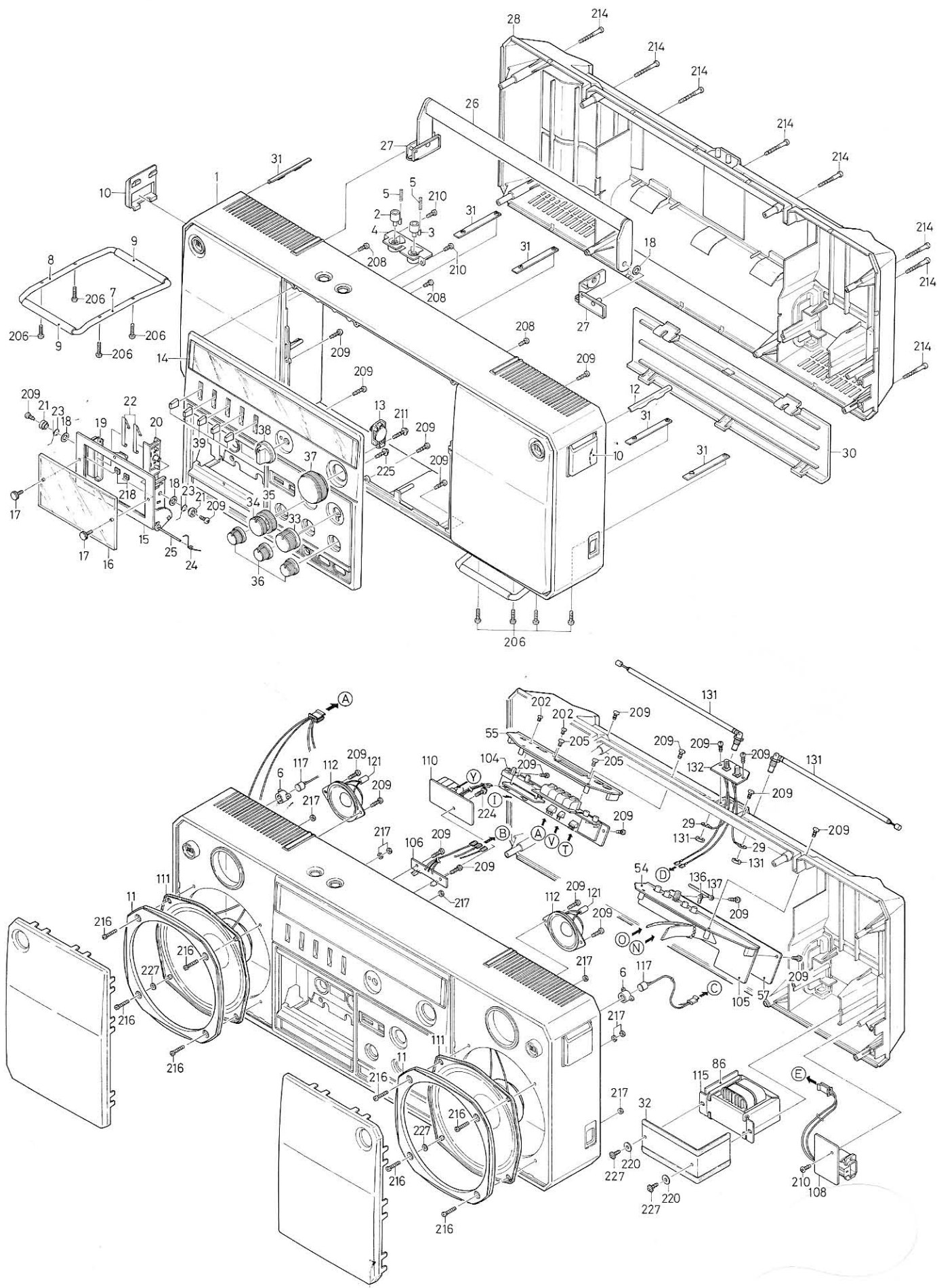
When the tape stops, read the tension gauge. If this reading is over 120 gram, no adjustment is needed.

If it is under 120 gram, adjust the pinch-roller pressure.

This is done by bending the spring wire 32 (141-2-852T-55700) shown in the mechanism exploded view. Clean the pinch roller with alcohol so the tape will not slip.

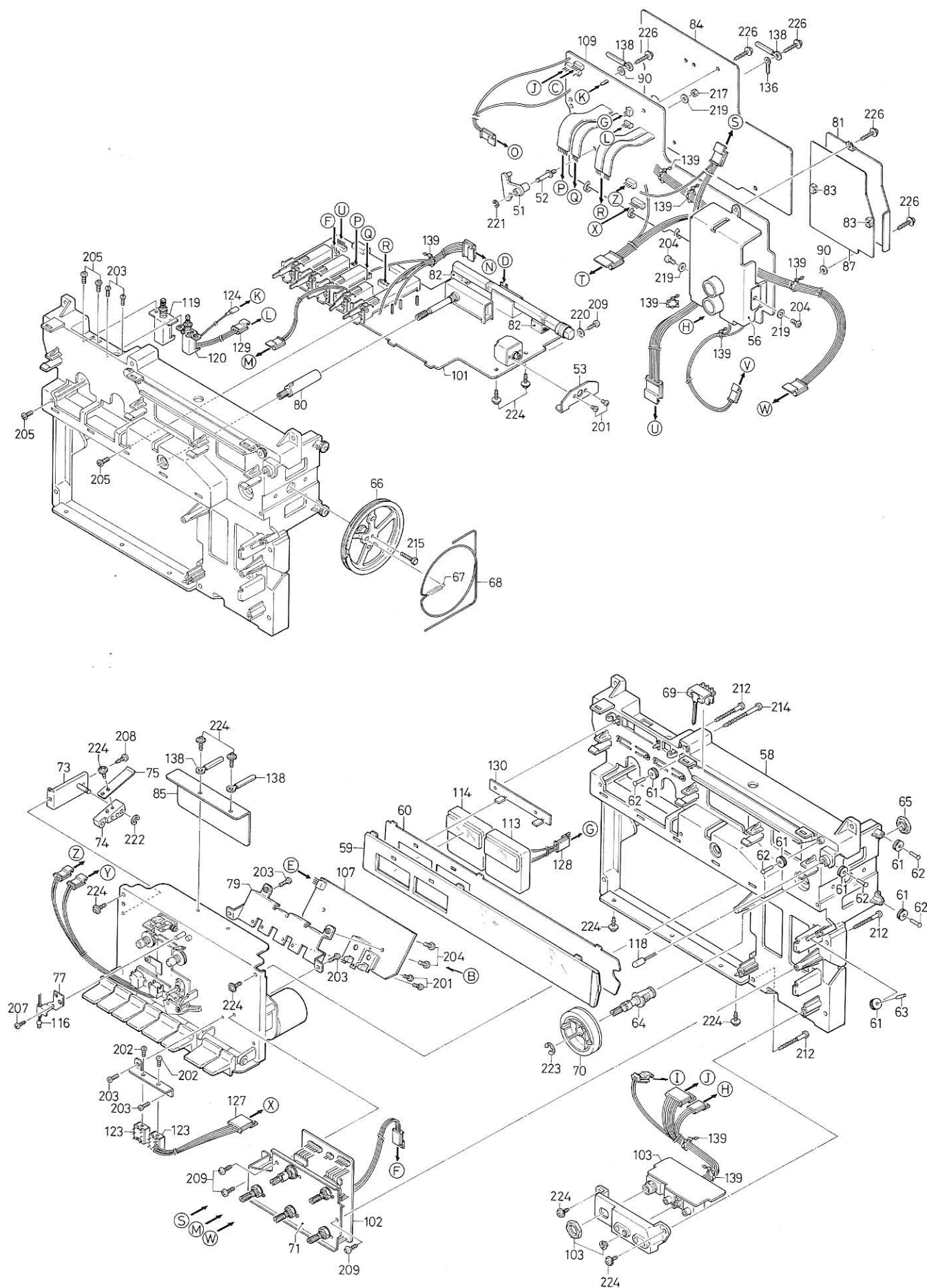


CABINET EXPLODED VIEW



PARTS LIST

| Ref. No. | Part No. | Description | Q'ty | Ref. No. | Part No. | Description | Q'ty | |
|-----------|------------------|-----------------------------------|------|----------|------------------|---|--------------------------|---|
| PACKING | | | | CHASSIS | | | | |
| | 141-6-133T-02304 | Individual Carton | 1 | 54 | 141-0-367T-32003 | Bracket Ass'y, Socket | 1 | |
| | 141-6-410T-34300 | Instruction Manual | 1 | 55 | 141-2-367T-32100 | Bracket, SP Socket | 1 | |
| | 141-6-144T-56800 | Form Plastic Case, Left | 1 | 56 | 141-2-368T-17800 | Heat Sink IC | 1 | |
| | 141-6-144T-56900 | Form Plastic Case, Right | 1 | 57 | 141-2-322T-52301 | Shield Plate | 1 | |
| | 141-6-144T-54100 | Form Plastic Case, Center | 1 | 58 | 141-2-311T-31300 | Chassis | 1 | |
| | 141-2-171T-15700 | Handle | 1 | 59 | 141-0-146T-22603 | Dial Scale Ass'y | 1 | |
| | 141-2-273T-02200 | Handle Base | 1 | 60 | 141-2-245T-07101 | Back Plate | 1 | |
| | 141-6-231T-90602 | Inner Poly Cover, Set | 1 | 61 | 141-2-661T-24600 | Pulley | 6 | |
| | 141-6-231T-25352 | Inner Poly Cover, Inst. B | 1 | 62 | 141-2-567T-02000 | Pulley Shaft | 5 | |
| | 141-2-332T-00300 | Sleeve, Battery | 2 | 63 | 141-2-567T-02100 | Pulley Shaft | 1 | |
| | 141-2-135T-62100 | Cover, Jack | 3 | 64 | 141-0-566T-08700 | Tuning Shaft Ass'y | 1 | |
| | 141-6-317T-10900 | Pad | 1 | 65 | 141-2-415T-01600 | Hexagon Nut | 1 | |
| | 141-0-385T-02900 | Bracket Assy, Mic | 2 | 66 | 141-2-538T-03900 | Drum | 1 | |
| | 141-6-231T-15300 | Inner Poly Cover, Mic | 2 | 67 | 141-2-851T-06300 | Spring Coil, Rope | 1 | |
| | 141-6-231T-10200 | Inner Poly Cover, Mic Stand | 2 | 68 | 141-2-340T-00500 | Rope | 1 | |
| | 141-6-479T-08300 | Label, Dolby | 1 | 69 | 141-0-511T-13301 | Pointer Ass'y | 1 | |
| | 141-6-132T-90300 | Individual Carton, Mic | 1 | 70 | 141-2-521T-10500 | Flywheel | 1 | |
| ACCESSORY | | | | 71 | 141-2-361T-16100 | Bracket, VR | 1 | |
| | 4-241T-12800 | or Cassette Tape C-12 | 1 | 72 | 141-2-367T-32200 | Bracket, Socket | 1 | |
| | 4-241T-08600 | | | | 73 | 141-0-715T-05300 | Bracket Lever Ass'y, REC | 1 |
| | 4-241T-10879 | | | | 74 | 141-2-742T-36300 | Lever, REC | 1 |
| | 4-153T-10700 | Microphone, without Remote Switch | 1 | 75 | 141-2-853T-62200 | Spring Plate, REC | 1 | |
| | 4-153T-10800 | Microphone, with Remote Switch | 1 | 77 | 141-2-374T-14600 | Bracket, Pilot | 1 | |
| | 4-243T-80900 | or Power Supply cord | 1 | 78 | 141-2-365T-42400 | Bracket, Edit Switch | 1 | |
| | 4-243T-81000 | | | | 79 | 141-2-365T-42500 | Bracket, AMSS Switch | 1 |
| CABINET | | | | 80 | 141-2-253T-16300 | Joint, Band Select Switch | 1 | |
| 1 | 141-0-111T-39303 | Cabinet Ass'y | 1 | 81 | 141-2-322T-52400 | Shield Plate, IC | 1 | |
| 2 | 141-2-161T-61800 | Push Button, Power | 1 | 82 | 141-2-447T-16600 | Cushion 10 x 15 x 10, Bear ANT | 2 | |
| 3 | 141-2-161T-61830 | Push Button, Dial | 1 | 83 | 141-2-447T-65900 | Cushion, 5 x 7 x 4,Shield Plate Mtg. | 2 | |
| 4 | 141-2-210T-11300 | Bracket, Push Button | 1 | 84 | 141-2-322T-53001 | Shield Plate, AMP | 1 | |
| 5 | 141-2-855T-34000 | Spring Coil, Push Button | 2 | 85 | 141-2-322T-53100 | Shield Plate, Mechanism | 1 | |
| 6 | 141-2-385T-02200 | Bracket, Mic | 2 | 86 | 141-2-246T-42700 | Sheet, Fiber, 35 x 40mm, PT | 1 | |
| 7 | 141-2-174T-08000 | Stand, Leg | 2 | 87 | 141-2-327T-19501 | Insulator, IC | 1 | |
| 8 | 141-2-174T-08100 | Stand, Leg | 2 | 89 | 141-2-447T-15200 | Cushion | 1 | |
| 9 | 141-2-461T-36800 | Pipe, Leg | 4 | 90 | 141-2-453T-01200 | Washer, 3 x 8 x 1mm | 2 | |
| 10 | 141-2-447T-66100 | Cushion, 5 x 10 x 10mm, PT | 1 | 136 | 123-2-472R-00401 | Lug | 2 | |
| 11 | 141-2-153T-50000 | Escutcheon, Speaker | 2 | 137 | 141-2-472T-01001 | Lug | 1 | |
| 12 | 141-2-246T-61800 | Sheet, 4 x 30 x 1mm, Fiber | 4 | 138 | 141-2-472T-01201 | Lug | 5 | |
| 13 | 141-0-581T-10901 | Gear Ass'y | 1 | 139 | 141-2-464T-08700 | Fixer | 7 | |
| 14 | 141-0-122T-28904 | Front Panel Ass'y | 1 | 140 | 141-2-464T-20671 | Fixer | 8 | |
| 15 | 141-0-124T-24100 | Top Lid Ass'y | 1 | 141 | 141-2-453T-00800 | Washer, 3 x 8 x 0.5mm | 3 | |
| 16 | 141-2-131T-19800 | Clear Window, Top Lid | 1 | 142 | 141-2-453T-01700 | Washer, 3 x 10 x 1mm, Fiber | 1 | |
| 17 | 141-2-421T-27700 | Special Screw, Clear Window | 2 | HARDWARE | | | | |
| 18 | 141-2-453T-31001 | Washer, 8.2 x 12 x 0.5mm, Nylon | 3 | 201 | | Pan Hd. Screw, 2.6 x 4mm | 4 | |
| 19 | 141-2-210T-10600 | Bracket, Cassette Holder | 1 | 202 | | Pan Hd. Screw, 2.6 x 6mm | 4 | |
| 20 | 141-2-210T-10700 | Bracket, Cassette Holder | 1 | 203 | | Pan Hd. Screw, 2.6 x 8mm | 6 | |
| 21 | 141-2-135T-59200 | Cover, Bracket | 2 | 204 | | Pan Hd. Screw, 3 x 6mm | 5 | |
| 22 | 141-2-853T-61100 | Spring Plate, Cassette Pres | 2 | 205 | | Pan Hd. Screw, 3 x 8mm | 6 | |
| 23 | 141-2-852T-53100 | Spring Wire, Bracekt | 2 | 206 | | Pan Hd. Screw, 3 x 16mm | 8 | |
| 24 | 141-2-852T-56800 | Spring Wire, Top Lid | 1 | 207 | | Pan Hd. Tapping Screw, 2.6 x 6mm | 1 | |
| 25 | 141-2-753T-63700 | Shaft, Top Lid | 1 | 208 | | Pan Hd. Tapping Screw, 3 x 6mm | 8 | |
| 26 | 141-0-171T-15100 | Handle Ass'y | 1 | 209 | | Pan Hd. Tapping Screw, 3 x 8mm | 34 | |
| 27 | 141-2-271T-14600 | Bracket, Handle | 2 | 210 | | Pan Hd. Tapping Screw 3 x 10mm | 3 | |
| 28 | 141-0-126T-28905 | Back Lid Ass'y | 1 | 211 | | Pan Hd. Tapping Screw, 3 x 16mm | 2 | |
| 29 | 123-2-472R-11100 | Lug, Rod ANT | 2 | 212 | | Pan Hd. Tapping Screw, 3 x 30mm | 3 | |
| 30 | 141-0-128T-14000 | Battery Lid Ass'y | 1 | 213 | | Pan Hd. Tapping Screw, 2.6 x 8mm | 2 | |
| 31 | 141-2-411T-10600 | Plate Nut, Leg | 4 | 214 | | Pan Hd. Tapping Screw, 3 x 40mm | 9 | |
| 32 | 141-2-322T-51900 | Shield Plate, PT | 1 | 215 | | Hexagon Bolt, 2.6 x 16mm | 1 | |
| 33 | 141-2-163T-60100 | Rotary Knob, Main VR | 1 | 216 | | Hexagon Bolt, 3 x 18mm | 8 | |
| 34 | 141-2-163T-60200 | Rotary Knob, Mic VR | 1 | 217 | | Hexagon Nut, 3mm | 9 | |
| 35 | 141-2-163T-60300 | Rotary Knob, Mic VR | 1 | 219 | | Washer, 3 x 8 x 0.5mm | 3 | |
| 36 | 141-2-163T-60400 | Rotary Knob, Bass/Treble | 3 | 220 | | Washer, 3 x 13 x 1mm | 3 | |
| 37 | 141-2-163T-60500 | Rotary Knob, Tuning | 1 | 221 | | Special Washer, E Ring, 2mm | 1 | |
| 38 | 141-2-163T-60600 | Rotary Knob, Band Select | 1 | 222 | 141-2-457T-23100 | Special Washer, E Ring 3mm | 1 | |
| 39 | 141-0-162T-16100 | Lever Knob Ass'y | 5 | 223 | 141-2-457T-23401 | Special Washer, E Ring 6mm | 1 | |
| CHASSIS | | | | 224 | | Pan Hd. Tapping w/washer 3 x 8mm | 1 | |
| 51 | 141-2-742T-36200 | Lever, REC | 1 | 225 | | Pan Hd. Tapping Screw, W/Washer, 3 x 10mm | 3 | |
| 52 | 123-2-566R-12000 | Tuning Shaft | 1 | 226 | | Pan Hd. Tapping Screw, W/Washer, 3 x 12mm | 5 | |
| 53 | 141-2-363T-09800 | Bracket, VC | 1 | 227 | | Pan Hd. Tapping w/washer 3 x 14mm | 1 | |



PARTS LIST

| Ref. No. | Part No. | Description | Q'ty | Ref. No. | Part No. | Description | Q'ty |
|----------------------------|------------------|---|------|----------------------------|----------|------------------------------------|------|
| ELECTRICAL PARTS | | | | TUNER/PRE/SWITCH PCB ASS'Y | | | |
| 111 | 4-151T-31800 | Speaker 16cm, Woofer | 2 | C106 | | Ceramic 12pF ±10% 50V | 1 |
| 112 | 4-151T-30000 | Speaker 5cm, Tweeter | 2 | C107 | | Ceramic 5pF ±0.25pF 50V | 1 |
| 113 | 4-511T-09271 | Meter, VU/Tuning | 1 | C109 | | Ceramic 8pF ±0.5pF 50V | 1 |
| 114 | 4-511T-09272 | Meter, VU/Battery | 1 | C115 | | Ceramic 13pF ±10% 50V | 1 |
| 115 | 4-251T-95400 | Power Trans. | 1 | C116 | | Ceramic 4pF ±0.25pF 50V | 1 |
| 116 | 4-612T-12500 | Indicator Lamp, Cassette | 1 | C108 | | Ceramic 30pF ±10% 50V | 1 |
| 117 | 4-153T-10500 | Microphone | 2 | C103,104,113,114,112 | | Ceramic 0.022μF +80-20% 50V | 5 |
| 118 | 4-612T-12600 | Indicator Lamp, Dial | 1 | C117 | | Ceramic 0.047μF +80-20% 50V | 1 |
| 119 | 4-231T-76271 | Switch, Power | 1 | C110 | | Ceramic 330pF ±10% 50V | 1 |
| 120 | 4-231T-53771 | Switch, Dial | 1 | C121,121 | | Ceramic 15pF ±10% 50V | 2 |
| 121 | | Electrolytic Cap. Nonpolar 4.7μF, 16V (C891, 991) | 2 | C118 | | Ceramic 0.022μF +80-20% 50V | 1 |
| 123 | 4-231T-51373 | Switch, Edit/AMSS | 2 | C134 | | Ceramic 7pF ±0.5pF 50V | 1 |
| 124 | 4-243T-12800 | Lead | 1 | C132 | | Styrol 120pF ±5% 50V | 1 |
| 125 | 4-235T-66300 | Socket, Mic | 1 | C131 | | BC Con 0.0047μF ±20% 25V | 1 |
| 126 | 4-235T-62900 | Socket, Speaker | 1 | C133 | | BC Con 0.01μF ±20% 25V | 1 |
| 127 | 4-235T-63200 | Socket, Edit | 1 | C151 | | Ceramic 100pF ±20% 50V | 1 |
| 128 | 4-235T-66500 | Socket, Meter | 1 | C153 | | Ceramic 0.01μF +80-20% 50V | 1 |
| 129 | 4-235T-66600 | Socket, Pilot | 1 | C311 | | Ceramic 1pF ±0.25pF 50V | 1 |
| 131 | 4-244T-02600 | Rod ANT | 2 | C307,309 | | Ceramic 2pF ±0.25pF 50V | 2 |
| 132 | 4-237T-08200 | Terminal Board | 1 | C322 | | Ceramic 30pF ±10% 50V | 1 |
| 133 | 4-235T-34600 | Socket, Ext ANT | 4 | C312 | | Ceramic 33pF ±10% 50V | 1 |
| | 4-235T-33076 | Socket, Ext, DC | 1 | C351 | | Ceramic 100pF ±20% 50V | 1 |
| | 4-231R-14500 | Slide Switch, DX-LOCAL | 1 | C301 | | Ceramic 220pF ±20% 50V | 1 |
| TUNER/PRE/SWITCH PCB ASS'Y | | | | C314,315,316 | | Ceramic 220pF ±20% 50V | 3 |
| 101 | 141-4-230T-89371 | P.C. Board Ass'y Tuner | 1 | C305,327 | | Ceramic 0.0022μF ±20% 50V | 2 |
| VC1 ~ 5 | 4-224T-12700 | Variable Capacitor | 1 | C306,328,329 | | Ceramic 0.01μF +80-20% 50V | 3 |
| L101 | 4-257T-33100 | ANT Coil, FM | 1 | C302,326,310,318 | | Ceramic 0.022μF +80-20% 50V | 4 |
| L105 | 4-265R-05000 | VHF Coil | 1 | C325,324 | | Ceramic 0.047μF +80-20% 50V | 2 |
| L104 | 4-265R-12400 | VHF Coil | 1 | C304 | | BC Con 0.022μF ±20% 25V | 1 |
| L102 | 4-265R-01300 | VHF Coil | 1 | C321 | | BC Con 0.01μF ±20% 25V | 1 |
| L108,109 | 4-265R-11800 | VHF Coil | 2 | C320 | | BC Con 0.015μF ±20% 25V | 1 |
| | 4-265R-01300 | VHF Coil | 2 | C308 | | BC Con 0.047μF ±20% 25V | 1 |
| L107 | 4-258T-08131 | OSC Coil | 1 | C323 | | Al Electrolytic 0.1μF +40-20% 10V | 1 |
| L106 | 4-257T-36601 | ANT Coil Ass'y, AM | 1 | C313 | | Electrolytic 1μF 25V | 1 |
| CT1 ~ 5 | 4-224R-01400 | Trimmer | 5 | C303 | | Electrolytic 10μF 16V | 1 |
| T101 | 4-256R-20831 | IFT | 1 | C319 | | Electrolytic 1000μF 10V | 1 |
| T301 | 4-256R-15131 | IFT | 1 | C317 | | Electrolytic 0.47μF 50V | 1 |
| T302 | 4-256R-02331 | IFT | 1 | C330 | | Electrolytic 220μF 10V | 1 |
| T102,303,304 | 4-256R-00131 | IFT | 3 | C503 | | Al Electrolytic 0.47μF +40-20% 10V | 1 |
| T305 | 4-256R-00231 | IFT | 1 | C504,505 | | Al Electrolytic 1μF 10V +40-20% | 2 |
| | 4-256T-80400 | I.F. Filter 10.7M Red | 1 | C507,510,511 | | Electrolytic 1μF 25V | 3 |
| | 4-256T-80471 | I.F. Filter 10.67M Blue | 1 | C501 | | Electrolytic 2.2μF 25V | 1 |
| CF301,302 | 4-256T-80472 | I.F. Filter 10.73M Orange | 2 | C512 | | Electrolytic 470μF 16V | 1 |
| | 4-256T-80473 | I.F. Filter 10.64M Black | 1 | C508,509 | | BC Con 0.01μF ±20% | 2 |
| | 4-256T-80474 | I.F. Filter 10.76M White | 1 | C502 | | BC Con 0.047μF ±20% 25V | 1 |
| SVR501 | 4-222T-39575 | Semifixed Variable Resistor | 1 | C508,509 | | Mylar 0.01μF ±20% 50V | 2 |
| SVR502 | 4-222T-39572 | Semifixed Variable Resistor | 1 | C506 | | Styrol 0.001μF ±5% 50V | 1 |
| SVR301 | 4-222T-39576 | Semifixed Variable Resistor | 1 | RESISTORS | | | |
| CR501,502 | 4-227T-02300 | CR Pack | 2 | R101 | | Carbon 1K ohm ±10% ¼W | 1 |
| S101 ~ 106 | 4-238T-09700 | Switch, Band Select | 1 | R103 | | Carbon 22 ohm ±10% ¼W | 1 |
| | 123-2-471R-10900 | Core | 1 | R102 | | Carbon 18K ohm ±10% ¼W | 1 |
| | 141-2-322T-18900 | Shield Plate | 1 | R105 | | Carbon 6.8K ohm ±10% ¼W | 1 |
| | 141-2-322T-18100 | Shield Plate | 1 | R109 | | Carbon 1K ohm ±10% ¼W | 1 |
| IC501 | | IC LA3361 | 1 | R108 | | Carbon 3.9K ohm ±10% ¼W | 1 |
| Q103,104 | | Transistor 2SC930 Conv. | 2 | R107 | | Carbon 1.5K ohm ±10% ¼W | 1 |
| Q301,302 | | Transistor 2SC930 IF | 2 | R110 | | Carbon 2.2K ohm ±10% ¼W | 1 |
| Q303,304 | | Transistor 2SC930 IF | 2 | R114,113, | | Carbon 100K ohm ±10% ¼W | 2 |
| Q101 | | Transistor FET 2K49 | 1 | R115 | | Carbon 1K ohm ±10% ¼W | 1 |
| D304,305,306,307 | | Diode 1S188 AM | 4 | R131 | | Carbon 33 ohm ±10% ¼W | 1 |
| D302,303 | | Diode 1S188 FM1 | 2 | R132 | | Carbon 180 ohm ±10% ¼W | 1 |
| D104 | | Diode 1S553 | 1 | R133 | | Carbon 15K ohm ±10% ¼W | 1 |
| D308 | | Diode RD8, 2EB | 1 | R135 | | Carbon 1.5K ohm ±10% ¼W | 1 |
| D107 | | Diode MV-11T | 1 | R134 | | Carbon 1.5M ohm ±10% ¼W | 1 |
| D101,102,103,105,301,309 | | Diode DS442 X | 6 | R311 | | Carbon 33 ohm ±10% ¼W | 1 |
| CAPACITORS | | | | R335 | | Carbon 33 ohm ±10% ¼W | 1 |
| C101 | | Ceramic 20pF ±10% 50V | 1 | R336 | | Carbon 180 ohm ±10% ¼W | 1 |
| C102 | | Ceramic 16pF ±10% 50V | 1 | R332 | | Carbon 220 ohm ±10% ¼W | 1 |
| | | | | R332 | | Carbon 2.2K ohm ±10% ¼W | 1 |
| | | | | R333 | | Carbon 220 ohm ±10% ¼W | 1 |
| | | | | R320 | | Carbon 270 ohm ±10% ¼W | 1 |

| Ref. No. | Part No. | Description | Q'ty |
|----------------------------------|--------------|---|------|
| TUNER/PRE/SWITCH PCB ASS'Y | | | |
| R309 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R314 | | Carbon 560 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R319,306 | | Carbon 560 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R326 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R302,310, 318,321, 322,327 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 6 |
| R330 | | Carbon 15K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R323,324 | | Carbon 5.6K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R305 | | Carbon 8.2K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R303 | | Carbon 10K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R334 | | Carbon 15K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R304 | | Carbon 47K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R317 | | Carbon 100 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R307 | | Carbon 68 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R315 | | Carbon 220 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R328 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R329 | | Carbon 6.8K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R313 | | Carbon 390K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R316 | | Carbon 390K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R312 | | Carbon 390K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R325 | | Carbon 1M ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R337 | | Carbon 33 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R338 | | Carbon 560 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R339 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R341 | | Carbon 1M ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R340 | | Carbon 270 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R503,514 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R506,507 | | Carbon 3.3K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R509 | | Carbon 12K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R508 | | Carbon 12K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R502 | | Carbon 47K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R505 | | Carbon 6.8K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R504 | | Carbon 22K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R513 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R512 | | Carbon 560 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R501 | | Carbon 3.3K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| ----- | | | |
| | 4-231T-86200 | Switch, T/R/P | 1 |
| | 4-231T-86300 | Switch, N/F/CR | 3 |
| | 4-231T-86500 | Switch, Loudness | 1 |
| | 4-236T-10200 | Plug | 1 |
| | 4-236T-10273 | Plug, 6P | 1 |
| | 4-235T-38793 | Socket, 6P | 1 |
| | 4-235T-38797 | Socket, 10P | 1 |
| | 4-235T-65372 | Socket, 4P | 1 |
| | 4-235T-69471 | Socket, 6P | 1 |
| | 4-235T-69473 | Socket, 8P | 1 |
| | 4-235T-66900 | Socket, 2P | 1 |
| | 4-235T-67471 | Socket, 7P | 1 |
| Q804,904 | | Transistor 2SC1571 | 2 |
| Q718 | | Transistor 2SC536 | 1 |
| RESISTORS | | | |
| R830,930 | | Carbon 680K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R831,931 | | Carbon 2.7K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R829,929 | | Carbon 22K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R406,606 | | Carbon 3.3K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R832,932 | | Carbon 470 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R403,603 | | Carbon 220 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R404,604 | | Carbon 33 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R749 | | Carbon 120K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R869,969 | | Carbon 82K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R855,955 | | Carbon 4.7K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R856,956 | | Carbon 3.3K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R755 | | Carbon 22K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R761 | | Carbon 220 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R405,605 | | Carbon 1.5K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R896,996, 897,997 | | Carbon 8.2K ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R723 | | Carbon 220 ohm $\pm 10\% 1W$ | 1 |
| R725 | | Carbon 100 ohm $\pm 10\% 1W$ | 1 |
| R837,937 | | Carbon 2.7K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R724 | | Carbon 2.7K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R776 | | Carbon 1 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R777 | | Carbon 5.6K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R778 | | Carbon 68 ohm $\pm 10\% \frac{1}{4}W$ | 1 |

| Ref. No. | Part No. | Description | Q'ty |
|----------------------------|------------------|--|------|
| TUNER/PRE/SWITCH PCB ASS'Y | | | |
| CAPACITORS | | | |
| C747 | | Electrolytic 100 μ F 25V | 1 |
| C748 | | Electrolytic 220 μ F 25V | 1 |
| C890,990 | | Electrolytic 100 μ F 6.3V | 2 |
| C818,918, 821,921 | | Electrolytic 1 μ F 25V | 4 |
| C739 | | Electrolytic 220 μ F 16V | 1 |
| C729 | | Electrolytic 4.7 μ F 16V | 1 |
| C889,989, 826,926 | | Mylar 0.068 μ F $\pm 20\%$ 50V | 4 |
| C820,920 | | Ceramic 82pF $\pm 10\%$ 50V | 2 |
| VOLUME PCB ASSY | | | |
| 102 | 141-4-230T-89601 | P.C Board Ass'y, Volume | 1 |
| | 4-222T-78900 | Variable Resistor 50K-B, Volume | 1 |
| | 4-222T-78400 | Variable Resistor 50K-W, Balance | 1 |
| | 4-222T-78500 | Variable Resistor 50K-A, Bass/Treble | 2 |
| | 4-222T-72100 | Variable Resistor 10K-A, Input | 1 |
| | 4-236T-10293 | Plug, 2P | 1 |
| | 4-236T-10272 | Plug, 5P | 1 |
| | 4-236T-10273 | Plug, 6P | 1 |
| | 4-235T-67500 | Socket, 3P | 1 |
| CAPACITORS | | | |
| C401,601 | | Ceramic 0.0022 μ F $\pm 10\%$ 50V | 2 |
| C823,923 | | Mylar 0.01 μ F $\pm 20\%$ 50V | 2 |
| C824,924 | | Mylar 0.022 μ F $\pm 20\%$ 50V | 2 |
| C822,922, 826,926 | | Mylar 0.068 μ F $\pm 20\%$ 50V | 4 |
| C825,925 | | Al Electrolytic 0.33 μ F +40-20% 16V | 2 |
| C899,999 | | Al Electrolytic 0.15 μ F +40-20% 16V | 2 |
| RESISTORS | | | |
| R835,935 | | Carbon 10K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R878,978 | | Carbon 1.5K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R407,607 | | Carbon 5.6K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| FRONT SOCKET PCB ASS'Y | | | |
| 103 | 141-4-230T-89700 | P.C. Board Ass'y, Front Socket | 1 |
| | 4-235T-60600 | Socket, Headphone | 1 |
| | 4-235T-60700 | Socket, Mic w/Switch | 1 |
| | 4-235R-15700 | Socket, Remote | 1 |
| | 123-2-411R-10900 | Plate Nut, Remote | 1 |
| | 4-235T-60800 | Socket, Mic w/o Switch | 1 |
| | 4-235T-63300 | Socket, 3P | 1 |
| | 4-235T-66700 | Socket, 7P | 1 |
| | 4-235T-64600 | Socket, 2P | 1 |
| C811,911, 812,912 | | Al Electroic Cup. 0.1 μ F +40-20% 16V | 4 |
| R818,918 | | Carbon Res. 1.5K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R720,721 | | Solid Res. 100 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| OUTPUT SOCKET PCB ASS'Y | | | |
| 104 | 141-4-230T-90200 | P.C Board Ass'y Input Socket | 1 |
| | 4-231T-86700 | Switch, Speaker | 1 |
| | 4-230T-97100 | P.C Board, Speaker Switch | 1 |
| | 141-2-382T-11700 | Terminal | 1 |
| | 4-231T-65200 | Switch, Beat Switch | 1 |
| | 4-236T-10293 | Plug, 2P | 1 |

| Ref. No. | Part No. | Description | Q'ty |
|------------------------|------------------|---------------------------------|------|
| OUTPUT SOCKET PCB ASSY | | | |
| C711 | 4-236T-10271 | Plug, 4P | 1 |
| | 4-235T-65600 | Socket, Line Out | 1 |
| | 4-236T-10593 | Plug, 2P | 1 |
| | 4-236T-10571 | Plug, 4P | 2 |
| | | Mylar Cap. 0.0022μF ±20% 50V | 1 |
| INPUT SOCKET PCB ASS'Y | | | |
| 105 | 141-4-233T-13800 | P.C Board Ass'y, Input Socket | 1 |
| | 4-235T-65500 | Socket, Line In | 1 |
| | 4-235T-65600 | Socket, RCAx2, 1 PHONO | 1 |
| | 4-231R-16600 | Slide Switch | 1 |
| | 4-236T-10274 | Plug, 7P | 1 |
| | 4-236T-10293 | Plug, 2P | 1 |
| | | Transistor 2SC1571 | 4 |
| CAPACITORS | | | |
| C877,977, 411,611 | | Ceramic 47pF ±10% 50V | 4 |
| C873,973 | | Ceramic 100pF ±10% 50V | 2 |
| C874,974 | | Ceramic 180pF ±10% 50V | 2 |
| C805,905 | | Mylar 0.1μF ±20% 50V | 2 |
| C806,906 | | Mylar 0.022μF ±20% 50V | 2 |
| C875,975 | | Mylar 0.033μF ±20% 50V | 2 |
| C808,908, 898,998 | | Electrolytic 1μF 25V | 4 |
| C801,901 | | Electrolytic 4.7μF ±20% 50V | 2 |
| C703 | | Electrolytic 1000μF 10V | 1 |
| RESISTORS | | | |
| R882,982 | | Carbon 22 ohm ±10% ¼W | 2 |
| R886,986 | | Carbon 3.3K ohm ±10% ¼W | 2 |
| R884,984 | | Carbon 4.7K ohm ±10% ¼W | 2 |
| R880,980, 413,613 | | Carbon 10K ohm ±10% ¼W | 4 |
| R808,908 | | Carbon 100K ohm ±10% ¼W | 2 |
| R888,985 | | Carbon 27K ohm ±10% ¼W | 2 |
| R803,903 | | Carbon 47K ohm ±10% ¼W | 2 |
| R411,611 | | Carbon 1K ohm ±10% ¼W | 2 |
| R412,612, 883,983 | | Carbon 1M ohm ±10% ¼W | 4 |
| R825,925 | | Carbon 22K ohm ±10% ¼W | 2 |
| R709 | | Carbon 1.2K ohm ±10% ¼W | 1 |
| R879,979 | | Carbon 820K ohm ±10% ¼W | 2 |
| R802,902 | | Carbon 2.2K ohm ±10% ¼W | 2 |
| R881,981 | | Carbon 150 ohm ±10% ¼W | 2 |
| AMSS LED PCB ASS'Y | | | |
| 106 | 141-4-230T-90071 | P.C Board Ass'y, AMSS LED | 1 |
| | 4-235T-34600 | Socket | 3 |
| D705,706 | | LED SLP239B, Green | 2 |
| AMSS PCB ASS'Y | | | |
| 107 | 141-4-233T-26600 | P.C Board Ass'y, AMSS | 1 |
| | 4-231T-43072 | Switch, F F/REW | 2 |
| | 4-231T-51372 | Switch, Play/Stop | 2 |
| | 4-252T-04700 | Choke Coil | 1 |
| | 4-236T-10571 | Plug 4P | 1 |
| IC703 | | IC BA 335 | 1 |
| Q707,712, 713,803 | | Transistor 2SC536F | 4 |
| Q708 | | Transistor 2SD612 | 1 |
| Q706 | | Transistor 2SA608 | 1 |
| Q710 | | Transistor 2SD400 | 1 |
| Q903 | | Transistor 2SC536 | 1 |
| Q703,704, | | Transistor 2SC536 or 2SC945 | 2 |

| Ref. No. | Part No. | Part No. | Q'ty |
|------------------------------|------------------|--------------------------------------|------|
| AMSS PCB ASS'Y | | | |
| D717,718, 806,906, 724 | | Diode DS442 | 5 |
| D709,707, 708 | | Diode 1N4001 | 3 |
| D710 | | Diode WZ130 | 1 |
| D725 | | Diode WZ081 | 1 |
| D726 | | Diode 1S188 AM | 1 |
| CAPACITORS | | | |
| C712,713, 715 | | Electrolytic 1μF 25V | 3 |
| C727 | | Electrolytic 47μF 16V | 1 |
| C728,714, 743 | | Electrolytic 100μF 16V | 3 |
| C733 | | Electrolytic 1000μF 16V | 1 |
| C705 | | Electrolytic 33μF 16V | 1 |
| C745 | | Electrolytic 4.7μF 25V | 1 |
| C732 | | Al Electrolytic 1μF +40-20% 16V | 1 |
| C717 | | Al Electrolytic 2.2μF +40-20% 16V | 1 |
| C718 | | Al Electrolytic 0.33μF ±10% 10V | 1 |
| C719 | | Al Electrolytic 4.7μF ±10% 10V | 1 |
| C731 | | Mylar 0.0047μF ±10% 50V | 1 |
| RESISTORS | | | |
| R726 | | Carbon 56 ohm ±10% ¼W | 1 |
| R743 | | Carbon 150 ohm ±10% ¼W | 1 |
| R727 | | Carbon 33 ohm ±10% ¼W | 1 |
| R750 | | Carbon 1K ohm ±10% ¼W | 1 |
| R715,735 | | Carbon 1K ohm ±10% ¼W | 2 |
| R732,734, 729 | | Carbon 3.3K ohm ±10% ¼W | 3 |
| R712,713, 770 | | Carbon 4.7K ohm ±10% ¼W | 3 |
| R731 | | Carbon 3.3K ohm ±10% ¼W | 1 |
| R745 | | Carbon 10K ohm ±10% ¼W | 1 |
| R733 | | Carbon 180K ohm ±10% ¼W | 1 |
| R746,747 | | Carbon 220K ohm ±10% ¼W | 2 |
| R728 | | Carbon 470K ohm ±10% ¼W | 1 |
| R722 | | Carbon 10 ohm ±10% ¼W | 1 |
| R748 | | Carbon 820 ohm ±10% ¼W | 1 |
| R752 | | Carbon 3.3K ohm ±10% ¼W | 1 |
| R714 | | Carbon 3.9K ohm ±10% ¼W | 1 |
| R736 | | Carbon 120 ohm ±10% 2W | 1 |
| R739 | | Carbon 1.5K ohm ±10% ¼W | 1 |
| R742 | | Carbon 3.3 ohm ±10% ¼W | 1 |
| R730 | | Carbon 180 ohm ±10% ¼W | 1 |
| R772 | | Carbon 8.2K ohm ±10% ¼W | 1 |
| R771 | | Carbon 3.3K ohm ±10% ¼W | 1 |
| DC POWER PCB ASS'Y | | | |
| 108 | 141-4-233T-16671 | P.C. Board Ass'y, DC Power | 1 |
| | 4-235T-57100 | Socket, AC Input | 1 |
| | 141-2-135T-44900 | Cover | 1 |
| | 141-2-381T-04200 | Bracket, Fuse | 2 |
| | 4-235T-62700 | Socket, 4P | 1 |
| | | Diode GP20D | 4 |
| D713,714 715,716 | | Ceramic Cap. 0.022μF +80-20% 50V | 4 |
| C720,721 722,723 | | Carbon 3.3M ohm ±10% ½W | 1 |
| R773 | | | |

| Ref. No. | Part No. | Description | Q'ty | Ref. No. | Part No. | Description | Q'ty |
|--|------------------|--|------|---------------------------------|----------|---|------|
| MAIN AMP PCB ASS'Y | | | | MAIN PCB ASS'Y | | | |
| 109 | 141-4-233T-06071 | P.C. Board Ass'y, Main AMP | 1 | C725,730 | | Electrolytic 3300 μ F 25V | 2 |
| L802,902 | 4-235T-01600 | MPX Coil, Dolby | 2 | C835,935 | | Electrolytic 1000 μ F 16V | 2 |
| L801,901 | 4-252T-08300 | Choke Coil, 15mH | 2 | C834,934 | | Electrolytic 470 μ F 16V | 2 |
| SVR801, 901, 802, 902 | 4-252T-03700 | Choke Coil | 2 | C836,936 | | Electrolytic 220 μ F 25V | 2 |
| SVR703 | 4-222T-39575 | Semidixed Variable Resistor | 4 | C740,813, 913,810, 910,852, 952 | | Electrolytic 220 μ F 16V | 7 |
| | 4-222T-39572 | Semidixed Variable Resistor | 1 | C872,972, 867,967, 837,737 | | Electrolytic 220 μ F 16V | 6 |
| | 4-237T-03000 | Terminal Board | 1 | C702,736 | | Electrolytic 100 μ F 16V | 2 |
| | 4-231T-86100 | Switch, R/P | 1 | C832,932 | | Electrolytic 47 μ F 10V | 2 |
| | 4-231T-86171 | Switch, R/P Muting | 1 | C830,930 | | Electrolytic 22 μ F 16V | 2 |
| | 4-236T-10200 | Plug, 3P | 3 | C814,914, 887,987, 839,939 | | Electrolytic 4.7 μ F 25V | 6 |
| | 4-236T-10271 | Plug, 4P | 2 | C869,969, 897,997, 741 | | Electrolytic 4.7 μ F 25V | 5 |
| | 4-236T-10273 | Plug, 6P | 2 | C849,949, 844,944, 807,907 | | Electrolytic 1 μ F 25V | 6 |
| | 4-236T-10274 | Plug, 7P | 1 | C850,950, 854,954, 856,956 | | Electrolytic 1 μ F 25V | 6 |
| | 4-236T-10277 | Plug, 10P | 1 | C880,980 | | Electrolytic 1 μ F 25V | 2 |
| | 4-235T-66800 | Socket, 5P | 1 | C863,963, 859,959 | | Electrolytic 10 μ F 16V | 4 |
| | 4-235T-67000 | Socket, 6P | 1 | C744 | | Electrolytic 47 μ F 16V | 1 |
| | 4-235T-67171 | Socket, 2P | 1 | C704 | | Electrolytic 22 μ F 10V | 1 |
| | 4-235T-67200 | Socket, 6P | 1 | C701 | | Electrolytic 47 μ F 10V | 1 |
| | 4-235T-64700 | Socket, 2P | 1 | C827,927 | | Al Electrolytic 0.47 μ F +40-20% 16V | 2 |
| | 4-235T-67300 | Socket, 4P | 1 | C853,953, 858,958, 892,992 | | Al Electrolytic 0.1 μ F +40-20% 16V | 6 |
| | 4-235T-34600 | Socket, | 1 | C817,917, 893,993 | | Al Electrolytic 0.1 μ F +40-20% 16V | 4 |
| IC802,902 | | IC BA532 S2 | 2 | C855,955 | | Al Electrolytic 0.22 μ F +40-20% 16V | 2 |
| IC801,902 | | IC NE646BN | 2 | C857,957 | | Al Electrolytic 0.33 μ F +40-20% 16V | 2 |
| Q805,905, 809,909 | | Transistor 2SC536 G | 4 | C871,971 | | Mylar 0.15 μ F \pm 20% 50V | 2 |
| Q815,915, 715,711 | | Transistor 2SC536 G | 4 | C833,933 | | Mylar 0.1 μ F \pm 20% 50V | 2 |
| Q801,901, 802,902 | | Transistor 2SC1571 G | 4 | C860,960 | | Mylar 0.047 μ F \pm 5% 50V | 2 |
| Q812,912, 813,913 | | Transistor 2SC1571 G | 4 | C862,962 | | Mylar 0.027 μ F \pm 5% 50V | 2 |
| Q808,908 | | Transistor 2SC693 G | 2 | C847,947 | | Mylar 0.022 μ F \pm 5% 50V | 2 |
| Q807,907 | | Transistor 2SC536 E ALC | 2 | C845,945 | | Mylar 0.018 μ F \pm 20% 50V | 2 |
| Q714,715, 716 | | Transistor 2SC536 F | 3 | C888,988 | | Mylar 0.0068 μ F \pm 20% 50V | 2 |
| Q816,916 | | Transistor 2SC536 G | 2 | C864,964 | | Mylar 0.0056 μ F \pm 5% 50V | 2 |
| Q814,914, 717 | | Transistor 2SC536 G } or | 3 | C865,965 | | Mylar 0.0047 μ F \pm 5% 50V | 2 |
| Q814,914, 717 | | Transistor 2SC945 P } | 3 | C848,948 | | Mylar 0.0015 μ F \pm 20% 50V | 2 |
| D701,702, 703,704, 719,720, 721,807, 907,722, 723,729, 805,905, 801,802, 901,902 | | Diode DS442 | 18 | C851,951, 884,984 | | Mylar 0.001 μ F \pm 20% 50V | 4 |
| D803,903, 804,904 | | Diode 1S188 AM | 4 | C866,966 | | Mylar 0.001 μ F \pm 5% 50V | 2 |
| D711 | | Diode WZ 120 | 1 | | | | |
| Q709 | | Transistor 2SD 325 | 1 | | | | |
| CAPACITORS | | | | RESISTORS | | | |
| C846,946 | | Ceramic 390pF \pm 10% 50V | 2 | R820,920, 875,877, 977 | | Carbon 1M ohm \pm 10% $\frac{1}{4}$ W | 5 |
| C895,995 | | Ceramic 330pF \pm 10% 50V | 2 | R894,994 | | Carbon 1M ohm \pm 10% $\frac{1}{4}$ W | 2 |
| C831,931 | | Ceramic 150pF \pm 10% 50V | 2 | R891,991 | | Carbon 820K ohm \pm 10% $\frac{1}{4}$ W | 2 |
| C838,938, 861,961 | | Ceramic 220pF \pm 10% 50V | 4 | R887,987 | | Carbon 680K ohm \pm 10% $\frac{1}{4}$ W | 2 |
| C882,982, 816,916, 879,979 | | Ceramic 180pF \pm 10% 50V | 6 | R872,972 | | Carbon 18 ohm \pm 10% $\frac{1}{4}$ W | 2 |
| C881,981, 815,915, 896,996 | | Ceramic 100pF \pm 10% 50V | 6 | R870,970, 858,958 | | Carbon 270K ohm \pm 10% $\frac{1}{4}$ W | 4 |
| C808,908, 894,994 | | Ceramic 82pF \pm 10% 50V | 4 | R814,914, 864,964 | | Carbon 220K ohm \pm 10% $\frac{1}{4}$ W | 4 |
| C883,983 | | Ceramic 47pF \pm 10% 50V | 2 | R848,948 | | Carbon 180K ohm \pm 10% $\frac{1}{4}$ W | 2 |
| C403,603 | | Ceramic 0.001 μ F \pm 10% 50V | 2 | R857,957, 873,973 | | Carbon 47K ohm \pm 10% $\frac{1}{4}$ W | 4 |
| C751 | | Ceramic 0.002 μ F \pm 80-20% 50V | 1 | R861,961 | | Carbon 39K ohm \pm 10% $\frac{1}{4}$ W | 2 |
| C726 | | Electrolytic 100 μ F 16V | 1 | R890 | | Carbon 27K ohm \pm 10% $\frac{1}{4}$ W | 1 |
| | | | | R892,992 | | Carbon 22K ohm \pm 10% $\frac{1}{4}$ W | 2 |
| | | | | R765 | | Carbon 15K ohm \pm 10% $\frac{1}{4}$ W | 1 |

PARTS LIST

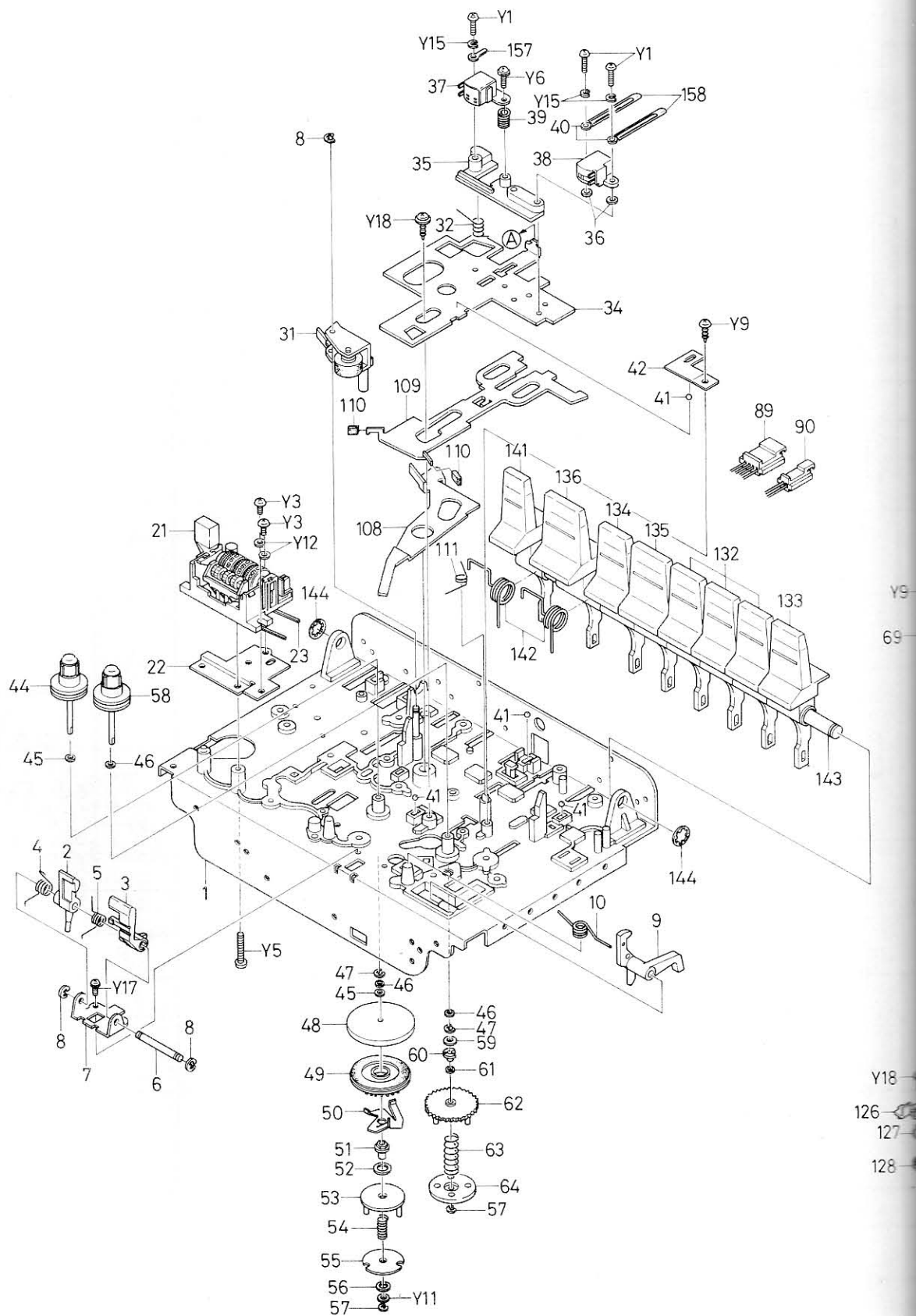
| Ref. No. | Part No. | Description | Q'ty |
|----------------------------|------------------|---|------|
| MAIN PCB ASS'Y | | | |
| R823,923, 860,862, 821,921 | | Carbon 10K ohm $\pm 10\% \frac{1}{4}W$ | 6 |
| R962,704, 756,834, 960 | | Carbon 10K ohm $\pm 10\% \frac{1}{4}W$ | 5 |
| R402,602 | | Carbon 8.2K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R827,927, 847,947, 850,950 | | Carbon 6.8K ohm $\pm 10\% \frac{1}{4}W$ | 6 |
| R845,945, 853 | | Carbon 5.6K ohm $\pm 10\% \frac{1}{4}W$ | 3 |
| R707,708, 846,946 | | Carbon 4.7K ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R701 | | Carbon 8.2K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R768,769 | | Carbon 4.7K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R851,951 | | Carbon 3.3K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R801,901, 867,967 | | Carbon 2.2K ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R774,601, 815,915, 755 | | Carbon 1.5K ohm $\pm 10\% \frac{1}{4}W$ | 5 |
| R868,968, 859,959 | | Carbon 1.2K ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R754,706, 833,933, 852,952 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 6 |
| R865,965, 702 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 3 |
| R843,943, 898,998, 828,928 | | Carbon 820 ohm $\pm 10\% \frac{1}{4}W$ | 6 |
| R822,922, 849 | | Carbon 560 ohm $\pm 10\% \frac{1}{4}W$ | 3 |
| R863,963, 888,988 | | Carbon 330 ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R874 | | Carbon 180 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R842,942 | | Carbon 100 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R710,711 | | Carbon 68 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R893,993, 866,966 | | Carbon 56 ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R895,995 | | Carbon 22 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R975 | | Carbon 1M ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R738 | | Carbon 68 ohm $\pm 10\% 1W$ | 1 |
| R758 | | Carbon 270 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R990 | | Carbon 27K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R934 | | Carbon 10K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R953 | | Carbon 5.6K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R401 | | Carbon 1.5K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R753 | | Carbon 1.8K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R703,705 | | Carbon 4.7K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R763 | | Carbon 10 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R889,989, 876,976 | | Carbon 3.3K ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R762 | | Carbon 330K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R760 | | Carbon 220 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R974 | | Carbon 180 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R766 | | Carbon 220 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R767 | | Carbon 10 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R757 | | Carbon 18K ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R408,608 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R409,609 | | Carbon 100 ohm $\pm 10\% \frac{1}{4}W$ | 2 |
| R414,614, 415,615 | | Carbon 1K ohm $\pm 10\% \frac{1}{4}W$ | 4 |
| R741 | | Carbon 1 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R740 | | Carbon 180 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| R779 | | Carbon 3.3 ohm $\pm 10\% \frac{1}{4}W$ | 1 |
| OSC PCB ASS'Y | | | |
| 110 | 141-4-233T-08300 | P.C Board Ass'y, OSC | 1 |
| | 4-258T-20202 | OSC Coil, Bias | 1 |
| SVR701, 702 | 4-222T-39578 | Semifixed Variable Resistor | 2 |
| | 4-236T-10293 | Plug, 2P | 1 |
| | 4-235T-64400 | Socket, 2P | 1 |
| | 4-252T-08800 | Choke Coil) or | 1 |
| | 4-252T-08871 | Choke Coil | 1 |
| C709,710 | | Ceramic Cap. 220pF $\pm 10\%$ 50V | 2 |

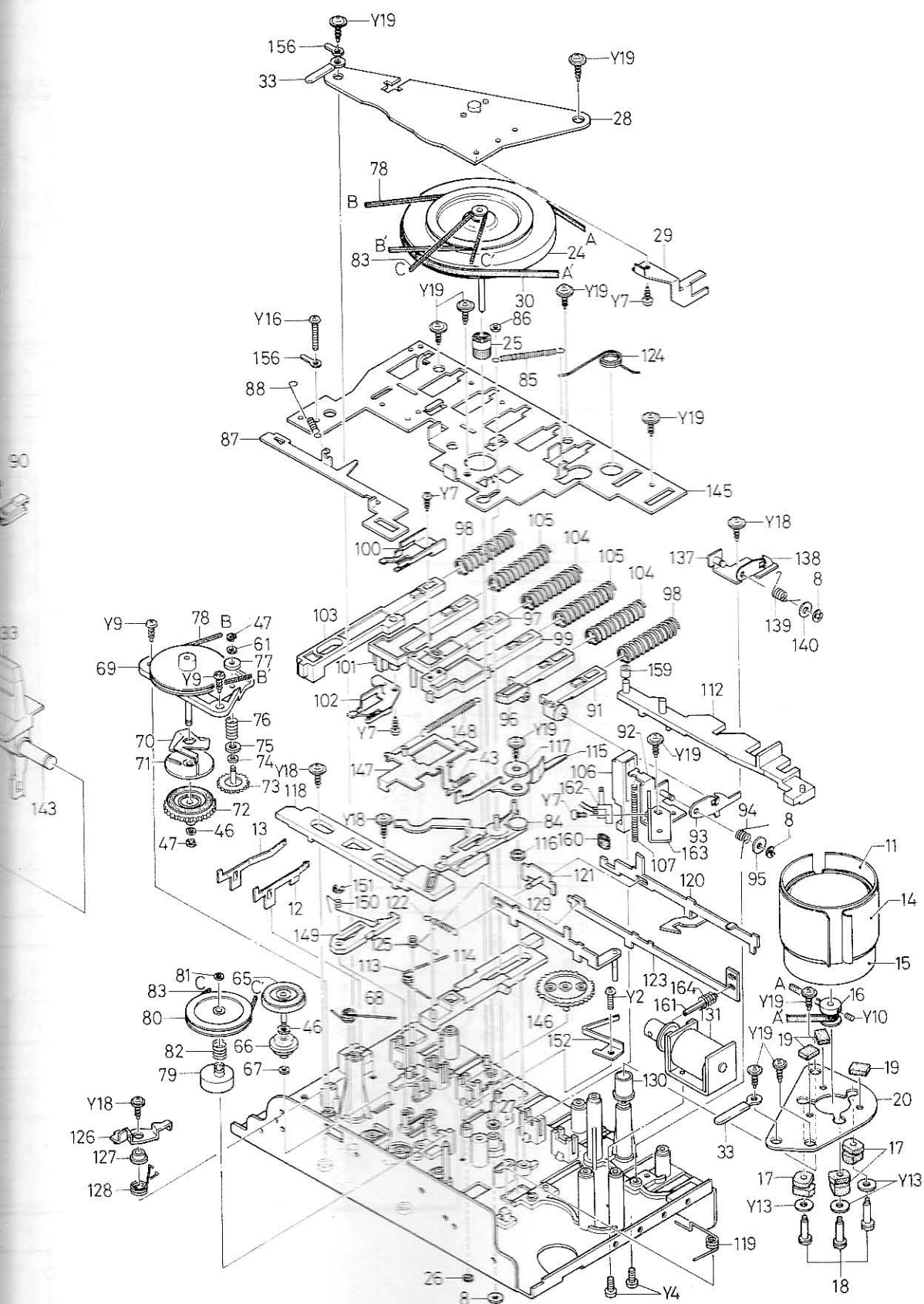
| Ref. No. | Part No. | Description | Q'ty |
|---------------|------------------|-----------------------------------|------|
| LED PCB ASS'Y | | | |
| 130 | 141-4-233T-15700 | P.C Board Ass'y, LED | 1 |
| D501,712, 727 | | LED PR5531K RE | 3 |
| | 4-235T-34600 | Socket | 2 |
| MECHANISM | | | |
| 1 | 141-0-311T-31120 | Chassis Ass'y | 1 |
| 2 | 141-2-742T-25800 | Lever | 1 |
| 3 | 141-2-742T-18300 | Lever | 1 |
| 4 | 141-2-852T-47300 | Spring Wire | 1 |
| 5 | 141-2-852T-48400 | Spring Wire | 1 |
| 6 | 141-2-753T-41400 | Shaft | 1 |
| 7 | 141-2-747T-16400 | Bracket, Lever | 1 |
| 8 | 141-2-457T-23000 | Special Washer | 5 |
| 9 | 141-2-742T-14500 | Lever | 1 |
| 10 | 141-2-852T-47200 | Spring Wire | 1 |
| 11 | 141-2-322T-27100 | Shield Plae | 1 |
| 12 | 141-0-853T-48603 | Spring Plate Ass'y | 1 |
| 13 | 141-0-853T-48502 | Spring Plate Ass'y | 1 |
| 14 | 141-2-184T-03000 | Tape | 1 |
| 15 | 4-527T-13000 | Motor | 1 |
| | 141-2-661T-72700 | Pully, Motor | } or |
| 16 | 141-2-661T-72701 | Pully, Motor | |
| | 141-2-661T-72702 | Pully, Motor | |
| 17 | 141-2-445T-11801 | Rubber Cushion, Motor | 3 |
| 18 | 141-2-421T-16000 | Special Screw, Motor | 3 |
| 19 | 141-2-447T-36001 | Cushion, Motor | 3 |
| 20 | 141-2-378T-09900 | Bracket, Motor | 1 |
| 21 | 141-2-811T-06900 | Counter | 1 |
| 22 | 141-2-812T-08000 | Bracket, Counter | 1 |
| 23 | 141-2-564T-19100 | Square Belt, Counter | 1 |
| 24 | 141-0-521T-09700 | Flywheel Ass'y | 1 |
| 25 | 141-2-581T-15400 | Gear | 1 |
| 26 | 141-2-457T-04300 | Special Washer | 1 |
| | 141-2-453T-30200 | Washer, 2.6 x 4.7 x 0.13mm, Nylon | } or |
| 27 | 141-2-453T-30201 | Washer, 2.6 x 4.7 x 0.13mm, Nylon | |
| | 141-2-453T-30202 | Washer, 2.6 x 4.7 x 0.13mm, Nylon | |
| 28 | 141-0-524T-07903 | Bracket, Flywheel Ass'y | 1 |
| 29 | 141-2-351T-48800 | Bracket | 1 |
| 30 | 141-2-561T-04501 | Flat Belt, Main | 1 |
| 31 | 141-0-545T-05800 | Lever, Pinch Roller Ass'y | 1 |
| 32 | 141-2-852T-55700 | Spring Wire | 1 |
| 33 | 141-2-472T-01201 | Lug | 2 |
| 34 | 141-2-731T-69300 | Slide, Head | 1 |
| 35 | 141-2-464T-27800 | Fixer | 1 |
| 36 | 141-2-457T-10301 | Special Washer | 2 |
| 37 | 4-242T-22500 | Head, R/P | 1 |
| 38 | 4-242T-18602 | Head, E | 1 |
| 39 | 141-2-851T-82700 | Spring Coil | 1 |
| 40 | 141-2-472T-05900 | Lug | 2 |
| 41 | 141-2-345T-00400 | Steel Ball | 4 |
| 42 | 141-2-853T-54900 | Spring Plate | 1 |
| 43 | 141-2-855T-38000 | Spring Coil | 1 |
| 44 | 141-0-531T-12200 | Reel Plate Ass'y, Tackup | 1 |
| 45 | 141-2-453T-30100 | Washer, 2.1 x 4 x 0.13mm, Nylon | 1 |
| 46 | 141-2-453T-30101 | Washer, 2.1 x 4 x 0.25mm, Nylon | 7 |
| 47 | 141-2-457T-23800 | Special Washer | 4 |
| 48 | 141-2-547T-02100 | Roller | 1 |
| 49 | 141-0-581T-15000 | Gear Ass'y | 1 |
| 50 | 141-2-853T-54500 | Spring Plate | 1 |
| 51 | 141-2-457T-13300 | Special Washer | 1 |
| 52 | 141-2-453T-30500 | Washer, 4.1 x 6.5 x 0.13mm, Nylon | 1 |
| 53 | 141-2-671T-05500 | Cum | 1 |
| 54 | 141-2-855T-23500 | Spring Coil | 1 |
| 55 | 141-2-457T-13000 | Special Washer | 1 |
| 56 | 141-2-453T-30500 | Washer, 4.1 x 6.5 x 0.13mm, Nylon | 1 |
| 57 | 141-2-457T-23700 | Special Washer | 2 |
| 58 | 141-0-531T-12201 | Reel Plate Ass'y, Supply | 1 |
| 59 | 141-2-457T-06200 | Special Washer | 1 |
| 60 | 141-2-661T-74000 | Pully, REW | 1 |
| 61 | 141-2-457T-10200 | Special Washer | 2 |
| 62 | 141-2-581T-10700 | Gear, REW | 1 |

PARTS LIST

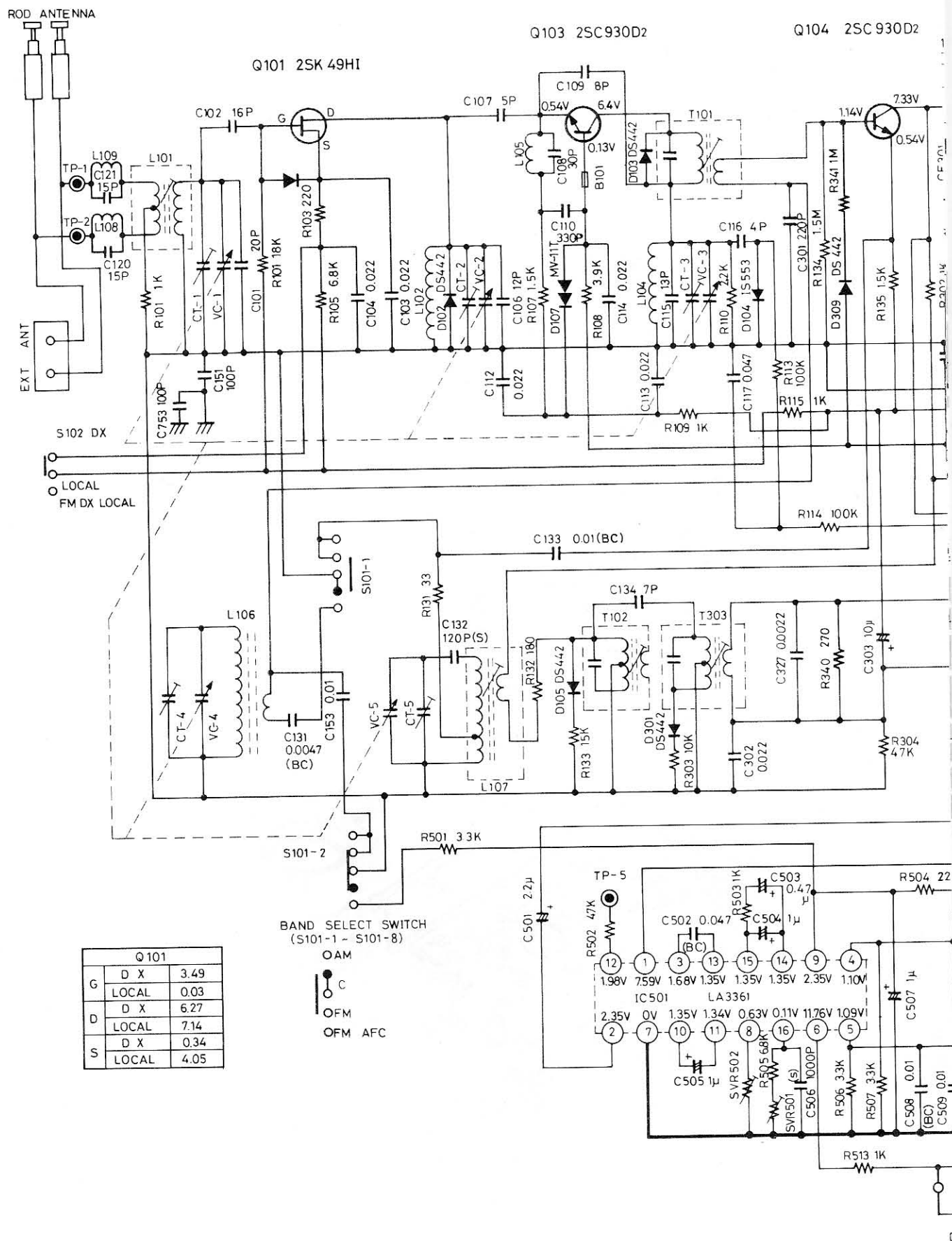
| Ref. No. | Part No. | Description | Q'ty |
|-----------|------------------|--------------------------------|------|
| MECHANISM | | | |
| 63 | 141-2-855T-65500 | Spring Coil | 1 |
| 64 | 141-2-661T-26500 | Pulley | 1 |
| 65 | 141-0-551T-01720 | Idler Ass'y | 1 |
| 66 | 141-2-661T-26600 | Pulley | 1 |
| 67 | 141-2-453T-31600 | Washer, 1.6 x 4 x 0.25mm | 1 |
| 68 | 141-2-852T-47800 | Spring Wire | 1 |
| 69 | 141-0-351T-48300 | Bracket Mounting Ass'y | 1 |
| 70 | 141-2-853T-54401 | Spring Plate | 1 |
| 71 | 141-2-457T-13100 | Special Washer | 1 |
| 72 | 141-0-581T-10400 | Gear Ass'y, FF/REW | 1 |
| 73 | 141-0-581T-10500 | Gear Ass'y, FF | 1 |
| 74 | 141-2-457T-11000 | Special Washer, 0.25t | 2 |
| 75 | 141-2-457T-14000 | Special Washer, 0.2t | 1 |
| 76 | 141-2-855T-23400 | Spring Coil | 1 |
| 77 | 141-2-457T-13600 | Special Washer | 1 |
| 78 | 141-2-564T-20600 | Square Belt, Pulley | 1 |
| 79 | 141-2-671T-05600 | Cum | 1 |
| 80 | 141-2-661T-26400 | Pulley | 1 |
| 81 | 141-2-453T-31600 | Washer, 1.6 x 4 x 0.25mm | 1 |
| 82 | 141-2-855T-30300 | Spring Coil | 1 |
| 83 | 141-2-564T-18400 | Square Belt, Auto Stop | 1 |
| 84 | 141-0-742T-14101 | Lever Ass'y | 1 |
| 85 | 141-2-855T-23101 | Spring Coil | 1 |
| 86 | 141-2-457T-14300 | Special Washer | 1 |
| 87 | 141-2-742T-13900 | Lever | 1 |
| 88 | 141-2-855T-26300 | Spring Coil | 1 |
| 89 | 4-235T-62100 | Socket, R/P Head | 1 |
| 90 | 4-235T-62200 | Socket, E Head | 1 |
| 91 | 141-0-731T-71800 | Slide Ass'y | 1 |
| 92 | 141-0-747T-17200 | Bracket Lever Ass'y | 1 |
| 93 | 141-2-742T-13800 | Lever | 1 |
| 94 | 141-2-852T-47700 | Spring Wire | 1 |
| 95 | 141-2-453T-00800 | Washer, 3 x 8 x 0.5mm | 1 |
| 96 | 141-2-731T-59100 | Slide, Stop Button | 1 |
| 97 | 141-0-731T-69000 | Slide Ass'y, Play Button | 1 |
| 98 | 141-2-855T-29500 | Spring Coil | 2 |
| 99 | 141-2-731T-68900 | Slide, FF | 1 |
| 100 | 141-2-853T-61600 | Spring Plate | 1 |
| 101 | 141-2-731T-69100 | Slide, REW Button | 1 |
| 102 | 141-2-853T-61700 | Spring Plate | 1 |
| 103 | 141-2-731T-69200 | Slide, REC Button | 1 |
| 104 | 141-2-855T-23000 | Spring Coil | 1 |
| 105 | 141-2-855T-37200 | Spring Coil | 1 |
| 106 | 141-2-731T-64300 | Slide, Eject | 1 |
| 107 | 141-2-855T-30200 | Spring Coil | 1 |
| 108 | 141-2-742T-29700 | Lever | 1 |
| 109 | 141-2-731T-65600 | Slide | 1 |
| 110 | 141-2-712T-02700 | Brake Shoe | 2 |
| 111 | 141-2-852T-49000 | Spring Wire | 1 |
| 112 | 141-2-742T-14200 | Lever | 1 |
| 113 | 141-2-852T-55500 | Spring Wire | 1 |
| 114 | 141-2-731T-59200 | Slide | 1 |
| 115 | 141-2-853T-54600 | Spring Plate | 1 |
| 116 | 141-2-683T-34200 | Ring | 1 |
| 117 | 141-2-457T-33400 | Special Washer | 1 |
| 118 | 141-2-731T-59301 | Slide | 1 |
| 119 | 141-2-852T-47600 | Spring Wire | 1 |
| 120 | 141-2-731T-69700 | Slide | 1 |
| 121 | 141-0-731T-69400 | Slide Ass'y | 1 |
| 122 | 141-2-855T-34100 | Spring Coil | 1 |
| 123 | 141-2-731T-69500 | Slide | 1 |
| 124 | 141-2-853T-54300 | Spring Plate | 1 |
| 125 | 141-2-852T-54400 | Spring Wire | 1 |
| 126 | 141-2-742T-31700 | Lever | 1 |
| 127 | 141-2-683T-36600 | Ring | 1 |
| 128 | 141-2-852T-55400 | Spring Wire | 1 |
| 129 | 141-0-731T-69600 | Slide Ass'y | 1 |
| 130 | 141-2-461T-34600 | Pipe | 1 |
| 131 | 4-264T-07601 | Magnetic Coil | 1 |
| 132 | 141-2-611T-12700 | Lever, Push Button Play/REW/FF | 3 |
| 133 | 141-2-611T-12701 | Lever, Push Button REC | 1 |
| 134 | 141-2-611T-12800 | Lever, Push Button PAUSE | 1 |
| 135 | 141-2-611T-12900 | Lever, Push Button Stop | 1 |
| 136 | 141-0-611T-13000 | Lever, Push Button PSF | 1 |
| 137 | 141-0-747T-17800 | Bracket, Lever | 1 |
| 138 | 141-2-742T-29800 | Lever | 1 |
| 139 | 141-2-852T-55300 | Spring Wire | 1 |
| 140 | 141-2-453T-00800 | Washer, 3 x 8 x 0.5mm | 1 |
| 141 | 141-2-611T-13100 | Lever, Push Button Edit | 1 |
| 142 | 141-2-852T-54200 | Spring Wire | 2 |

| Ref. No. | Part No. | Description | Q'ty |
|--------------------|------------------|--|------|
| MECHANISM | | | |
| 143 | 141-2-753T-57600 | Shaft | 1 |
| 144 | 141-2-457T-20300 | Special Washer | 2 |
| 145 | 141-2-737T-06700 | Bracket, Slide | 1 |
| 146 | 141-0-581T-11900 | Gear Ass'y | 1 |
| 147 | 141-0-731T-61000 | Slide Ass'y | 1 |
| 148 | 141-2-855T-25300 | Spring Coil | 1 |
| 149 | 141-2-742T-19600 | Lever | 1 |
| 150 | 141-2-852T-48900 | Spring Wire | 1 |
| 151 | 141-2-453T-30001 | Washer, 1.7 x 3.2 x 0.25mm, Nylon | 1 |
| 152 | 141-2-853T-56800 | Spring Plate | 1 |
| 157 | 123-2-472R-00200 | Lug | 1 |
| 158 | 141-2-490T-00600 | Tube | 1 |
| 159 | 141-2-490T-08301 | Tube | 5 |
| 160 | 141-2-490T-08000 | Tube | 3 |
| 161 | 141-2-488T-19000 | Pin | 1 |
| 162 | 4-231T-71200 | Switch | 1 |
| 163 | 141-2-365T-43800 | Bracket, Switch | 1 |
| 164 | 141-2-855T-39100 | Spring Coil | 1 |
| MECHANISM HARDWARE | | | |
| Y1 | | Pan Hd. Screw, 2 x 10mm | 3 |
| Y2 | | Pan Hd. Screw, 2.6 x 4mm | 1 |
| Y3 | | Pan Hd. Screw, 2.6 x 6mm | 2 |
| Y4 | | Pan Hd. Screw, 3 x 4mm | 2 |
| Y5 | | Pan Hd. Screw, 3 x 16mm | 1 |
| Y6 | | Pan Hd. Screw, W/Washer, 2 x 10mm | 1 |
| Y7 | | Pan Hd. Tapping Screw, 2.3 x 6mm | 4 |
| Y9 | | Binding Hd. Tapping Screw, 3 x 6mm | 3 |
| Y10 | | Headless Screw, 2 x 4mm | 1 |
| Y11 | | Washer, 2 x 6 x 0.4mm | 1 |
| Y12 | | Washer, 2.6 x 5 x 0.5mm | 2 |
| Y13 | | Washer, 3 x 8 x 0.5mm | 3 |
| Y15 | | Spring Washer, 2 x 4.4 x 0.5mm | 3 |
| Y16 | | Pan Hd. Forming Screw, 3 x 18mm | 1 |
| Y17 | | Pan Hd. Screw W/Spring Washer, 2.6 x 4mm | 2 |
| Y18 | | Pan Hd. Screw W/Washer, 3 x 6mm | 4 |
| Y19 | | Pan Hd. Tapping W/Washer, 3 x 8mm | 11 |





SCHEMATIC DIAGRAM

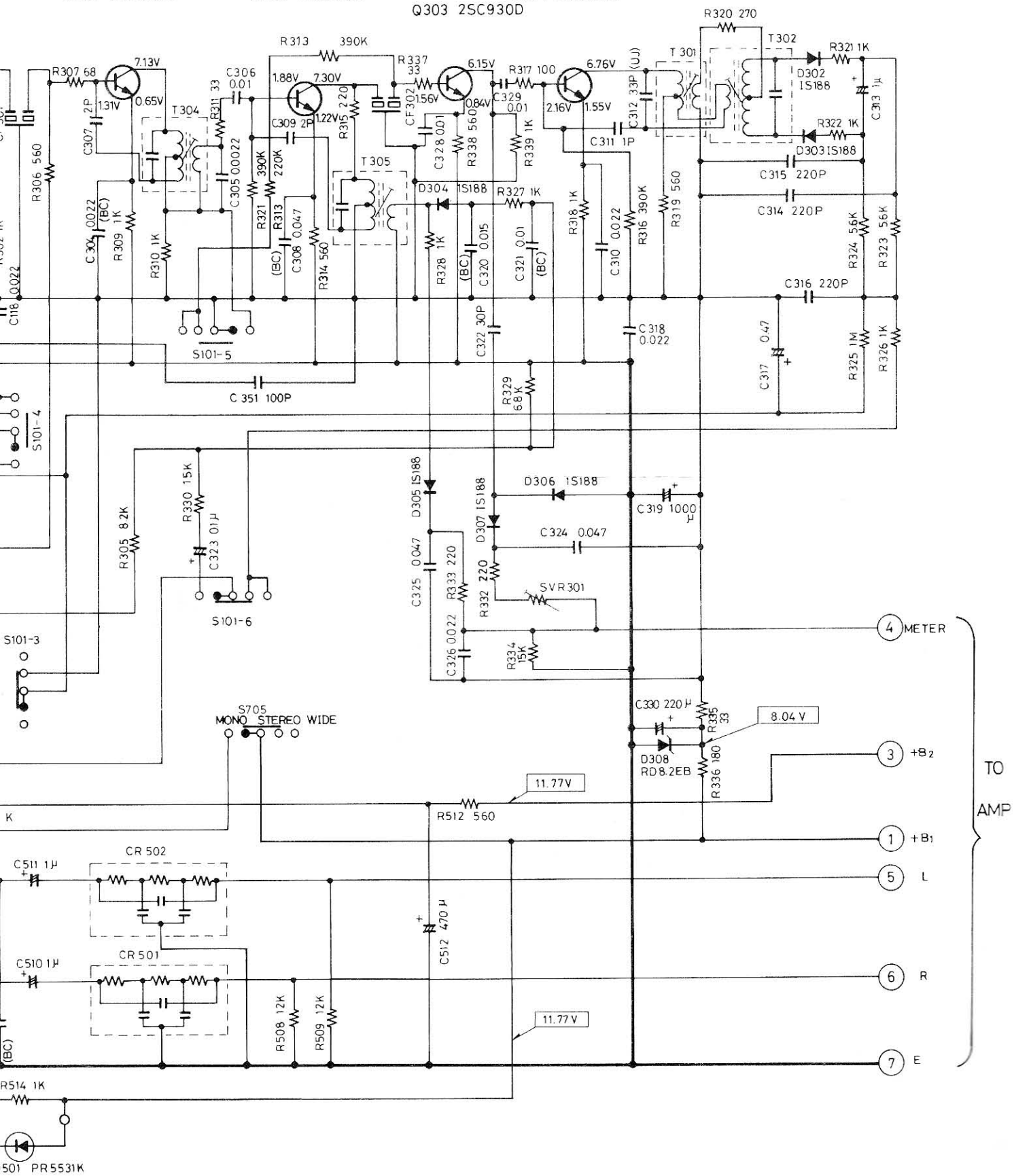


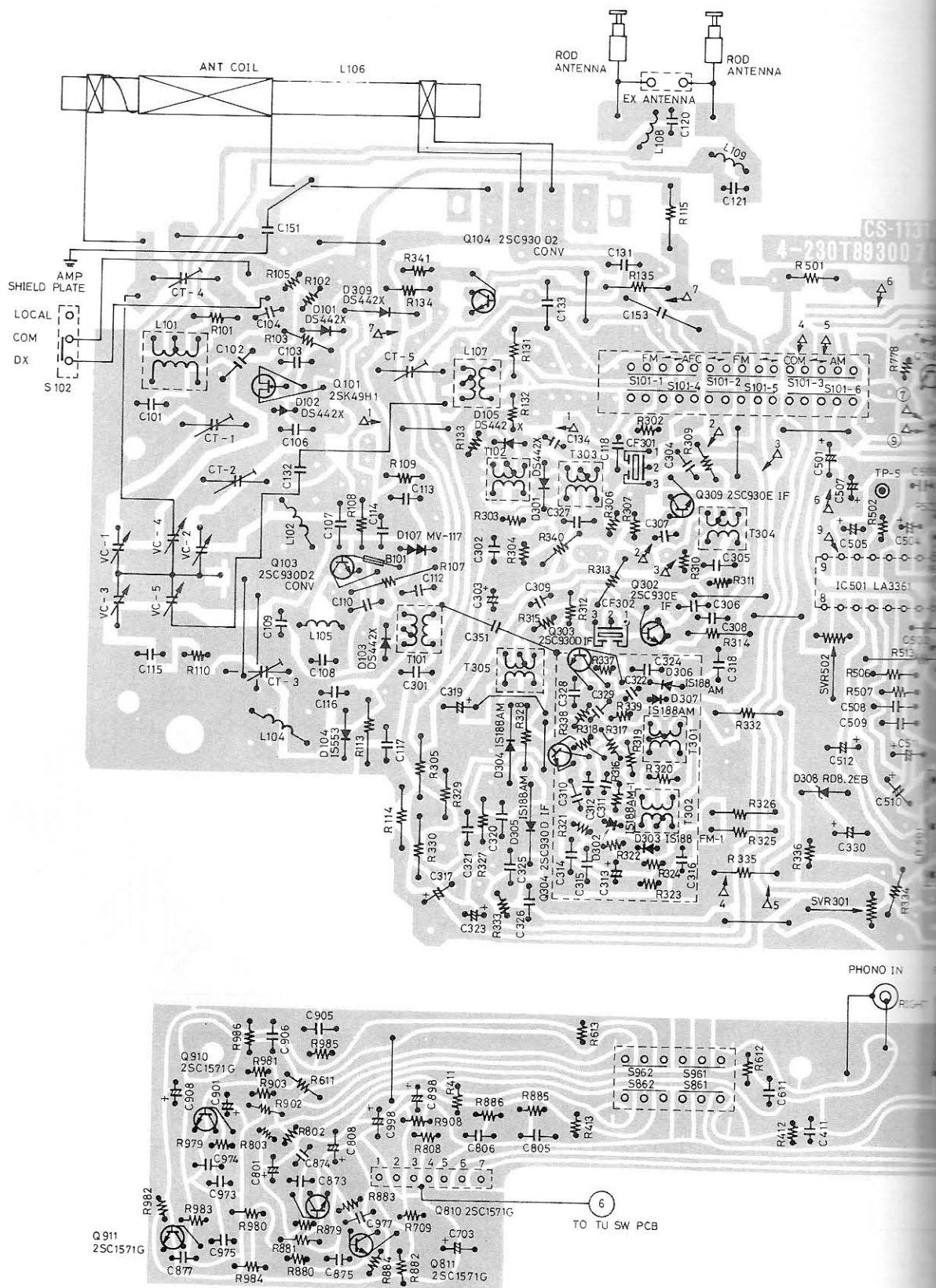
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Q 302 2SC930E

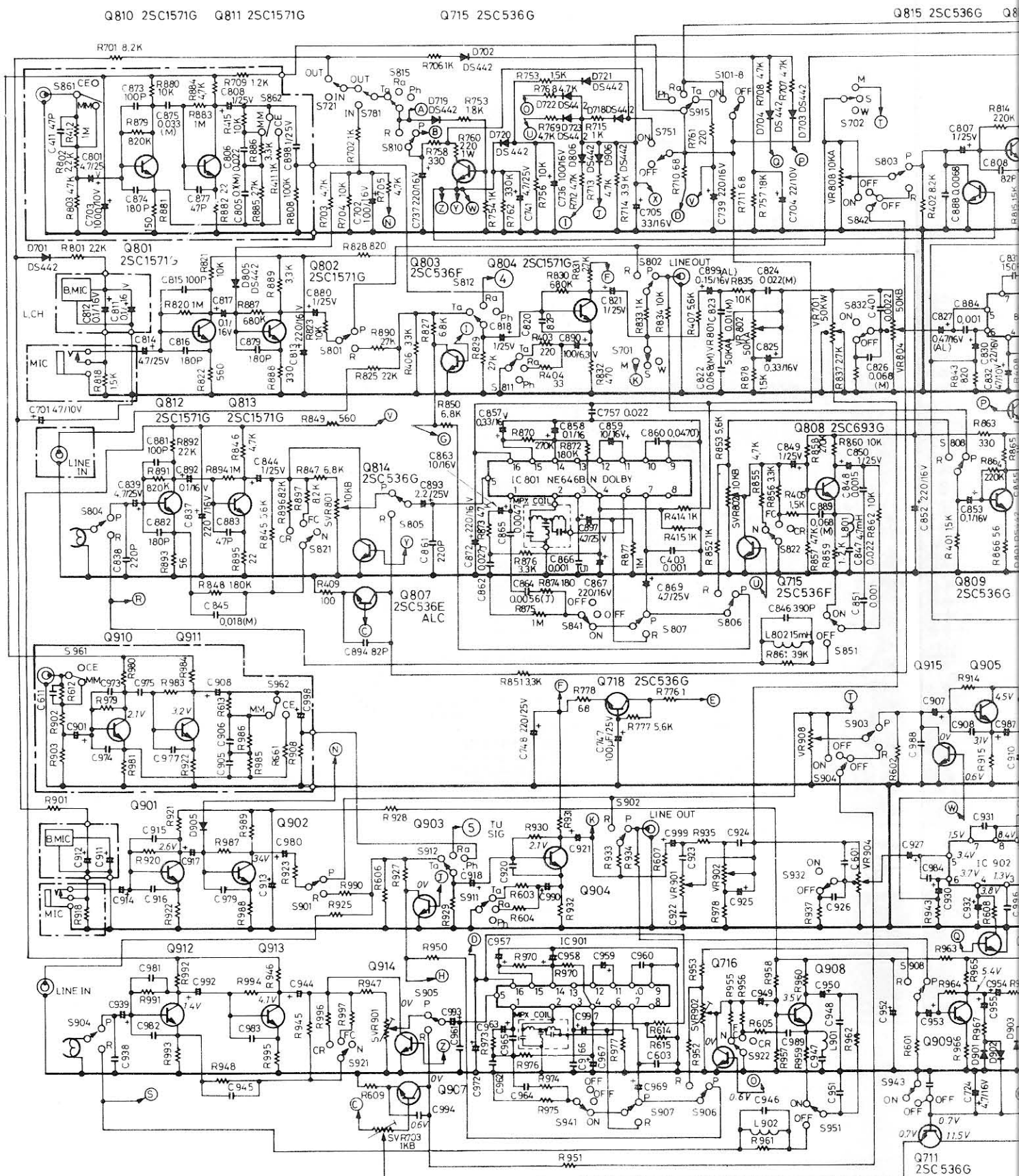
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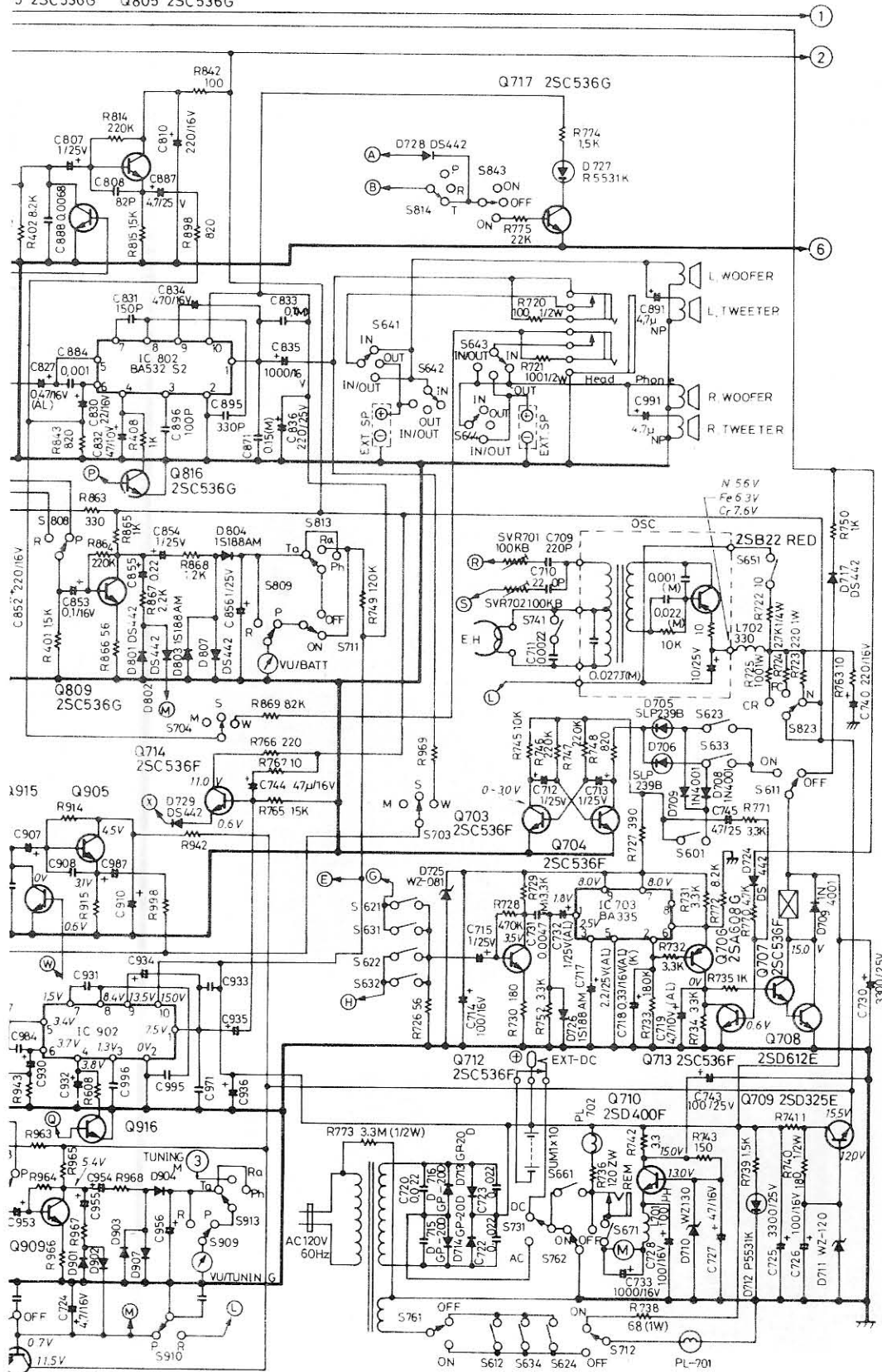
Q303 2SC930D





SCHEMATIC DIAGRAM



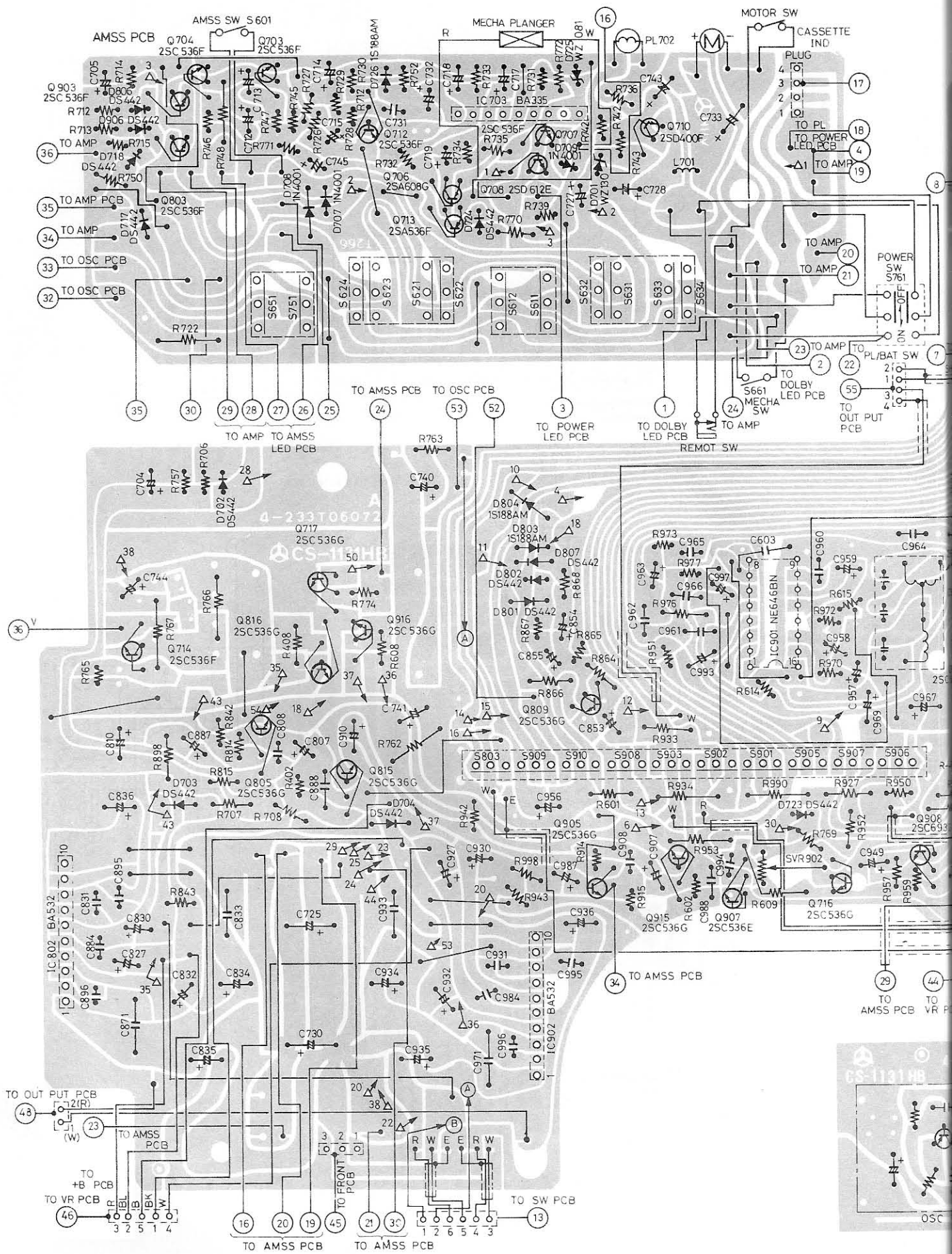


- S601AMSS SWITCH
 S611 ~ S612PLAY SWITCH
 S621 ~ S624FAST FORWARD SWITCH
 S631 ~ S634REWIND SWITCH
 S641 ~ S644SPEAKER SWITCH
 S651STOP MUTING SWITCH
 S661MECHANISM SWITCH
 S671MOTOR SWITCH
 S681VOLTAGE SELECT SWITCH

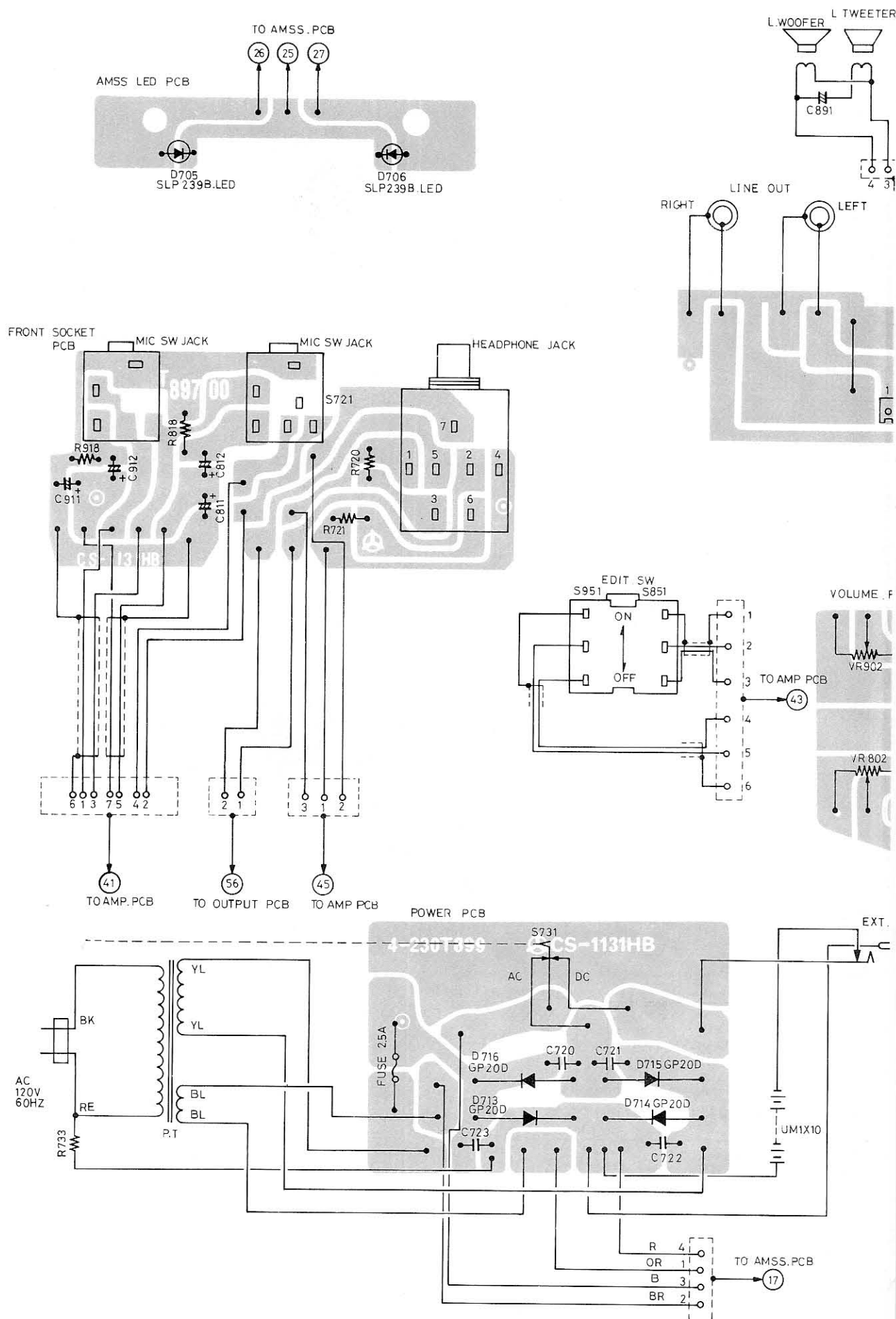
 S701 ~ S704MONO/STEREO/WIDE SWITCH
 S711 ~ S712PLAMP/ BATTERY SWITCH
 S721MIC SWITCH
 S731AC/DC SWITCH
 S741BEAT CANCEL SWITCH
 S751MUTING SWITCH
 S761 ~ S762POWER SWITCH
 S781RCA SWITCH

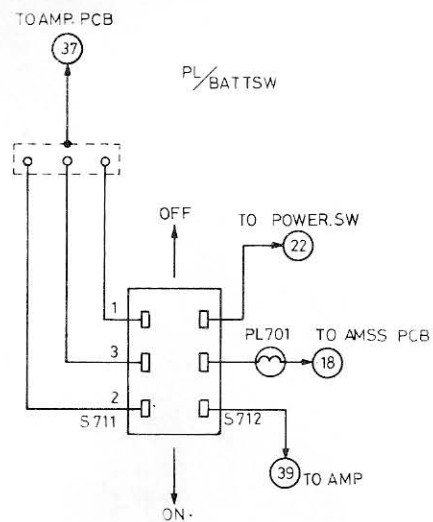
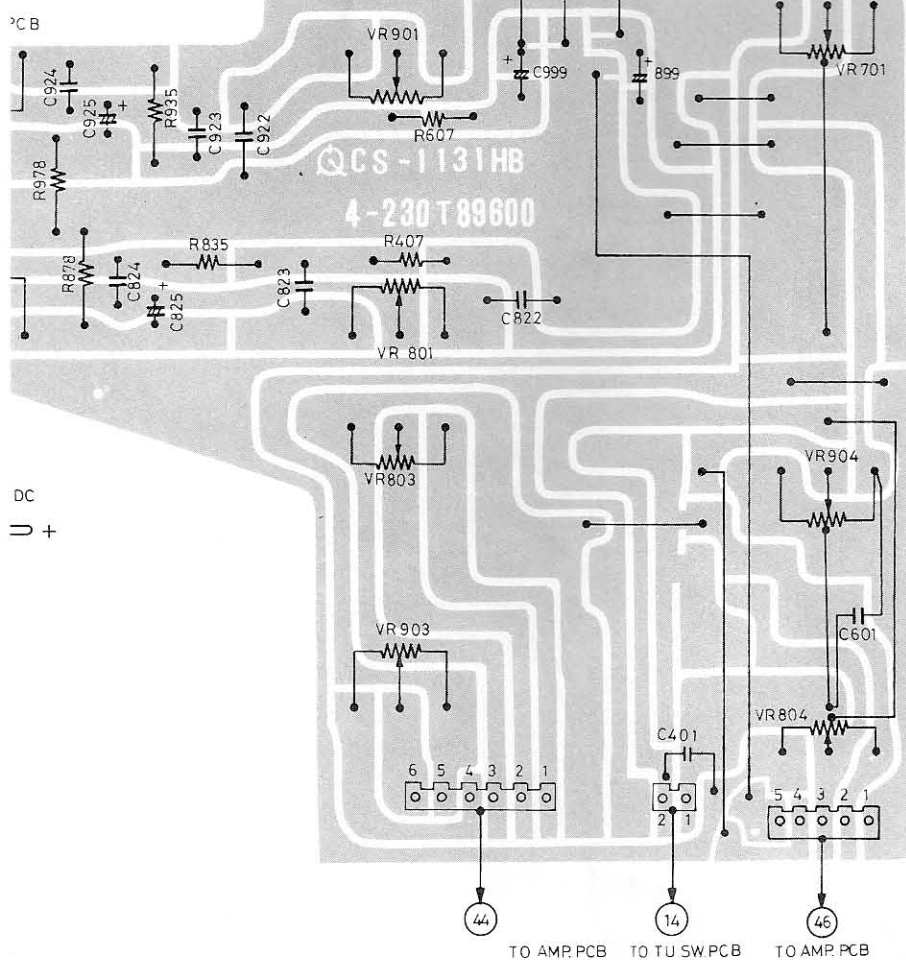
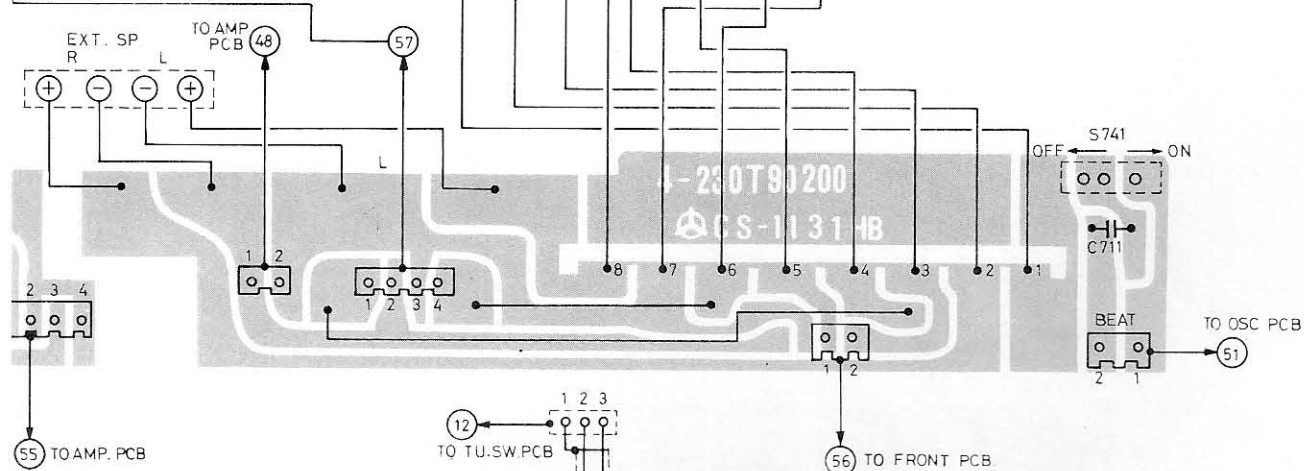
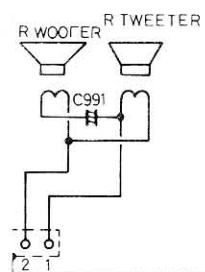
 S801 / S810RECORD / PLAY SWITCH
 S901 / S910TAPE / RADIO / PHNO SWITCH
 S911 / S915TAPE SELECT SWITCH
 S921 / S922LOUDNESS SWITCH
 S931 / S932PHONO / LINE SWITCH
 S941 / S942DOLBY SWITCH
 S942 / S943ALC SWITCH
 S951 / S951EDIT SWITCH
 S961 ~ S962CARTRIDGE SELECT SWITCH

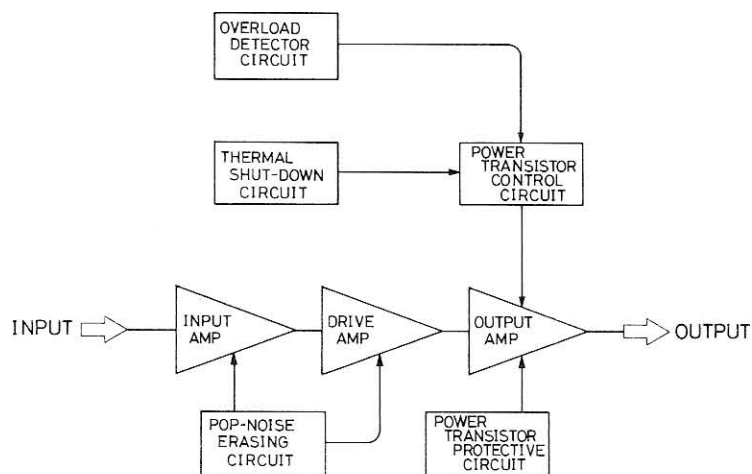
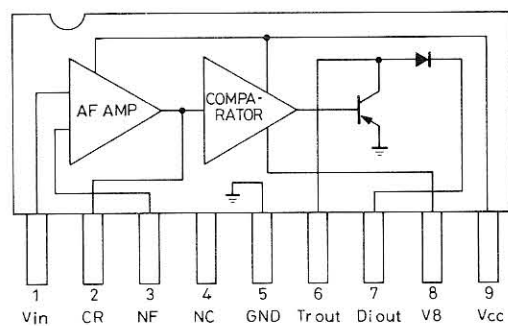
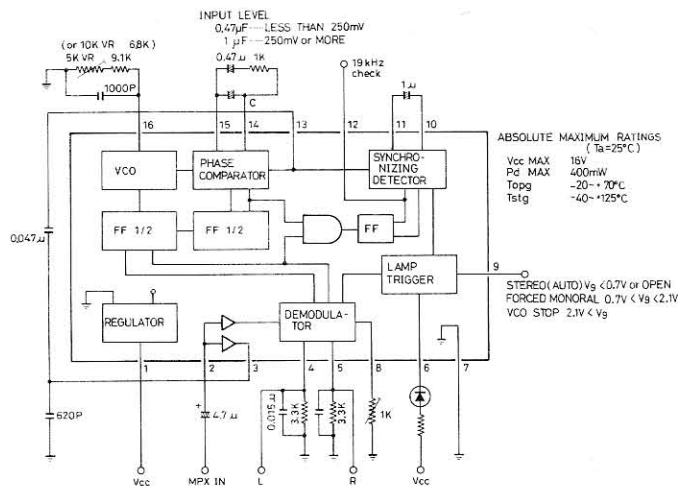
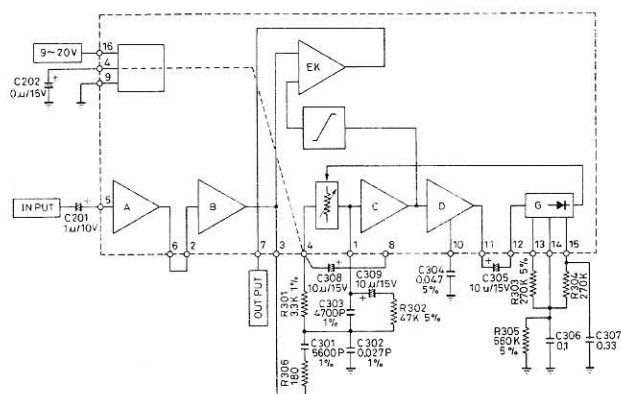
WIRING DIAGRAM

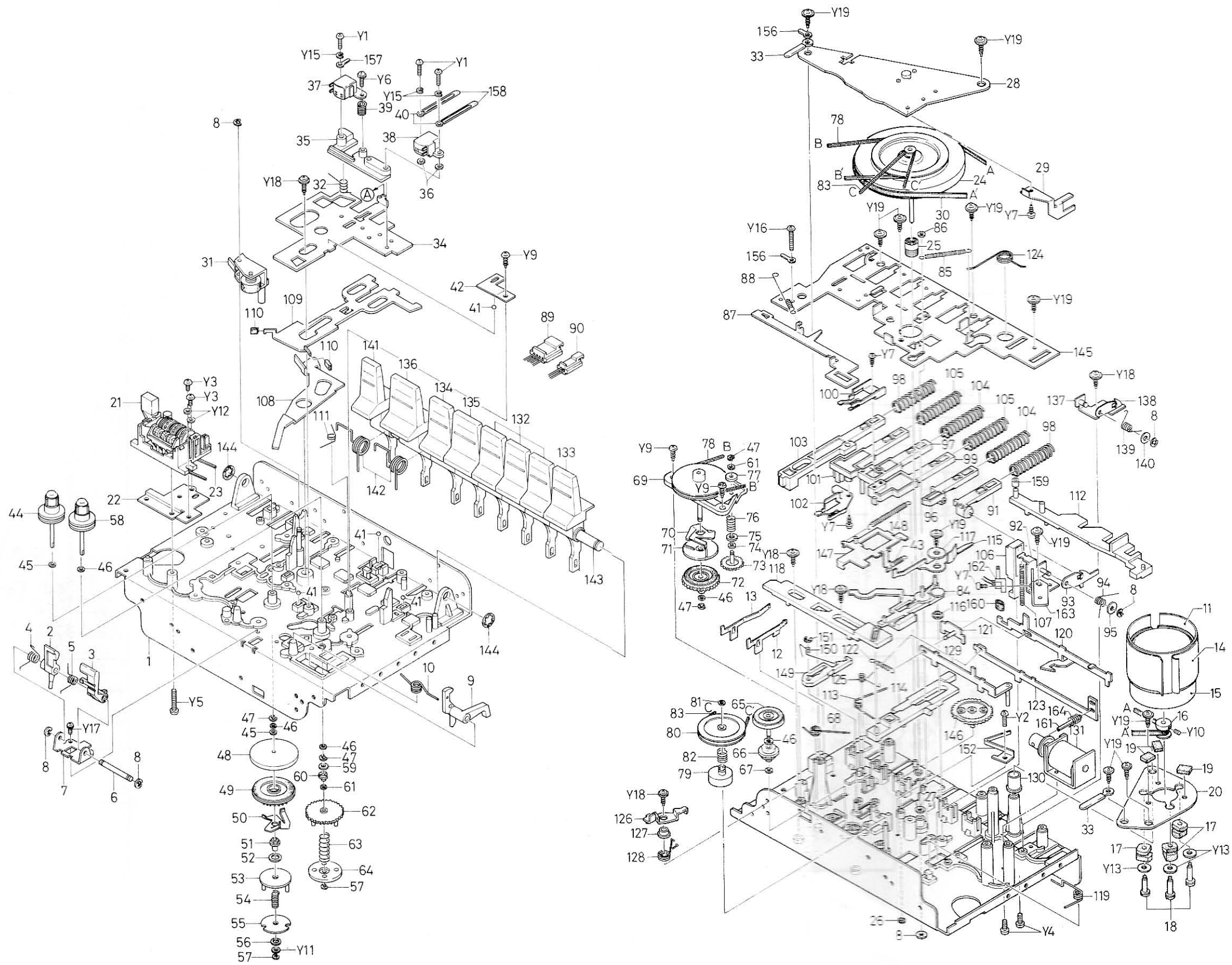


WIRING DIAGRAM

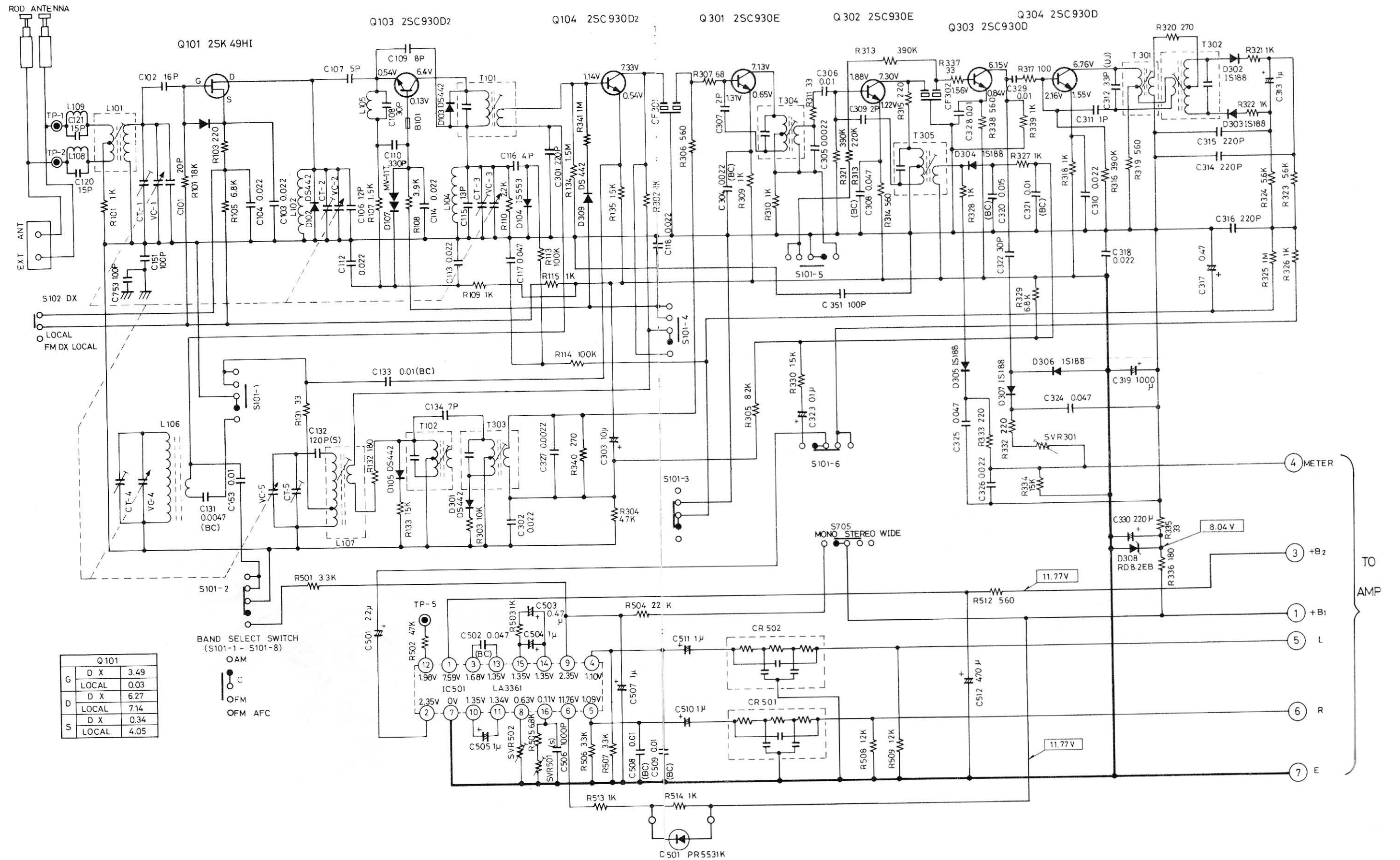


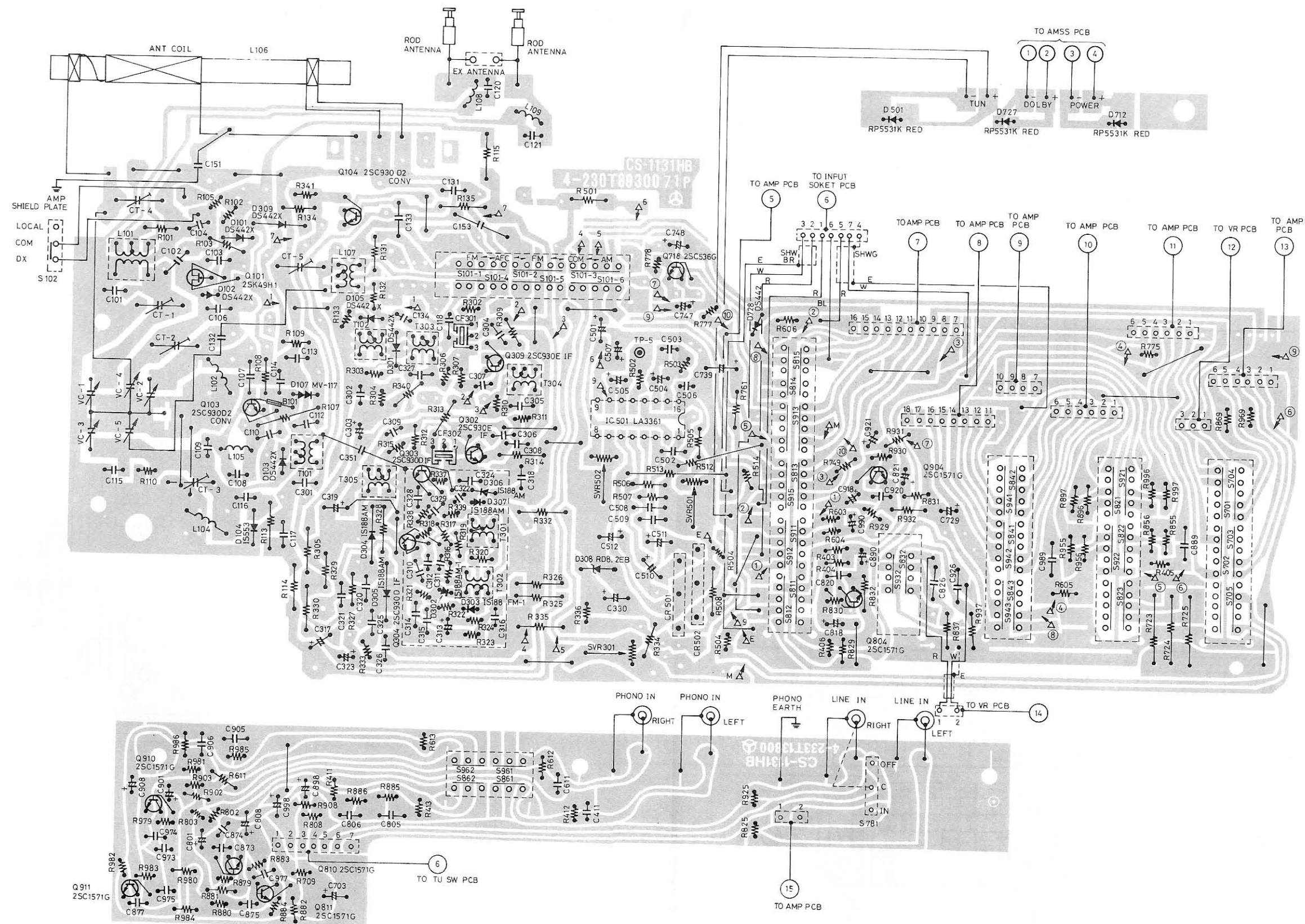




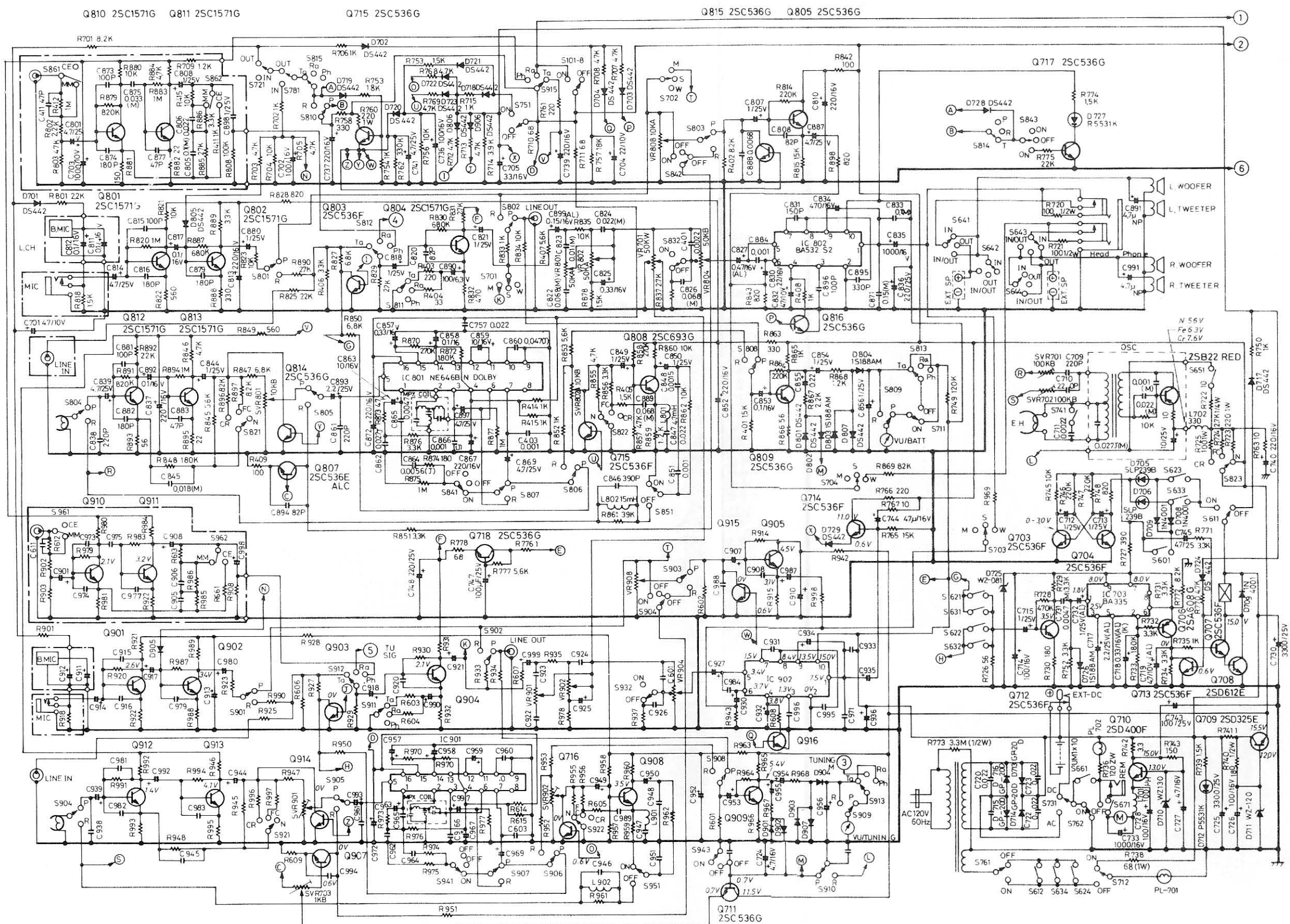


SCHEMATIC DIAGRAM.

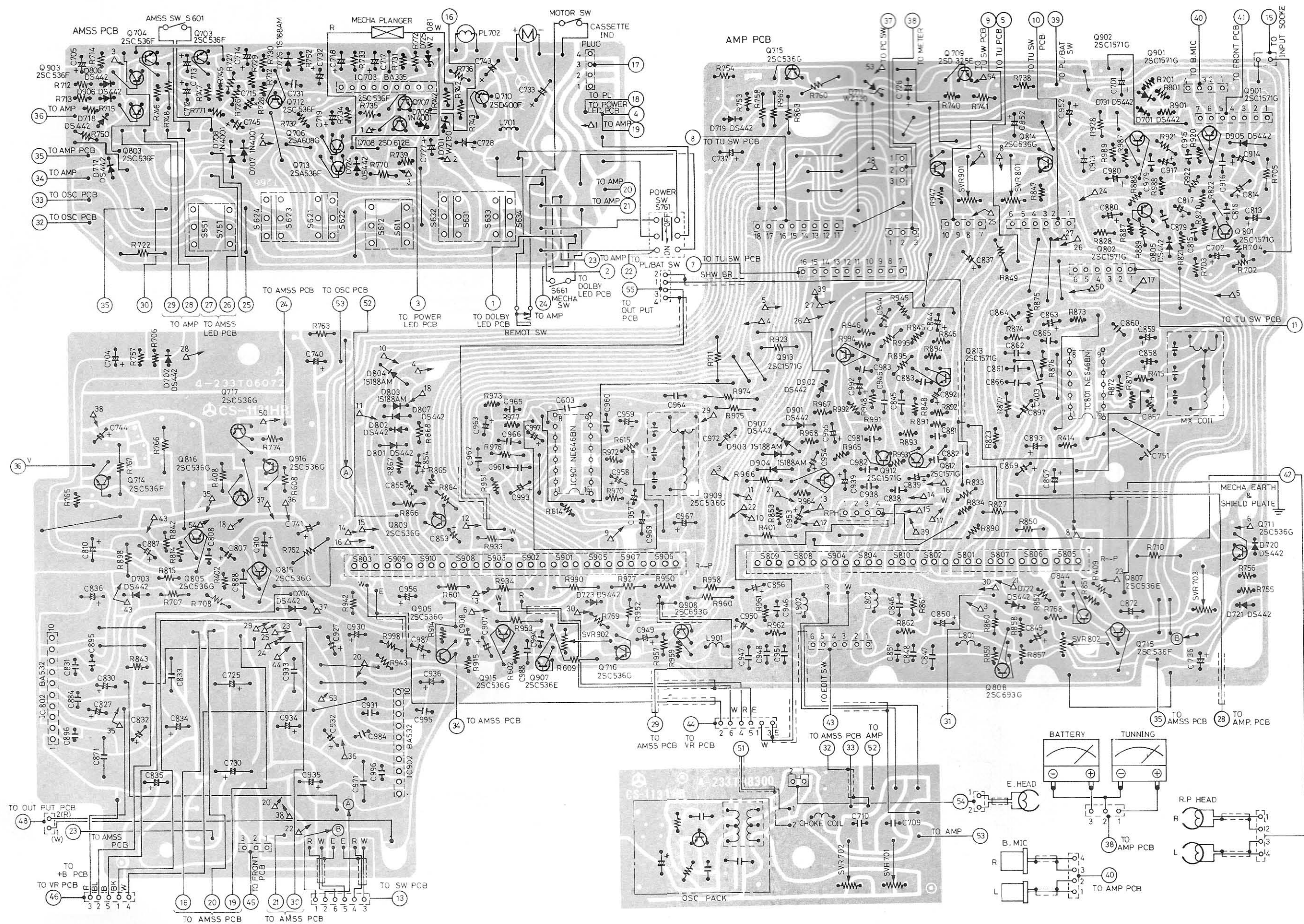


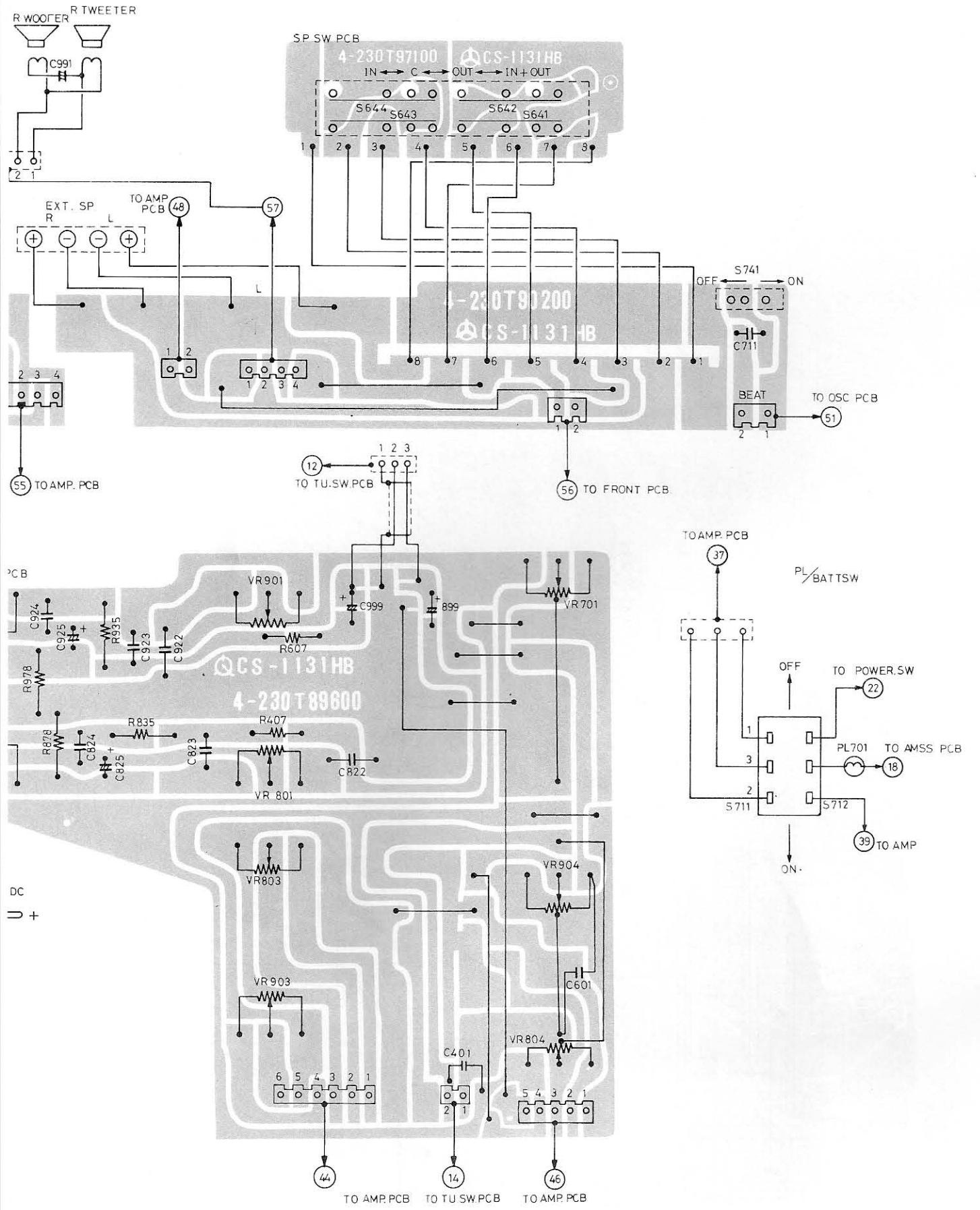
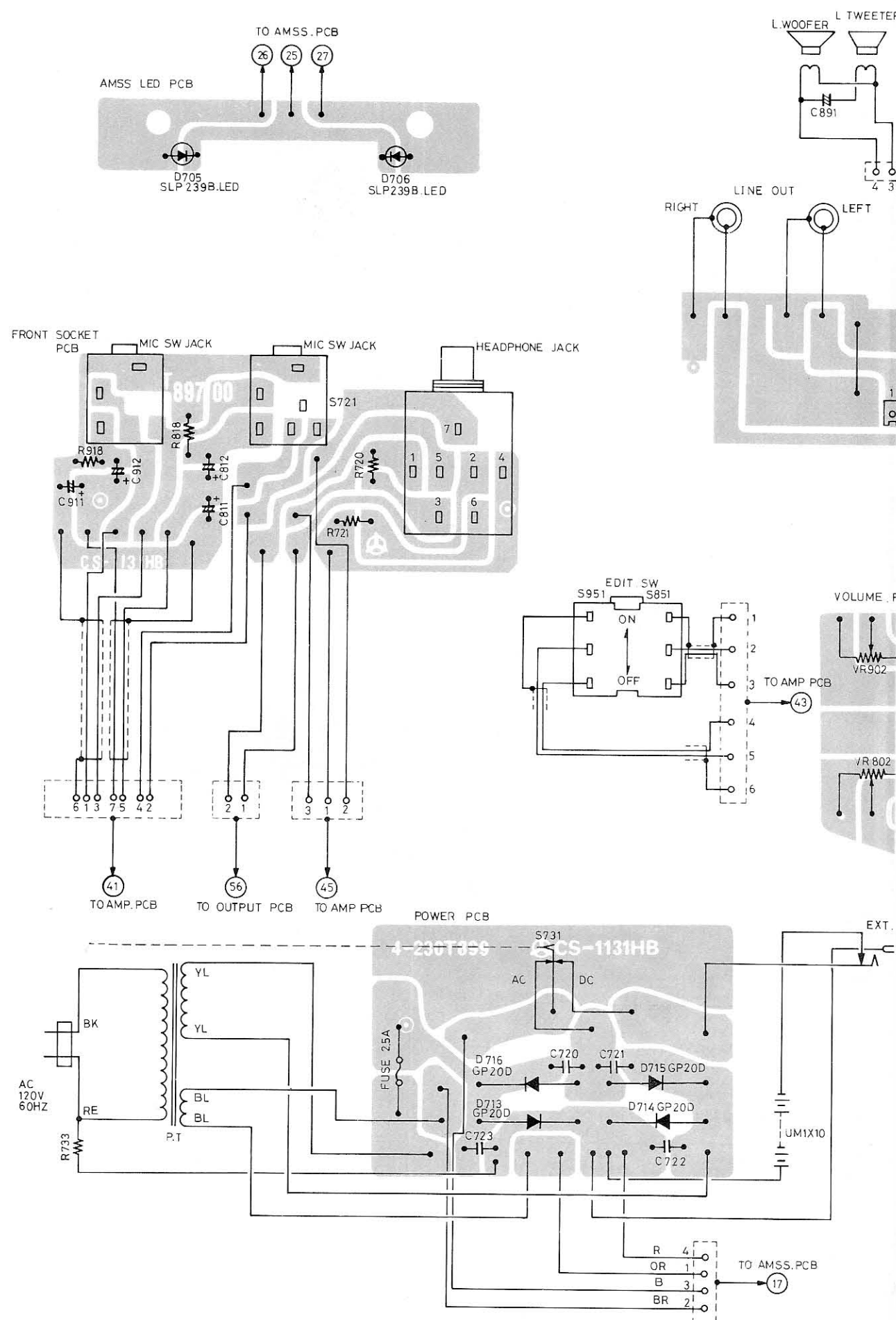


SCHEMATIC DIAGRAM



- S601 AMSS SWITCH
S611 ~ S612 PLAY SWITCH
S621 ~ S624 FAST FORWARD SWITCH
S631 ~ S634 REWIND SWITCH
S641 ~ S644 SPEAKER SWITCH
S651 STOP MUTING SWITCH
S661 MECHANISM SWITCH
S671 MOTOR SWITCH
S681 VOLTAGE SELECT SWITCH
- S701 ~ S704 MONO/STEREO/WIDE SWITCH
S711 ~ S712 PLAMP/BATTERY SWITCH
S721 MIC SWITCH
S731 AC/DC SWITCH
S741 BEAT CANCEL SWITCH
S751 MUTING SWITCH
S761 ~ S762 POWER SWITCH
S781 RCA SWITCH
- S801 ~ S810
S901 ~ S910 RECORD / PLAY SWITCH
S811 ~ S815
S911 ~ S915 TAPE / RADIO / PHONO SWITCH
S821 ~ S823
S921 ~ S922 TAPE SELECT SWITCH
S831 ~ S832 LOUDNESS SWITCH
S931 ~ S932 PHONO / LINE SWITCH
S841, S941 DOLBY SWITCH
S842 ~ S843
S942 ~ S943 ALC SWITCH
S851, S951 EDIT SWITCH
S861 ~ S862
S961 ~ S962 CARTRIDGE SELECT SWITCH





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