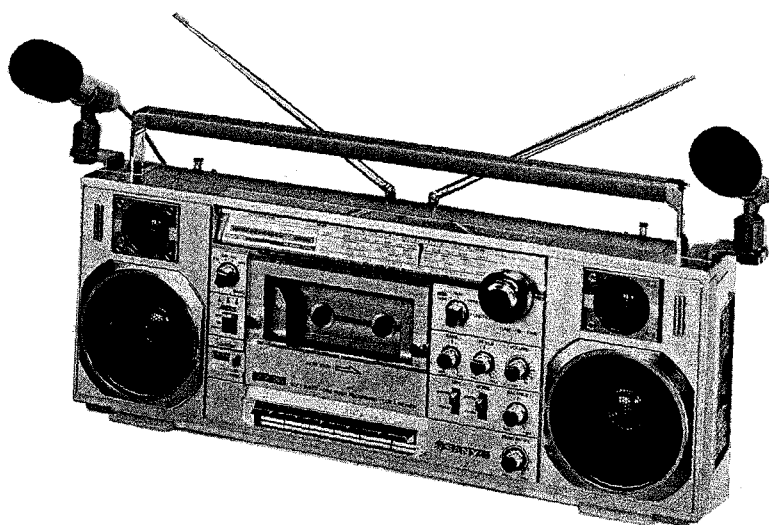


SERVICE MANUAL

CASSETTE RECORDER

**SANYO****M7900K**

SPECIFICATIONS

| | | | |
|---------------------------------|------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------|
| Recording system | AC bias, 4-track stereo | Frequency response | 80 – 10,000 Hz (normal) 80 – 12,000 Hz (metal) |
| Erasing system | AC erase, 2-track | Output power | 3.5 W x 2 maximum (music power) at 3 ohms load |
| Tape speed | 4.75 cm/sec (1-7/8 i.p.s.) | Power source | DC: 9V "C" (UM-2) x 6 9V Car battery adaptor |
| Rewind and fast forward time | Rewind: 1 min. 40 sec. (C-60) Fast forward: 1 min. 40 sec. (C-60) | Dimensions | AC: 120/200/240V, 50/60Hz 420 (W) x 84 (D) x 155 (H) mm (16-9/16" x 3-3/8" x 6-1/8") |
| Frequency range | FM: 87.5 – 108 MHz SW2: 7.0 – 22 MHz SW1: 2.3 – 7.0 MHz MW: 530 – 1605 kHz | Weight | Approx. 3.5 kg (7 lbs. 12 ozs.) including batteries |
| Terminal impedance | MIC: 6 kohms REC/PB: (input) 0.22 mV/kohm (output) 2.2 kohms EXT SP: 3 – 8 ohms PHONES: 8 ohms | | |

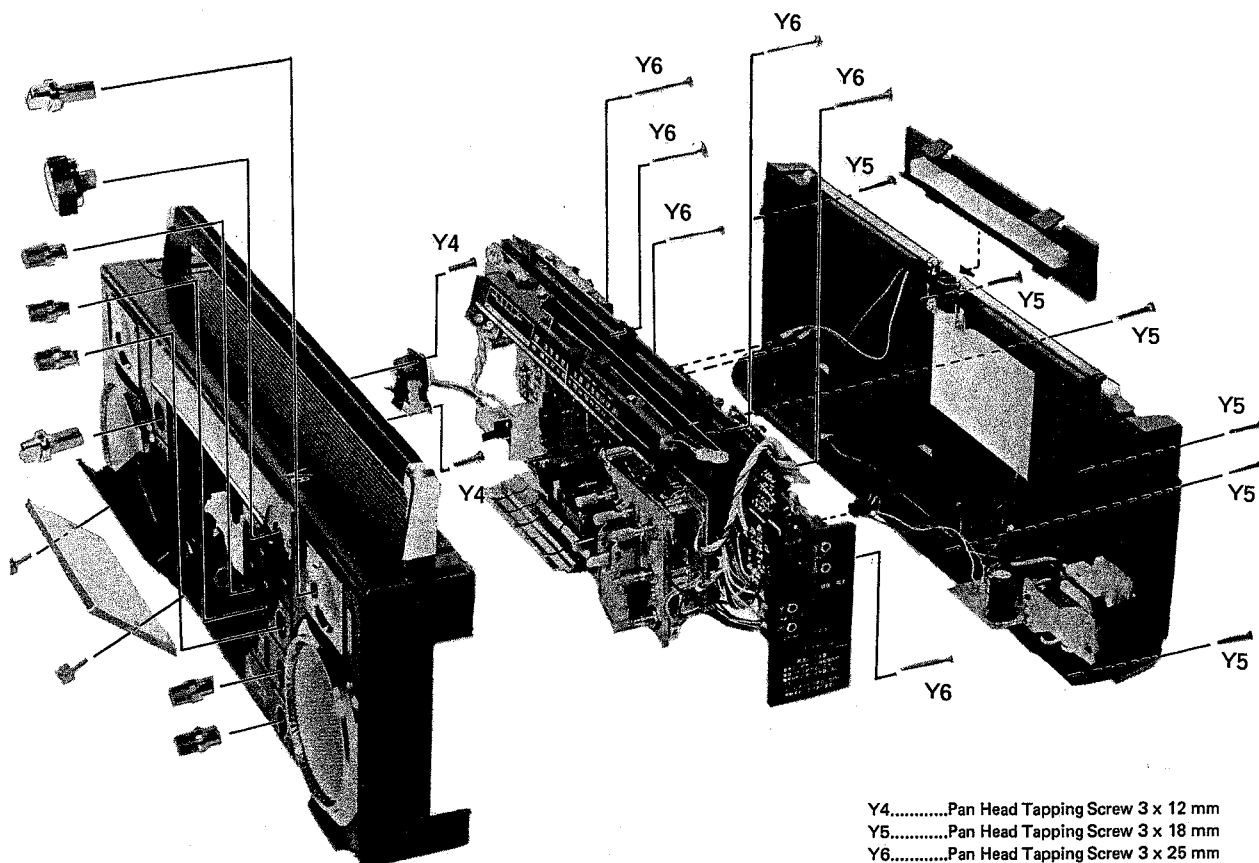
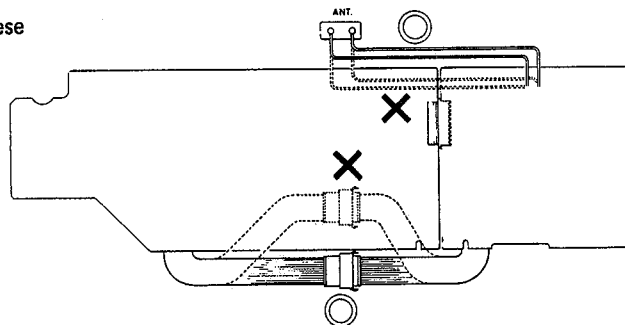
* Specification subject to change without notice.

HOW TO REMOVE THE CABINET, CHASSIS AND MECHANISM

Should batteries are found put in the battery case or the power cord is found connected to the convenience outlet, be sure to remove them or disconnect the cord in advance.

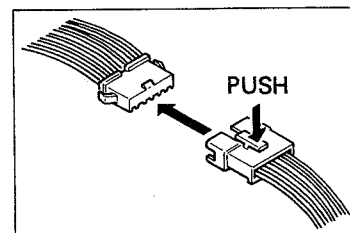
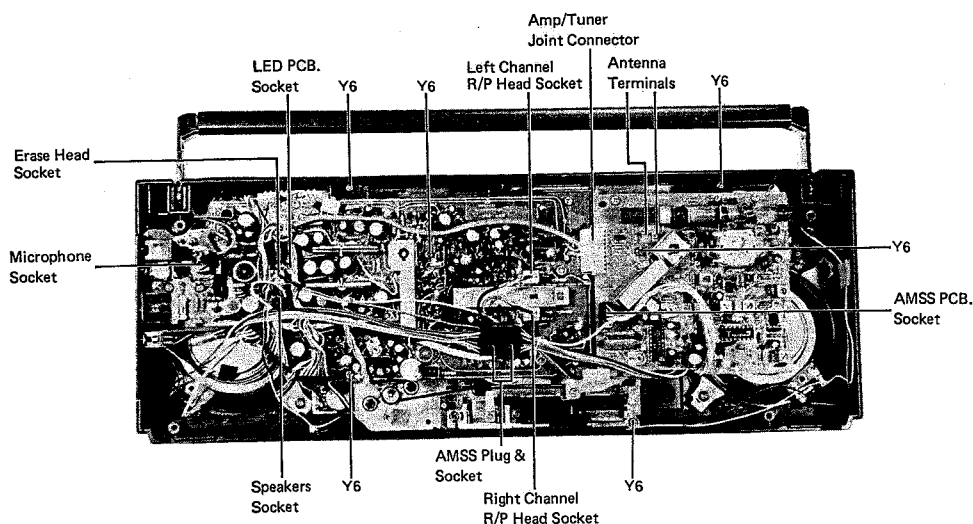
(1) How to remove the back lid

- (A) Unscrew six black screws (M3 x 18 mm pan head tapping screws, one of which is provided inside the battery case) used to fasten the back lid.
- (B) Detach the back lid as pushing up the bottom of this set. Next, disconnect sockets (2 antenna sockets* and 1 power socket) connecting the P.C.B. with back lid.
 - When restoring, pay attention to shaping of lead wires of these sockets so that these lead wires stay on the back lid side.



(2) How to remove the chassis

- (A) Detach eight control knobs (band switch, tuning knob, selector switch, bass knob, treble knob, volume knob, balance knob and mixing microphone volume knob).
- (B) Unscrew six red screws (M3 x 25 mm pan head tapping screws) used to fasten the chassis and cabinet together.
- (C) Disconnect the socket* connecting the AMSS P.C.B. with AMSS Switch P.C.B. Next, disconnect the LED socket, speaker sockets and microphone socket.
 - Shape lead wires of this socket so that it will not come above the P.C.B. (IC TA7137p in particular) but will come below the P.C.B. in parallel to it. Besides, how to disconnect this socket is as per the following sketch.

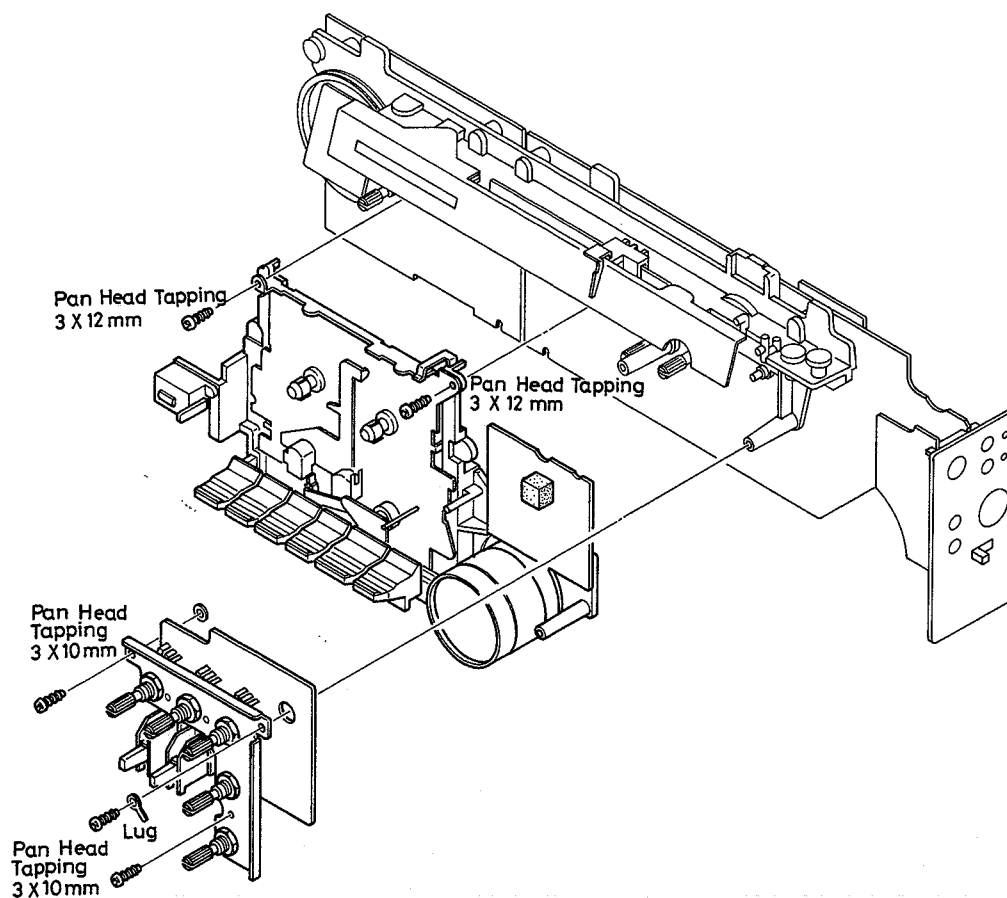


(3) How to remove the mechanism

(A) Unscrew three black screws (1 - M3 x 8 mm pan head tapping screw and 2 - M3 x 12 mm pan head tapping screws) used to fasten the mechanism as well as detach one lug (29).

(B) Unscrew two screws (M3 x 10 mm pan head tapping screws) used to set the control P.C.B. (92) and detach the earth lug, and remove the P.C.B.

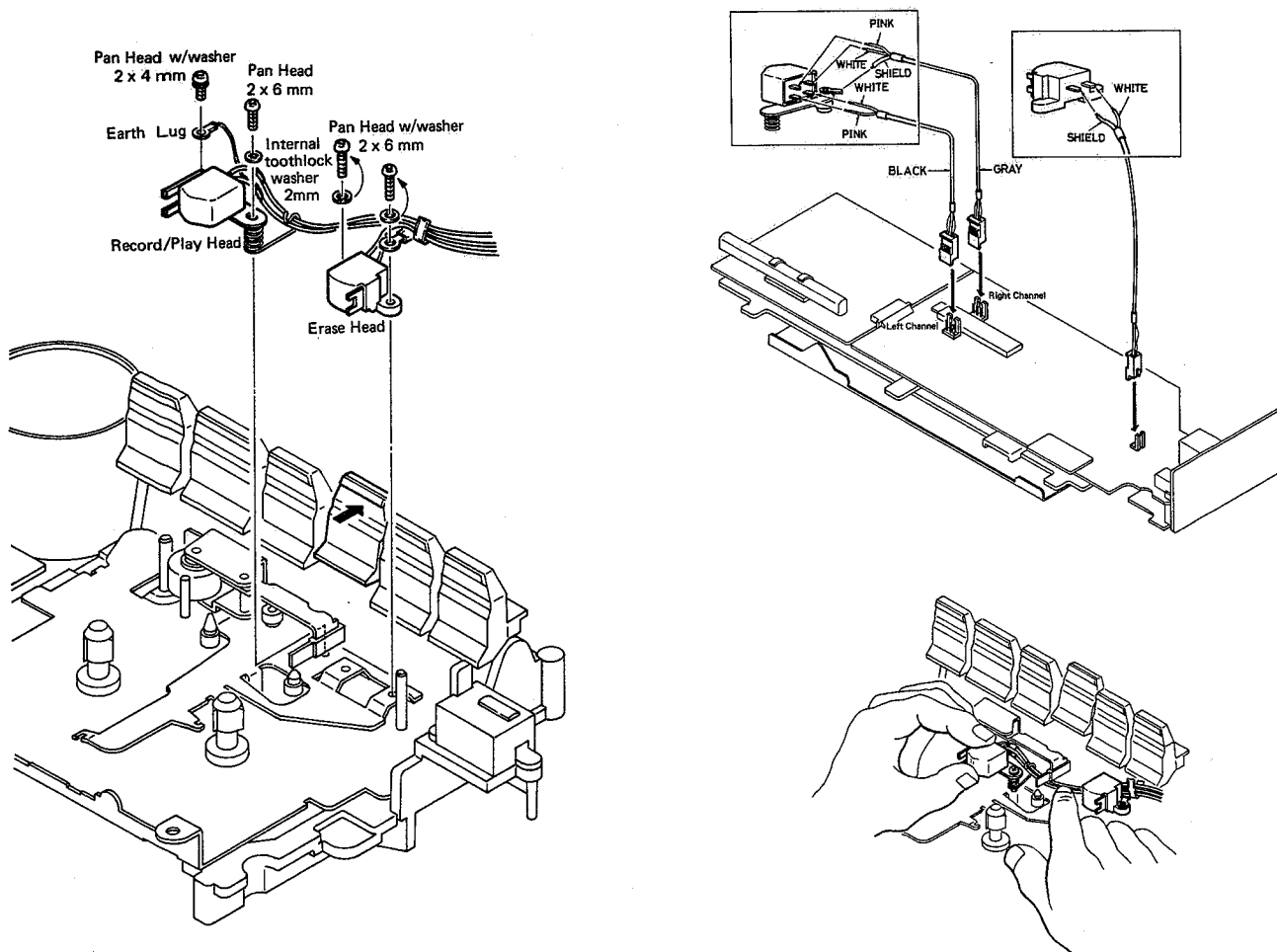
Under this condition, AMSS P.C.B. and lead socket of mechanism remain connected to the mechanism; but the belt, motor and recording/playback heads are replaceable.



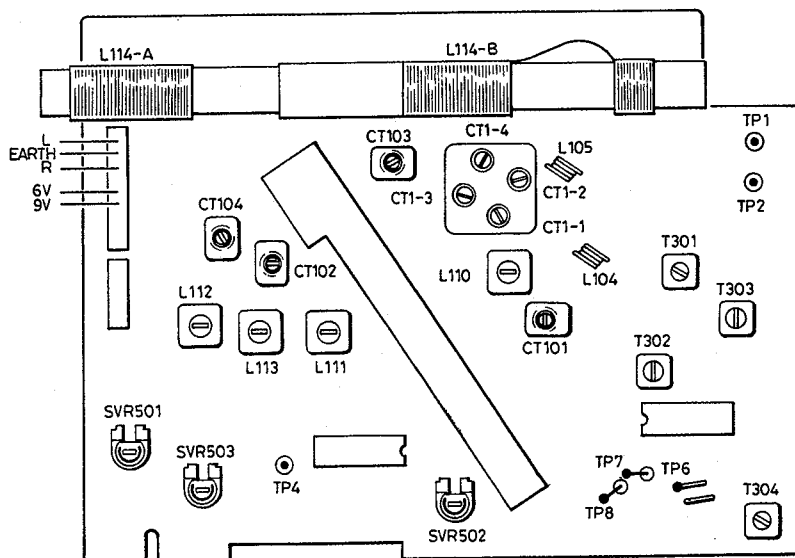
● **Replacement of recording/playback and erasing heads**

Replace recording/playback heads as illustrated. To equip a new recording/playback head, attach the spring coil, washer, screws, etc. to the head beforehand; and put in the head assembly from the reel side (the front) to set it. This equipping is simpler than equipping the head after setting it alone.

Connect the head with lead wire as shown in figure at right.



PARTS LOCATION (TUNER)



TUNER ADJUSTMENT

FM ALIGNMENT

DC Voltage is 9.0V. and Speaker impedance 2.5 ohms, Output Power 50 mW (0.32V)

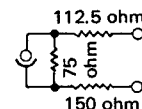
FM ALIGNMENT

| Step | Adjusting Circuit | Connections | | SG frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope |
|------|---------------------|-------------------------------------------------|---------------------------------------------------------|------------------------------------|------------------------------------------------------------------|------------|-------------------|
| | | Input | Output | | | | |
| 1 | I. F. | Connect sweep generator to FM TP1 (H) & TP2 (E) | Connect oscilloscope to test point TP 7 (H) TP 8 (E) | 10.7 MHz (none modulation) | Near max. capacity of VC. at position with no unrequired signal. | T301 | |
| 2 | Ratio Det. | | Connect oscilloscope to test point TP 6 (H) TP 8 (E) | | | T304 | |
| 3 | OSC | Connect FM SG. to TP1 (H) & TP2 (E) | Connect VTVM to speaker terminal. | 87 MHz (400 Hz 30% modulation) | Low end of dial scale | L105 | Max. |
| 4 | | | | 109MHz (400 Hz 30% modulation) | High end of dial scale | CT1-2 | |
| 5 | AERIAL | Connect FM SG. to TP1 (H) & TP2 (E) | Connect VTVM to speaker terminal. | 90 MHz (400 Hz 30% modulation) | 90 MHz on dial scale | L103, L104 | Max. |
| 6 | | | | 106 MHz (400 Hz 30% modulation) | 106 MHz on dial scale | CT1-1 | |
| 7 | Repeat adjustments. | | | | | | |

PREPARE:

1. Variable Capacitors completely closed.
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, VTVM and oscilloscope. FM aerial input impedance is 300 ohm.
4. Use a screwdriver with plastic grip for all adjustments.
5. AFC switch OFF.

* Because an AFC is incorporated, FM tracking and frequency coverage adjustments have to be made. Use a small input (about 10dB) for this purpose.



MW ALIGNMENT

| TUNING 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. | 455 KHz | Low end of dial scale. at position of no unrequired signal. | T302, T303 | Max. |
| 2 | OSC | Connect A. M. SG to TEST LOOP | Connect VTVM to EXT. SP terminals | 505 KHz (400 Hz 30% modulation) | Low end of dial scale | L113 | Max. |
| 3 | | | | 1670 kHz (400 Hz 30% modulation) | High end of dial scale | CT1-4. | |
| 4 | AERIAL | Connect A. M. SG to TEST LOOP | Connect VTVM to EXT. SP terminals | 600 KHz (400 Hz 30% modulation) | 600 KHz on dial scale | L114-B | Max. |
| 5 | | | | 1400 KHz (400 Hz 30% modulation) | 1400 KHz on dial scale | CT1-3 | |
| 6 | Repeat adjustments | | | | | | |

- PREPARE: 1. Variable capacitor completely closed.
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 "MW".
5. Use a dummy of back lid and Rod Antenna, adjust tracking point.

SW 1 ALIGNMENT

| SW T ALIGNMENT | | | | | | | |
|----------------|---------------------|-----------------------------|-------------------------------------|----------------------------------|-------------------------|------------|-------------------|
| Step | Adjusting Circuit | Connections | | SG frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope |
| | | Input | Output | | | | |
| 1 | OSC | Connect AM SG to Test Loop. | Connect VTVM to EXT. SP. terminals. | 2.15 MHz (400 Hz 30% modulation) | Low end of dial scale. | L112 | MAX. |
| 2 | | | | 7.3 MHz (400 Hz 30% modulation) | High end of dial scale. | CT104 | |
| 3 | AERIAL | Connect AM SG to Test Loop. | Connect VTVM to EXT. SP. terminals. | 2.5 MHz (400 Hz 30% modulation) | 2.5 MHz on dial scale | L114A | MAX. |
| 4 | | | | 6.5 MHz (400 Hz 30% modulation) | 6.5 MHz on dial scale. | CT103 | |
| 5 | Repeat adjustments. | | | | | | |

- PREPARE: 1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator, AM SG, VTVM and oscilloscope.
4. Use screwdriver with plastic clip for all adjustments.

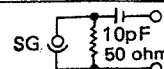
5. Selector switch to "SW 1".
6. Set the Fine Tuning to mechanical center.
7. Use a dummy of back lid and Rod Antenna, and tracking point.

SW 2 ALIGNMENT

| WORK 2 ASSIGNMENT | | | | | | | |
|-------------------|---------------------|------------------------------------------------------|-------------------------------------|----------------------------------|-------------------------|------------|-------------------|
| Step | Adjusting Circuit | Connections | | SG frequency | Position of tuning dial | Adjustment | VTVM Oscilloscope |
| | | Input | Output | | | | |
| 1 | OSC | Connect AM SG to aerial terminal, through IRE dummy. | Connect VTVM to EXT. SP. terminals. | 6.8 MHz (400 Hz 30% modulation) | Low end of dial scale. | L111 | MAX. |
| 2 | | | | 22.5 MHz (400 Hz 30% modulation) | High end of dial scale. | CT102 | |
| 3 | AERIAL | Connect AM SG to aerial terminal through IRE dummy. | Connect VTVM to EXT. SP. Terminals. | 8.0 MHz (400 Hz 30% modulation) | 8.0 MHz on dial scale. | L110 | MAX. |
| 4 | | | | 21.5 MHz (400 Hz 30% modulation) | 21.5MHz on dial scale. | CT101 | |
| 5 | Repeat adjustments. | | | | | | |

- PREPARE: 1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect signal generator to dummy aerial.

4. Use screwdriver with plastic clip for all adjustments.
5. Selector switch to "SW 2".
6. Set the Fine Tuning to mechanical center.



Caution for FM adjustment

- * Input points of FM
 - IF hot side (H): TP1
 - IF earth side (E): TP2
- Output points
 - IF hot side (H): V-curve ...TP7
 - S-curve ...TP6
 - IF earth side (E): TP8
- * FM antenna dummy is of 300-ohm balanced type.
- * Coverage adjustment should be based on the graduations of the dial scale.

Adjustment of signal meter

1. Tune in to 600 kHz in MW band, and set the SG input to -80 dB
2. Turn SVR501 until the volt reads $0.4 \pm 0.1V$ between TP5 (Hot) and TP8 (ground)

Adjustment of FM multiplex

This adjustment should be done after adjustment of FM tuner.

Carrier signal modulation frequency: 1000 Hz
 ± 22.5 kHz dev.

Pilot signal (19 kHz): ± 6.75 kHz dev.

| Adjustment | Tuning frequency | Connection method of instruments | | Freq. of sig. gen. | Adj. point | Traget value | Method of adjustment |
|--------------|------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Input side | Output side | | | | |
| VCO (19 kHz) | 98 MHz | | Connect hot side of freq. counter to TP4 earth side to TP8 | 98 MHz | SVR502 | 19 kHz ± 100 kHz | (1) In FM stereo mode, set output of FM-SG to 60 dB, and tune in. (2) * Adjust with no modulation |
| Separation | 98 MHz | Connect hot side of FM-SG to TP1, earth side to TP2. | Connect DVTVM and oscilloscope to output speaker terminals, adjust volume control to standard output in both L and R channels. | 98 MHz | SVR503 | Balance in L and R channels, 1,000 Hz: above 30 dB | (1) In FM stereo mode, set FM-SG to 60dB, and tune in. (2) With tone controls at MIN and balance control in the center, adjust volume control to standard output. (3) By changing over the channels* on stereo modulator, adjust the leakage current of opposite channel to minimum. |

- * "No modulation" means to set MAIN & SUB signal and PILOT signal of stereo modulator to "OFF" position.
- * When changing over the channels, exchange the connections of the external speaker terminals at the same time.
- * Set band selector to FM, and mode selector to STEREO.

HOW TO PUT ON THE DIAL ROPE

(1) Preparation

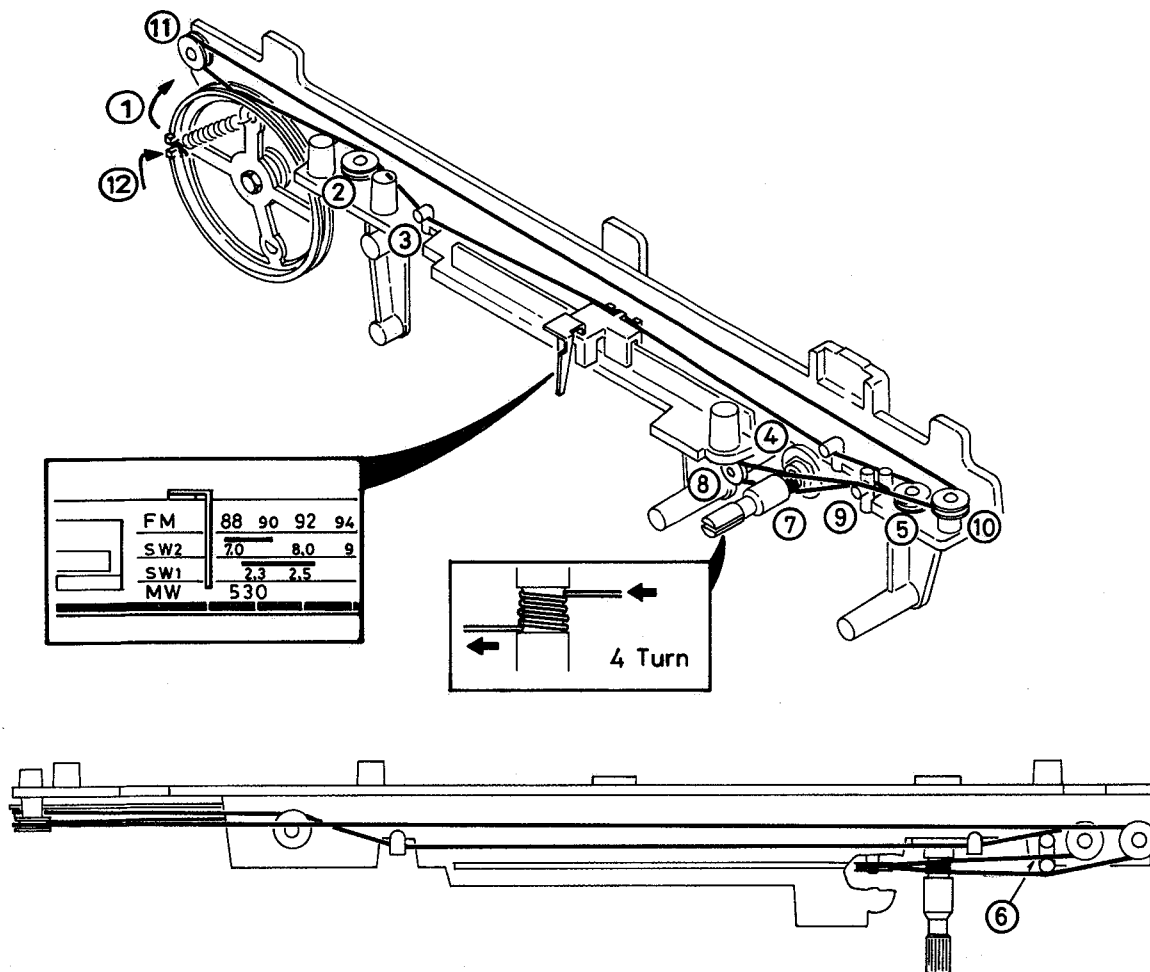
- (A) Unscrew two screws (Y3) used to set the dial scale, and detach it from the rope.
- (B) Prepare the 0.3 ϕ mm rope having length of 1,200 mm, and bind the rope to the spring coil so that the turning back length of rope becomes 536 ± 1 mm (by inner diameter).

(2) Arrangement

As shown in figure below, put an end of rope on the drum, pass another end of rope through 1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 6, wind it aounr 7 for 4 turns, and return it to the spring coil after passing thorough 8 \rightarrow 9 \rightarrow 10 \rightarrow 11 \rightarrow 12.

(3) Pointer positional adjustment

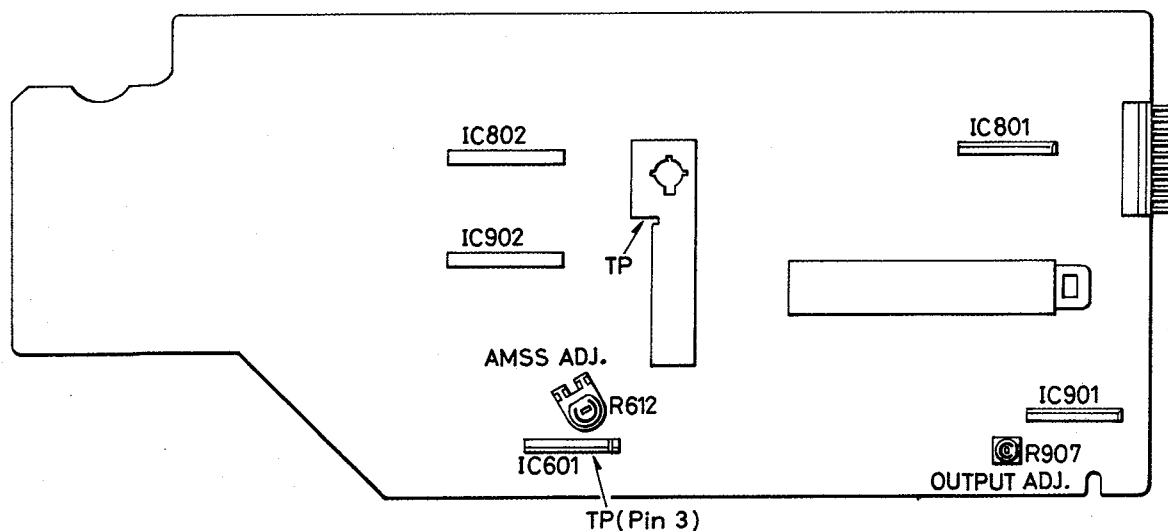
Turn the tuning shaft counterclockwise until it idles, and fix the pointer to agree it with the "0" graduation of dial scale.



ADJUSTMENT OF AMPLIFIER UNIT

(1) Output adjustment

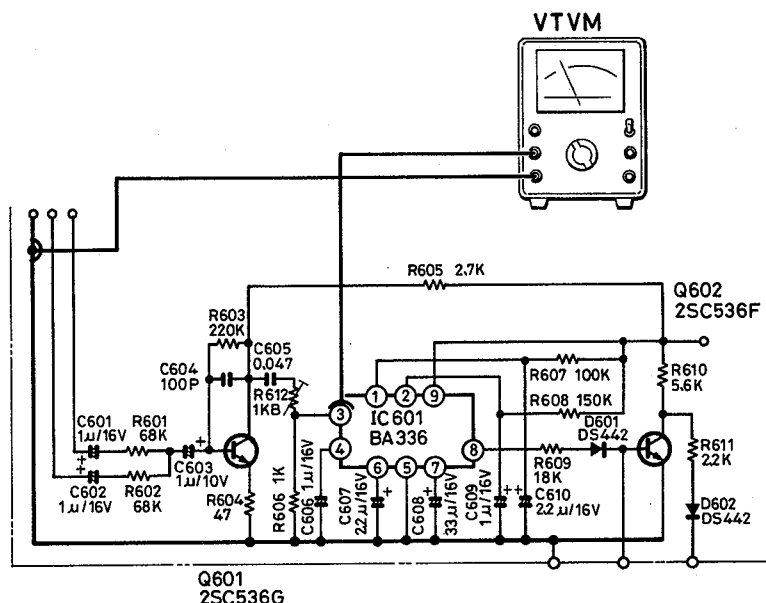
Under the playback state of an 1 kHz-10 dB test tape (MTT118, for instance), adjust R907 10K(B) so that the difference in output level of left and right external speaker terminal outputs will become within ± 1 dB.



(2) AMSS adjustment

Perform AMSS action (depress the playback button and fast forward button) from the starting point of taking up an 1 kHz-35 dB tape, and adjust R612 10K(B) when letting the tape of run (while reading of the counter is 000 ~ 030) so that the AC voltage between point TP (pin 3 of IC 601) and the ground (selector switch shielding case) will become 4 mV. Adjusting range: 4 ± 1 mV

Remarks: An 1 kHz-35 dB tape refers to a tape recorded from tape output of 1 kHz and 0 dB at -35 dB level. Use a highly accurate tape for 1 kHz-0 dB tape.



AMSS CIRCUIT DESCRIPTION

In this set, the AMSS circuit function and multitune program/tune selection circuit function have been adopted. The AMSS circuit function automatically searches for start of a tune by detecting the blank area (non-recorded area) between tunes of a music tape, for example, and the multitune program/tune selection circuit function enables skipping or programing within three tunes.

Note: Skipping more than three tunes is possible in view of control.

(1) Principal operation

A blank area is detected by amplifying signals sent from the recording/playback heads in playback, and the up down counter is operated by the number of detected signals. On the other hand, programing is performed by AMSS switch (to actuate the up down counter), and the plunger (for AMSS) is driven when the value of up down counter becomes zero (channel 1).

(2) Detailed description of each circuit

(A) Blank detection circuit

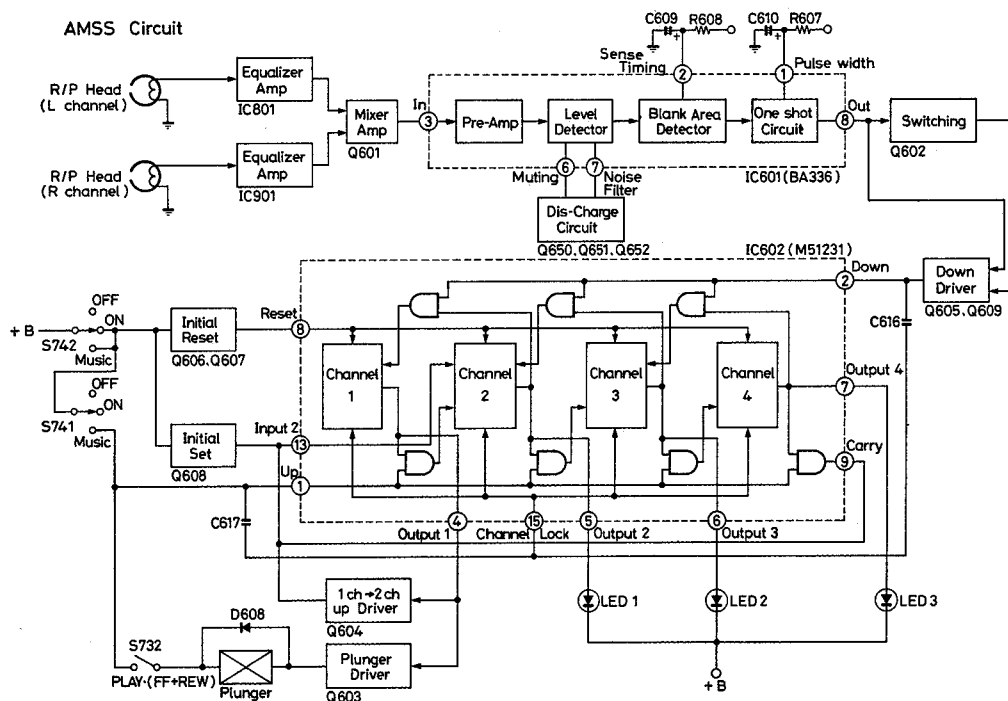
Reproduced signals detected by recording/playback heads of both the left and right channels are amplified by qualizer amplifiers (IC801 & IC901) and both of these signals are input to the base of Q601. Signals input are synthezized and amplified and then input to IC601. This input signal is amplified by preamplifier, and detected of the blank area by level comparator. If the blank area lasts more than the fixed time, such time is measured and detected by no-music time detection circuit (having time constant of $R608 \times C609 \times 0.7 = 80$ msec.). If measured and detected, one-shot pulse (having time constant of $R607 \times C610 \times 0.7 = 150$ msec.) is generated in the one-shot circuit and signal output from pin 8 of IC601 to input to the base of Q602.

* Q602 is a switching transistor for pulse inversion. Pin 6 and pin 7 of IC601 are muting (switch) and noise filter, respectively, which form a malfunction protection circuit for blank detection circuit. However, if the circuit operates once, C607 and C608 are charged, and the circuit would not work. Hence, these pins of IC601 form a discharge circuit to let C607 and C608 discharge every time one-shot pulse is generated by Q650, Q651 and Q652. Incidentally, the blank detection circuit operates as the power is supplied to it when the selector switch is set in the "TAPE" position and PLAY (F-F + REW) swtch (S732) is turned on.

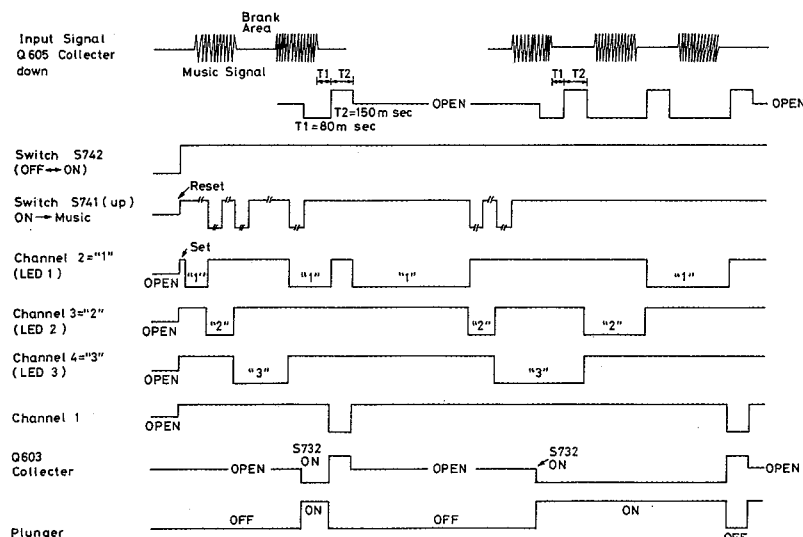
* Q801 and Q901 form a muting circuit to deaden voice in AMSS action.

(B) Program circuit

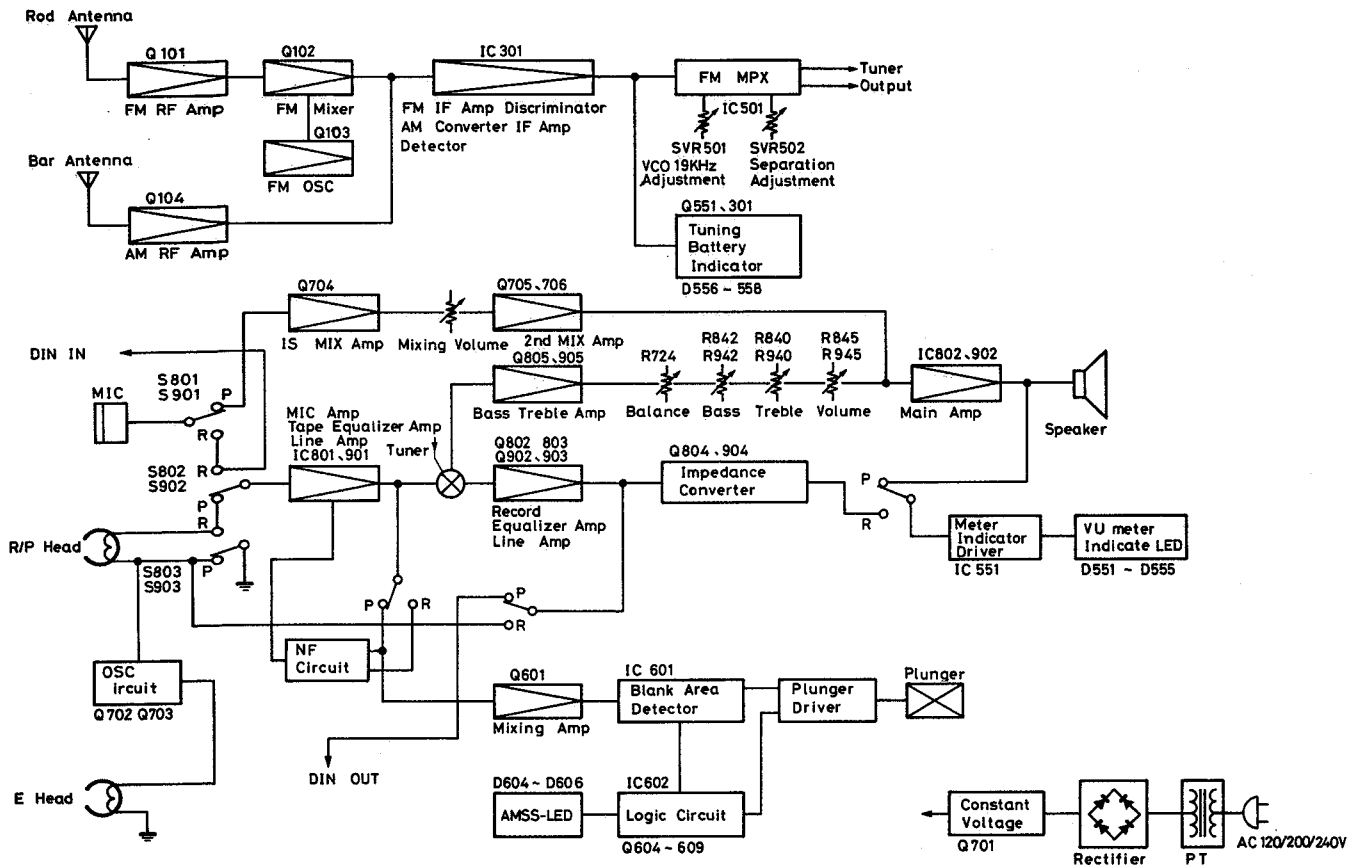
- As the AMSS switch (S742) is turned on, power "+B" becomes "AMSS + B", and line (pin 10) of IC602 is energized. At the same time, Q606 and Q607 operate in an instant, and reset (pin 8) of IC602 becomes LOW to reset 1 ~ 4 channel memory. Furthermore, Q608 comes into action after resetting of channel memory to set channel 2. This setting causes LED1 (D606) to light up.
- Every time the AMSS switch (S741) is changed over from the "ON" setting to the "CH. SELECT." setting, channel selection signal enters up (pin 1), and channel shifts as 1 (channel 2) → 2 (channel 3) → 3 (channel 4). Shifting of 3 (channel 4) → 1 (channel 2) takes place because pin 6 is connected to pin 13. C621 is provided for prevention of chattering, and C616 and C617 serve to release channel lock when up (pin 1)/down (pin 2) is in action.
- Every time the one-shot pulse is output by the blank detection circuit, Q605 operates to input this signal to down (pin 2), and channel shifts as 3 (channel 4) → 2 (channel 3) → 1 (channel 2) → 0 (channel 1).
- * Q609 is already in action under the "ON" state of PLAY (F.F + REW) switch.
- * As channel becomes 0 (channel 1), Q603 is cut off, and the plunger operates. At this time, Q604 functions simultaneously, and channel returns as 0 (channel 1) → 1 (channel 2). The plunger is normally attracting/sucking under the energized state.



AMSS TIMING CHART



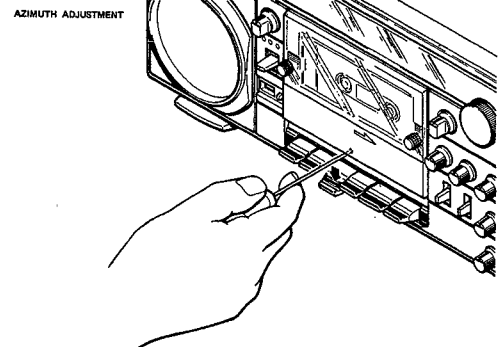
BLOCK DIAGRAM



ADJUSTMENT OF MECHANISM

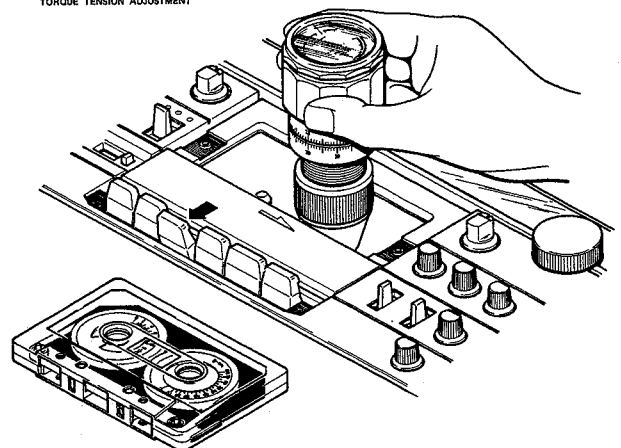
(1) AZIMUTH ADJUSTMENT

Load with head angle correction tape (3 kHz standard tape), and set in play mode. Insert small-size Phillips screwdriver into the hole provided in the upper part of play button in the cabinet, and turn azimuth adjusting screw (Y3) until the maximum sound volume without distortion may be obtained.



(2) MEASUREMENT OF TORQUE TENSION

Before measurement, make sure all parts are operating normally by checking visually, especially paying attention to cleanliness of the head and pinch roller. Play (normal speed forwarding) 30 to 60 gr-cm
Fast-forwarding 80 to 150 gr-cm
Rewind 80 to 150 gr-cm
Cue, review More than 80 gr-cm
On cassette type torque meter, the measurement should be:
Fast-forwarding 100 to 185 gr-cm
Rewind 90 to 185 gr-cm



(3) MEASUREMENT OF PINCH ROLLER PRESSURE

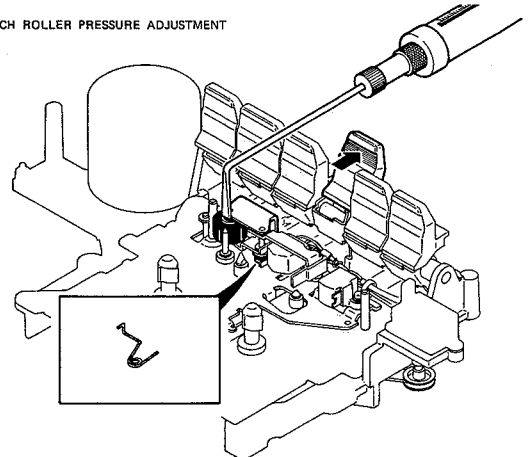
In the play mode as shown, measure the pinch roller pressure at the position of pinch roller shaft by means of tension gauge.

Take the measurement of pinch roller pressure when the rotation of pinch roller is about to stop.

Standard: More than 400 gr

If the pressure is below the standard value, adjust by means of the spring wire of mechanism No. A8 (141-2-852T-57900).

PINCH ROLLER PRESSURE ADJUSTMENT



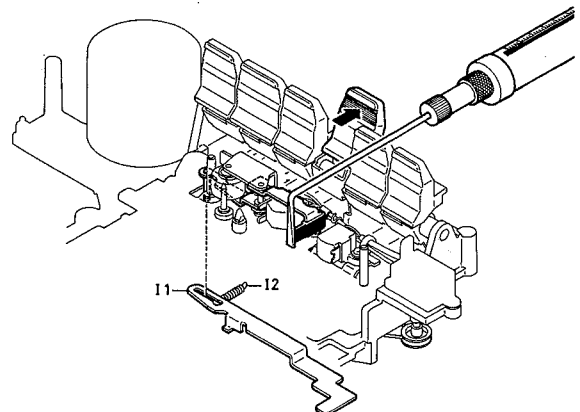
(4) MEASUREMENT OF AUTO-STOP FORCE

In the play mode as shown, fit a bar spring balance to the tip part of lever (A7) and return it slowly until the auto-stop takes effect.

Standard: 40 to 65 gr

If the force is out of the standard range, adjust by means of the spring coil of mechanism No. I2 (141-2-855T-42701).

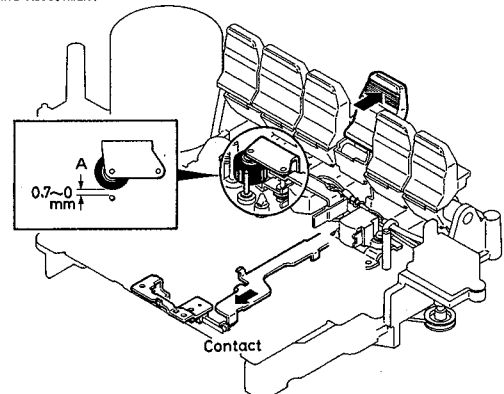
AUTO STOP ADJUSTMENT



(5) TIMING ADJUSTMENT OF MAIN SWITCH

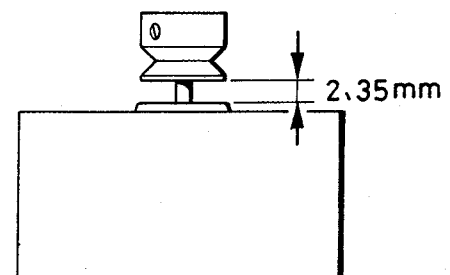
Set the main switch so that it may be turned on when the distance between pinch roller and capstan becomes equal to A (0.7 to 0 mm) in play mode.

SWITCH TIMING ADJUSTMENT



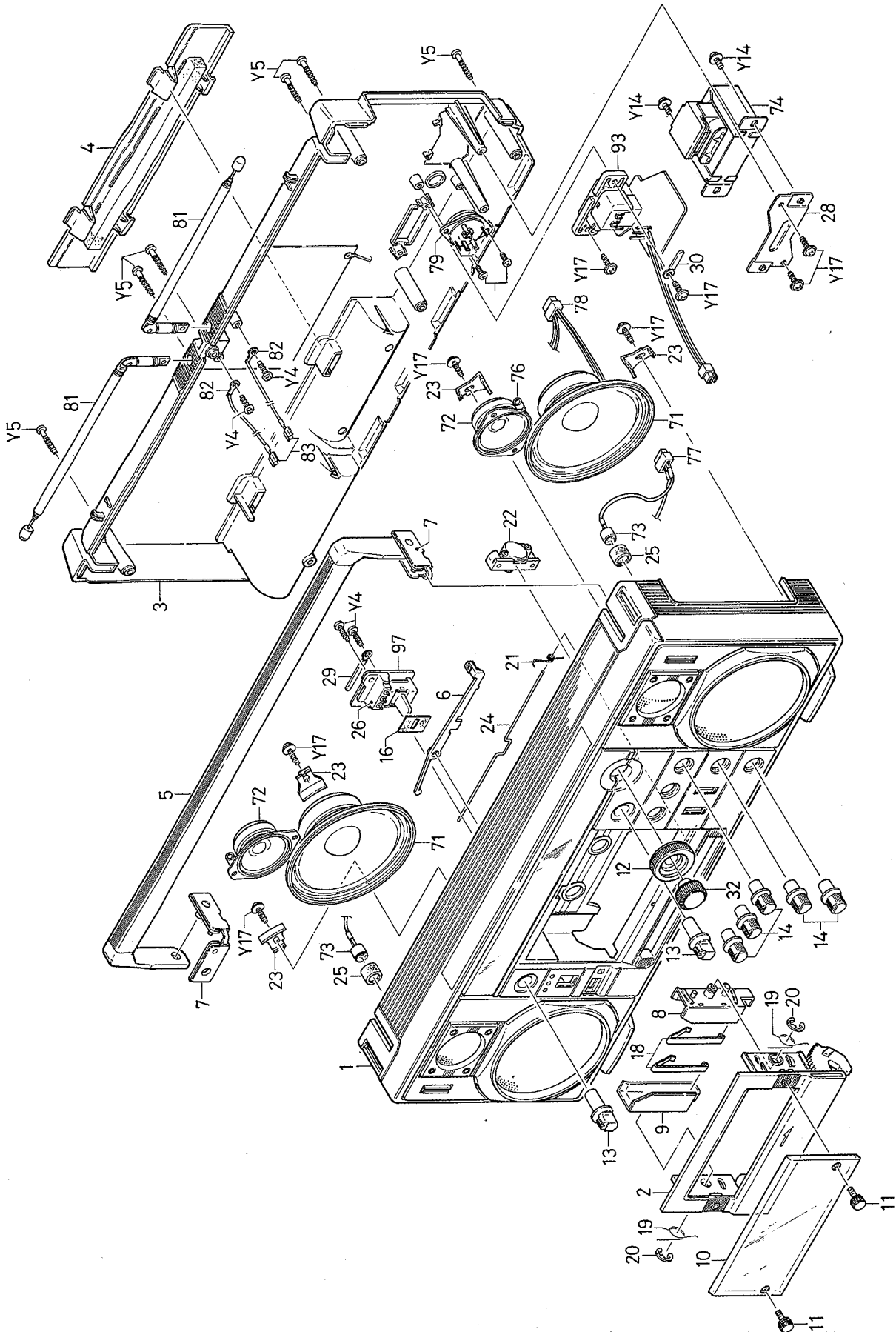
(6) MOUNTING HEIGHT OF MOTOR PULLEY

Install so that the distance between the motor pulley and motor may be 2.35 mm as shown in the sketch.

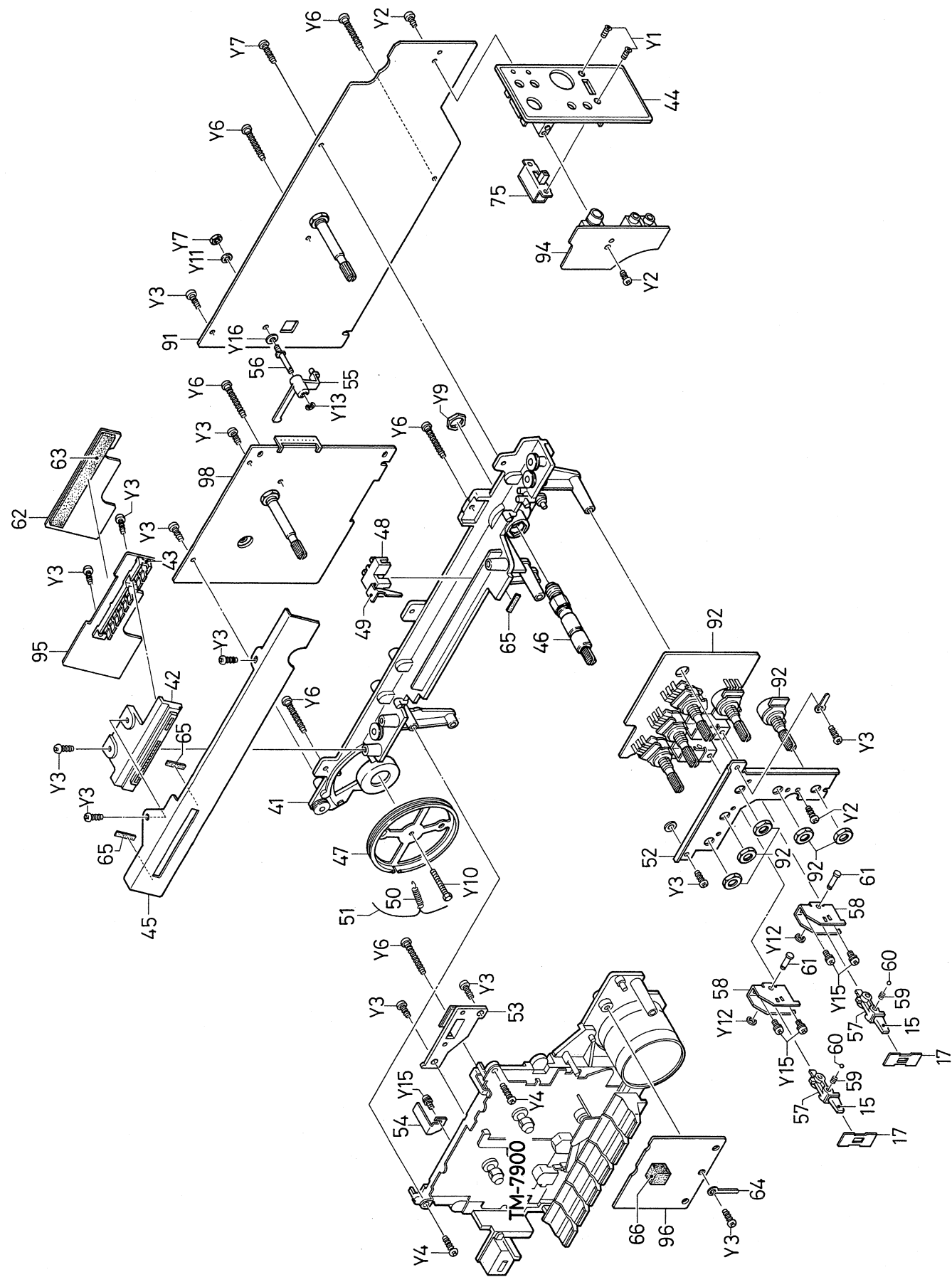


(NOTE) The speed can not be adjusted by means of motor in this machine.

EXPLODED VIEW (CABINET)



EXPLODED VIEW (CHASSIS)



PARTS LIST

| Key No. | Part No. | Description | Q'ty | Key No. | Part No. | Description | Q'ty |
|-----------|------------------|---------------------------------------|------|--------------------|------------------|-------------------------------------------------|------|
| PACKING | | | | CHASSIS | | | |
| | 141-6-133T-22200 | Individual Carton | 1 | 59 | 141-2-855T-72400 | Spring Coil | 2 |
| | 141-6-144T-68800 | Foam Plastic Case, L | 1 | 60 | 141-2-345T-00100 | Steel Ball | 2 |
| | 141-6-144T-68900 | Foam Plastic Case, R | 1 | 61 | 141-2-754T-01600 | Shaft | 2 |
| | 141-6-231T-20350 | Inner Poly Cover, Inst., M | 1 | 62 | 141-2-322T-65500 | Shield Plate, VU Meter | 1 |
| | 141-6-231T-30600 | Inner Poly Cover, Set | 1 | 63 | 141-2-447T-50300 | Cushion | 1 |
| | 141-6-231T-10250 | Inner Poly Cover, AC Cord | 1 | 64 | 141-2-472T-01001 | Lug | 1 |
| | 141-2-171T-09500 | Handle | 1 | 65 | 141-2-447T-00804 | Cushion, 5x15 | 3 |
| | 141-6-317T-23200 | Pad | 1 | 66 | 141-2-447T-92700 | Cushion, 10x10x8t | 1 |
| ACCESSORY | | | | HARDWARE | | | |
| | 141-6-410T-57900 | Instruction Manual | 1 | Y1 | | Flat Hd. Screw, 2x8mm | 1 |
| | 4-243T-13080 | Lead Cord | 1 | Y2 | | Pan Hd. Tapping Screw, 3x8mm | 3 |
| | 4-241T-15200 | Cassette Tape | 1 | Y3 | | Pan Hd. Tapping Screw, 3x10mm | 20 |
| | 4-236T-17100 | Plug, Erasing | 1 | Y4 | | Pan Hd. Tapping Screw, 3x12mm | 6 |
| | 4-236T-11201 | Plug Ass'y | 1 | Y5 | | Pan Hd. Tapping Screw, 3x18mm | 6 |
| CABINET | | | | Y6 | | Pan Hd. Tapping Screw, 3x25mm | 6 |
| 1 | 141-0-111T-46402 | Cabinet Ass'y | 1 | Y8 | | Hex. Nut 3φ | 2 |
| 2 | 141-0-124T-29500 | Top Lid Ass'y | 1 | Y10 | | Hex. Bolt, 2.6x20mm | 1 |
| 3 | 141-0-126T-35002 | Back Lid Ass'y | 1 | Y11 | | Spring Washer, 3mm | 1 |
| 4 | 141-0-128T-16700 | Battery Lid Ass'y | 1 | Y12 | 141-2-457T-23800 | E Ring, 1.5mm | 2 |
| 5 | 141-0-171T-17400 | Handle Ass'y | 1 | Y13 | 141-2-457T-23000 | E Ring, 2mm | 1 |
| 6 | 141-2-742T-58700 | Lever, Eject | 1 | Y14 | | Pan Hd. Screw W/Washer, 3x6mm | 2 |
| 7 | 141-2-271T-17800 | Bracket, Handle | 2 | Y15 | | Pan Hd. Screw W/Spring, 2.6x4mm | 5 |
| 8 | 141-2-210T-26100 | Bracket | 1 | Y16 | 141-2-453T-02000 | Fiber Washer, 3x8x0.5 | 1 |
| 9 | 141-2-210T-26200 | Bracket | 1 | Y17 | | Pan Hd. Tapping Screw W/Washer, 3x10mm | 4 |
| 10 | 141-2-131T-28700 | Clear Window | 1 | ELECTRICAL PARTS | | | |
| 11 | 141-2-421T-29800 | Special Screw | 2 | 71 | 4-151T-36200 | Speaker, 92mm | 2 |
| 12 | 141-2-163T-76300 | Rotary Knob, Tuning | 1 | 72 | 4-151T-36700 | Speaker, 40mm | 2 |
| 13 | 141-2-163T-74400 | Rotary Knob, Band/Function | 2 | 73 | 4-153T-11771 | Microphone | 2 |
| 14 | 141-2-163T-74500 | Rotary Knob, Vol/Bal/Bass/Treb/Mix VR | 5 | 74 | 4-300T-34100 | Power Trans | 1 |
| 15 | 141-2-162T-16330 | Lever Knob, Tape/Mode | 2 | 75 | 4-231T-19200 | Switch, Beat | 1 |
| 16 | 141-2-241T-23900 | Veil, AMSS | 1 | 76 | | Electrolytic Cap. 4.7μF 10V Nonpolar (C849,949) | 2 |
| 17 | 141-2-241T-24400 | Veil, Tape/Mode | 2 | 77 | 4-240T-00100 | Socket, Mic | 1 |
| 18 | 141-2-853T-61100 | Spring Plate | 2 | 78 | 4-240T-00300 | Socket, Speaker | 1 |
| 19 | 141-2-852T-67900 | Spring Wire | 2 | 79 | 4-231T-37607 | Switch | 1 |
| 20 | 141-2-457T-23400 | Special Washer, 6x12x0.8t | 2 | 81 | 4-244T-05100 | Rod Antenna | 2 |
| 21 | 141-2-852T-56801 | Spring Wire, Top Lid | 1 | 82 | 123-2-472R-00400 | Lug | 2 |
| 22 | 141-0-581T-07100 | Gear Ass'y | 1 | 83 | 4-235T-34600 | Socket | 2 |
| 23 | 141-2-372T-01901 | Bracket, Speaker | 4 | MAIN AMP PCB ASS'Y | | | |
| 24 | 141-2-753T-96600 | Shaft | 1 | 91 | 141-4-233T-73101 | P.C. Board Ass'y, Main Amp | 1 |
| 25 | 141-2-385T-03700 | Bracket, MIC | 2 | | 4-238T-25600 | Switch, TA/RA/SL | 1 |
| 26 | 141-2-210T-26600 | Bracket, LED | 1 | | 4-238T-18671 | Switch, R/P | 1 |
| 27 | 141-2-447T-17100 | Cushion, 15x20x12t | 1 | | 4-235T-38000 | Socket, Mic R | 1 |
| 28 | 141-2-310T-52500 | Bracket, Trans | 1 | | 4-235T-74100 | Socket, Mic L | 1 |
| 29 | 141-2-472T-01001 | Lug | 2 | | 4-235T-33300 | Socket, DIN 5P | 1 |
| 30 | 123-2-472R-00601 | Lug | 1 | | 4-236T-17600 | Plug 2P, Power | 1 |
| 31 | 141-2-447T-93100 | Cushion 7x10x1.5t | 1 | | 4-236T-17700 | Plug 3P, R/P Head | 2 |
| 32 | 141-2-163T-76400 | Rotary Knob, | 1 | | 4-236T-17672 | Plug 4p, Speaker & Mic | 2 |
| CHASSIS | | | | | 4-236T-17672 | Plug 4p, Control | 1 |
| 41 | 141-0-311T-37001 | Chassis Ass'y | 1 | | 4-236T-17675 | Plug 7P, Control | 1 |
| 42 | 141-0-311T-37000 | Chassis Ass'y | 1 | | 4-236T-17676 | Plug 8P, AMSS | 1 |
| 43 | 141-2-210T-26300 | Bracket, Meter LED | 1 | L702 | 4-258T-29040 | OSC Coil | 1 |
| 44 | 141-2-210T-27700 | Bracket, Meter LED | 1 | L801,901 | 4-252T-08300 | Choke 15mH, Bias Trap | 2 |
| 45 | 141-2-367T-34901 | Bracket, Socket | 1 | L701 | 4-253T-13200 | Filter 2.2μH | 1 |
| 46 | 141-2-146T-25901 | Dial, Scale | 1 | R612,907 | 4-222T-75075 | Semifixed Variable Resistor 10K | 2 |
| 47 | 141-0-566T-11100 | Tuning Shaft Ass'y | 1 | | 4-236T-17771 | Plug, Erase Head, 2P | 1 |
| 48 | 141-2-538T-12700 | Drum | 1 | | 4-236T-10576 | Plug, Tuner 9p | 1 |
| 49 | 141-2-513T-06100 | Carrige | 1 | | | | |
| 50 | 141-2-511T-20600 | Pointer | 1 | | | | |
| 51 | 123-2-481R-10300 | Spring Coil | 1 | | | | |
| 52 | 141-2-340T-03001 | Rope | 1 | | | | |
| 53 | 141-2-361T-18300 | Bracket, PCB | 1 | | | | |
| 54 | 141-2-210T-26400 | Bracket PCB | 1 | | | | |
| 55 | 141-2-853T-69400 | Spring Plate | 1 | | | | |
| 56 | 141-2-742T-58800 | Lever, R/P Select | 1 | | | | |
| 57 | 123-2-566R-12000 | Shaft, R/P Select | 1 | | | | |
| 58 | 141-2-742T-62400 | Lever, Tape/Mode | 2 | | | | |
| | 141-2-747T-22000 | Bracket, Lever | 2 | | | | |

[illegible][illegible]

PARTS LIST

| Key No. | Part No. | Description | Q'ty | Key No. | Part No. | Description | Q'ty |
|---------------------------|------------------|-----------------------------------|------|----------------------------------|----------|------------------------------------|------|
| AMSS PCB ASS'Y | | | | TUNER PCB ASS'Y | | | |
| | | RESISTORS | | | | CAPACITORS | |
| R626 | | Carbon 68 ohm ±10% 1/4W | 1 | C115 | | Ceramic 2pF 50V ±0.25pF | 1 |
| R624 | | Carbon 330 ohm ±10% 1/4W | 1 | C106 | | Ceramic 5pF 50V ±0.25pF | 1 |
| R622 | | Carbon 1.2K ohm ±10% 1/4W | 1 | C121,122 | | Ceramic 10pF 50V ±0.25pF | 2 |
| R628 | | Carbon 1.8K ohm ±10% 1/4W | 1 | C120 | | Ceramic 15pF 50V ±5% | 1 |
| R617,620 | | Carbon 2.2K ohm ±10% 1/4W | 2 | C103 | | Ceramic 20pF 50V ±5% | 1 |
| R615 | | Carbon 5.6K ohm ±10% 1/4W | 1 | C107 | | Ceramic 24pF 50V ±5% | 1 |
| R621 | | Carbon 6.8K ohm ±10% 1/4W | 1 | C101 | | Ceramic 39pF 50V ±5% | 1 |
| R618,625 | | Carbon 10K ohm ±10% 1/4W | 2 | C102 | | Ceramic 56pF 50V ±5% | 1 |
| R627 | | Carbon 47K ohm ±10% 1/4W | 1 | C310 | | Ceramic 100pF 50V ±5% | 1 |
| R616 | | Carbon 33K ohm ±10% 1/4W | 1 | C108 | | Ceramic 200pF 50V ±5% | 1 |
| R629,630, 631,632 | | Carbon 220K ohm ±10% 1/4W | 4 | C306 | | Ceramic 390pF 50V ±5% | 1 |
| R619 | | Carbon 680 ohm ±10% 1/4W | 1 | C116 | | Ceramic 5pF 50V ±0.25pF | 1 |
| AMSS SWITCH PCB ASS'Y | | | | C130 | | Ceramic 6pF 50V ±0.5pF | 1 |
| 97 | 141-4-233T-47700 | P.C. Board Ass'y, AMSS Switch | 1 | C129 | | Ceramic 8pF 50V ±0.25pF | 1 |
| | 4-238T-25700 | Switch | 1 | C112 | | Ceramic 12pF 50V ±5% | 1 |
| | 4-240T-01000 | Socket | 1 | C117 | | Ceramic 18pF 50V ±5% | 1 |
| D604,605, 606 | | LED SLP144B Red | 3 | C113,114 | | Ceramic 20pF 50V ±5% | 2 |
| R623 | | Carbon Res. 1.2K ohm ±10% 1/4W | 1 | C131 | | Ceramic 6pF 50V ±0.25pF | 1 |
| C621 | | Electrolytic Cap. 0.47μF 50V | 1 | C104 | | Ceramic 150pF 50V ±10% | 1 |
| TUNER PCB ASS'Y | | | | C508 | | Ceramic 560pF 50V ±10% | 1 |
| 98 | 141-4-233T-85400 | P.C. Board Ass'y, Tuner | 1 | C119 | | Ceramic 0.0047μF 50V ±10% | 1 |
| VCT1-1~ 4 | 4-224T-16800 | Variable Resistor | 1 | C111 | | Ceramic 0.01μF 25V +80-20% | 1 |
| CT1-1~4 | | | | C105,109, 110,118, 123,124 | | Ceramic 0.022μF 25V +80-20% | 6 |
| SW101~9 | | | | C128,303 | | Ceramic 0.022μF 25V +80-20% | 2 |
| | 4-238T-28100 | Switch | 1 | C305,307 | | Ceramic 0.047μF 25V +80-20% | 2 |
| | 4-236T-17673 | Plug 5P | 1 | C301,304, 309,311, 312 | | BC Con 0.022μF 25V ±10% | 5 |
| | 4-235T-38796 | Socket 9P | 1 | C507,308, 319 | | BC Con 0.047μF 25V ±10% | 3 |
| L114AB | 4-257T-42201 | ANT Coil Ass'y | 1 | C509 | | BC Con 0.0068μF 25V ±20% | 1 |
| L113 | 4-248T-30440 | OSC Coil | 1 | C510 | | BC Con 0.0068μF 25V ±20% | 1 |
| L112 | 4-258T-07640 | OSC Coil | 1 | C315 | | BC Con 0.01μF 25V ±10% | 1 |
| L111 | 4-258T-07540 | OSC Coil | 1 | C316 | | Electrolytic 1000μF 6.3V | 1 |
| L110 | 4-257T-28630 | ANT Coil | 1 | C513 | | Electrolytic 470μF 16V | 1 |
| L101 | 4-257T-39240 | ANT Coil | 1 | C313 | | Electrolytic 47μF 10V | 1 |
| L102 | 4-265R-00200 | VHF Coil | 1 | C314 | | Electrolytic 10μF 16V | 1 |
| L105 | 4-265R-10800 | VHF Coil | 1 | C501 | | Electrolytic 3.3μF 25V | 1 |
| L104 | 4-265R-13700 | VHF Coil | 1 | C317 | | Electrolytic 2.2μF 25V | 1 |
| L103 | 4-265T-01200 | VHF Coil | 1 | C302,502, 504,505 | | Electrolytic 1μF 25V | 4 |
| T301 | 4-256R-20810 | IFT | 1 | C511,512 | | Al Electrolytic 0.1μF 10V ±20% | 2 |
| T302 | 4-256T-22240 | IFT | 1 | C503 | | Al Electrolytic 0.47μF 16V ±20% | 1 |
| T303 | 4-256T-22340 | IFT | 1 | C125 | | Mylar 0.0047μF 50V ±20% | 1 |
| T304 | 4-256T-22440 | IFT | 1 | C506 | | P P Con 0.001μF 100V ±5% | 1 |
| CT101, 102,103, 104 | 4-224R-11600 | Trimmer | 4 | C127 | | Styrol 340pF 50V ±5% | 1 |
| L107 | 4-253T-10804 | Filter | 1 | C126 | | Styrol 1400pF 50V ±5% | 1 |
| L109 | 4-253T-10813 | Filter | 1 | | | RESISTORS | |
| L106,108 | 4-253T-10800 | Filter | 2 | R117 | | Carbon 47 ohm ±5% 1/4W | 1 |
| | 141-2-322T-40300 | Shield Plate, IC301 | 1 | R121 | | Carbon 68 ohm ±5% 1/4W | 1 |
| CF303 | 4-256T-81100 | IF Filter, AM | 1 | R120 | | Carbon 120 ohm ±5% 1/4W | 1 |
| CF301, 302 | 4-256T-80400 | IF Filter, FM) or | 2 | R301,309 | | Carbon 100 ohm ±5% 1/4W | 2 |
| SVR501 | 4-222T-81473 | Semifixed Variable Resistor 2K | 1 | R305,307 | | Carbon 150 ohm ±5% 1/4W | 2 |
| SVR503 | 4-222T-81472 | Semifixed Variable Resistor 1K | 1 | R302 | | Carbon 220 ohm ±5% 1/4W | 1 |
| SVR502 | 4-222T-81475 | Semifixed Variable Resistor 10K | 1 | R113 | | Carbon 470 ohm ±5% 1/4W | 1 |
| CF501,502 | 4-227T-02300 | CR Pack | 2 | R101,505 | | Carbon 1K ohm ±5% 1/4W | 2 |
| Q103 | | Transistor 2SC930 | 1 | R508,509 | | Carbon 3.9K ohm ±5% 1/4W | 2 |
| Q101,102 | | Transistor 2SC535 | 2 | R116,122, 312,504 | | Carbon 6.8K ohm ±5% 1/4W | 4 |
| Q502 | | Transistor 2SA608 | 1 | R112 | | Carbon 10K ohm ±5% 1/4W | 1 |
| Q501 | | Transistor FET 2SK44 | 1 | R316 | | Carbon 22K ohm ±5% 1/4W | 1 |
| Q104 | | Transistor 2SC930 | 1 | R506 | | Carbon 68K ohm ±5% 1/4W | 1 |
| Q301 | | Transistor 2SC536 | 1 | R105 | | Carbon 560K ohm ±5% 1/4W | 1 |
| D302,501 | | Diode DS442 X | 2 | R516 | | Carbon 15 ohm ±5% 1/4W | 1 |
| D101 | | Diode SD115 | 1 | R114 | | Carbon 100K ohm ±5% 1/4W | 1 |
| D301 | | Zener Diode GZA5.1L | 1 | R502 | | Carbon 33 ohm ±5% 1/4W | 1 |
| D502 | | Varystor VD1221M | 1 | R317 | | Carbon 3.9K ohm ±10% 1/8W | 1 |
| IC501 | | IC LA3361 | 1 | R303 | | Carbon 6.8 ohm ±10% 1/4W | 1 |
| IC301 | | IC TA7614APYL DIP16 | 1 | R503 | | Carbon 390 ohm ±5% 1/4W | 1 |
| | | | | R304 | | Carbon 100 ohm ±5% 1/4W | 1 |
| | | | | R107 | | Carbon 150 ohm ±5% 1/4W | 1 |
| | | | | R510 | | Carbon 680 ohm ±5% 1/4W | 1 |

PARTS LIST

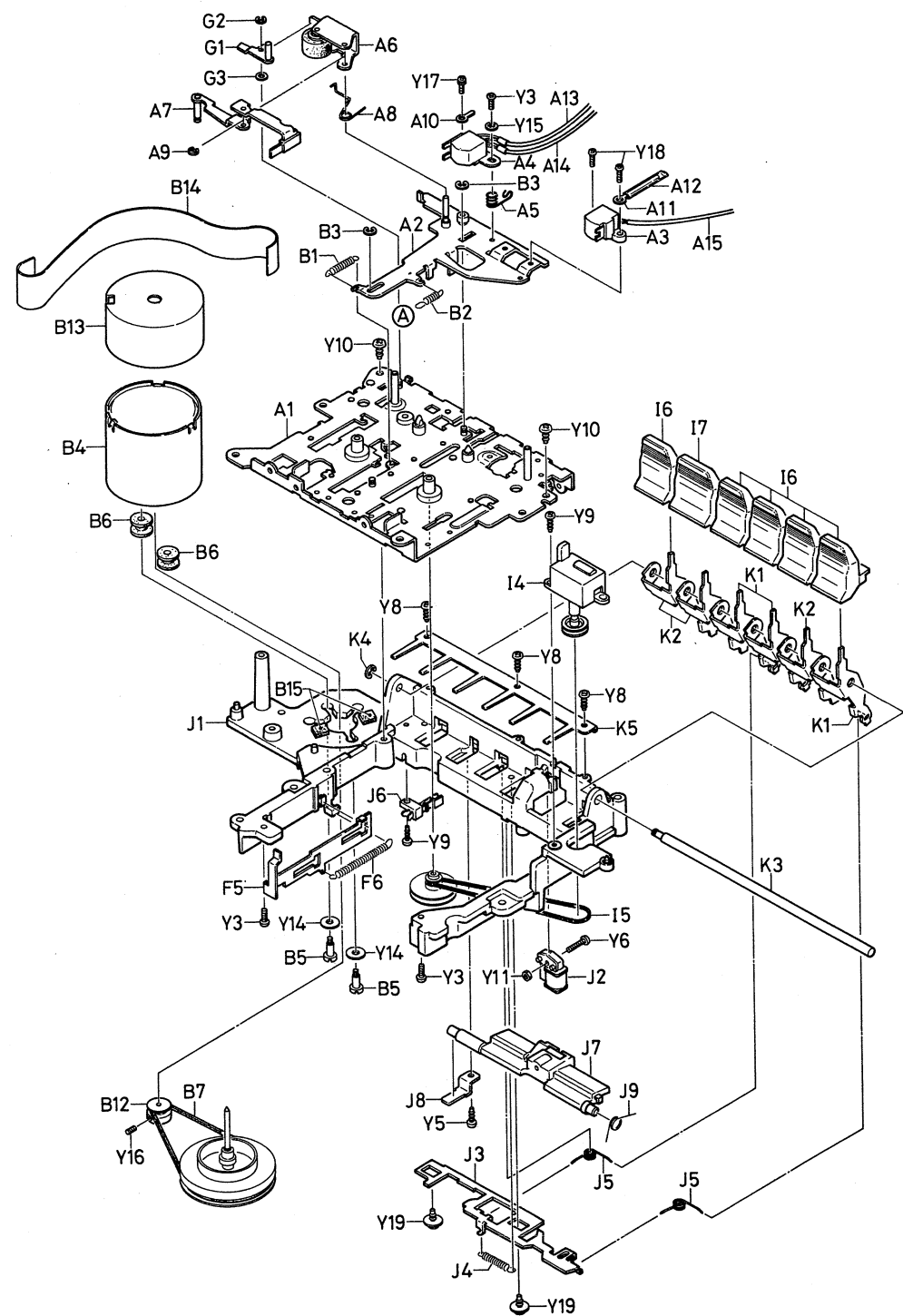
| Key No. | Part No. | Description | Q'ty |
|----------------------|------------------|----------------------------|------|
| TUNER PCB ASS'Y | | | |
| R110,513, 514,515 | | Carbon 1K ohm ±5% 1/4W | 4 |
| R103,106, 108 | | Carbon 1.5K ohm ±5% 1/4W | 3 |
| R310,313 | | Carbon 1.8K ohm ±5% 1/4W | 2 |
| R111 | | Carbon 3.3K ohm ±5% 1/4W | 1 |
| R511 | | Carbon 3.9K ohm ±5% 1/4W | 1 |
| R119 | | Carbon 8.2K ohm ±5% 1/4W | 1 |
| R314 | | Carbon 15K ohm ±5% 1/4W | 1 |
| R308 | | Carbon 100K ohm ±5% 1/4W | 1 |
| R109 | | Carbon 270K ohm ±5% 1/4W | 1 |
| R102 | | Carbon 560K ohm ±5% 1/4W | 1 |
| R115 | | Carbon 56 ohm ±5% 1/4W | 1 |
| R104 | | Carbon 220 ohm ±5% 1/4W | 1 |
| R507 | | Carbon 220 ohm ±5% 1/4W | 1 |
| R311 | | Carbon 3.3K ohm ±5% 1/4W | 1 |
| R306 | | Carbon 680 ohm ±5% 1/4W | 1 |
| MECHANISM | | | |
| A1 | 141-0-311T-32605 | Shassis Ass'y | 1 |
| A2 | 141-0-731T-85701 | Slide Ass'y, Head | 1 |
| A3 | 4-242T-26300 | E Head | 1 |
| A4 | 4-242T-24671 | R/D Head | 1 |
| A5 | 141-2-855T-42000 | Spring Coil | 1 |
| A6 | 141-0-545T-05900 | Lever Pinch Roller Ass'y | 1 |
| A7 | 141-0-742T-35900 | Lever Ass'y | 1 |
| A8 | 141-2-852T-57900 | Spring Wire | 1 |
| A9 | 141-2-457T-23800 | Special Washer, 1.5mm | 1 |
| A10 | 123-2-472R-00200 | Lug | 1 |
| A11 | 141-2-472T-02200 | Lug | 1 |
| A12 | 141-2-490T-00600 | Tube | 1 |
| A13 | 4-240T-04400 | Socket, R/P Head Lead | 1 |
| A14 | 4-240T-04500 | Socket, R/P Head Leak | 1 |
| A15 | 4-240T-04600 | Socket, E Head Lead | 1 |
| B1 | 141-2-855T-43000 | Spring Coil | 1 |
| B2 | 141-2-855T-42200 | Spring Coil | 1 |
| B3 | 141-2-457T-23000 | Special Washer, 2mm | 2 |
| B4 | 4-527T-14400 | Motor | 1 |
| B5 | 141-2-421T-32300 | Special Screw | 2 |
| B6 | 141-2-445T-25600 | Rubber Cushion | 2 |
| B7 | 141-2-564T-24000 | Square Belt | 1 |
| B8 | 141-0-521T-09911 | Flywheel Ass'y | 1 |
| B9 | 141-2-453T-30102 | Washer, 2.1x4x0.5 Nylon | 1 |
| | 141-2-453T-30101 | Washer, 2.1x4x0.25 Nylon | 1 |
| B10 | 141-2-457T-08201 | Special Washer | 1 |
| B11 | 141-0-524T-08600 | Bracket Flywheel Ass'y | 1 |
| B12 | 141-2-661T-76400 | Pulley Motor | 1 |
| B13 | 141-2-322T-27100 | Shield Plate | 1 |
| B14 | 141-2-184T-02400 | Tape | 1 |
| B15 | 141-2-455T-26200 | Rubber Cushion | 2 |
| C1 | 141-2-731T-72402 | Slide, REW | 1 |
| C2 | 141-2-855T-42301 | Spring Coil | 1 |
| C3 | 141-2-457T-23800 | Special Washer | 1 |
| C4 | 141-2-742T-34700 | Lever, REW | 1 |
| C5 | 141-0-742T-35020 | Lever Ass'y | 1 |
| C6 | 141-0-661T-28500 | Pully Ass'y | 1 |
| C7 | 141-2-453T-30101 | Washer, 2.1x4x0.25 Nylon | 1 |
| C8 | 141-2-453T-30001 | Washer, 1.7x3.2x0.25 Nylon | 1 |
| C9 | 141-2-855T-42400 | Spring Coil | 1 |
| C10 | 141-2-457T-23600 | Special Washer | 1 |
| C11 | 141-2-564T-21600 | Square Belt | 1 |
| C12 | 141-0-731T-72502 | Slide Ass'y | 1 |
| C13 | 141-2-855T-42500 | Spring Coil | 1 |
| C14 | 141-2-457T-23000 | Special Washer, 2mm | 1 |
| D1 | 141-2-742T-59000 | Lever | 1 |
| D2 | 141-2-855T-68300 | Spring Coil | 1 |
| D3 | 141-2-457T-23000 | Special Washer | 1 |
| D4 | 141-0-731T-72702 | Slide Ass'y, Play | 1 |
| D5 | 141-2-742T-34900 | Lever, REC | 1 |
| D6 | 141-2-852T-58300 | Spring Wire | 1 |
| D7 | 141-2-457T-23800 | Special Washer, 1.5mm | 3 |
| D8 | 141-2-731T-72800 | Slide | 1 |
| D9 | 141-2-855T-42800 | Spring Coil | 1 |
| D10 | 141-2-731T-72900 | Slide | 1 |
| D11 | 141-2-490T-15600 | Tube | 1 |
| D12 | 141-2-855T-42900 | Spring Coil | 1 |
| E1 | 141-2-731T-72602 | Slide, F. FWD | 1 |
| E2 | 141-2-855T-43201 | Spring Coil | 1 |
| E3 | 141-2-742T-34800 | Lever | 1 |
| E4 | 141-2-457T-23800 | Special Washer, 1.5mm | 4 |
| E5 | 141-0-742T-35300 | Lever Ass'y | 1 |
| E6 | 141-0-742T-35400 | Lever Ass'y | 1 |

| Key No. | Part No. | Description | Q'ty |
|--------------------|------------------|------------------------------|------|
| MECHANISM | | | |
| E7 | 141-0-551T-03400 | Idler Ass'y | 1 |
| E8 | 141-2-453T-30101 | Washer, 2.1x4x0.25 Nylon | 1 |
| E9 | 141-2-453T-30001 | Washer, 1.7x3.2x0.25 Nylon | 1 |
| E10 | 141-2-855T-43100 | Spring Coil | 1 |
| E11 | 141-2-731T-73003 | Slide | 1 |
| E12 | 141-2-855T-42100 | Spring Coil | 1 |
| F1 | 141-2-742T-35200 | Lever | 1 |
| F2 | 141-2-457T-23800 | Special Washer | 2 |
| F3 | 141-2-742T-59400 | Lever | 1 |
| F4 | 141-2-855T-67300 | Spring Coil | 1 |
| F5 | 141-2-731T-85900 | Slide, Eject | 1 |
| F6 | 141-2-855T-67800 | Spring Coil | 1 |
| F7 | 141-2-731T-73102 | Slide, Panse | 1 |
| F8 | 141-2-858T-08700 | Bracket Spring | 1 |
| F9 | 141-2-855T-42100 | Spring Coil | 1 |
| F10 | 141-2-742T-35600 | Lever | 1 |
| F11 | 141-2-852T-58000 | Spring Wire | 1 |
| F12 | 141-2-453T-32700 | Special Washer | 1 |
| G1 | 141-0-742T-37900 | Lever Ass'y | 1 |
| G2 | 141-2-457T-23800 | Special Washer | 2 |
| G3 | 141-2-457T-34700 | Special Washer | 1 |
| G4 | 141-2-365T-44200 | Bracket, Switch | 1 |
| G5 | 4-238T-11200 | Switch, Main | 1 |
| G6 | 141-0-532T-04201 | Reel Guide Ass'y | 1 |
| G7 | 141-2-453T-30101 | Washer, 2.1x4x0.25 Nylon | 2 |
| G8 | 141-2-661T-28400 | Pulley, Supply | 1 |
| G9 | 141-2-457T-23700 | Special Washer | 1 |
| G10 | 141-2-457T-11002 | Special Washer | 1 |
| G11 | 141-2-742T-34500 | Lever, Play | 1 |
| G12 | 141-2-581T-15801 | Gear | 1 |
| G13 | 141-2-453T-30001 | Washer, 1.7x3.2x0.25 Nylon | 1 |
| H1 | 141-0-574T-02700 | Roller Ass'y | 1 |
| H2 | 141-2-581T-15600 | Gear | 1 |
| H3 | 141-2-453T-30102 | Washer, 2.1x4x0.5 Nylon | 1 |
| H4 | 141-2-742T-36000 | Lever | 1 |
| H5 | 141-2-853T-63400 | Spring Plate | 1 |
| H6 | 141-2-453T-61000 | Washer, 1.8x3.5x0.3 | 1 |
| H7 | 141-0-532T-04201 | Reel Guide Ass'y | 1 |
| H8 | 141-2-457T-11002 | Special Washer | 1 |
| H9 | 141-2-457T-23700 | Special Washer | 1 |
| H10 | 141-2-731T-73200 | Slide | 1 |
| H11 | 141-2-461T-35400 | Pipe | 1 |
| H12 | 141-2-461T-35500 | Pipe | 1 |
| H13 | 141-2-457T-23800 | Special Washer, 1.5mm | 1 |
| H14 | 141-2-457T-23000 | Special Washer, 2mm | 2 |
| H15 | 141-2-855T-43300 | Spring Coil | 1 |
| H16 | 141-0-742T-35800 | Lever Ass'y | 1 |
| I1 | 141-2-742T-35700 | Lever | 1 |
| I2 | 141-2-855T-42700 | Spring Coil | 1 |
| | 141-2-855T-42701 | Spring Coil | 1 |
| I3 | 141-2-457T-23800 | Special Washer, 1.5mm | 2 |
| I4 | 141-2-811T-08600 | Counter | 1 |
| I5 | 141-2-564T-24100 | Square Belt | 1 |
| I6 | 141-2-611T-14500 | Lever Push Button, Stop | 5 |
| I7 | 141-2-611T-14600 | Lever Push Button, Panse | 1 |
| I8 | 141-2-742T-40601 | Lever, Panse | 1 |
| I9 | 141-2-490T-20001 | Tube | 1 |
| I10 | 141-2-855T-55800 | Spring Coil | 1 |
| J1 | 141-2-351T-53300 | Bracket | 1 |
| J2 | 4-264T-09900 | Magnetic Coil | 1 |
| J3 | 141-2-731T-85800 | Slide | 1 |
| J4 | 141-2-855T-68200 | Spring Coil | 1 |
| J5 | 141-2-852T-66400 | Spring Wire | 2 |
| J6 | 4-238T-20800 | Switch, AMSS | 1 |
| J7 | 141-0-742T-58900 | Lever Ass'y, AMSS | 1 |
| J8 | 141-2-747T-21900 | Bracket, Lever | 1 |
| J9 | 141-2-852T-67800 | Spring Wire | 1 |
| K1 | 141-2-742T-59200 | Lever | 2 |
| K2 | 141-2-742T-59300 | Lever | 3 |
| K3 | 141-2-753T-96900 | Shaft | 1 |
| K4 | 141-2-457T-23000 | Special Washer | 1 |
| K5 | 141-2-853T-69700 | Spring Plate | 1 |
| K7 | 141-2-742T-59301 | Lever | 1 |
| MECHANISM HARDWARE | | | |
| Y1 | | Pan Hd. Screw 1.7x2 | 1 |
| Y2 | | Pan Hd. Screw, 2x4 | 1 |
| Y3 | | Pan Hd. Screw, 2x6 | 3 |
| Y4 | | Pan Hd. Screw, 2.3x4 | 2 |
| Y6 | | Pan Hd. Screw, 2x12 | 1 |
| Y7 | | Flat Hd. Screw, 2.6x6 | 2 |
| Y8 | | Pan Hd. Tapping Screw, 2.3x4 | 3 |

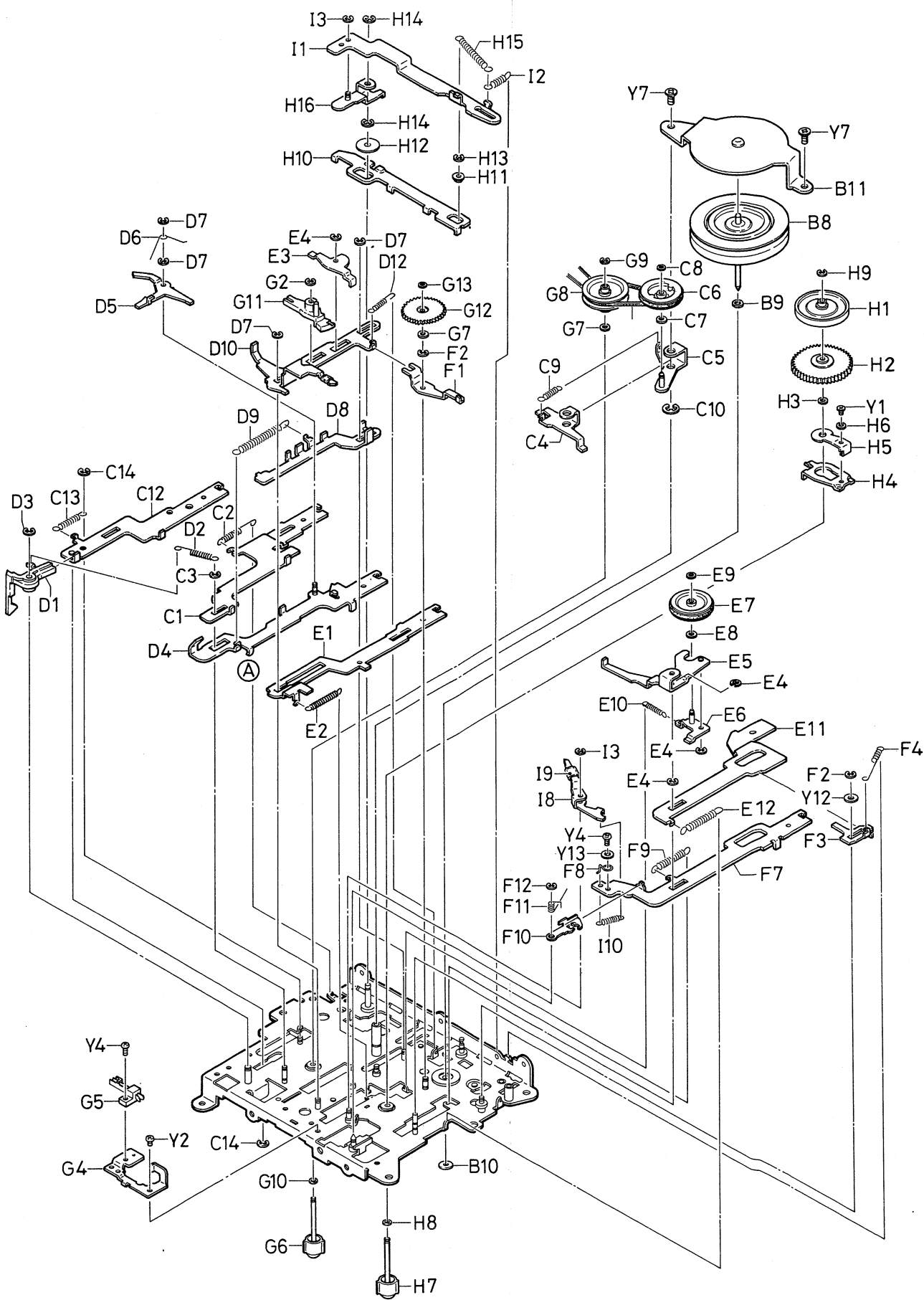
PARTS LIST

| Key No. | Part No. | Description | Q'ty | Key No. | Part No. | Description | Q'ty |
|--------------------|----------|------------------------------|------|--------------------|----------|------------------------------------------|------|
| MECHANISM HARDWARE | | | | MECHANISM HARDWARE | | | |
| Y9 | | Pan Hd. Tapping Screw, 2.3x6 | 2 | Y16 | | Head Less Screw, 2x4 | 1 |
| Y10 | | Pan Hd. Tapping Screw, 3x8 | 2 | Y18 | | Pan Hd. Screw W/spring, Washer, 2x6 | 3 |
| Y11 | | Hexagon Nut 2 | 1 | Y19 | | Pan Hd. Tapping Screw W/Washer, 3x5 | 2 |
| Y12 | | Washer, 2x4x0.4t | 1 | Y20 | | Pan Hd. Tapping Screw W/Washer, 2.3x8 | 1 |
| Y13 | | Washer, 2.3x4.3x0.4t | 1 | | | | |
| Y14 | | Washer, 3x8x0.5t | 2 | | | | |
| Y15 | | Washer, 2x4.8x0.32 | 1 | | | | |

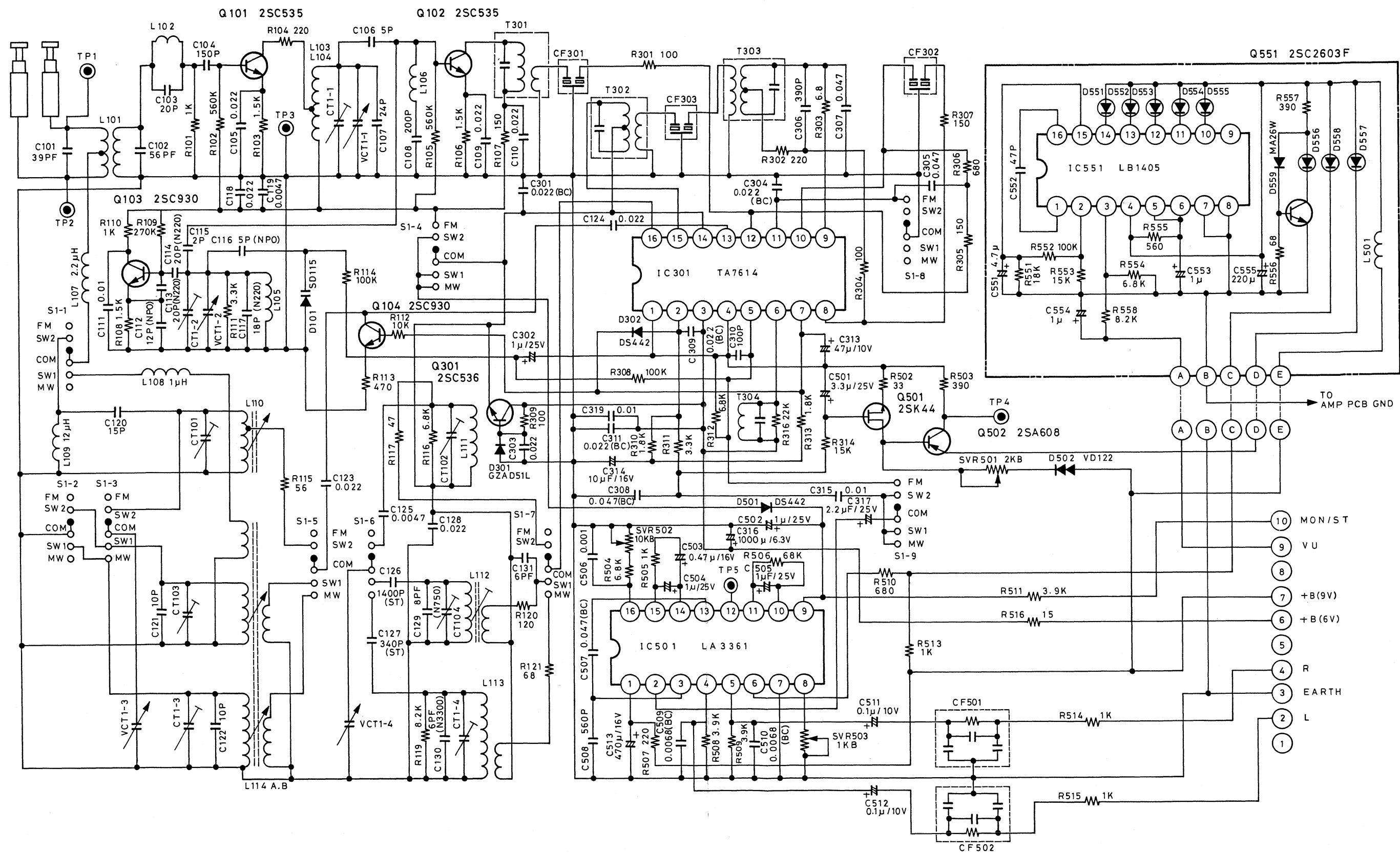
EXPLODED VIEW (MECHANISM 1)



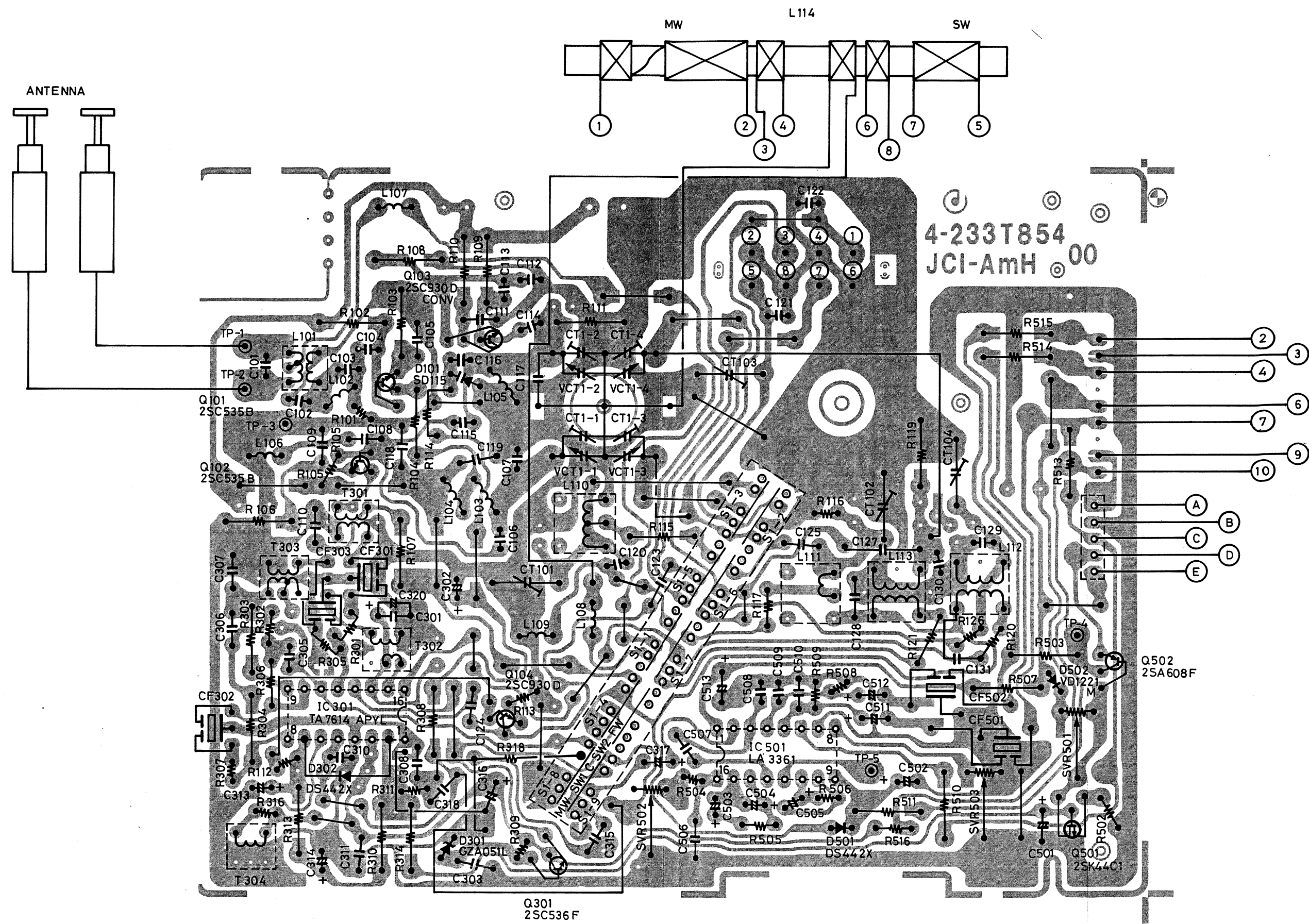
EXPLODED VIEW (MECHANISM 2)



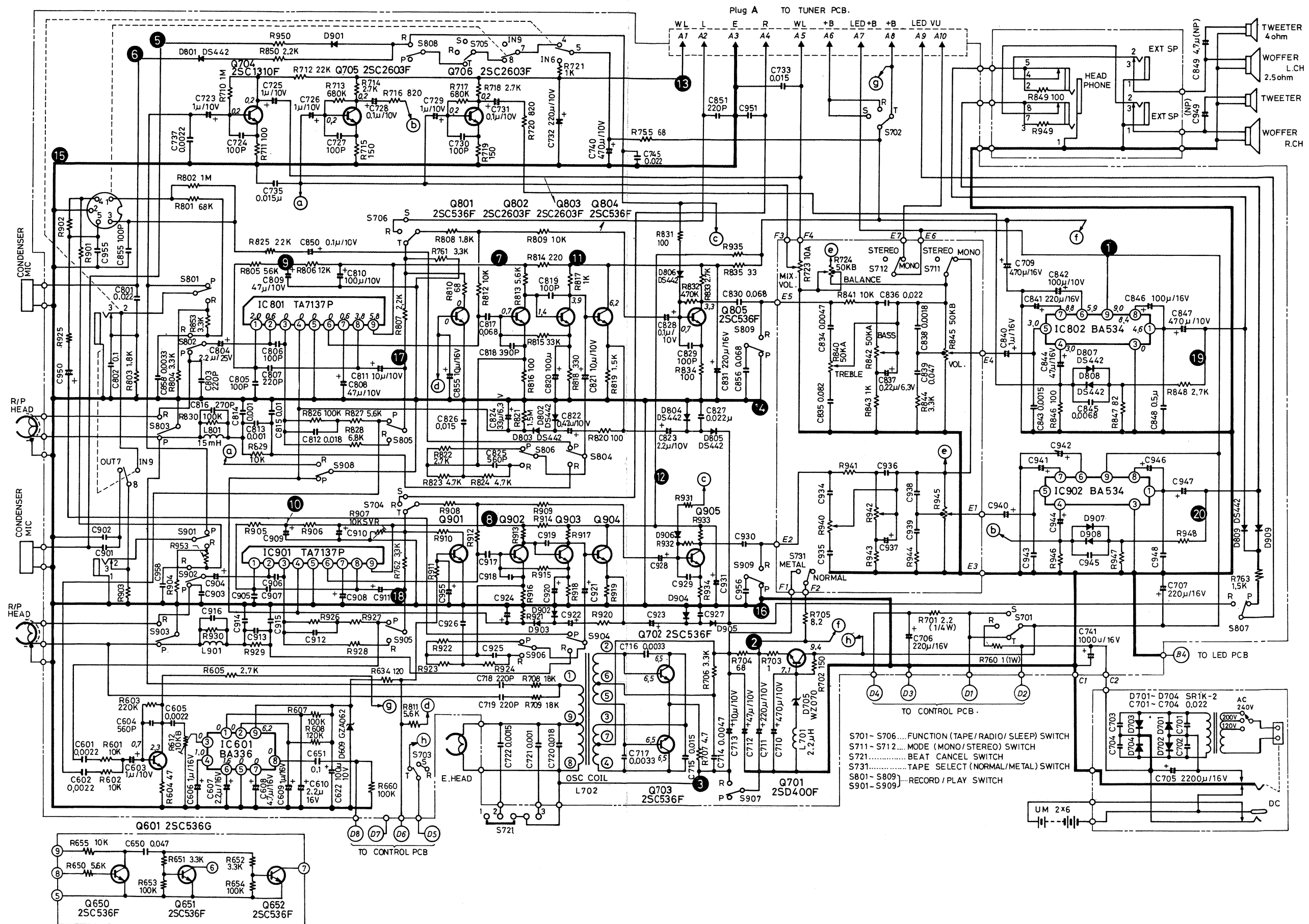
SCHEMATIC DIAGRAM (TUNER)



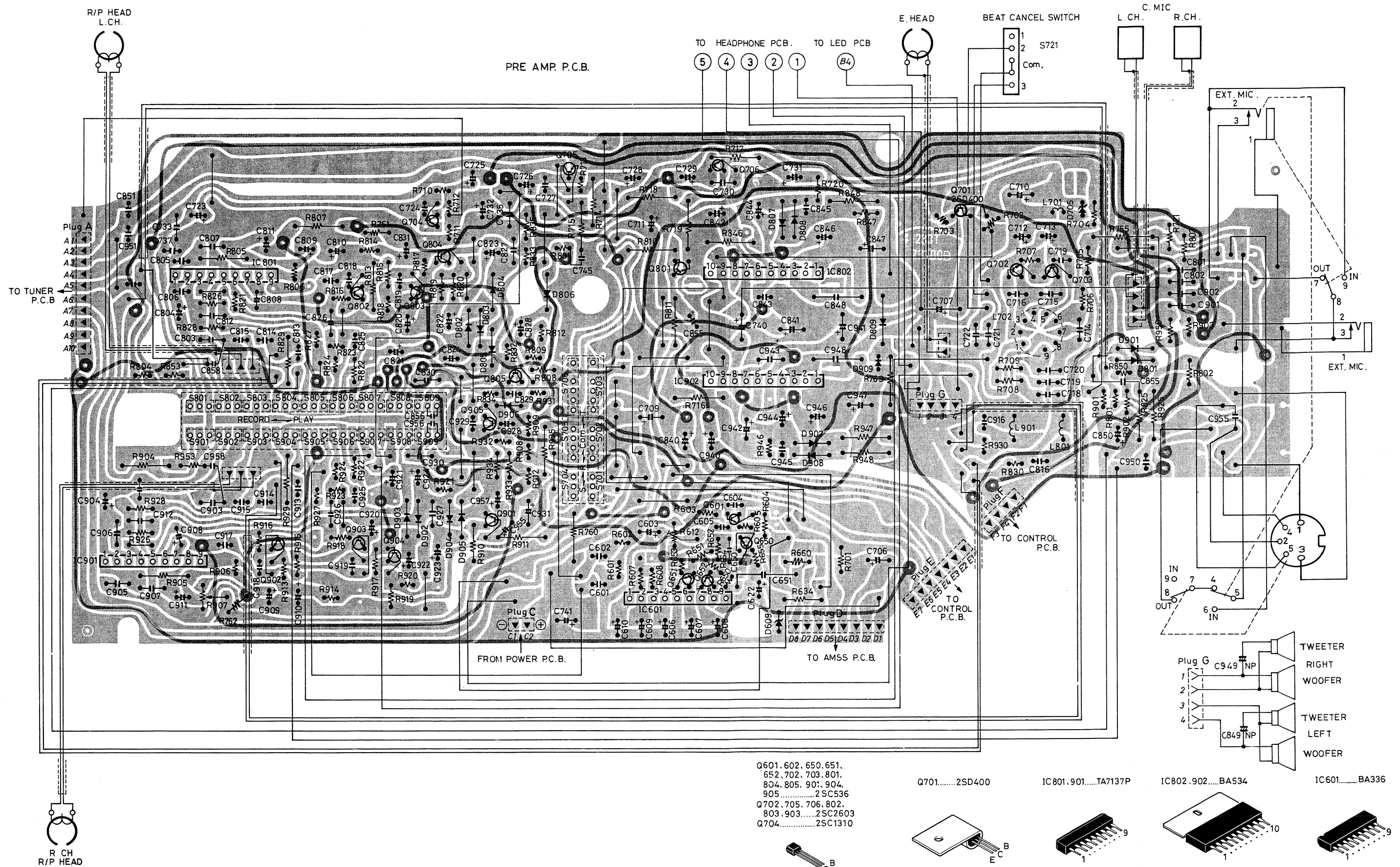
WIRING DIAGRAM (TUNER)



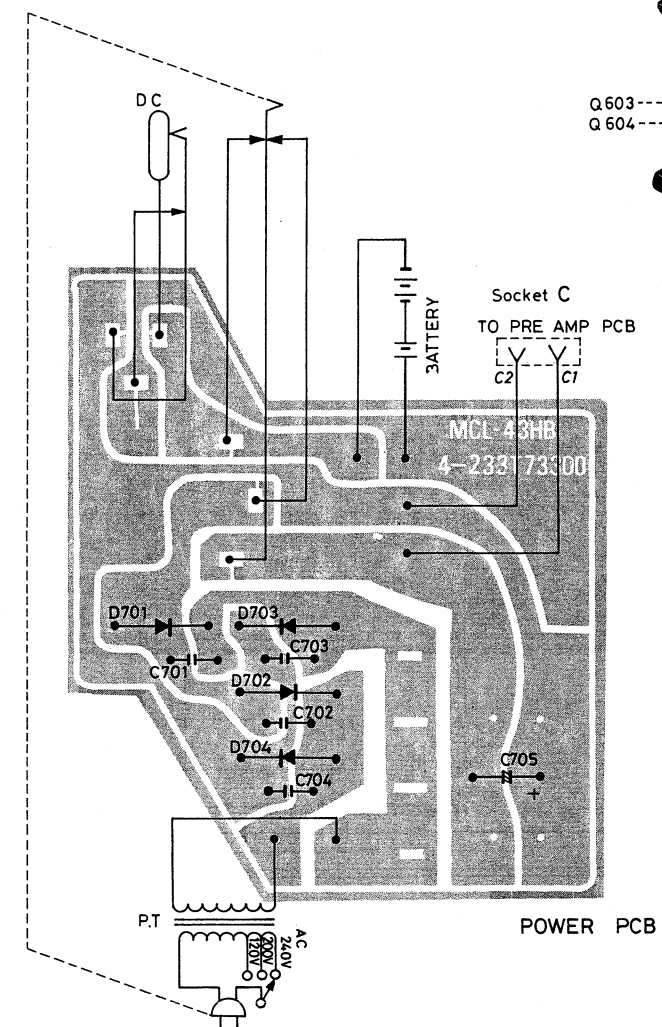
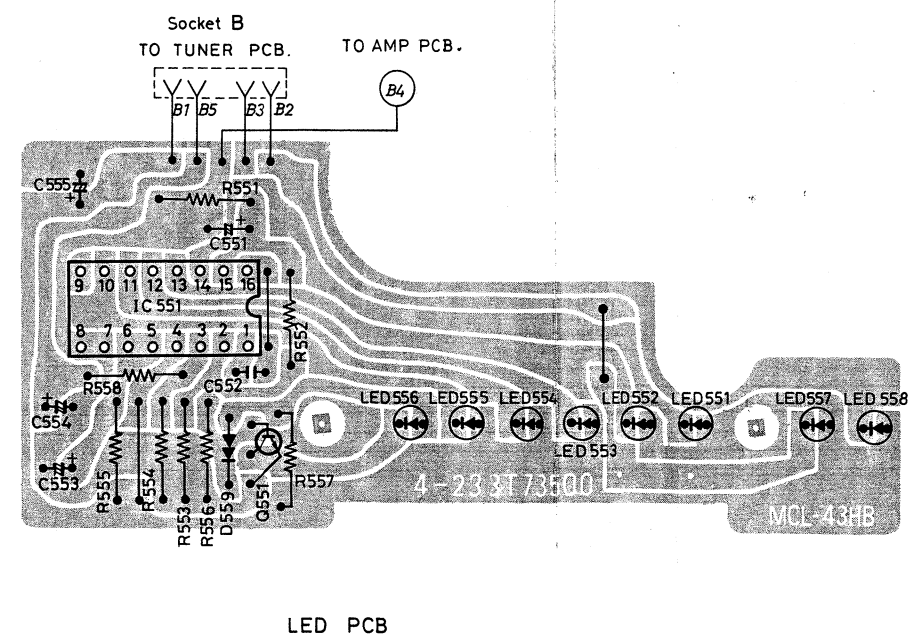
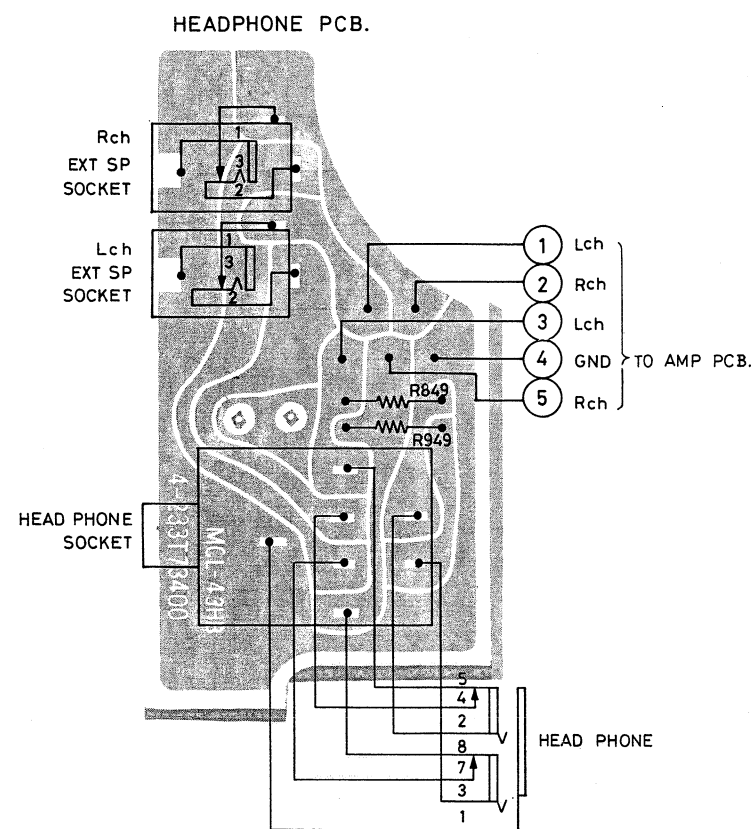
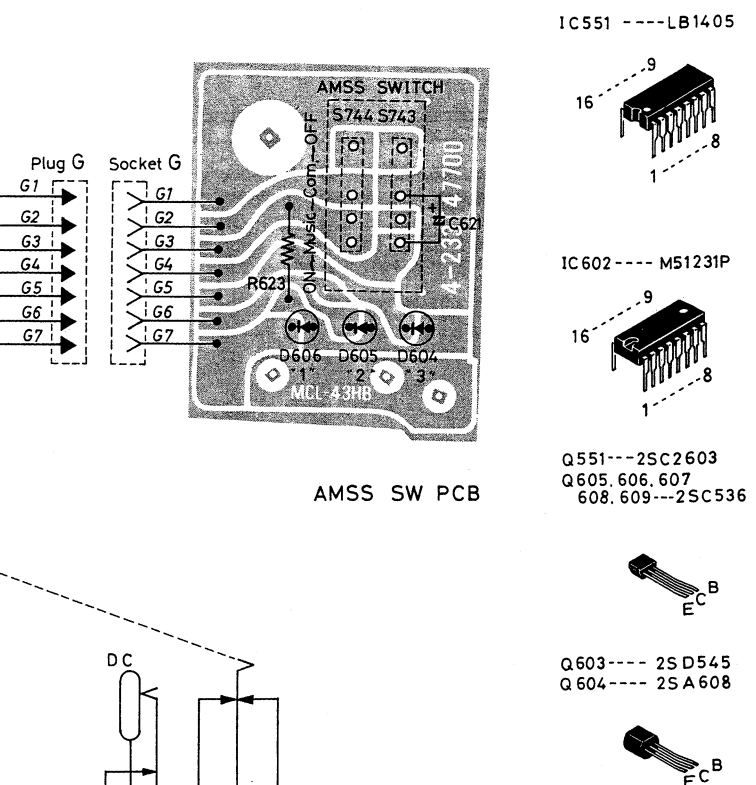
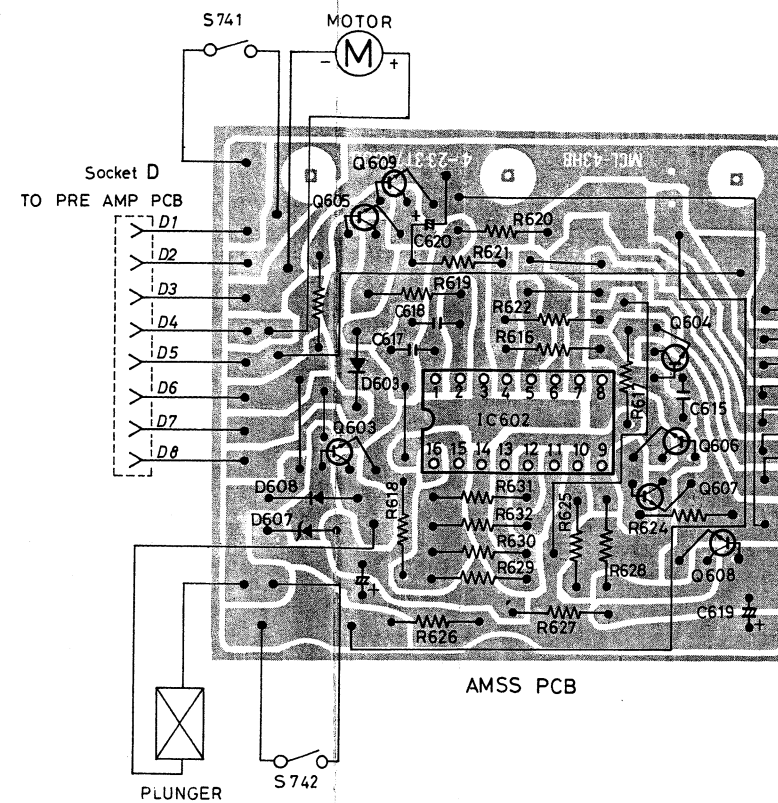
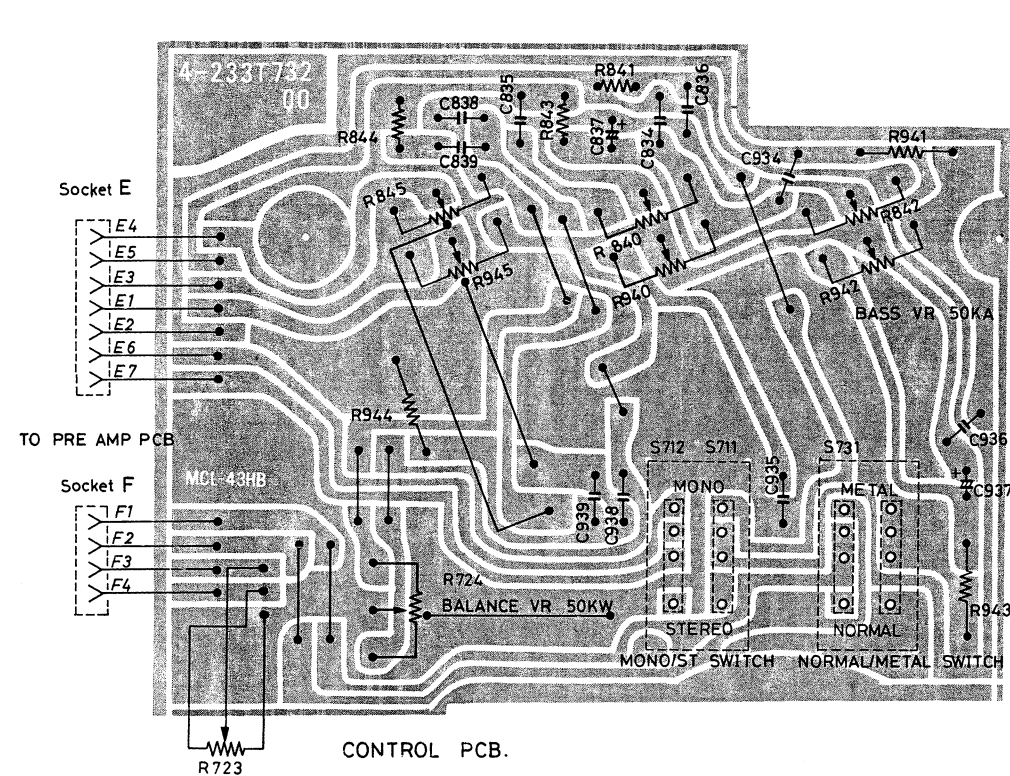
SCHEMATIC DIAGRAM (AMP).



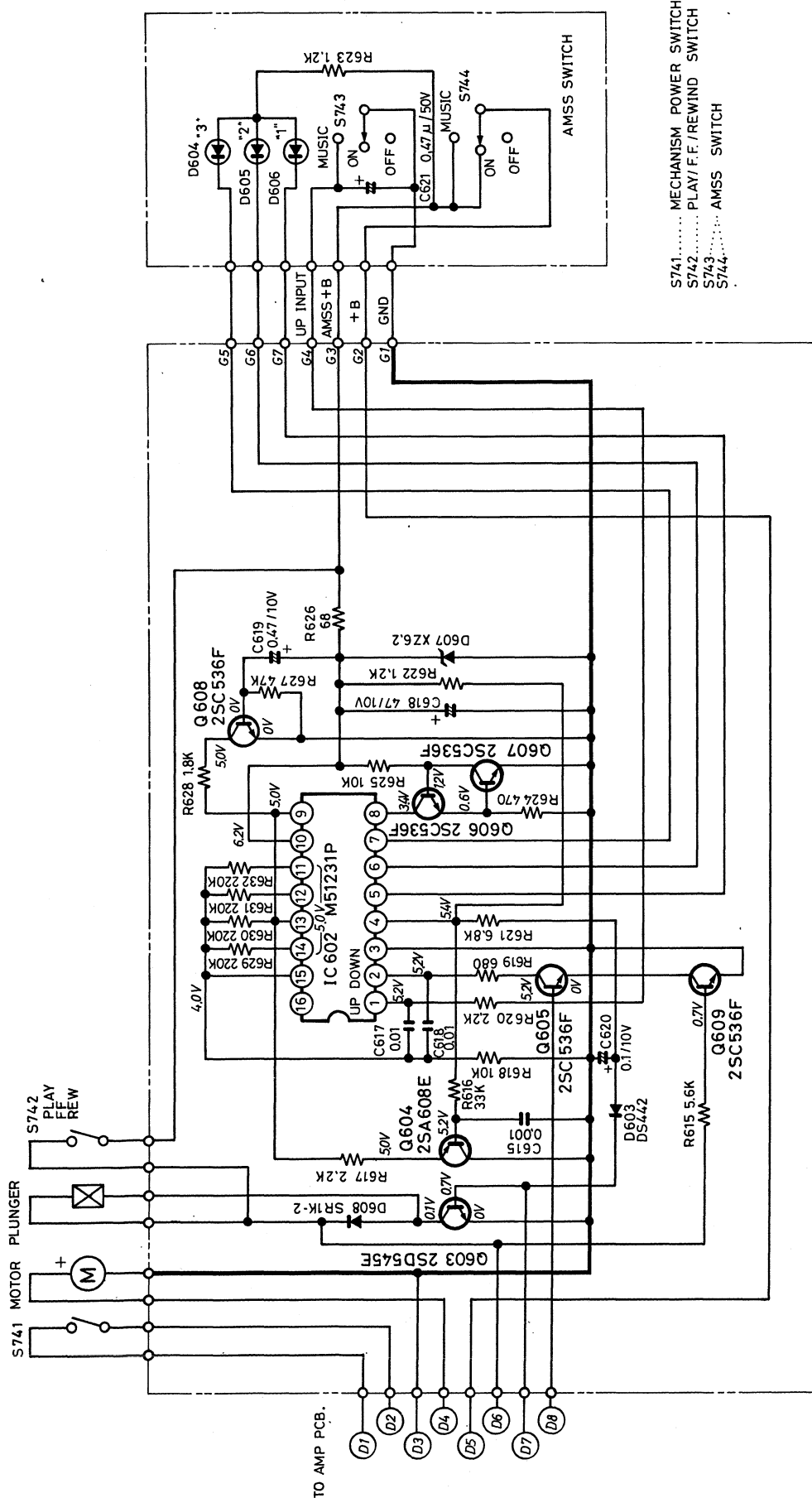
WIRING DIAGRAM (AMP)



2



SCHEMATIC DIAGRAM (AMSS)



S741..... MECHANISM POWER SWITCH
S742..... PLAY/F.F./REWIND SWITCH
S743..... AMSS SWITCH
S744..... AMSS SWITCH

Q603 PLUNGER DRIVE
Q604 SWITCHING
Q605 Q609 LED DOWN SHIFT
Q606 Q607 FLIP FLOP RESET
Q608 LED 1 (D606) LIGHT ON

Voltage indicated in AMSS '1' operation mode.
— indicates negative line.