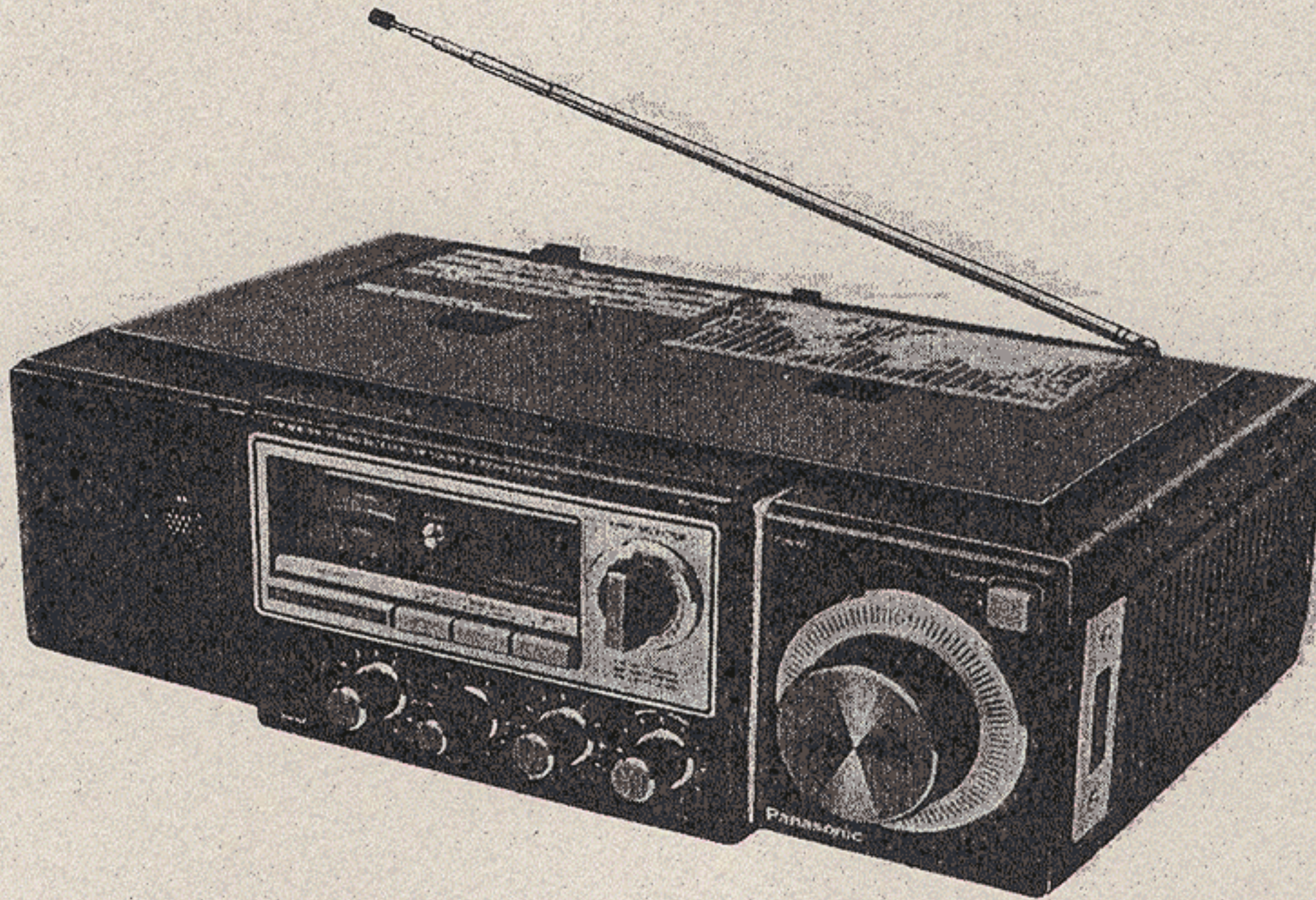


Service Manual

Radio
RF-3100/©

FM/MW/SW₁₋₂₉ 31-Band Portable Radio
with PLL Quartz-Synthesized Tuning



■ SPECIFICATIONS

| | | | |
|-------------------------|---|--------------------|---|
| Frequency Range: | FM 88~108 MHz MW 525~1610 kHz (571~186 m) SW1 1.6~2.0 MHz (186~150 m) SW2 2.0~3.0 MHz (150~100 m) | Power Source: | AC 120 V, 60 Hz or DC 12 V (Eight "D" size Flashlight Batteries) (Panasonic UM-1 or equivalent) |
| Intermediate Frequency: | SW29 29.0~30.0 MHz (10.6~10 m) FM 10.7 MHz MW 455 kHz SW1~SW29 1st 10.695 MHz 2nd 455 kHz | Power Consumption: | 15 W |
| Sensitivity: | FM 2.5 μ V (-3 dB, Limit, Sens) MW 40 μ V/m (Max. Sens) SW1 2.5 μ V/ (S/N 10 dB) SW2 2.2 μ V (S/N 10 dB) SW29 3.2 μ V (S/N 10 dB) | Power Output: | 2.0 mW ... RMS (Max.) |
| | | Speaker: | 9 cm (3 1/2") PM Dynamic Speaker |
| | | Dimensions: | 371 (W) x 122 (H) x 241 (D) mm (14 5/8 x 4 3/4 x 9 1/2") |
| | | Weight: | 3.2 kg (7 lb 1 oz.) without batteries |
| | | Impedance: | Speaker 8 Ω Recording Output Jack 5 k Ω Earphone/External Speaker Jack ... 8 Ω |

Specifications are subject to change without notice.
Weights and dimensions shown are approximate.
(Les poids et dimensions mentionnes sont approximatifs.)

Panasonic

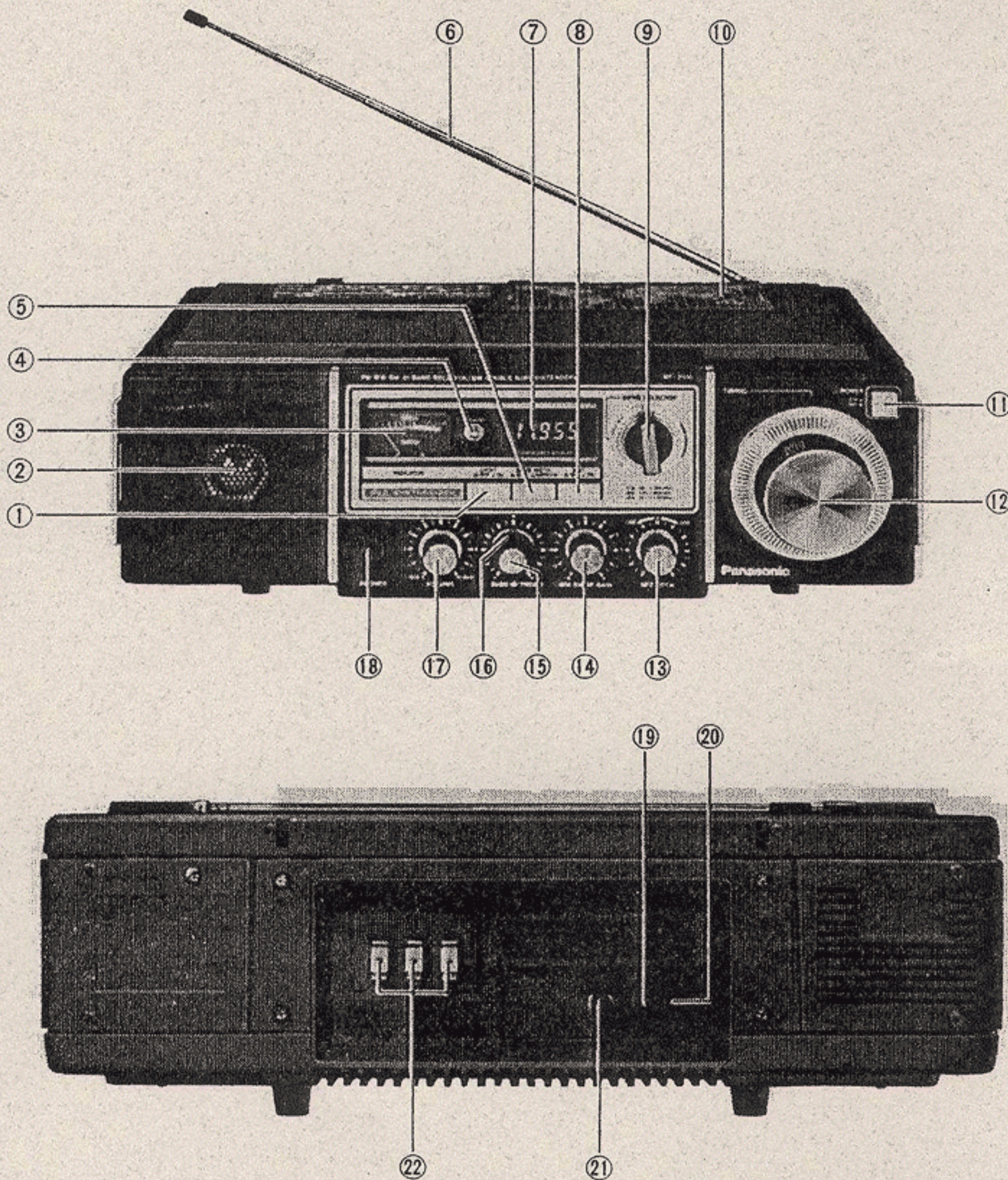
Panasonic Company
Division of Matsushita Electric
Corporation of America
One Panasonic Way, Secaucus,
New Jersey 07094

Panasonic Hawaii, Inc.
320 Waiakamilo Road, Honolulu,
Hawaii 96817

Panasonic Canada
Division of Matsushita Electric
of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Panasonic Sales Company,
Division of Matsushita Electric
of Puerto Rico, Inc.
Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

LOCATION OF CONTROLS AND COMPONENTS



- ① Light Switch
- ② Speaker [9 cm (3 1/2"), 8Ω]
- ③ Signal/Tuning Indicator (INDICATOR)
- ④ Power Indicator (POWER)
- ⑤ Bandwidth Selector (BANDWIDTH)
- ⑥ Telescopic Antenna
- ⑦ Digital Frequency Display (FREQUENCY DISPLAY)
- ⑧ BFO On/Off Switch (BFO)
- ⑨ Band Selector (FM/MW/SW1/SW2 ... SW29)
- ⑩ Battery Compartment Cover
- ⑪ Power Switch (POWER)
- ⑫ Tuning Control (TUNING)
- ⑬ BFO Pitch Control (BFO PITCH)
- ⑭ RF Gain Control (MW, SW RF GAIN)
- ⑮ Treble Control (TREBLE)
- ⑯ Bass Control (BASS)
- ⑰ Volume Control (VOLUME)
- ⑱ Headphone Jack (8Ω)
- ⑲ Recording Output Jack (5 kΩ)
- ⑳ Earphone/External Speaker Jack (8Ω)
- ㉑ Antenna Selector
- ㉒ External Antenna Terminals

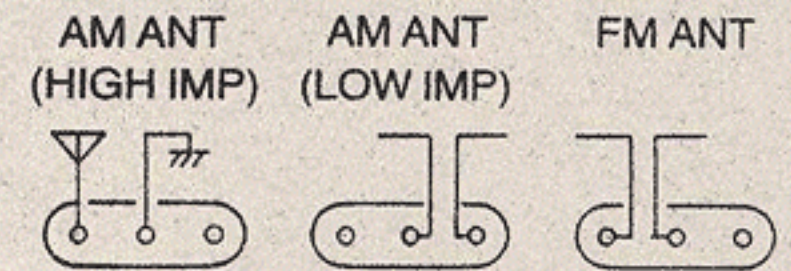


Fig. 1

DISASSEMBLY INSTRUCTIONS

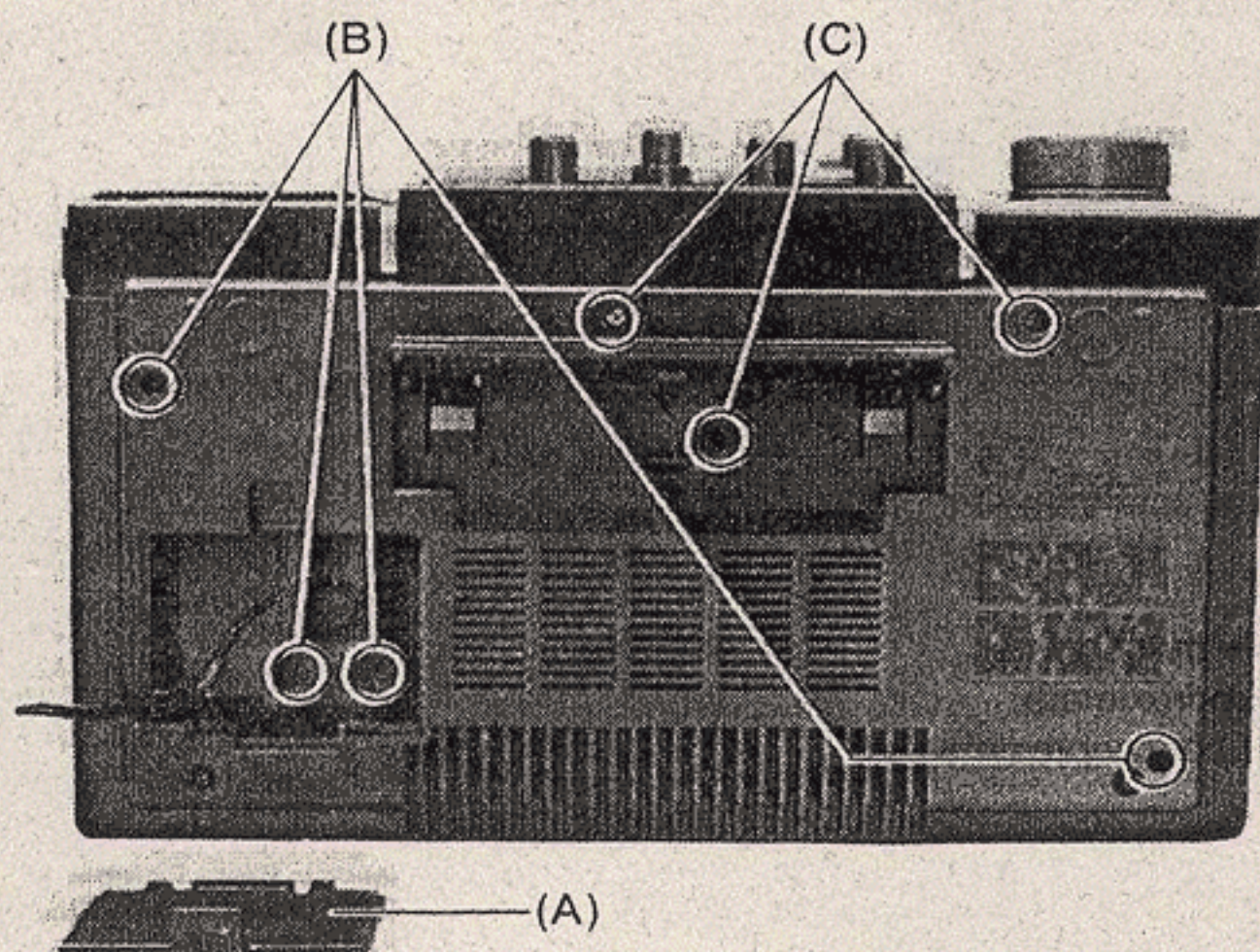


Fig. 2

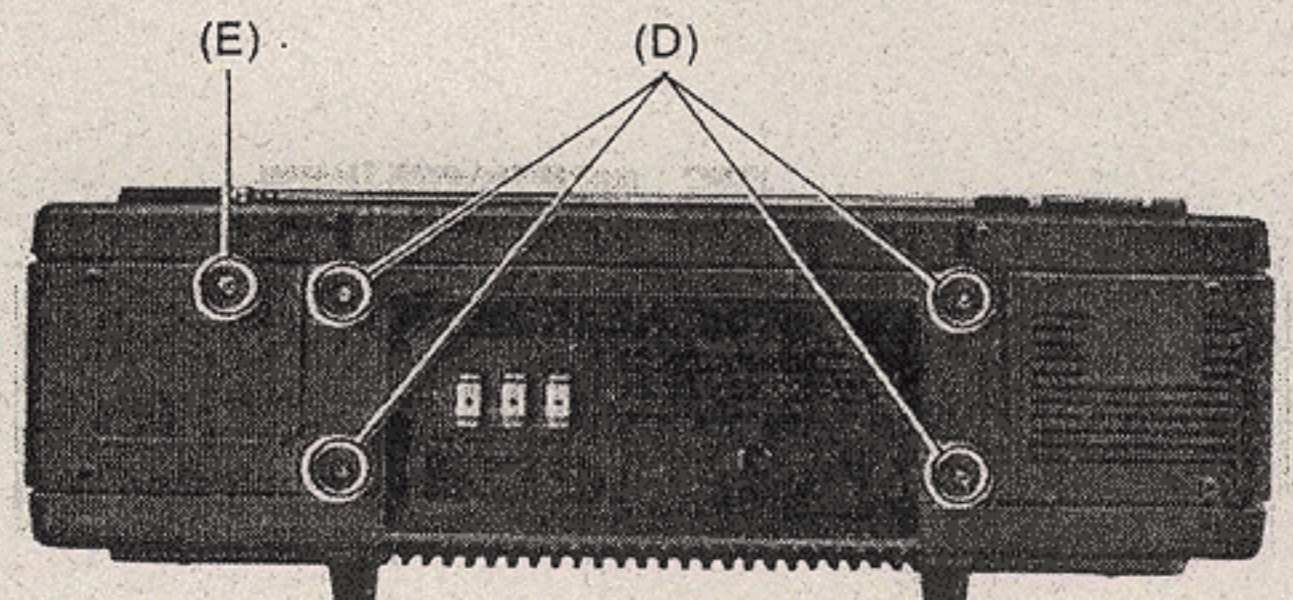


Fig. 3

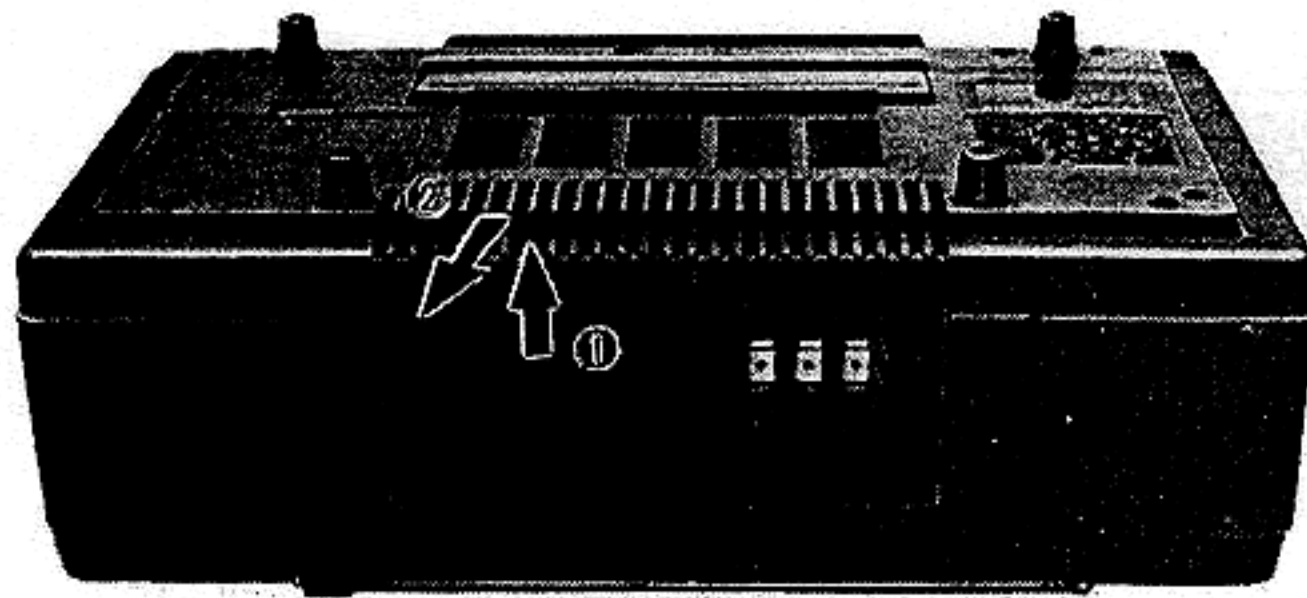


Fig. 4

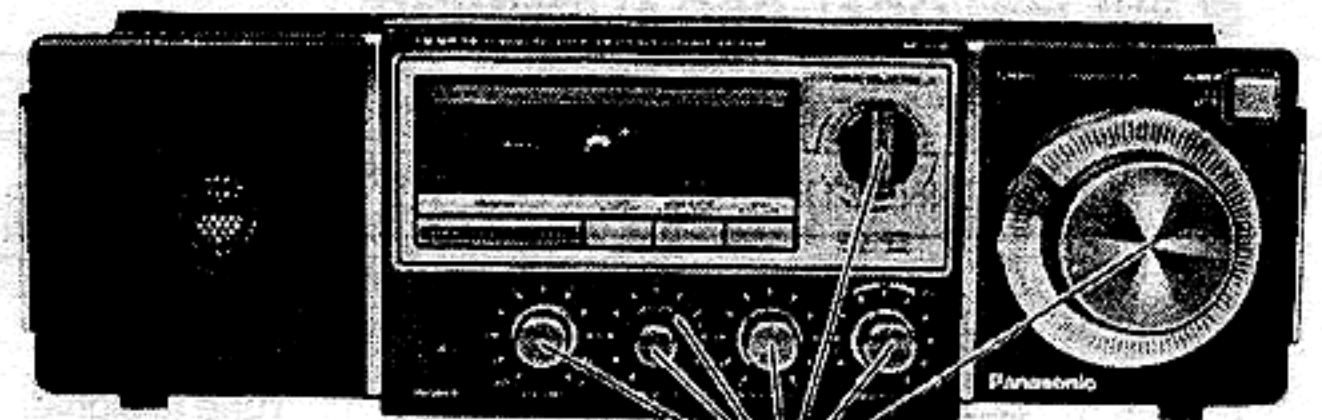


Fig. 5

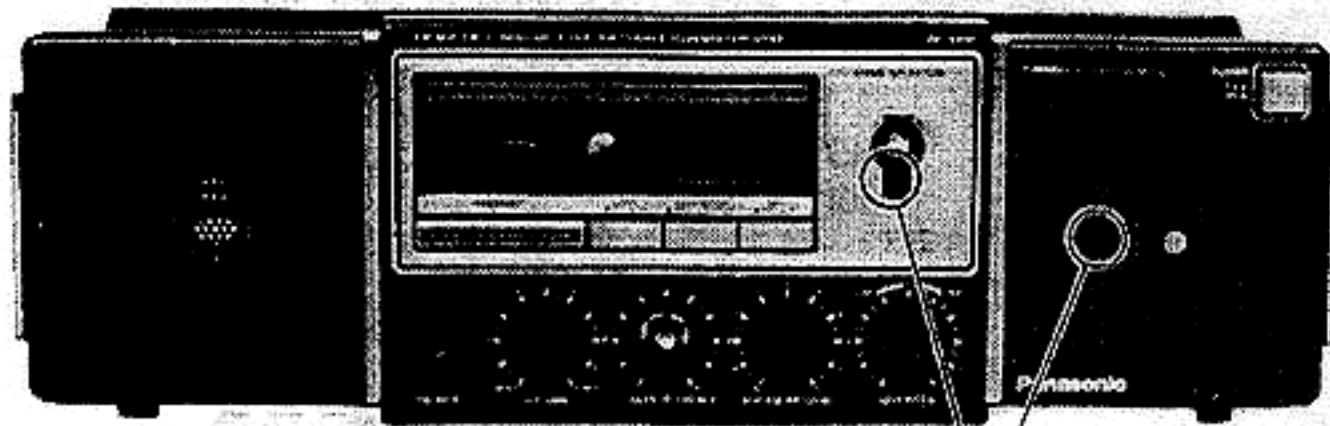


Fig. 6

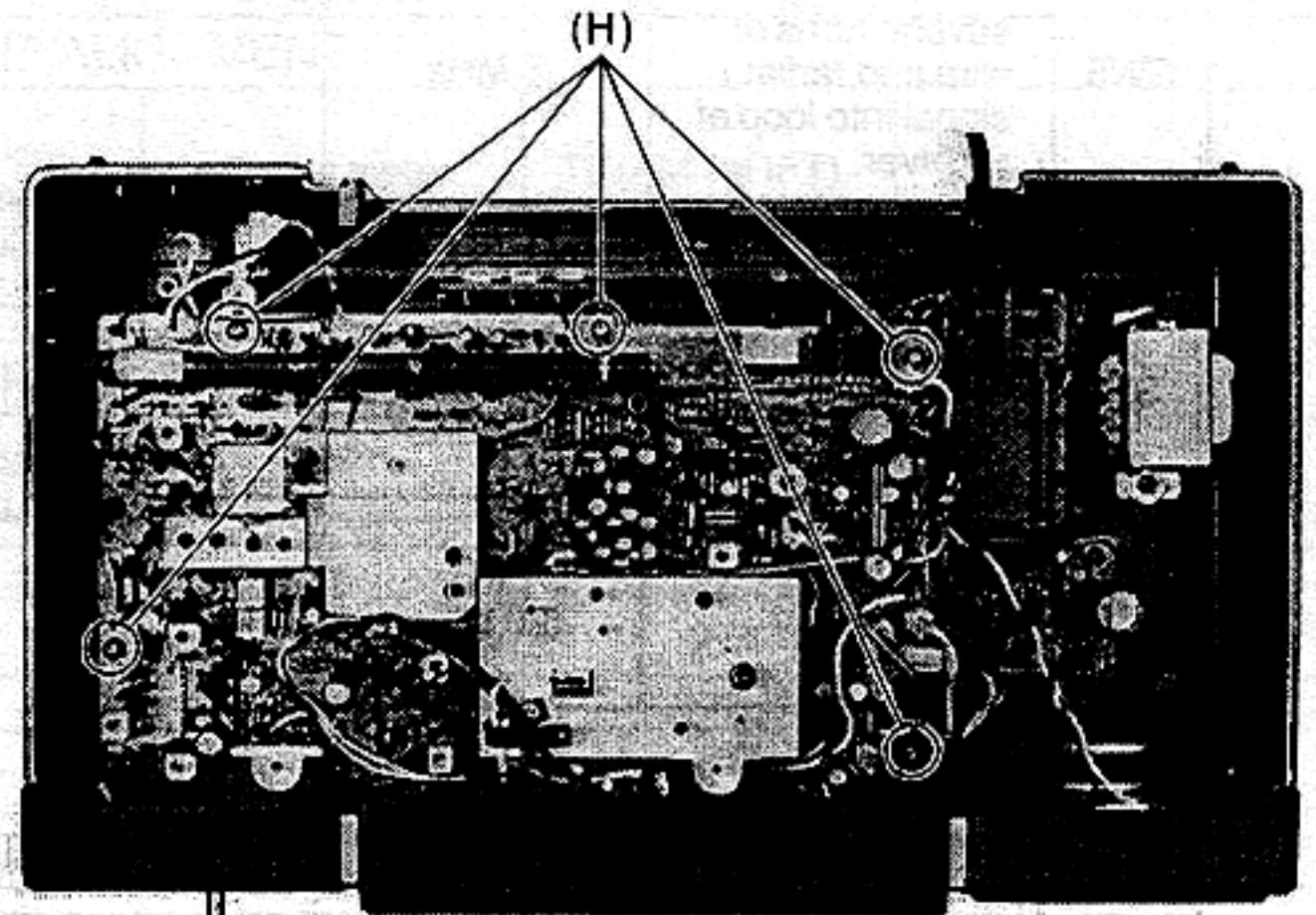


Fig. 7

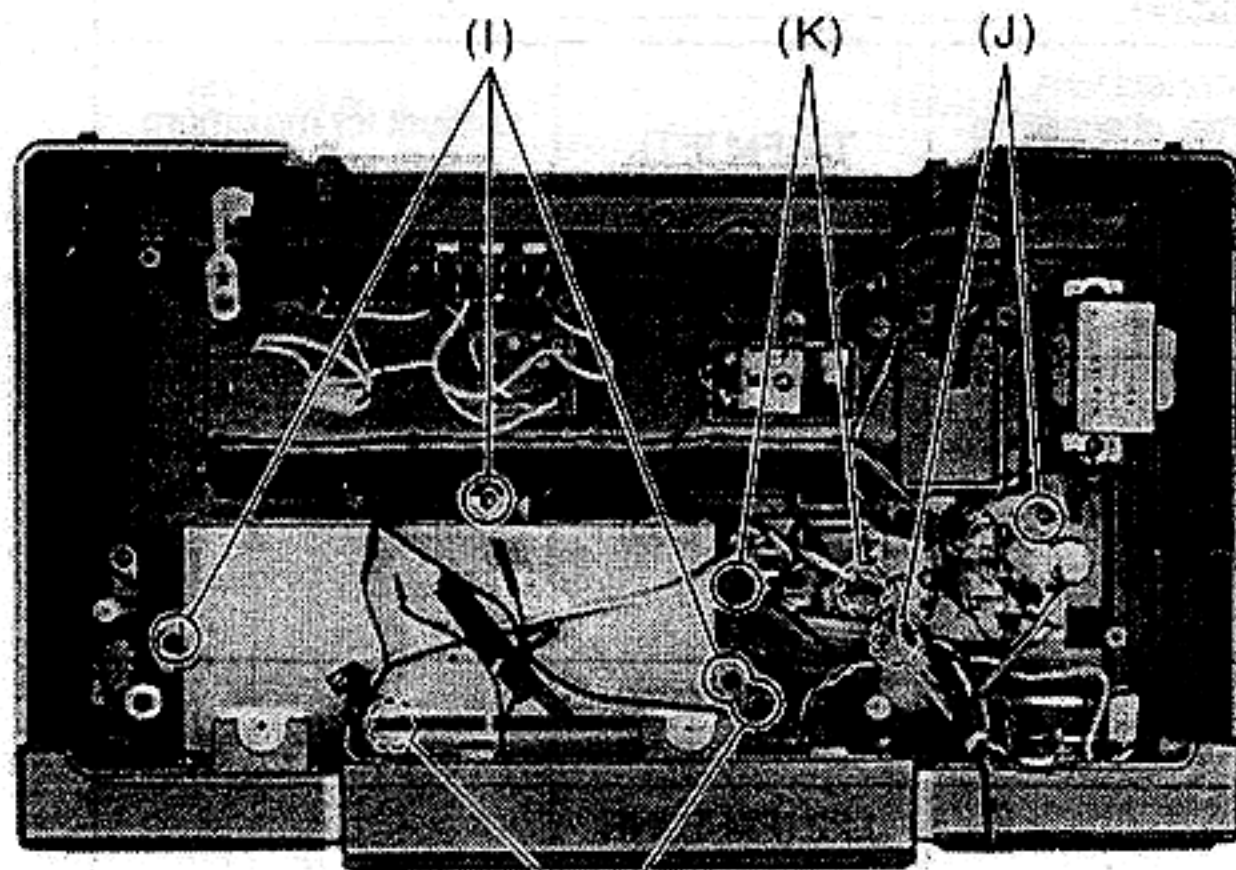


Fig. 8

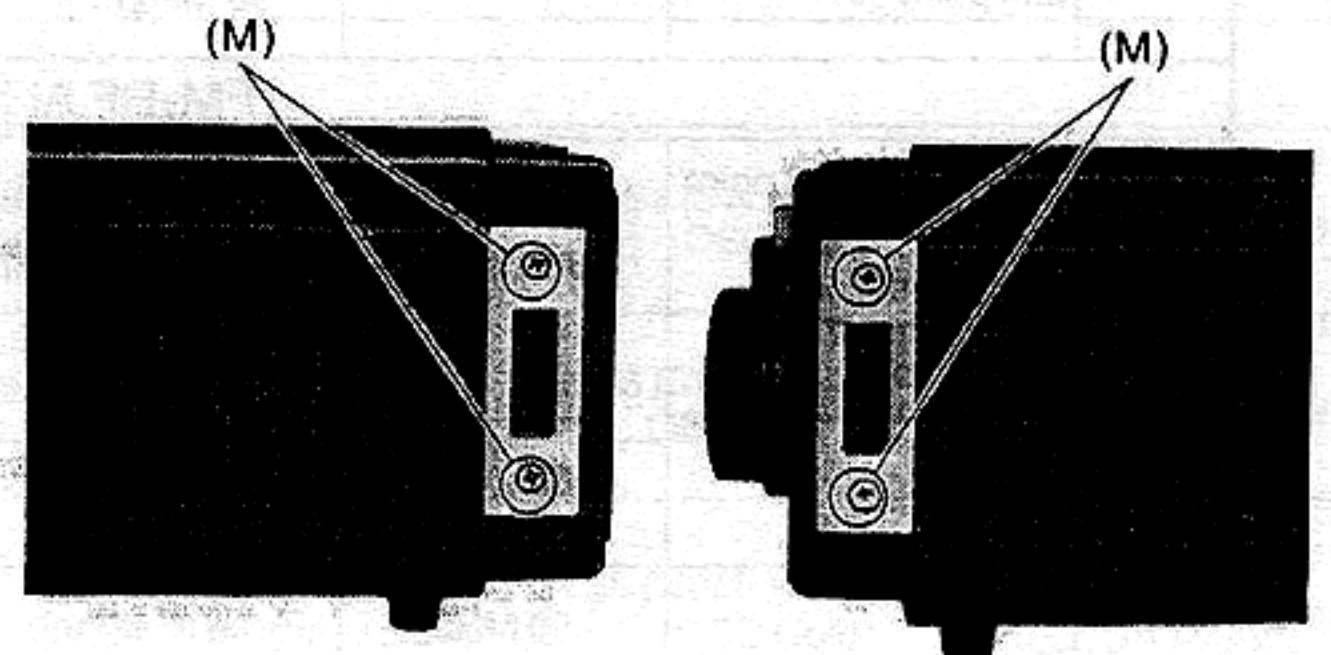


Fig. 9

DIAL THREADING

Dial Cord length: 110 cm (43 $\frac{5}{16}$ "')

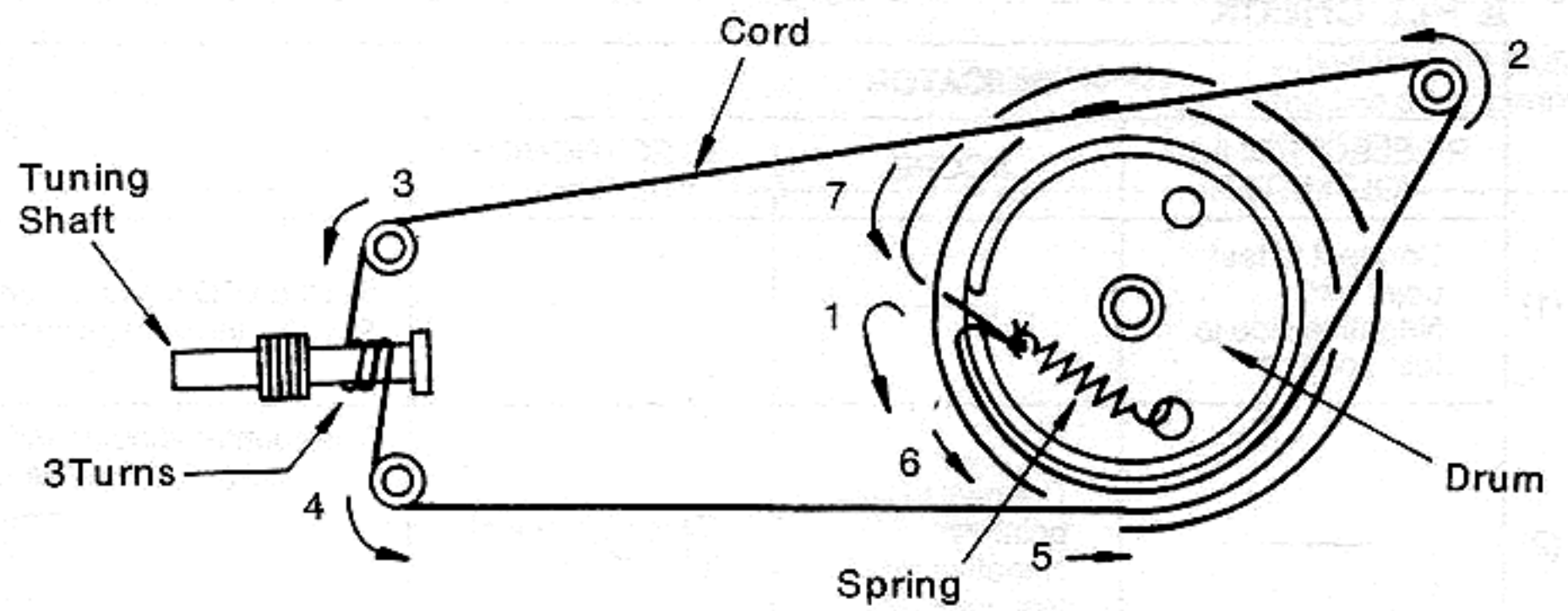


Fig. 10

| Procedure | To remove— | Remove— | Shown in Fig.— |
|-----------|--------------------------------------|---|----------------|
| 1 | Bottom Cabinet Ass'y | AC Cord Cover (A)×1 | 2 |
| 2 | | Screw (3×12) (B)×4 | |
| 3 | | Screw (3×8) (C)×3 | 3 |
| 4 | | Screw (3×12) (D)×4 | |
| 5 | | Remove the bottom cabinet in the direction of arrows ① and ②. | 4 |
| 6 | Telescopic Antenna | Screw (3×10) (E)×1 | 3 |
| 7 | Main Circuit Board | Knob (F)×7 | 5 |
| 8 | | Screw (3×8) (G)×2 | 6 |
| 9 | | Screw (3×12) (H)×5 | 7 |
| 10 | Display Circuit Board | Screw (3×12) (I)×3 | 8 |
| 11 | Circuit Board (Power, OSC Filter) | Screw (3×12) (J)×2 | 8 |
| 12 | | Screw (3×12) (K)×2 | |
| 13 | Front Panel | Screw (3×10) (L)×2 | 8 |
| 14 | | Screw (3×12) (M)×4 | 9 |

■ CONNECTOR POSITION

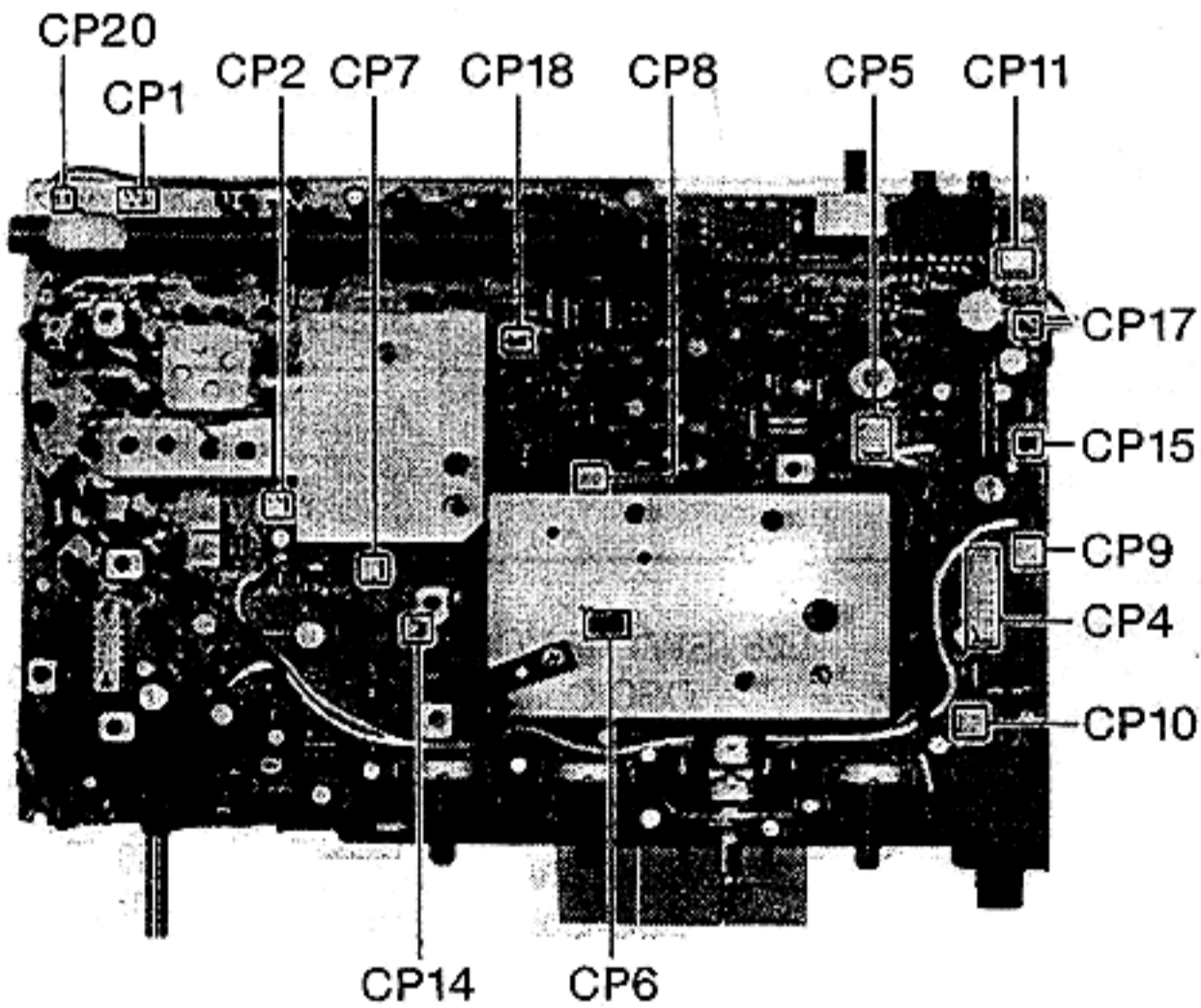


Fig. 11

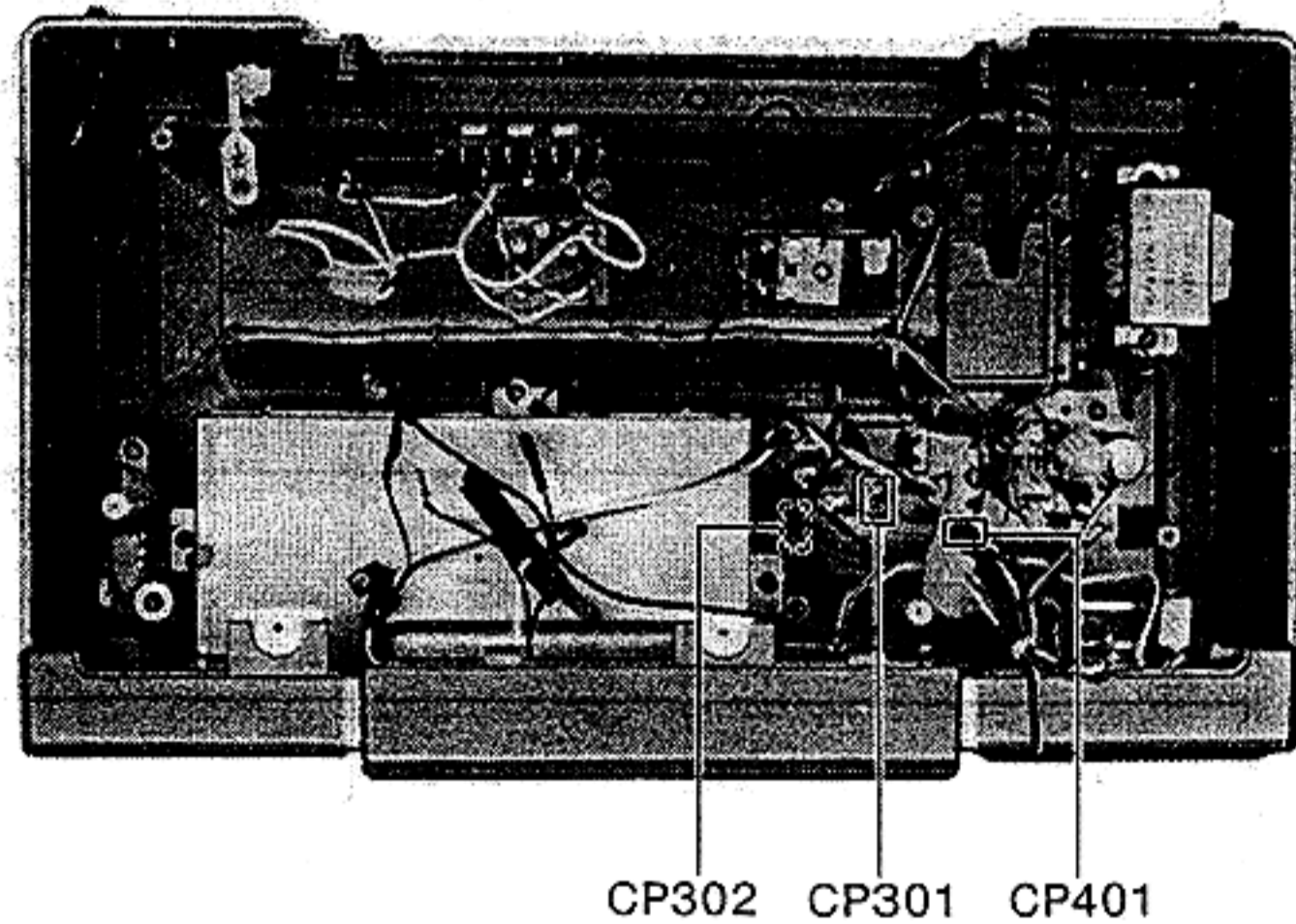


Fig. 12

CP1: EXT. ANT. Connector
 CP2: FM LOCAL OSC Connector
 CP4: Counter Block (1) Connector
 CP5: VCO Control Connector
 CP6: VCO Connector
 CP7: VFO/MW LOCAL Connector

CP8: 10.24 MHz OUT Connector
 CP9: Meter Connector
 CP10: Pilot Lamp Connector
 CP11: Speaker Connector
 CP14: Counter Block (2) Connector
 CP15: Counter Block (3) Connector

CP17: Counter Block (4) Connector
 CP18: Counter Block (5) Connector
 CP20: Counter Block (6) Connector
 CP301: Regulator Block Connector
 CP302: 2nd Local Connector
 CP401: Power Supply Connector

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Notes:

1. Set power switch to ON.
2. Set volume control to maximum.
3. Set bass and treble control to maximum.
4. Set AM RF gain control to minimum.
5. Set BFO pitch control to center.
6. Set band switch to MW, SW1~SW29 or FM.
7. Set BFO switch to OFF.
8. Set EXT. ANT. switch to low.
9. Set power source voltage to 12 V DC.
10. Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW ALIGNMENT

| BAND | SIGNAL GENERATOR or SWEEP GENERATOR | | RADIO DIAL SETTING [FREQUENCY DISPLAY (UNIT)] | INDICATOR (ELECTRONICS VOLTMETER or SCOPE) | ADJUSTMENT | REMARKS |
|------------------------|---|-------------------------------------|--|--|---|--|
| | CONNECTIONS | FREQUENCY | | | | |
| AM-IF ALIGNMENT | | | | | | |
| (1) MW | Fashion loop of several turns of wire and radiate signal into loop of receiver. | 455 kHz 30% Mod. with 400 Hz. | Point of non-interference. (on/about 600 kHz). | Output meter across voice coil. | T3 (AM 1st IFT) T4 (AM 2nd IFT) T6 (AM 3rd IFT) | Adjust for maximum output. |
| MW-RF ALIGNMENT | | | | | | |
| (2) MW | " | 511 kHz | Tuning capacitor fully closed. | " | L33 (MW OSC Coil) | " |
| (3) MW | " | 1650 kHz | Tuning capacitor fully open. | " | CT4 (MW OSC Trimmer) | " |
| (4) MW | " | 600 kHz | "600" | " | (*1) L1 (MW ANT Coil) | Adjust for maximum output. Adjust L1 by moving coil bobbin along ferrite core. |
| (5) MW | " | 1500 kHz | "1500" | " | CT3 (MW ANT Trimmer) | Adjust for maximum output. Repeat steps (2)~(5). |

(*1) Cement antenna bobbin with wax after completing alignment.

■ SW VFO and VCO ALIGNMENT

| | | | | | | |
|----------|---|---|--------------------------------|---|-----------------------------|---|
| (1) SW4 | — | — | Tuning capacitor fully closed. | — | L34 (SW VFO, OSC Coil) | Adjust for "3,900" reading on frequency display (UNIT). |
| (2) SW4 | — | — | Tuning capacitor fully open. | — | CT5 (SW VFO, OSC Trimmer) | Adjust for "5,900" reading on frequency display (UNIT). |
| (3) SW7 | — | — | " | Connect to test point ▼. Negative side to test point ▼. | L26 (SW1~7 VCO, OSC Coil) | Adjust for 9 ± 0.05 V reading on electronics voltmeter. |
| (4) SW15 | — | — | " | " | L27 (SW8~15 VCO, OSC Coil) | Adjust for 8.5 ± 0.05 V reading on electronics voltmeter. |
| (5) SW29 | — | — | " | " | L28 (SW16~29 VCO, OSC Coil) | Adjust for 8.5 ± 0.05 V reading on electronics voltmeter. |

Dial C

Dial C

■ SW 2nd LOCAL OSC ALIGNMENT

| BAND | SIGNAL GENERATOR or SWEEP GENERATOR | | RADIO DIAL SETTING [FREQUENCY DISPLAY (UNIT)] | INDICATOR (ELECTRONICS VOLTMETER or SCOPE) | ADJUSTMENT | REMARKS |
|------|---|-----------------------------|---|--|--|---|
| | CONNECTIONS | FREQUENCY | | | | |
| SW5 | Connect to test point ▼. Negative side to test point ▼. | 5 MHz (Mode 30%, 1000 kHz.) | Tune to signal. | Output meter across voice coil. | T1 (SW 1st OSC Coil) T2 (SW 2nd OSC Coil) | 1. Set band width switch to narrow. 2. Set AM RF gain control to maximum. 3. Adjust for maximum output. |

■ BFO ALIGNMENT

| | | | | | | |
|-----|---|-------|---|---------------|--------------------|--|
| SW5 | Fashion loop of several turns of wire and radiate signal into loop of receiver. | 5 MHz | " | EXT. SP. JACK | L37 (BFO OSC Coil) | 1. Cut off modulation after tune to signal. 2. Set BFO switch to ON. 3. Adjust for "0" beat. |
|-----|---|-------|---|---------------|--------------------|--|

■ TUNING METER ALIGNMENT

| | | | | | | |
|-----|---|-----------------|---|--------------|---------------------|---|
| SW5 | Connect to test point ▼. Negative side to test point ▼. | 5 MHz (99 dB/m) | " | Tuning Meter | VR5 (Meter control) | Adjust VR5 so that the indication needle is at the position ㉑ shown in fig. 16. |
| SW5 | " | 5 MHz (20 dB/m) | " | " | VR6 (Meter control) | Adjust VR6 so that the indication needle is at the position ㉒ shown in fig. 16. |

■ FM ALIGNMENT


FM-IF ALIGNMENT

| | | | | | | | |
|-----|----|---|----------|---|---|-------------------------|---|
| (1) | FM | Connect to test point ▼ through 0.001 μ F. Negative side to test point ▼. | 10.7 MHz | Point of non-interference. (on/about 90 MHz). | Connect vert. amp. of scope to test point ▼. Negative side to test point ▼. | T5 (FM IFT) (Secondary) | Adjust for maximum amplitude. (Refer to fig. 13.) |
|-----|----|---|----------|---|---|-------------------------|---|

FM-RF ALIGNMENT

| | | | | | | | |
|-----|----|--|-----------|--------------------------------|---------------------------------|-----------------------|---|
| (2) | FM | Connect to test point ▼ through FM dummy antenna. Negative side to test point ▼. (Refer to fig. 14.) | 87.2 MHz | Tuning capacitor fully closed. | Output meter across voice coil. | L29 (FM OSC Coil) | Adjust for maximum output. |
| (3) | FM | " | 109.2 MHz | Tuning capacitor fully open. | " | CT2 (FM OSC Trimmer) | " |
| (4) | FM | " | 90 MHz | Tune to signal. | " | L22 (FM TUNE Coil) | " |
| (5) | FM | " | 106 MHz | " | " | CT1 (FM TUNE Trimmer) | Adjust for maximum output. Repeat steps (2)~(5) |

■ PLL CHECK

| | | INDICATOR | | Items for confirmation | |
|-----|--|---|---|--------------------------|---|
| | | RF ELECTRONICS VOLTMETER | SCOPE | | ELECTRONICS VOLTMETER |
| (1) | | Connect to test point ▼. Negative side to test point ▼. | — | — | Set the VFO to fmax. Turn the dial from bands SW1 through SW29; the voltage should be between 100 mV and 650 mV. |
| (2) | | — | Connect to test point ▼. Negative side to test point ▼. | Output terminal. (SCOPE) | The counter should read 60~88 MHz. The ratio A:B should be less than 6 dB.  |

■ 2nd LOCAL FILTER ALIGNMENT

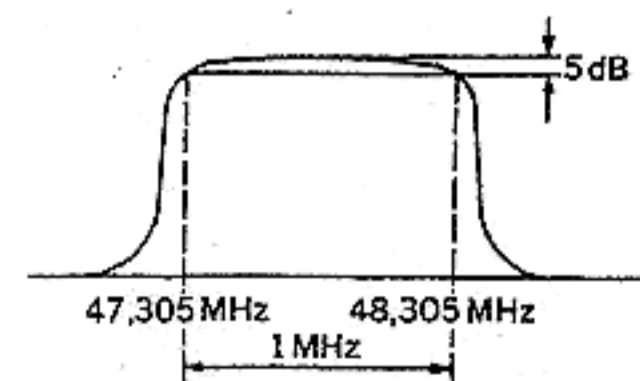
| INDICATOR (RF ELECTRONICS VOLTMETER) | REMARKS |
|--|---|
| Connect to test point ∇ . Negative side to test point ∇ . | ① Temporarily set VR301 in the mid-range and rotate T301 and T302; adjust such that the RF electronic voltmeter displays the maximum reading. (Repeat the adjustment of T301 and T302 two or three times.) ② Adjust VR301 such that the RF electronic voltmeter reads 44 mV~46 mV. |

■ PLL AND COUNTER BLOCK ALIGNMENT

| BAND | INDICATOR (RF ELECTRONICS VOLTMETER AND ELECTRONICS COUNTER) | ADJUSTMENT | REMARKS |
|---------|--|--------------------------------|---|
| (1) SW1 | Connect to test point ∇ . Negative side to test point ∇ . | T505 [OSC Coil (10.24 MHz)] | 1. Adjust for 10.24 MHz \pm 400 Hz reading on electronics counter. 2. Adjust for maximum reading on RF electronics voltmeter. |
| (2) SW1 | Connect to test point ∇ . Negative side to test point ∇ . | T501 [OSC Coil (51.2 MHz)] | 1. Adjust for 51.2 MHz (10.24 MHz \times 5) reading on electronics counter. 2. Adjust for maximum reading on RF electronics voltmeter. |

■ 51.2 MHz and VFO MIX OUT (47.305~48.305 MHz) ALIGNMENT

| BAND | SIGNAL GENERATOR or SWEEP GENERATOR | | INDICATOR (RF ELECTRONICS VOLTMETER and ELECTRONICS COUNTER) | ADJUSTMENT | REMARKS |
|------|--|--|--|--|---|
| | CONNECTIONS | FREQUENCY | | | |
| SW1 | Connect to point CS7 (BLUE). Negative side to test point ∇ . | 2.895~3.895 MHz (Mode 0%) (100 dB/m) | Connect to test point ∇ . Negative side to test point ∇ . | T502 [OSC Coil (51.2 MHz)] T503 [OSC Coil (51.2 MHz)] | ① Attach the RF electronic voltmeter; positive side to ∇ and negative side to ∇ . Set the signal generator to 3.5 MHz. Insert the cores of T503 and T502. ② While withdrawing the core of T502, adjust such that the RF electronic voltmeter displays the maximum reading. (51.2 MHz-3.2 MHz=a value of 47.7 MHz) ③ While withdrawing the core of T503, adjust such that the RF electronic voltmeter displays the maximum reading. (51.2 MHz-3.5 MHz=a value of 47.7 MHz) ④ Vary the signal generator from 2.895~3.895 MHz; the reading of the RF electronic voltmeter should range \pm 0.5 dB. ⑤ When the signal generator is changed to 100 \pm 0.5 dB, operation should be normal. ⑥ When the counter is attached; positive side to ∇ and negative side to ∇ , the frequency should range from 47.305~48.305 MHz. |



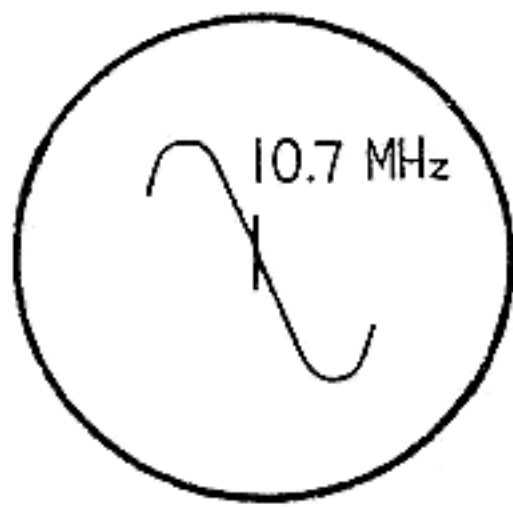


Fig. 13

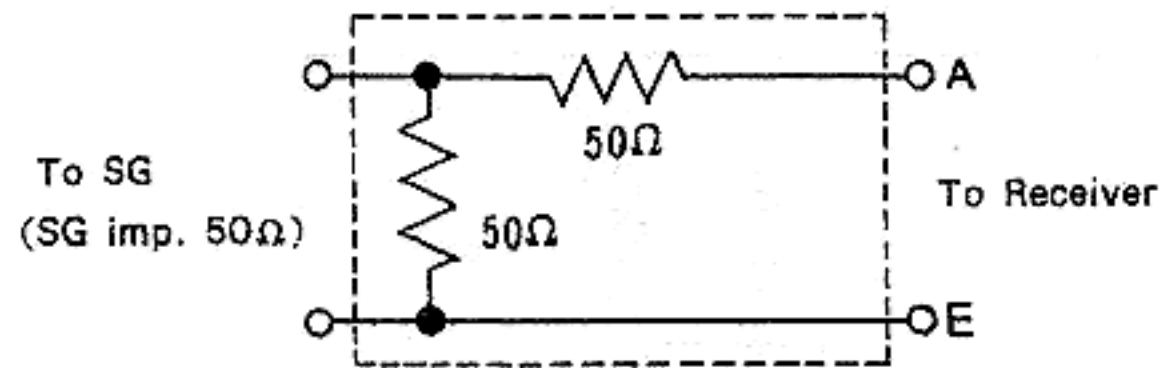


Fig. 14 FM Dummy Antenna

■ ALIGNMENT POINTS

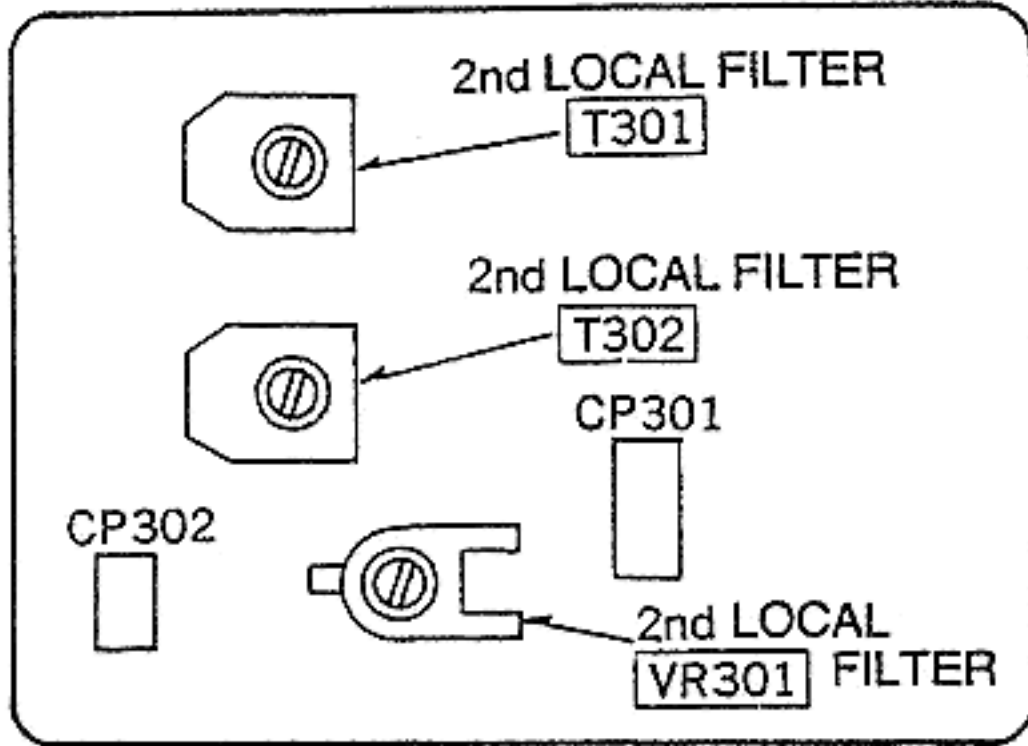


Fig. 15

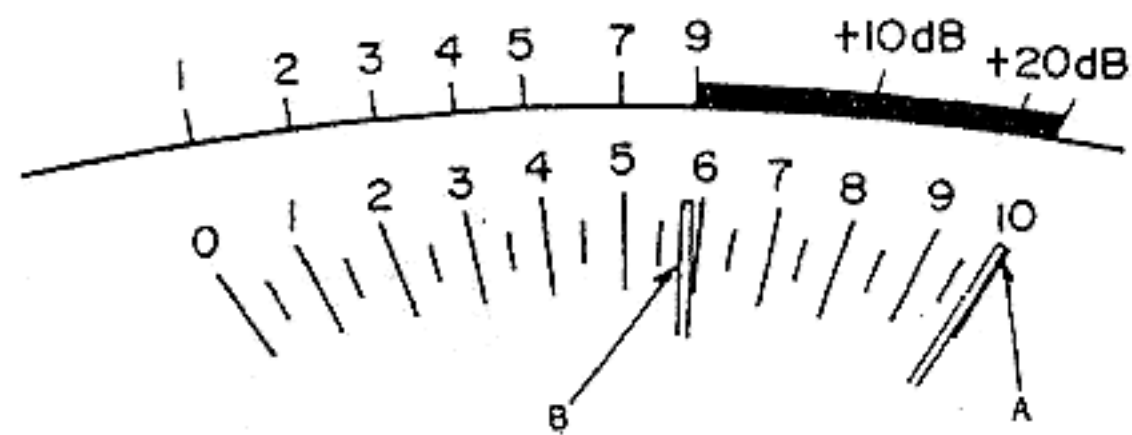


Fig. 16

●Please refer to Circuit Board (COUNTER) in which test point are located.

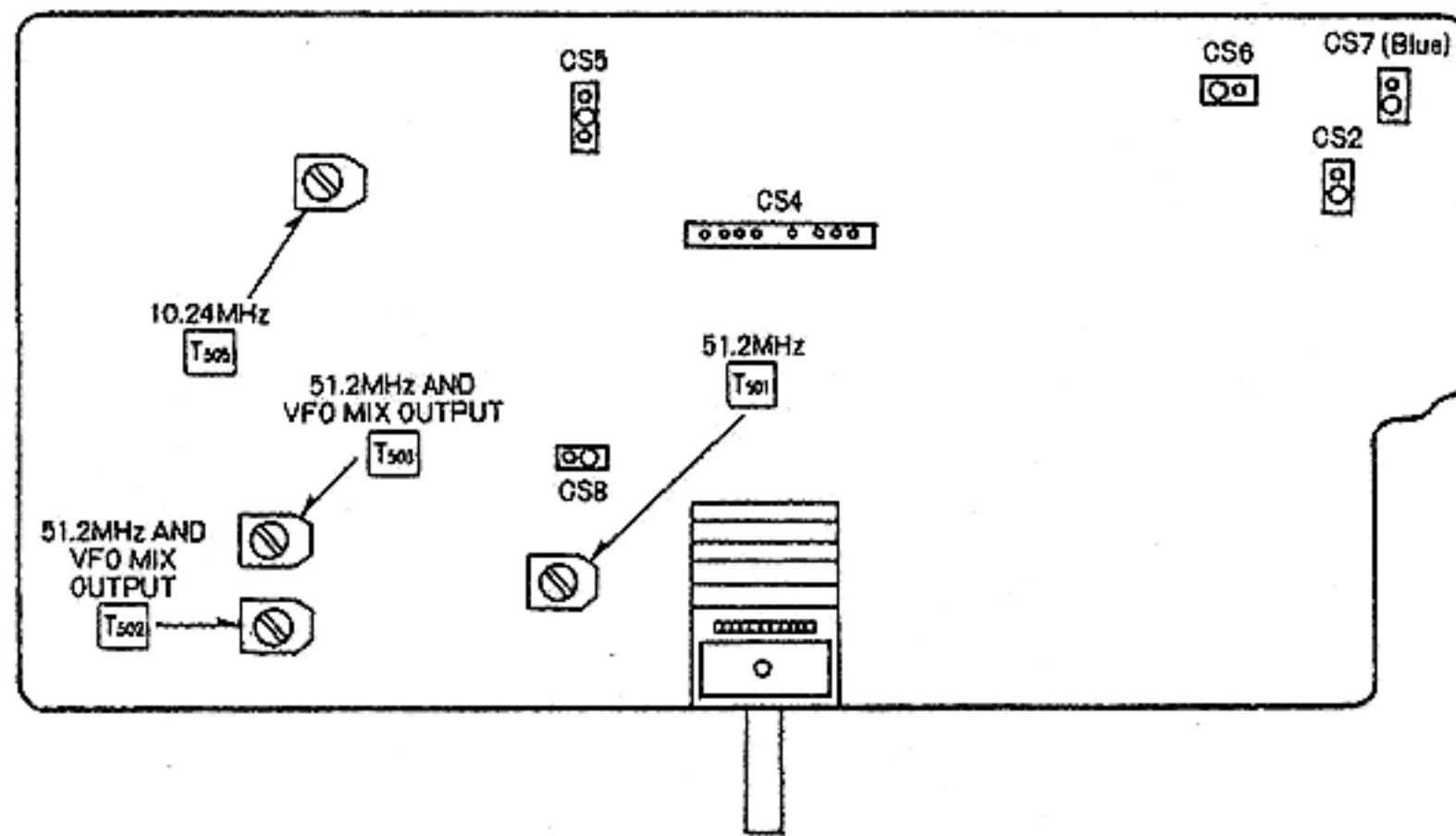


Fig. 17

●Please refer to Circuit Board (RADIO/AUDIO) in which test point 110 and 111 are located.

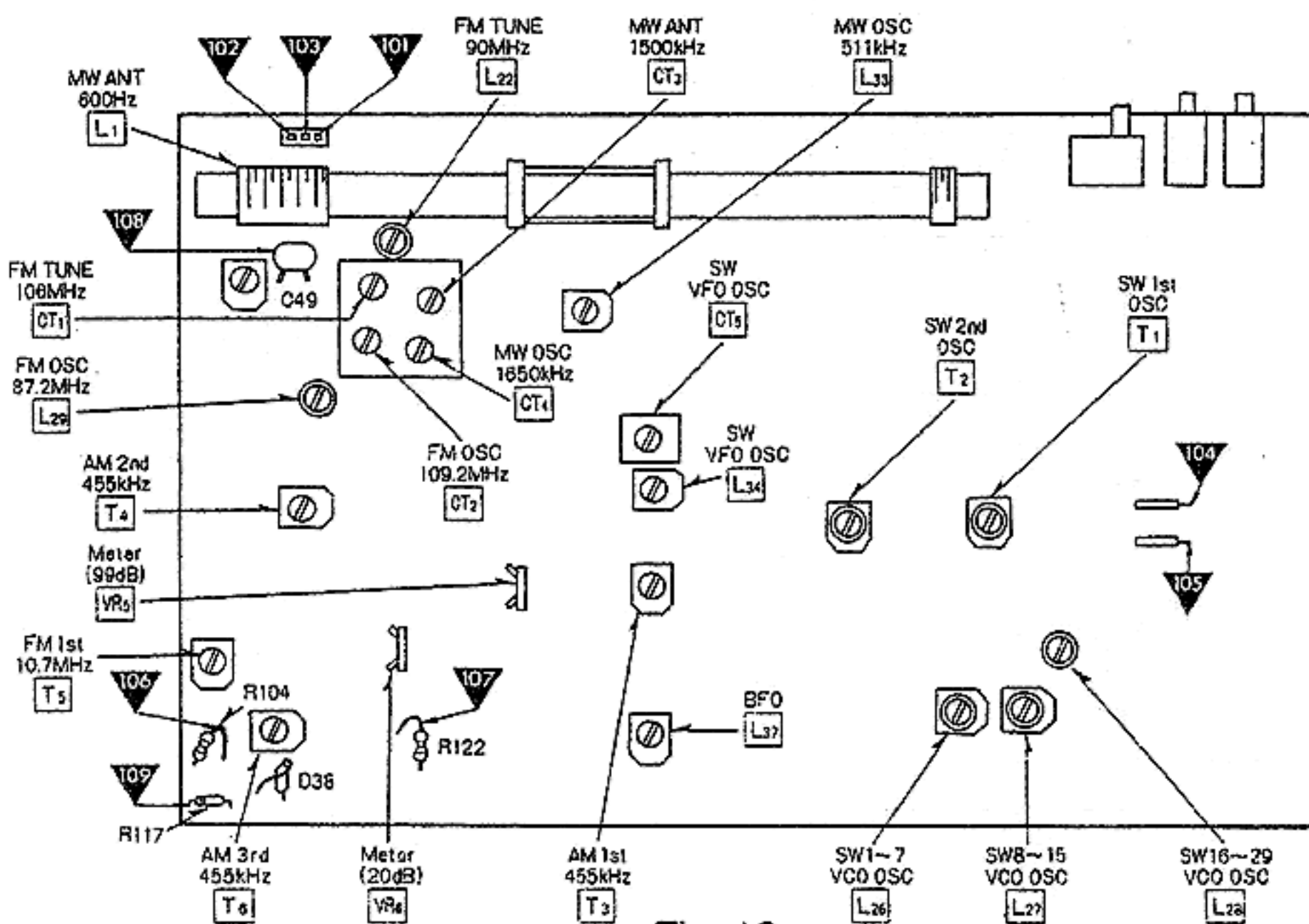
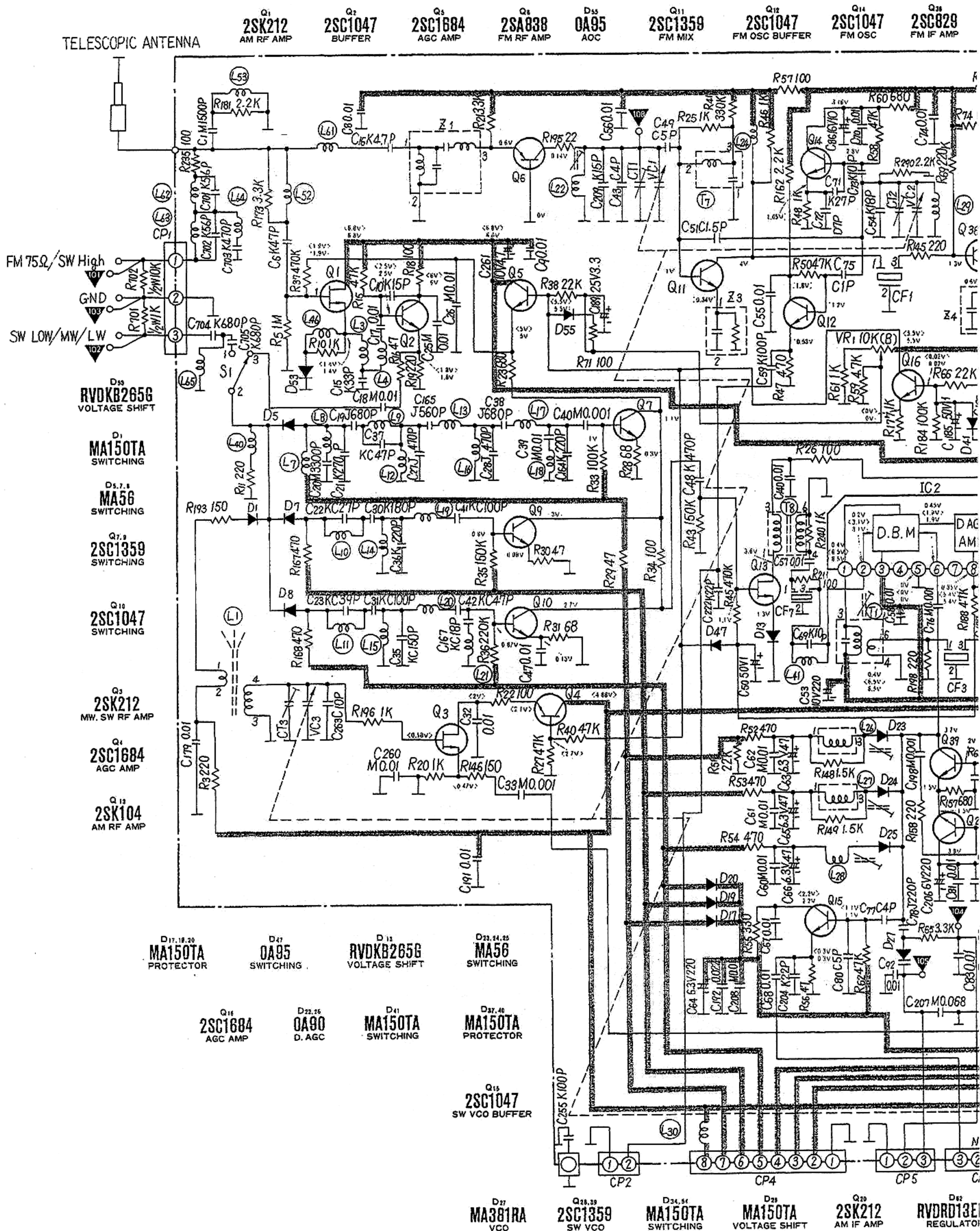


Fig. 18

SCHEMATIC DIAGRAM (RADIO/AUDIO)



MODEL RF-3100/©

Q19
2SC1684
AGC AMP

Q21,22
2SC829
SWITCHING

Q43
2SB175
METER AMP

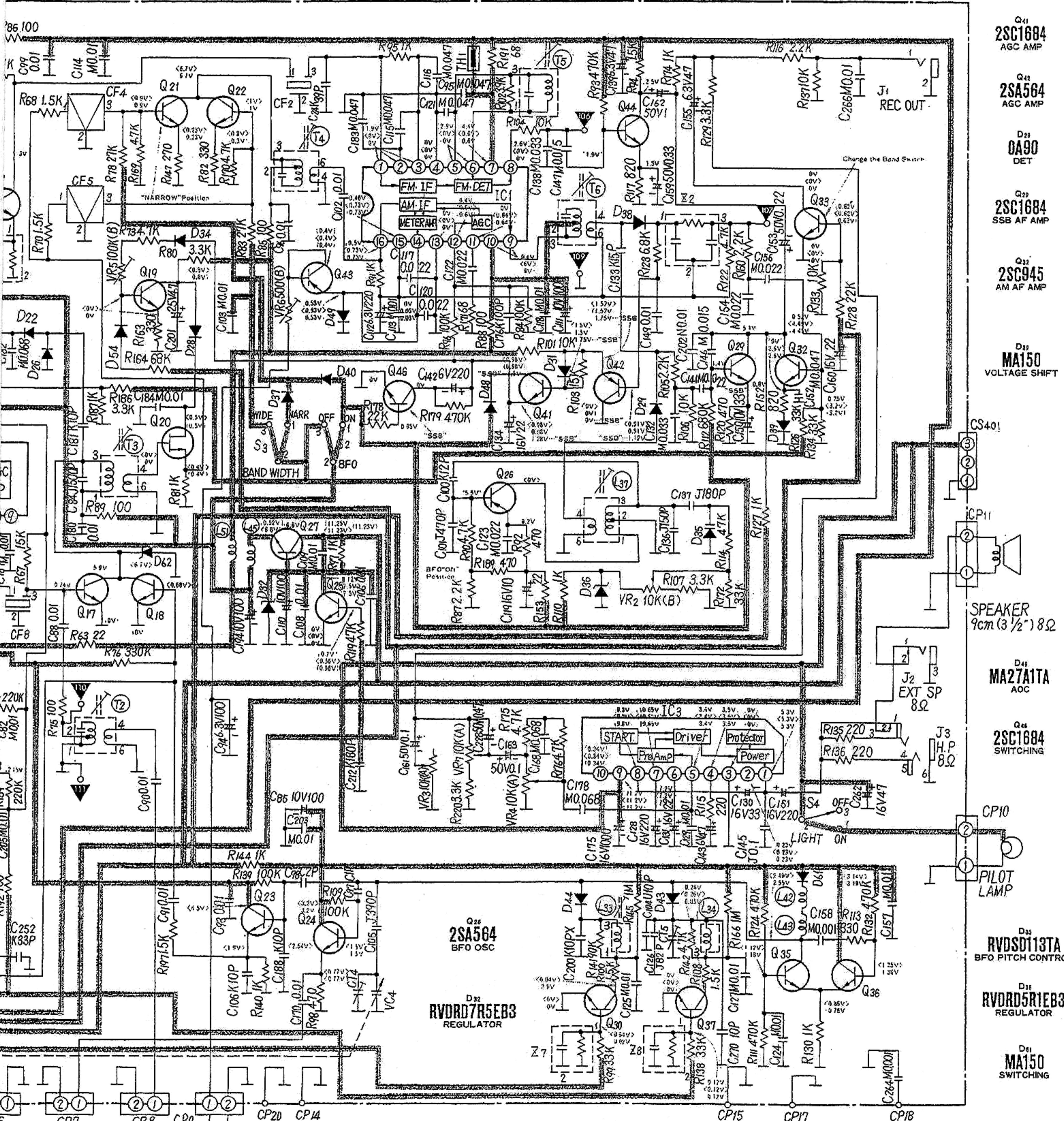
IC1
RV1A1210
FM IF/DET & AM IF/METER

Q44
2SC1684
FM AF AMP

D31
0A90
AM DET

Q33
2SC2001
MUTING

D31
RVDKB262D
AGC



Q41
2SC1684
AGC AMP

Q42
2SA564
AGC AMP

D31
0A90
DET

Q45
2SC1684
SSB AF AMP

Q32
2SC945
AM AF AMP

D33
MA150
VOLTAGE SHIFT

D41
MA27A1TA
AOC

Q46
2SC1684
SWITCHING

D35
RVDS0113TA
BFO PITCH CONTROL

D35
RVDR05R1EB3
REGULATOR

D41
MA150
SWITCHING

IC2
AN7254
D.B.M AGC AMP

Q17
2SC1360
SW 2nd MIX

METER

Q16
2SC1675
MW, SW MIX

Q28,24
2SC1359
SW, MW OSC/VFO BUFFER

Q27
2SC2001
REGULATOR

Q35,36,37
2SC1684
SWITCHING

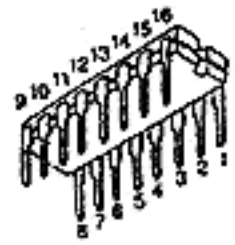

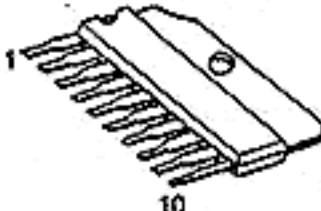
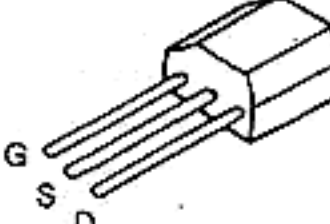
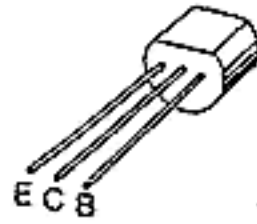
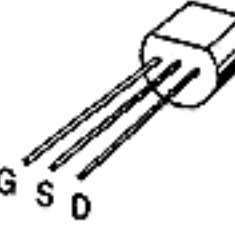
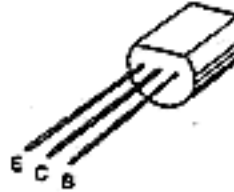

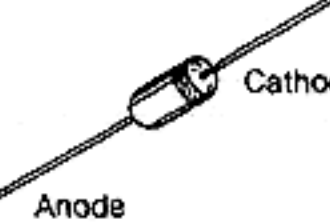
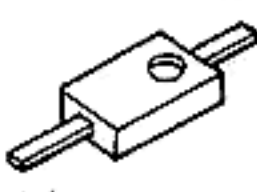

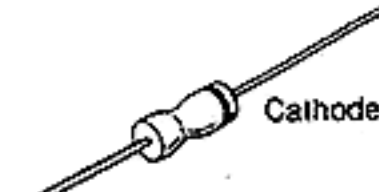

IC3
QV1BA524
AF POWER AMP

D43,44
MA56
SWITCHING

Q35,36
2SC1359
MW OSC/SW VFO

Notes:

1. S1: Antenna select switch in "SW/MW LOW" position.
(1... SW/MW LOW, 2... FM/SW HIGH)
2. S2: BFO ON/OFF switch in "OFF" position.
3. S3: Bandwidth select switch in "WIDE" position.
4. S4: Light ON/OFF switch in "OFF" position.
5. VR1: MW-SW RF gain control.
6. VR2: BFO pitch control.
7. VR3: Bass control.
8. VR4: Volume control.
9. VR5: Meter adjustment VR (+20 dB).
10. VR6: Meter adjustment VR (+9 dB).
11. VR7: Treble control.
12. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
(Light SW... OFF, Bandwidth SW... WIDE, BFO SW... OFF, Volume... MIN.,
(Bass and Treble... MIN, RF Gain... MIN, BFO Pitch... Center position.
[]... FM position, < >... MW position, ()... SW position.

| | | | | |
|---|---|--|---|---|
|  <p>IC1</p> |  <p>IC2</p> |  <p>IC3</p> |  <p>Q1, 3, 20</p> |  <p>Q2, 4~7, 9~12, 14~16, 18, 19, 21~30, 32, 33, 35~39, 41, 42, 44, 46</p> |
|  <p>Q13</p> |  <p>Q17</p> |  <p>Q43</p> |  <p>Anode Cathode</p> <p>D1, 3, 17, 19, 20, 28, 32, 34~37, 39~41, 48, 49, 62</p> |  <p>Cathode</p> <p>Anode</p> <p>D4, 5, 7, 8, 23~25, 43, 44</p> |
|  <p>Anode Cathode</p> <p>D13, 31, 53</p> |  <p>Anode Cathode</p> <p>D22, 26, 29, 38, 47, 55</p> |  <p>Anode Cathode</p> <p>D27</p> | | |

CIRCUIT BOARD (RADIO/AUT)

Q23

| | |
|---|------|
| | MW |
| C | 4.5V |
| B | 2.5V |
| E | 1.9V |

| | | | | | | | | | | | | | | | | | | | |
|----|-------|-----|-------|-----|-------|----|-------|----|------|-----|------|----|------|----|------|-----|-------|---|-------|
| Q9 | | Q10 | | Q18 | | Q4 | | Q5 | | Q20 | | Q2 | | Q3 | | Q30 | | | |
| | SW | | SW | | MW | | MW | | MW | | SW | | MW | | SW | | MW | | SW |
| C | 3V | C | 2.7V | C | 6.7V | C | 4.88V | C | 6.8V | C | 6.8V | C | 6V | C | 6V | C | 0.04V | C | 2.9V |
| B | 0.8V | B | 0.87V | B | 0.68V | B | 2.7V | B | 5.5V | B | 5.5V | B | 2.5V | B | 2.5V | B | 0.18V | B | 0.64V |
| E | 0.08V | E | 0.13V | E | 0V | E | 2.1V | E | 5V | E | 5V | E | 1.8V | E | 1.8V | E | 0V | E | 0V |

Q13

| | |
|---|------|
| | SW |
| D | 3.6V |
| G | 1.1V |
| S | 1.3V |

Q7

| | |
|---|------|
| | SW |
| C | 1.1V |
| B | 1V |
| E | 0.3V |

IC3

| | | | |
|----|--------|--------|--------|
| | FM | MW | SW |
| 1 | 5.3V | 5.3V | 5.3V |
| 2 | 0.23V | 0.23V | 0.23V |
| 3 | 0V | 0V | 0V |
| 4 | 3.5V | 3.5V | 3.5V |
| 5 | 3.4V | 3.4V | 3.4V |
| 6 | 7.2V | 7.2V | 7.2V |
| 7 | 10.65V | 10.65V | 10.65V |
| 8 | 9.8V | 9.8V | 9.8V |
| 9 | 11.2V | 11.2V | 11.2V |
| 10 | 0.34V | 0.34V | 0.34V |

IC2

| | | | |
|---|-------|------|------|
| | FM | MW | SW |
| 1 | 0.4V | 6.5V | 6.5V |
| 2 | 0.2V | 3.1V | 3.1V |
| 3 | 0.4V | 6.5V | 6.5V |
| 4 | - | - | - |
| 5 | 0V | 0V | 0V |
| 6 | 0.45V | 1.9V | 1.9V |
| 7 | - | - | - |
| 8 | 0.35V | 5.4V | 5.4V |
| 9 | - | - | - |

Q27

| | | | |
|---|--------|--------|--------|
| | FM | MW | SW |
| C | 11.25V | 11.23V | 11.23V |
| B | 0.12V | 7.5V | 7.5V |
| E | 0.52V | 6.8V | 6.8V |

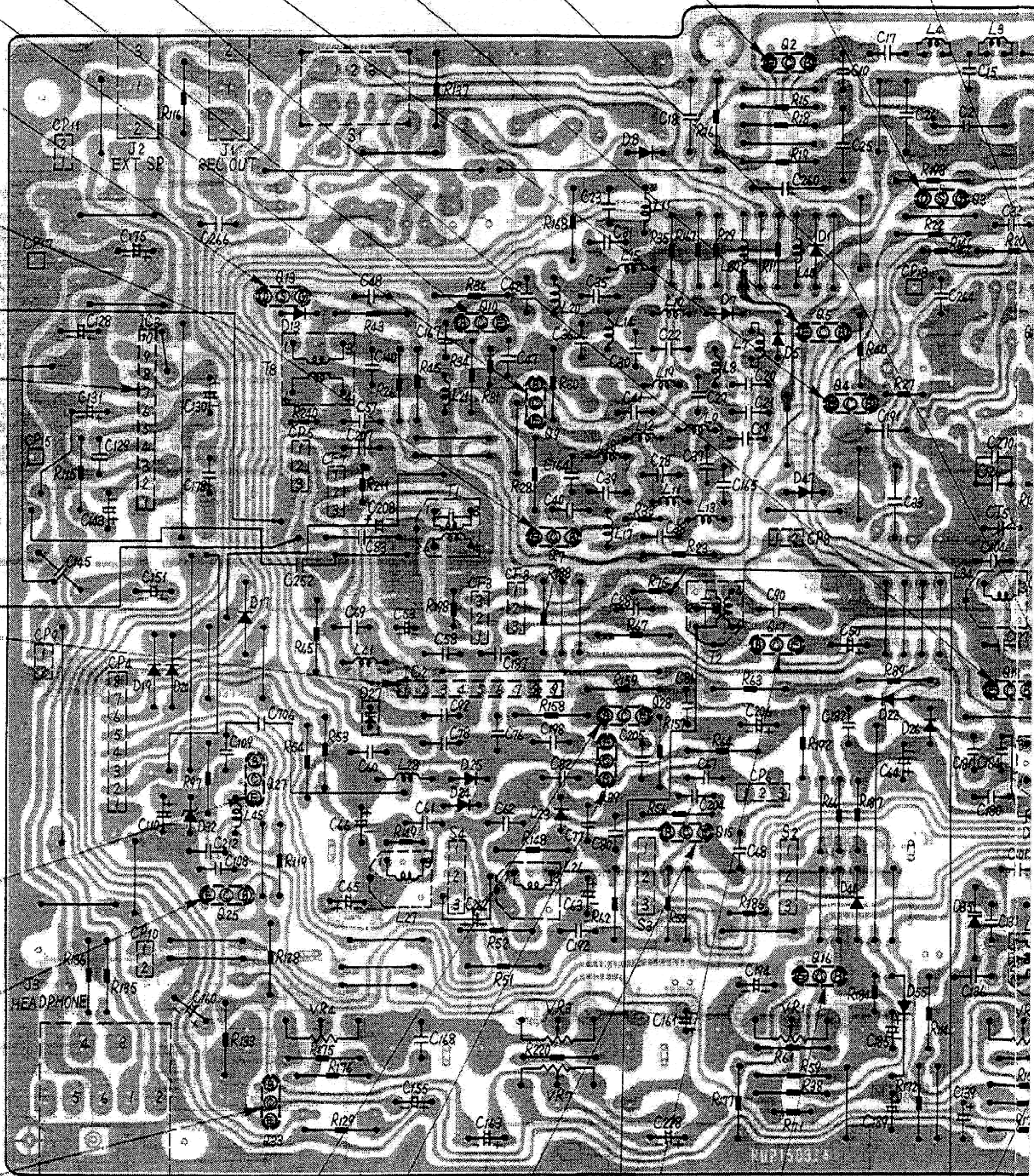
Q25

| | | | |
|---|-------|-------|-------|
| | FM | MW | SW |
| C | 0.12V | 7.5V | 7.5V |
| B | 0.7V | 0.56V | 0.56V |
| E | 0V | 0V | 0V |

Q33

Change the Band Switch

| | | | |
|---|-------|-------|-------|
| | FM | MW | SW |
| C | 0V | 0V | 0V |
| B | 0.62V | 0.62V | 0.62V |
| E | 0V | 0V | 0V |



| | | | | | | | | | | | |
|-----|-------|-----|------|-----|------|-----|-------|-----|-------|-----|------|
| Q28 | | Q39 | | Q15 | | Q17 | | Q16 | | Q26 | |
| | SW | | SW | | MW | | SW | | MW | | SW |
| C | 3.8V | C | 3.7V | C | 2.2V | C | 5.9V | C | 5.5V | C | 0V |
| B | 2.15V | B | 2V | B | 1.1V | B | 0.74V | B | 0.02V | B | 5.5V |
| E | 1.5V | E | 1.5V | E | 0.3V | E | 0V | E | 0V | E | 6.2V |

BFO "ON" Position

| | |
|---|------|
| | SW |
| C | 0V |
| B | 5.5V |
| E | 6.2V |

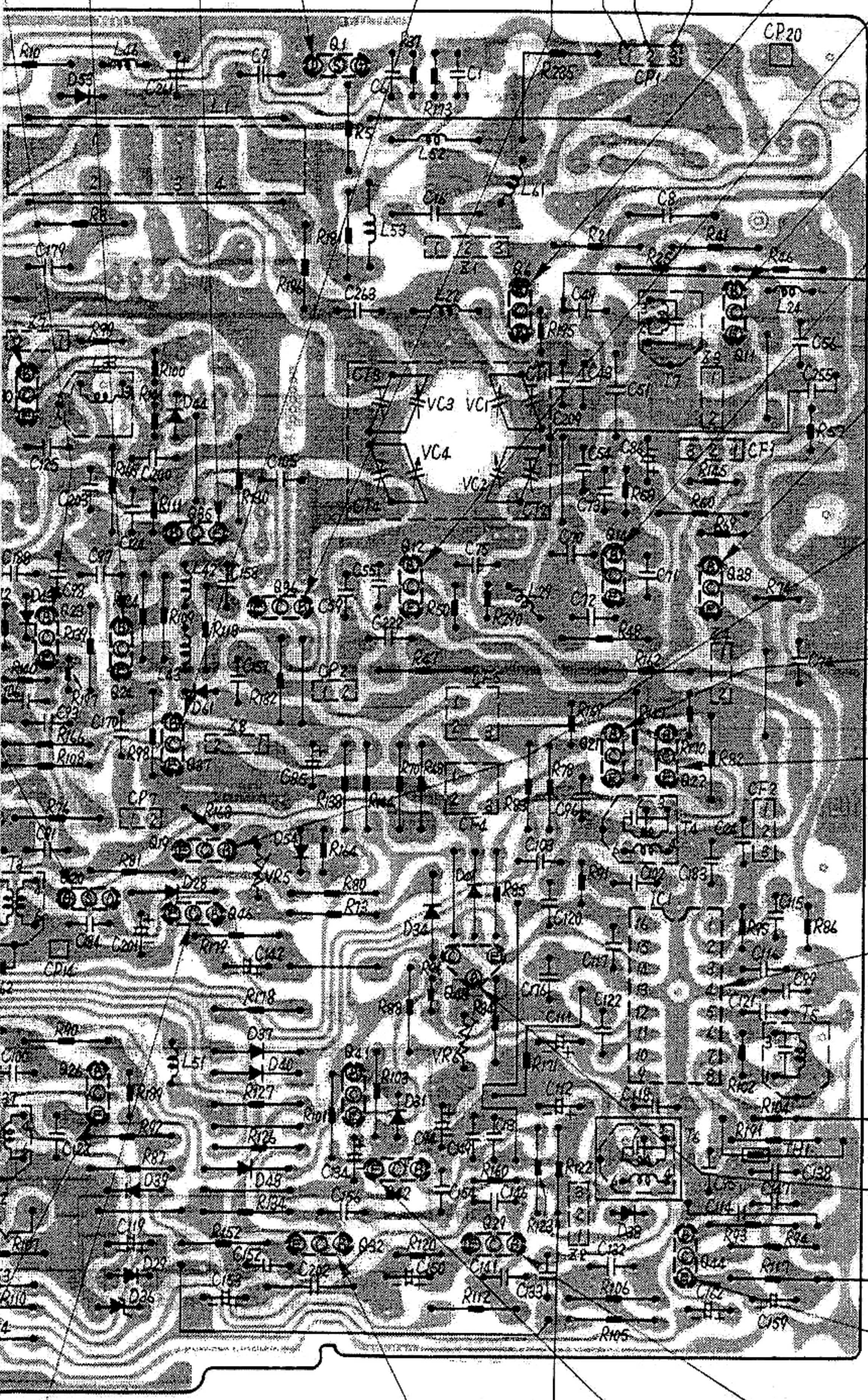
DIO) MODEL RF-3100/©

| Q35 | | | Q1 | | | Q36 | | |
|-----|-------|-------|----|------|------|-----|-------|-------|
| | MW | SW | | MW | SW | | MW | SW |
| C | 2.49V | 2.55V | D | 6.8V | 6.8V | C | 3.14V | 3.19V |
| B | 1.12V | 1.18V | G | 1.9V | 1.9V | B | 1.25V | 1.36V |
| E | 0.88V | 0.76V | S | 1.4V | 1.4V | E | 0.88V | 0.76V |

| Q24 | | |
|-----|-------|-------|
| | MW | SW |
| C | 3.2V | 3.2V |
| B | 1.5V | 1.5V |
| E | 0.77V | 0.77V |

| Q37 | | | |
|-----|-------|-------|-------|
| | FM | MW | SW |
| C | 0.26V | 0.26V | 0.05V |
| B | 0.12V | 0.12V | 0.12V |
| E | 0V | 0V | 0V |

| Q6 | | | Q12 | | | Q11 | | |
|----|-------|--|-----|-------|--|-----|-------|--|
| | FM | | | FM | | | FM | |
| C | 0.14V | | C | 1.8V | | C | 4V | |
| B | 0V | | B | 1.2V | | B | 1V | |
| E | 0.6V | | E | 0.53V | | E | 0.34V | |



| Q14 | | |
|-----|-------|--|
| | FM | |
| C | 3.16V | |
| B | 2.3V | |
| E | 1.65V | |

| Q38 | | |
|-----|------|--|
| | FM | |
| C | 3V | |
| B | 1.3V | |
| E | 0.6V | |

| Q19 | | |
|-----|------|------|
| | MW | SW |
| C | 0.8V | 0.8V |
| B | 0V | 0V |
| E | 0V | 0V |

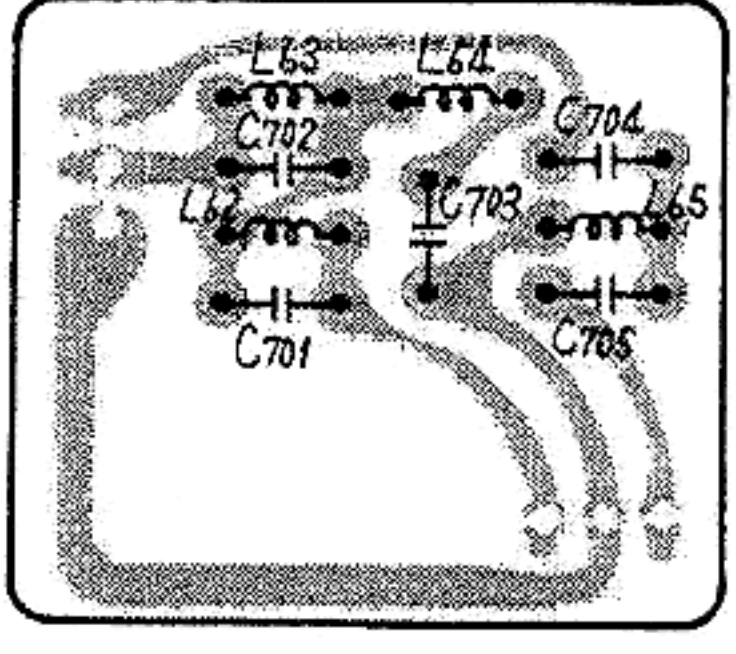
| Q21 | | |
|-------------------|-------|-------|
| "NARROW" Position | | |
| | MW | SW |
| C | 6.7V | 6.7V |
| B | 0.9V | 0.9V |
| E | 0.23V | 0.23V |

| Q22 | | |
|-----|------|------|
| | MW | SW |
| C | 6.7V | 6.7V |
| B | 1V | 1V |
| E | 0.3V | 0.3V |

| IC1 | | | | | | | |
|-----|------|------|------|----|-------|-------|-------|
| | FM | MW | SW | | FM | MW | SW |
| 1 | 1.9V | 0V | 0V | 9 | 0.4V | 6V | 6V |
| 2 | 1.9V | 0V | 0V | 10 | 0.4V | 6V | 6V |
| 3 | 1.9V | 0V | 0V | 11 | 0V | 0.64V | 0.64V |
| 4 | 0V | 0V | 0V | 12 | 0.4V | 0.6V | 0.6V |
| 5 | 2.9V | 0V | 0V | 13 | 0V | 0V | 0V |
| 6 | 2.9V | 0V | 0V | 14 | 0V | 0.03V | 0.03V |
| 7 | 4.4V | 0.6V | 0.6V | 15 | 0.46V | 0.73V | 0.73V |
| 8 | 2.6V | 0V | 0V | 16 | 0.5V | 0.73V | 0.73V |

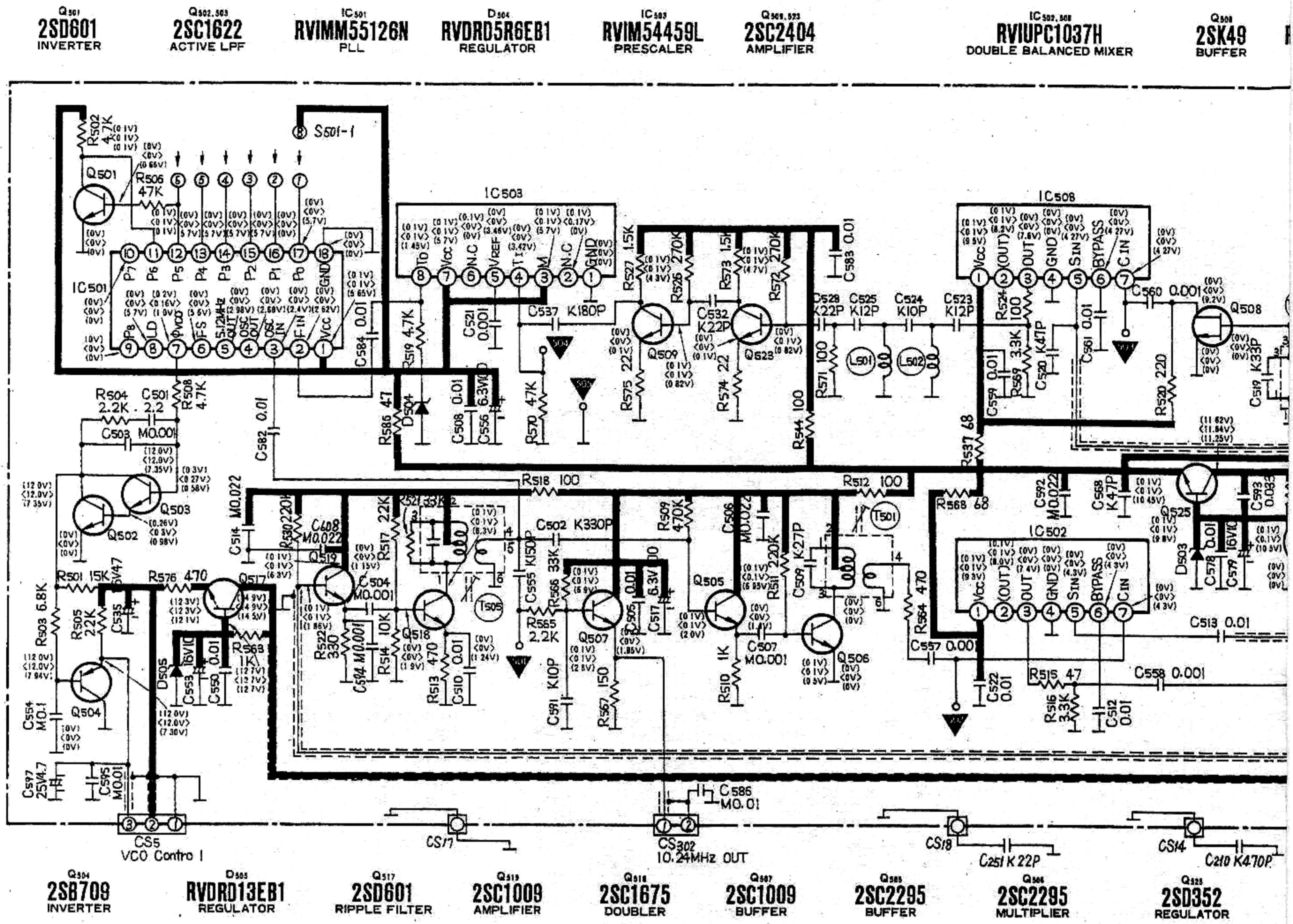
| Q43 | | | |
|-----|-------|-------|-------|
| | FM | MW | SW |
| C | 0.4V | 0.4V | 0.4V |
| B | 0.4V | 0.4V | 0.4V |
| E | 0.53V | 0.53V | 0.53V |

| Q44 | |
|-----|------|
| | FM |
| C | 2.5V |
| B | 1.9V |
| E | 1.3V |



| Q46 | | | | Q41 | | | | Q32 | | | | Q42 | | | | Q29 | | |
|-----|-------|--|--|-----|-------|-------|-------|-----|----|-------|-------|-------|----|-------|-------|-------|-----|------|
| | SSB | | | | MW | SW | SSB | | FM | MW | SW | | MW | SW | SSB | | SSB | |
| C | 0V | | | C | 0.98V | 0.98V | 6.5V | | C | 0.52V | 4.45V | 4.45V | C | 0V | 0V | 0V | C | 5.1V |
| B | 0.65V | | | B | 1.5V | 1.5V | 1.75V | | B | 0.25V | 3.2V | 3.2V | B | 0.91V | 0.91V | 1.12V | B | 1.4V |
| E | 0V | | | E | 0.98V | 0.98V | 1.28V | | E | 0V | 2.6V | 2.6V | E | 1.52V | 1.52V | 1.75V | E | 0.8V |

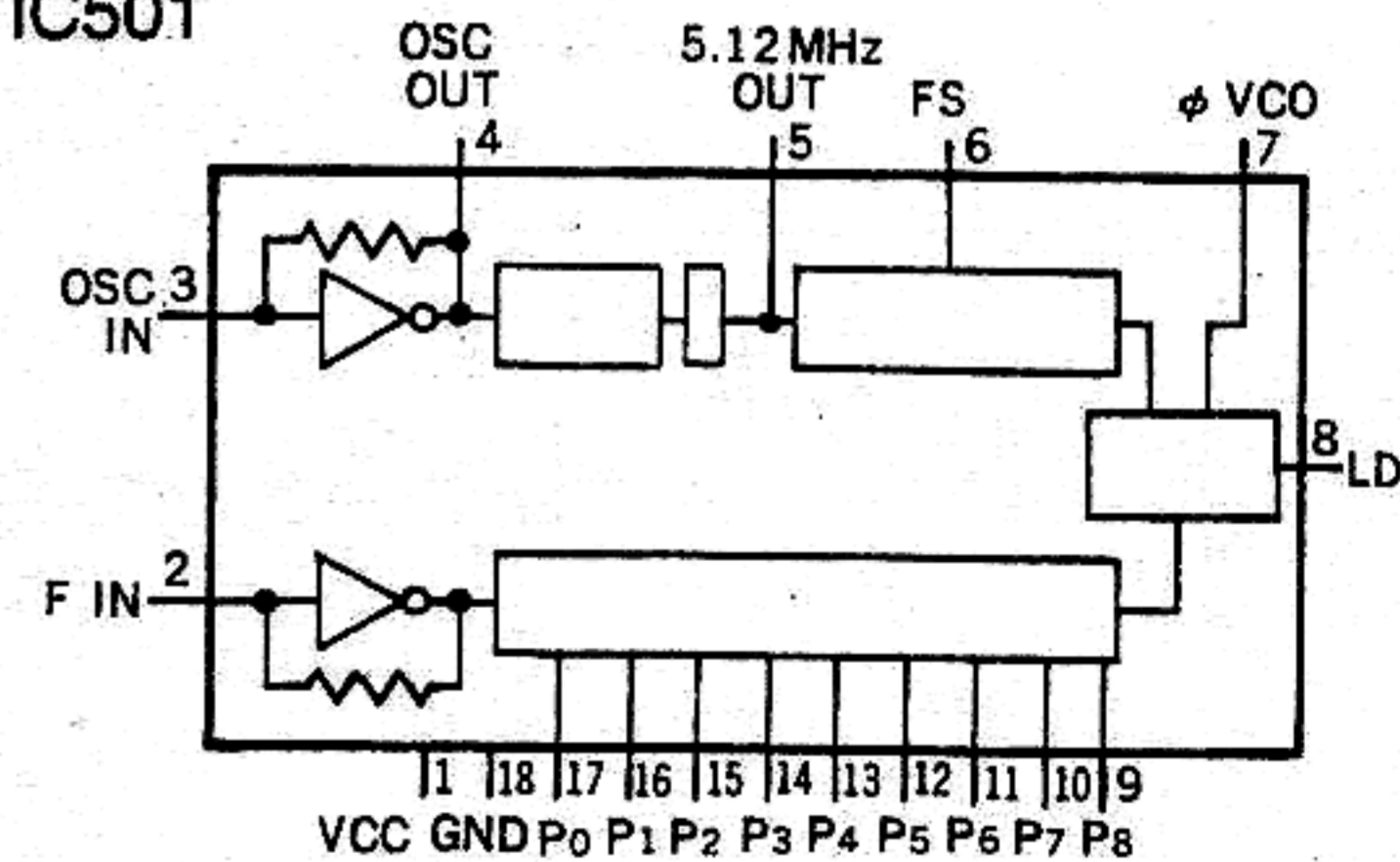
SCHEMATIC DIAGRAM (CONT)



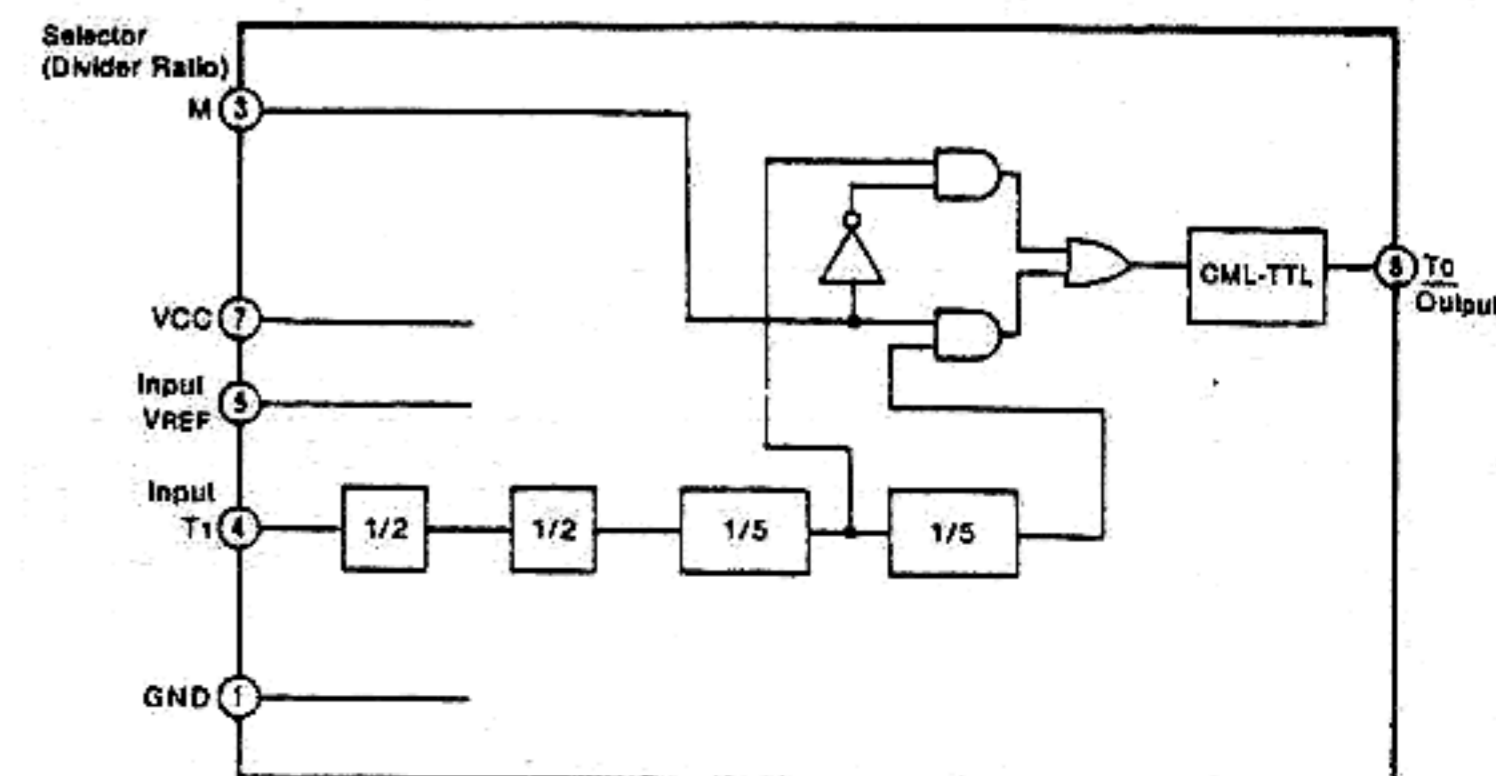
Notes:

1. S501-1, S501-2: Band select switch in "FM" position.
(1... SW16~29, 2... SW8~15, 3... SW1~7, 4... MW, 5, 6... FM)
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
(Light SW... OFF, Bandwidth SW... WIDE, BFO SW... OFF, Volume... MIN, Bass and Treble... MIN, RF Gain... MIN, BFO Pitch... Center position.
[]... FM position, < >... MW position, ()... SW position.

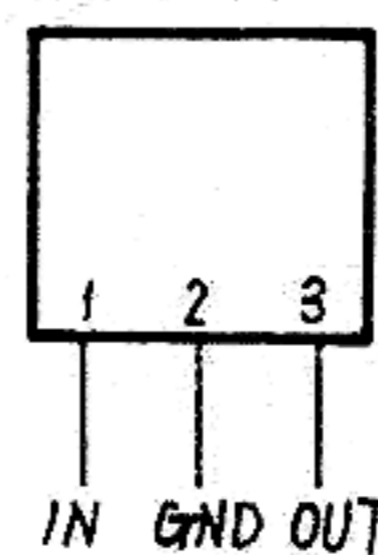
IC501



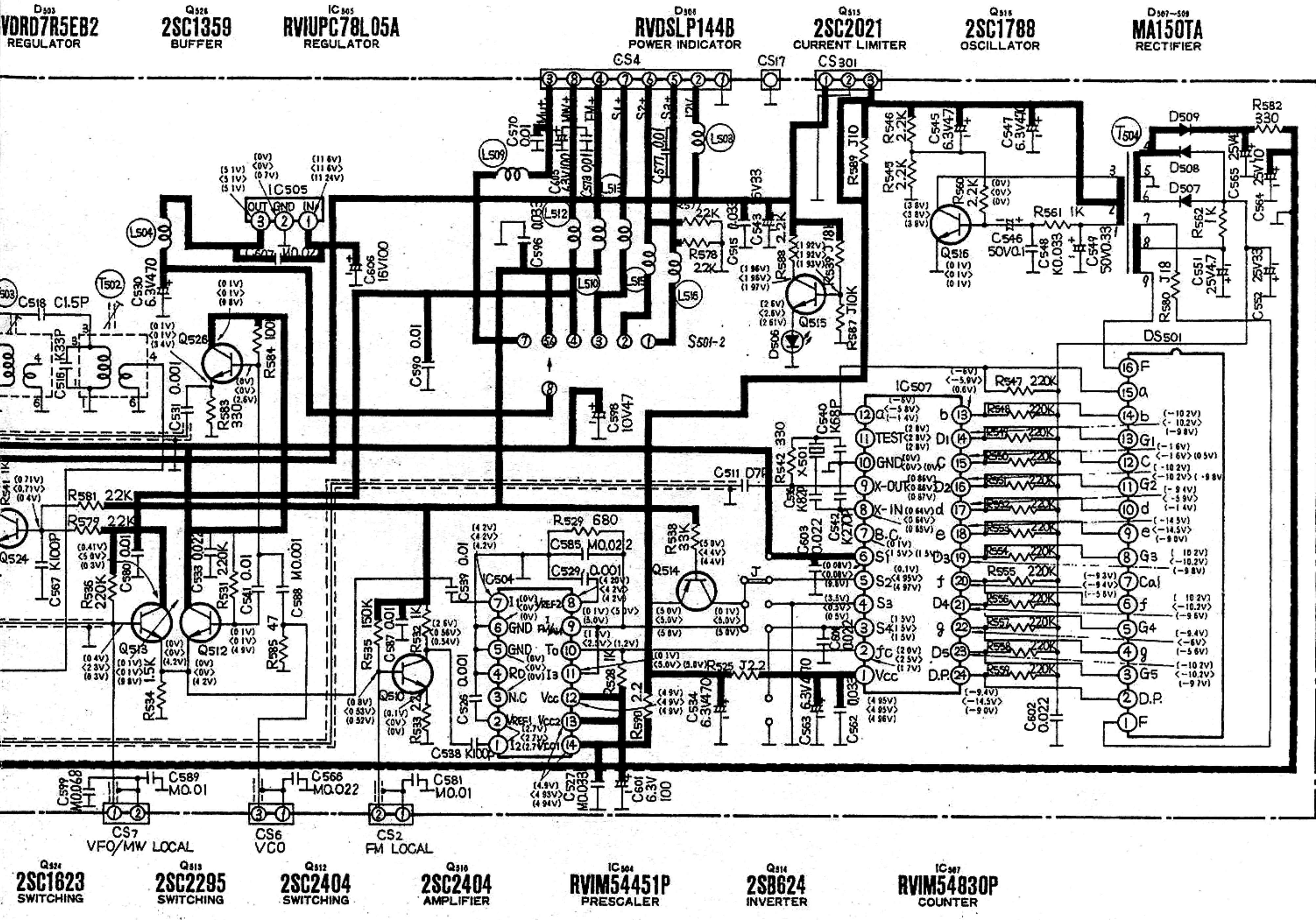
IC503



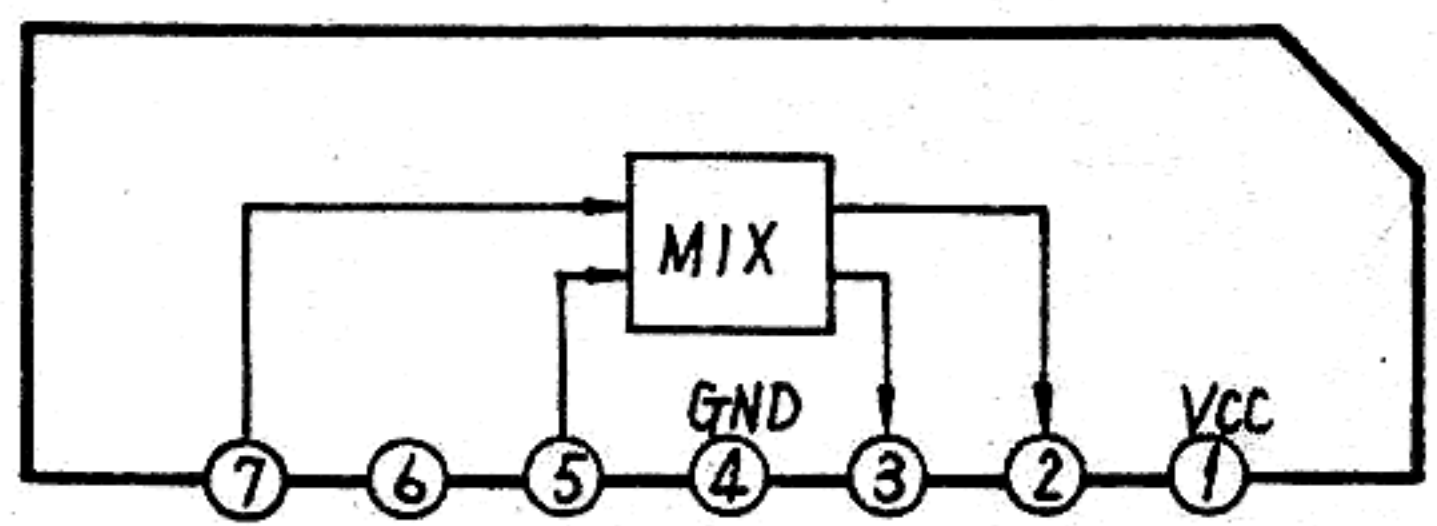
IC301, 505



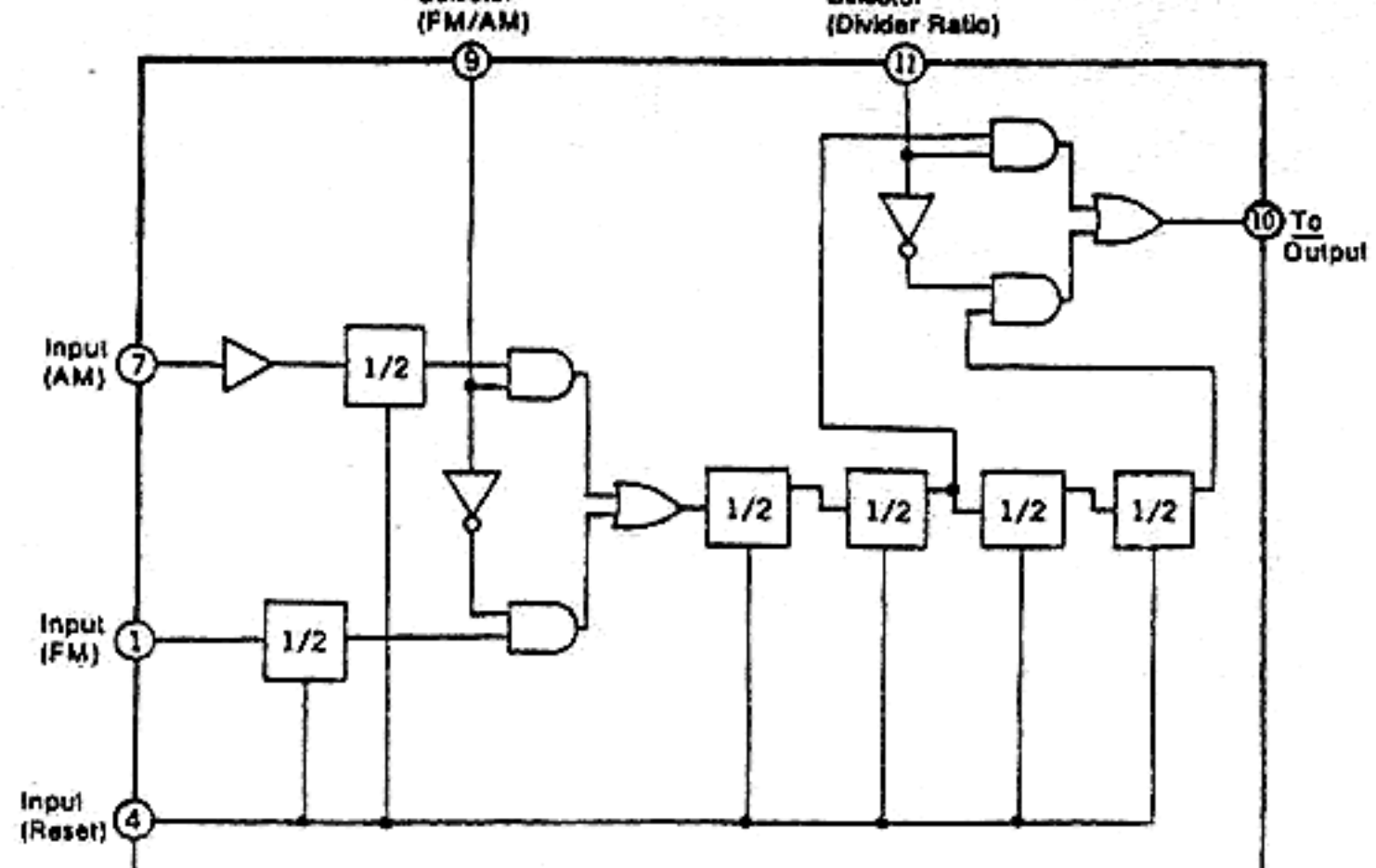
ER) MODEL RF-3100/©



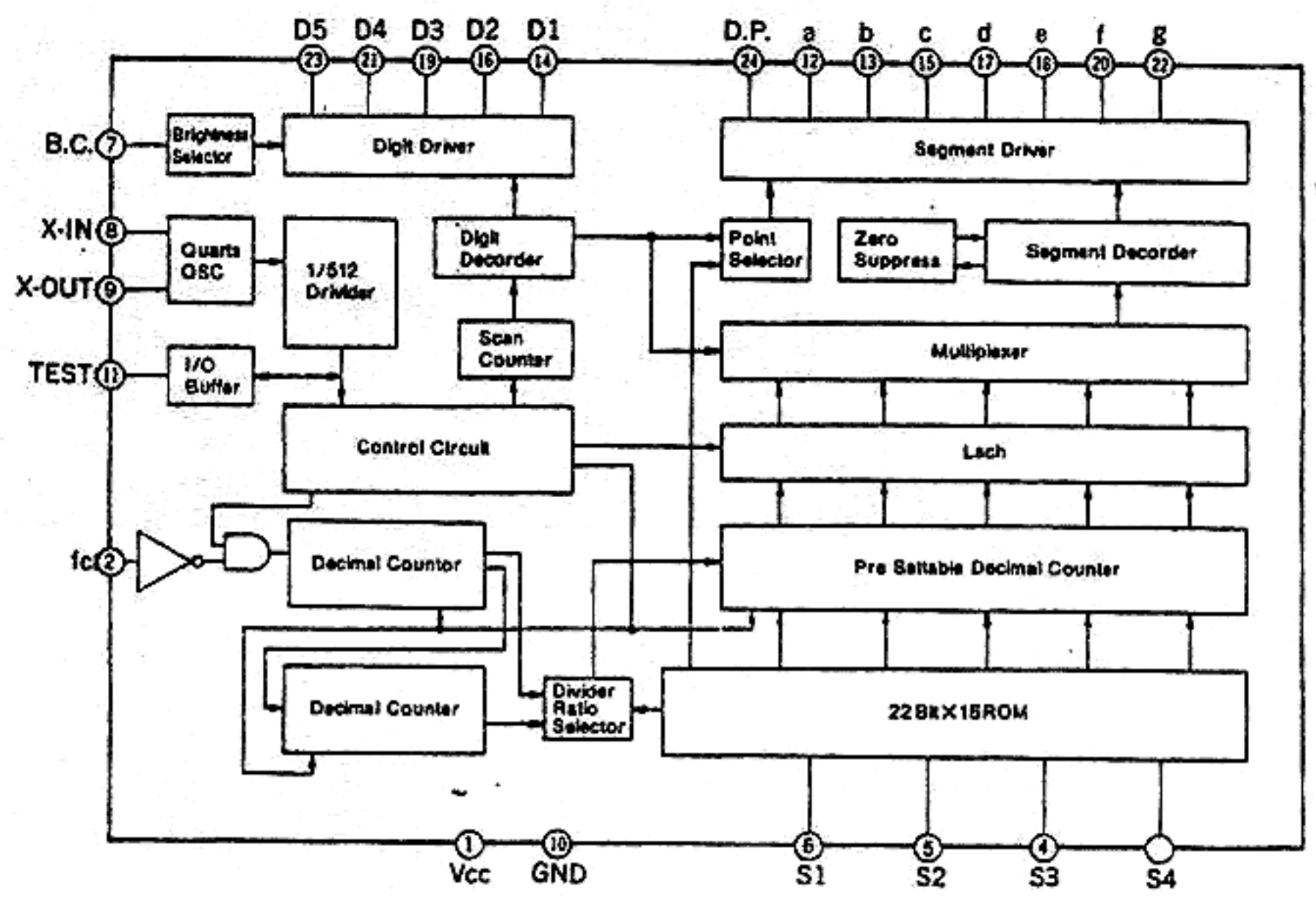
IC502, 508



IC504



IC507



CIRCUIT BOARD SCHEMATIC DIAGRAM (C

Q514

| | FM | MW | SW |
|---|------|------|------|
| C | 0.1V | 0.0V | 5.0V |
| B | 5.0V | 4.4V | 4.4V |
| E | 5.0V | 5.0V | 5.0V |

Q524

| | FM | MW | SW |
|---|-------|-------|-------|
| C | 0.1V | 0.1V | 10.5V |
| B | 0.71V | 0.71V | 0.4V |
| E | 0V | 0V | 0V |

Q513

| | FM | MW | SW |
|---|-------|------|------|
| C | 0.41V | 5.0V | 0.3V |
| B | 0.4V | 2.3V | 0.3V |
| E | 0V | 0V | 0V |

Q526

| | FM | MW | SW |
|---|------|------|------|
| C | 0.1V | 0.1V | 9.8V |
| B | 0V | 0V | 2.6V |
| E | 0.1V | 0.1V | 3.4V |

IC505

| | FM | MW | SW |
|---|-------|-------|--------|
| 1 | 11.6V | 11.6V | 11.24V |
| 2 | 0V | 0V | 0V |
| 3 | 5.1V | 5.1V | 5.1V |

| | FM |
|---|-------|
| C | 14.9V |
| B | 12.7V |
| E | 12.3V |

Q512

| | FM | MW | SW |
|---|------|------|------|
| C | 0.1V | 0.1V | 9.8V |
| B | 0.1V | 0.1V | 4.9V |
| E | 0V | 0V | 4.2V |

Q510

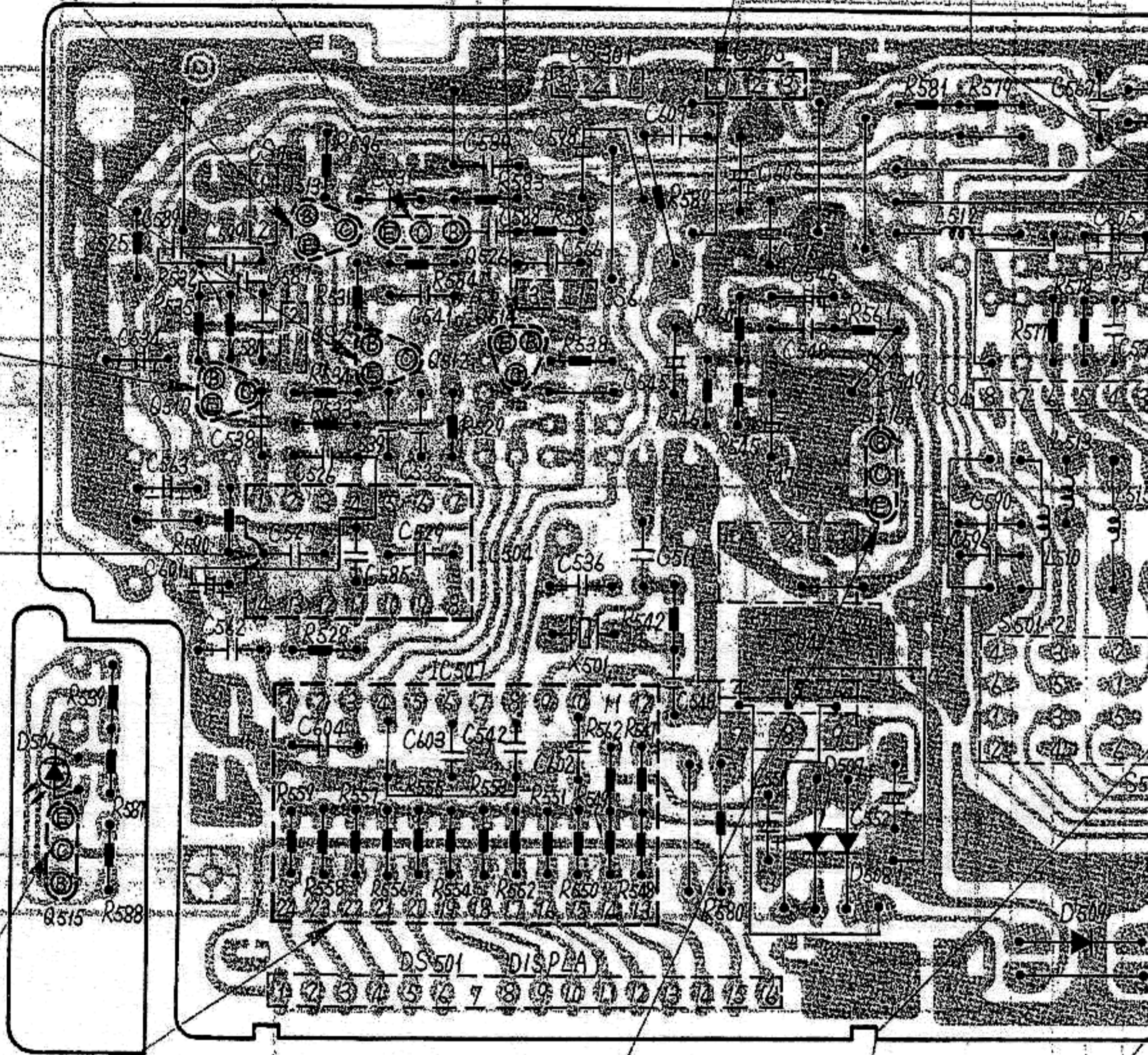
| | FM | MW | SW |
|---|------|-------|-------|
| C | 2.6V | 0.56V | 0.54V |
| B | 0.8V | 0.53V | 0.52V |
| E | 0.1V | 0V | 0V |

IC504

| | FM | MW | SW | | FM | MW | SW |
|---|------|------|------|----|------|-------|-------|
| 1 | 2.7V | 2.7V | 2.7V | 8 | 4.2V | 4.2V | 4.2V |
| 2 | 2.7V | 2.7V | 2.7V | 9 | 0.1V | 5.0V | 5.0V |
| 3 | 0V | 0V | 0V | 10 | 1.8V | 2.5V | 1.2V |
| 4 | 0V | 0V | 0V | 11 | 0.1V | 5.0V | 5.0V |
| 5 | 0V | 0V | 0V | 12 | 4.9V | 4.9V | 4.9V |
| 6 | 0V | 0V | 0V | 13 | 4.9V | 4.93V | 4.94V |
| 7 | 4.2V | 4.2V | 4.2V | 14 | 4.9V | 4.93V | 4.94V |

Q515

| | FM | MW | SW |
|---|--------|--------|-------|
| C | 1.96V | 1.96V | 1.97V |
| B | -1.92V | -1.92V | 1.93V |
| E | 2.6V | 2.6V | 2.61V |



IC507

| | FM | MW | SW | | FM | MW | SW |
|----|-------|-------|-------|----|--------|--------|-------|
| 1 | 4.95V | 4.95V | 4.96V | 13 | -6V | -5.9V | 0.6V |
| 2 | 2.0V | 2.5V | 1.7V | 14 | -10.2V | -10.2V | -9.8V |
| 3 | 1.5V | 1.5V | 1.5V | 15 | -1.6V | -1.6V | 0.5V |
| 4 | 3.5V | 0.5V | 0.5V | 16 | -10.2V | -10.2V | -9.8V |
| 5 | 0.1V | 4.95V | 4.97V | 17 | -9.4V | -5.9V | -1.4V |
| 6 | 0.08V | 0.08V | 9.8V | 18 | -14.5V | -14.5V | -9.0V |
| 7 | 0.1V | 1.5V | 1.5V | 19 | -10.2V | -10.2V | -9.8V |
| 8 | 0.64V | 0.64V | 0.65V | 20 | -9.3V | -9.4V | -5.6V |
| 9 | 0.86V | 0.86V | 0.87V | 21 | -10.2V | -10.2V | -9.6V |
| 10 | 0V | 0V | 0V | 22 | -9.4V | -6V | -5.6V |
| 11 | 2.8V | 2.8V | 2.8V | 23 | -10.2V | -10.2V | -9.7V |
| 12 | -6V | -5.8V | -1.4V | 24 | -9.4V | -14.5V | -9.0V |

Q516

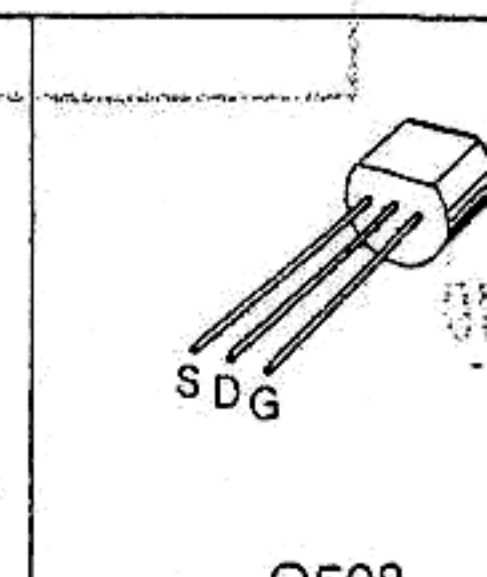
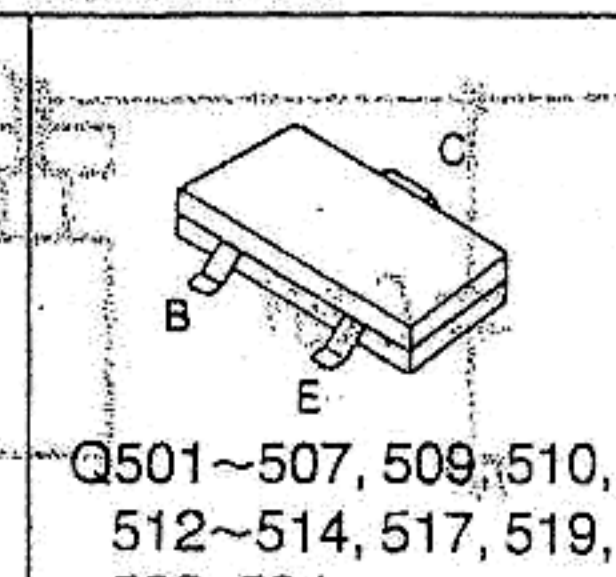
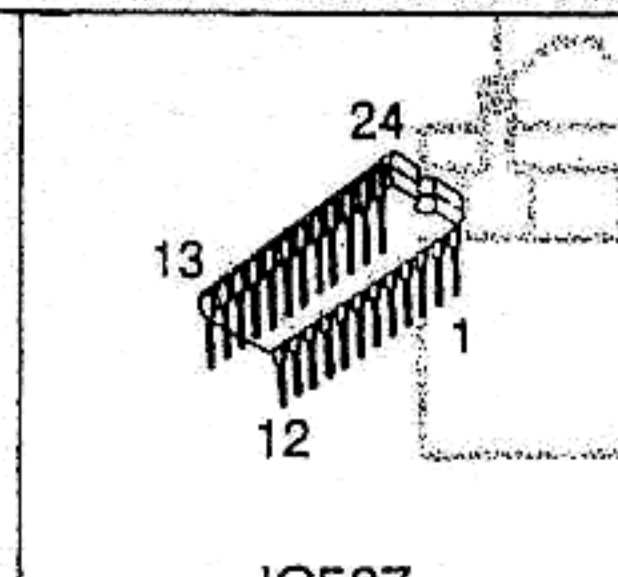
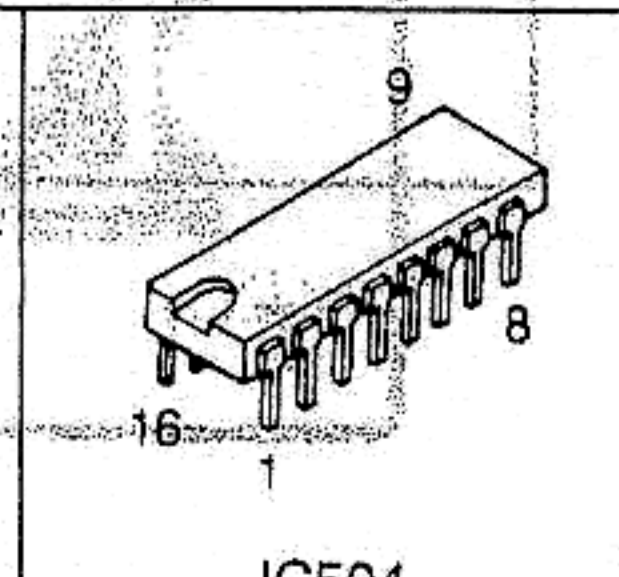
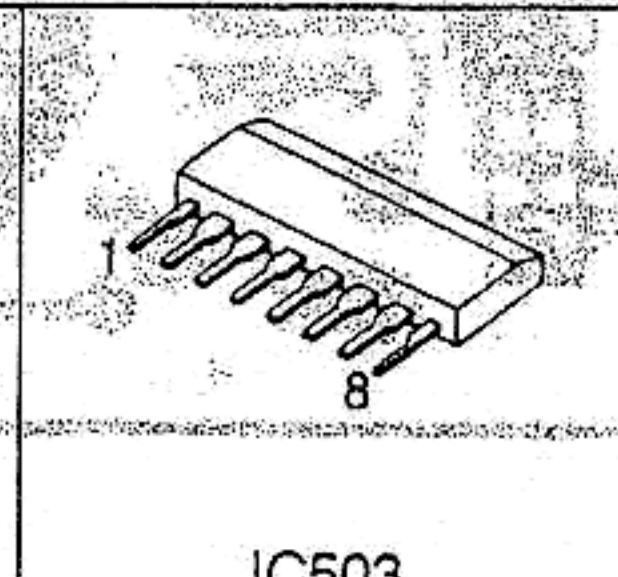
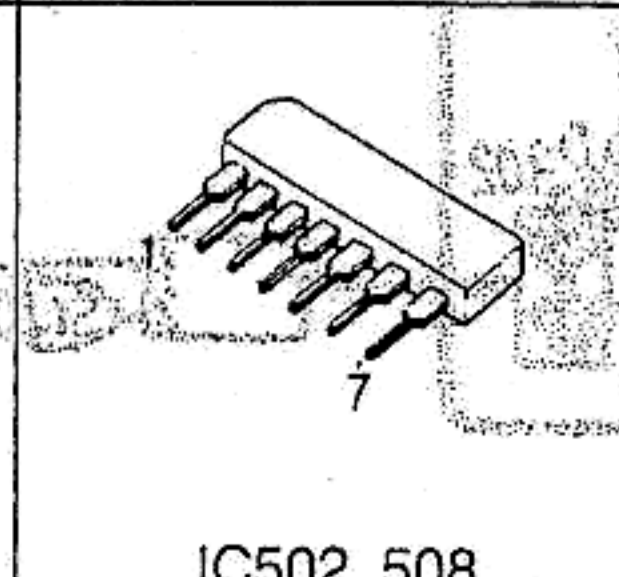
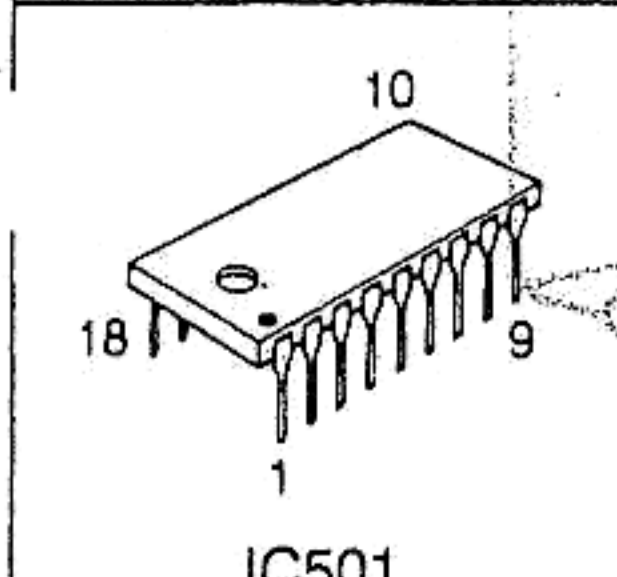
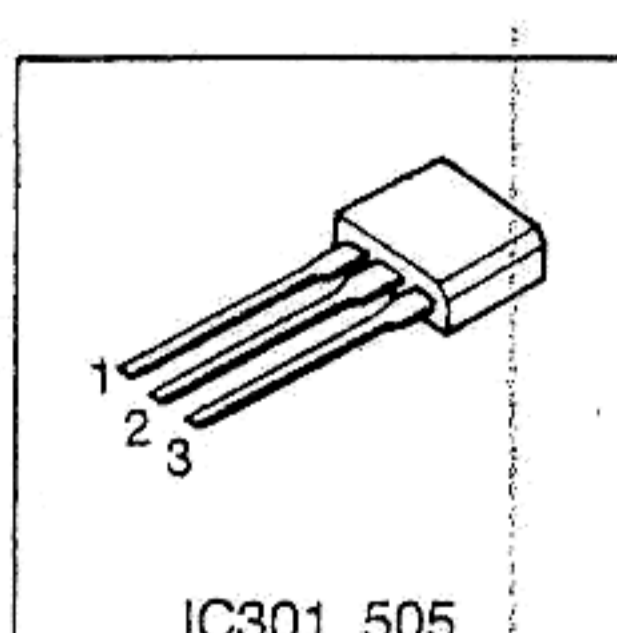
| | FM | MW | SW |
|---|------|------|------|
| C | 3.8V | 3.8V | 3.8V |
| B | 0V | 0V | 0V |
| E | 0.1V | 0.1V | 0.1V |

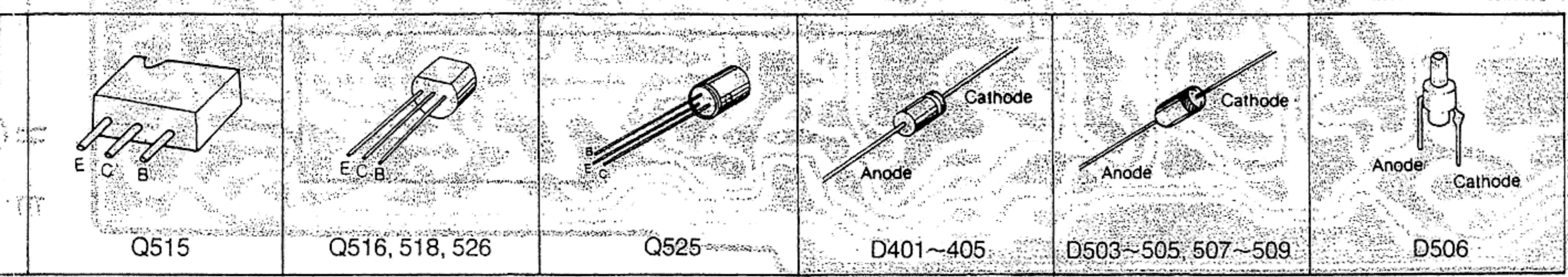
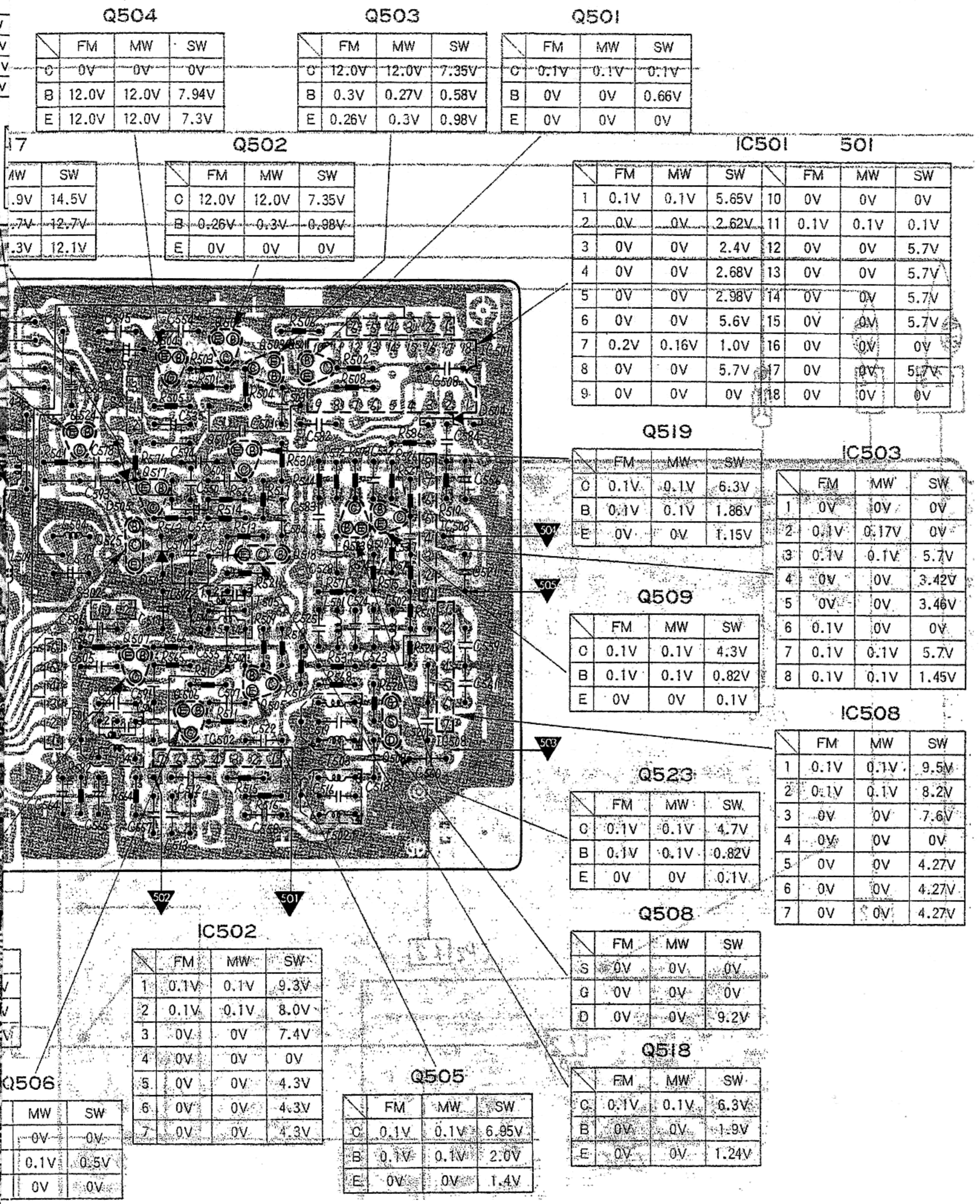
Q507

| | FM | MW |
|---|------|------|
| C | 0.1V | 0.1V |
| B | 0.1V | 0.1V |
| E | 0V | 0V |

Q525

| | FM | MW | SW |
|---|--------|--------|--------|
| C | 11.62V | 11.64V | 11.25V |
| B | 0.1V | 0.1V | 9.8V |
| E | 0.1V | 0.13V | 10.45V |

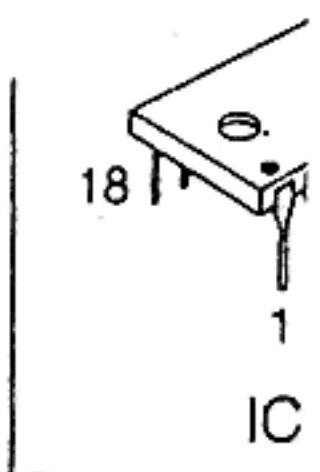
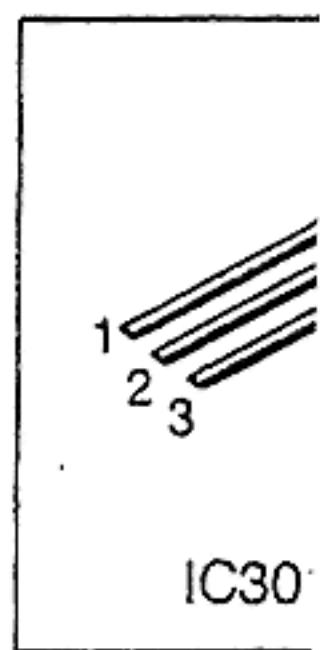


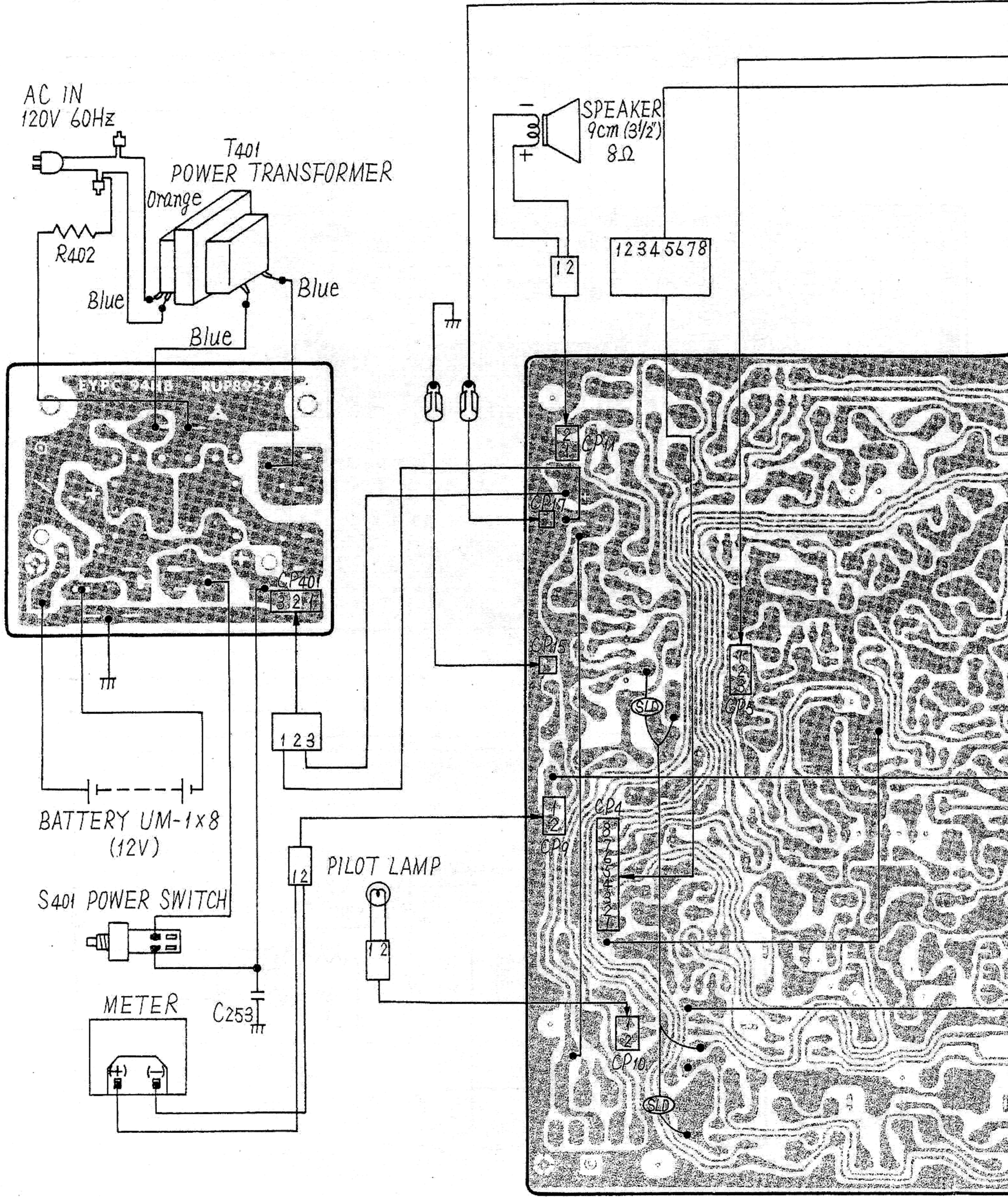


■ SWITCH POSITIONS

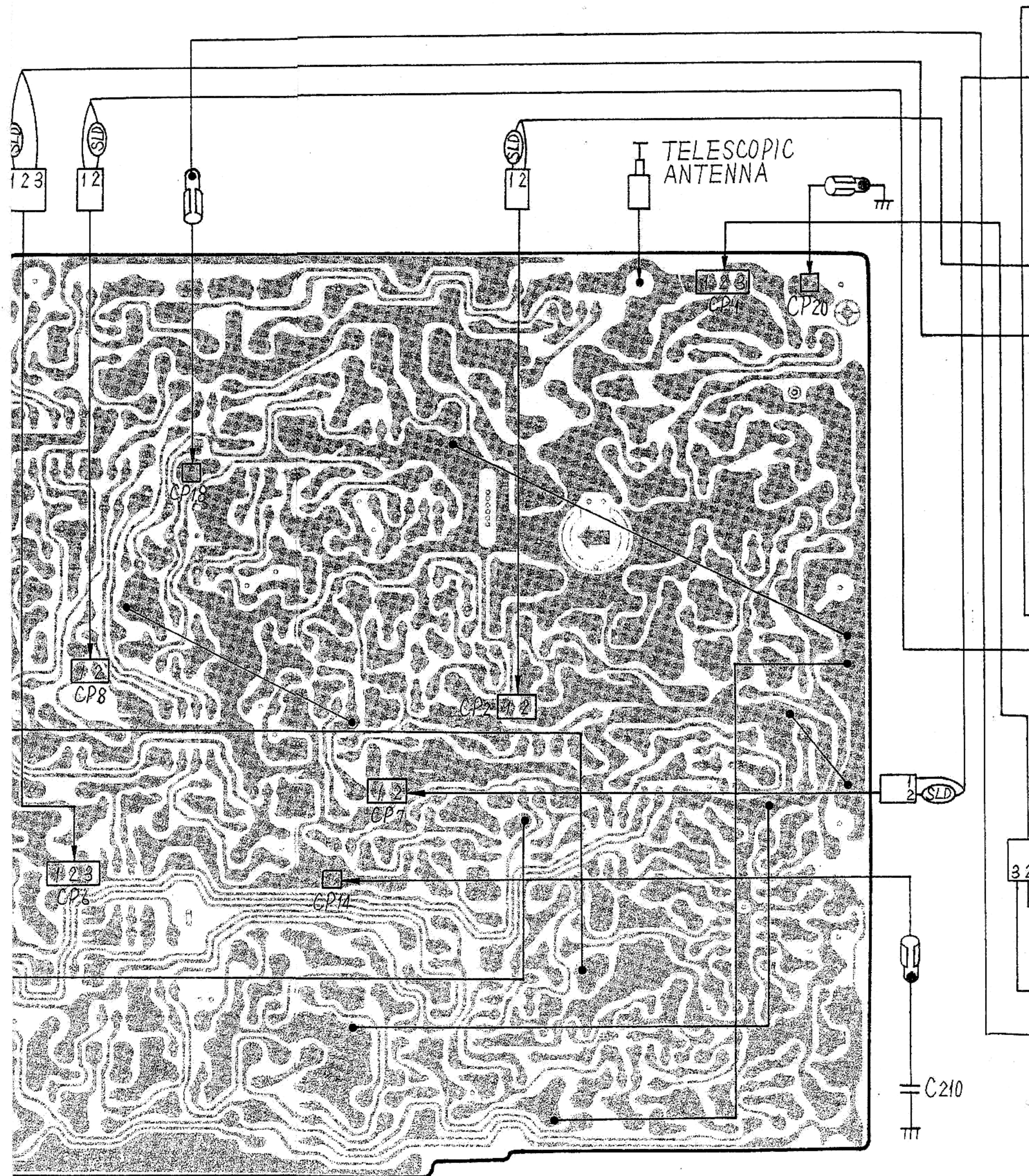
○ : ON, No mark: OFF

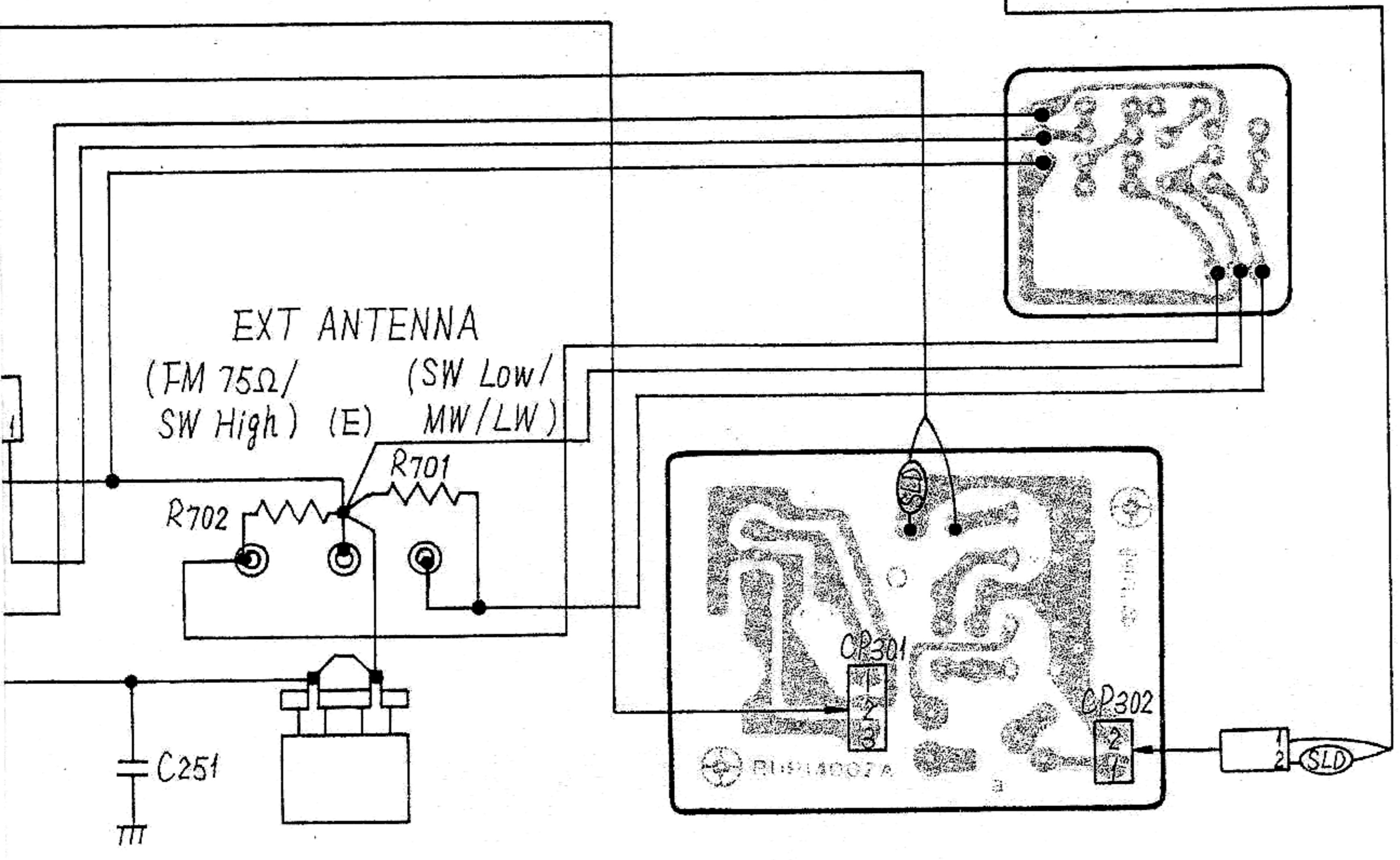
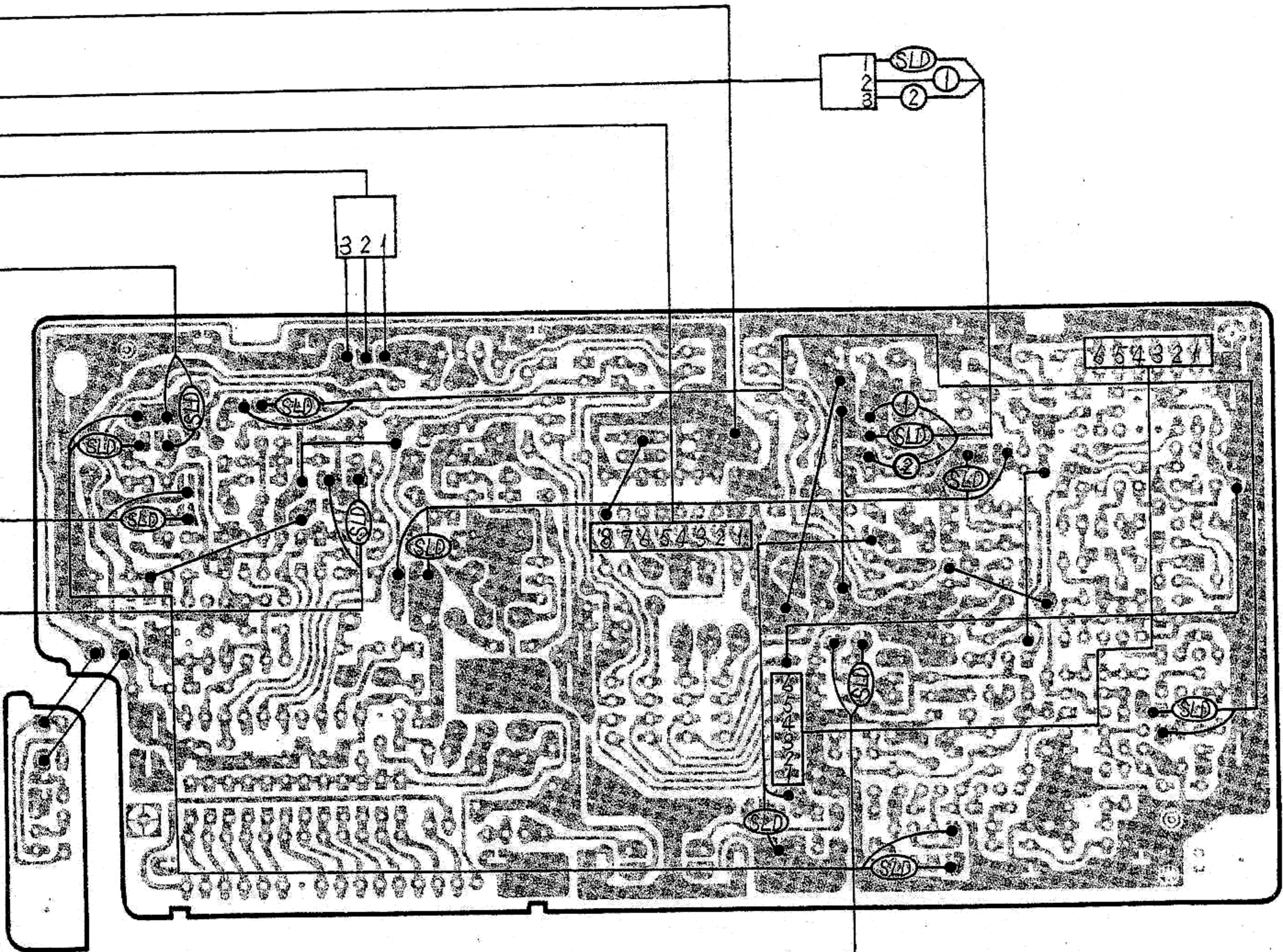
| | S501-2 | | | | | | | S501-1 | | | | | |
|------|--------|---|---|---|---|---|---|--------|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 | 6 |
| FM | | | | | ○ | | | | | | | | |
| MW | | | | ○ | | | ○ | | | | | | |
| SW1 | | | ○ | | | | ○ | | | ○ | ○ | ○ | ○ |
| SW2 | | | ○ | | | | ○ | ○ | | ○ | ○ | ○ | ○ |
| SW3 | | | ○ | | | | ○ | | ○ | ○ | ○ | ○ | ○ |
| SW4 | | | ○ | | | | ○ | ○ | | ○ | ○ | ○ | ○ |
| SW5 | | | ○ | | | | ○ | | | | | | |
| SW6 | | | ○ | | | | ○ | | | | | | |
| SW7 | | | ○ | | | | ○ | | ○ | | | | |
| SW8 | | ○ | | | | | ○ | ○ | | | | | |
| SW9 | | ○ | | | | | ○ | | | ○ | | | |
| SW10 | | ○ | | | | | ○ | | | ○ | | | |
| SW11 | | ○ | | | | | ○ | | ○ | ○ | | | |
| SW12 | | ○ | | | | | ○ | ○ | | ○ | | | |
| SW13 | | ○ | | | | | ○ | | | | ○ | | |
| SW14 | | ○ | | | | | ○ | | | | ○ | | |
| SW15 | | ○ | | | | | ○ | | ○ | | ○ | | |
| SW16 | ○ | | | | | | ○ | ○ | | | ○ | | |
| SW17 | ○ | | | | | | ○ | | | ○ | ○ | | |
| SW18 | ○ | | | | | | ○ | | | ○ | ○ | | |
| SW19 | ○ | | | | | | ○ | | ○ | ○ | ○ | | |
| SW20 | ○ | | | | | | ○ | ○ | | ○ | ○ | | |
| SW21 | ○ | | | | | | ○ | | | | | ○ | |
| SW22 | ○ | | | | | | ○ | | | | | ○ | |
| SW23 | ○ | | | | | | ○ | | ○ | | | ○ | |
| SW24 | ○ | | | | | | ○ | ○ | | | | ○ | |
| SW25 | ○ | | | | | | ○ | | | ○ | | ○ | |
| SW26 | ○ | | | | | | ○ | | ○ | | | ○ | |
| SW27 | ○ | | | | | | ○ | | ○ | | | ○ | |
| SW28 | ○ | | | | | | ○ | ○ | ○ | | | ○ | |
| SW29 | ○ | | | | | | ○ | | | ○ | | ○ | |



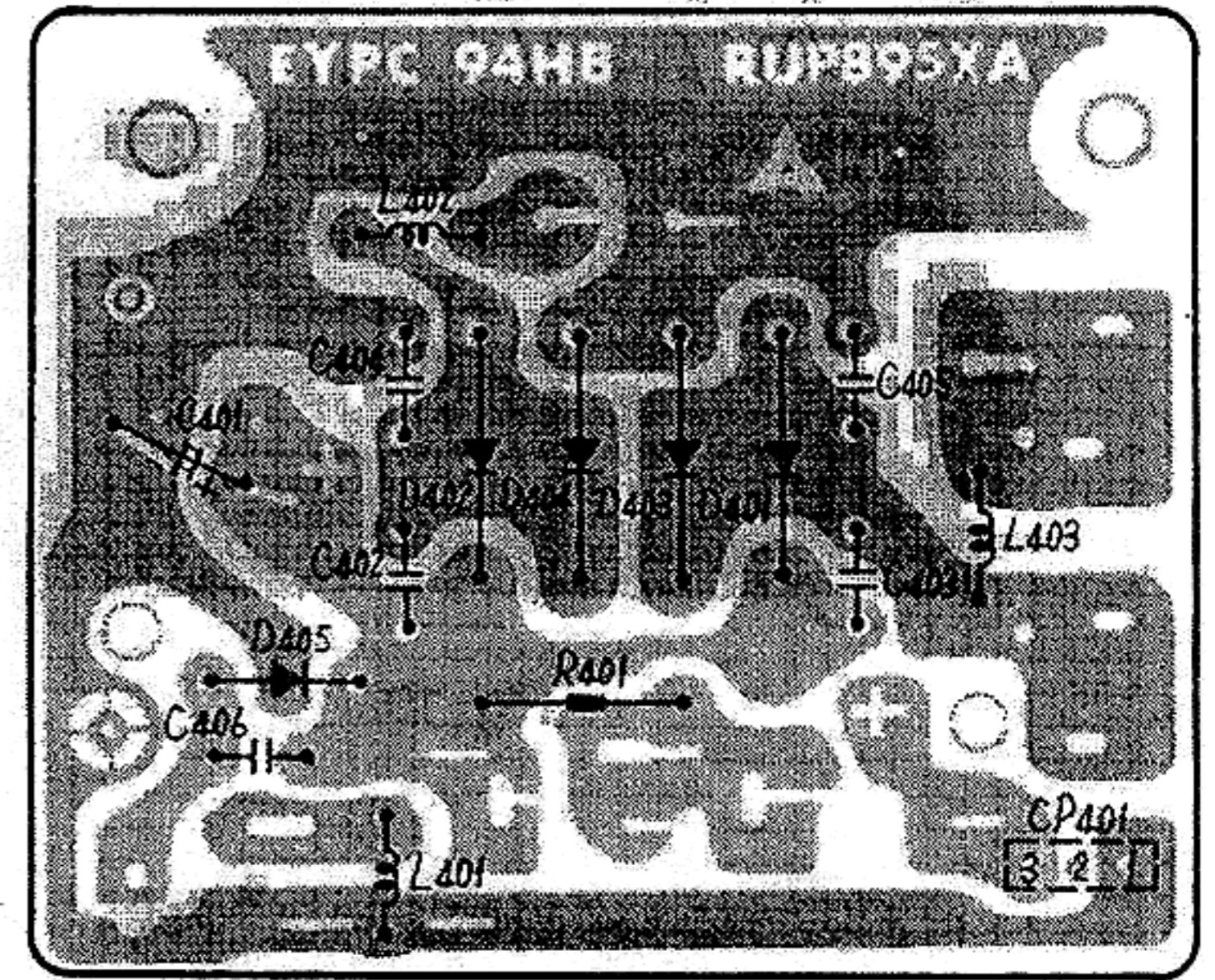
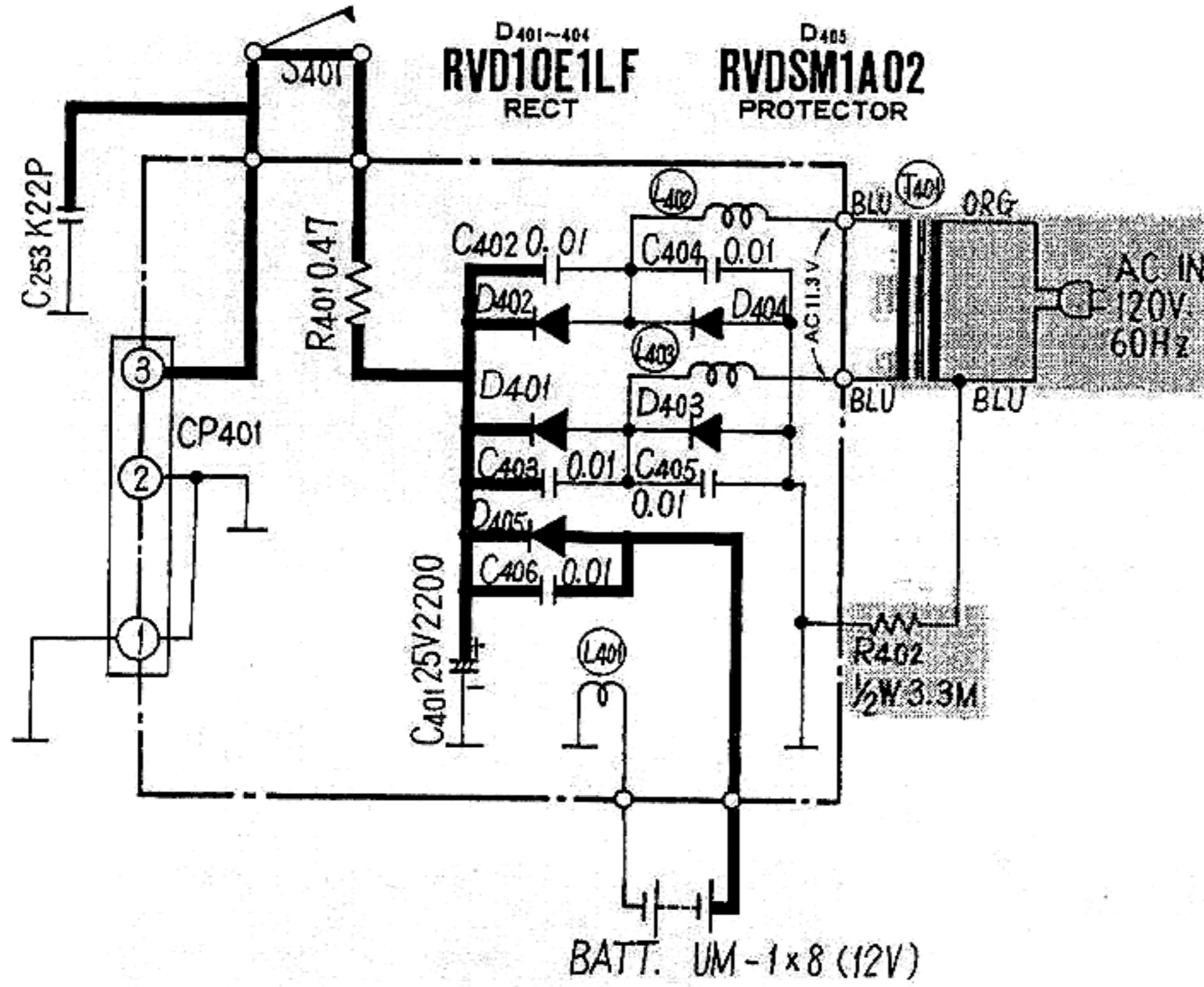


RING CONNECTION DIAGRAM MODEL RF-3100/©





■ POWER SUPPLY CIRCUIT



Notes:

1. S401: Power ON/OFF switch in "OFF" position.
2. VR301: 2nd local OSC filter adjustment VR.
3. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
[] FM position, < > ... MW position,
() ... SW position.
4. Battery current: No signal (MW) 270 mA
No signal (FM) 240 mA
Maximum (MW) 480 mA
Maximum (FM) 465 mA

5. Important safety notice
The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.
When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

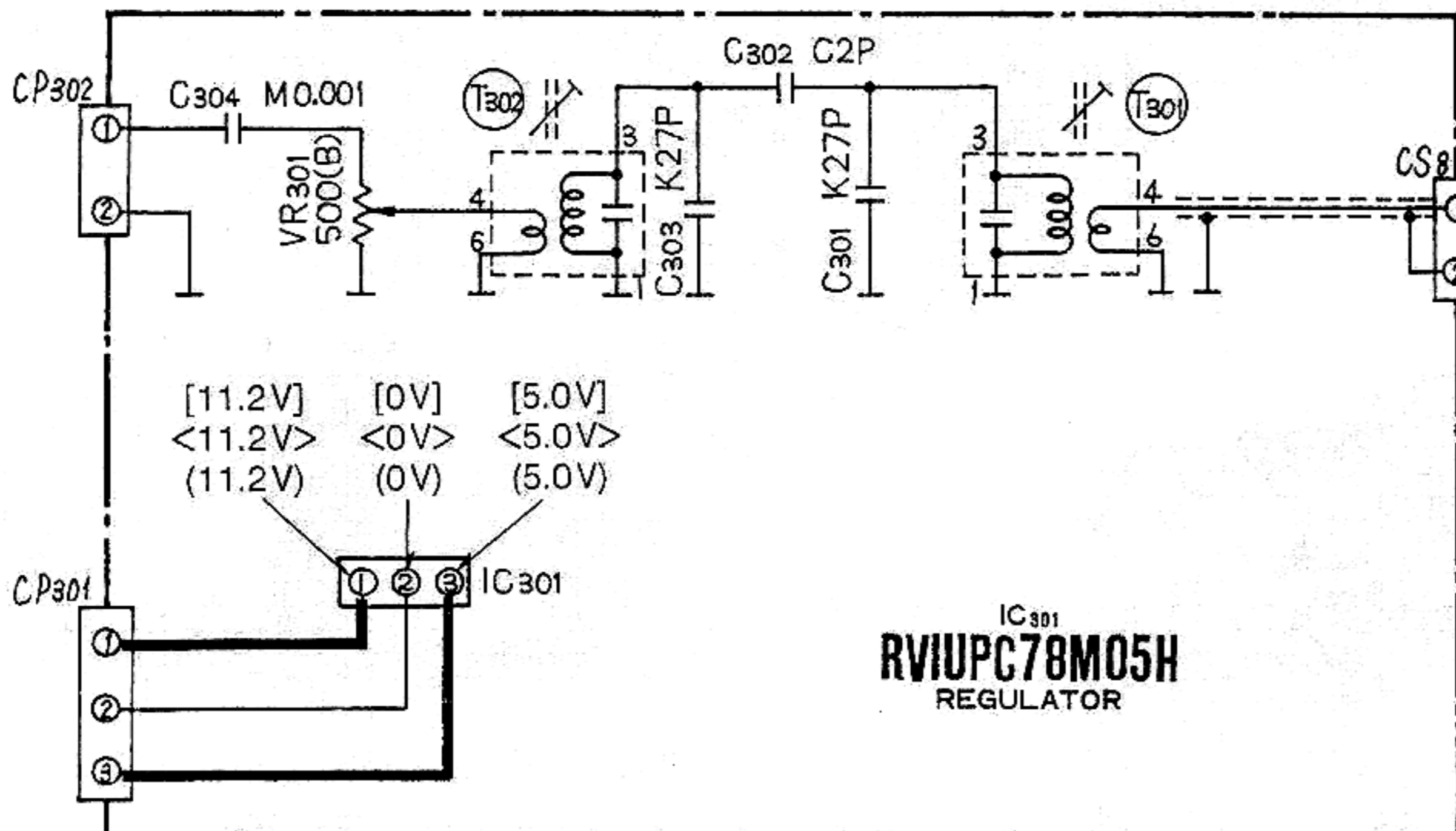
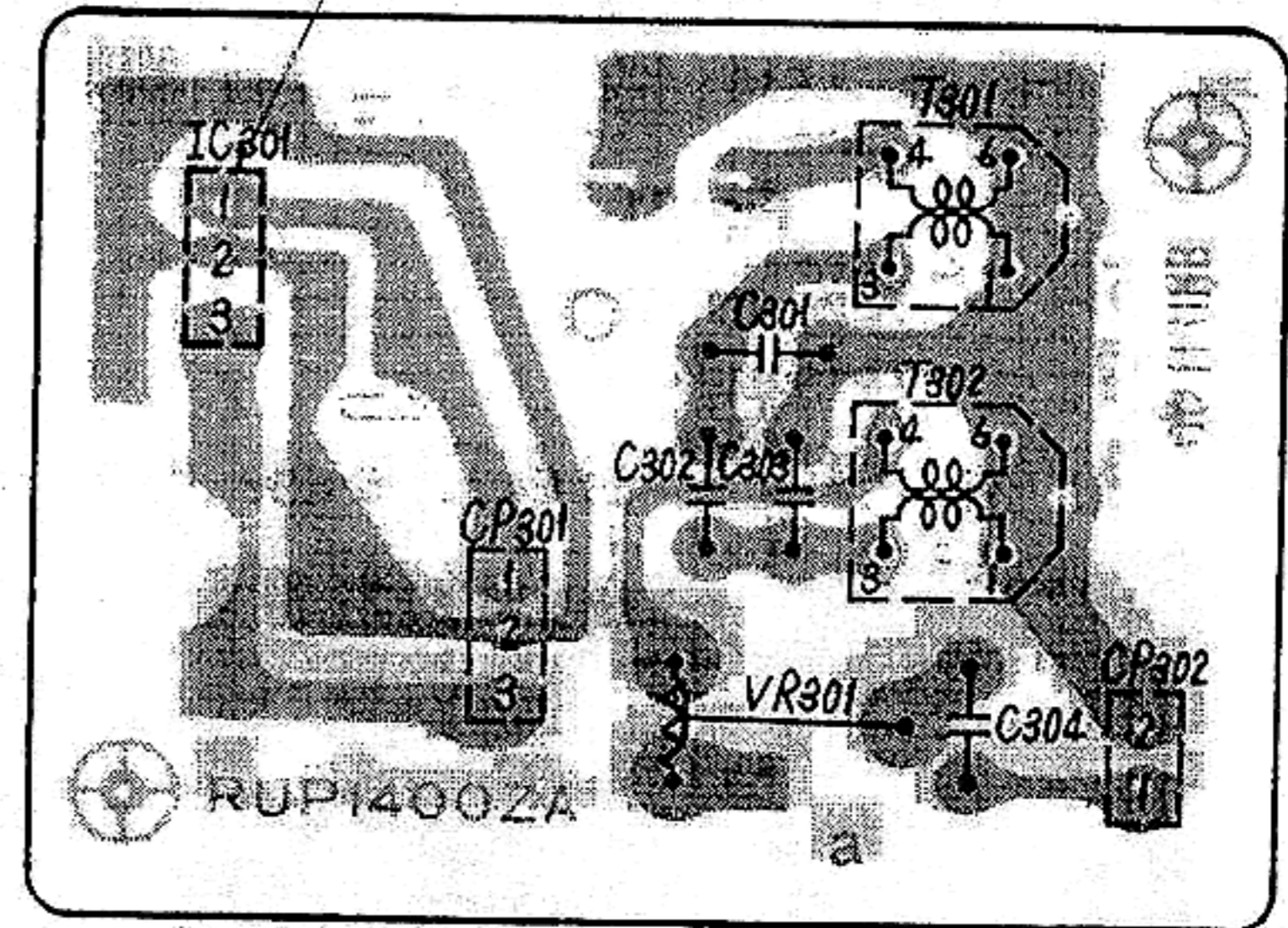
6. Special Notes:
The secondary AC voltage of power transformer specification (without load).



■ 2nd LOCAL FILTER CIRCUIT

IC301

| | FM | MW | SW |
|---|-------|-------|-------|
| 1 | 11.2V | 11.2V | 11.2V |
| 2 | 0V | 0V | 0V |
| 3 | 5.0V | 5.0V | 5.0V |



IC301
RVIUPC78M05H
REGULATOR

ELECTRICAL PARTS LOCATION

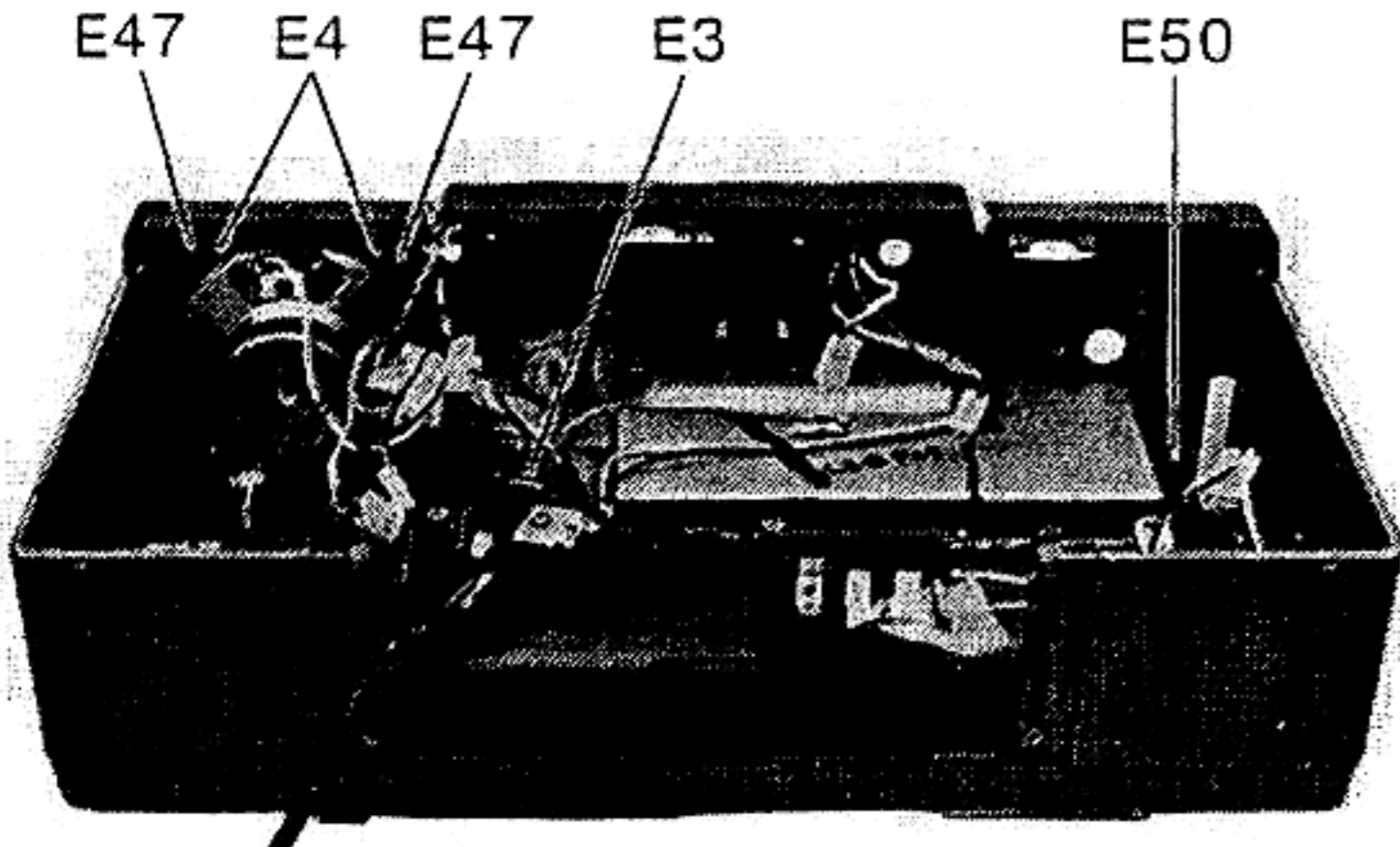


Fig. 19

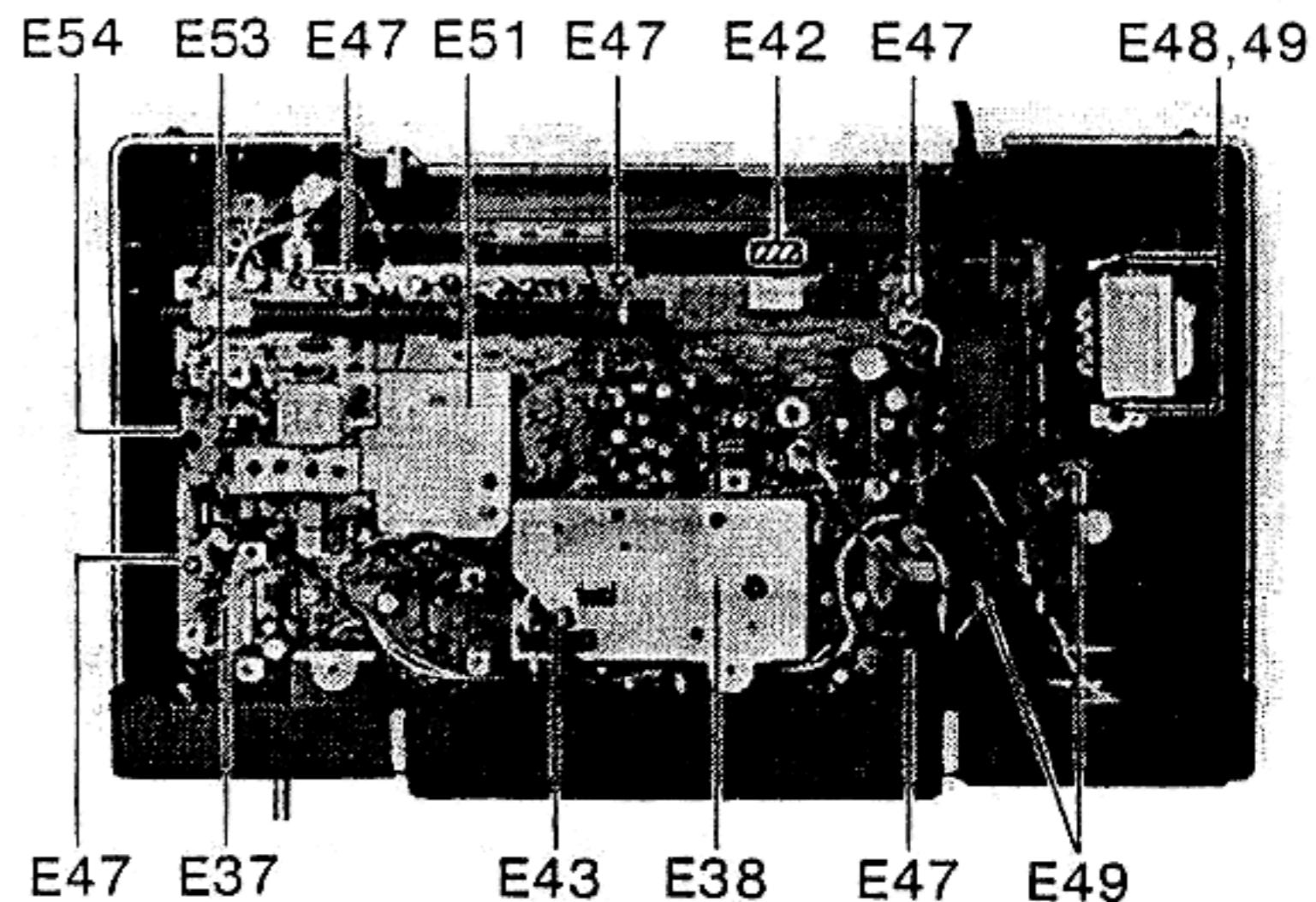


Fig. 20

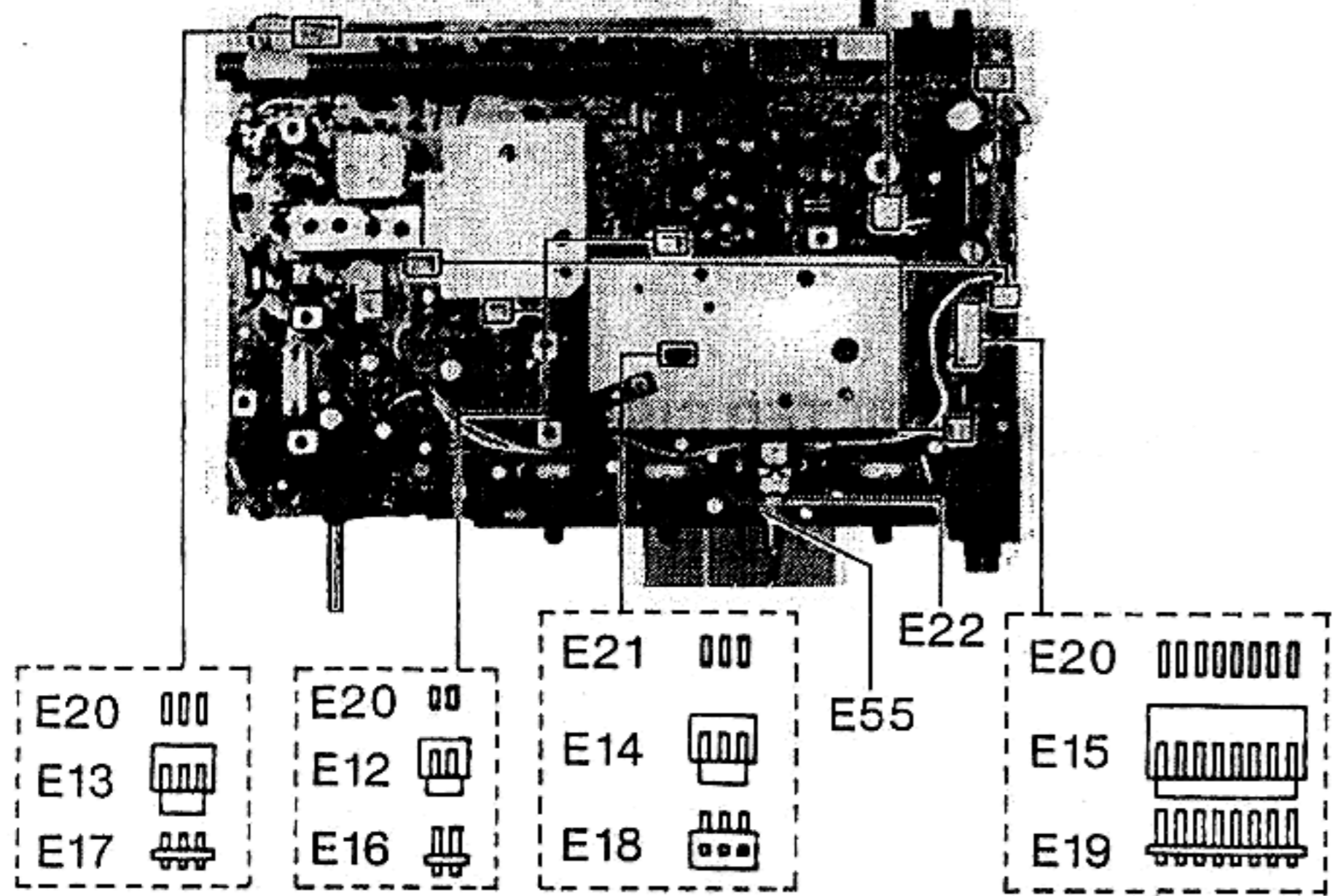


Fig. 21

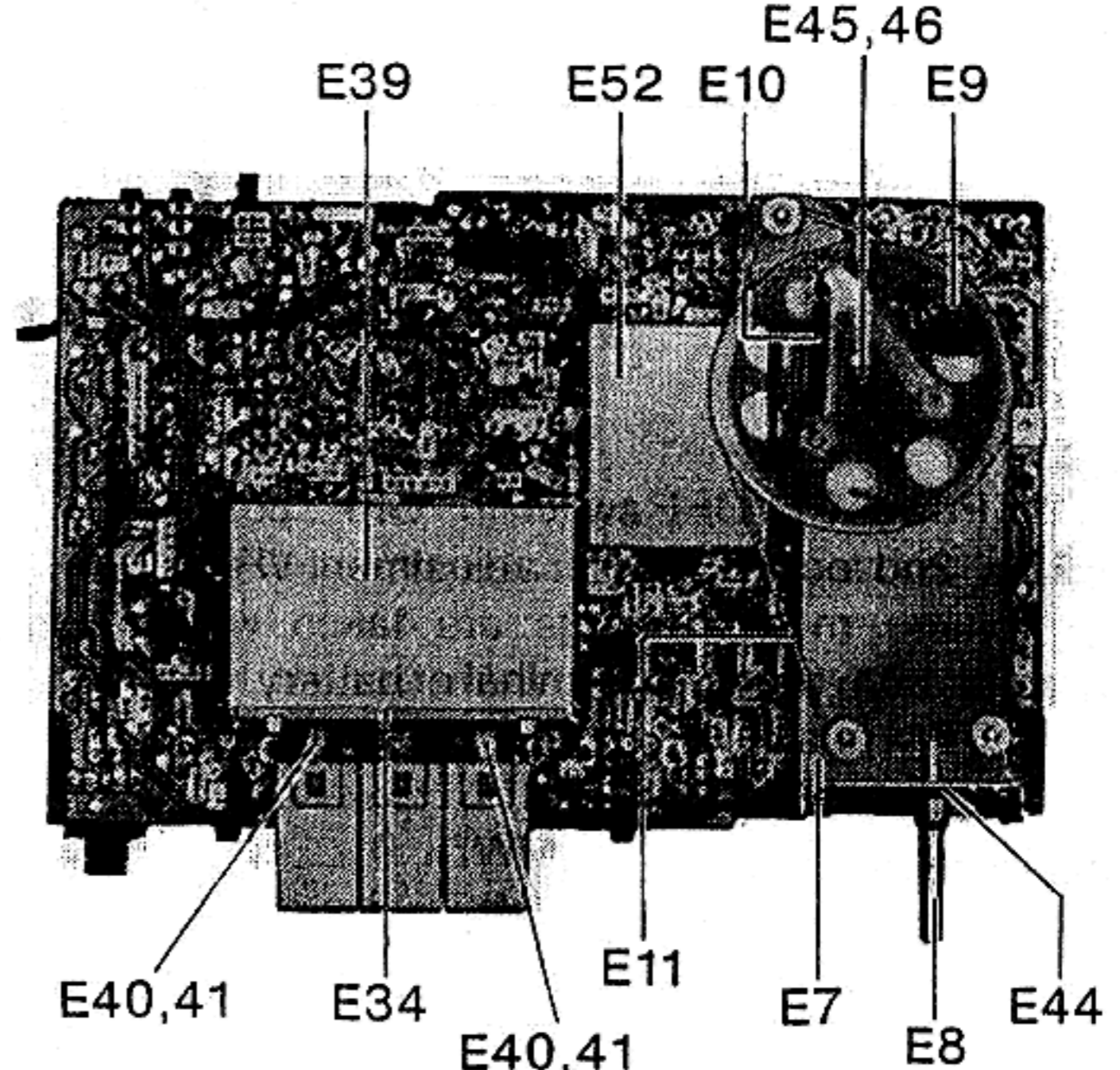


Fig. 22

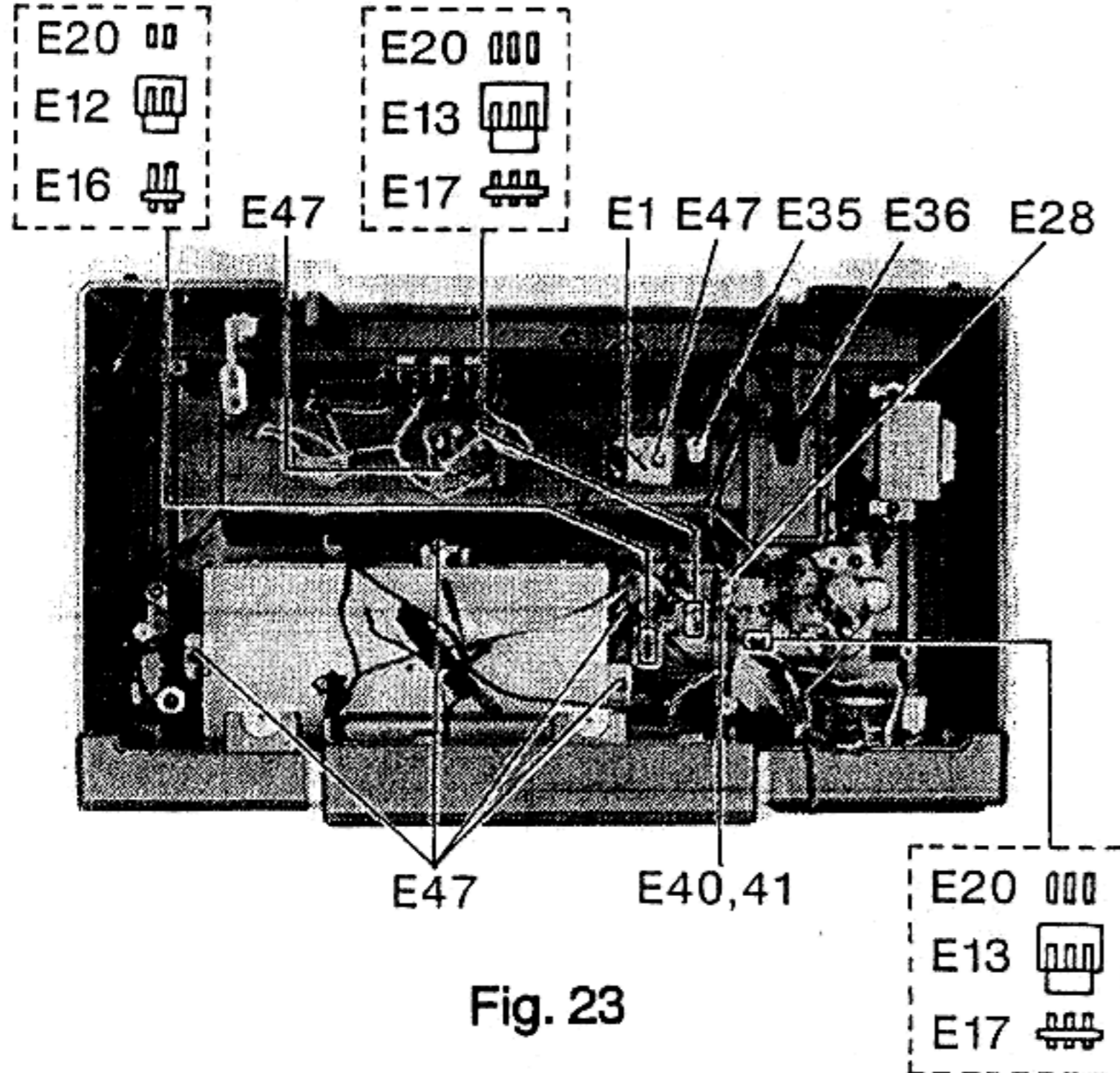


Fig. 23

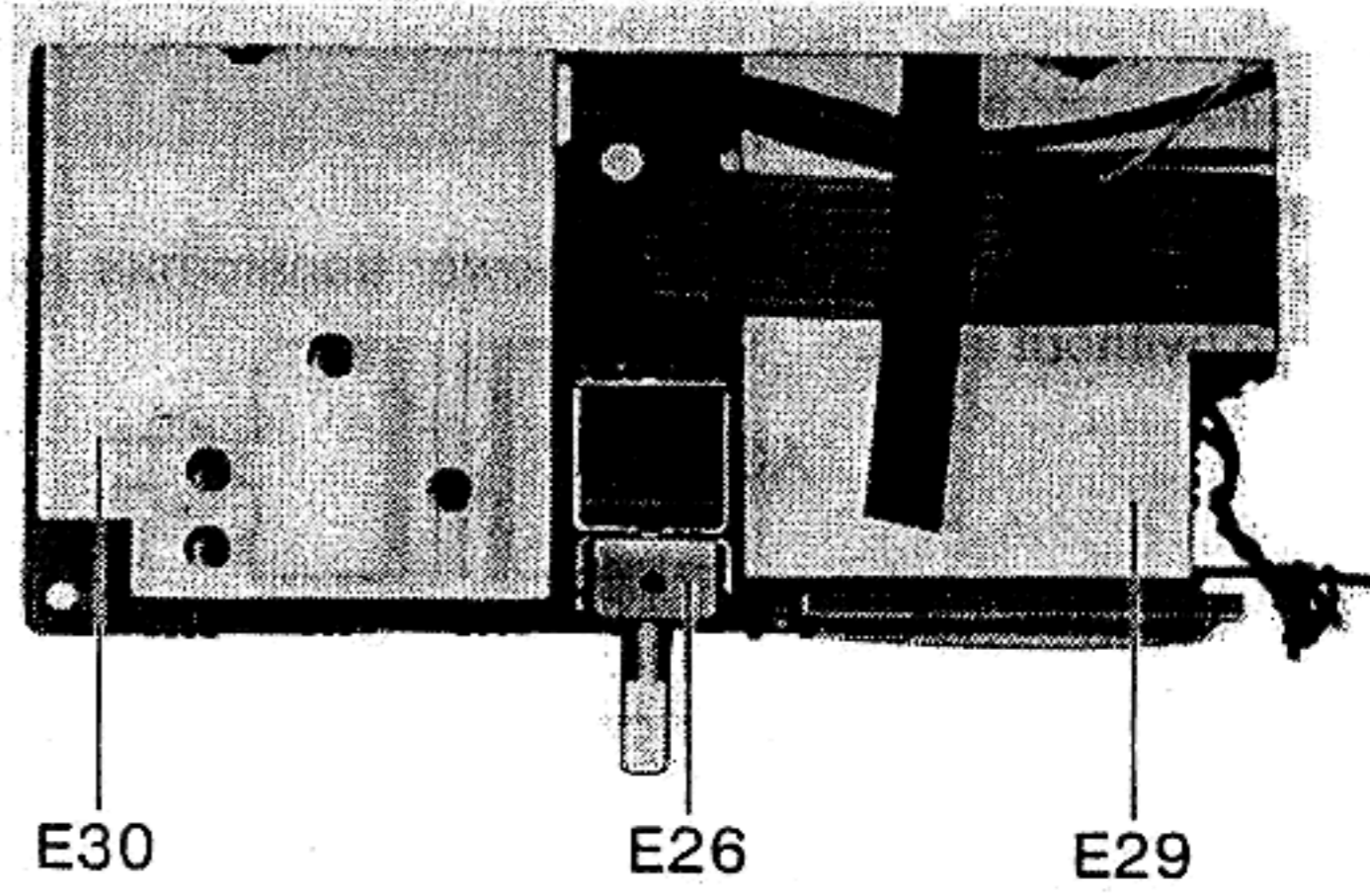


Fig. 24

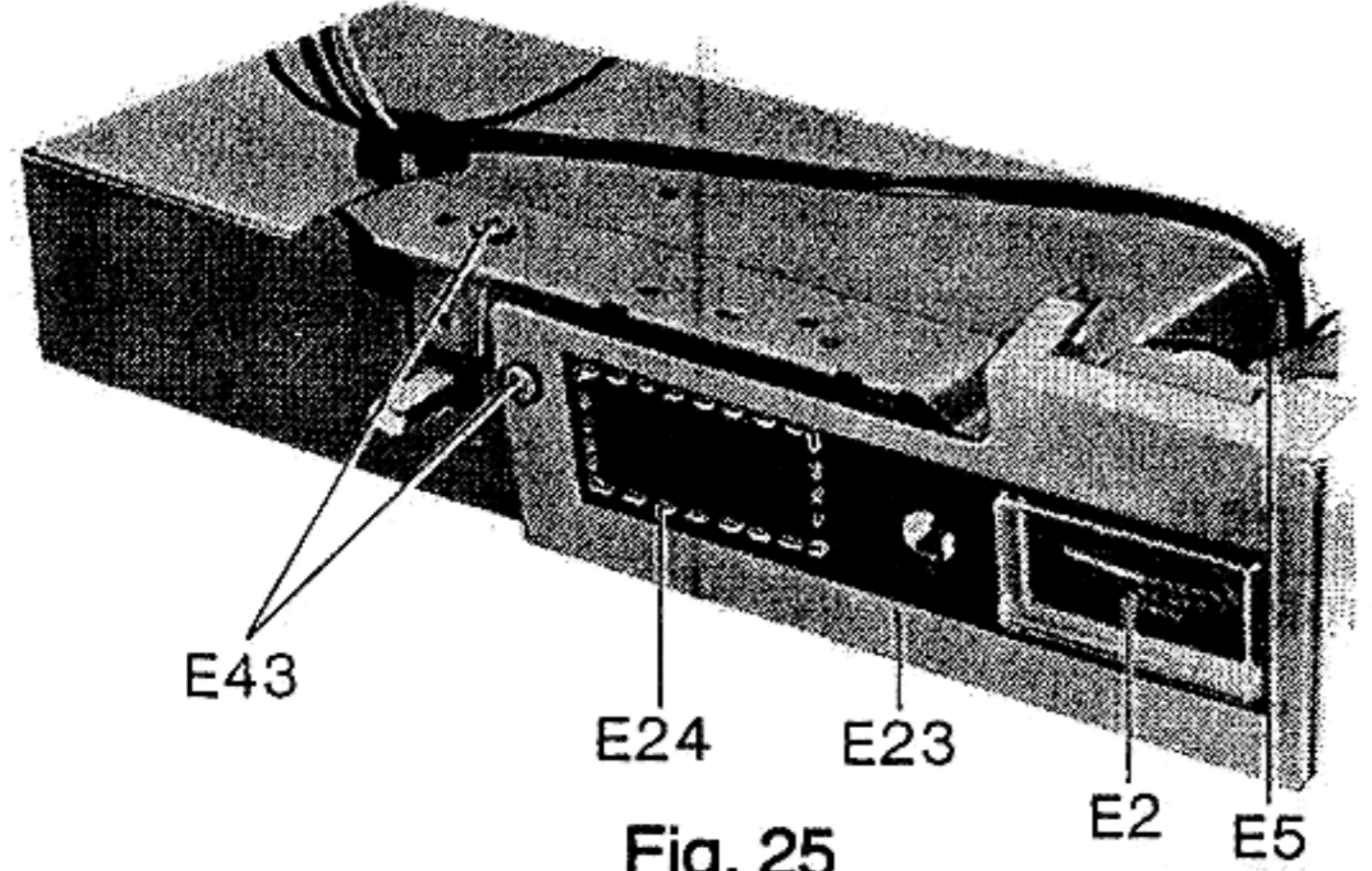


Fig. 25

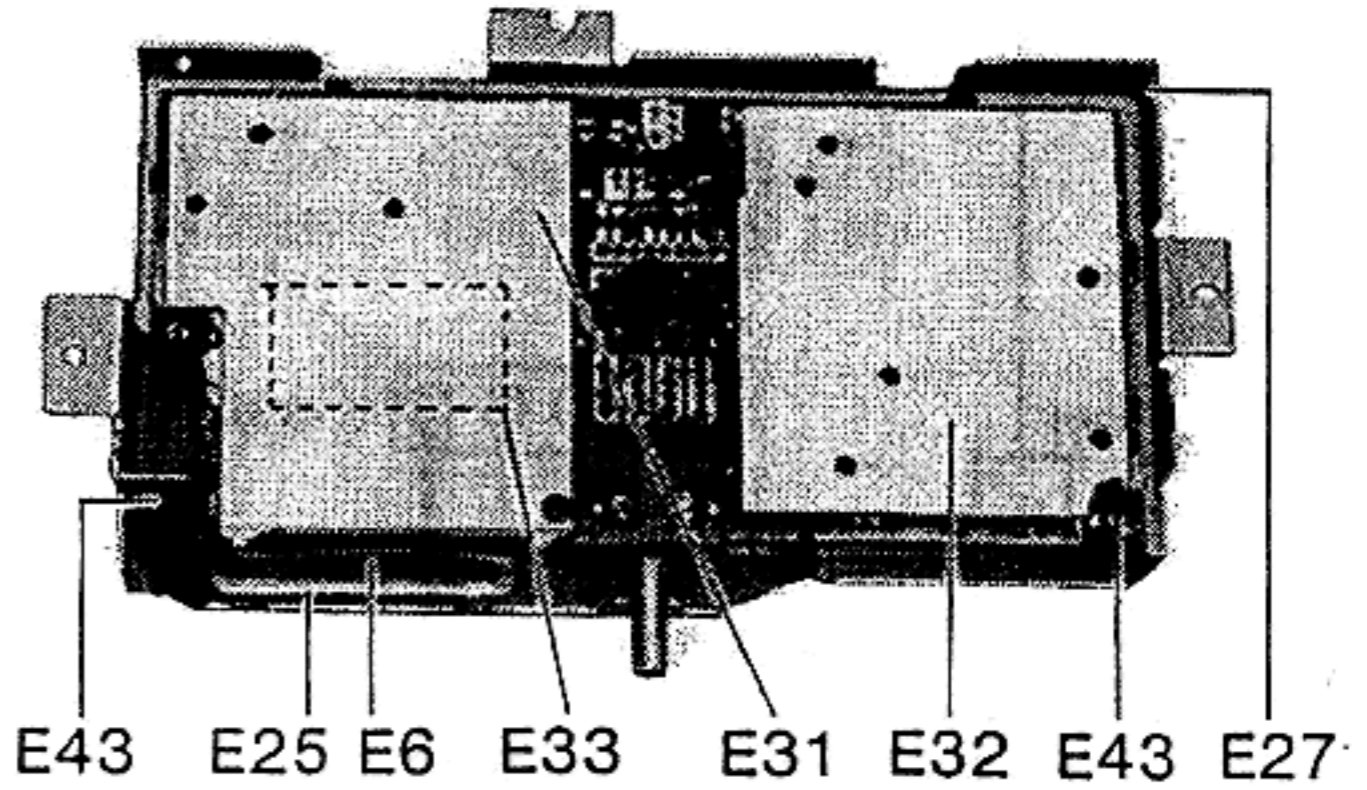


Fig. 26

CABINET PARTS LOCATION

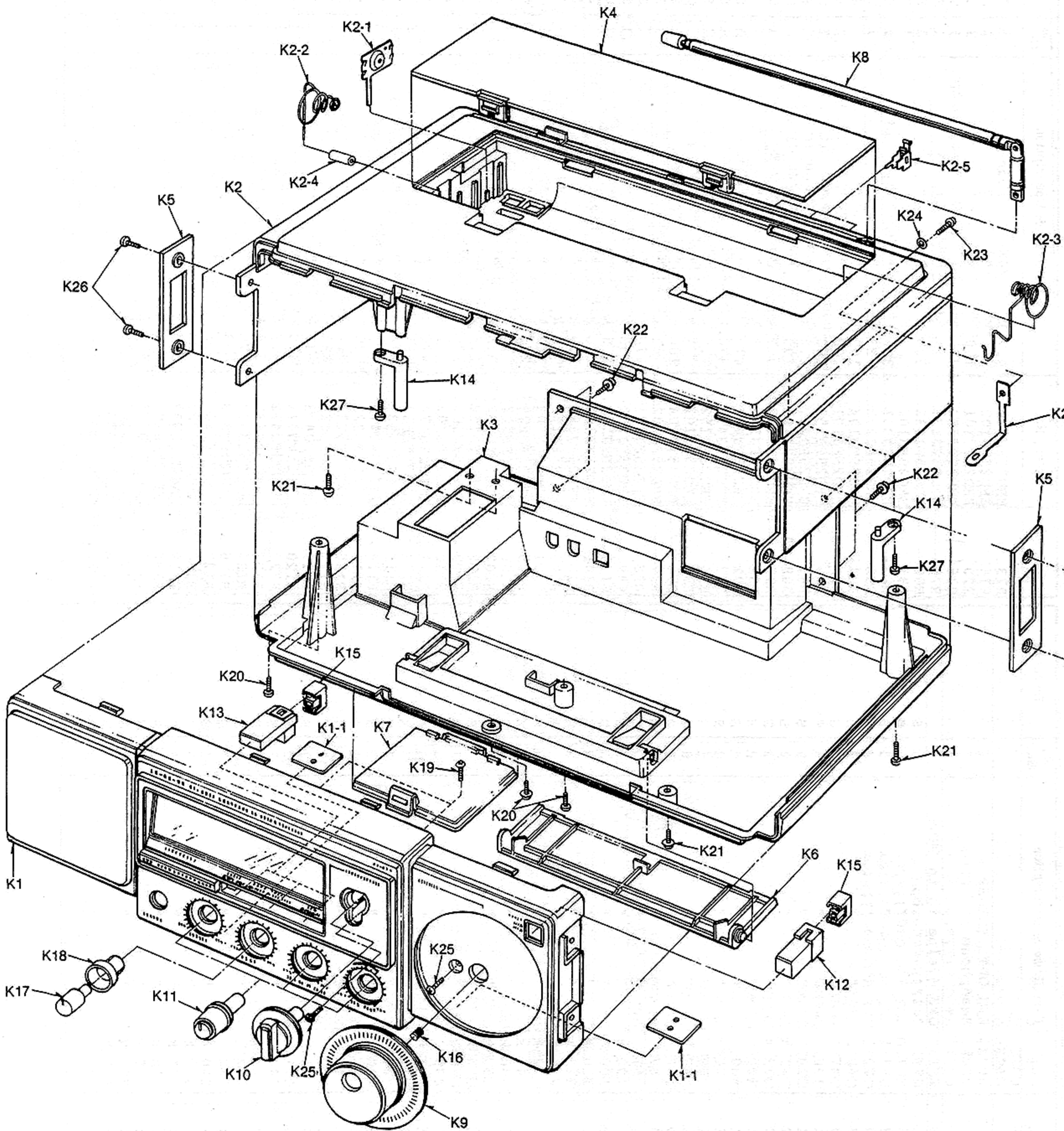


Fig. 27

REPLACEMENT PARTS LIST Model RF-3100/©
(RD81071895C1)

NOTES: 1. Important safety notice.
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
2. The S mark indicates service standard parts and may differ from production parts.

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|-------------------------------|--------------|--|---------|---------|
| | | INTEGRATED CIRCUITS, TRANSISTORS AND DIODES | | |
| IC1 | RVILA1210 | IC | 1 | |
| IC2 | AN7254 | IC | 1 | |
| IC3 | QVIBA524 | IC | 1 | |
| IC301 | RVIUPC78M05H | IC | 1 | |
| IC501 | RVIMM55126N | IC | 1 | |
| IC502,508 | RVIUPC1037H | IC | 2 | |
| IC503 | RVIM54459L | IC | 1 | |
| IC504 | RVIM54451P | IC | 1 | |
| IC505 | RVIUPC78L05A | IC | 1 | |
| IC507 | RVIM54830P | IC | 1 | |
| Q1,3,20 | 2SK212D | Transistor (Si) | 3 | |
| Q2,10,12,14,15 | 2SC1047-C | Transistor (Si) | 5 | S |
| Q4 | 2SC1684S | Transistor (Si) | 1 | S |
| Q5,16,19,25,29,30,37,41,44,46 | 2SC1685-Q | Transistor (Si) | 10 | S |
| Q6 | 2SA838-B | Transistor (Ge) | 1 | S |
| Q7,9,11,23,24,28,35,36,39,526 | 2SC1359B | Transistor (Si) | 10 | S |
| Q13 | 2SK104F | Transistor (Si) | 1 | S |
| Q17 | 2SC1360 | Transistor (Si) | 1 | S |
| Q18 | 2SC1675 | Transistor (Si) | 1 | S |
| Q21,22,38 | 2SC829-B | Transistor (Si) | 3 | S |
| Q26,42 | 2SA722-S | Transistor (Ge) | 2 | S |
| Q27 | 2SC2001K2 | Transistor (Si) | 1 | S |
| Q32 | 2SC945-Q | Transistor (Si) | 1 | S |
| Q33 | 2SC2001L1 | Transistor (Si) | 1 | S |
| Q43 | 2SB175-B | Transistor (Ge) | 1 | S |
| Q501 | 2SD601Q | Transistor (Si) | 1 | S |
| Q502,503 | 2SC1622 | Transistor (Si) | 2 | S |
| Q504 | 2SB709Q | Transistor (Ge) | 1 | S |
| Q505,506,513 | 2SC2295B | Transistor (Si) | 3 | S |
| Q507 | 2SC1009F3 | Transistor (Si) | 1 | S |
| Q508 | 2SK49F1 | Transistor (Si) | 1 | S |
| Q509,510,512,523 | 2SC2404C | Transistor (Si) | 4 | S |
| Q514 | 2SB624BV3 | Transistor (Ge) | 1 | S |
| Q515 | 2SC2021F | Transistor (Si) | 1 | S |
| Q516 | 2SC1788RDR2 | Transistor (Si) | 1 | S |
| Q517 | 2SD601R | Transistor (Si) | 1 | S |
| Q518 | 2SC1675K1 | Transistor (Si) | 1 | S |
| Q519 | 2SC1009F4 | Transistor (Si) | 1 | S |

ACCESSORY AND PACKING MATERIALS

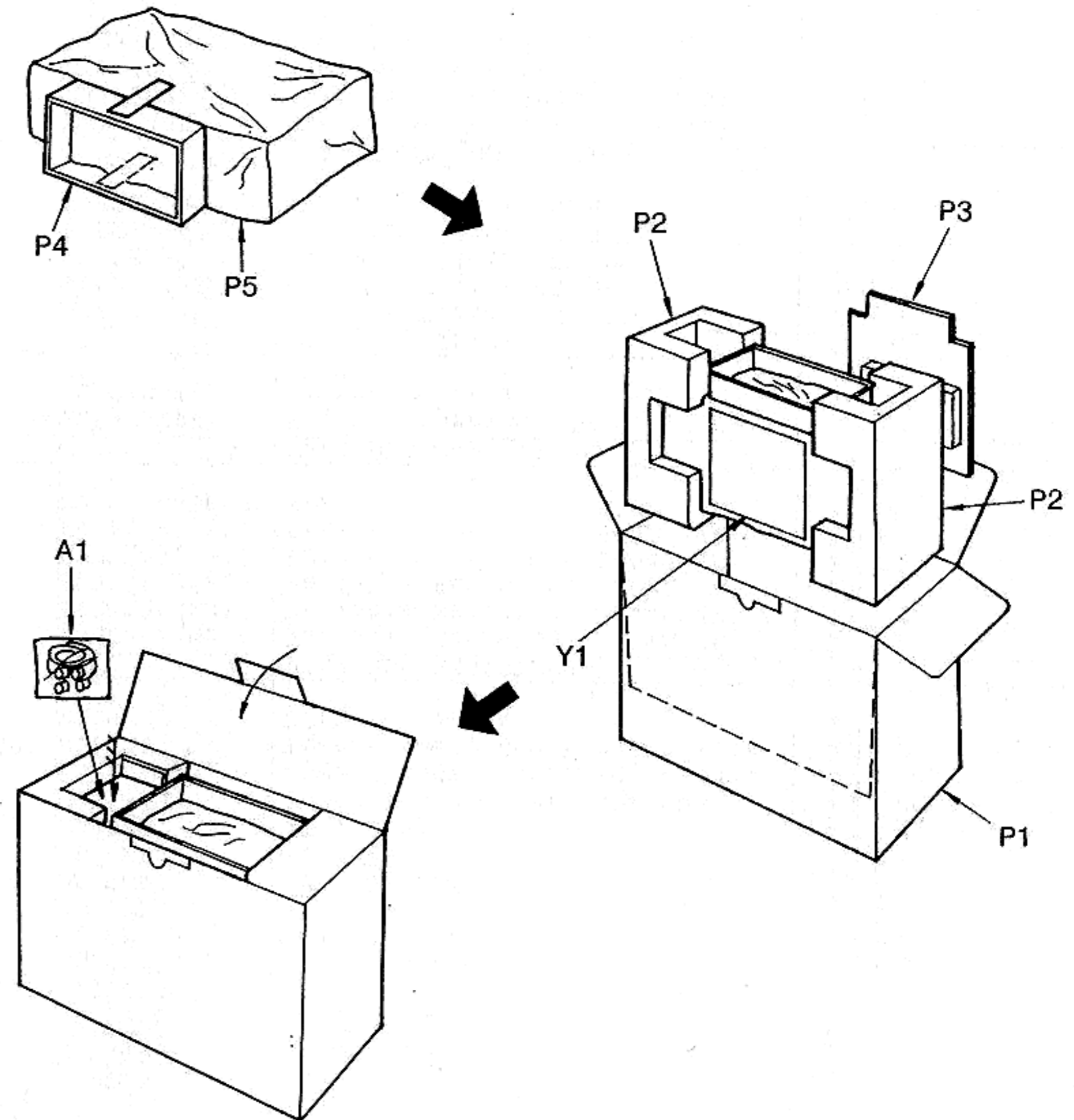


Fig. 28

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks | Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|--|-------------|--------------------------|---------|---------|------------------|--------------|--------------------------------|---------|---------|
| Q524 | 2SC1623L5A | Transistor (Si) | 1 | S | L53 | RLQZA470KW | Coil, Choke | 1 | |
| Q525 | 2SD352E | Transistor (Si) | 1 | S | L62,63 | RLQG681K | Coil, Choke | 2 | |
| D1,17,19,20,28,34,37,39,40,41,48,54,61,507~509 | MA161 | Diode (Si) | 16 | S | L64 | RLQZB820K | Coil, Choke | 1 | |
| D5,7,8,23,24,25,43,44 | MA56 | Diode (Si) | 8 | | L65 | RLQZB5R6K | Coil, Choke | 1 | |
| D13,53 | RVDKB265G | Diode (Si) | 2 | S | L503,504 | RLQZ222 | Coil, Choke | 1 | |
| D22,26,29,38 | 20A90 | Diode (Ge) | 4 | S | L509,510,515,516 | RLQZA101K | Coil, Choke | 4 | |
| D27 | MA381RA | Diode (Si) | 1 | S | L512 | RLQZA331K | Coil, Choke | 1 | |
| D31 | RVDKB262D | Diode (Si) | 1 | S | L513 | RLQZB101K | Coil, Choke | 1 | |
| D32 | RVDRD7R5EB3 | Diode (Si) | 1 | | T1,2,5,30 | RLI4M101 | IFT, 2nd Local 10.24MHz | 6 | S |
| D35 | RVDS113 | Diode (Si) | 1 | | T3 | RLI2M214 | IFT, AM 1st | 1 | S |
| D36 | RVDRD5R1EB3 | Diode (Si) | 1 | | T4 | RLI2M205 | IFT, AM 2nd | 1 | S |
| D47,55 | OA95 | Diode (Ge) | 2 | S | T6 | RLI2M402 | IFT, AM 3rd | 1 | S |
| D49 | MA27A1 | Diode (Si) | 1 | S | T7 | RLI4M103 | IFT, FM | 1 | S |
| D401~404 | SM112 | Diode (Si) | 4 | S | T8 | RLA3Z9 | IFT, Trap | 1 | |
| D405 | RVDSM1A02 | Diode (Si) | 1 | | T401 | RLT5J4M1A | Power Transformer, for USA | 1 | ▲ |
| D503 | RVDRD7R5EB2 | Diode (Si) | 1 | | T401 | RLT5J4C1A | Power Transformer, for Canada | 1 | ▲ |
| D504 | RVDRD5R6EB1 | Diode (Si) | 1 | | T501~503 | RLI9M8 | Transformer, 2nd Local Filter | 3 | |
| D62,505 | RVDRD13EB1 | Diode (Si) | 2 | | T504 | RLT9F2 | DC-DC Converter | 1 | |
| D506 | RVDSL144B | Diode (Si) | 1 | | | | VARIABLE RESISTORS | | |
| | | THERMISTOR | | | VR1,2 | EWHP0AF20B14 | Variable Resistor, 10kΩ (B) | 2 | |
| TH1 | RRT800 | Thermistor | 1 | | VR3 | EVKANAF32A14 | Variable Resistor, 10kΩ (A) | 1 | |
| | | CRYSTAL | | | VR4 | EWHP0AF20A14 | Variable Resistor, 10kΩ (A) | 1 | |
| X501 | RVCX5120N5Z | Crystal | 1 | | VR5 | EVTT3AA00B15 | Preset, 100kΩ (B) | 1 | S |
| | | COILS AND TRANSFORMERS | | | VR6 | EVTT3AA00B52 | Preset, 500Ω (B) | 1 | S |
| L1 | RLF2F47 | Coil, MW Antenna | 1 | | VR301 | EVNM4AA00B52 | Preset, 500Ω (B) | 1 | S |
| L7,46 | RLQZG102K | Coil, Choke | 2 | | | | VARIABLE CAPACITORS | | |
| L8 | RLQZB8R2KW | Coil, Choke | 1 | | VC1,2,3,4 | RCV4RC2VK | Tuning Capacitor (CT1,2,3,4) | 1 | |
| L9 | RLQZB2R2KW | Coil, Choke | 1 | | CT5 | RCVCTZ51F | Trimmer Capacitor | 1 | |
| L10,20 | RLQZB1R0KT | Coil, Choke | 2 | | | | CERAMIC FILTERS | | |
| L12,16 | RLQZB3R9KW | Coil, Choke | 2 | | CF1,2,3 | RVF107NAR | Ceramic Filter, 10,7MHz | 3 | |
| L13 | RLQZB3R3KW | Coil, Choke | 1 | | CF4 | RVFSFP455K | Ceramic Filter, 455kHz | 1 | |
| L14,21 | RLQZB1R0KW | Coil, Choke | 2 | | CF5 | RVFSFP455H10 | Ceramic Filter, 455kHz | 1 | |
| L17 | RLQZB2R7KW | Coil, Choke | 1 | | CF7 | RVFTPA107MB | Ceramic Filter, 10,7MHz | 1 | |
| L18 | RLQZB6R8KW | Coil, Choke | 1 | | CF8 | RVFSFA107MF5 | Ceramic Filter, 10,7MHz | 1 | |
| L19 | RLQZB1R8KW | Coil, Choke | 1 | | | | COMPONENT COMBINATIONS | | |
| L22 | RLD4N30 | Coil, Tuning | 1 | | Z1 | RXABPWB5 | Component Combination (L,C) | 1 | |
| L24 | RLQZB101KW | Coil, Choke | 1 | | Z2 | EXAF203Z471F | Component Combination (C,R) | 1 | |
| L26 | RLO3M43 | Coil, SW1 VCO Oscillator | 1 | | Z3,4 | EXRP103P471T | Component Combination (C,R) | 2 | |
| L27 | RLO3M49 | Coil, SW2 VCO Oscillator | 1 | | Z7,8 | EXRP103P103T | Component Combination (C,R) | 2 | |
| L28 | RLA3N14 | Coil, SW3 VCO Oscillator | 1 | | | | SPEAKER | | |
| L29 | RLO4N141 | Coil, Oscillator | 1 | | | RA9P04Z | Speaker, 9cm (3-1/2"), 8Ω | 1 | |
| L30,40 | RLQZA331KW | Coil, Choke | 2 | | | | SWITCHES | | |
| L33 | RLO2M28 | Coil, MW Oscillator | 1 | | S1 | RSS2B20Z | Switch, Antenna Select | 1 | |
| L34 | RLO3M41 | Coil, SW VFO Oscillator | 1 | | S2,3,4 | RSHX042Z | Switch, BFO, Band Width, Light | 1 | |
| L37 | RLO9M8 | Coil, BFO Oscillator | 1 | | S401 | RSH1A10Z | Switch, Power | 1 | |
| L42,43 | RLQZ102 | Coil, Choke | 2 | | S501 | RSRX012Y | Switch, Band | 1 | |
| L51 | RLQZB101KT | Coil, Choke | 1 | | | | | | |
| L52 | RLQZA5R6KW | Coil, Choke | 1 | | | | | | |

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks | Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|----------|------------|-------------------------------------|---------|---------|----------|------------|-------------------------|---------|---------|
| | | JACKS | | | | | | | |
| J1,2 | RJJ19Y | Jack, REC OUT, EXT SP | 2 | | R73 | ERD25FJ472 | 4.7 k 1/4W Carbon | 1 | S |
| J3 | RJJ1E2Z | Jack, Headphone | 1 | | R74 | ERD25FJ102 | 1 k " | 1 | S |
| | | RESISTORS (Value is in OHMS) | | | R75 | ERD25FJ101 | 100 " | 1 | S |
| R3 | ERD25FJ221 | 220 1/4W Carbon | 1 | S | R76 | ERD25TJ334 | 330 k " | 1 | S |
| R5 | ERD25TJ105 | 1 M " | 1 | S | R78 | ERD25FJ273 | 27 k " | 1 | S |
| R10 | ERD25FJ102 | 1 k " | 1 | S | R80 | ERD25FJ332 | 3.3 k " | 1 | S |
| R11 | ERD25FJ220 | 22 " | 1 | S | R81 | ERD25FJ102 | 1 k " | 1 | S |
| R15 | ERD25FJ473 | 47 k " | 1 | S | R82 | ERD25FJ331 | 330 " | 1 | S |
| R16 | ERD25FJ470 | 47 " | 1 | S | R83 | ERD25FJ273 | 27 k " | 1 | S |
| R18 | ERD25FJ101 | 100 " | 1 | S | R84 | ERD25TJ104 | 100 k " | 1 | S |
| R19 | ERD25FJ221 | 220 " | 1 | S | R85 | ERD25FJ101 | 100 " | 1 | S |
| R20 | ERD25FJ102 | 1 k " | 1 | S | R86 | ERD25FJ101 | 100 " | 1 | S |
| R21 | ERD25FJ332 | 3.3 k " | 1 | S | R87 | ERD25FJ222 | 2.2 k " | 1 | S |
| R22 | ERD25FJ101 | 100 " | 1 | S | R88,89 | ERD25FJ101 | 100 " | 2 | S |
| R23 | ERD25FJ681 | 680 " | 1 | S | R90 | ERD25FJ472 | 4.7 k " | 1 | S |
| R25 | ERD25FJ102 | 1 k " | 1 | S | R91 | ERD25FJ102 | 1 k " | 1 | S |
| R26 | ERD25FJ101 | 100 " | 1 | S | R92 | ERD25FJ471 | 470 " | 1 | S |
| R27 | ERD25FJ473 | 47 k " | 1 | S | R93 | ERD25TJ474 | 470 k " | 1 | S |
| R28 | ERD25FJ680 | 68 " | 1 | S | R94 | ERD25FJ152 | 1.5 k " | 1 | S |
| R29,30 | ERD25FJ470 | 47 " | 2 | S | R95 | ERD25FJ102 | 1 k " | 1 | S |
| R31 | ERD25FJ680 | 68 " | 1 | S | R96 | ERD25TJ104 | 100 k " | 1 | S |
| R33 | ERD25TJ104 | 100 k " | 1 | S | R97 | ERD25FJ102 | 1 k " | 1 | S |
| R34 | ERD25FJ101 | 100 " | 1 | S | R98 | ERD25FJ471 | 470 " | 1 | S |
| R35 | ERD25TJ154 | 150 k " | 1 | S | R99 | ERD25FJ333 | 33 k " | 1 | S |
| R36 | ERD25TJ224 | 220 k " | 1 | S | R100 | ERD25FJ152 | 1.5 k " | 1 | S |
| R37 | ERD25TJ474 | 470 k " | 1 | S | R101 | ERD25FJ103 | 10 k " | 1 | S |
| R38 | ERD25FJ223 | 22 k " | 1 | S | R102 | ERD25FJ392 | 3.9 k " | 1 | S |
| R40 | ERD25FJ473 | 47 k " | 1 | S | R103 | ERD25FJ153 | 15 k " | 1 | S |
| R41 | ERD25TJ334 | 330 k " | 1 | S | R104 | ERD25FJ103 | 10 k " | 1 | S |
| R43 | ERD25TJ154 | 150 k " | 1 | S | R105 | ERD25FJ222 | 2.2 k " | 1 | S |
| R45 | ERD25TJ474 | 470 k " | 1 | S | R106 | ERD25FJ103 | 10 k " | 1 | S |
| R46 | ERD25FJ102 | 1 k " | 1 | S | R107 | ERD25FJ332 | 3.3 k " | 1 | S |
| R47 | ERD25FJ471 | 470 " | 1 | S | R108 | ERD25FJ152 | 1.5 k " | 1 | S |
| R48 | ERD25FJ102 | 1 k " | 1 | S | R109 | ERD25TJ104 | 100 k " | 1 | S |
| R50 | ERD25FJ473 | 47 k " | 1 | S | R110 | ERD25FJ102 | 1 k " | 1 | S |
| R51 | ERD25FJ223 | 22 k " | 1 | S | R111 | ERD25TJ474 | 470 k " | 1 | S |
| R52~54 | ERD25FJ471 | 470 " | 3 | S | R112 | ERD25TJ684 | 680 k " | 1 | S |
| R55 | ERD25FJ331 | 330 " | 1 | S | R113 | ERD25FJ331 | 330 " | 1 | S |
| R56 | ERD25FJ470 | 47 " | 1 | S | R114 | ERD25FJ473 | 47 k " | 1 | S |
| R57 | ERD25FJ101 | 100 " | 1 | S | R115 | ERD25FJ221 | 220 " | 1 | S |
| R58 | ERD25FJ473 | 47 k " | 1 | S | R116 | ERD25FJ222 | 2.2 k " | 1 | S |
| R59 | ERD25FJ472 | 4.7 k " | 1 | S | R117 | ERD25FJ821 | 820 " | 1 | S |
| R60 | ERD25FJ681 | 680 " | 1 | S | R119 | ERD25FJ473 | 47 k " | 1 | S |
| R61 | ERD25FJ102 | 1 k " | 1 | S | R120 | ERD25FJ471 | 470 " | 1 | S |
| R62 | ERD25FJ473 | 47 k " | 1 | S | R122 | ERD25FJ472 | 4.7 k " | 1 | S |
| R63 | ERD25FJ220 | 22 " | 1 | S | R123 | ERD25FJ682 | 6.8 k " | 1 | S |
| R64 | ERD25TJ224 | 220 k " | 1 | S | R124 | ERD25TJ474 | 470 k " | 1 | S |
| R65 | ERD25FJ332 | 3.3 k " | 1 | S | R126 | ERD25FJ333 | 33 k " | 1 | S |
| R66 | ERD25FJ223 | 22 k " | 1 | S | R127 | ERD25FJ102 | 1 k " | 1 | S |
| R67 | ERD25FJ153 | 15 k " | 1 | S | R128 | ERD25FJ223 | 22 k " | 1 | S |
| R68 | ERD25FJ152 | 1.5 k " | 1 | S | R129 | ERD25FJ332 | 3.3 k " | 1 | S |
| R69 | ERD25TJ224 | 220 k " | 1 | S | R130 | ERD25FJ102 | 1 k " | 1 | S |
| R70 | ERD25FJ152 | 1.5 k " | 1 | S | R132 | ERD25TJ474 | 470 k " | 1 | S |
| R71 | ERD25FJ101 | 100 " | 1 | S | R133 | ERD25FJ103 | 10 k " | 1 | S |
| | | | | | R134 | ERD25FJ333 | 33 k " | 1 | S |
| | | | | | R135,136 | ERD25FJ221 | 220 " | 2 | S |

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks | Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|----------|-------------|-------------------------|---------|---------|----------|------------|-------------------------|---------|---------|
| R137 | ERD25FJ103 | 10 k 1/4W Carbon | 1 | S | R504 | RRD18XK222 | 2.2 k 1/8W Chip | 1 | |
| R138 | ERD25FJ333 | 33 k " " | 1 | S | R505 | RRD18XK223 | 22 k " " | 1 | |
| R139 | ERD25TJ104 | 100 k " " | 1 | S | R506 | RRD18XK473 | 47 k " " | 1 | |
| R140 | ERD25FJ102 | 1 k " " | 1 | S | R508 | RRD18XK472 | 4.7 k " " | 1 | |
| R141 | ERD25FJ103 | 10 k " " | 1 | S | R509 | RRD18XK474 | 470 k " " | 1 | |
| R142 | ERD25FJ472 | 4.7 k " " | 1 | S | R510 | RRD18XK102 | 1 k " " | 1 | |
| R144 | ERD25FJ102 | 1 k " " | 1 | S | R511 | RRD18XK224 | 220 k " " | 1 | |
| R145 | ERD25FJ221 | 220 " " | 1 | S | R512 | RRD18XK101 | 100 " " | 1 | |
| R146 | ERD25FJ151 | 150 " " | 1 | S | R513 | RRD18XK471 | 470 " " | 1 | |
| R147 | ERD25FJ271 | 270 " " | 1 | S | R514 | RRD18XK103 | 10 k " " | 1 | |
| R148 | ERD25FJ152 | 1.5 k " " | 1 | S | R515 | RRD18XK470 | 47 " " | 1 | |
| R149 | ERD25FJ152 | 1.5 k " " | 1 | S | R516 | RRD18XK332 | 3.3 k " " | 1 | |
| R152 | ERD25FJ821 | 820 " " | 1 | S | R517 | RRD18XK223 | 22 k " " | 1 | |
| R153 | ERD25FJ220 | 22 " " | 1 | S | R518 | RRD18XK101 | 100 " " | 1 | |
| R157 | ERD25FJ681 | 680 " " | 1 | S | R519 | RRD18XK472 | 4.7 k " " | 1 | |
| R158 | ERD25FJ221 | 220 " " | 1 | S | R520 | RRD18XK221 | 220 " " | 1 | |
| R159 | ERD25TJ224 | 220 k " " | 1 | S | R521 | ERD25FJ333 | 33 k 1/4W Carbon | 1 | S |
| R160 | ERD25FJ222 | 2.2 k " " | 1 | S | R522 | RRD18XK331 | 330 1/8W Chip | 1 | |
| R162 | ERD25FJ222 | 2.2 k " " | 1 | S | R524 | RRD18XK101 | 100 " " | 1 | |
| R163 | ERD25FJ331 | 330 " " | 1 | S | R525 | ERD25FJ2R2 | 2.2 1/4W Carbon | 1 | S |
| R164 | ERD25TJ683 | 68 k " " | 1 | S | R526 | RRD18XK274 | 270 k 1/8W Chip | 1 | |
| R165,166 | ERD25TJ105 | 1 M " " | 2 | S | R527 | RRD18XK152 | 1.5 k " " | 1 | |
| R167,168 | ERD25FJ471 | 470 " " | 2 | S | R528 | RRD18XK102 | 1 k " " | 1 | |
| R169 | ERD25FJ472 | 4.7 k " " | 1 | S | R529 | ERD25FJ681 | 680 1/4W Carbon | 1 | S |
| R170 | ERD25FJ472 | 4.7 k " " | 1 | S | R530,531 | RRD18XK224 | 220 k 1/8W Chip | 2 | |
| R171 | ERD25FJ680 | 68 " " | 1 | S | R532 | RRD18XK102 | 1 k " " | 1 | |
| R172 | ERD25FJ333 | 33 k " " | 1 | S | R533 | ERD25FJ220 | 22 1/4W Carbon | 1 | S |
| R173 | ERD25FJ332 | 3.3 k " " | 1 | S | R534 | RRD18XK152 | 1.5 k 1/8W Chip | 1 | |
| R174 | ERD25FJ102 | 1 k " " | 1 | S | R535 | RRD18XK154 | 150 k " " | 1 | |
| R175,176 | ERD25FJ472 | 4.7 k " " | 2 | S | R536 | RRD18XK224 | 220 k " " | 1 | |
| R177 | ERD25FJ102 | 1 k " " | 1 | S | R537 | ERD25FJ680 | 68 1/4W Carbon | 1 | S |
| R178 | ERD25FJ223 | 22 k " " | 1 | S | R538 | RRD18XK333 | 33 k 1/8W Chip | 1 | |
| R179 | ERD25TJ474 | 470 k " " | 1 | S | R539 | RRD18XK183 | 18 k " " | 1 | |
| R181 | ERD25FJ222 | 2.2 k " " | 1 | S | R541 | RRD18XK102 | 1 k " " | 1 | |
| R184 | ERD25TJ104 | 100 k " " | 1 | S | R542 | RRD18XK331 | 330 " " | 1 | |
| R186 | ERD25FJ332 | 3.3 k " " | 1 | S | R544 | RRD18XK101 | 100 " " | 1 | |
| R187 | ERD25FJ102 | 1 k " " | 1 | S | R545,546 | RRD18XK222 | 2.2 k " " | 2 | |
| R188 | ERD25FJ473 | 47 k " " | 1 | S | R547~559 | RRD18XK224 | 220 k " " | 13 | |
| R189 | ERD25FJ471 | 470 " " | 1 | S | R560 | RRD18XK222 | 2.2 k " " | 1 | |
| R191 | ERD25FJ680 | 68 " " | 1 | S | R561~563 | RRD18XK102 | 1 k " " | 3 | |
| R192 | ERD25FJ101 | 100 " " | 1 | S | R564 | RRD18XK471 | 470 " " | 1 | |
| R193 | ERD25FJ151 | 150 " " | 1 | S | R565 | RRD18XK222 | 2.2 k " " | 1 | |
| R195 | ERD25FJ220 | 22 " " | 1 | S | R566 | RRD18XK333 | 33 k " " | 1 | |
| R196 | ERD25FJ102 | 1 k " " | 1 | S | R567 | RRD18XK151 | 150 " " | 1 | |
| R197 | ERD25FJ152 | 1.5 k " " | 1 | S | R568 | ERD25FJ680 | 68 1/4W Carbon | 1 | S |
| R198 | ERD25FJ221 | 220 " " | 1 | S | R569 | RRD18XK332 | 3.3 k 1/8W Chip | 1 | |
| R211 | ERD25FJ101 | 100 " " | 1 | S | R570 | RRD18XK473 | 47 k " " | 1 | |
| R220 | ERD25FJ102 | 1 k " " | 1 | S | R571 | RRD18XK101 | 100 " " | 1 | |
| R235 | ERD25FJ101 | 100 " " | 1 | S | R572 | RRD18XK274 | 270 k " " | 1 | |
| R240 | ERD25FJ102 | 1 k " " | 1 | S | R573 | RRD18XK152 | 1.5 k " " | 1 | |
| R290 | ERD25FJ222 | 2.2 k " " | 1 | S | R574,575 | RRD18XK220 | 22 " " | 2 | |
| R401 | ERD2FCJR47 | 0.47 2W " " | 1 | S | R576 | RRD18XK471 | 470 " " | 1 | |
| R402 | ERC12ZGM335 | 3.3 M 1/2W Solid | 1 | | R577~579 | RRD18XK223 | 22 k " " | 3 | |
| R501 | RRD18XK153 | 15 k 1/8W Chip | 1 | | R580 | ERD25FJ180 | 18 1/4W Carbon | 1 | S |
| R502 | RRD18XK472 | 4.7 k " " | 1 | | R581 | RRD18XK223 | 22 k 1/8W Chip | 1 | |
| R503 | RRD18XK682 | 6.8 k " " | 1 | | R582,583 | RRD18XK331 | 330 " " | 2 | |

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks | Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|----------|-------------|--|---------|---------|-----------|-------------|-----------------------------|---------|---------|
| R584 | RRD18XK104 | 100 k 1/8W Chip | 1 | | C69 | ECCD1H100KC | 10 P 50V Ceramic | 1 | |
| R585 | RRD18XK470 | 47 " " | 1 | | C70 | ECKD1H103ZF | 0.01 " " | 1 | |
| R586 | ERD25FJ470 | 47 1/4W Carbon | 1 | S | C71 | ECCD1H270KC | 27 P " " | 1 | |
| R587 | RRD18XK103 | 10 k 1/8W Chip | 1 | | C72 | ECCD1H070DC | 7 P " " | 1 | |
| R588 | RRD18XK222 | 2.2 k " " | 1 | | C73 | ECCD1H100KC | 10 P " " | 1 | |
| R589 | ERD2FCJ100 | 10 2W Carbon | 1 | S | C74 | ECKD1H103ZF | 0.01 " " | 1 | |
| R590 | RRD18XK2R2 | 2.2 1/8W Chip | 1 | | C75 | ECCD1H010C | 1 P " " | 1 | |
| R701 | ERD50FJ102 | 1 k 1/2W Carbon | 1 | S | C76 | ECKD1H102MD | 0.001 " " | 1 | |
| R702 | ERC12GM103 | 10 k " Solid | 1 | S | C77 | ECCD1H040C | 4 P " " | 1 | |
| | | CAPACITORS (Value is in MICRO FARADS except P.P=PICO FARADS) | | | | | | | |
| C1 | ECKD1H152MD | 0.0015 50V Ceramic | 1 | | C78 | ECMS05221J | 220 P " Mica | 1 | |
| C6 | ECCD1H470K | 47 P " " | 1 | | C80 | ECCD1H050C | 5 P " Ceramic | 1 | |
| C8 | ECBT1H103NM | 0.01 " Ceramic (Cylinder) | 1 | | C81 | ECKD1H103ZF | 0.01 " " | 1 | |
| C9 | ECKD1H103ZF | 0.01 " Ceramic | 1 | | C82 | ECKD1H103MD | 0.01 " " | 1 | |
| C10 | ECCD1H150KC | 15 P " " | 1 | | C83 | ECBT1E103NM | 0.01 25V Ceramic (Cylinder) | 1 | |
| C15 | ECCD1H330KC | 33 P " " | 1 | | C84 | RCQP2A152JZ | 0.0015 100V Styrol | 1 | |
| C16 | ECBT1H4R7KC | 4.7 P " Ceramic (Cylinder) | 1 | | C85 | ECES1AS101 | 100 10V Electrolytic | 1 | S |
| C17 | ECKD1H103ZF | 0.01 " Ceramic | 1 | | C86 | ECEA1HS100 | 10 50V " | 1 | S |
| C18 | ECBT1H103NM | 0.01 " Ceramic (Cylinder) | 1 | | C88 | ECKD1H103ZF | 0.01 " Ceramic | 1 | |
| C19 | RCQP2A681JZ | 680 P 100V Styrol | 1 | | C90~93 | ECKD1H103ZF | 0.01 " " | 4 | |
| C20 | ECKD1H332MD | 0.0033 50V Ceramic | 1 | | C94 | ECEA1AS101 | 100 10V Electrolytic | 1 | S |
| C21 | ECCD1H271K | 270 P " " | 1 | | C95 | ECFVD473MD | 0.047 25V Semi-Conductor | 1 | |
| C22 | ECCD1H270KC | 27 P " " | 1 | | C96 | ECKD1H103ZF | 0.01 50V Ceramic | 1 | |
| C23, 24 | ECCD1H390KC | 39 P " " | 2 | | C97 | ECCD1H010C | 1 P " " | 1 | |
| C25, 26 | ECBT1H103NM | 0.01 " Ceramic (Cylinder) | 2 | | C98 | ECCD1H020C | 2 P " " | 1 | |
| C27, 28 | RCQP2A471JZ | 470 P 100V Styrol | 2 | | C99 | ECKD1H103ZF | 0.01 " " | 1 | |
| C30 | ECCD1H181K | 180 P 50V Ceramic | 1 | | C100 | ECCD1H120KC | 12 P " " | 1 | |
| C31 | ECCD1H101KC | 100 P " " | 1 | | C101 | RCQP2A471JZ | 470 P 100V Styrol | 1 | |
| C32 | ECKD1H103ZF | 0.01 " " | 1 | | C102 | ECKD1H103ZF | 0.01 50V Ceramic | 1 | |
| C33 | ECBT1H102MD | 0.001 " Ceramic (Cylinder) | 1 | | C103 | ECKD1H103MD | 0.01 " " | 1 | |
| C35 | ECCD1H151K | 150 P " Ceramic | 1 | | C104 | ECCD1H100KU | 10 P " " | 1 | |
| C36 | ECCD1H221K | 220 " " " | 1 | | C105 | ECQS2B391JZ | 390 P 100V Styrol | 1 | |
| C37 | ECCD1H470KC | 47 P " " | 1 | | C106 | ECCD1H100KC | 10 P 50V Ceramic | 1 | |
| C38 | RCQP2A681JZ | 680 P 100V Styrol | 1 | | C108 | ECKD1H103ZF | 0.01 " " | 1 | |
| C39 | ECFVD103MD | 0.01 25V Semi-Conductor | 1 | | C109 | ECKD1H103MD | 0.01 " " | 1 | |
| C40 | ECKD1H102MD | 0.001 50V Ceramic | 1 | | C110, 111 | ECEA1AS101 | 100 10V Electrolytic | 2 | S |
| C41 | ECCD1H101KC | 100 P " " | 1 | | C112 | ECEA1AS221 | 220 " " | 1 | S |
| C42 | ECCD1H470KC | 47 P " " | 1 | | C113 | ECFVD103MD | 0.01 25V Semi-Conductor | 1 | |
| C43 | ECCD1H040C | 4 P " " | 1 | | C114 | ECKD1H103MD | 0.01 50V Ceramic | 1 | |
| C47 | ECKD1H103ZF | 0.01 " " | 1 | | C115, 116 | ECFVD473MD | 0.047 25V Semi-Conductor | 2 | |
| C48 | ECKD1H471KB | 470 P " " | 1 | | C117 | ECKD1H223ZF | 0.022 50V Ceramic | 1 | |
| C49 | ECCD1H050C | 5 P " " | 1 | | C118 | ECKD1H103MD | 0.01 " " | 1 | |
| C50 | ECEA50Z1 | 1 " Electrolytic | 1 | S | C119 | ECEA1HS100 | 10 " Electrolytic | 1 | S |
| C51 | ECBT1H1R5ML | 1.5 " Ceramic (Cylinder) | 1 | | C120 | ECKD1H223ZF | 0.022 " Ceramic | 1 | |
| C53 | ECEA1AS221 | 220 10V Electrolytic | 1 | S | C121 | ECFVD473MD | 0.047 25V Semi-Conductor | 1 | |
| C54 | ECCD1H180KC | 18 P 50V Ceramic | 1 | | C122 | ECFVD223MD | 0.022 " " | 1 | |
| C55~58 | ECKD1H103ZF | 0.01 " " | 4 | | C123 | ECFVD223MD | 0.022 " " | 1 | |
| C59 | ECCD1H101K | 100 P " " | 1 | | C124, 125 | ECKD1H103MD | 0.01 50V Ceramic | 2 | |
| C60 | ECKD1H103MD | 0.01 " " | 1 | | C126 | ECMS05820K | 82 P " Mica | 1 | |
| C61, 62 | ECFVD103MD | 0.01 25V Semi-Conductor | 2 | | C127 | ECKD1H103MD | 0.01 " Ceramic | 1 | |
| C63 | ECEA1AS470 | 47 10V Electrolytic | 1 | S | C128 | ECEA1CS221 | 220 16V Electrolytic | 1 | S |
| C64 | ECEA1AS221 | 220 " " | 1 | S | C129 | ECFVD103MD | 0.01 25V Semi-Conductor | 1 | |
| C65, 66 | ECEA1AS470 | 47 " " | 2 | S | C130 | ECEA1CS330 | 33 16V Electrolytic | 1 | S |
| C67, 68 | ECKD1H103ZF | 0.01 50V Ceramic | 2 | | C131 | ECES1ES220 | 22 25V " | 1 | S |
| | | | | | C132 | ECFVD333MD | 0.033 " Semi-Conductor | 1 | |
| | | | | | C133 | ECCD1H150KC | 15 P 50V Ceramic | 1 | |
| | | | | | C134 | ECEA1ES220 | 22 25V Electrolytic | 1 | S |

| Ref. No. | Part No. | Part Name & Description | | | Per Set | Remarks | Ref. No. | Part No. | Part Name & Description | | | Per Set | Remarks |
|----------|-------------|-------------------------|------|--------------------|---------|---------|----------|-------------|-------------------------|------|--------------------|---------|---------|
| C136 | ECMS05151J | 150 P | 50V | Mica | 1 | | C208 | ECKD1H103MD | 0.01 | 50V | Ceramic | 1 | |
| C137 | ECMS05181J | 180 P | " | " | 1 | | C209 | ECCD1H150KC | 15 P | " | " | 1 | |
| C138 | ECFVD333MD | 0.033 | 25V | Semi-Conductor | 1 | | C210 | ECKD1H471KB | 470 P | " | " | 1 | |
| C139 | ECEA1AS470 | 47 | 10V | Electrolytic | 1 | S | C212 | ECCD1H181K | 180 P | " | " | 1 | |
| C140 | ECKD1H103ZF | 0.01 | 50V | Ceramic | 1 | | C222 | ECCD1H220K | 22 P | " | " | 1 | |
| C141 | ECFVD223MD | 0.022 | 25V | Semi-Conductor | 1 | | C228 | ECEA50ZR47 | 0.47 | " | Electrolytic | 1 | S |
| C142 | ECEA1AS221 | 220 | 10V | Electrolytic | 1 | S | C251 | ECCD1H220K | 22 P | " | Ceramic | 1 | |
| C143 | ECEA1AS470 | 47 | " | " | 1 | S | C252 | ECCD1H330K | 33 P | " | " | 1 | |
| C145 | ECQV05104JZ | 0.1 | 50V | Epoxy | 1 | | C253 | ECCD1H220K | 22 P | " | " | 1 | |
| C146 | ECKD1H152MD | 0.0015 | " | Ceramic | 1 | | C255 | ECCD1H101K | 100 P | " | " | 1 | |
| C147 | ECFVD153MD | 0.015 | 25V | Semi-Conductor | 1 | | C260 | ECBT1E103NM | 0.01 | 25V | Ceramic (Cylinder) | 1 | |
| C149 | ECKD1H103ZF | 0.01 | 50V | Ceramic | 1 | | C261 | ECEA1AS470 | 47 | 10V | Electrolytic | 1 | S |
| C150 | ECEA1CS330 | 33 | 16V | Electrolytic | 1 | S | C262 | ECES1ES470 | 47 | 25V | " | 1 | S |
| C151 | ECEA1CS221 | 220 | " | " | 1 | S | C263 | ECCD1H100KC | 10 P | 50V | Ceramic | 1 | |
| C152 | ECFVD473MD | 0.047 | 25V | Semi-Conductor | 1 | | C264 | ECKD1H102MD | 0.001 | " | " | 1 | |
| C153 | ECEA50ZR22 | 0.22 | 50V | Electrolytic | 1 | S | C266 | ECFVD103MD | 0.01 | 25V | Semi-Conductor | 1 | |
| C154 | ECFVD223MD | 0.022 | 25V | Semi-Conductor | 1 | | C270 | ECCD1H100KC | 10 P | 50V | Ceramic | 1 | |
| C155 | ECEA1AS470 | 47 | 10V | Electrolytic | 1 | S | C301 | ECCD1H270KC | 27 P | " | " | 1 | |
| C156 | ECFVD223MD | 0.022 | 25V | Semi-Conductor | 1 | | C302 | ECCD1H020C | 2 P | " | " | 1 | |
| C157 | ECKD1H103MD | 0.01 | 50V | Carbon | 1 | | C303 | ECCD1H270KC | 27 P | " | " | 1 | |
| C158 | ECKD1H102MD | 0.001 | " | " | 1 | | C304 | ECKD1H102MD | 0.001 | " | " | 1 | |
| C159 | ECEA50ZR33 | 0.33 | " | Electrolytic | 1 | S | C401 | ECEA1ES222 | 2200 | 25V | Electrolytic | 1 | S |
| C160 | ECEA1ES220 | 22 | 25V | " | 1 | S | C402~406 | ECKD1H103ZF | 0.01 | 50V | Ceramic | 5 | |
| C161 | ECEA50ZR1 | 0.1 | 50V | " | 1 | S | C501 | ECQE1225KN | 2.2 | 100V | Styrol | 1 | |
| C162 | ECEA50Z1 | 1 | " | " | 1 | S | C502 | ECUX1H331KD | 330 P | 50V | Chip | 1 | |
| C163 | ECEA50ZR1 | 0.1 | " | " | 1 | S | C503,504 | ECUX1H102MD | 0.001 | " | " | 2 | |
| C164 | ECCD1H221K | 220 P | " | Ceramic | 1 | | C505 | ECUX1H103ZF | 0.01 | " | " | 1 | |
| C165 | RCQP2A561JZ | 560 P | 100V | Styrol | 1 | | C506 | ECUX1H223MD | 0.022 | " | " | 1 | |
| C167 | ECCD1H180KC | 18 P | 50V | Ceramic | 1 | | C507 | ECUX1H102MD | 0.001 | " | " | 1 | |
| C168 | ECFVD683MD | 0.068 | 25V | Semi-Conductor | 1 | | C508 | ECUX1H103ZF | 0.01 | " | " | 1 | |
| C170 | ECCD1H103ZF | 0.01 | 50V | Ceramic | 1 | | C509 | ECUX1H270KC | 27 P | " | " | 1 | |
| C175 | ECEA1CS102 | 1000 | 16V | Electrolytic | 1 | S | C510 | ECUX1H103ZF | 0.01 | " | " | 1 | |
| C176 | ECCD1H101K | 100 P | 50V | Ceramic | 1 | | C511 | ECUX1H070DC | 7 P | " | " | 1 | |
| C178 | ECFVD683MD | 0.068 | 25V | Semi-Conductor | 1 | | C512,513 | ECUX1H103ZF | 0.01 | " | " | 2 | |
| C179 | ECKD1H103ZF | 0.01 | 50V | Ceramic | 1 | | C514 | ECUX1H223MD | 0.022 | " | " | 1 | |
| C180 | ECCD1H103ZF | 0.01 | " | " | 1 | | C515 | ECUX1H333ZF | 0.033 | " | " | 1 | |
| C181 | ECCD1H100KC | 10 P | " | " | 1 | | C516 | ECUX1H330KC | 33 P | " | " | 1 | |
| C182 | ECFVD683MD | 0.068 | 25V | Semi-Conductor | 1 | | C517 | ECEA1AS101 | 100 | 10V | Electrolytic | 1 | S |
| C183 | ECFVD473MD | 0.047 | " | " | 1 | | C518 | ECUX1H1R5CC | 1.5 P | 50V | Chip | 1 | |
| C184 | ECFVD103MD | 0.01 | " | " | 1 | | C519 | ECUX1H330KC | 33 P | " | " | 1 | |
| C185 | ECEA50Z1 | 1 | 50V | Electrolytic | 1 | S | C520 | ECUX1H470KC | 47 P | " | " | 1 | |
| C187 | ECKD1H103MD | 0.01 | " | Ceramic | 1 | | C521 | ECUX1H102ZF | 0.001 | " | " | 1 | |
| C188 | ECCD1H100KC | 10 P | " | " | 1 | | C522 | ECUX1H103ZF | 0.01 | " | " | 1 | |
| C189 | ECEA50Z3R3 | 3.3 | " | Electrolytic | 1 | S | C523 | ECUX1H120KC | 12 P | " | " | 1 | |
| C191 | ECKD1H103ZF | 0.01 | " | Ceramic | 1 | | C524 | ECUX1H100KC | 10 P | " | " | 1 | |
| C192 | ECKD1H223ZF | 0.022 | " | " | 1 | | C525 | ECUX1H120KC | 12 P | " | " | 1 | |
| C194 | ECEA1AS101 | 100 | 10V | Electrolytic | 1 | S | C526 | ECUX1H102ZF | 0.001 | " | " | 1 | |
| C198 | ECKD1H102MD | 0.001 | 50V | Ceramic | 1 | | C527 | ECUX1H333ZF | 0.033 | " | " | 1 | |
| C200 | ECCD1H100KX | 10 P | " | " | 1 | | C528 | ECUX1H220KC | 22 P | " | " | 1 | |
| C201 | ECEA25Z4R7 | 4.7 | 25V | Electrolytic | 1 | S | C529 | ECUX1H102ZF | 0.001 | " | " | 1 | |
| C202 | ECBT1E103NM | 0.01 | " | Ceramic (Cylinder) | 1 | | C530 | ECEA0JS471 | 470 | 6.3V | Electrolytic | 1 | S |
| C203 | ECKD1H103MD | 0.01 | 50V | Ceramic | 1 | | C531 | ECUX1H102ZF | 0.001 | 50V | Chip | 1 | |
| C204 | ECCD1H220KC | 22 P | " | " | 1 | | C532 | ECUX1H220KC | 22 P | " | " | 1 | |
| C205 | ECKD1H103MD | 0.01 | " | " | 1 | | C533 | ECUX1H223ZF | 0.022 | " | " | 1 | |
| C206 | ECEA1AS221 | 220 | 10V | Electrolytic | 1 | S | C534 | ECEA0JS471 | 470 | 6.3V | Electrolytic | 1 | S |
| C207 | ECFVD683MD | 0.068 | 25V | Semi-Conductor | 1 | | C535 | ECEA1ES470 | 47 | 25V | " | 1 | S |

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|----------|-------------|--------------------------|---------|---------|----------|--------------|------------------------------|---------|---------|
| C536 | ECUX1H820KC | 82 P 50V Chip | 1 | | C605 | ECEALAS101 | 100 10V Electrolytic | 1 | S |
| C537 | ECUX1H181KD | 180 P " | 1 | | C606 | ECEALES101 | 100 25V " | 1 | S |
| C538 | ECUX1H101KD | 100 P " | 1 | | C607,608 | ECUX1H223MD | 0.022 50V Chip | 2 | |
| C539 | ECUX1H103ZF | 0.01 " " | 1 | | C701,702 | ECCD1H560K | 56 P " Ceramic | 2 | |
| C540 | ECUX1H680KC | 68 P " " | 1 | | C703 | RCQP2A471JZ | 470 P 100V Styrol | 1 | |
| C541 | ECUX1H103ZF | 0.01 " " | 1 | | C704,705 | ECKD1H681KB | 680 P 50V Ceramic | 2 | |
| C542 | ECUX1H271KD | 270 P " " | 1 | | C706 | ECKD1H103ZF | 0.01 " " | 1 | |
| C543 | ECEALCS330 | 33 16V Electrolytic | 1 | S | | | CABINET PARTS | | |
| C545 | ECEALAS470 | 47 10V " | 1 | S | K1 | RYPF3100M | Front Panel Ass'y | 1 | |
| C546 | ECEALHS0R1 | 0.1 50V " | 1 | S | K1-1 | RKX111Z | Plate, Front Panel Holding | 6 | |
| C547 | ECEA0JS471 | 470 6.3V " | 1 | S | K2 | RYMFB30N7 | Upper Cabinet Ass'y | 1 | |
| C548 | ECUX1H333ZF | 0.033 50V Chip | 1 | | K2-1 | RJC111A | Terminal, Battery, + Side | 1 | |
| C549 | ECEALHSR33 | 0.33 " Electrolytic | 1 | S | K2-2 | RJC512Z | Terminal, Battery, - Side | 1 | |
| C550 | ECUX1H103ZF | 0.01 " Chip | 1 | | K2-3 | RJC936Z | Terminal, Battery, + - Side | 1 | |
| C551 | ECEA25Z4R7 | 4.7 25V Electrolytic | 1 | S | K2-4 | RJT398Y | Pipe, Battery Spring | 1 | |
| C552 | ECEALVS330 | 33 35V " | 1 | S | K2-5 | RJF1065Z | Terminal, EXT, Antenna | 3 | |
| C553 | ECEALHS100 | 10 50V " | 1 | S | K2-6 | RJT219Z | Terminal, Antenna | 1 | |
| C554 | ECFVD104MD | 0.1 25V Semi-Conductor | 1 | | K3 | RYFF3100M7 | Bottom Cabinet Ass'y | 1 | |
| C555 | ECUX1H151KD | 150 P 50V Chip | 1 | | K4 | RYNFB30N7 | Cover, Battery | | |
| C556 | ECEALAS101 | 100 10V Electrolytic | 1 | S | K5 | RKT127Z | Plate, Handle Holding | 1 | |
| C557 | ECUX1H102ZF | 0.001 50V Chip | 1 | | K6 | RKL22Z | Stand | 2 | |
| C558 | ECUX1H102ZF | 0.001 " " | 1 | | K7 | RKK92Z7 | Cover, AC Cord | 1 | |
| C559 | ECUX1H103ZF | 0.01 " " | 1 | | K8 | XEAQCR228FAK | Telescopic Antenna | 1 | |
| C560 | ECUX1H102ZF | 0.001 " " | 1 | | K9 | RBN563Y | Knob, Tuning | 1 | |
| C561 | ECUX1H103ZF | 0.01 " " | 1 | | K10 | RBS176Y | Knob, Band | 1 | |
| C562 | ECUX1H333ZF | 0.033 " " | 1 | | K11 | RBN564Y | Knob, Volume, BFO, RF Gain | 1 | |
| C563 | ECEA0JS471 | 470 6.3V Electrolytic | 1 | S | K12 | RBC331Z | Knob, Power | 3 | |
| C564 | ECEALHS100 | 10 50V " | 1 | S | K13 | RBC330Z | Knob, BFO, LIGHT, BAND WIDTH | 1 | |
| C565 | ECEA25Z4R7 | 4.7 25V " | 1 | S | K14 | RHR1023X | Connecting Pipe | 3 | |
| C566 | ECUX1H223MD | 0.022 50V Chip | 1 | | K15 | RBE29Z | Switch Connecting Pipe | 2 | |
| C567 | ECCD1H101K | 100 P " Ceramic | 1 | | K16 | RUS295Z | Spring, Tuning Knob | 4 | |
| C568 | ECCD1H470K | 47 P " " | 1 | | K17 | RBN565Y | Knob, Treble | 1 | |
| C570 | ECUX1H103ZF | 0.01 " Chip | 1 | | K18 | RBN566Z | Knob, Bass | 1 | |
| C573 | ECUX1H103ZF | 0.01 " " | 1 | | K19 | XTW3+10F | Screw, 3x10 | 1 | |
| C577,578 | ECUX1H103ZF | 0.01 " " | 2 | | K20 | XSB3+8BN | Screw, 3x8 | 2 | |
| C579 | ECEALHS100 | 10 " Electrolytic | 1 | S | K21 | XTV3+12G | Screw, 3x12 | 3 | S |
| C580 | ECUX1H103ZF | 0.01 " Chip | 1 | | K22 | XTB3+12BFZ | Screw, 3x12 | 4 | |
| C581 | ECUX1H103MD | 0.01 " " | 1 | | K23 | XSN3+10S | Screw, 3x10 | 4 | |
| C582~584 | ECUX1H103ZF | 0.01 " " | 3 | | K24 | XWA3B | Washer | 1 | |
| C585 | ECUX1H223ZF | 0.022 " " | 1 | | K25 | XTV3+8BFN | Screw, 3x8 | 1 | |
| C586 | ECUX1H103MD | 0.01 " " | 1 | | K26 | XSB3+12BNS | Screw, 3x12 | 2 | |
| C587 | ECKD1H103ZF | 0.01 " Ceramic | 1 | | K27 | XTW3+12Q | Screw, 3x12 | 4 | |
| C588 | ECUX1H102MD | 0.001 " Chip | 1 | | | | ELECTRICAL PARTS | | |
| C589 | ECUX1H103MD | 0.01 " " | 1 | | E1 | RJR1B | Connecting Terminal | 1 | |
| C590 | ECUX1H103ZF | 0.01 " " | 1 | | E2 | RSM2627Z | Meter | 1 | |
| C591 | ECCD1H100KC | 10 P " Ceramic | 1 | | E3 | XAMR82R150A | Pilot Lamp | 1 | |
| C592 | ECUX1H223ZF | 0.022 " Chip | 1 | | E4 | RMS12B | Plate, Speaker Holding | 2 | |
| C593 | ECUX1H333ZF | 0.033 " " | 1 | | E5 | RUS436Z | Spring, Meter Holding | 1 | |
| C594 | ECKD1H102MD | 0.001 " Ceramic | 1 | | E6 | RAD5BT11 | Display | 1 | |
| C595 | ECUX1H103MD | 0.01 " Chip | 1 | | E7 | RZAFB30N | Dial Chassis Ass'y | 1 | |
| C596 | ECUX1H333ZF | 0.033 " " | 1 | | E8 | RDT2401Z | Shaft, Tuning | 1 | |
| C597 | ECEA25Z4R7 | 4.7 25V Electrolytic | 1 | S | E9 | RDD700Z | Drum, Dial | 1 | |
| C598 | ECEALAS470 | 47 10V " | 1 | S | | | | | |
| C599 | ECFVD683MD | 0.068 25V Semi-Conductor | 1 | | | | | | |
| C601 | ECEALAS101 | 100 10V Electrolytic | 1 | S | | | | | |
| C602~604 | ECUX1H223ZF | 0.022 50V Chip | 3 | | | | | | |

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|----------|------------|--------------------------|---------|---------|
| E10 | RDS4170A | Spring, Dial | 1 | |
| E11 | RDZ05Z | Cord, Dial (110cm) | 1 | |
| | | | ROLL | |
| E12 | RJS2L1Z | Socket, 2P | 7 | |
| E13 | RJS3L1Z | Socket, 3P | 4 | |
| E14 | QJS1921TN | Socket, 3P | 1 | |
| E15 | RJS8L1Z | Socket, 8P | 1 | |
| E16 | RJP2G1Z | Plug, 2P | 7 | |
| E17 | RJP3G1Z | Plug, 3P | 4 | |
| E18 | QJP1921TN | Plug, 3P | 1 | |
| E19 | RJP8G1Z | Plug, 8P | 1 | |
| E20 | RJT462Z | Contact | 33 | |
| E21 | QJT1054 | Contact | 2 | |
| E22 | RMR103Z | Angle, Tone | 1 | |
| E23 | RZEFB30N | Polarization Plate Ass'y | 1 | |
| E24 | RHR2014Z | Zebra | 1 | |
| E25 | RHG223Z | Cushion, Display | 1 | |
| E26 | RMW211Z | Angle, Band Switch | 1 | |
| E27 | RJT202B | Terminal, Earth | 3 | |
| E28 | RMV146Z | Heat Sink | 1 | |
| E29 | RMC760Z | Shield Plate | 1 | |
| E30 | RMC761Z | Shield Plate | 1 | |
| E31 | RMC762Z | Shield Plate | 1 | |
| E32 | RMC763Z | Shield Plate | 1 | |
| E33 | RMC779Z | Shield Plate | 1 | |
| E34 | RMW210Z | Angle, Switch | 1 | |
| E35 | RHR108A | Wire Connector | 2 | △ |
| E36 | RJA9Y | Power Cord, AC | 1 | △ |
| E37 | RMC171Y | Shield Plate, IC | 1 | |
| E38 | RMC764Z | Shield Plate | 1 | |
| E39 | RMC765Z | Shield Plate | 1 | |
| E40 | XSN3+6S | Screw | 3 | S |
| E41 | XWA3B | Washer | 3 | S |
| E42 | RUV293A | Cover, Antenna Switch | 1 | |
| E43 | XTB3+6BFN | Screw | 16 | S |
| E44 | XNS9 | Nut | 1 | |
| E45 | XSN26+5 | Screw | 1 | S |
| E46 | XWA26B | Screw | 1 | S |
| E47 | XTV3+12G | Screw | 14 | |
| E48 | XWT3 | Washer | 2 | |
| E49 | XTW3+12Q | Screw | 4 | |
| E50 | XYER3+BG14 | Screw | 1 | |
| E51 | RMC781Z | Shield Plate | 1 | |
| E52 | RMC782Y | Shield Plate | 1 | |
| E53 | RMC807Z | Shield Plate | 1 | |
| E54 | XTW3+6L | Screw | 1 | |
| E55 | XWV9 | Washer | 1 | S |
| | | ACCESSORY | | |
| A1 | RQC9017Z | Belt | 1 | |
| | | PACKING MATERIALS | | |
| P1 | RPK1162Z | Gift Box, for USA | 1 | |
| P1 | RPK1218Z | Gift Box, for Canada | 1 | |
| P2 | RPN3324Y | Pad, L, R Side | 2 | |
| P3 | RPN3338Y | Pad, Rear | 1 | |

| Ref. No. | Part No. | Part Name & Description | Per Set | Remarks |
|----------|-------------|------------------------------|---------|---------|
| P4 | RPN3367Z | Spacer | 1 | |
| P5 | XZB50X40A04 | Poly Bag | 1 | S |
| | | PRINTED MATERIALS | | |
| Y1 | RQX6758Z | Instruction Book, for USA | 1 | |
| Y1 | RQX6806Z | Instruction Book, for Canada | 1 | |