

REALISTIC[®]

Service Manual

20-214

DX-390 AM/FM WORLD-BAND PORTABLE RADIO

Catalog Number: 20-214

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SPECIFICATIONS

FM

| TEST ITEM | CONDITION | NOMINAL | LIMIT | UNIT |
|--------------------------------------|------------|-------------|-------------------------------|------|
| Tuning Range | Min. | 87.5 | ± 0.15 | MHz |
| | Max. | 108.0 | ± 0.15 | MHz |
| Intermediate Freq. | | 10.7 | ± 0.15 | MHz |
| Max. Sens. | 90MHz | | 18 | dBμ |
| | 98MHz | | 18 | dBμ |
| | 106MHz | | 18 | dBμ |
| Usable Sens. (S/N 30dB) | 90MHz | 18 | 24 | dBμ |
| | 98MHz | 18 | 24 | dBμ |
| | 106MHz | 18 | 24 | dBμ |
| Dial Calibration | 90MHz | | ± 100 | kHz |
| | 98MHz | | ± 100 | kHz |
| | 106MHz | | ± 100 | kHz |
| Audio Fidelity -3dB (W/Pre-emphasis) | 98MHz | | 150 | Hz |
| | 98MHz | | 8K | Hz |
| 3dB Limiting (1mV) | 98MHz | 18 | 24 | dBμ |
| Image Rejection | 106MHz | 36 | 30 | dB |
| I. F. Rejection | 90MHz | 60 | 50 | dB |
| Spurious Rejection | 98MHz | | 50 | dB |
| T. H. D. (75kHz. Dev.) | 98MHz | 2 | 4 | % |
| Lowest Battery Voltage | 98MHz | 3.9 | 4.2 | V |
| Max. Output Power | 98MHz | | | mW |
| Output Power At 10% T. H. D. | 98MHz | | 700 | mW |
| Alter. Channel Select. 100μV | 98MHz | | 25 | dB |
| Stereo Indicator Sens. | 98MHz | | 24 | dBμ |
| Tuning indicator Sens. (2nd. dot) | 98MHz | | 24 | dBμ |
| Stereo Separation (1kHz) | 98MHz | 25 | 20 | dB |
| Auto Scanning Stop Sens. | 98MHz | | 24 | dBμ |
| Overload Capacity | 98MHz | | 100 | dBμ |
| AM. Suppression (66dBμ) | 98MHz | | 30 | dB |
| Min. Output | 98MHz | | 3 | mV |
| Tone Action (10kHz) | 98MHz | | 18 | dB |
| S/N (22.5kHz Dev.) | 98MHz | 50 | 44 | dB |
| Supply Voltage: DC 6V | R.O.: 50mW | Load: 4 ohm | Modulation: 1kHz/22.5kHz Dev. | |

MW

| TEST ITEM | CONDITION | NOMINAL | LIMIT | UNIT |
|--|------------|-------------|---------------------------|-------|
| Tuning Range | Min. | 520 | ± 5 | kHz |
| | Max. | 1620/1710 | ± 5 | kHz |
| Intermediate Freq. | 1st. IF | 55845 | ± 1 | kHz |
| | 2nd. IF | 450 | | |
| Max. Sens. | 600kHz | | 58 | dBμ/m |
| | 1000MHz | | 56 | dBμ/m |
| | 1400MHz | | 56 | dBμ/m |
| Usable Sens. (S/N 20dB) | 600kHz | 58 | 64 | dBμ/m |
| | 1000kHz | 56 | 62 | dBμ/m |
| | 1400kHz | 56 | 62 | dBμ/m |
| Dial Calibration | 600kHz | | ± 5 | kHz |
| | 1000kHz | | ± 5 | kHz |
| | 1400kHz | | ± 5 | kHz |
| Audio Fidelity (-6dB) | 1000kHz | | 150 | Hz |
| | 1000kHz | | 2100 | Hz |
| A. C. A. (± 10kHz) | 1000kHz | | 28 | dB |
| T. H. D. (5mV) | 1000kHz | 2 | 4 | % |
| A.G.C. F.O.M. | 1000kHz | | 40 | dB |
| Image Rejection | 1400kHz | | 26 | dB |
| I. F. Rejection (450kHz) | 1000kHz | | 40 | dB |
| Whistle Modulation (5mV/m) | 21F/31F | | 15 | % |
| Lowest Battery Voltage | 1000kHz | 3.9 | 4.2 | V |
| Hum Modulation (5mV) | 1000kHz | | | dB |
| Tuning Indicator Sens. (2nd. dot) | 1000kHz | | 58 | dBμ/m |
| Auto Scanning Stop Sens. | 1000kHz | | 60 | dBμ/m |
| Tone Action (3kHz) | 1000kHz | | | dB |
| S/N Ratio (5mV) | 1000kHz | | 32 | dB |
| Current Consumption | | | | |
| Output Power At 10% T.H.D. | 1000kHz | | 700 | mW |
| Overload Capacity (30% Mod 10% T.H.D.) | 1000kHz | | 100 | dBμ/m |
| Bandwidth 6dB (Wide) | 1000kHz | 7 | 4 ~ 9 | kHz |
| Bandwidth 6dB (Narrow) | 1000kHz | 4.5 | 2.5 ~ 7 | kHz |
| Supply Voltage: DC 6V | R.O.: 50mW | Load: 4 ohm | Modulation: 1kHz 30% Mod. | |

SW

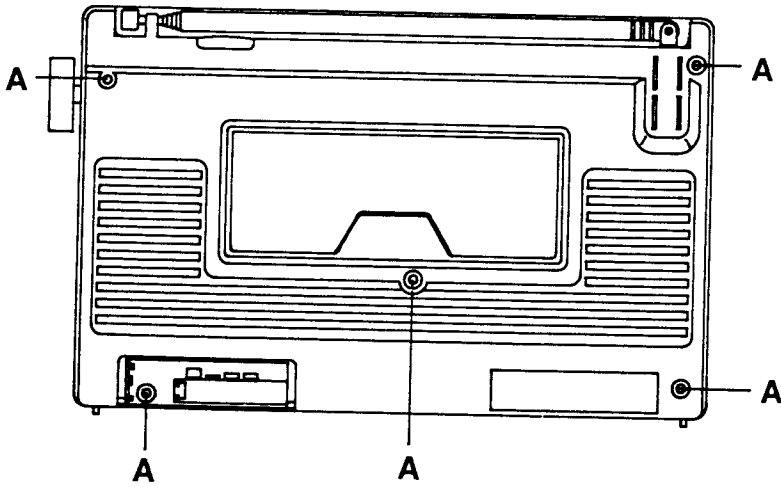
| TEST ITEM | CONDITION | NOMINAL | LIMIT | UNIT |
|--|------------|-------------|---------------------------|------|
| Tuning Range | Min. | 1621/1711 | ± 5 | kHz |
| | Max. | 29999 | ± 5 | kHz |
| Intermediate Freq. | 1st. IF | 55845 | ± 1 | kHz |
| | 2nd. IF | 450 | | |
| Max. Sens. | 2300kHz | | 24 | dBμ |
| | 15100kHz | | 22 | dBμ |
| | 25600MHz | | 22 | dBμ |
| Usable Sens. (S/N 20dB) | 2300kHz | 22 | 28 | dBμ |
| | 15100kHz | 22 | 28 | dBμ |
| | 25600kHz | 22 | 28 | dBμ |
| Dial Calibration | 2300kHz | | ± 5 | kHz |
| | 15100kHz | | ± 5 | kHz |
| | 25600kHz | | ± 5 | kHz |
| Audio Fidelity (-6dB) | 15100kHz | | 150 | Hz |
| | 15100kHz | | 2200 | Hz |
| A. C. A. (± 10kHz) | 15100kHz | | 28 | dB |
| T. H. D. (60 dBμ) | 15100kHz | 2 | 4 | % |
| A.G.C. F.O.M. (86 dBμ) | 15100kHz | | 50 | dB |
| Image Rejection | 15100kHz | 26 | 20 | dB |
| I. F. Rejection (450kHz) | 15100kHz | | 50 | dB |
| Whistle Modulation (5mV) | 21F/31F | | | % |
| Lowest Battery Voltage | 15100kHz | 3.9 | 4.2 | V |
| Hum Modulation (5mV) | 1000kHz | | | dB |
| Tuning Indicator Sens. (2nd. dot) | 15100kHz | | 24 | dBμ |
| Auto Scanning Stop Sens. | 15100kHz | | 26 | dBμ |
| RF Gain Control | 15100kHz | 25 | ± 6 | dB |
| S/N Ratio (60 dBμ) | 15100kHz | | 40 | dB |
| SSB/CW Sens. (S/N = 10 dB) | 15100kHz | -3 | + 3 | dBμ |
| Output Power At 10% T.H.D. | 15100kHz | | 700 | mW |
| Overload Capacity (30% Mod 10% T.H.D.) | 15100kHz | 86 | 80 | dBμ |
| Bandwidth 6dB (Wide) | 15100kHz | 7 | 4 ~ 9 | kHz |
| Bandwidth 6dB (Narrow) | 15100kHz | 4.5 | 3 ~ 7 | kHz |
| Supply Voltage: DC 6V | R.O.: 50mW | Load: 4 ohm | Modulation: 1kHz 30% Mod. | |

LW

| TEST ITEM | CONDITION | NOMINAL | LIMIT | UNIT |
|-----------------------------------|------------|-------------|---------------------------|-------|
| Tuning Range | Min. | 150 | ± 5 | kHz |
| | Max. | 519 | ± 5 | |
| Intermediate Freq. | 1st.IF | 55845 | ± 1 | kHz |
| | 2nd.IF | 450 | | |
| Max. Sens. | 173kHz | | 68 | dBμ/m |
| | 218MHz | | 66 | dBμ/m |
| | 281MHz | | 64 | dBμ/m |
| Usable Sens. (S/N 20dB) | 173kHz | 68 | 74 | dBμ/m |
| | 218kHz | 66 | 72 | dBμ/m |
| | 281kHz | 64 | 70 | dBμ/m |
| Dial Calibration | 173kHz | | ± 5 | kHz |
| | 218kHz | | ± 5 | kHz |
| | 281kHz | | ± 5 | kHz |
| Lowest Battery Voltage | 218kHz | 3.9 | 4.2 | V |
| Hum Modulation (5mV) | 1000kHz | | | dB |
| Tuning Indicator Sens. (2nd. dot) | 218kHz | | 70 | dBμ/m |
| Auto Scanning Stop Sens. | 218kHz | | 72 | dBμ/m |
| Tone Action (3kHz) | 1000kHz | | | dB |
| S/N Ratio (5mV) | 218kHz | | 24 | dB |
| Supply Voltage: DC 6V | R.O.: 50mW | Load: 4 ohm | Modulation: 1kHz 30% Mod. | |

Note : Nominal specs represent the design specs. All units should be able to approximate these-some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable ; in no case should a unit fall to meet limit specs.

DISASSEMBLY INSTRUCTIONS

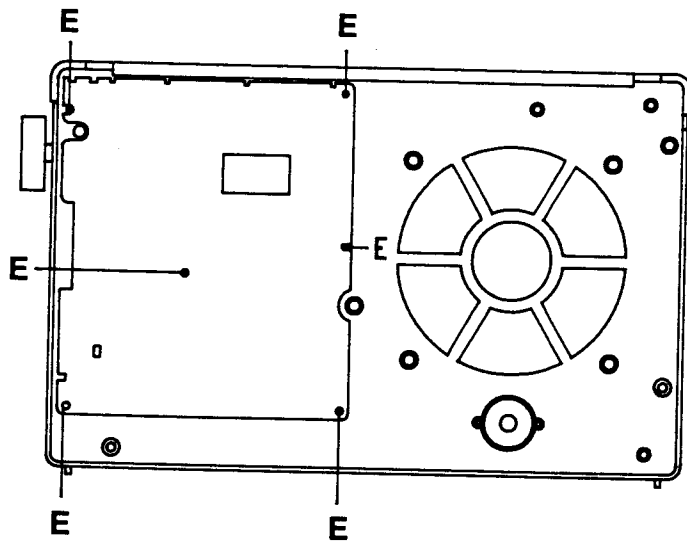
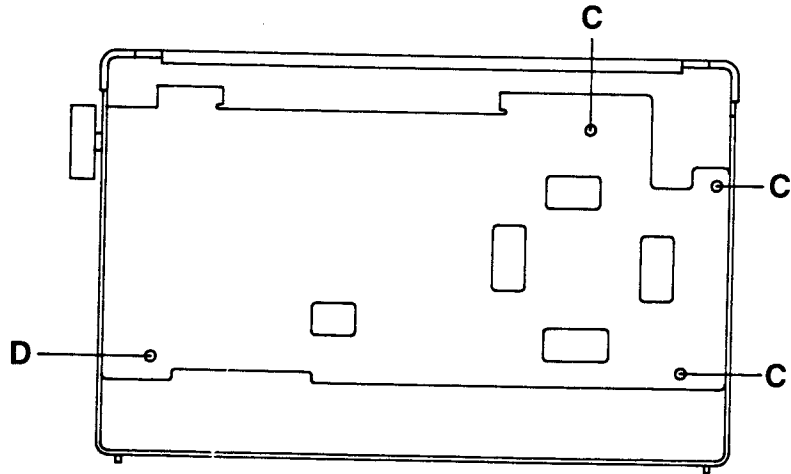


TO REMOVE BACK COVER

- a. Unscrew 5 screws A.
- b. Separate front and back cabinet.

TO REMOVE CONTROL PCB

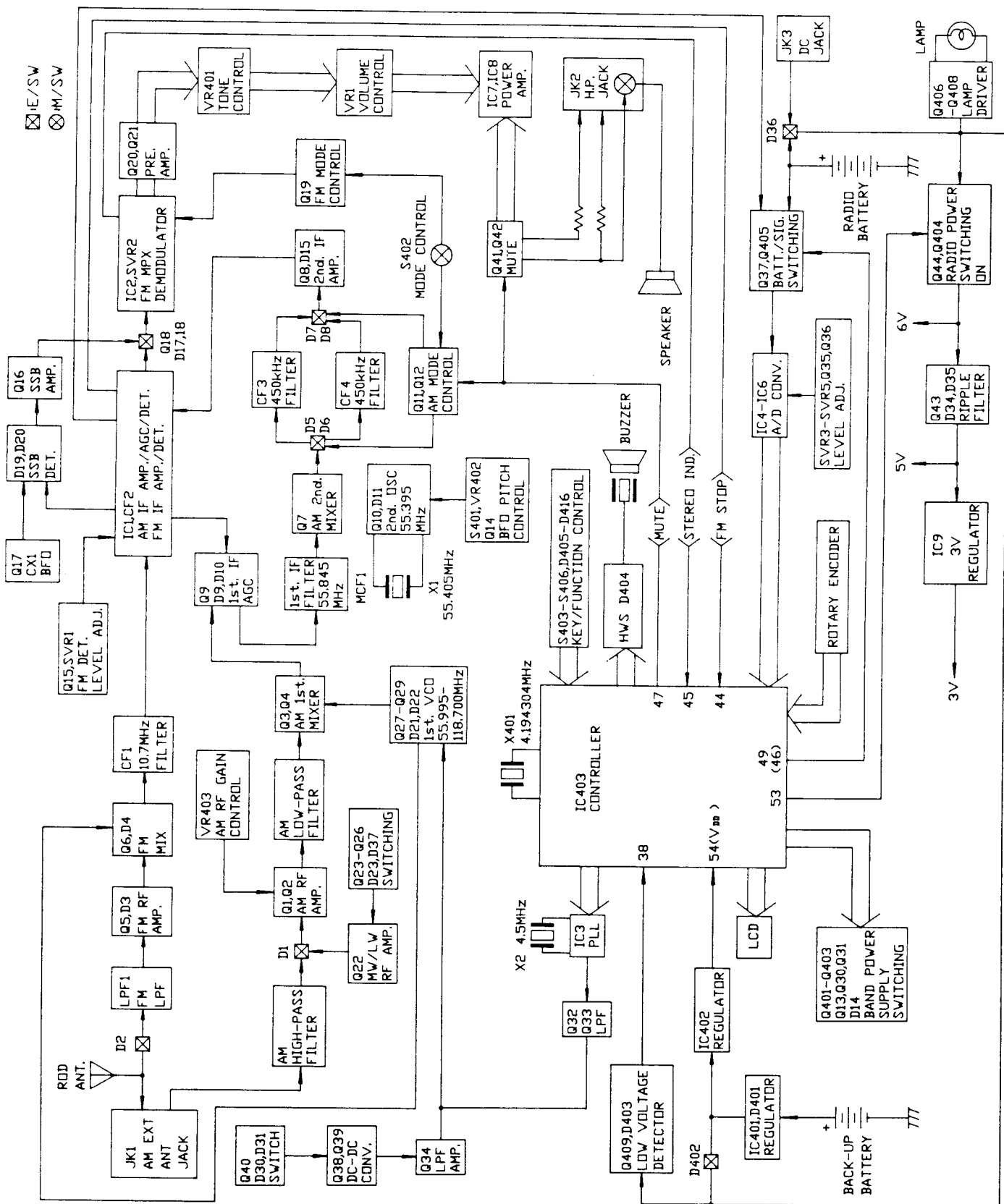
- a. Remove 5 screws E.
- b. Remove Control PCB.



TO REMOVE MAIN PCB

- a. Remove 3 screws C.
- b. Remove Main PCB and 1 screw D.

BLOCK DIAGRAM



ALIGNMENT INSTRUCTIONS

Note: (1) All test points are shown both on schematic diagram and figures 1-13.
(2) Load in fresh batteries before any alignment procedures.

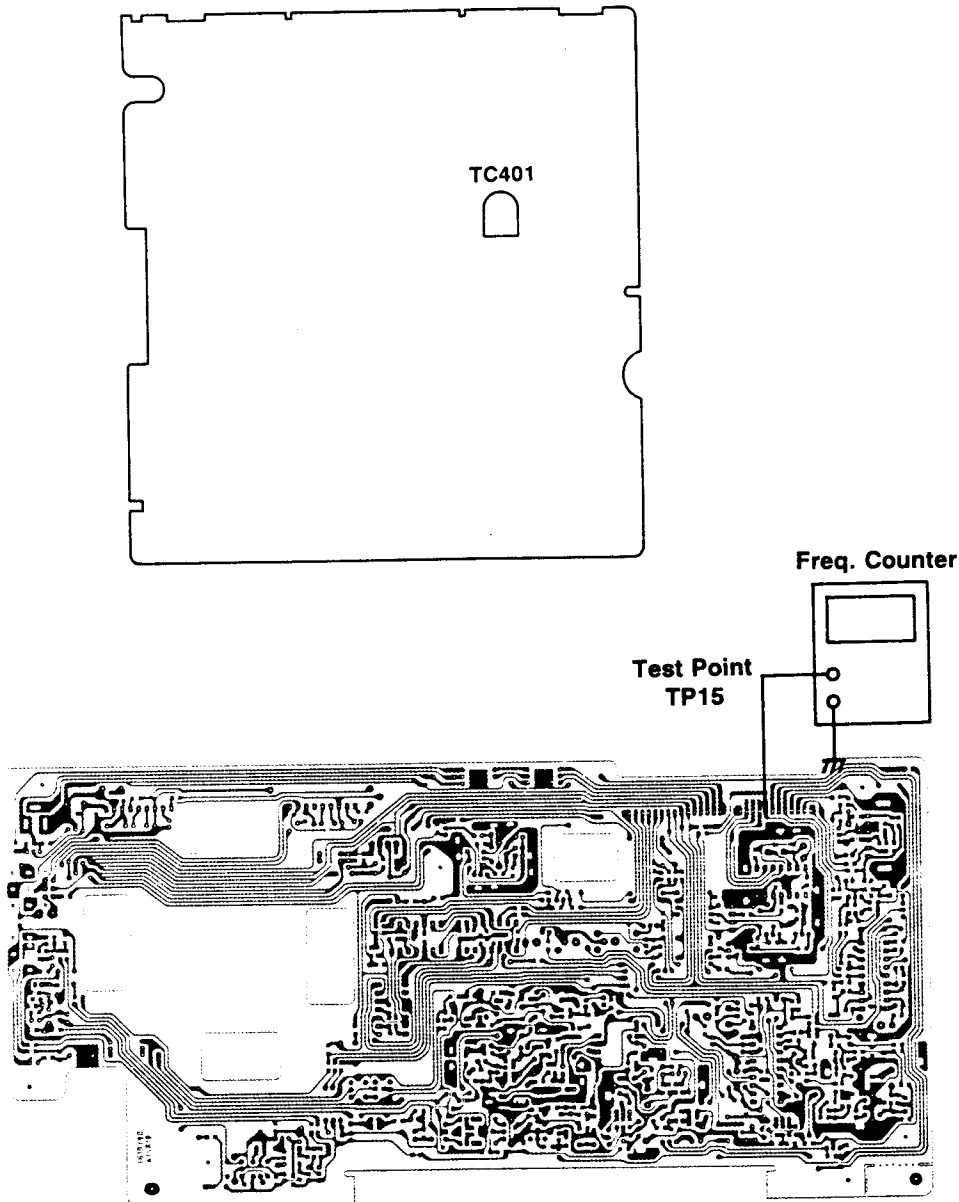
(1) ALIGNMENT FOR CLOCK TIME ACCURACY

a. Required Instrument
Frequency Counter

b. Alignment Procedure

| Adjustment | Procedure |
|------------|--|
| TC 401 | (1) Turn the radio to SLEEP ON mode. (2) Set the SAFETY switch upward to electrically lock all push buttons. (3) Remove the batteries from the RADIO BATTERY compartment. The monitor TIME BASE signal starts functioning. (4) Connect a frequency counter to TP 15. (5) Adjust TC401 to reach a reading $524288 \pm 4\text{Hz}$ ($\pm 7.6\text{PPM}$ or $\pm 20\text{sec/month}$) on counter. |

c. Instrument Connection



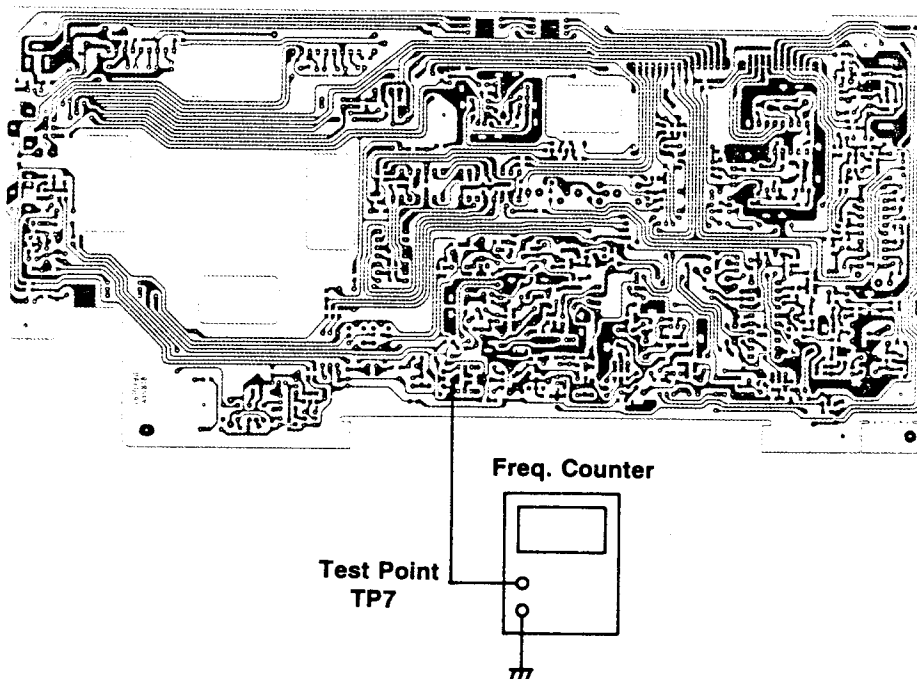
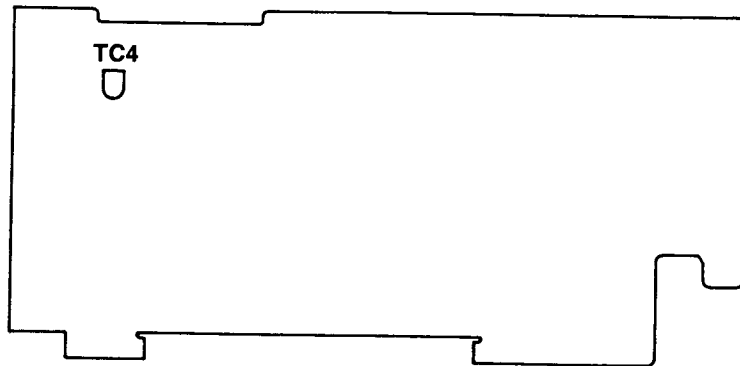
(2) ALIGNMENT FOR PLL FREQUENCY

a. Required Instrument
Frequency Counter

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|--|
| FM | TC4 | (1) Turn the radio ON. (2) Select the tuner frequency at 108 MHz. (3) Connect the test probes of frequency counter to TP7 and ground. The ground point should be as near as possible to the test point TP7 (4) Adjust TC4 to have a reading of 118.69975MHz-118.70025MHz. |

c. Instrument Connection



(3) **ALIGNMENT FOR AM 2ND LOCAL OSC**

a. Required Instrument

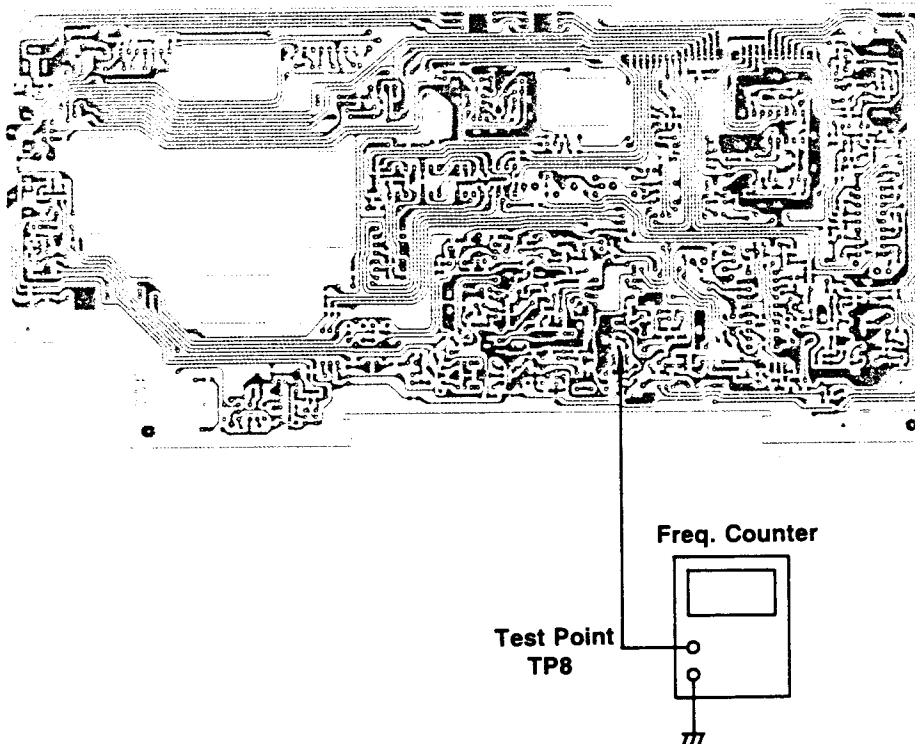
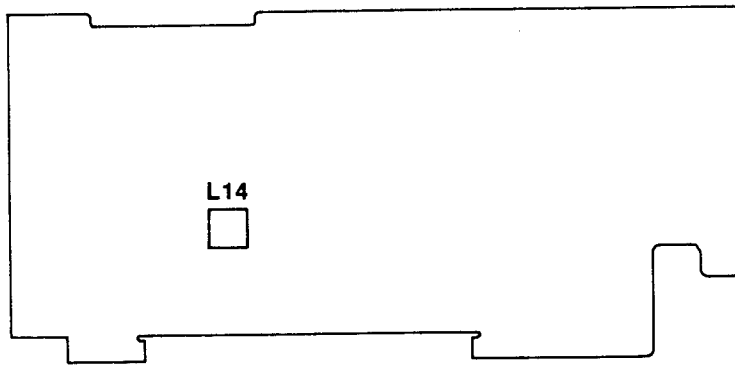
Frequency counter with higher impedance probe.

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|--|
| AM | L14 | (1) Turn the radio ON. (2) Tune the frequency far away from any station to avoid interference. (3) Connect the test probes of frequency counter to TP8 and ground. (4) Adjust L14 to have a reading of 55.39485MHz-55.39515MHz. |

Caution : A loading effect could emerge in the circuit if inserted with a lower impedance probe of frequency counter.

c. Instrument Connection

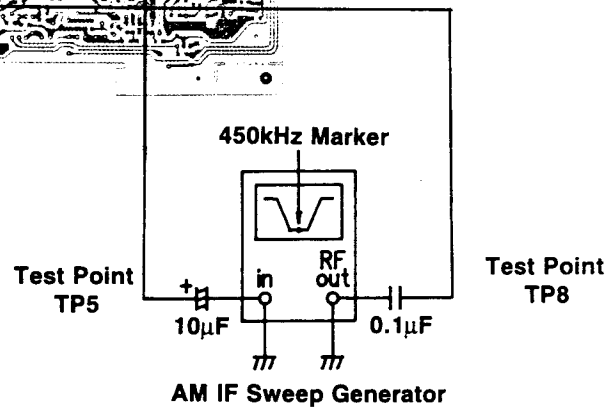
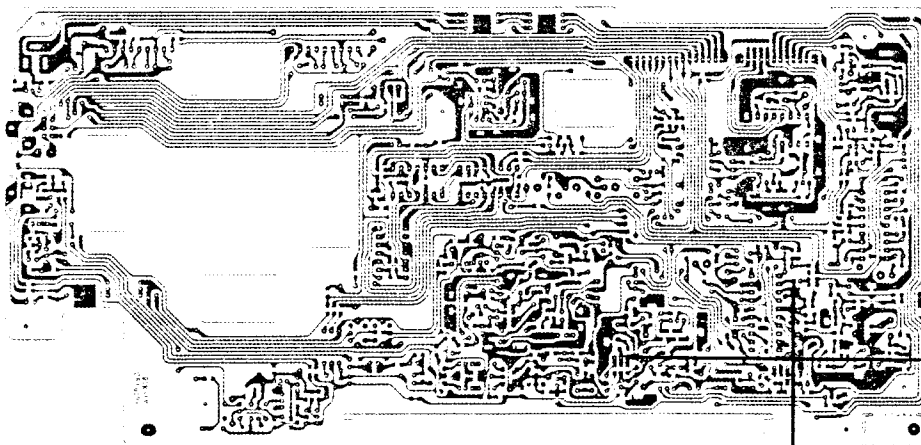
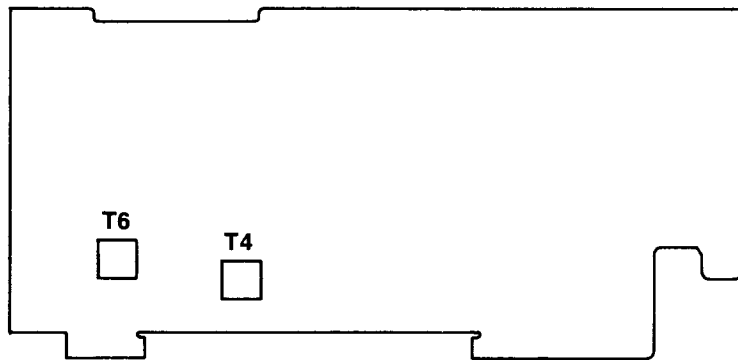


(4) ALIGNMENT FOR AM 2ND IF

- a. Required Instrument
AM IF Sweep Generator with Scope
- b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|---|
| AM | T 4 T 6 | <ol style="list-style-type: none"> (1) Turn the radio ON. (2) Set the bandwidth switch to WIDE position. (3) Connect the input terminal of AM IF sweep generator in series with a capacitor of 10μF to the test point TP5. (4) Connect the RF output terminal of AM IF sweep generator in series with a capacitor 0.1μF to another test point TP8. (5) Adjust T4 to have a max. output with a marker frequency of 450kHz on the sweep scope. (6) Adjust T6 to have a max. output with a marker frequency of 450kHz on the sweep scope. (7) Repeat (5) and (6) until a max. 450kHz output is reached. |

c. Instrument Connection



(5) ALIGNMENT FOR FM IF

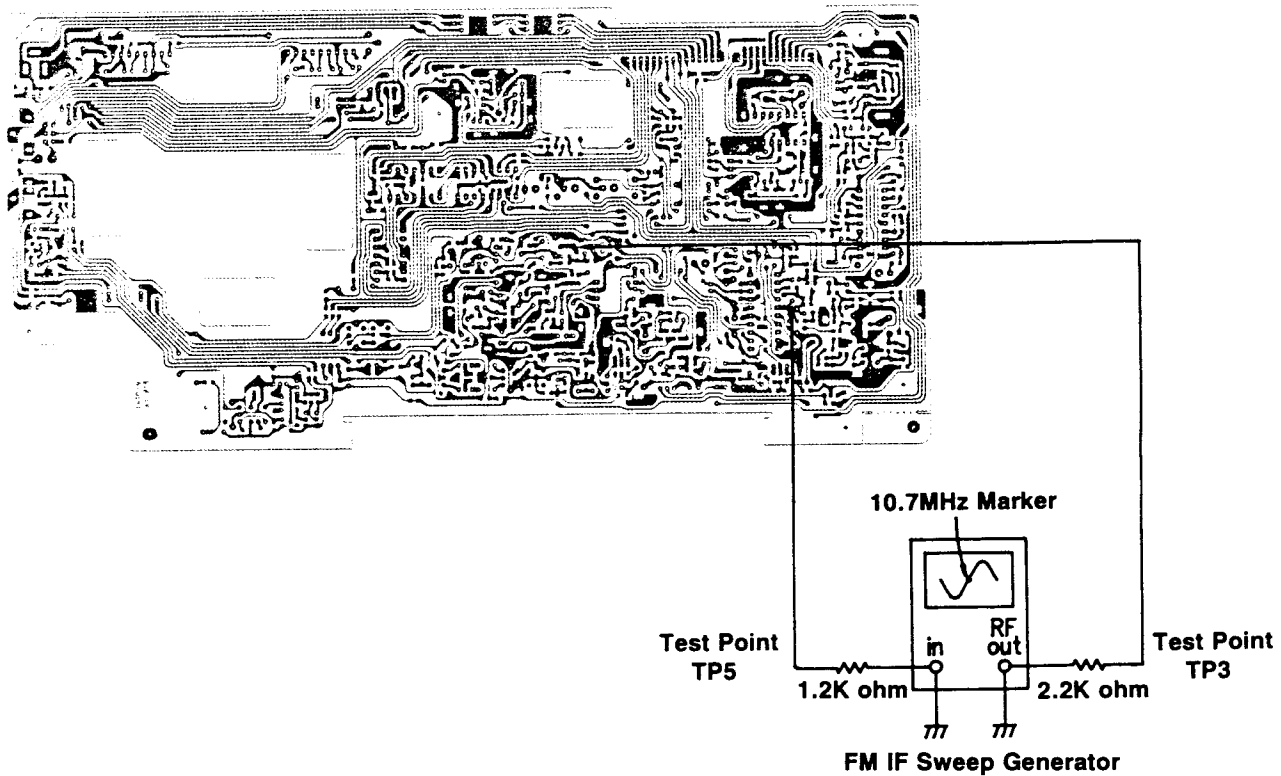
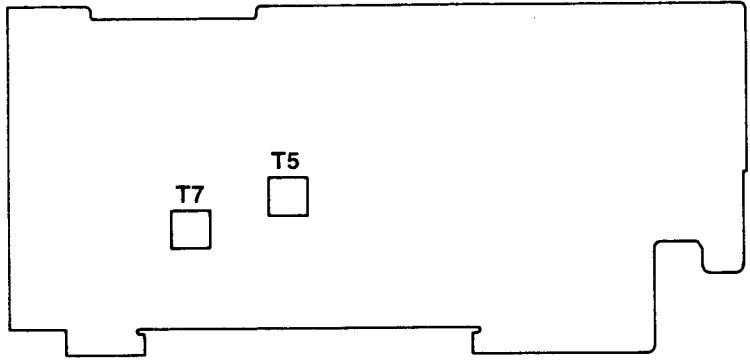
a. Required Instruments

FM IF Sweep Generator with Scope.

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|--|
| FM | T5 T7 | (1) Turn the radio ON. (2) Connect the input of FM IF sweep generator in series with a resistor of 1.2K ohm to the test point TP5. (3) Connect the RF output of FM IF sweep generator in series with a resistor of 2.2K ohm to another test point TP3. (4) Adjust T5 and T7 to have a max output and best symmetrical S curve with respect to the center marker frequency of 10.7MHz. |

c. Instrument Connection



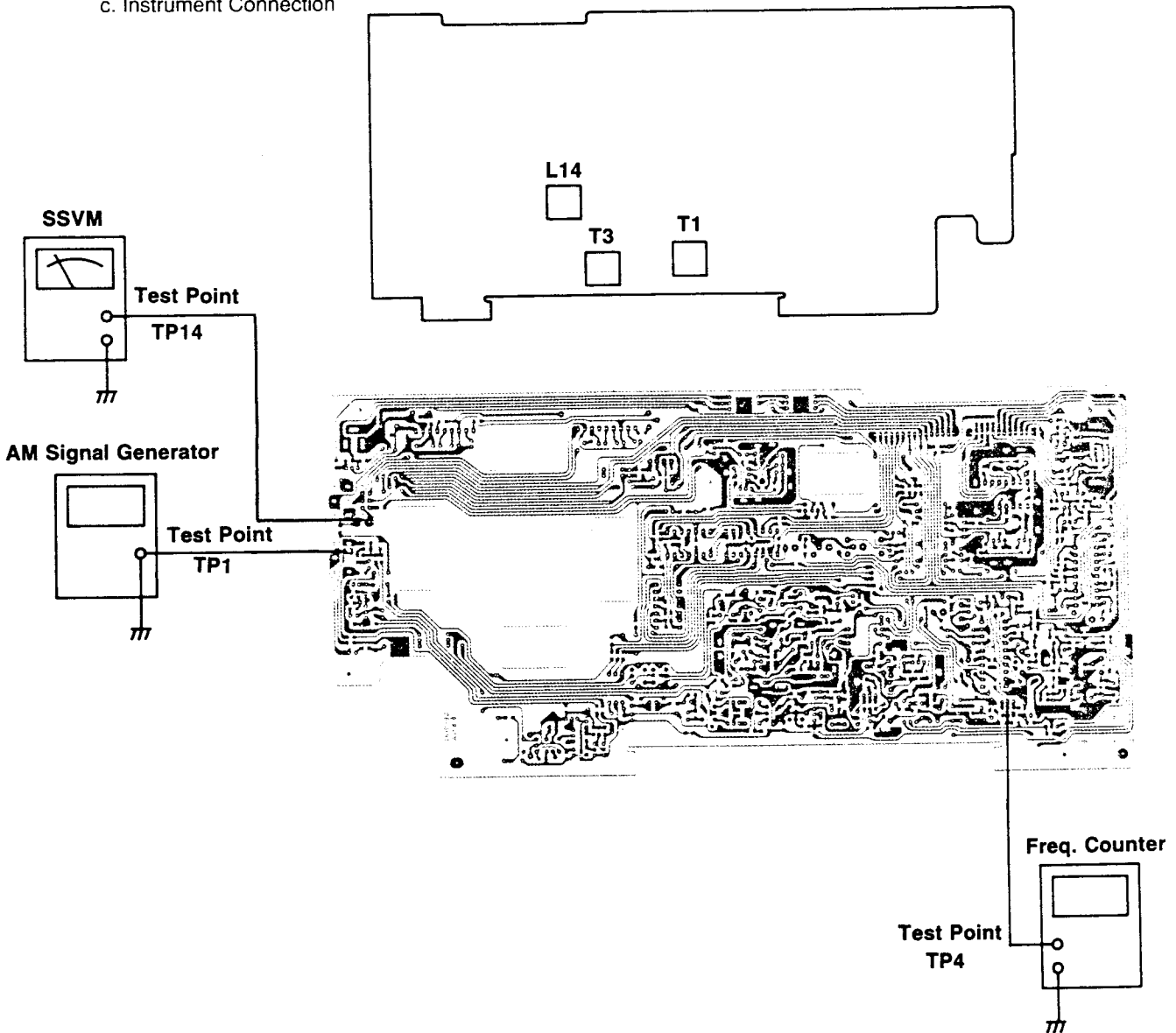
(6) ALIGNMENT FOR AM SENSITIVITY

- a. Required Instruments
 AM Signal Generator
 SSVM
 Frequency Counter

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|-----------------|--|
| AM | T1 T3 L14 | (1) Turn the radio ON. (2) Set the bandwidth switch to WIDE and RF GAIN VR to MAX position. (3) Tune the radio band frequency to 15.100MHz. (4) Feed a signal with modulation from AM signal generator output to the test point TP1 and connect a SSVM to speaker (TP14). (5) Tune the generator frequency exactly the same as that of the radio frequency displayed. (6) Adjust T1 and T3 to have a max. audio output. (7) Connect the probe of frequency counter at the test point TP4. (8) Adjust L14 to meet the specification frequency $450\text{kHz} \pm 0.15\text{kHz}$. (9) Remove the counter and repeat (6) to (8) until the specification frequency is met. |

c. Instrument Connection



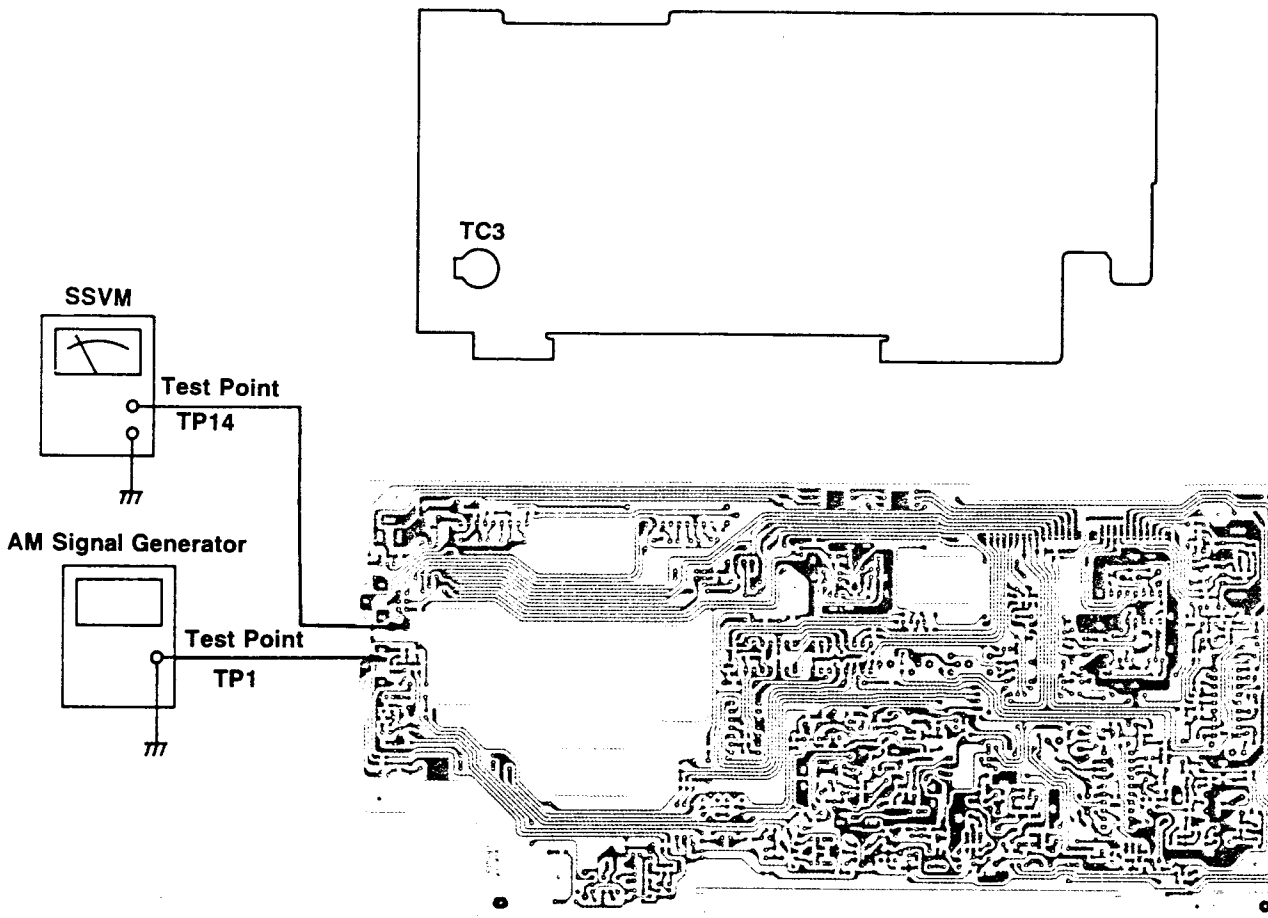
(7) ALIGNMENT FOR BFO

- a. Required Instruments
 AM Signal Generator
 SSVM

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|---|
| AM | TC3 | (1) Turn the radio ON. (2) Set the BFO switch to ON and BFO pitch to center position. (3) Tune the radio bank frequency to 15.100MHz. (4) Feed a signal without modulation from AM signal generator output to the test point TP1 and connect a SSVM to speaker (TP14). (5) Tune the generator frequency exactly displayed. (6) Adjust TC3 to have a minimum reading on SSVM. |

c. Instrument Connection

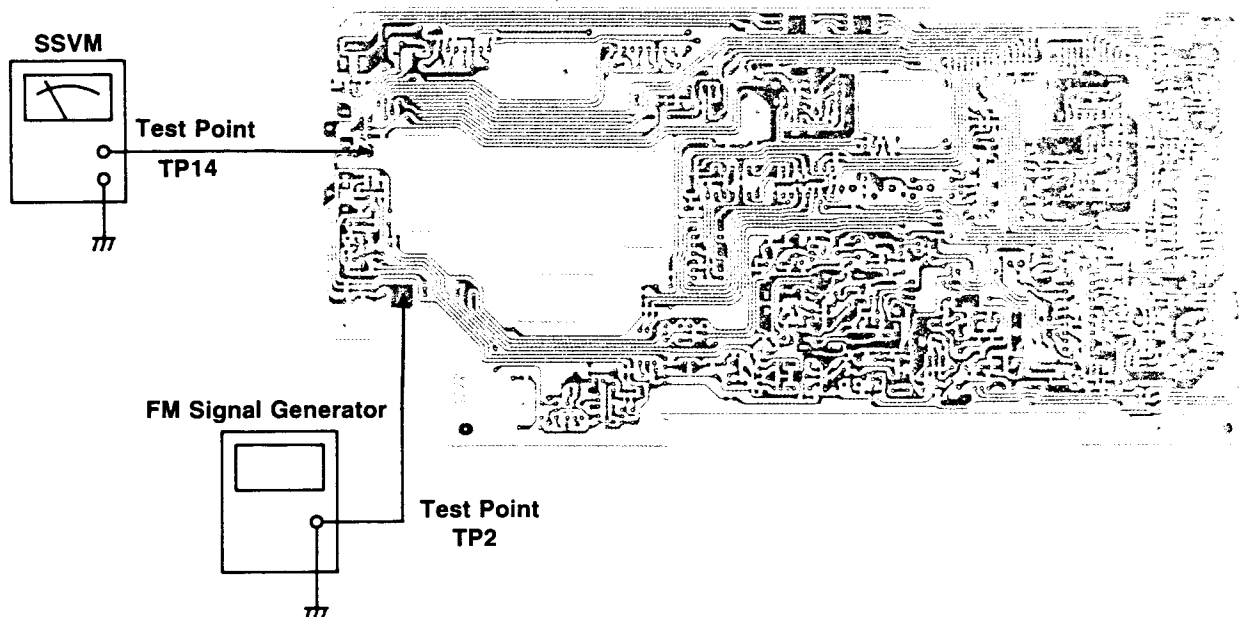
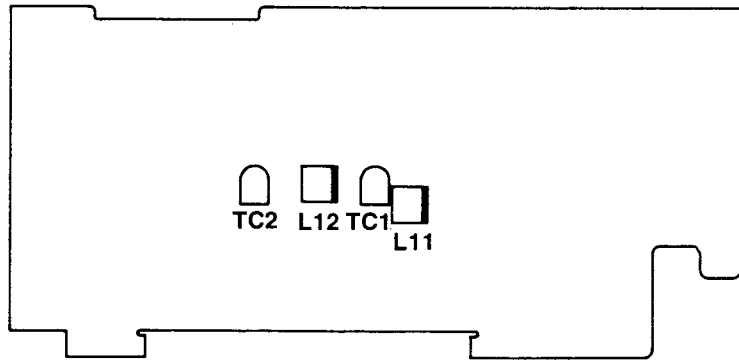


(8) ALIGNMENT FOR FM SENSITIVITY

- a. Required Instruments
 FM Signal Generator
 SSVM

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|----------------------|---|
| FM | L11, L12 TC1, TC2 | (1) Turn the radio ON. (2) Connect a SSVM to speaker (TP14). (3) Connect a FM signal generator to the input terminal of Rod Ant. (TP2). (4) Set the signal generator to 22.5kHz deviation with 1kHz modulation. (5) Tune the radio band frequency to 90MHz and adjust L11, L12 to have a max. reading on SSVM. (6) Return the radio band frequency to 106MHz and adjust TC1, TC2 to have a max. reading on SSVM. (7) Repeat (5) and (6) until a best sensitivity on these two frequencies are formed. |



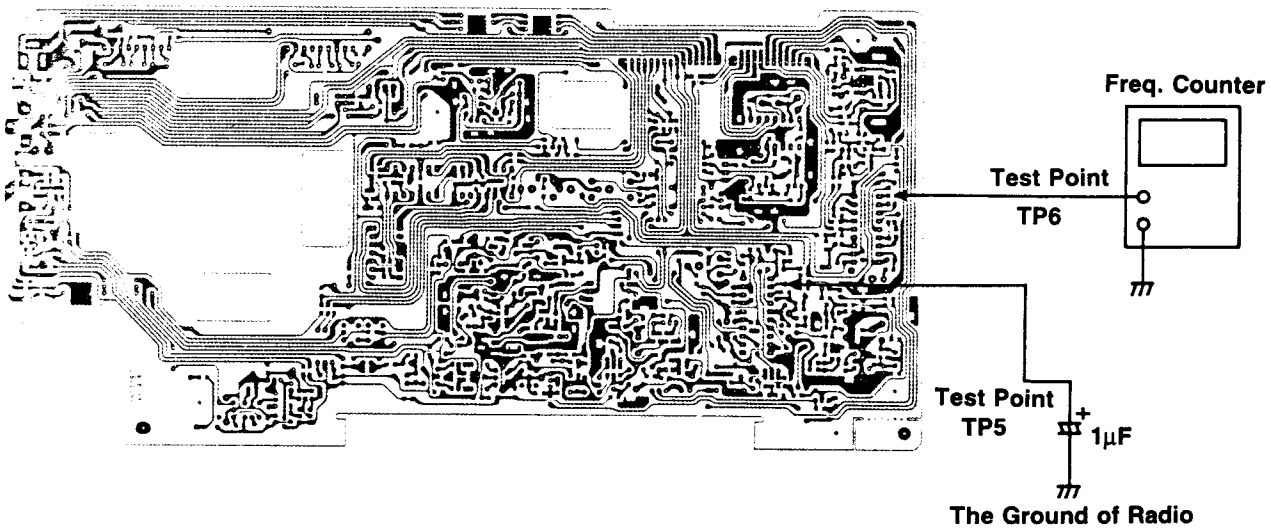
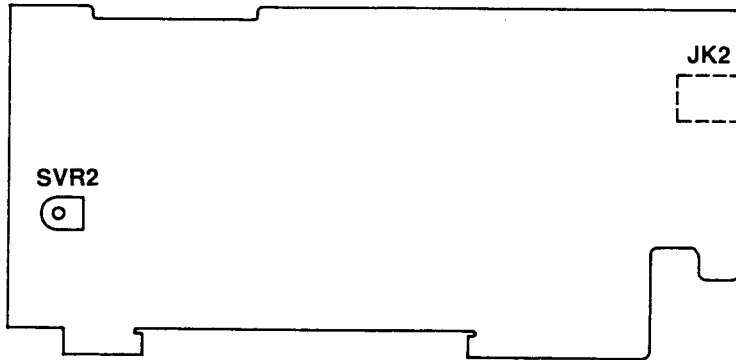
9) **ALIGNMENT FOR MPX**

a. Required Instrument
Frequency Counter

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|--|
| FM | SVR2 | (1) Turn the radio ON. (2) Set the FM mode switch to STEREO position. (3) Insert a plug of headphone into the HEADPHONE JACK (JK2) (4) Connect the test point TP5 in series with a capacitor of 1 μ F to ground. (5) Connect a frequency counter to TP6. (6) Adjust SVR2 to have a reading of 18.95kHz-19.05kHz on frequency counter. |

c. Instrument Connection



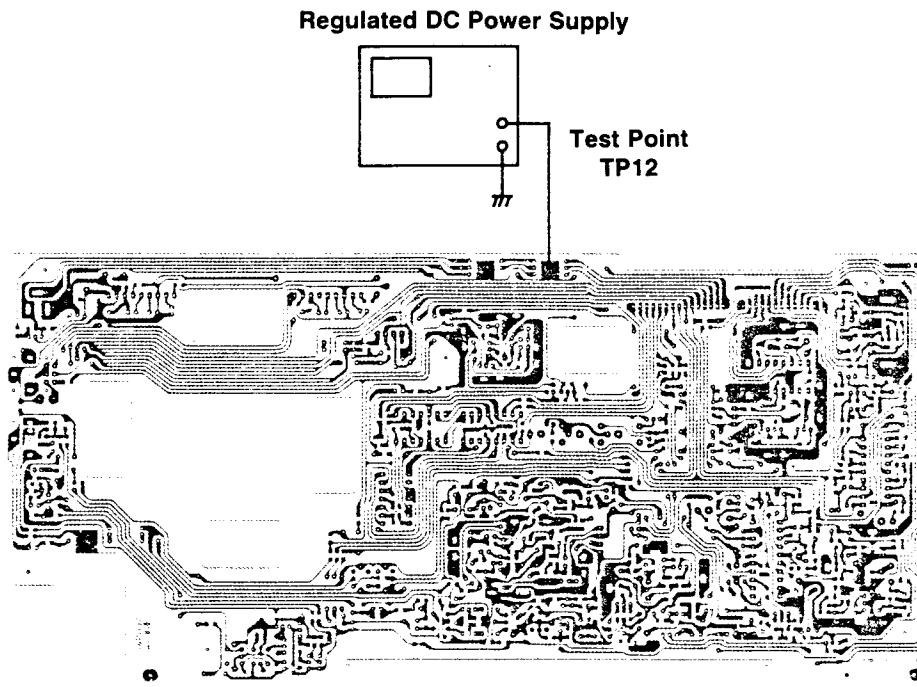
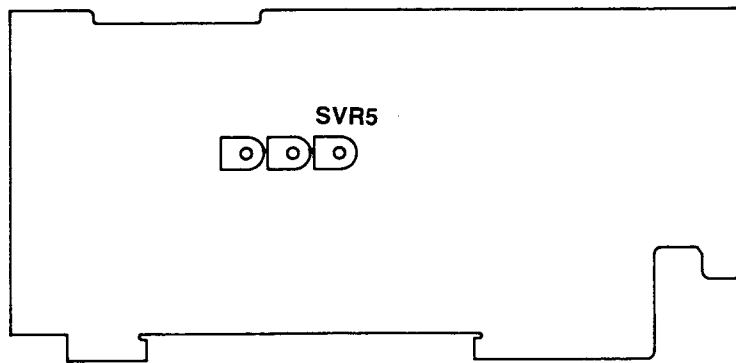
(10) ALIGNMENT FOR INDICATION LEVEL OF BATTERY

- a. Required Instrument
DC Power Supply with voltage meter

b. Alignment Procedure

| Adjustment | Procedure |
|------------|---|
| SVR5 | <ul style="list-style-type: none">(1) Remove batteries away from the RADIO BATTERY compartment.(2) Connect a DC power supply to the test point TP12.(3) Set the voltage to a reading of 4.4V.(4) Turn the radio ON and adjust SVR5.(5) Push POWER key again to shut off the radio and the BATTERY LEVEL INDICATOR appears for 5 seconds.(6) Repeat (4) and (5) until the level is indicated on the 2nd. scale. |

c. Instrument Connection



(11) ALIGNMENT FOR SIGNAL STRENGTH LEVEL

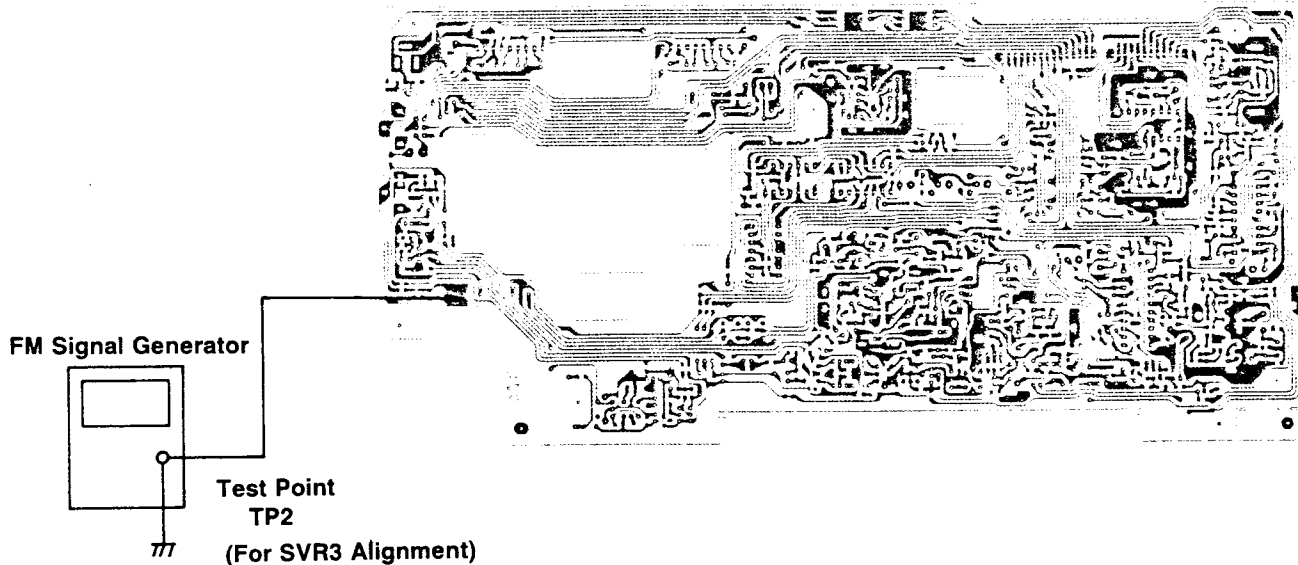
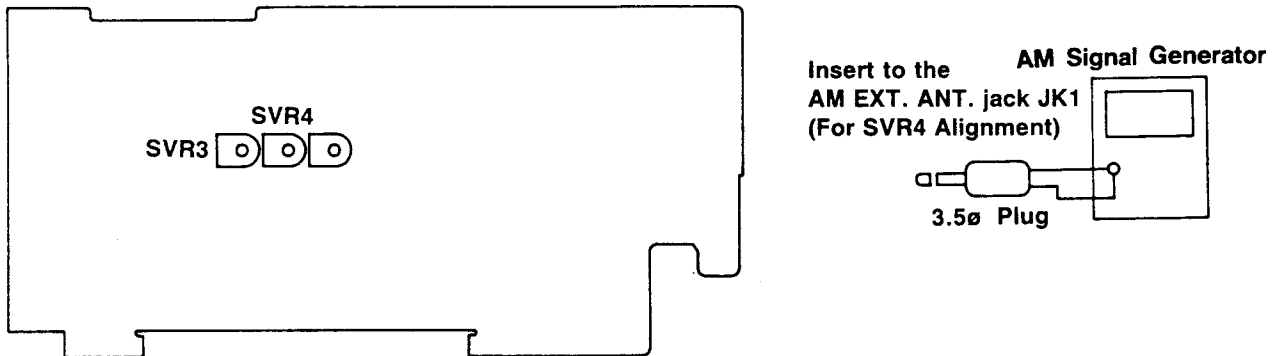
- a. Required Instrument
 - FM Signal Generator
 - AM Signal Generator

- b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|---|
| FM | SVR3 | (1) Turn the radio ON. (2) Connect a FM signal generator to the input terminal of Rod Ant. (TP2) (3) Set the signal generator to 98MHz with 1kHz Mod, 22.Hz deviation and 36 emf dBμ/75 ohm output level. (4) Tune the radio band frequency to 98MHz and adjust SVR3 to have a strength level reading of 6th scale. |
| AM | SVR4 | (1) Turn the radio ON. (2) Set the bandwidth switch to WIDE and RF GAIN VR to MAX position. (3) Tune the radio band frequency to 15.100MHz. (4) Feed a signal with 30% modulation and 36 emf dBμ/50 ohm output level into the AM EXT. ANT. Jack. (5) Tune the generator frequency exactly the same as that of the radio frequency displayed (6) Adjust SVR4 to have a strength level reading of 5th scale. |

Caution : Before these signal strength alignment procedures, the SVR5 (for Battery level) should be in correct position.

- c. Instrument Connection



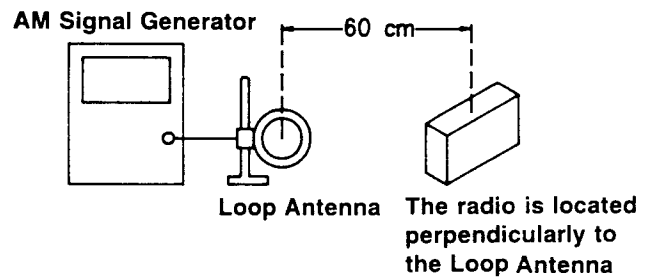
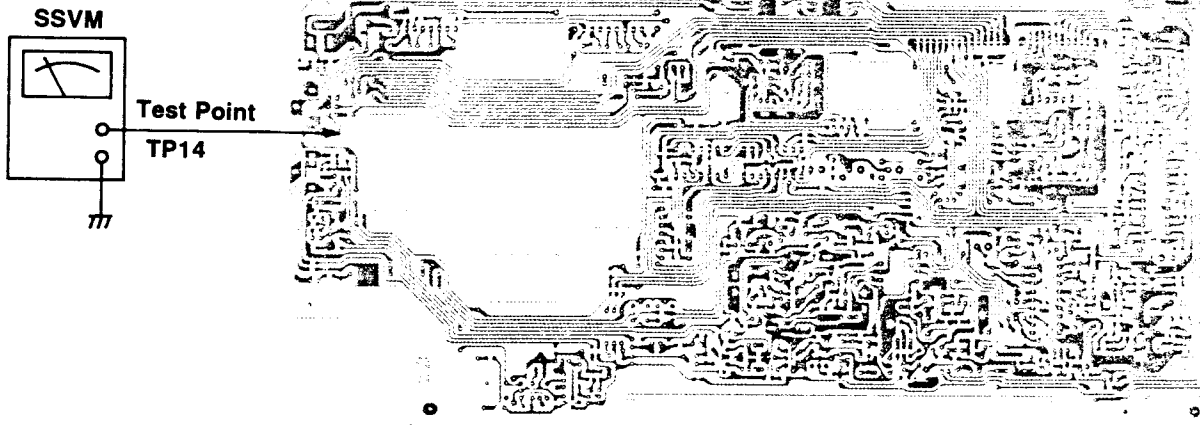
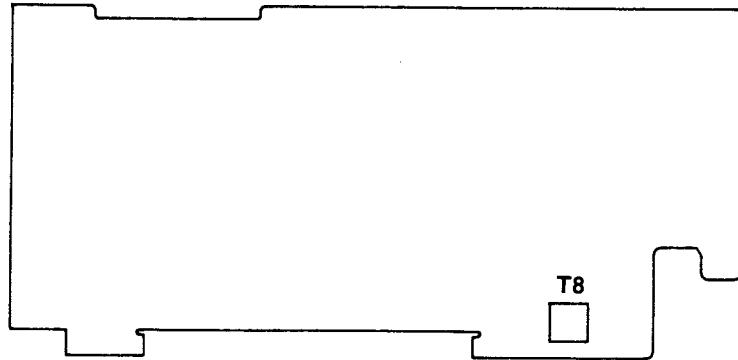
(12) ALIGNMENT FOR 450kHz TRAP

- a. Required Instruments
 AM Signal Generator
 Loop Antenna
 SSVM

b. Alignment Procedure

| Mode | Adjustment | Procedure |
|------|------------|---|
| AM | T8 | (1) Turn the radio ON. (2) Set the bandwidth switch to WIDE and RF GAIN VR to MAX position. (3) Tune the radio band frequency to 450kHz. (4) Connect a AM signal generator together with standard loop dummy antenna and feed a stronger signal to the MW/LW ferrite bar antenna. (5) Tune the generator frequency to 450kHz and set modulation depth to 30%~50% (6) Connect a SSVM to speaker (TP14). (7) Adjust T8 to have a min. audio output. |

c. Instrument Connection



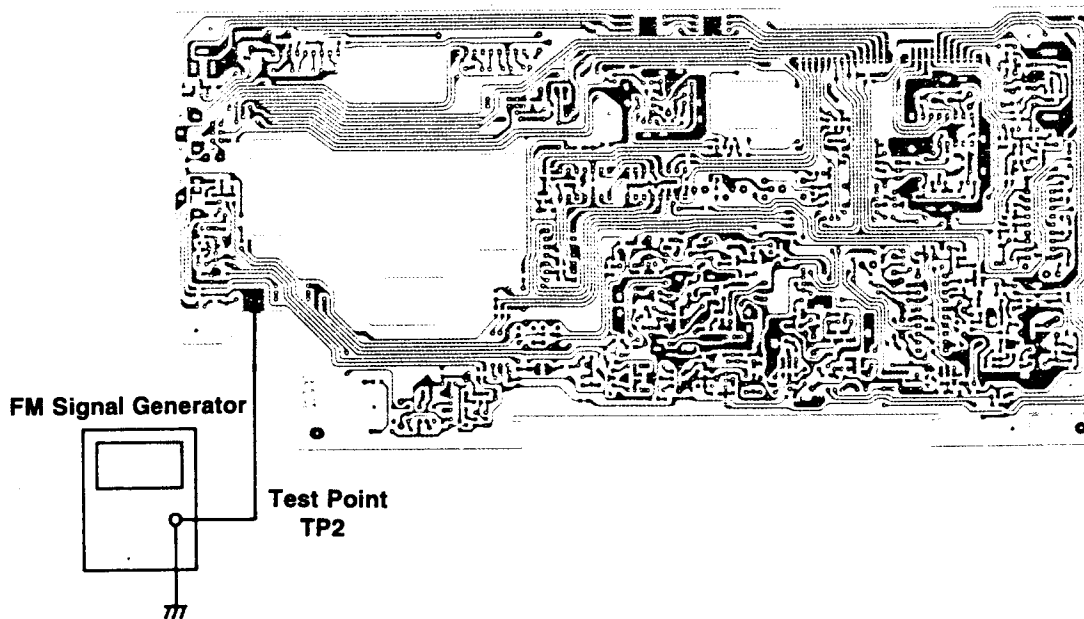
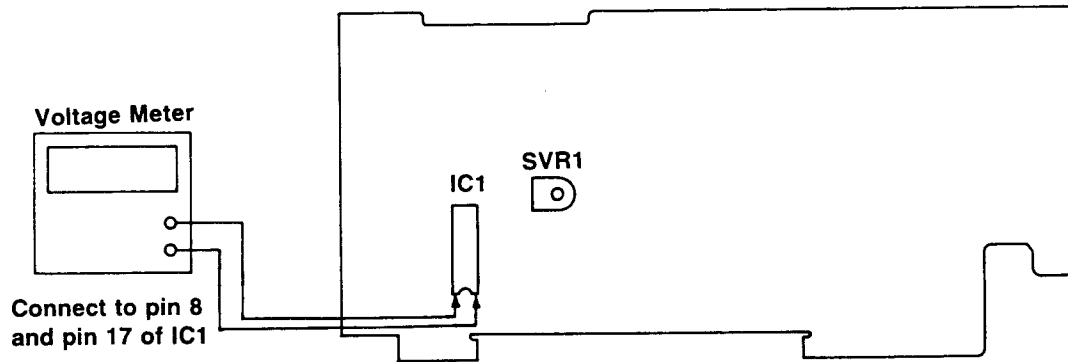
(13) ALIGNMENT FOR FM STATION DETECTION

- a. Required Instruments
 FM Signal Generator
 Voltage Meter

b. Alignment Procedure

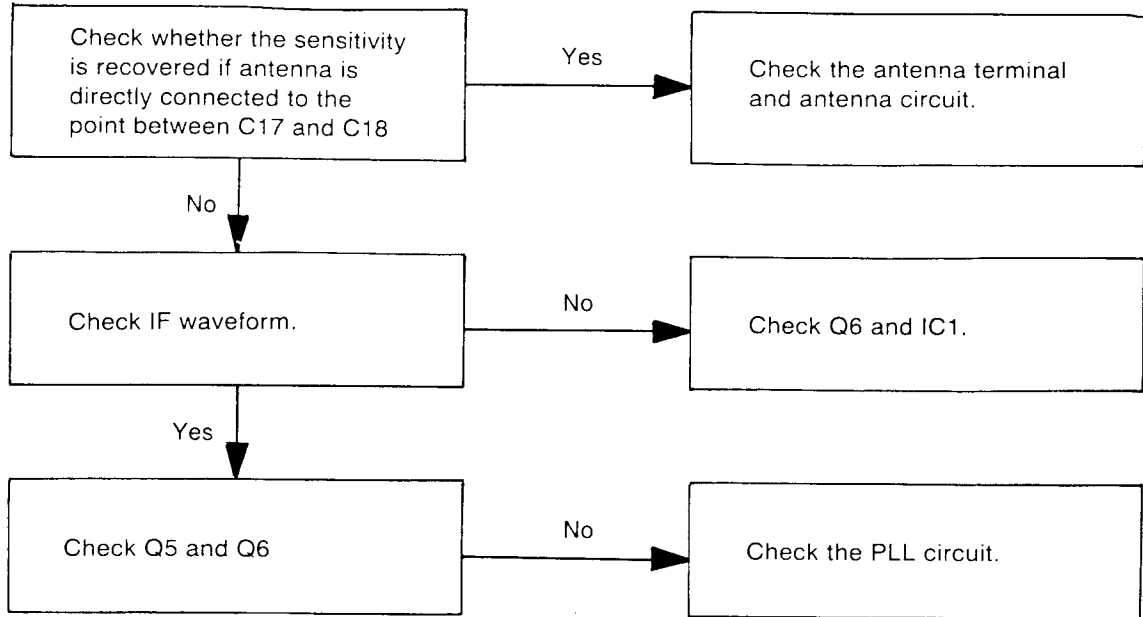
| Mode | Adjustment | Procedure |
|------|------------|--|
| FM | SVR1 | (1) Turn the radio ON. (2) Connect a voltage meter between pin (8) and pin (17) of IC1 TA7758P. (3) Connect a FM signal generator to the input terminal of Rod Ant. (TP2). (4) Set the signal generator to 98MHz with 1kHz Mod. 22.5kHz deviation and 66 emf dBμ/75 ohm output level. (5) Tune the radio band frequency to 98MHz and adjust SVR1 until the voltage difference between pin(8) and pin (17) is less than 0.3 Volt. |

c. Instrument Connection

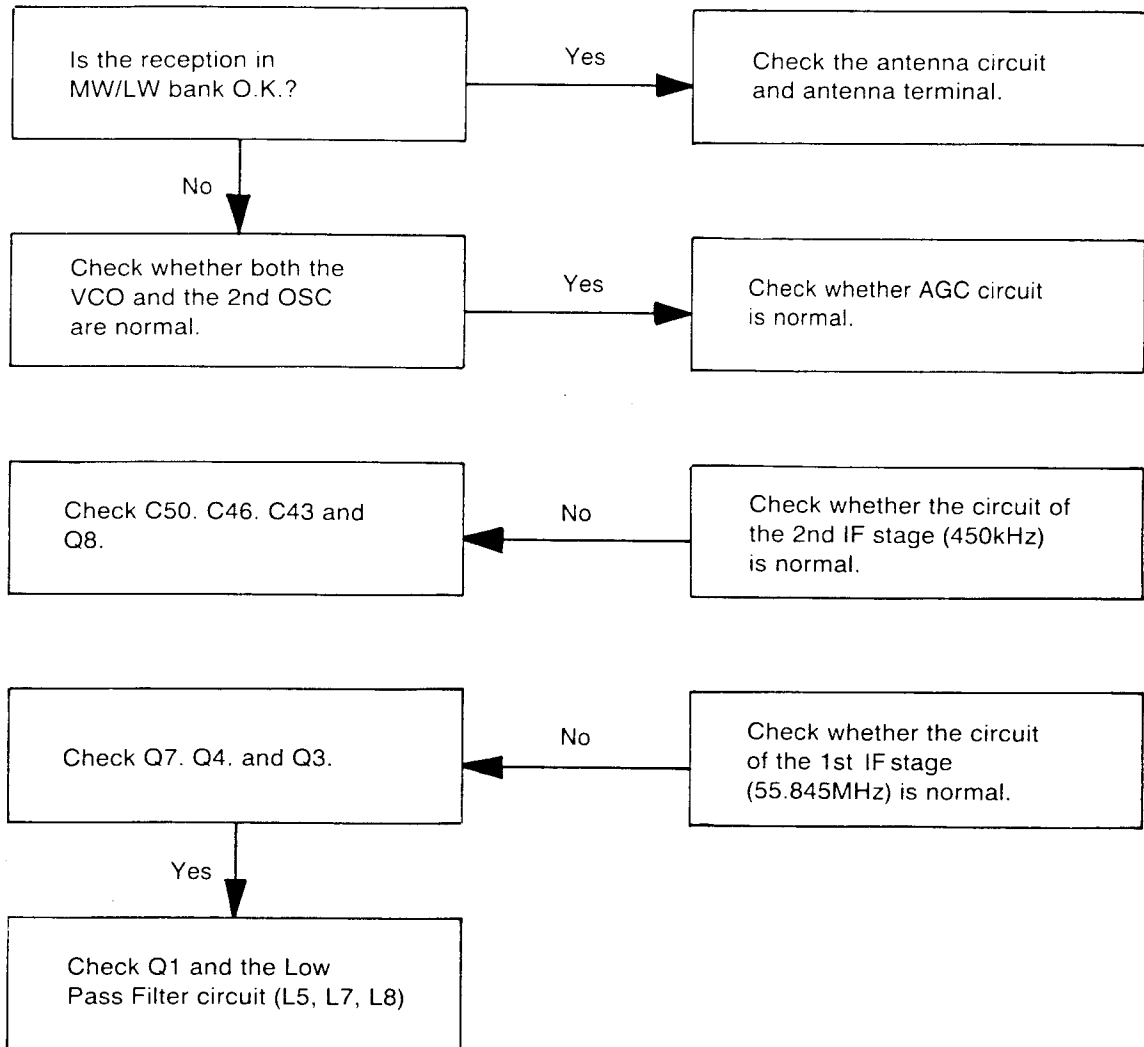


TROUBLESHOOTING FLOW CHART

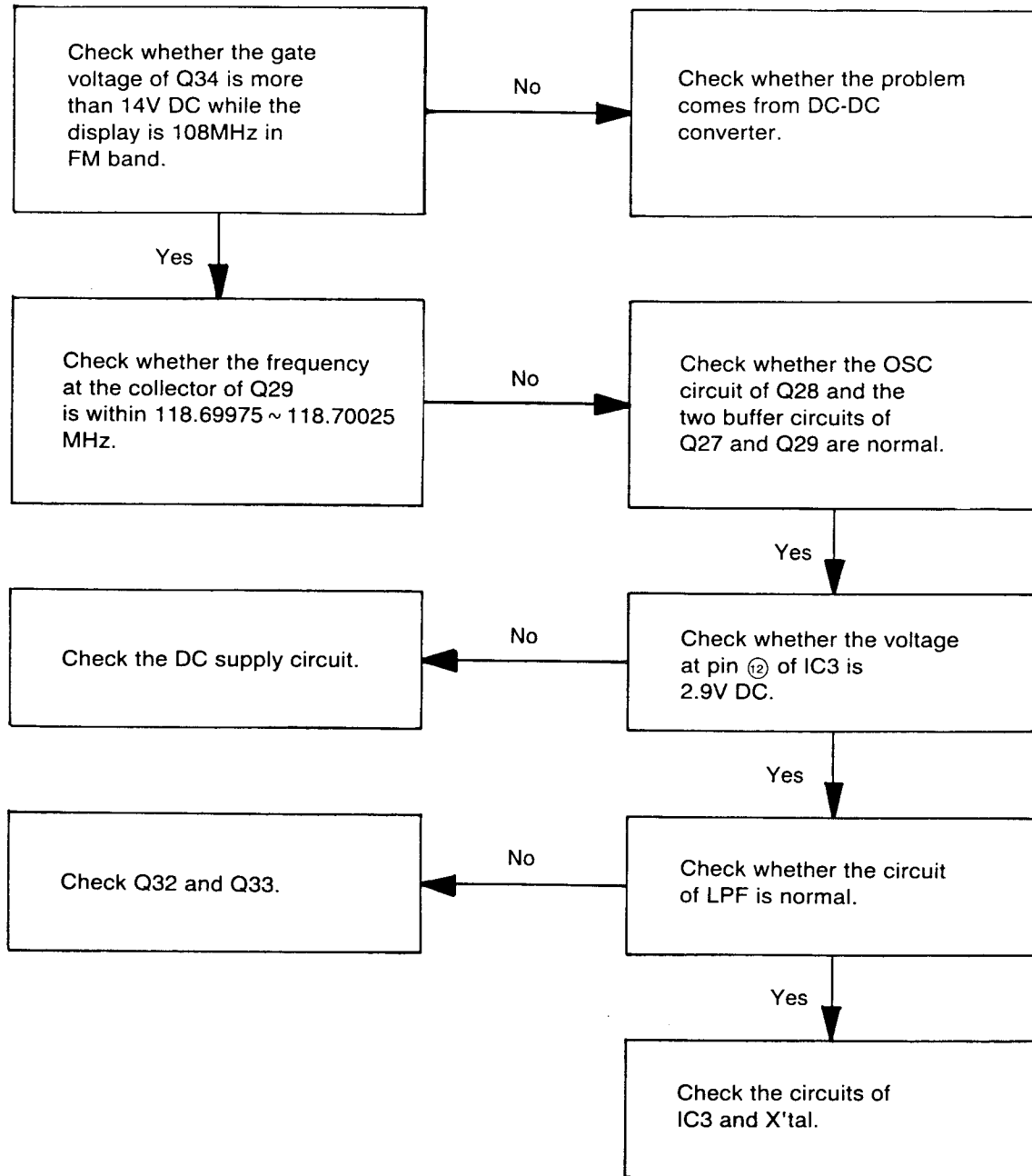
(1) Weak sensitivity on FM mode



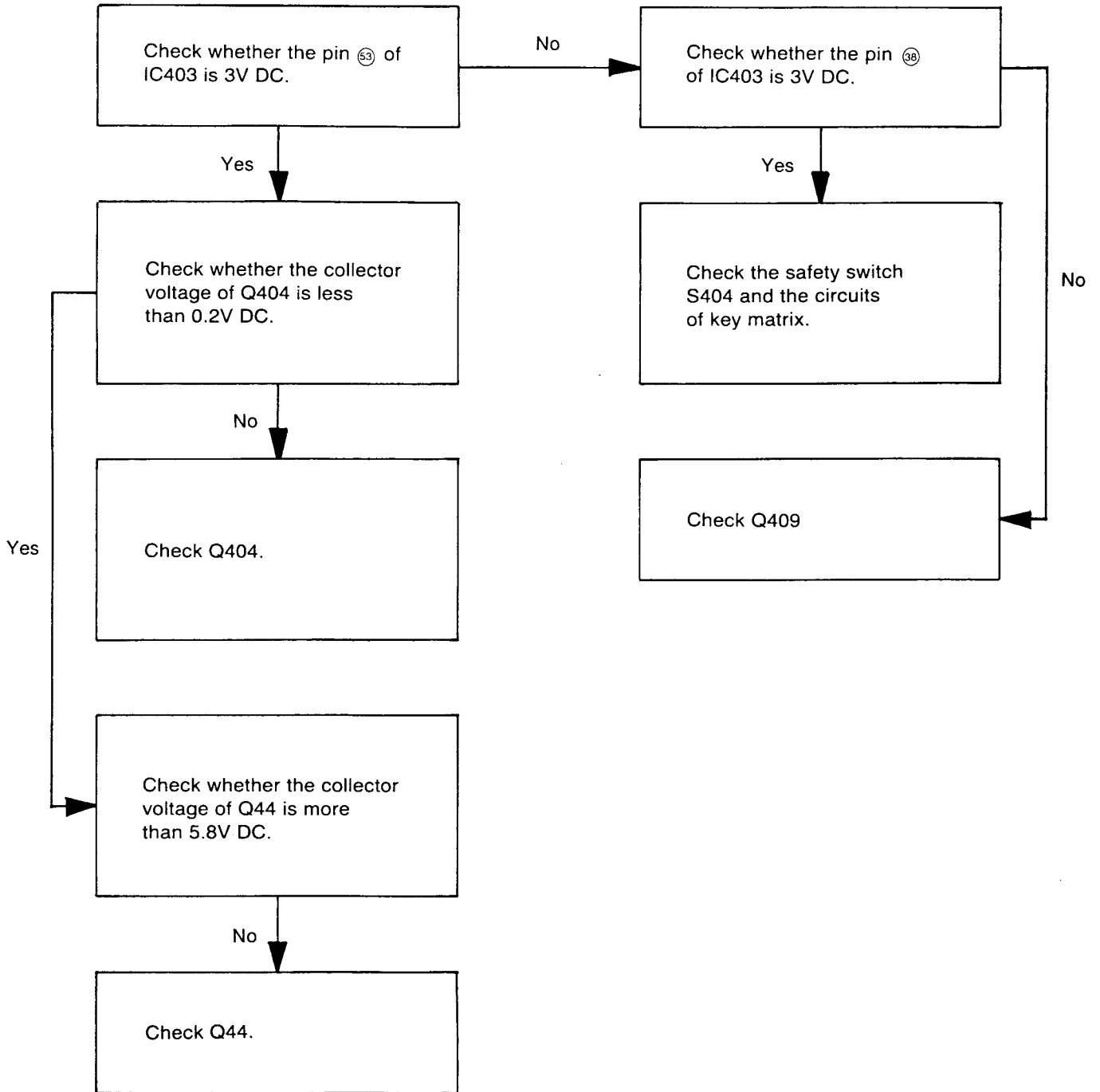
(2) Weak sensitivity in AM band



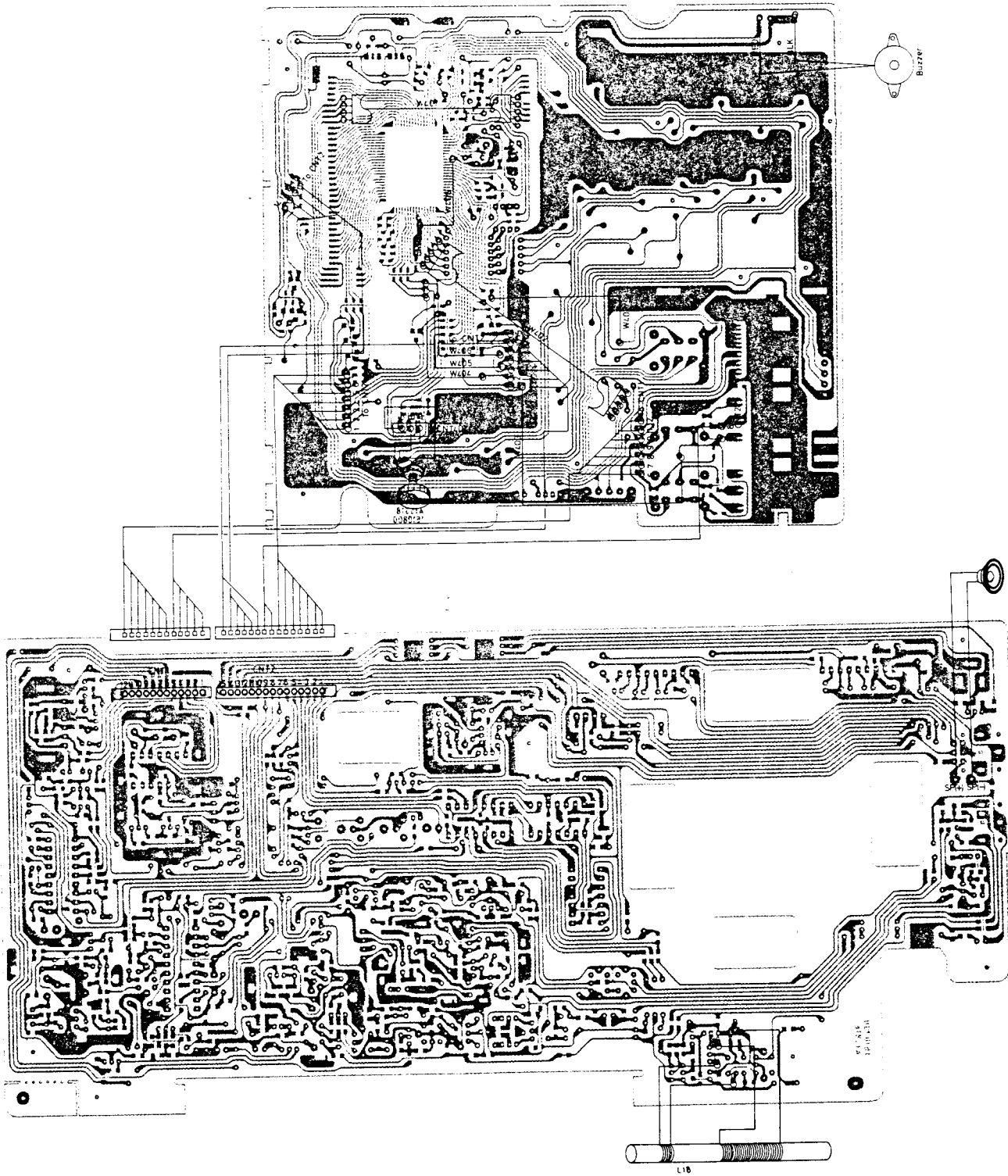
(3) PLL does not work



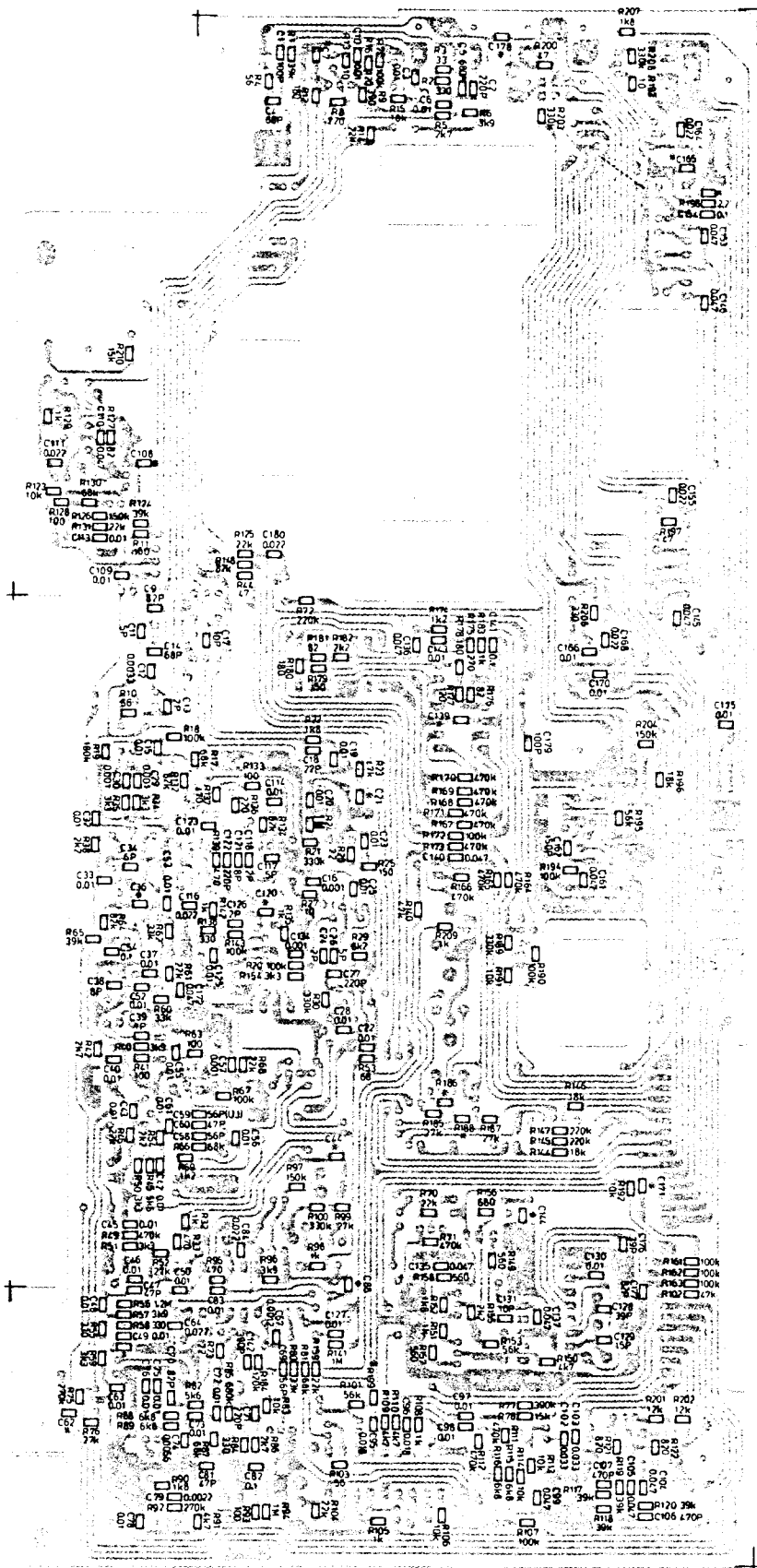
(4) Power cannot be turned on



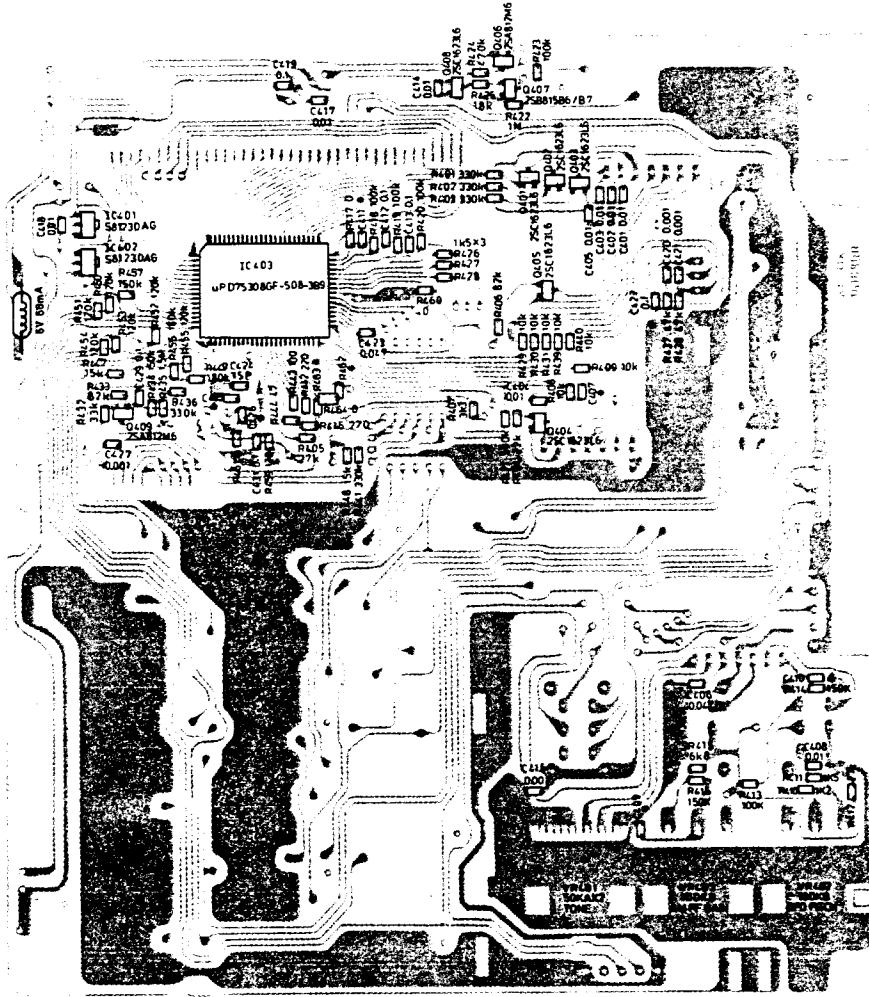
WIRING DIAGRAM



MAIN PCB CHIP SIDE



CONTROL PCB CHIP SIDE



ELECTRICAL PARTS LIST

| Ref. No. | Description | RS Part No. | Mfr. Part No. |
|---|----------------------------|-------------|---------------|
| | PCB-A Ass'y (Main Board) | | 06016602 |
| | PCB-A Blank | | 1610790 |
| CAPACITORS (All Chip Type. Ceramic Type-A 2.0 x 1.25 m/m, Type-B 3.2 x 1.6 m/m Unless Noted Otherwise) | | | |
| C1 | 100pF 50V ± 5% NPO-A | | 4010101 |
| C2 | 220pF 50V ± 5% NPO-A | | 4022101 |
| C3 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C4 | 68pF 50V ± 5% NPO-A | | 4068001 |
| C5 | 680pF 50V ± 5% SL-A | | 4068119 |
| C6 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C7 | Not Used | | |
| C8 | Elect. 10μF 16V ± 20% 5x11 | | 4410632 |
| C9 | 82pF 50V ± 5% NPO-A | | 4082001 |
| C10 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C11 | 5pF 50V ± 0.25p NPO-A | | 4005001 |
| C12 | 0.0033μF 50V ± 10% X7R-A | | 4033261 |
| C13 | 2pF 50V ± 0.25p NPO-A | | 4002001 |
| C14 | 68pF 50V ± 5% NPO-A | | 4068001 |
| C15 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C16 | 0.001μF 50V ± 5% SL-A | | 4010219 |
| C17 | 10pF 50V ± 0.5% NPO-A | | 4010002 |
| C18 | 22pF 50V ± 5% NPO-A | | 4022001 |
| C19 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C20 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C21 | Not Used | | |
| C22 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C23 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C24 | 2pF 50V ± 0.25p NPO-A | | 4002001 |
| C25 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C26 | 5pF 50V ± 0.25p NPO-A | | 4005001 |
| C27 | 220pF 50V ± 5% NPO-A | | 4022101 |
| C28 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C29 | 0.001μF 50V ± 5% SL-A | | 4010219 |
| C30 | 0.001μF 50V ± 5% SL-A | | 4010219 |
| C31 | Elect. 10μF 16V ± 20% 5x11 | | 4410632 |
| C32 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C33 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C34 | 6pF 50V ± 0.5p NPO-A | | 4006002 |
| C35 | Not Used | | |
| C36 | Not Used | | |
| C37 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C38 | 8pF 50V ± 0.5p NPO-A | | 4008002 |
| C39 | 1pF 50V ± 0.25p NPO-A | | 4001001 |
| C40 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C41 | Elect. 10μF 16V ± 20% 5x11 | | 4410632 |
| C42 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C43 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C44 | Not Used | | |
| C45 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C46 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C47 | 47pF 50V ± 5% NPO-A | | 4047001 |
| C48 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C49 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C50 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C51 | Elect. 10μF 16V ± 20% 5x11 | | 4410632 |
| C52 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C53 | 0.01μF 25V ± 10% X7R-A | | 4010367 |
| C54 | 0.1μF 25V +80%-20% Y5V-A | | 4010471 |
| C55 | 0.01μF 25V ± 10% X7R-A | | 4010367 |

| Ref. No. | Description | | | | RS Part No. | Mfr. Part No. |
|----------|--------------|----------------|----------------|----------|-------------|---------------|
| C56 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C57 | | 0.001 μ F | 50V \pm 5% | SL-A | | 4010219 |
| C58 | | 56pF | 50V \pm 5% | NPO-A | | 4056001 |
| C59 | | 56pF | 50V \pm 5% | UJ-A | | 4056016 |
| C60 | | 47pF | 50V \pm 5% | NPO-A | | 4047001 |
| C61 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C62 | | 0.001 μ F | 50V \pm 5% | SL-A | | 4010219 |
| C63 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C64 | | 0.022 μ F | 25V \pm 20% | X7R-A | | 4022368 |
| C65 | Elect. | 47 μ F | 10V \pm 20% | 5x11 | | 4447620 |
| C66 | Elect. | 15 μ F | 35V \pm 20% | 5x11 | | 4415650 |
| C67 | | 0.0012 μ F | 50V \pm 10% | X7R-A | | 4012261 |
| C68 | Non-Polar C. | 0.47 μ F | 50V \pm 20% | 5x11 | | 4447464 |
| C69 | | 56pF | 50V \pm 5% | NPO-A | | 4056001 |
| C70 | | 82pF | 50V \pm 5% | NPO-A | | 4082001 |
| C71 | | 220pF | 50V \pm 5% | NPO-A | | 4022101 |
| C72 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C73 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C74 | | 0.0056 μ F | 50V \pm 10% | X7R-A | | 4056261 |
| C75 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C76 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C77 | Elect. | 10 μ F | 16V \pm 20% | 5x11 | | 4410632 |
| C78 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C79 | | 0.0022 μ F | 50V \pm 10% | X7R-A | | 4022261 |
| C80 | PS | 0.001 μ F | 50V \pm 5% | | | 4501020 |
| C81 | | 47pF | 50V \pm 5% | NPO-A | | 4047001 |
| C82 | | 0.1 μ F | 25V + 80% -20% | Y5V-A | | 4010471 |
| C83 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C84 | | 0.022 μ F | 25V \pm 20% | X7R-A | | 4022368 |
| C85 | Elect. | 1 μ F | 50V \pm 20% | 5x11 | | 4410561 |
| C86 | Not Used | | | | | |
| C87 | Elect. | 100 μ F | 10V \pm 20% | 6.3x11.2 | | 4410772 |
| C88 | PS | 470pF | 50V \pm 5% | | | 4504710 |
| C89 | Elect. | 47 μ F | 10V \pm 20% | 5x11 | | 4447620 |
| C90 | Elect. | 0.22 μ F | 50V \pm 20% | 5x11 | | 4422460 |
| C91 | Elect. | 0.47 μ F | 50V \pm 20% | 5x11 | | 4447461 |
| C92 | Elect. | 1 μ F | 50V \pm 20% | 5x11 | | 4410561 |
| C93 | Elect. | 1 μ F | 50V \pm 20% | 5x11 | | 4410561 |
| C94 | Elect. | 1 μ F | 50V \pm 20% | 5x11 | | 4410561 |
| C95 | | 0.018 μ F | 25V \pm 10% | X7R-A | | 4018367 |
| C96 | | 0.018 μ F | 25V \pm 10% | X7R-A | | 4018367 |
| C97 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C98 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C99 | | 0.047 μ F | 25V + 80% -20% | Y5V-A | | 4047371 |
| C100 | Elect. | 1 μ F | 50V \pm 20% | 5x11 | | 4410561 |
| C101 | Elect. | 1 μ F | 50V \pm 20% | 5x11 | | 4410561 |
| C102 | | 0.033 μ F | 25V \pm 20% | X7R-A | | 4033368 |
| C103 | | 0.033 μ F | 25V \pm 20% | X7R-A | | 4033368 |
| C104 | | 0.047 μ F | 50V \pm 20% | Z5U-A | | 4047363 |
| C105 | | 0.047 μ F | 50V \pm 20% | Z5U-A | | 4047363 |
| C106 | | 470pF | 50V \pm 5% | NPO-A | | 4047101 |
| C107 | | 470pF | 50V \pm 5% | NPO-A | | 4047101 |
| C108 | Not Used | | | | | |
| C109 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |
| C110 | | 0.047 μ F | 25V + 80% -20% | Y5V-A | | 4047371 |
| C111 | | 0.022 μ F | 25V \pm 20% | X7R-A | | 4022368 |
| C112 | Elect. | 10 μ F | 16V \pm 20% | 5x11 | | 4410632 |
| C113 | | 0.01 μ F | 25V \pm 10% | X7R-A | | 4010367 |

| Ref. No. | Description | | | | | RS Part No. | Mfr. Part No. |
|----------|---------------------|---------------|-----|-------------|----------|-------------|---------------|
| C114 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C115 | Elect. | 10 μ F | 16V | $\pm 20\%$ | 5x11 | | 4410632 |
| C116 | | 0.022 μ F | 25V | $\pm 20\%$ | X7R-A | | 4022368 |
| C117 | | | | | | | |
| C118 | | 47pF | 50V | $\pm 0.25p$ | NPO-A | | 4002001 |
| C119 | | 0.01 μ F | 50V | $\pm 10\%$ | X7R-A | | 4033261 |
| C120 | Not Used | | | | | | |
| C121 | | 8pF | 50V | $\pm 0.5p$ | NPO-A | | 4008002 |
| C122 | | 220pF | 50V | $\pm 5\%$ | NPO-A | | 4022101 |
| C123 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C124 | Elect. | 4.7 μ F | 50V | $\pm 20\%$ | 5x11 | | 4447562 |
| C125 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C126 | | 2pF | 50V | $\pm 0.25p$ | NPO-A | | 4002001 |
| C127 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C128 | | 39pF | 50V | $\pm 5\%$ | NPO-A | | 4039001 |
| C129 | | 15pF | 50V | $\pm 5\%$ | NPO-A | | 4015001 |
| C130 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C131 | | 10pF | 50V | $\pm 0.5p$ | NPO-A | | 4010002 |
| C132 | Metal.Poly | 0.22 μ F | 50V | $\pm 5\%$ | | | 4822460 |
| C133 | *Mylar [®] | 0.033 μ F | 50V | $\pm 5\%$ | | | 4633360 |
| C134 | | 0.001 μ F | 50V | $\pm 5\%$ | SL-A | | 4010219 |
| C135 | | 0.047 μ F | 25V | +80%-20% | Y5V-A | | 4047371 |
| C136 | | 0.047 μ F | 25V | +80%-20% | Y5V-A | | 4047371 |
| C137 | | 0.047 μ F | 25V | +80%-20% | Y5V-A | | 4047371 |
| C138 | Elect. | 10 μ F | 16V | $\pm 20\%$ | 5x11 | | 4410632 |
| C139 | Not Used | | | | | | |
| C140 | | 0.047 μ F | 25V | +80%-20% | Y5V-A | | 4047371 |
| C141 | | 0.1 μ F | 25V | +80%-20% | Y5V-A | | 4010471 |
| C142 | | 390pF | 50V | $\pm 5\%$ | NPO-A | | 4039101 |
| C143 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C144 | Not Used | | | | | | |
| C145 | | 0.047 μ F | 50V | $\pm 20\%$ | Z5U-A | | 4047363 |
| C146 | | 0.047 μ F | 50V | $\pm 20\%$ | Z5U-A | | 4047363 |
| C147 | Elect. | 22 μ F | 16V | $\pm 20\%$ | 5x11 | | 4422630 |
| C148 | Elect. | 22 μ F | 16V | $\pm 20\%$ | 5x11 | | 4422630 |
| C149 | Elect. | 100 μ F | 10V | $\pm 20\%$ | 6.3x11.2 | | 4410722 |
| C150 | Elect. | 100 μ F | 10V | $\pm 20\%$ | 6.3x11.2 | | 4410722 |
| C151 | Elect. | 100 μ F | 10V | $\pm 20\%$ | 6.3x11.2 | | 4410722 |
| C152 | Elect. | 100 μ F | 10V | $\pm 20\%$ | 6.3x11.2 | | 4410722 |
| C153 | | 0.047 μ F | 25V | +80%-20% | Y5V-A | | 4047371 |
| C154 | | 0.1 μ F | 25V | +80%-20% | Y5V-A | | 4010471 |
| C155 | | 0.022 μ F | 25V | $\pm 20\%$ | X7R-A | | 4022368 |
| C156 | Elect. | 1000 μ F | 10V | $\pm 20\%$ | 10x16 | | 4410820 |
| C157 | Elect. | 220 μ F | 10V | $\pm 20\%$ | 8x11.2 | | 4422720 |
| C158 | Elect. | 10 μ F | 16V | $\pm 20\%$ | 4x7 | | 4410631 |
| C159 | Elect. | 1 μ F | 50V | $\pm 20\%$ | 4x7 | | 4410560 |
| C160 | Elect. | 4.7 μ F | 50V | $\pm 20\%$ | 4x7 | | 4447540 |
| C161 | | 0.047 μ F | 25V | +80%-20% | Y5V-A | | 4047371 |
| C162 | | 150 μ F | 50V | $\pm 5\%$ | NPO-A | | 4015101 |
| C163 | Elect. | 100 μ F | 10V | $\pm 20\%$ | 6.3X11.2 | | 4410722 |
| C164 | | 0.022pF | 25V | $\pm 20\%$ | X7R-A | | 4022368 |
| C165 | Not Used | | | | | | |
| C166 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C167 | Elect. | 1 μ F | 50V | $\pm 20\%$ | 5x11 | | 4410561 |
| C168 | | 0.022 μ F | 25V | $\pm 20\%$ | X7R-A | | 4022368 |
| C169 | Elect. | 220 μ F | 10V | $\pm 20\%$ | 8x11.2 | | 4422720 |
| C170 | | 0.01 μ F | 25V | $\pm 10\%$ | X7R-A | | 4010367 |
| C171 | Not Used | | | | | | |

Note: * Mylar[®] is a registered trademark of E.I. DU PONT de nemours and company.

| Ref. No. | Description | | | | RS Part No. | Mfr. Part No. |
|-------------------|--------------------------|---------------|-----|-------------|-------------|---------------|
| C172 | | 0.047 μ F | 25V | + 80%-20% | Y5V-A | 4047371 |
| C173 | Elect. | 220 μ F | 10V | \pm 20% | 8x11.2 | 4422720 |
| C174 | Elect. | 2200 μ F | 10V | \pm 20% | 12.5x20 | 4422820 |
| C175 | | 0.01 μ F | 25V | \pm 10% | X7R-A | 4010367 |
| C176 | | 39pF | 50V | \pm 5% | NPO-A | 4039001 |
| C177 | | 82pF | 50V | \pm 5% | NPO-A | 4082001 |
| C178 | Not Used | | | | | |
| C179 | | 100pF | 50V | \pm 5% | NPO-A | 4010101 |
| C180 | | 0.022 μ F | 25V | \pm 20% | X7R-A | 4022368 |
| C181 | | 39pF | 50V | \pm 5% | NPO-A | 4039001 |
| CONNECTORS | | | | | | |
| CNT1 | CNT. Housing 12P | | | (JST/JAE) | | 1700110 |
| CNT2 | CNT. Housing 15P | | | (JST/JAE) | | 1700120 |
| | CNT. Wire Ass'y 12P | | | (JST/JAE) | | 1703210 |
| | CNT. Wire Ass'y 15P | | | (JST/JAE) | | 1703220 |
| COILS | | | | | | |
| L1 | 22 μ H | | | | | 1132900 |
| L2 | 180 μ H | | | | | 1134000 |
| L3 | 220 μ H | | | | | 1134100 |
| L4 | 0.22 μ H | | | | | 1130500 |
| L5 | 0.47 μ H | | | | | 1130900 |
| L6 | 0.39 μ H | | | | | 1130800 |
| L7 | 1 μ H | | | | | 1131300 |
| L8 | 1.5 μ H | | | | | 1131500 |
| L9 | Not Used | | | | | |
| L10 | Toroid Coil 720 μ H | | | | | 1150000 |
| L11 | Adj. Coil 0258-404-W038B | | | (FM ANT) | | 1122211 |
| L12 | Adj. COIL 0258-404-W039B | | | (FM RF) | | 1122220 |
| L13 | 1 μ H | | | | | 1131370 |
| L14 | Adj. Coil 0237-404-W322A | | | (AM OSC) | | 1122300 |
| L15 | 0.39 μ H | | | | | 1130800 |
| L16 | 47 μ H | | | | | 1133300 |
| L17 | Adj. Coil 0950 | | | (SSB DET) | | 1120950 |
| L18 | BAR & Coil | | | (LW/MW ANT) | | 1110470 |
| L19 | 10mH | | | | (LW/MW RF) | 1136100 |
| L20 | 0.47 μ H | | | | | 1130900 |
| L21 | 2.2 μ H | | | | | 1131700 |
| L22 | Adj. Coil 0258-404-W040A | | | (VCO) | | 1122440 |
| L23 | 8.2 μ H | | | | | 1132400 |
| L24 | 8.2 μ H | | | | | 1132400 |
| L25 | 2.2 μ H | | | | | 1131700 |
| L26 | 1.5mH | | | | | 1135100 |
| L27 | Adj. Coil 4140-404-W120A | | | (DC CONV) | | 1122290 |
| L28 | 1.5mH | | | | | 1135100 |
| T1 | Adj. Coil 0237-404-W525 | | | (AM MCF I) | | 1122420 |
| T2 | Not Used | | | | | |
| T3 | Adj. Coil 0237-404-W402 | | | (AM MCF II) | | 1122260 |
| T4 | lft 4140-404-W121 | | | (AM IF) | | 1122270 |
| T5 | lft 4143-404-W188 | | | (FM MIX) | | 1122231 |
| T6 | Adj. Coil 0990 | | | (AM DET) | | 1120990 |
| T7 | lft 22153-404-W275 | | | (FM DET) | | 1122250 |
| T8 | lft 2150-404-W387B | | | (AM TRAP) | | 1122280 |
| CRYSTALS | | | | | | |
| X1 | X'TAL 55.405MHz | | | | | 1650020 |
| X2 | X'TAL 4.500MHz | | | | | 1650030 |
| DIODES | | | | | | |
| D1 | 1N4148TR | | | | | 1040020T |
| D2 | 1SS238 | | | | | 1042010 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|----------------------------|-----------------------------|-------------|----------------|
| D3 | Varactor SVC203 (AA1/AA2) | | 1043060 |
| D4 | Varactor SVC203 (AA1/AA2) | | 1043060 |
| D5 | 1N4148TR | | 1040020T |
| D6 | 1N4148TR | | 1040020T |
| D7 | 1N4148TR | | 1040020T |
| D8 | 1N4148TR | | 1040020T |
| D9 | 1SS238 | | 1042010 |
| D10 | 1SS238 | | 1042010 |
| D11 | Varactor SVC201SP | | 1043030 |
| D12 | 1N4148TR | | 1040020T |
| D13 | 1N4148TR | | 1040020T |
| D14 | 1N4148TR | | 1040020T |
| D15 | 1SS238 | | 1042010 |
| D16 | 1N4148TR | | 1040020T |
| D17 | 1N4148TR | | 1040020T |
| D18 | 1N4148TR | | 1040020T |
| D19 | 1N60P | | 1040040 |
| D20 | 1N60P | | 1040040 |
| D21 | Varactor SVC203 (AA1/AA2) | | 1043060 |
| D22 | 1N4148TR | | 1040020T |
| D23 | 1N4148TR | | 1040020T |
| D24 | 1N60P | | 1040030 |
| D25 | 1N4148TR | | 1040020T |
| D26 | 1N4148TR | | 1040020T |
| D27 | 1N4148TR | | 1040020T |
| D28 | 1N4148TR | | 1040020T |
| D29 | 1N4148TR | | 1040020T |
| D30 | 1N4148TR | | 1040020T |
| D31 | 1N4148TR | | 1040020T |
| D32 | Zener UZ - 15BH | | 1045090 |
| D33 | 1N4148 | | 1040020 |
| D34 | 1N4148TR | | 1040020T |
| D35 | 1N4148TR | | 1040020T |
| D36 | 1N4148TR | | 1040020T |
| D37 | 1N4148TR | | 1040020T |
| FILTERS | | | |
| LPF1 | LC Filter 0247-036 (FM Lpf) | | 1122200 |
| MCF1 | MCF 55.845MHz | | 1650041 |
| CX1 | Resonator 451kHz | | 1650061 |
| CF1 | CF. SFE10.7MA8-A | | 1660080 |
| CF2 | CF. SFE10.7MA8-A | | 1660080 |
| CF3 | CF. SFP450I | | 1660170 |
| CF4 | CF. SFR450J | | 1660360 |
| INTEGRATED CIRCUITS | | | |
| IC1 | TA7758P FM IF, AM MIX & IF | | 1010300 |
| IC2 | AN7415 AM FM IC AMP | | 1010030 |
| IC3 | CX7961A-1 PLL | | 1010401 |
| IC4 | TC74HC148AP A/D Converter | | 1011230 |
| IC5 | TA75339AP/P A/D Converter | | 1011400 |
| IC6 | TA75339AP/P A/D Converter | | 1011400 |
| IC7 | AN7141N Power AMP | | 1011350 |
| IC8 | AN7141N Power AMP | | 1011350 |
| IC9 | LA5003 3V Regulator | | 1010140 |
| JACKS | | | |
| JK1 | HSJ0912-01-022 (Ext Ant) | | 1649021 |
| JK2 | HSJ0914-01-040 (Headphone) | | 1640060 |
| JK3 | HEC047-01-230 (DC IN) | | 1647000 |
| JUMP WIRES | | | |
| J1 | | | 8000050 |
| J2 | | | 8000040 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|----------|-------------|-------------|----------------|
| J3 | 10mm 0.6ø | | 8000040 |
| J4 | 10mm 0.6ø | | 8000040 |
| J5 | 5mm 0.6ø | | 8000010 |
| J6 | 5mm 0.6ø | | 8000010 |
| J7 | 7.5mm 0.6ø | | 8000030 |
| J8 | 10mm 0.6ø | | 8000040 |
| J9 | 12.5mm 0.6ø | | 8000050 |
| J10 | 10mm 0.6ø | | 8000040 |
| J11 | 10mm 0.6ø | | 8000040 |
| J12 | 5mm 0.6ø | | 8000010 |
| J13 | 7.5mm 0.6ø | | 8000030 |
| J14 | 7.5mm 0.6ø | | 8000030 |
| J15 | 10mm 0.6ø | | 8000040 |
| J16 | 10mm 0.6ø | | 8000040 |
| J17 | 7.5mm 0.6ø | | 8000030 |
| J18 | 10mm 0.6ø | | 8000040 |
| J19 | 10mm 0.6ø | | 8000040 |
| J20 | 15mm 0.6ø | | 8000090 |
| J21 | 10mm 0.6ø | | 8000040 |
| J22 | 10mm 0.6ø | | 8000040 |
| J23 | 10mm 0.6ø | | 8000040 |
| J24 | 10mm 0.6ø | | 8000040 |
| J25 | 10mm 0.6ø | | 8000040 |
| J26 | 10mm 0.6ø | | 8000040 |
| J27 | 10mm 0.6ø | | 8000040 |
| J28 | 12.5mm 0.6ø | | 8000050 |
| J29 | 12.5mm 0.6ø | | 8000050 |
| J30 | 10mm 0.6ø | | 8000040 |
| J31 | 10mm 0.6ø | | 8000040 |
| J32 | 10mm 0.6ø | | 8000040 |
| J33 | 10mm 0.6ø | | 8000040 |
| J34 | 10mm 0.6ø | | 8000040 |
| J35 | 10mm 0.6ø | | 8000040 |
| J36 | 10mm 0.6ø | | 8000040 |
| J37 | 10mm 0.6ø | | 8000040 |
| J38 | 10mm 0.6ø | | 8000040 |
| J39 | 10mm 0.6ø | | 8000040 |
| J40 | 7.5mm 0.6ø | | 8000030 |
| J41 | 10mm 0.6ø | | 8000040 |
| J42 | 10mm 0.6ø | | 8000040 |
| J43 | 10mm 0.6ø | | 8000040 |
| J44 | 10mm 0.6ø | | 8000040 |
| J45 | 10mm 0.6ø | | 8000040 |
| J46 | 7.5mm 0.6ø | | 8000030 |
| J47 | 10mm 0.6ø | | 8000040 |
| J48 | 10mm 0.6ø | | 8000040 |
| J49 | 7.5mm 0.6ø | | 8000030 |
| J50 | 7.5mm 0.6ø | | 8000030 |
| J51 | 10mm 0.6ø | | 8000040 |
| J52 | 7.5mm 0.6ø | | 8000030 |
| J53 | 7.5mm 0.6ø | | 8000030 |
| J54 | 7.5mm 0.6ø | | 8000030 |
| J55 | 10mm 0.6ø | | 8000040 |
| J56 | 10mm 0.6ø | | 8000040 |
| J57 | 10mm 0.6ø | | 8000040 |
| J58 | 12.5mm 0.6ø | | 8000050 |
| J59 | 10mm 0.6ø | | 8000040 |
| J60 | 7.5mm 0.6ø | | 8000030 |
| J61 | 7.5mm 0.6ø | | 8000030 |
| J62 | 7.5mm 0.6ø | | 8000030 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|---|--|-------------|----------------|
| J63 | 7.5mm 0.6ø | | 8000030 |
| J64 | 10mm 0.6ø | | 8000040 |
| J65 | 7.5mm 0.6ø | | 8000030 |
| J66 | 7.5mm 0.6ø | | 8000030 |
| J67 | 7.5mm 0.6ø | | 8000030 |
| J68 | 7.5mm 0.6ø | | 8000030 |
| J69 | 10mm 0.6ø | | 8000040 |
| J70 | 7.5mm 0.6ø | | 8000030 |
| J71 | 7.5mm 0.6ø | | 8000030 |
| J72 | 7.5mm 0.6ø | | 8000030 |
| J73 | 7.5mm 0.6ø | | 8000030 |
| J74 | 10mm 0.6ø | | 8000040 |
| J75 | 7.5mm 0.6ø | | 8000030 |
| J76 | 7.5mm 0.6ø | | 8000030 |
| J77 | 5mm 0.6ø | | 8000010 |
| J78 | 5mm 0.6ø | | 8000010 |
| J79 | 15mm 0.6ø | | 8000090 |
| | SP. Frame -GND 25mm 0.6ø | | 8000140 |
| | PCB A GND-GND 25mm 0.6ø | | 8000140 |
| | X1-GND 25mm 0.6ø | | 8000140 |
| PVC JUMPER WIRES | | | |
| PCB A (K) | 45(9+9)mm Grn (AWG28 1095) | | 8170565 |
| PCB A (P) | 90(9+9)mm Blk (AWG28 1095) | | 8171460 |
| PCB A (F) | 90(9+9)mm Grn (AWG28 1095) VCO | | 8171465 |
| PCB A (V) | 90(9+9)mm Wht (AWG28 1095) VT | | 8171469 |
| PCB A (G) | 180(9+9)mm Blk (AWG28 1095) AUDIO | | 8173260 |
| PCB A (R) | 180(9+9)mm Brn (AWG28 1095) AUDIO | | 8173261 |
| PCB A (L) | 180(9+9)mm Gry (AWG28 1095) AUDIO | | 8173268 |
| Speaker (+) | 120(3+6)mm Grn (AWG28 1095) | | 8172025 |
| Speaker (-) | 120(3+6)mm Wht (AWG28 1095) | | 8172029 |
| Back-Up | 110(9+9)mm Wht (AWG26 1095)m. Batt(-) -M.Batt(-) | | 8171869 |
| | 150(9+9)mm Red (AWG26 1095)m. Batt(+) -Batt.Contact(+) | | 8132662 |
| | 160(9+9)mm Blk (AWG26 1095)m. Batt(+) -Batt.Contact(+) | | 8232860 |
| RESISTORS (All Carbon Film 1/10W ± 5% Chip Type A 2.0x1.25m/mType-B 3.1x1.55m/m, Unless Noted Otherwise) | | | |
| R1 | 39kΩ | | 6160155 |
| R2 | 330Ω | | 6160130 |
| R3 | 33Ω | | 6160118 |
| R4 | 56Ω | | 6160121 |
| R5 | 2.7kΩ | | 6160141 |
| R6 | 3.9kΩ | | 6160143 |
| R7 | 100kΩ | | 6160160 |
| R8 | 220Ω | | 6160128 |
| R9 | 390Ω | | 6160131 |
| R10 | 56Ω | | 6160121 |
| R11 | 150Ω | | 6160126 |
| R12 | 180Ω | | 6160127 |
| R13 | 10Ω | | 6160112 |
| R14 | 22kΩ | | 6160152 |
| R15 | 18kΩ | | 6160151 |
| R16 | 120Ω | | 6160125 |
| R17 | 68kΩ | | 6160158 |
| R18 | 100kΩ | | 6160160 |
| R19 | 180kΩ | | 6160163 |
| R20 | 100kΩ | | 6160160 |
| R21 | 330kΩ | | 6160166 |
| R22 | 1.8kΩ | | 6160139 |
| R23 | 47kΩ | | 6160156 |
| R24 | 100kΩ | | 6160160 |
| R25 | 150Ω | | 6160126 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|----------|-------------|---------------|----------------|
| R26 | 22Ω | | 6160116 |
| R27 | 10Ω | | 6160112 |
| R28 | RD 100kΩ | 1/6W ± 5% T | 6050760T |
| R29 | 8.2kΩ | | 6160147 |
| R30 | 330kΩ | | 6160166 |
| R31 | RD 820Ω | 1/6W ± 5% T | 6050735T |
| R32 | 1kΩ | | 6160136 |
| R33 | 470Ω | | 6160132 |
| R34 | 3.3kΩ | | 6160142 |
| R35 | 3.3kΩ | | 6160142 |
| R36 | RD 82Ω | 1/6W ± 5% T | 6050723T |
| R37 | RD 82Ω | 1/6W ± 5% T | 6050723T |
| R38 | 2.2kΩ | | 6160140 |
| R39 | Not Used | | |
| R40 | 3.9kΩ | | 6160143 |
| R41 | 100Ω | | 6160124 |
| R42 | 2.7kΩ | | 6160141 |
| R43 | 0Ω | | 6160194 |
| R44 | 47Ω | | 6160120 |
| R45 | 5.6kΩ | | 6160145 |
| R46 | 22kΩ | | 6160152 |
| R47 | RD 8.2kΩ | 1/8W ± 5% SM5 | 6010547 |
| R48 | RD 8.2kΩ | 1/6W ± 5% T | 6050747T |
| R49 | 470Ω | | 6160168 |
| R50 | 3.3kΩ | | 6160142 |
| R51 | 3.3kΩ | | 6160142 |
| R52 | 27kΩ | | 6160153 |
| R53 | 68Ω | | 6160122 |
| R54 | 2.2kΩ | | 6160140 |
| R55 | 330Ω | | 6160130 |
| R56 | 1.2MΩ | | 6160173 |
| R57 | 3.9kΩ | | 6160143 |
| R58 | 330Ω | | 6160130 |
| R59 | 3.3kΩ | | 6160142 |
| R60 | 33kΩ | | 6160154 |
| R61 | 22kΩ | | 6160152 |
| R62 | 33kΩ | | 6160154 |
| R63 | 100Ω | | 6160124 |
| R64 | 82kΩ | | 6160159 |
| R65 | 39kΩ | | 6160155 |
| R66 | 68kΩ | | 6160158 |
| R67 | 100kΩ | | 6160160 |
| R68 | 22kΩ | | 6160152 |
| R69 | 1.2kΩ | | 6160137 |
| R70 | 22kΩ | | 6160152 |
| R71 | 470kΩ | | 6160168 |
| R72 | 220kΩ | | 6160134 |
| R73 | 22Ω | | 6160116 |
| R74 | RD 4.7kΩ | 1/6W ± 5% T | 6050744T |
| R75 | 270kΩ | | 6160165 |
| R76 | 27kΩ | | 6160153 |
| R77 | 390kΩ | | 6160167 |
| R78 | 15kΩ | | 6160150 |
| R79 | RD 1.5kΩ | 1/6W ± 5% T | 6050738T |
| R80 | 33kΩ | | 6160154 |
| R81 | 68kΩ | | 6160158 |
| R82 | 5.6kΩ | | 6160145 |
| R83 | 10kΩ | | 6160148 |
| R84 | 330kΩ | | 6160130 |
| R85 | 680kΩ | | 6160170 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|----------|---------------|-------------|----------------|
| R86 | 2.7k Ω | | 6160141 |
| R87 | 68k Ω | | 6160158 |
| R88 | 6.8k Ω | | 6160146 |
| R89 | 6.8k Ω | | 6160146 |
| R90 | 1.8k Ω | | 6160139 |
| R91 | 4.7k Ω | | 6160144 |
| R92 | 270k Ω | | 6160165 |
| R93 | 100k Ω | | 6160124 |
| R94 | 1M Ω | | 6160172 |
| R95 | 470 Ω | | 6160132 |
| R96 | 3.9k Ω | | 6160143 |
| R97 | 150k Ω | | 6160162 |
| R98 | 1k Ω | | 6160136 |
| R99 | 27k Ω | | 5160153 |
| R100 | 330k Ω | | 6160166 |
| R101 | 56k Ω | | 6160157 |
| R102 | 47k Ω | | 6160156 |
| R103 | 56k Ω | | 6160121 |
| R104 | 22k Ω | | 6160152 |
| R105 | 1k Ω | | 6160136 |
| R106 | 10k Ω | | 6160148 |
| R107 | 100k Ω | | 6160160 |
| R108 | 1k Ω | | 6160136 |
| R109 | 4.7k Ω | | 6160144 |
| R110 | 4.7k Ω | | 6160144 |
| R111 | 470k Ω | | 6160168 |
| R112 | 470k Ω | | 6160168 |
| R113 | 10k Ω | | 6160148 |
| R114 | 10k Ω | | 6160148 |
| R115 | 6.8k Ω | | 6160146 |
| R116 | 6.8k Ω | | 6160146 |
| R117 | 39k Ω | | 6160155 |
| R118 | 39k Ω | | 6160155 |
| R119 | 39k Ω | | 6160155 |
| R120 | 39k Ω | | 6160155 |
| R121 | 820 Ω | | 6160135 |
| R122 | 820 Ω | | 6160135 |
| R123 | 10k Ω | | 6160148 |
| R124 | 39k Ω | | 6160155 |
| R125 | 22k Ω | | 6160152 |
| R126 | 150k Ω | | 6160162 |
| R127 | 82 Ω | | 6160123 |
| R128 | 100 Ω | | 6160124 |
| R129 | 1k Ω | | 6160136 |
| R130 | 68k Ω | | 6160158 |
| R131 | 22k Ω | | 6160152 |
| R132 | 82k Ω | | 6160159 |
| R133 | 100 Ω | | 6160124 |
| R134 | 82k Ω | | 6160159 |
| R135 | 1k Ω | | 6160136 |
| R136 | 220 Ω | | 6160128 |
| R137 | 470 Ω | | 6160132 |
| R138 | 330 Ω | | 6160130 |
| R139 | 470 Ω | | 6160132 |
| R140 | 47k Ω | | 6160156 |
| R141 | 1M Ω | | 6160172 |
| R142 | 1k Ω | | 6160136 |
| R143 | 100k Ω | | 6160160 |
| R144 | 18k Ω | | 6160151 |
| R145 | 220k Ω | | 6160164 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|----------|----------------|-----------------|----------------|
| R146 | 18k Ω | | 6160151 |
| R147 | 220k Ω | | 6160164 |
| R148 | 82k Ω | | 6160159 |
| R149 | 560k Ω | | 6160133 |
| R150 | 4.7k Ω | | 6160144 |
| R151 | 1k Ω | | 6160136 |
| R152 | 1.8k Ω | | 6160139 |
| R153 | 56k Ω | | 6160157 |
| R154 | 3.3k Ω | | 6160142 |
| R155 | 2.2k Ω | | 6160140 |
| R156 | 680 Ω | | 6160134 |
| R157 | 560 Ω | | 6160133 |
| R158 | 560 Ω | | 6160133 |
| R159 | 22k Ω | | 6160152 |
| R160 | RD 10 Ω | 1/6W \pm 5% T | 6050712T |
| R161 | 100k Ω | | 6160160 |
| R162 | 100k Ω | | 6160160 |
| R163 | 100k Ω | | 6160160 |
| R164 | 470k Ω | | 6160168 |
| R165 | 470k Ω | | 6160168 |
| R166 | 470k Ω | | 6160168 |
| R167 | 470k Ω | | 6160168 |
| R168 | 470k Ω | | 6160168 |
| R169 | 470k Ω | | 6160168 |
| R170 | 470k Ω | | 6160168 |
| R171 | 470k Ω | | 6160168 |
| R172 | 100k Ω | | 6160160 |
| R173 | 470k Ω | | 6160168 |
| R174 | 1.2k Ω | | 6160137 |
| R175 | 270 Ω | | 6160129 |
| R176 | 82 Ω | | 6160123 |
| R177 | 120 Ω | | 6160125 |
| R178 | 180 Ω | | 6160127 |
| R179 | 150 Ω | | 6160126 |
| R180 | 180 Ω | | 6160127 |
| R181 | 82 Ω | | 6160123 |
| R182 | 2.2k Ω | | 6160140 |
| R183 | 1k Ω | | 6160136 |
| R184 | 120k Ω | | 6160161 |
| R185 | 27k Ω | | 6160153 |
| R186 | Not Used | | |
| R187 | 27k Ω | | 6160153 |
| R188 | Not Used | | |
| R189 | 330k Ω | | 6160166 |
| R190 | 100k Ω | | 6160160 |
| R191 | 10k Ω | | 6160148 |
| R192 | 10k Ω | | 6160148 |
| R193 | 10 Ω | | 6160112 |
| R194 | 100k Ω | | 6160160 |
| R195 | 56k Ω | | 6160157 |
| R196 | 18k Ω | | 6160151 |
| R197 | 47 Ω | | 6160120 |
| R198 | 2.2 Ω | | 6160104 |
| R199 | Not Used | | |
| R200 | 47 Ω | | 6160120 |
| R201 | 12k Ω | | 6160149 |
| R202 | 12k Ω | | 6160149 |
| R203 | 330k Ω | | 6160166 |
| R204 | 150k Ω | | 6160162 |
| R205 | Not Used | | |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|--------------------|-------------|-------------|----------------|
| R206 | 330Ω | | 6160130 |
| R207 | 1.8kΩ | | 6160139 |
| R208 | 330kΩ | | 6160166 |
| R209 | 1kΩ | | 6160136 |
| R210 | 15kΩ | | 6160150 |
| R211 | 8.2kΩ | | 6160147 |
| TRANSISTORS | | | |
| Q1 | FET 2SK291Q | | 1030060 |
| Q2 | 2SC3330S | | O 1022020 |
| | 2SC3330T | | R 1022023 |
| Q3 | FET 2SK291R | | 1030061 |
| Q4 | FET 2SK291R | | 1030061 |
| Q5 | FET 2SK212E | | 1030001 |
| Q6 | 2SC2999D | | 1020181 |
| Q7 | FET 2SK291R | | 1030061 |
| Q8 | 2SC2839E | | 1022000 |
| Q9 | 2SC3330S | | 1022020 |
| Q10 | 2SC2839E | | 1022000 |
| Q11 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q12 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q13 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q14 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q15 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q16 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q17 | 2SC2839E | | 1022000 |
| Q18 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q19 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q20 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q21 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q22 | FET 2SK291Q | | 1030060 |
| Q23 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q24 | 2SC3330U | | 1022021 |
| Q25 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q26 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q27 | 2SC2999E | | 1020180 |
| Q28 | 2SC2839E | | 1022000 |
| Q29 | 2SC2999E | | 1020180 |
| Q30 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q31 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q32 | FET 2SK381B | | 1030071 |
| Q33 | 2SC3330S | | 1022020 |
| Q34 | FET 2SK381A | | 1030070 |
| Q35 | 2SC3330T | | O 1022023 |
| | 2SC3330U | | R 1022021 |
| Q36 | 2SC3330T | | O 1022023 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|--|--------------------------------------|-------------|----------------|
| Q37 | 2SC3330U | | R 1022021 |
| | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q38 | 2SC3330U | | 1022021 |
| Q39 | 2SC3330U | | 1022021 |
| Q40 | 2SA1317T | | O 1020273 |
| | 2SA1317U | | R 1020271 |
| Q41 | 2SC3330U | | 1022021 |
| Q42 | 2SC3330U | | 1022021 |
| Q43 | 2SD1012G | | 1023000 |
| Q44 | 2SA1020Y | | 1020250 |
| TRIMMERS | | | |
| TC1 | 10pF 222-808-23109 | | 1210010 |
| TC2 | 10pF 222-808-23109 | | 1210010 |
| TC3 | 100pF 222-808-32101 | | 1210030 |
| TC4 | 10pF VCT31C213A | | 1210003 |
| VARIABLE RESISTORS | | | |
| VR1 | VR 50kAx2 (RK16K12A0039-SG) (Volume) | | 1310130 |
| SVR1 | SVR 100kB (D) (FM Scan Stop) | | 1320150 |
| SVR2 | SVR 10kB (E) (MPX VCO) | | 1320160 |
| SVR3 | SVR 10kB (E) (FM Strength) | | 1320160 |
| SVR4 | SVR 10kB (E) (AM Strength) | | 1320160 |
| SVR5 | SVR 10kB (E) (Batt. IND) | | 1320160 |
| SHIELD | | | |
| | DC/DC Shield (Up) | | 2149020 |
| | DC/DC Shield (Down) | | 2149030 |
| | VCO Shield (Frame) | | 2149040 |
| | VCO Shield (Cover) | | 2149050 |
| | 1st OSC Shield (W/Mylar Sheet) | | 2149060 |
| | 2nd OSC Shield (W/Mylar Sheet) | | 2149130 |
| End Of PCB-A Ass'y | | | |
| | PCB-C Ass'y (Control Board) | | 06216602 |
| | PCB-C Blank | | 1610800 |
| CAPACITORS (All Chip Capacitor Material Ceramic Unless Noted Otherwise) | | | |
| C401 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C402 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C403 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C404 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C405 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C406 | 0.047 μ F 25V +80%-20% Y5V-A | | 4047371 |
| C407 | Not Used | | |
| C408 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C409 | Not Used | | |
| C410 | Not Used | | |
| C411 | Not Used | | |
| C412 | 0.1 μ F 25V +80%-20% Y5V-A | | 4010471 |
| C413 | 0.1 μ F 25V +80%-20% Y5V-A | | 4010471 |
| C414 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C415 | Elect. 10 μ F 16V \pm 20% 4x7 | | 4410631S |
| C416 | 0.001 μ F 50V \pm 5% SL-A | | 4010219 |
| C417 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C418 | 0.01 μ F 25V \pm 10% X7R-A | | 4010367 |
| C419 | 0.1 μ F 25V +80%-20% Y5V-A | | 4010471 |
| C420 | 0.001 μ F 50V \pm 5% SL-A | | 4010219 |
| C421 | 0.001 μ F 50V \pm 5% SL-A | | 4010219 |
| C422 | 0.1 μ F 25V +80%-20% Y5V-A | | 4010471 |
| C423 | 0.047 μ F 25V +80%-20% Y5V-A | | 4047371 |
| C424 | 15pF 50V \pm 5% NPO-A | | 4015001 |
| C425 | Not Used | | |
| C426 | Not Used | | |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|----------------------------|--|-------------|----------------|
| C427 | 0.001 μ F 50V \pm 5% SL-A | | 4010219 |
| C428 | Elect. 4.7 μ F 50V \pm 20% 4x7 | | 4447540 |
| C429 | 0.1 μ F 25V +80%-20% Y5V-A | | 4010471 |
| C430 | Elect. 100 μ F 6.3V \pm 20% 6x8 | | 4410710 |
| C431 | 0.1 μ F 25V +80%-20% Y5V-A | | 4010471 |
| C432 | Sup. C. 0.047 μ F 5.5V +80%-20% | | 4947300 |
| CONNECTOR | | | |
| CNT401 | CNT. Housing 3P (JST/JAE) | | 1702000 |
| | CNT. Wire Ass'y 15P (JST/JAE) | | 1703124 |
| CRYSTAL | | | |
| X401 | 4.194304MHz | | 1650071 |
| DIODES | | | |
| D401 | 1SS98-T2 | | 1046000T |
| D402 | 1SS98-T2 | | 1046000T |
| D403 | 1N4148TR | | 1040020T |
| D404 | 1N4148TR | | 1040020T |
| D405 | 1N4148TR | | 1046000T |
| D406 | 1N4148TR | | 1046000T |
| D407 | 1N4148TR | | 1040020T |
| D408 | 1N4148TR | | 1040020T |
| D409 | 1N4148TR | | 1046000T |
| D410 | 1N4148TR | | 1046000T |
| D411 | 1N4148TR | | 1040020T |
| D412 | 1N4148TR | | 1040020T |
| D413 | 1N4148TR | | 1046000T |
| D414 | 1N4148TR | | 1046000T |
| D415 | Not Used | | |
| D416 | 1N4148TR | | 1040020T |
| INTEGRATED CIRCUITS | | | |
| IC401 | S81230AG-RB-T2 Voltage Regulator | | 1011360 |
| IC402 | S81230AG-RB-T2 Voltage Regulator | | 1011360 |
| IC403 | LSI μ PD75308GF-508-3B9 Cmos Single-Chip Microcomputer | | 1000021 |
| JUMP WIRES | | | |
| J401 | 10mm 0.6 \emptyset | | 8000040 |
| J402 | 10mm 0.6 \emptyset | | 8000040 |
| J403 | 12.5mm 0.6 \emptyset | | 8000050 |
| J404 | 12.5mm 0.6 \emptyset | | 8000050 |
| J405 | 12.5mm 0.6 \emptyset | | 8000050 |
| J406 | 12.5mm 0.6 \emptyset | | 8000050 |
| J407 | 12.5mm 0.6 \emptyset | | 8000050 |
| J408 | 12.5mm 0.6 \emptyset | | 8000050 |
| J409 | 5mm 0.6 \emptyset | | 8000010 |
| J410 | 5mm 0.6 \emptyset | | 8000010 |
| R446 | 5mm 0.6 \emptyset | | 8000010 |
| J411 | 7.5mm 0.6 \emptyset | | 8000030 |
| J412 | 5mm 0.6 \emptyset | | 8000010 |
| J413 | 5mm 0.6 \emptyset | | 8000010 |
| J414 | 10mm 0.6 \emptyset | | 8000040 |
| J415 | 15mm 0.6 \emptyset | | 8000090 |
| J416 | 5mm 0.6 \emptyset | | |
| J417 | 5mm 0.6 \emptyset | | |
| J418 | 7.5mm 0.6 \emptyset | | 8000030 |
| LAMPS | | | |
| | 3.2 \emptyset x 13 6V 60mA | | 1680020 |
| LCD | | | |
| | | | 1600120 |
| PVC JUMPER WIRES | | | |
| W401 | 4 Wire 70 (6 + 6) P = 2.0 GRY | | 8725350 |
| W402 | 5 Wire 90 (6 + 6) P = 2.0 GRY | | 8650010 |
| W403 | 80 (9 + 9) WHT (AWG28 1095) | | 8171269 |
| W404 | 60 (9 + 9) RED (AWG28 1095) | | 8170862 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|---|-----------------------------|-------------|----------------|
| W405 | 60 (9 + 9) ORN (AWG28 1095) | | 8170863 |
| W406 | 60 (9 + 9) YEL (AWG28 1095) | | 8170864 |
| W407 | 60 (9 + 9) GRY (AWG28 1095) | | 8170868 |
| W408 | 55 (9 + 9) GRN (AWG28 1095) | | 8170765 |
| RESISTORS (All Carbon Film 1/10W ± 5% Chip Type A, Unless Noted Otherwise) | | | |
| R401 | 330kΩ | | 6160166 |
| R402 | 330kΩ | | 6160166 |
| R403 | 330kΩ | | 6160166 |
| R404 | 22kΩ | | 6160152 |
| R405 | 27kΩ | | 6160153 |
| R406 | 82kΩ | | 6160159 |
| R407 | 3.3kΩ | | 6160142 |
| R408 | 10kΩ | | 6160148 |
| R409 | 10kΩ | | 6160148 |
| R410 | 1.2kΩ | | 6160137 |
| R411 | 1.5kΩ | | 6160138 |
| R412 | 27kΩ | | 6160153 |
| R413 | 100kΩ | | 6160160 |
| R414 | 150kΩ | | 6160162 |
| R415 | 6.8kΩ | | 6160146 |
| R416 | 150kΩ | | 6160162 |
| R417 | 0Ω | | 6160194 |
| R418 | 100kΩ | | 6160160 |
| R419 | 100kΩ | | 6160160 |
| R420 | 100kΩ | | 6160160 |
| R421 | 560kΩ | | 6160169 |
| R422 | 1MΩ | | 6160172 |
| R423 | 100kΩ | | 6160160 |
| R424 | 470kΩ | | 6160168 |
| R425 | 18kΩ | | 6160151 |
| R426 | 1.5kΩ | | 6160138 |
| R427 | 1.5kΩ | | 6160138 |
| R428 | 1.5kΩ | | 6160138 |
| R429 | 10kΩ | | 6160148 |
| R430 | 10kΩ | | 6160148 |
| R431 | 10kΩ | | 6160148 |
| R432 | 33kΩ | | 6160154 |
| R433 | 82kΩ | | 6160159 |
| R434 | 150kΩ | | 6160162 |
| R435 | 1.5kΩ | | 6160141 |
| R436 | 330kΩ | | 6160166 |
| R437 | 470kΩ | | 6160168 |
| R438 | 470kΩ | | 6160168 |
| R439 | 10kΩ | | 6160148 |
| R440 | 10kΩ | | 6160148 |
| R441 | 330kΩ | | 6160166 |
| R442 | 220Ω | | 6160128 |
| R443 | 100Ω | | 6160124 |
| R444 | 47Ω | | 6160120 |
| R445 | 270Ω | | 6160129 |
| R446 | Not Used | | |
| R447 | 15kΩ | | 6160150 |
| R448 | 15kΩ | | 6160150 |
| R449 | 180kΩ | | 6160163 |
| R450 | 120kΩ | | 6160161 |
| R451 | 120kΩ | | 6160161 |
| R452 | 120kΩ | | 6160161 |
| R453 | 120kΩ | | 6160161 |
| R454 | 120kΩ | | 6160161 |
| R455 | 120kΩ | | 6160161 |

| Ref. No. | Description | RS Part No. | Mfr. Parts No. |
|---------------------------|-----------------------------|-------------|----------------|
| R456 | 180k Ω | | 6160163 |
| R457 | 150k Ω | | 6160162 |
| R458 | RD 10 Ω 1/8W SM5 | | 6010512 |
| R459 | Not Used | | |
| R460 | 0 Ω | | 6160194 |
| R461 | 0 Ω | | 6160194 |
| SWITCHES | | | |
| S401 | 2P2C (BFO On/Off) | | 1630600 |
| S402 | 2P2C (Wide/Narrow) | | 1630600 |
| S403 | 2P2C (Buzz/Radio) | | 1630600 |
| S404 | 1P2C(H) (Hold) | | 1630340 |
| S405 | 1P3C (Fast/Slow/Lock) | | 1630620 |
| S406 | 1P2C (9K/10K) | | 1630010 |
| TRANSISTORS | | | |
| Q401 | 2SC1623L6 (T2) | | 1020240 |
| Q402 | 2SC1623L6 (T2) | | 1020240 |
| Q403 | 2SC1623L6 (T2) | | 1020240 |
| Q404 | 2SC1623L6 (T2) | | 1020240 |
| Q405 | 2SC1623L6 (T2) | | 1020240 |
| Q406 | 2SA812M6 (T2) | | 1020230 |
| Q407 | 2SB815B6 | | O 1020210 |
| | 2SB815B7 | | R 1020211 |
| Q408 | 2SC1623L6 (T2) | | 1020240 |
| Q409 | 2SA812M6 (T2) | | 1020230 |
| TRIMMER | | | |
| TC401 | 20pF 2222-808-20123 | | 1210050 |
| VARIABLE RESISTORS | | | |
| VR401 | VR 50kA x 2/50kD x 2 (Tone) | | 1310020 |
| VR402 | VR 100kB (BFO) | | 1310050 |
| VR403 | VR 100kB (Gain) | | 1310050 |
| | Rotary Encoder (W/O Detent) | | 1730030 |
| End Of PCB-C Ass'y | | | |

SEMICONDUCTOR LEAD IDENTIFICATIONS

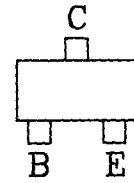
Transistors



2SK212E



2SC2839E
2SD1012G
2SA1317T/U
2SC2999D/E
2SC3330S/T/U



2SA812M6
2SC1623L6
2SB815B6/B7



2SA1020Y



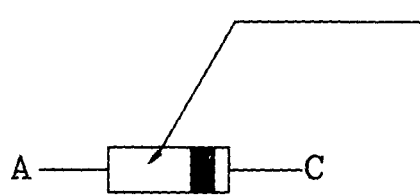
2SK381A/B



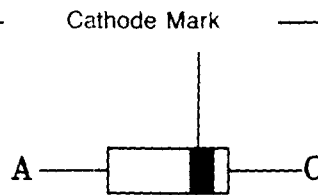
2SK291Q/R

(E: Emitter C: Collector B: Base S: Source G: Gate D: Drain)

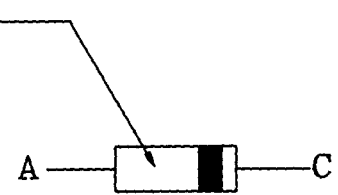
Diodes



IN60



1SS238



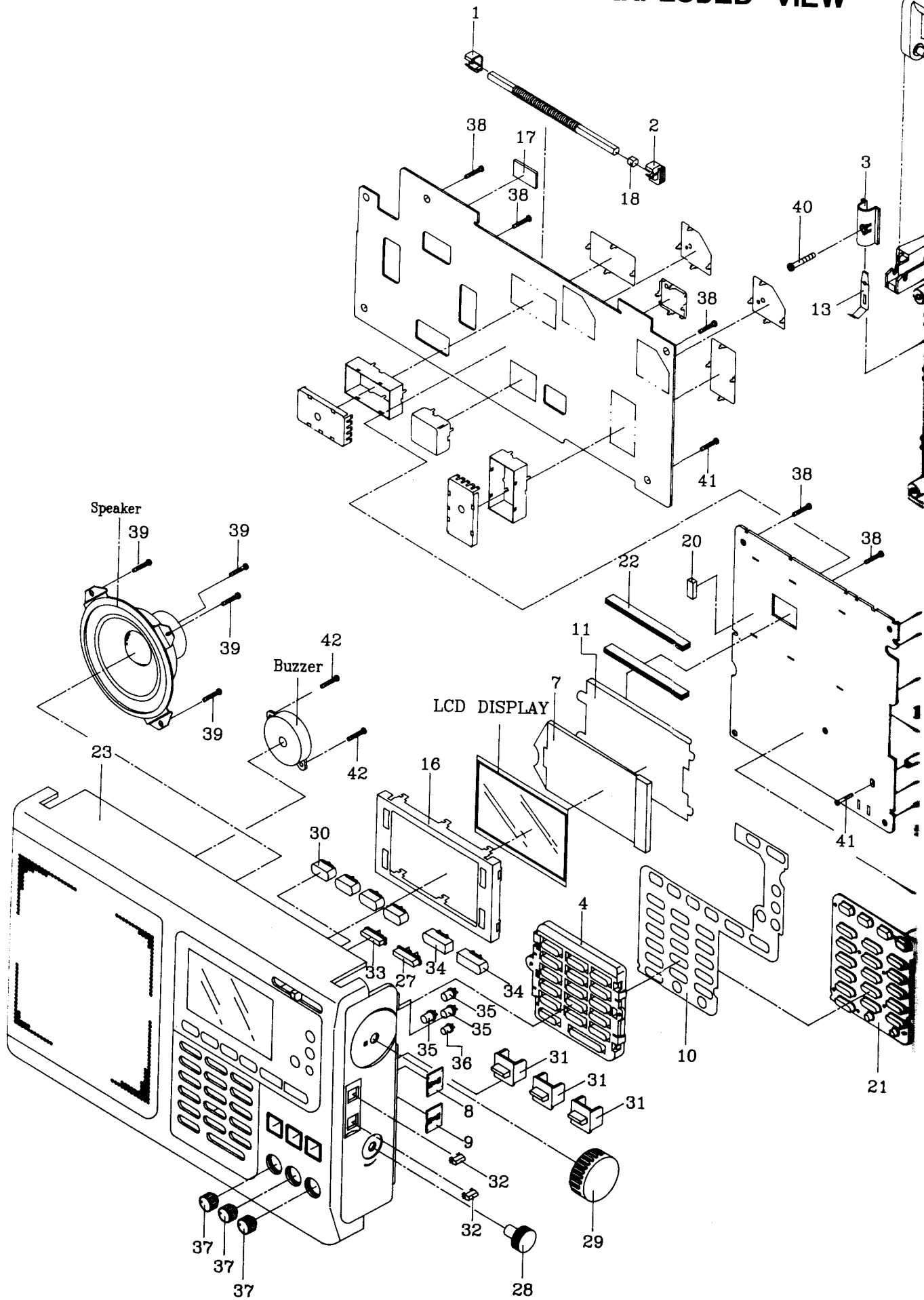
UZ-15BH



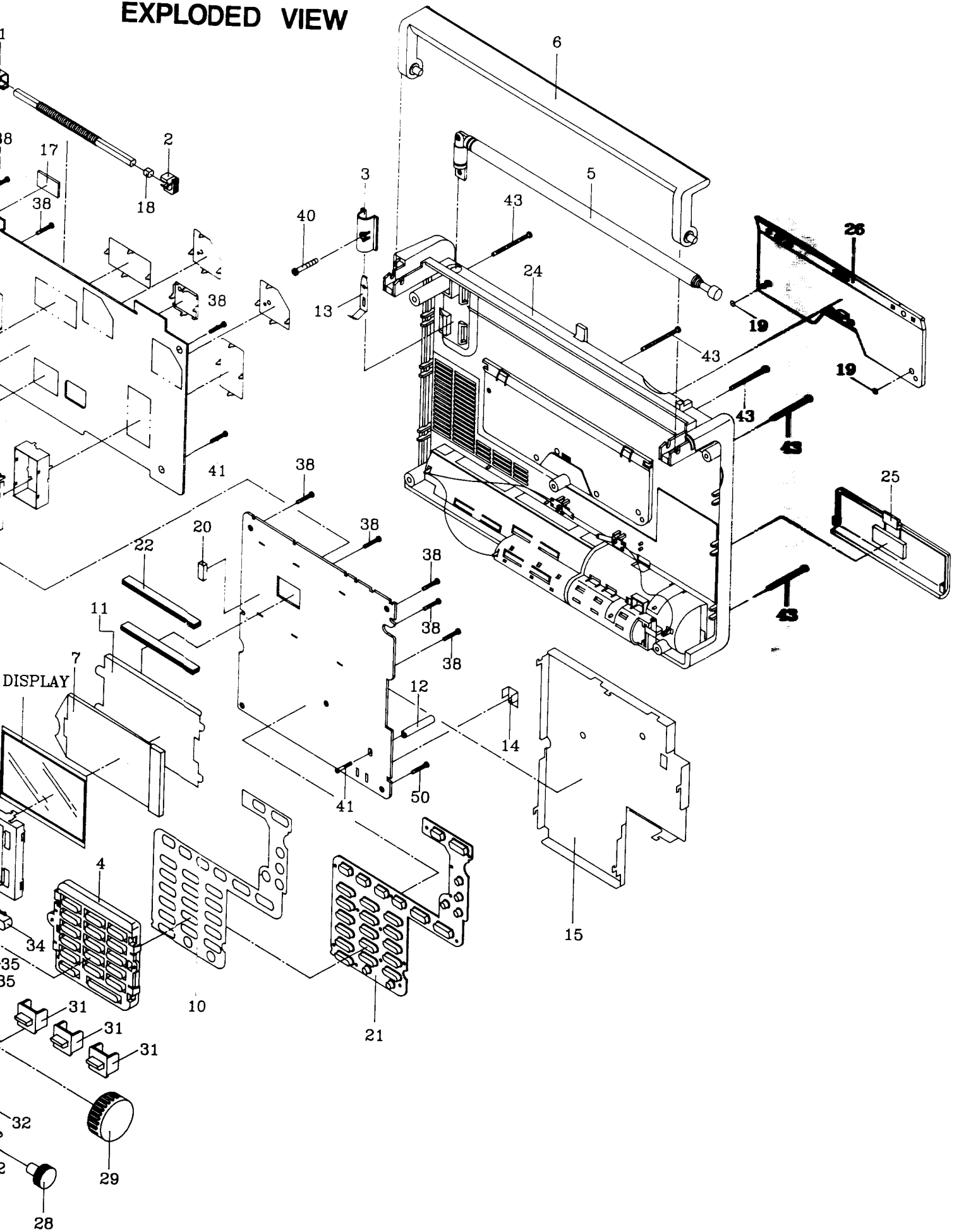
IN60P

(A: Anode C: Cathode)

EXPLODED VIEW



EXPLODED VIEW



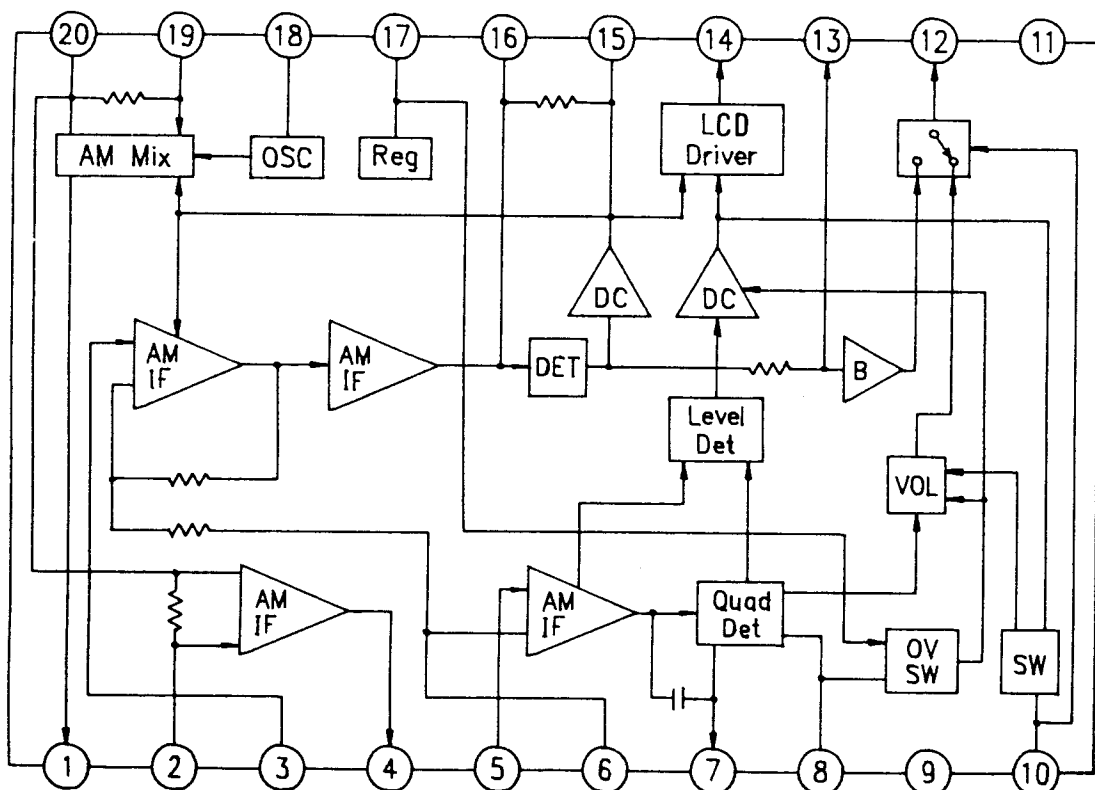
MECHANICAL PARTS LIST

| Ref. No. | Description | RS Part No. | Mfr. Part No. |
|----------|---|-------------|---------------|
| 1 | Ant. Bar Holder (L) | | 2018070 |
| 2 | Ant. Bar Holder (R) | | 2018080 |
| 3 | Rod Ant. Holder | | 2018100 |
| 4 | Key Knob Panel Ass'y | | 07916602 |
| | Key Knob Panel | | 2065010 |
| | Key Knob Holder | | 2065030 |
| | Key Knob Ass'y | | 3156501 |
| | End of Key Knob Panel Ass'y | | |
| 5 | Rod Ant. | | 3606301 |
| 6 | Handle | | 2065050 |
| 7 | LCD Illuminator | | 2065070 |
| 8 | Slide Knob Holder (B) | | 2065080 |
| 9 | Slide Knob Holder (A) | | 2065090 |
| 10 | Key Board Shield | | 2166010 |
| 11 | LCD Shield Plate | | 2165020 |
| 12 | PCB Supporter | | 2165040 |
| 13 | Rod Ant. Connector | | 2165080 |
| 14 | Battery Terminal (For C-PCB) | | 2165090 |
| 15 | Shield Plate (For C-PCB) | | 2165150 |
| 16 | LCD Holder | | 2165170 |
| 17 | P.C.B. Hemelon (For A-PCB) | | 2256000 |
| 18 | Ant. Bat Fixed Sponge | | 2318000 |
| 19 | EVA Cushion (For Back Supporter 4.5) | | 2365010 |
| 20 | Lamp EVA Spacer | | 2365040 |
| 21 | Key Board Rubber | | 2465000 |
| 22 | Conductive Rubber (For LCD) | | 2465010 |
| 23 | Front Cabinet Ass'y | | 06416602 |
| | Front Cabinet | | 3016620 |
| | Hemelon | | 2265000 |
| | Speaker Grill | | 3436601 |
| | LCD Window | | 3056531 |
| | Dial Plate | | 3426520 |
| | End of Front Cabinet Ass'y | | |
| 24 | Back Cover Ass'y | | |
| | (For USA) | | 06516602 |
| | (For CAN/USA/AUS) | | 06516603 |
| | Back Cover | | 3036501 |
| | Battery Housing Case | | 2065000 |
| | Battery Contact | | 2165060 |
| | Battery Contact (+) (For UM-3 Battery) | | 2165070 |
| | Battery Contact (+) (For UM-1 Battery) | | 2165140 |
| | Ribbon (For UM-3 Battery) | | 2258020 |
| | Battery Conductor (W/Spring) (For UM-3 Battery) | | 2104050 |
| | Battery Contact (W/Spring) (For UM-1 Battery) | | 2165130 |
| | TP Screw 2.6x8 P NI (Battery Contact) | | 9102082 |
| | Ribbon (UM-1 Battery) | | 2265010 |
| | PU Foot | | 2465030 |
| | PVC Wire 160 (9 + 9)Blk(AWG26 M.Batt (-) -Batt. Contact (-) | | 8132860 |
| | PVC Wire 150 (9 + 9)Red(AWG26 M.Bat(-) -Batt. Contac (-) | | 8132662 |
| | PVC Wire 110 (9 + 9)Wht(AWG26 Back-Up Batt(-)-M. Batt (-) | | 8171869 |
| | Rating Plate (For U.S.A.) | | 3406520 |
| | (For CAN. U.K. AUS.) | | 3406523 |
| | End of Back Cover Ass'y | | |
| 25 | Battery Cover Ass'y | | 07916603 |
| | Battery Cover | | 3056531 |
| | PU Foot | | 2465030 |
| | EVA Cushion | | 2365020 |
| | End of Battery Cover Ass'y | | |
| 26 | Back Supporter | | 3066520 |

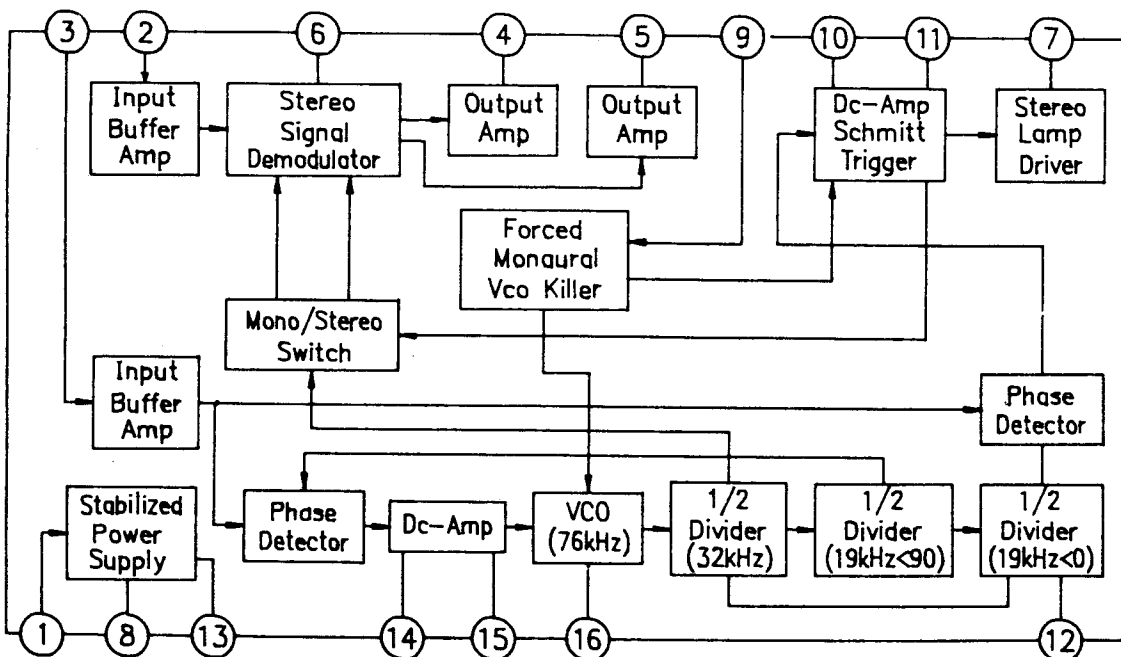
| Ref. No. | Description | RS Part No. | Mfr. Part No. |
|----------|---|-------------|---------------|
| 27 | Power Knob | | 3106501 |
| 28 | Volume Knob | | 3116501 |
| 29 | Tuning Knob | | 3126501 |
| 30 | Band Knob | | 3136501 |
| 31 | Slide Knob (B) | | 3166501 |
| 32 | Slide Knob (A) | | 3176501 |
| 33 | Light Knob | | 3186501 |
| 34 | Manual Tuning Knob | | 3196501 |
| 35 | Time Set Knob (Sleep/Time/Dual) | | 3206501 |
| 36 | Dual Time Knob | | 3216501 |
| 37 | Rotary Knob | | 3276501 |
| | Ext/Int Hardware Kit | | 07906601 |
| 38 | TP Screw 2.6x8 PW NI (C-PCB x 6, A-PCB x 3) | | 9152082 |
| 39 | TP Screw 3x8 PW NI (Speaker x 4) | | 9153082 |
| 40 | M Screw 3x6 P NI (Rod Ant. x 1) | | 9003062 |
| 41 | M Screw 2.6x4 PW NI (PCB Supporter x 2) | | 9052042 |
| 42 | TP Screw 2x6 P NI (Buzzer x 2) | | 9101062 |
| 43 | TP Screw 2.6x16 P ZK (Back Cover & Front Cabinet x 5) | | 9102161 |
| | End of Hardware Kit | | |

IC CIRCUIT BLOCK DIAGRAM

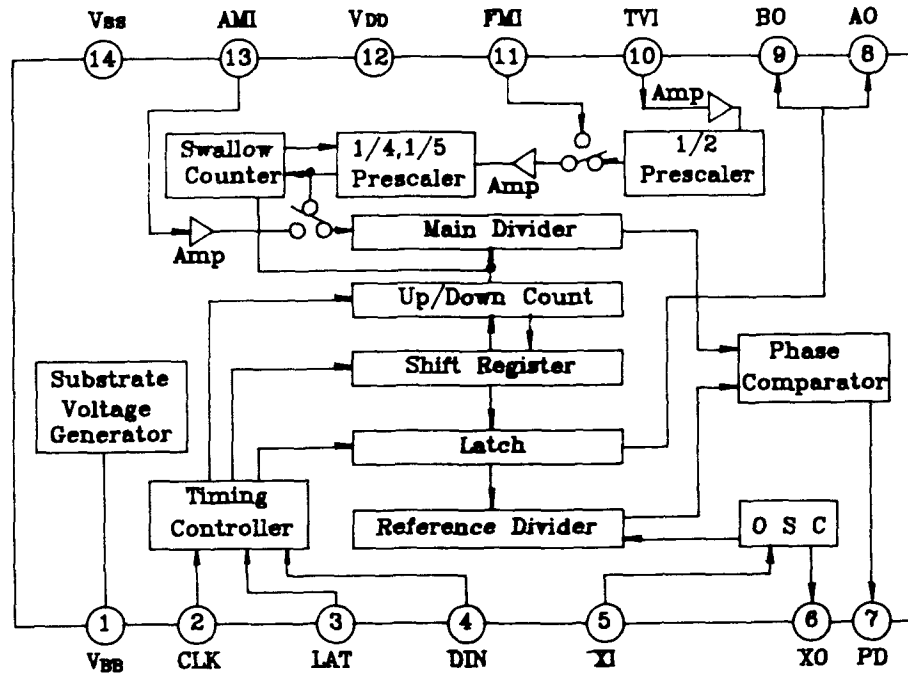
(1) IC1-TA7758P



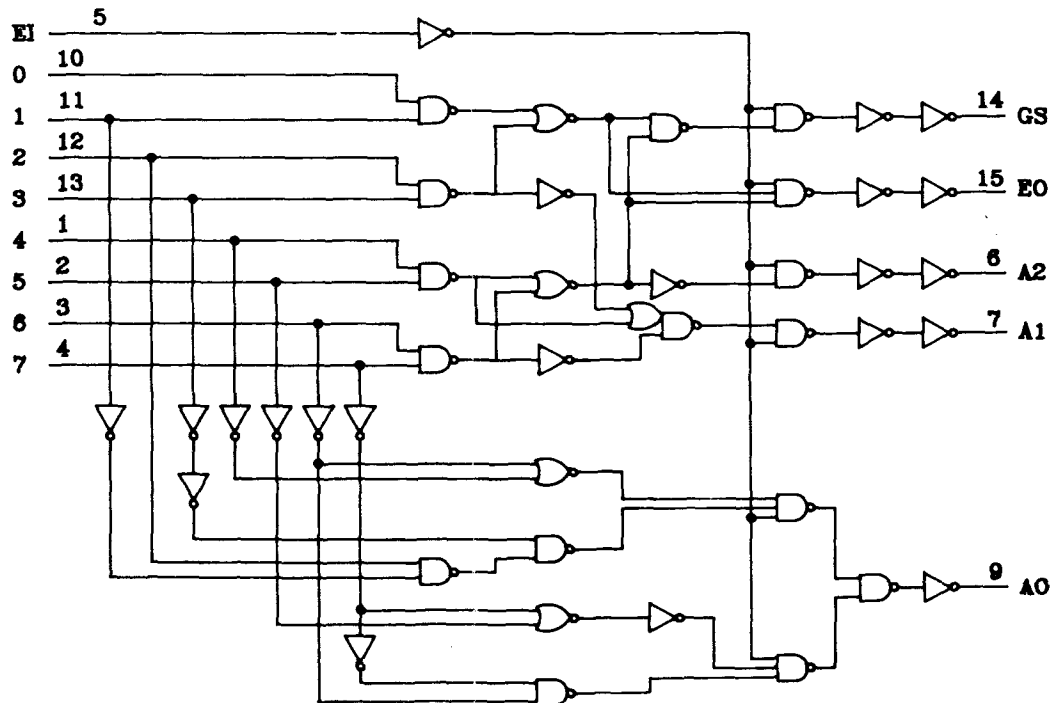
(2) IC2-AN7415



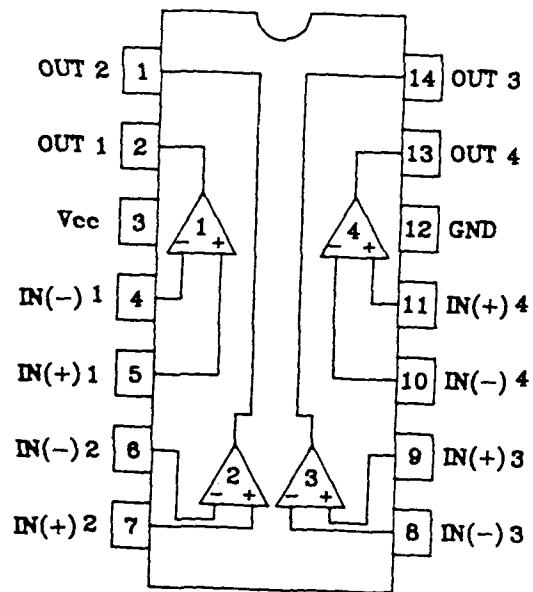
(3) IC3-CX7961A-1



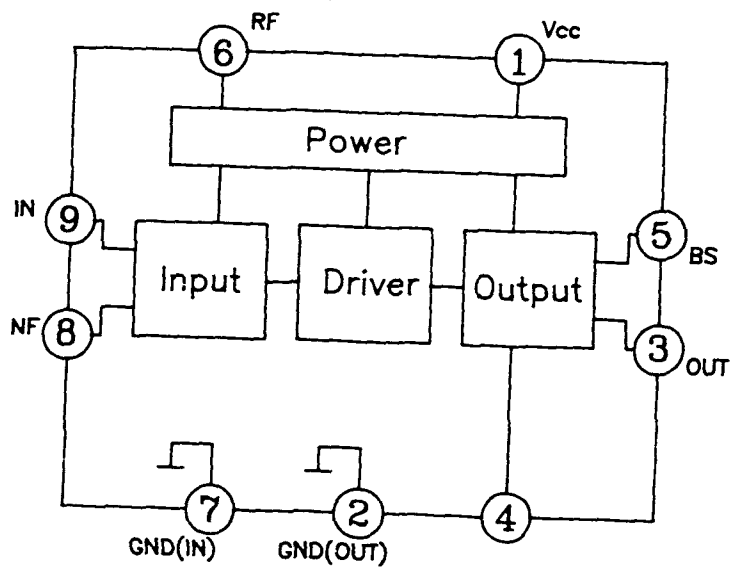
(4) IC4-TC74HC148AP



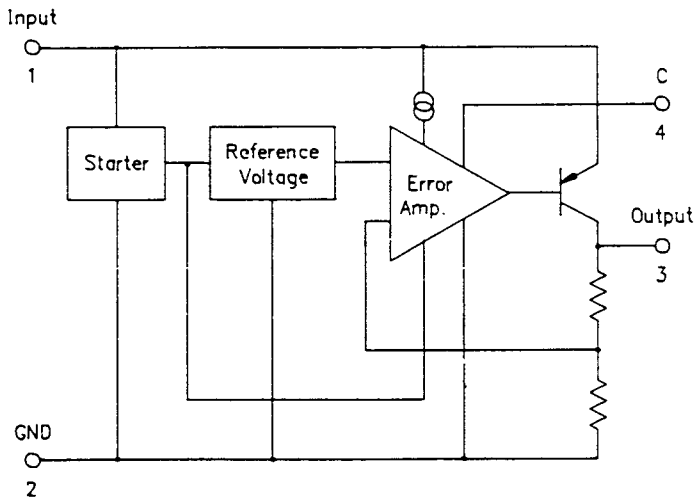
(5) IC5,6-TA75339AP/P



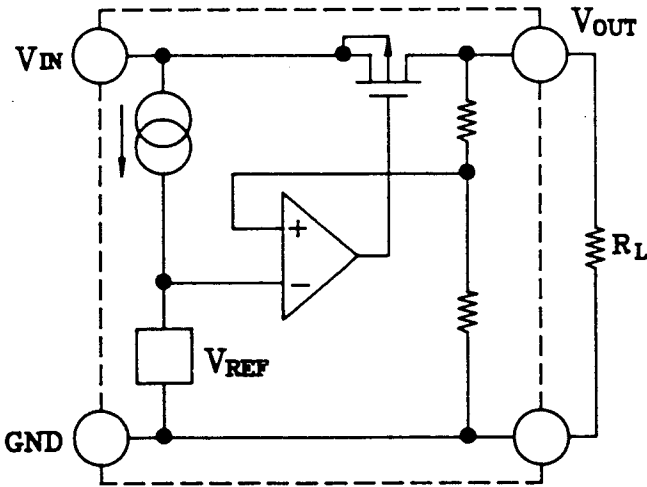
(6) IC7,8-AN7141N



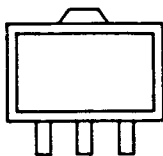
(7) IC9-LA5003



(8) IC401,402-S81230AG-RB-T2

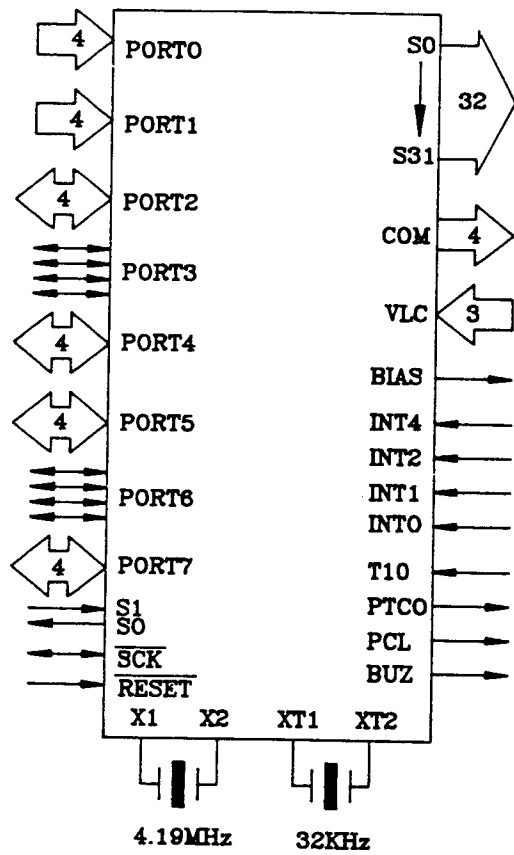


TOP VIEW



| NO. | S-802 | S-812 |
|-----|------------------|------------------|
| 1 | V _{OUT} | GND |
| 2 | GND | V _{IN} |
| 3 | V _{IN} | V _{OUT} |

(9) IC403-UPD75308GF-508-3B9



ICS' & TRANSISTORS' VOLTAGE LIST

IC1

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 4.39 | 3.80 |
| 2 | 1.66 | 1.66 |
| 3 | 1.83 | 1.60 |
| 4 | 1.27 | 1.79 |
| 5 | 1.38 | 1.60 |
| 6 | 1.38 | 1.60 |
| 7 | 5.04 | 4.99 |
| 8 | 2.60 | 2.25 |
| 9 | 5.05 | 5.00 |
| 10 | 4.93 | 0 |
| 11 | 0 | 0 |
| 12 | 1.50 | 1.59 |
| 13 | 0 | 2.35 |
| 14 | 2.97 | 2.97 |
| 15 | 1.12 | 1.08 |
| 16 | 1.12 | 1.08 |
| 17 | 2.38 | 2.33 |
| 18 | 1.77 | 1.46 |
| 19 | 1.66 | 1.66 |
| 20 | 1.66 | 1.66 |

IC2

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 2.86 | 2.86 |
| 2 | 0.46 | 0.46 |
| 3 | 0.46 | 0.46 |
| 4 | 0.93 | 0.93 |
| 5 | 0.93 | 0.93 |
| 6 | 0.02 | 0.02 |
| 7 | 2.99 | 2.99 |
| 8 | 0 | 0 |
| 9 | 1.04 | 1.04 |
| 10 | 0.45 | 0.45 |
| 11 | 1.17 | 1.17 |
| 12 | 1.32 | 1.32 |
| 13 | 1.43 | 1.43 |
| 14 | 1.15 | 1.15 |
| 15 | 1.15 | 1.15 |
| 16 | 0.02 | 0.02 |

IC3

| PIN NO. | FM | AM |
|---------|-------|-------|
| 1 | -1.38 | -1.37 |
| 2 | 0 | 0 |
| 3 | 0 | 0 |
| 4 | 3.00 | 3.00 |
| 5 | 1.20 | 1.20 |
| 6 | 1.11 | 1.11 |
| 7 | 0.68 | 0.69 |
| 8 | 0.01 | 0.01 |
| 9 | 0.01 | 0.01 |
| 10 | 0 | 0 |
| 11 | 1.40 | 1.39 |
| 12 | 2.88 | 2.88 |
| 13 | 0 | 0 |
| 14 | 0 | 0 |

TESTING CONDITION :

1. WITHOUT ANY INPUT SIGNAL AND SETTING VOLUME TO MIN.
2. SPEAKER MODE.
3. EXTERNAL ANT. IS NOT USED.
4. AM IS RECEIVED BY 150KHZ AND PUT ON THE WIDE BW, BFO OFF & AM RF GAIN IS MAX.
5. FM IS RECEIVED BY 98MHZ AND PUT ON THE STEREO POSITION.
6. LOAD IN RADIO BATTERY 6.0V AND BACK UP BATTERY 4.5V.
7. UNIT OF MEASURE : VOLTS.

IC4

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 3.00 | 3.00 |
| 2 | 3.00 | 3.00 |
| 3 | 3.00 | 3.00 |
| 4 | 3.00 | 3.00 |
| 5 | 0 | 0 |
| 6 | 3.00 | 3.00 |
| 7 | 3.00 | 3.00 |
| 8 | 0 | 0 |
| 9 | 3.00 | 3.00 |
| 10 | 0 | 0 |
| 11 | 3.00 | 3.00 |
| 12 | 3.00 | 3.00 |
| 13 | 3.00 | 3.00 |
| 14 | 0 | 0 |
| 15 | 3.00 | 3.00 |
| 16 | 3.00 | 3.00 |

IC5

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 3.00 | 3.00 |
| 2 | 3.00 | 3.00 |
| 3 | 3.00 | 3.00 |
| 4 | 0.75 | 0.70 |
| 5 | 1.19 | 1.00 |
| 6 | 0.75 | 0.70 |
| 7 | 1.11 | 0.94 |
| 8 | 0.75 | 0.70 |
| 9 | 1.27 | 1.07 |
| 10 | 0.75 | 0.70 |
| 11 | 1.24 | 1.04 |
| 12 | 0 | 0 |
| 13 | 3.00 | 3.00 |
| 14 | 3.00 | 3.00 |

IC6

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 3.00 | 3.00 |
| 2 | 0 | 0 |
| 3 | 3.00 | 3.00 |
| 4 | 3.00 | 3.00 |
| 5 | 0.75 | 0.70 |
| 6 | 0.75 | 0.70 |
| 7 | 1.05 | 3.88 |
| 8 | 0.75 | 0.70 |
| 9 | 0.97 | 0.82 |
| 10 | 0.75 | 0.70 |
| 11 | 0.94 | 0.79 |
| 12 | 0 | 0 |
| 13 | 3.00 | 3.00 |
| 14 | 3.00 | 3.00 |

IC401

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 0 | 0 |
| 2 | 4.50 | 4.50 |
| 3 | 5.85 | 5.85 |

IC402

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 0 | 0 |
| 2 | 5.85 | 5.85 |
| 3 | 3.00 | 3.00 |

IC9

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 5.10 | 5.05 |
| 2 | 0 | 0 |
| 3 | 3.00 | 3.00 |
| 4 | 4.35 | 4.30 |

IC7

| PIN NO. | FM | AM |
|---------|----|----|
| 1 | 0 | 0 |
| 2 | 0 | 0 |
| 3 | 0 | 0 |
| 4 | 0 | 0 |
| 5 | 0 | 0 |
| 6 | 0 | 0 |
| 7 | 0 | 0 |
| 8 | 0 | 0 |
| 9 | 0 | 0 |

IC8

| PIN NO. | FM | AM |
|---------|------|------|
| 1 | 5.95 | 5.95 |
| 2 | 0 | 0 |
| 3 | 3.15 | 3.15 |
| 4 | 0.62 | 0.62 |
| 5 | 0.65 | 0.65 |
| 6 | 5.90 | 5.90 |
| 7 | 0 | 0 |
| 8 | 1.33 | 1.33 |
| 9 | 0.02 | 0.02 |

IC403

| PIN NO. | FM | AM |
|---------|----------------|------|
| 1 ~ 15 | LCD SEGMENT | |
| 16 | 1.57 | 1.57 |
| 17 | 3.0 | 0 |
| 18 | 0 | 3.0 |
| 19 | 0 | 0 |
| 20 | 0 | 0 |
| 21 ~ 24 | LCD back plane | |
| 25 | 3.22 | 3.22 |
| 26 | 3.22 | 3.22 |
| 27 | 2.15 | 2.15 |
| 28 | 1.08 | 1.08 |
| 29 | 3.00 | 3.00 |
| 30 | 0 | 0 |
| 31 | 0 | 0 |
| 32 | 0 | 0 |
| 33 | 0 | 0 |
| 34 | 0 | 0 |
| 35 | 0 | 0 |
| 36 | 0 | 0 |
| 37 | 2.8 | 2.8 |
| 38 | 3.05 | 3.05 |
| 39 | 3.00 | 3.00 |
| 40 | 3.00 | 3.00 |
| 41 | 3.00 | 3.00 |
| 42 | 3.00 | 3.00 |
| 43 | 3.00 | 3.00 |

IC403

| PIN NO. | FM | AM |
|---------|-------------|------|
| 44 | 2.95 | 2.95 |
| 45 | 2.85 | 2.85 |
| 46 | 0 | 0 |
| 47 | 0 | 0 |
| 48 | 0 | 0 |
| 49 | 0 | 0 |
| 50 | 0 | 0 |
| 51 | 0 | 0 |
| 52 | 0 | 0 |
| 53 | 3.00 | 3.00 |
| 54 | 3.00 | 3.00 |
| 55 | 0 | 0 |
| 56 | 3.00 | 3.00 |
| 57 | 0 | 0 |
| 58 | 1.45 | 1.45 |
| 59 | 1.50 | 1.50 |
| 60 | 3.00 | 3.00 |
| 61 | 3.00 | 3.00 |
| 62 | 3.00 | 3.00 |
| 63 | 3.00 | 3.00 |
| 64 | 3.00 | 3.00 |
| 65 | 3.00 | 3.00 |
| 66 | 3.00 | 3.00 |
| 67 | 3.00 | 3.00 |
| 68 | 3.00 | 3.00 |
| 69~80 | LED SEGMENT | |

| | | FM | AM |
|----|---|------|------|
| Q1 | S | 0 | 0.43 |
| | G | 0 | 0 |
| | D | 0 | 3.85 |
| Q2 | E | 0 | 0 |
| | B | 0.64 | 0.64 |
| | C | 0 | 0.01 |
| Q3 | S | 0 | 0.92 |
| | G | 0 | 0 |
| | D | 0 | 3.55 |
| Q4 | S | 0 | 0.92 |
| | G | 0 | 0 |
| | D | 0 | 3.55 |
| Q5 | S | 0 | 0 |
| | G | 0 | 0 |
| | D | 4.02 | 0 |
| Q6 | E | 0 | 0 |
| | B | 0.65 | 0 |
| | C | 4.00 | 0 |
| Q7 | S | 0 | 0.78 |
| | G | 0 | 0 |
| | D | 0 | 4.34 |
| Q8 | E | 0 | 0.09 |
| | B | 0 | 0.74 |
| | C | 0 | 1.95 |
| Q9 | E | 0 | 0 |
| | B | 0.29 | 0.29 |
| | C | 3.00 | 3.00 |

| | | FM | AM | |
|-----|---|------|------|--------|
| Q10 | E | 0 | 0 | |
| | B | 0 | 0.65 | |
| | C | 0 | 1.40 | |
| Q11 | E | 0 | 4.91 | |
| | B | 0.01 | 4.35 | |
| | C | 0 | 0.01 | |
| Q12 | E | 0 | 0 | |
| | B | 0.56 | 0 | |
| | C | 0.01 | 4.35 | |
| Q13 | E | 3.00 | 3.00 | |
| | B | 4.35 | 2.32 | |
| | C | 0 | 2.98 | |
| Q14 | E | 0 | 2.98 | 2.98 |
| | B | 0 | 2.98 | 2.32 |
| | C | 0 | 0 | 2.96 |
| Q15 | E | 0 | 0 | |
| | B | 0.64 | 0 | |
| | C | 0.01 | 2.25 | |
| | | FM | AM | SSB/CW |
| Q16 | E | 0 | 0 | 0.11 |
| | B | 0 | 0 | 0.74 |
| | C | 0 | 0 | 2.03 |
| Q17 | E | 0 | 0 | 0 |
| | B | 0 | 0 | 0.69 |
| | C | 0 | 0 | 1.75 |
| Q18 | E | 0 | 0 | 0 |
| | B | 0 | 0 | 0.62 |
| | C | 3.00 | 3.00 | 0.01 |

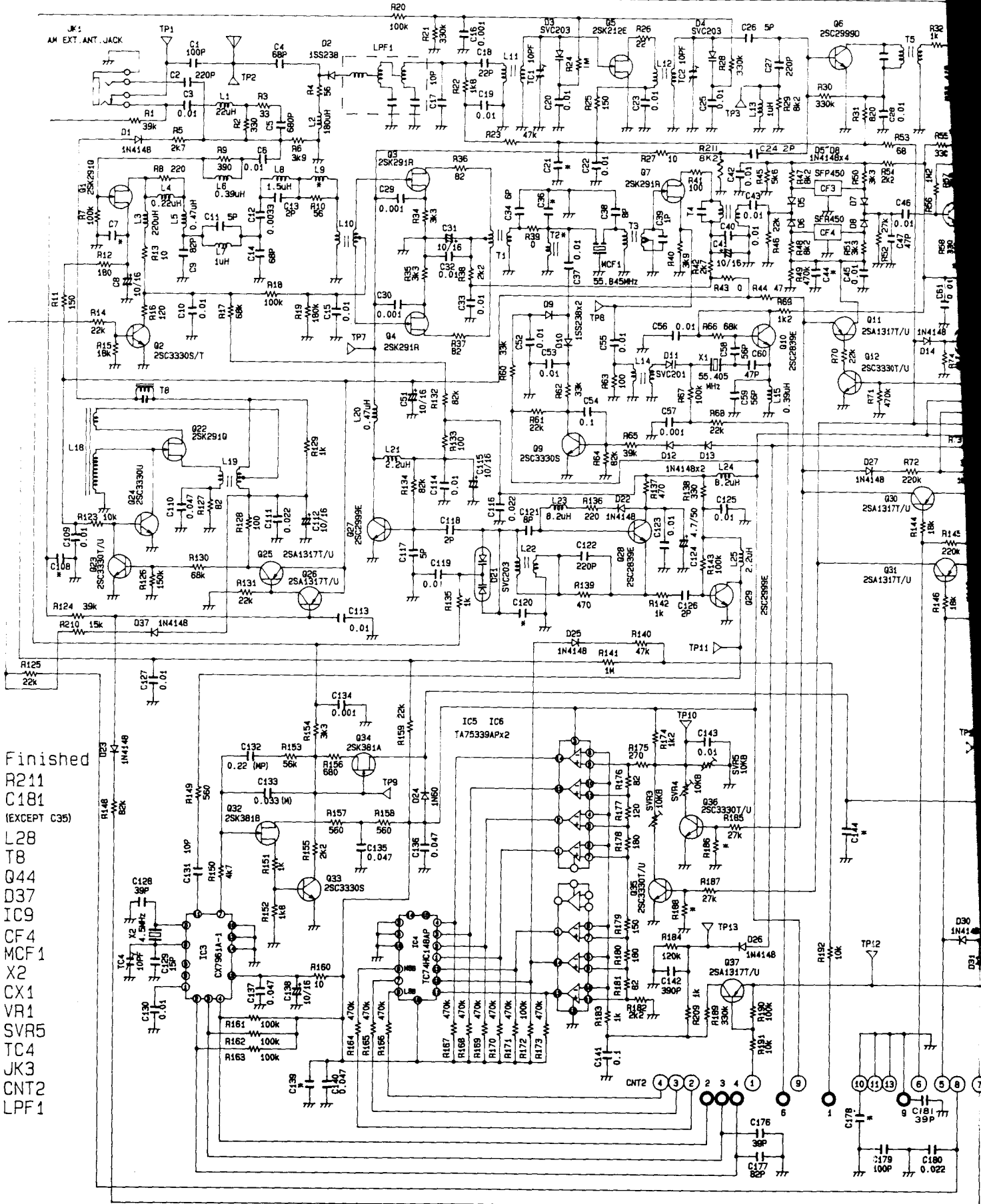
| | | FM | AM |
|-----|---|------|------|
| Q19 | E | 2.85 | 2.85 |
| | B | 3.45 | 3.45 |
| | C | 2.86 | 2.86 |
| Q20 | E | 0.37 | 0.37 |
| | B | 1.02 | 1.02 |
| | C | 2.45 | 2.45 |
| Q21 | E | 0.37 | 0.37 |
| | B | 1.02 | 1.02 |
| | C | 2.45 | 2.45 |
| Q22 | S | 0 | 0.37 |
| | G | 0 | 0 |
| | D | 0 | 4.20 |
| Q23 | E | 0 | 0 |
| | B | 0 | 0.64 |
| | C | 0 | 0.04 |
| Q24 | E | 0 | 0 |
| | B | 0 | 0.04 |
| | C | 0 | 0 |
| Q25 | E | 0 | 4.91 |
| | B | 0 | 4.22 |
| | C | 0 | 4.85 |
| Q26 | E | 0 | 4.91 |
| | B | 0 | 4.78 |
| | C | 0 | 4.22 |
| Q27 | E | 0 | 0 |
| | B | 0.75 | 0.75 |
| | C | 2.64 | 2.64 |

| | | FM | AM |
|-----|---|-------|------|
| Q28 | E | 0.75 | 0.75 |
| | B | 1.40 | 1.40 |
| | C | 1.68 | 1.68 |
| Q29 | E | 0 | 0 |
| | B | 0.74 | 0.74 |
| | C | 2.04 | 2.04 |
| Q30 | E | 5.10 | 5.05 |
| | B | 4.93 | 4.29 |
| | C | 0 | 4.91 |
| Q31 | E | 5.10 | 5.05 |
| | B | 4.36 | 5.30 |
| | C | 4.99 | 0 |
| Q32 | S | 0.93 | 0.94 |
| | G | 0.68 | 0.69 |
| | D | 2.63 | 2.63 |
| Q33 | E | 0 | 0 |
| | B | 0.60 | 0.61 |
| | C | 9.3 | 1.2 |
| Q34 | E | 10.15 | 1.97 |
| | B | 9.97 | 1.78 |
| | C | 14.90 | 2.77 |
| Q35 | E | 0 | 0 |
| | B | 0.66 | 0 |
| | C | 0.02 | 1.16 |
| Q36 | E | 0 | 0 |
| | B | 0 | 0.66 |
| | C | 1.38 | 0.02 |

| | | FM | AM |
|------|---|------|------|
| Q401 | E | 0 | 0 |
| | B | 0.61 | 0 |
| | C | 0.07 | 5.30 |
| Q402 | E | 0 | 0 |
| | B | 0 | 0.61 |
| | C | 4.93 | 0.07 |
| Q403 | E | 0 | 0 |
| | B | 0 | 0 |
| | C | 0.46 | 5.96 |
| Q404 | E | 0 | 0 |
| | B | 0.66 | 0.66 |
| | C | 0.07 | 0.07 |
| Q405 | E | 0 | 0 |
| | B | 0 | 0 |
| | C | 6.00 | 6.00 |
| Q406 | E | 6.00 | 6.00 |
| | B | 6.00 | 6.00 |
| | C | 0 | 0 |
| Q407 | E | 6.00 | 6.00 |
| | B | 5.99 | 5.99 |
| | C | 0 | 0 |
| Q408 | E | 0 | 0 |
| | B | 0 | 0 |
| | C | 5.99 | 5.99 |
| Q409 | E | 3.53 | 3.53 |
| | B | 3.00 | 3.00 |
| | C | 3.35 | 3.35 |

| | | FM | AM |
|-----|---|------|------|
| Q37 | E | 6.00 | 6.00 |
| | B | 6.00 | 6.00 |
| | C | 0.75 | 0.70 |
| Q38 | E | 0 | 0 |
| | B | 0.53 | 0 |
| | C | 0.68 | 0 |
| Q39 | E | 0 | 0 |
| | B | 0.68 | 0 |
| | C | 5.81 | 0 |
| Q40 | E | 5.97 | 5.97 |
| | B | 5.27 | 5.96 |
| | C | 5.87 | 0 |
| Q41 | E | 0 | 0 |
| | B | 0 | 0 |
| | C | 0 | 0 |
| Q42 | E | 0 | 0 |
| | B | 0 | 0 |
| | C | 0 | 0 |
| Q43 | E | 5.10 | 5.05 |
| | B | 5.84 | 5.83 |
| | C | 5.97 | 5.97 |
| Q44 | E | 6.00 | 6.00 |
| | B | 5.31 | 5.31 |
| | C | 5.97 | 5.97 |

SCHEMATIC DIAGRAM (Ca)



- Finished
 R211
 C181
 (EXCEPT C35)
 L28
 T8
 Q44
 D37
 IC9
 CF4
 MCF1
 X2
 CX1
 VR1
 SVR5
 TC4
 JK3
 CNT2
 LPF1

