



QS
REGULAR MATRIX

SERVICE MANUAL

4-CHANNEL RECEIVER **SANSUI QRX-5500**



Sansui

SANSUI ELECTRIC CO., LTD.

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the QRX-5500 correctly.

When ordering the parts, use the stock number and parts name specifically referring to the Parts Locations & Parts List.

For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

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1. SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT (at rated distortion)
 MUSIC POWER (IHF) .. 220W (4Ω 1,000Hz)
 160W (8Ω 1,000Hz)
 CONTINUOUS POWER (each channel driven)
 45W/ch. (4Ω 1,000Hz)
 30W/ch. (8Ω 1,000Hz)
 CONTINUOUS POWER (4-channels driven)
 25W × 4 (8Ω 1,000Hz)
 22W × 4 (8Ω 20 to 20,000Hz)
 TOTAL HARMONIC DISTORTION (at rated output)
 OVERALL (from 4-channels AUX) .. less than 0.3%
 INTERMODULATION DISTORTION (at rated output
 70Hz: 7,000Hz=4 : 1 SMPTE method)
 OVERALL (from 4-channels AUX) .. less than 0.3%
 POWER BANDWIDTH (IHF) 10 to 30,000Hz
 LOAD IMPEDANCE 4 to 16Ω
 DAMPING FACTOR 40 (8Ω)
 INPUT SENSITIVITY AND IMPEDANCE (1,000Hz for
 rated output)
 PHONO-1, 2 (2-channel) 2.5mV 50kΩ
 Max. input capability
 more than 250mV at 0.5% distortion
 MIC 2.5mV 10kΩ
 AUX (2-ch, 4-ch) 100mV 50kΩ
 TAPE MONITOR (PIN, 2-ch, 4-ch) .. 100mV 50kΩ
 TAPE MONITOR (DIN, 2-ch) 100mV 50kΩ
 RECORDING OUTPUT
 TAPE REC (PIN, 2-ch, 4-ch) 100mV
 TAPE REC (DIN, 2-ch) 30mV
 FREQUENCY RESPONSE (at 1W output)
 OVERALL (from 4-channels AUX)
 30 to 30,000Hz ± 1.0 dB
 -1.5 dB
 EQUALIZATION (RIAA CURVE)
 30 to 15,000Hz ± 1.0 dB
 CROSSTALK (2-channel) better than 50dB at 1,000Hz
 HUM AND NOISE (IHF)
 PHONO-1, 2 (2-channel) .. better than 70dB
 AUX (4-channels) better than 80dB
 CONTROLS
 BASS ± 12 dB at 50Hz
 TREBLE ± 12 dB at 15,000Hz
 LOUDNESS (volume control at -30 dB)
 +8dB at 50Hz
 +3dB at 10,000Hz
 LOW FILTER -10 dB at 50Hz (6dB/oct.)
 HIGH FILTER -10 dB at 10,000Hz (6dB/oct.)
 4-CHANNEL SYNTHESIZER/DECODER CIRCUIT
 QS regular matrix system with
 QS vario-matrix circuit

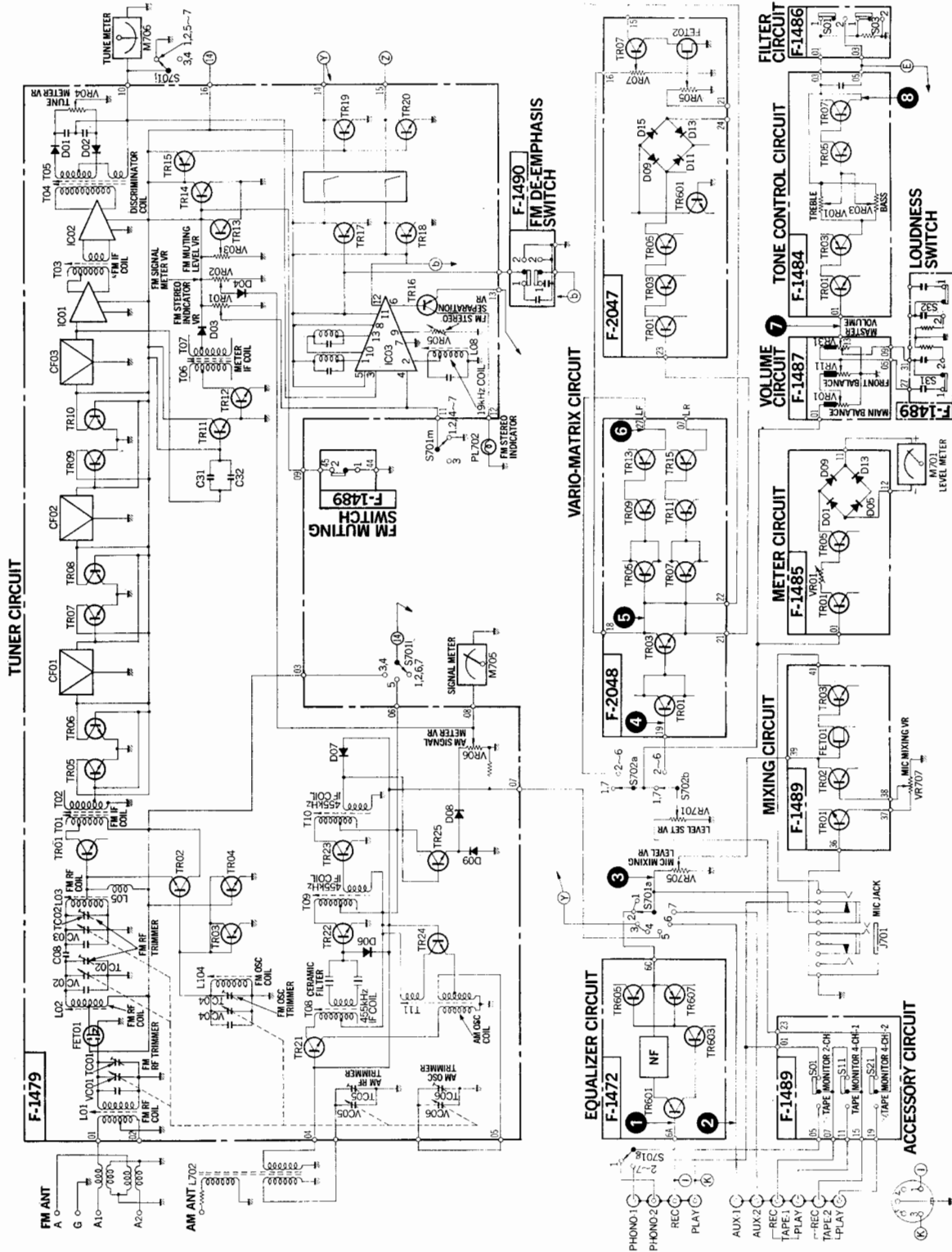
TUNER SECTION

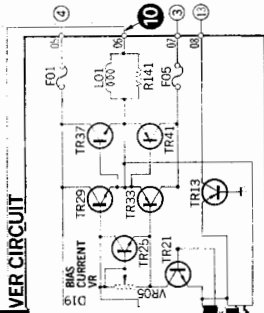
<FM>
 TUNING RANGE 88 to 108MHz
 SENSITIVITY (IHF) 1.9μV
 Max. input capability .. more than 120dB
 SIGNAL TO NOISE RATIO (MONO)
 better than 65dB
 CAPTURE RATIO (IHF) less than 2.0dB
 IMAGE REJECTION better than 75dB at 98MHz
 IF REJECTION better than 90dB at 98MHz
 SPURIOUS RESPONSE REJECTION
 better than 80dB at 98MHz
 SELECTIVITY better than 60dB
 TOTAL HARMONIC DISTORTION
 MONO less than 0.3%
 STEREO less than 0.5%
 STEREO SEPARATION better than 37dB at 1,000Hz
 FREQUENCY RESPONSE .. 30 to 15,000Hz ± 1.0 dB
 -3.0 dB
 ANTENNA IMPEDANCE .. 300Ω balanced,
 75Ω unbalanced
 <AM>
 TUNING RANGE 535 to 1605kHz
 SENSITIVITY (bar antenna)
 50dB/m at 1,000kHz
 IMAGE REJECTION better than 80dB/m at 1,000kHz
 IF REJECTION better than 80dB/m at 1,000kHz
 SELECTIVITY better than 25dB at 1,000kHz
 OTHERS
 SEMICONDUCTORS
 TRANSISTORS 136
 FETs 5
 DIODES 80
 ZENER DIODES 6
 ICs 3
 POWER REQUIREMENTS
 VOLTAGE 100V, 117V, 220V, 240V 50/60Hz
 CONSUMPTION 140W (rated), 400VA (max.)
 DIMENSIONS 203mm (8")H, 594mm (23 $\frac{3}{8}$ ")W,
 370mm (14 $\frac{9}{16}$ ")D
 WEIGHT 21.6kg (47.5 lbs) net,
 24.8kg (54.6 lbs) shipping

* Design and specifications subject to change without notice for improvements.

2. BLOCK DIAGRAM AND LEVEL DIAGRAM

2-1. Block Diagram





S703a-d : DIRECTION
 1. NORMAL
 2. RIGHT QUARTER TURN
 3. HALF TURN
 4. LEFT QUARTER TURN

S704a-h : SPEAKER
 1. OFF
 2. A
 3. B
 4. A+B

2-2. Level Diagram

* Each number (①, ②, ③....) indicated in Level Diagram undermentioned corresponds to the number in Block Diagram.

1. MASTER VOLUME, LEVEL SET volume control
 Maximum
2. BASS, TREBLE, BALANCE Volume control
 Center
3. Input PHONO-1 2.5mV 1kHz Sine Wave
 AUX-1 100mV 1kHz Sine Wave
 (output impedance of 600Ω at an audio signal oscillator)
4. Output 15.5V (30W) 8Ω

Note: Each voltage value is for reference and measured by a VTVM. In some recorders, the actual

3. ALIGNMENTS AND ADJUSTMENTS

Abbreviation

Equipment

AM FM Generator Oscilloscope.....Genescope
 AM Standard Signal GeneratorAM SSG
 FM Standard Signal GeneratorFM SSG
 FM Stereo Generator.....Stereo SG
 OscilloscopeScope
 Audio OscillatorAudio Osci.
 Distortion MeterDist. Meter

Others

ClockwiseCW.
 Counterclockwise.....CCW.
 AntennaANT.
 Modulation.....MOD.

3-1. Regulated Power Supply Board Adjustment (See Fig. 3-1)

- Note:** 1. Function.....QS Synthesizer
 2. Master Volume.....Minimum
 3. Confirm the AC Power Supply voltage.

| STEP | SUBJECT | EQUIPMENT | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|------------------------|---------------|--------------------|-------------|------------|-----------|
| 1 | Regulated Power Supply | DC volt meter | F-1483 terminal 18 | F-1483 VR01 | 25±0.1V | |

3-2 Level Meter Adjustment (See Fig. 3-2)

2. Selector.....AUX-1
 3. Master VolumeMinimum
 4. Level Set VolumeMaximum
 5. For adjustment, run the unit for more than 2 minutes after the power is switched on.

| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|-------------|---------------------------------|----------------------------|----------------|--|------------|---|
| | | FROM | TO | | | | |
| 1 | Level Meter | 1kHz Output : 100mV Audio Osci. | FRONT, REAR, AUX-1 L, R-ch | Level Meter | F-1485 VR01 (front L-ch) VR02 (front R-ch) VR03 (rear L-ch) VR04 (rear R-ch) | 0 level | ○ Feed signal to 4-CH (both FRONT and REAR) |

Fig. 3-1

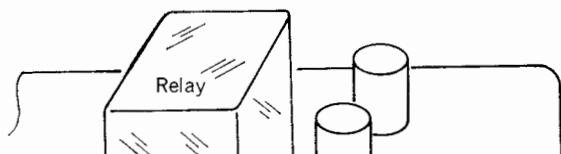
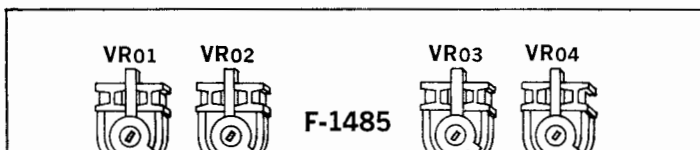


Fig. 3-2



3-3. Driver Circuit Board Adjustment (See Figs. 3-3 and 3-4)

- Note:** 1. Master Volume.....Minimum
 2. Make the SP terminals free (no load).
 3. Confirm the AC Power Supply voltage.
 4. After adjustment, run the unit for more than 5 minutes, then check and readjust necessary.
 5. Room temperature should be 18~28° (65~83°F) for bias current adjustment.

| STEP | SUBJECT | EQUIPMENT | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|-------------------------|-----------------|--|----------------|---------------|---------------------------------------|
| 1 | DC 0V Front L | DC volt meter | Speaker terminal Front L-ch Fig. 3-4 | F-1482 VR01 | 0V | ○ Step down meter's range accordingly |
| 2 | DC 0V Front R | Same as above | Speaker terminal Front R-ch Fig. 3-4 | F-1482 VR02 | Same as above | Same as above |
| 3 | DC 0V Rear L | Same as above | Speaker terminal Rear L-ch Fig. 3-4 | F-1482 VR03 | Same as above | Same as above |
| 4 | DC 0V Rear R | Same as above | Speaker terminal Rear R-ch Fig. 3-4 | F-1482 VR04 | Same as above | Same as above |
| 5 | Bias current Front L | DC milliammeter | F-1482 F01 Fig. 3-3 | F-1482 VR05 | 25±1mA | ○ Step down meter's range accordingly |
| 6 | Bias current Front R | Same as above | F-1482 F02 Fig. 3-3 | F-1482 VR06 | Same as above | Same as above |
| 7 | Bias current Rear L | Same as above | F-1482 F03 Fig. 3-3 | F-1482 VR07 | Same as above | Same as above |
| 8 | Bias current Rear R | Same as above | F-1482 F04 Fig. 3-3 | F-1482 VR08 | Same as above | Same as above |

Fig. 3-3

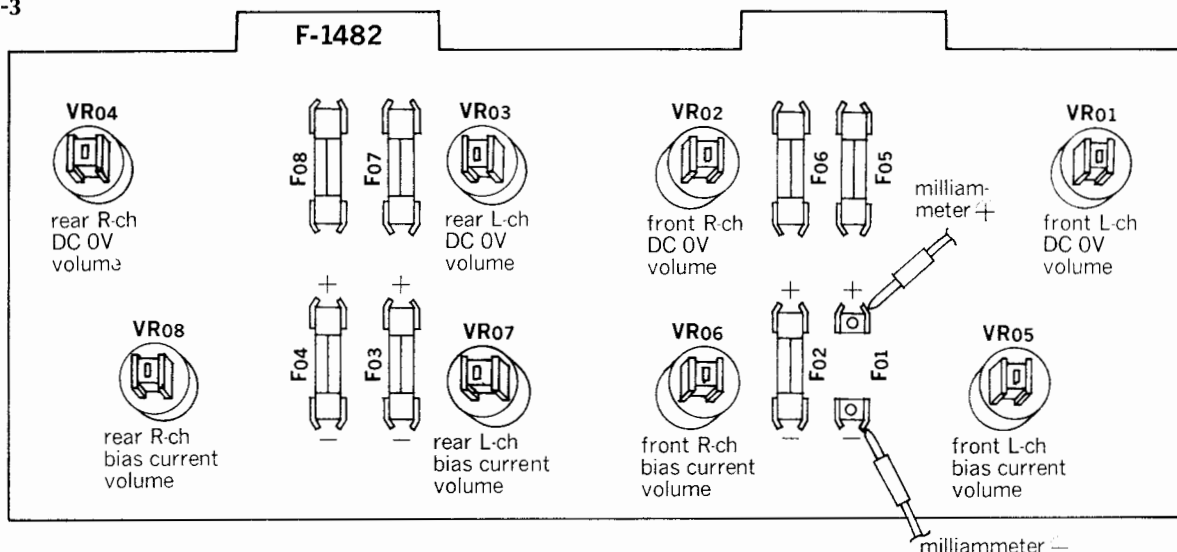
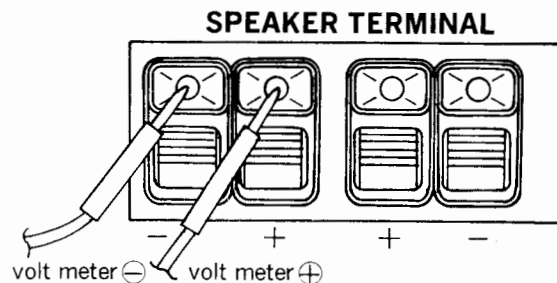


Fig. 3-4

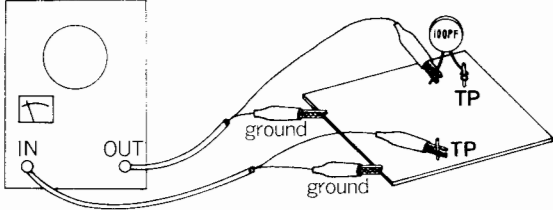


3-4. FM IF Alignment (See Fig. 3-10 on page 10)

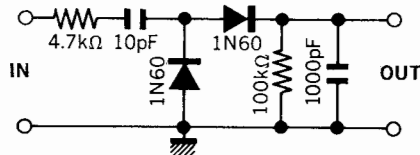
- Note:** 1. Selector.....FM AUTO
 2. Master VolumeMinimum
 3. Output lever of genescopesAfter attenuator
 4. Sweepwidth.....1.5~2cm/150kHz
 5. Frequency band9.5~11.5MHz

6. ConnectionConnect the output of genescopes to TP.A through 100p ceramic capacitor.
 7. Before adjustment, turn both VR01 and VR02 CCW (Max.), VR03 CW (Max.) and VR04 to center.

GENE SCOPE



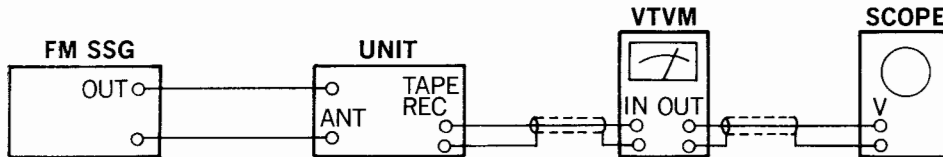
DETECTOR PROBE BLOCK



| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|--------------------|------------------------|---|---|------------|---|-----------------------|
| | | FROM | TO | | | | |
| 1 | IF coil | Output 55dB Genescopes | Base of TR01 on F-1479 (Fig. 3-10 TP.A) | Connected Point between R48 & R50 on F-1479 (Fig. 3-10 TP.B) | T01, T02 | Max. IF waveform 1 as Fig. 3-9 | Turn core of T06 CCW. |
| 2 | Meter coil | Same as above | Same as above | Use Detector Probe Connected point between R62 & VR02 on F-1479 (Fig. 3-10 TP.D) Direct from Genescopes | T06, T07 | Max. IF waveform 2 Set the center of waveform 2 with waveform 1 as Fig. 3-9 | |
| 3 | Discriminator coil | Same as above | Same as above | Connected point between R67 & R68 on F-1479 (Fig. 3-10 TP.C) Direct from Genescopes | T04 T05 | Max. linearity of S curve Set the center of S curve waveform 1 & 2 as Fig. 3-9 | |
| 4 | IF coil | Same as above | Same as above | Same as above | T03 | Max. noise | |

3-5. FM Dial Calibration and RF Alignment (See Fig. 3-10 on page 10)

- Note:** 1. Selector.....FM AUTO
 2. Master VolumeMinimum
 3. FM Muting switchOFF (pushed in)
 4. Confirm start point of dial pointer before alignment.
 5. In Step 3, 4 and 5, 1 and 2 are readjusted, repeat 3, 4 and 5 again.

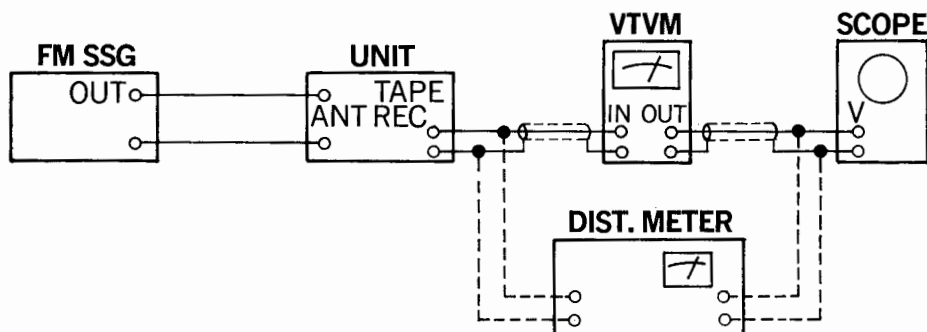


| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|-------------------------|--|-------------------|--------------------------------|-------------------|---------------|------------------------|
| | | FROM | TO | | | | |
| 1 | 88MHz Dial Calibration | 88MHz ANT input 60dB 1kHz (100% MOD) FM SSG | ANT terminal 300Ω | REC OUT L or R-ch VTVM & Scope | L04 | Max. output | Set Dial on 88MHz |
| 2 | 108MHz Dial Calibration | 108MHz ANT input 60dB 1kHz (100% MOD) FM SSG | Same as above | Same as above | Trimmer Cap. TC04 | Same as above | Set Dial on 108MHz |

| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|---------------------------------|---|---------------|----------------|-------------------------------------|---------------------------------|--|
| | | FROM | TO | | | | |
| 3 | Confirm 88MHz Dial Calibration | Same as Step 1 | Same as above | Same as above | | Confirm 88MHz Dial Calibration | ◦If not, repeat from Step 1 |
| 4 | Confirm 98MHz Dial Calibration | 98MHz ANT input 60dB 1kHz (100% MOD) FM SSG | Same as above | Same as above | | Confirm 98MHz Dial Calibration | |
| 5 | Confirm 108MHz Dial Calibration | Same as Step 2 | Same as above | Same as above | | Confirm 108MHz Dial Calibration | ◦If not, repeat from Step 2 |
| 6 | 88MHz RF Adj. | 88MHz ANT input 10dB 1kHz (100% MOD) FM SSG | Same as above | Same as above | L01, L02, L03 | Max. output | ◦Tune FM SSG (Max. indication of Signal Meter) |
| 7 | 108MHz RF Adj. | 108MHz ANT input 10dB 1kHz (100% MOD) FM SSG | Same as above | Same as above | Trimmer Cap. TC01, TC02, TC03 | Same as above | Same as above |

3-6. FM Signal Meter, Mono Distortion, Tune Meter and Muting Adjustment (See Fig. 3-10 on page 10)

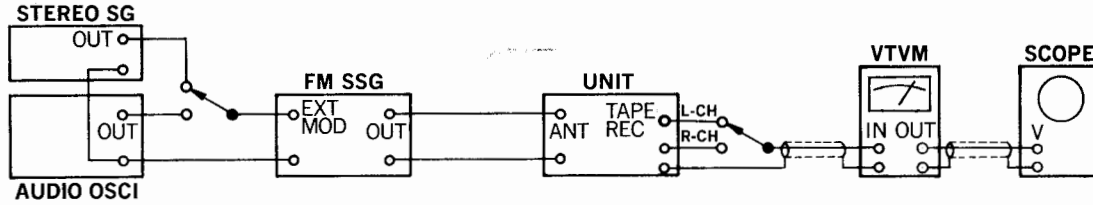
- Note: 1. Selector.....FM AUTO
2. Master VolumeMinimum



| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|--------------|--|----------------------|--|--------|-----------------------------|--|
| | | FROM | TO | | | | |
| 1 | Signal Meter | 98MHz ANT input 66dB 1kHz (100% MOD) FM SSG | ANT terminal 300Ω | Signal Meter | VR02 | 4.3 on meter | ◦Tune FM SSG (Max. indication of Signal Meter) ◦Before adjustment, if meter swings out or not enough, preadjust VR02 until the reasonable point |
| 2 | Distortion | Same as above | Same as above | REC OUT L or R-ch Dist. meter & Scope | T05 | Min. distortion | ◦Set VR04 to center ◦Tune FM SSG (Max. indication of Signal Meter) |
| 3 | Tune Meter | | | Tune Meter | VR04 | Center on Tune meter | ◦Tune interstation noise |
| 4 | Muting Level | 98MHz ANT input 25dB 1kHz (100% MOD) FM SSG | Same as above | REC OUT L or R-ch VTVM & Scope | VR03 | Audio signal just muted | ◦Set FM MUTING switch to OFF (pushed in) ◦Tune the Tune Meter to center and set the muting switch to ON (pushed out) |

3-7. MPX Alignment (See Fig. 3-10 on page 10)

- Note:** 1. SelectorFM AUTO
 2. Master Volume.....Minimum
 3. FM MUTING switchOFF (pushed in)
 4. Before adjustment, turn VR01 CW (Max.) and VR05 to center.

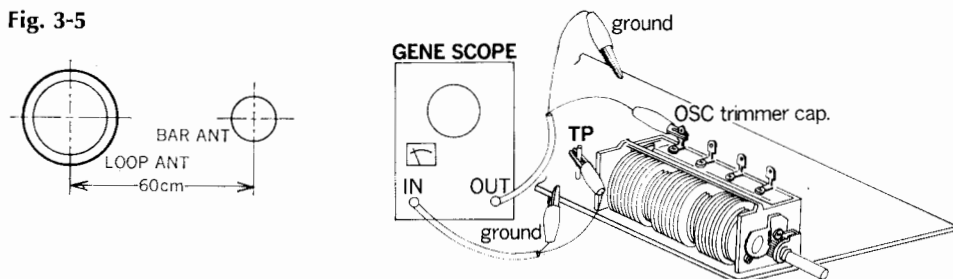


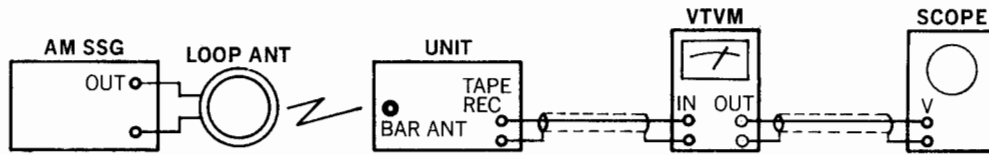
| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|----------------------------|---|-------------------------|------------------------------------|--------|----------------|---|
| | | FROM | TO | | | | |
| 1 | 19kHz coil | 98MHz ANT input 60dB FM SSG Pilot 19kHz (10% MOD) L-ch 1kHz (45% MOD) R-ch (0% MOD) Stereo SG | ANT terminal 300Ω | REC OUT L-ch VTVM & Scope | 108 | Max. output | ○ Tune FM SSG (Center indication of Tune Meter) |
| 2 | Separation | Same as above | Same as above | REC OUT R-ch VTVM & Scope | VR05 | Min. output | |
| 3 | Cofirm Separation | 98MHz ANT input 60dB FM SSG Pilot 19kHz (10% MOD) L-ch (0% MOD) R-ch 1kHz (45% MOD) Stereo SG | Same as above | REC OUT L-ch VTVM & Scope | | Min. output | ○ If less the 37dB adjust VR05 |
| 4 | Indicator (Lighting level) | 98MHz ANT input 31dB FM SSG Pilot 19kHz (10% MOD) Stereo SG | Same as above | Stereo indicator lamp | VR01 | Lighting Point | ○ Tune FM SSG (Center indication of Tune Meter) |

3-8. AM IF, Dial Calibration, RF and Signal Meter Alignment (See Figs. 3-6, 3-7, 3-8 and 3-10 on page 10)

- Note:** 1. Selector.....AM
 2. Master VolumeMinimum
 3. Confirm start point of dial pointer before alignment.
 4. In case of using loop antenna, increase output of AM SSG for 26dB than bar antenna's direct input as it attenuates input sensitivity for 26dB. (See Fig. 3-5)
 5. After adjustment of signal meter, confirm the meter's swing on FM. (If meter swang out or not enough, readjust VR02.) (See Page 3-8)

Fig. 3-5





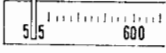
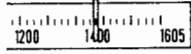
| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|------|----------------------------------|--|-----------------------------------|--|-------------------|----------------------------------|--|
| | | FROM | TO | | | | |
| 1 | IF coil | Output 70dB Genescope | OSC trimmer cap. (TC06) Fig. 3-10 | Connected Point between R130 & R136 on F-1479 (Fig. 3-10 TP.E) | T08 | Max. IF waveform 1 Fig. 3-6 | ○ Turn core T09 & T10 CCW. |
| 2 | IF coil | Output 55dB Genescope | Same as above | | T09 | Max. IF waveform 2 Fig. 3-7 | |
| 3 | IF coil | Output 45dB Genescope | Same as above | | T10 | Max. IF waveform 3 Fig. 3-8 | ○ If not, readjust T08 & T09 slightly |
| 4 | 535kHz Dial calibration | 535kHz ANT input 60dB 400Hz (30% MOD) AM SSG Use loop ANT | Bar ANT | REC OUT L or R-ch VTVM & Scope | T11 | Max. output | ○ If broadcasting station is near, it might be used  |
| 5 | 1400kHz Dial Calibration | 1400kHz ANT input 60dB 400Hz (30% MOD) AM SSG Use loop ANT | Same as above | Same as above | Trimmer Cap. TC06 | Same as above | Same as above  |
| 6 | Confirm 600Hz Dial Calibration | 600kHz ANT input 60dB 400Hz (30% MOD) AM SSG Use loop ANT | Same as above | Same as above | | Confirm 600kHz Dial Calibration | ○ If not, repeat from Step 4 |
| 7 | Confirm 1000Hz Dial Calibration | 1000kHz ANT input 60dB 400Hz (30% MOD) AM SSG Use loop ANT | Same as above | Same as above | | Confirm 1000kHz Dial Calibration | |
| 8 | Confirm 1400kHz Dial Calibration | Same as Step 5 | Same as above | Same as above | | Confirm 1400kHz Dial Calibration | ○ If not, repeat from Step 5 |
| 9 | 600kHz RF Adj. | 600kHz ANT input 50dB 400Hz (30% MOD) AM SSG Use loop ANT | Same as above | Same as above | Bar ANT L702 | Max. output | |

Fig. 3-6

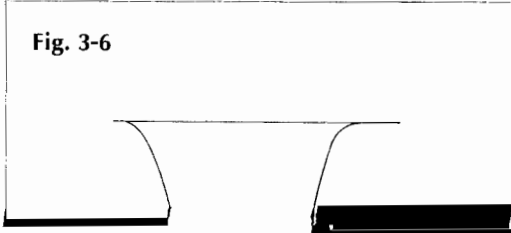


Fig. 3-10



VR05
FM stereo

4. THREADING OF DIAL CORD

* If dial cord is or slips, replace cord by following procedures. As QRX-5500 is using 0.6mmφ cord, please use with same type certainly.

* Length of dial cord.....approx. 210cm (82.7 inch)

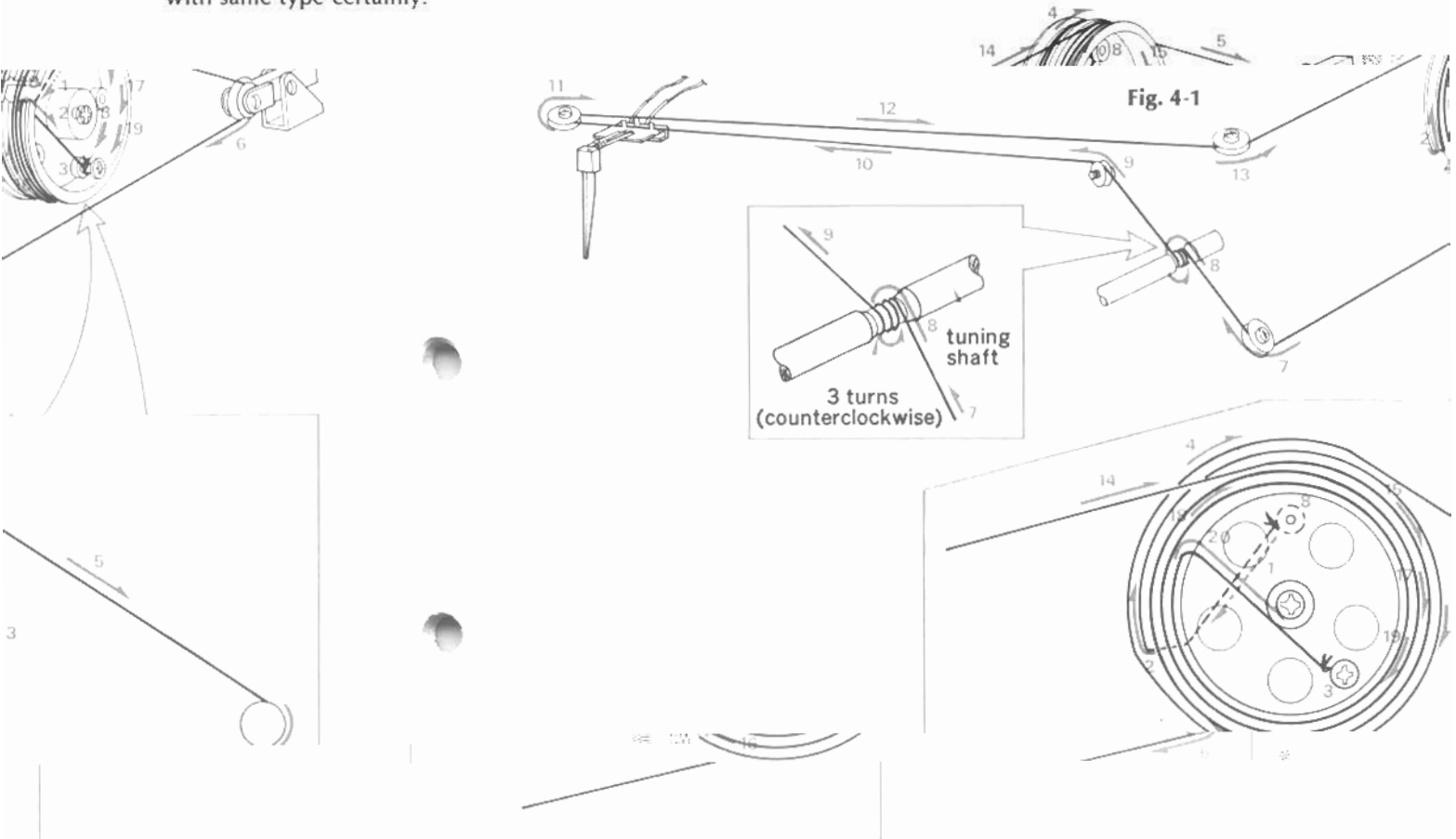


Fig. 4-1

al order from 1 to 20 as

5) After these procedures, lock the knots of cord with paint.

1. How to Thread Dial Cord

* Thread dial cord in numeric order from 1 to 20 as shown in Fig. 4-1.

1) Close the variable capacitor completely (Maximum capacitance).

capacitance).

2) Tie cord to number ⑧ screw of the dial pulley and

thread cord in direction of arrow from 1 to 7 toward tuning shaft 8.

3) After 8, wind cord three turns around the tuning shaft counterclockwise and thread it in direction of arrow from 9 to 19.

4) After 20, tie cord to number ③ screw of the pulley.

* In order to proceed with the above procedure 4) successfully, please follow the instruction under-mentioned.

(1) To strengthen the dial cord's tension, hold around the end of cord and pull it toward the Front Panel.

(2) Then, turn the tuning shaft counterclockwise, as tension will be more constantly obtained.

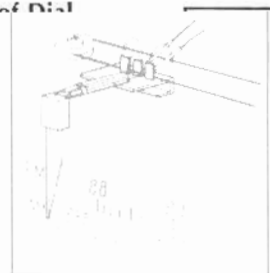
cord to number ③ screw of the pulley (same procedure 4).

Attachment of Dial Pointer

- 1) Close the variable capacitor completely (Maximum capacitance).
- 2) Set the dial pointer to "0" on dial scale and tighten the dial pointer ass'y. (See Fig. 4-2)

* Make sure that the dial mechanism operates smoothly by turning the Tuning knob.

Fig. 4-2



| Stock No. | Stock Description | Description |
|-----------|-------------------|-------------|
| 6036050 | Dial Cord 0.6mmφ | |

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as proc

5. TROUBLESHOOTING CHART

5-1. Troubleshooting on Power Supply Section

1. No power supplied to each section

| Symptom | Check Point | Cause & What to Do |
|----------------------------------|--------------|--|
| 1-1. Each lamp not lighted | | 1. Imperfect contact of power supply plug 2. Power fuse open 3. Defective power switch S705 4. F01 on F-1483 open 5. Defective power transformer PT001 |
| 1-2. Each lamp lighted | | |
| 1) +31V not supplied to terminal | 05 on F-1482 | 6. Defective D07, D08 on F-1483 |
| 2) -31V not supplied to terminal | 07 on F-1482 | 7. Defective D05, D06 on F-1483 |
| 3) +42V not supplied to terminal | 6F on F-1472 | 8. F02, F03 on F-1483 open 9. Defective D02 on F-1483 10. Defective TR03, TR04 on F-1483 |
| 4) +25V not supplied to terminal | 25 on F-2047 | 11. Defective TR05 on F-1483 12. Imperfect contact of VR01 on F-1483 13. Defective D15 on F-1483 |

5-2. Troubleshooting on Audio Section

1. Quick acting fuse open

| | |
|---|--|
| 1-1. After replacement, fuse not open | 1. Set the bias current to 25mA |
| 1-2. After replacement, fuse open again | 2. Defective TR37, TR41 (TR38, TR42) on F-1482 3. Defective TR29, TR33 (TR30, TR34) on F-1482 4. Defective TR25 (TR26) on F-1482 |

2. 2-CH of FUNCTION inoperative

| | |
|--------------------------------|---|
| 2-1. Both channels inoperative | 5. Defective power supply section (See 5-1) |
| 2-2. One channel inoperative | 6. Imperfect contact of TAPE MONITOR switch S01 (S02) on F-1489 7. Defective TR01, TR03, TR05, TR07 (TR02, TR04, TR06, TR08) on F-1484 8. Imperfect contact of Low Filter switch S01 (S02) on F-1486 9. Imperfect contact of High Filter switch S03 (S04) on F-1486 10. Imperfect contact of Direction switch S703a~d 11. Defective F-1482 printed board |

3. PHONO inoperative

| Symptom | Check Point | Cause & What to Do |
|--|-------------|---|
| 3-1. Both channels inoperative | | 12. Defective power supply section (See 5-1) |
| 3-2. One channel inoperative | | |
| 1. Reverse the output cords of L and R-ch from turntable | | |
| 1-1. Inoperative channel reverses | | 13. Imperfect contact of turntable output cord 14. Defective turntable |
| 1-2. Inoperative channel not reverses | | 15. Defective TR601, TR603, TR605, TR607 (TR602, TR604, TR606, TR608) on F-1472 16. Imperfect contact of SELECTOR switch S701a (S701b) |

4. MIC inoperative

| | | |
|---|--|--|
| 4-1. Both channels inoperative | | |
| 1. +42V not supplied to terminal 43 on F-1489 | | 17. Defective power supply section (F-1483) |
| 2. -42V supplied to terminal 43 on F-1489 | | 18. Defective TR01, TR02 on F-1489 19. Defective VR707 |
| 4-2. One channel inoperative | | 20. Defective FET01 (FET02) on F-1489 21. Defective TR03 (TR04) on F-1489 22. Imperfect contact of Microphone Jack (J701) 23. Defective VR705 (VR706) |

5. Level Meter inoperative

| | | |
|-----------------------------------|--|---|
| 5-1. 4-channels inoperative | | 24. Defective power supply section (See 5-1) 25. Defective F-2048, F-2047 |
| 5-2. Two channels inoperative | | |
| 1) Front two channels inoperative | | 26. Defective TR01, TR05 (TR02, TR06) on F-1485 27. Defective D01, D05, D09, D13, (D02, D06, D10, D14) on F-1485 28. Defective VR01 (VR02) on F-1485 29. Defective Meter |
| 2) Rear two channels inoperative | | 30. Defective TR03, TR07 (TR04, TR08) on F-1485 31. Defective D03, D07, D11, D15 (D04, D08, D12, D16) on F-1485 32. Defective Meter 33. Defective F-2048, F-2047 |

6. QS SYNTHESIZER or QS REGULAR MATRIX of FUNCTION Switch inoperative

| Symptom | Check Point | Cause & What to Do |
|--|-------------|---|
| *QS Regular Matrix circuit consists of both F-2047 and F-2048 printed boards. (2-CH of FUNCTION switch operative) | | |
| 6-1. Both Front and Rear inoperative | ————— | 34. Defective power supply section (See 5-1) |
| 6-2. One Front and Rear inoperative | ————— | 35. Defective TR01, TR04 (TR02, TR05) on F-2048 |
| | | 36. Defective TR01, TR03, TR05 (TR02, TR04, TR06) on F-2047 |
| | | 37. Defective D09, D11, D13, D15 (D10, D12, D14, D16) on F-2047 |
| | | 38. Defective FET01 (FET02) on F-2047 |
| | | 39. Defective TR07 (TR08, TR09) on F-2047 |
| | | 40. Defective TR05, TR09, TR13 (TR06, TR10, TR14) on F-2048 |
| | | 41. Defective TR07, TR11, TR15 (TR08, TR12, TR16) on F-2048 |
| | | 42. Defective FUNCTION switch S702a~f |

5-3. Troubleshooting on RF Section

1. Both FM and AM inoperative (PHONO operative)

| | | |
|---|-------|---|
| 1-1. Both channels inoperative | | |
| 1) +13V not supplied to terminal 03, 06, 16 on F-1479 | ————— | 1. Defective power supply section (F-1483) |
| 2) +13V not supplied to terminal 03, 06, on F-1479 | ————— | 2. Imperfect contact of SELECTOR switch S701I |
| 1-2. One channel inoperative | | |
| 1) AM section inoperative | ————— | 3. Defective SELECTOR switch S701a (701b) |
| 2) FM section inoperative | ————— | 4. Defective SELECTOR switch S701a (701b) |
| | | 5. Defective TR17 (TR18) on F-1479 |
| | | 6. Defective Low Pass Filter L.P. F01 |

2. FM Section

| Symptom | Check Point | Cause & What to Do |
|---|-------------|--|
| *Before check, set MUTING switch to OFF (Pushed in) | | |
| 2-1. FM inoperative only | | |
| 1. Tune FM signal or FM broadcasting station | | |
| 1-1. Signal meter inoperative | | <ul style="list-style-type: none"> 7. Defective IC01, IC02 on F-1479 8. Defective T01~T05 on F-1479 9. Defective D01, D02 on F-1479 10. Defective IC03 on F-1479 |
| 1-2. Signal meter operative (Interstation noise too low compared with proper unit) | | <ul style="list-style-type: none"> 11. Defective CF01~CF03 on F-1479 12. Defective FET01, TR01, TR02 on F-1479 13. Defective TR05~TR10 on F-1479 14. Defective L01~L03 on F-1479 15. Defective T01~T05 on F-1479 |
| 2-2. Signal meter inoperative (FM broadcasting sound can be heard) | | <ul style="list-style-type: none"> 16. IF, RF out of adjustment on F-1479 17. Defective TR11, TR12 on F-1479 18. Defective T06, T07 on F-1479 19. Defective D03, D04 on F-1479 20. Defective VR02 on F-1479 21. Defective signal meter |
| 2-3. Tune meter inoperative (FM broadcasting sound can be heard) | | <ul style="list-style-type: none"> 22. T04, T05, out of adjustment on F-1479 23. IF out of adjustment on F-1479 24. Discriminator coil out of adjustment on F-1479 25. Defective Tune meter |
| 2-4. Muting circuit inoperative (Signal meter operative) | | <ul style="list-style-type: none"> 26. Defective TR13~TR15 on F-1479 27. Defective TR19, TR20 on F-1479 28. Defective D05 on F-1479 29. Defective VR03 on F-1479 30. Imperfect contact of MUTING switch S41 |

| Symptom | Check Point | Cause & What to Do |
|--|--|--|
| 2-5. No channel separation on FM stereo broadcasting | *Confirm that SELECTOR switch is set to FM AUTO. *Confirm signal meter operates | |
| 1. Indicator lamp not lighted | | <ul style="list-style-type: none"> —31. Defective the indicator lamp PL726 —32. Defective TR16 on F-1479 —33. Defective L08 on F-1479 —34. Defective IC03 on F-1479 —35. Defective VR01 for indicator lamp on F-1479 —36. Defective VR05 for FM stereo separation on F-1479 —37. Defective F-1483 |
| 2. Indicator lamp lighted | | <ul style="list-style-type: none"> —38. Defective TR16 on F-1479 |

3. AM Section

3-1. AM inoperative

1. Interstation noise changes by touching the terminal 04 on F-1479

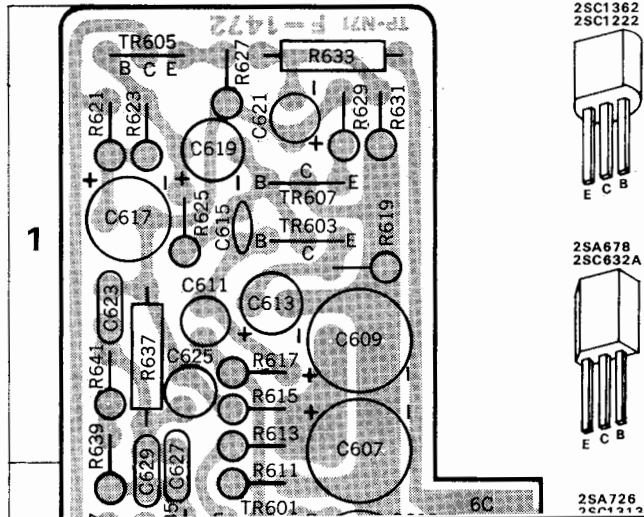
| | | |
|---|--|--|
| 1-1. Increase | | <ul style="list-style-type: none"> —39. Defective bar antenna —40. Defective TR24 on F-1479 —41. Defective T11 on F-1479 —42. Variable capacitor shorted |
| 1-2. No change | | <ul style="list-style-type: none"> —43. Defective D07 on F-1479 —44. Defective TR21~TR23 on F-1479 —45. Defective T08~T10 on F-1479 |
| 3-2. Distortion | | <ul style="list-style-type: none"> —46. Defective D06, D07 on F-1479 —47. IF out of adjustment on F-1479 |
| 3-3. Signal meter inoperative (AM broadcasting sound can be heard) | | <ul style="list-style-type: none"> —48. IF, RF out of adjustment on F-1479 —49. Defective TR25 on F-1479 —50. Defective D08, D09 on F-1479 —51. Imperfect contact of VR06 on F-1479 —52. Defective signal meter |

6. PARTS LOCATIONS AND PARTS LIST

6-1. F-1472A Equalizer Circuit Board

(Stock No. 7550510 Complete Circuit Board F-1472A)

Conductor Side



Parts List

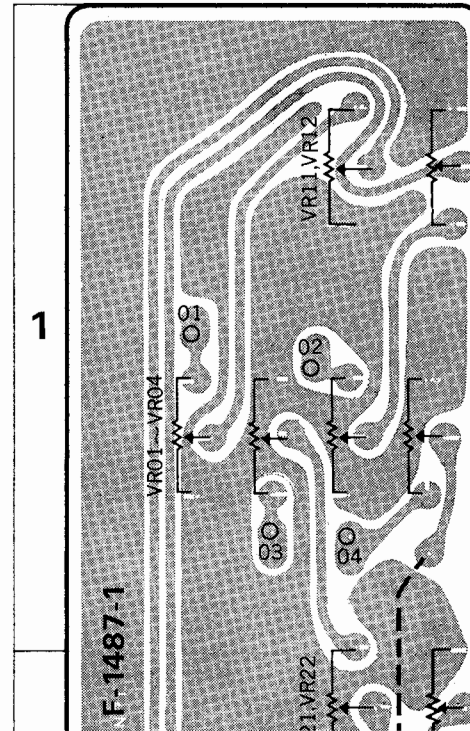
| Parts No. | Stock No. | Description | Position | |
|-----------|------------|-------------------------------|------------|-------------------------------|
| TR601 | 0300410, 1 | 2SA726 [®] (F, G) | 2 | |
| TR602 | 0300410, 1 | 2SA726 [®] (F, G) | 2 | |
| TR603 | 0305766, 7 | 2SA632A [®] (71, 81) | 1 | |
| | | or | | |
| | | 0306011, 2 | | 2SC1222 (F, E) |
| | | or | | |
| TR604 | 0306071, 2 | 2SC1313 [®] (G, H) | 3 | |
| | | or | | |
| | | 0305766, 7 | | 2SA632A [®] (71, 81) |
| | | or | | |
| TR605 | 0306011, 2 | 2SC1222 (F, G) | 1 | |
| | | or | | |
| TR606 | 0306141, 2 | 2SC1362 (71, 81) | 3 | |
| TR607 | 0300292, 3 | 2SA678 (7, 8) | 1 | |
| TR608 | 0300292, 3 | 2SA678 (7, 8) | 3 | |
| C601 | 0573229 | 2.2 μ F | 25V T.C. 2 | |
| C602 | 0573229 | 2.2 μ F | 25V T.C. 2 | |
| C603 | 0515330 | 33 μ F | 25V T.C. 2 | |

6-2. F-1487 Volume Circuit Board

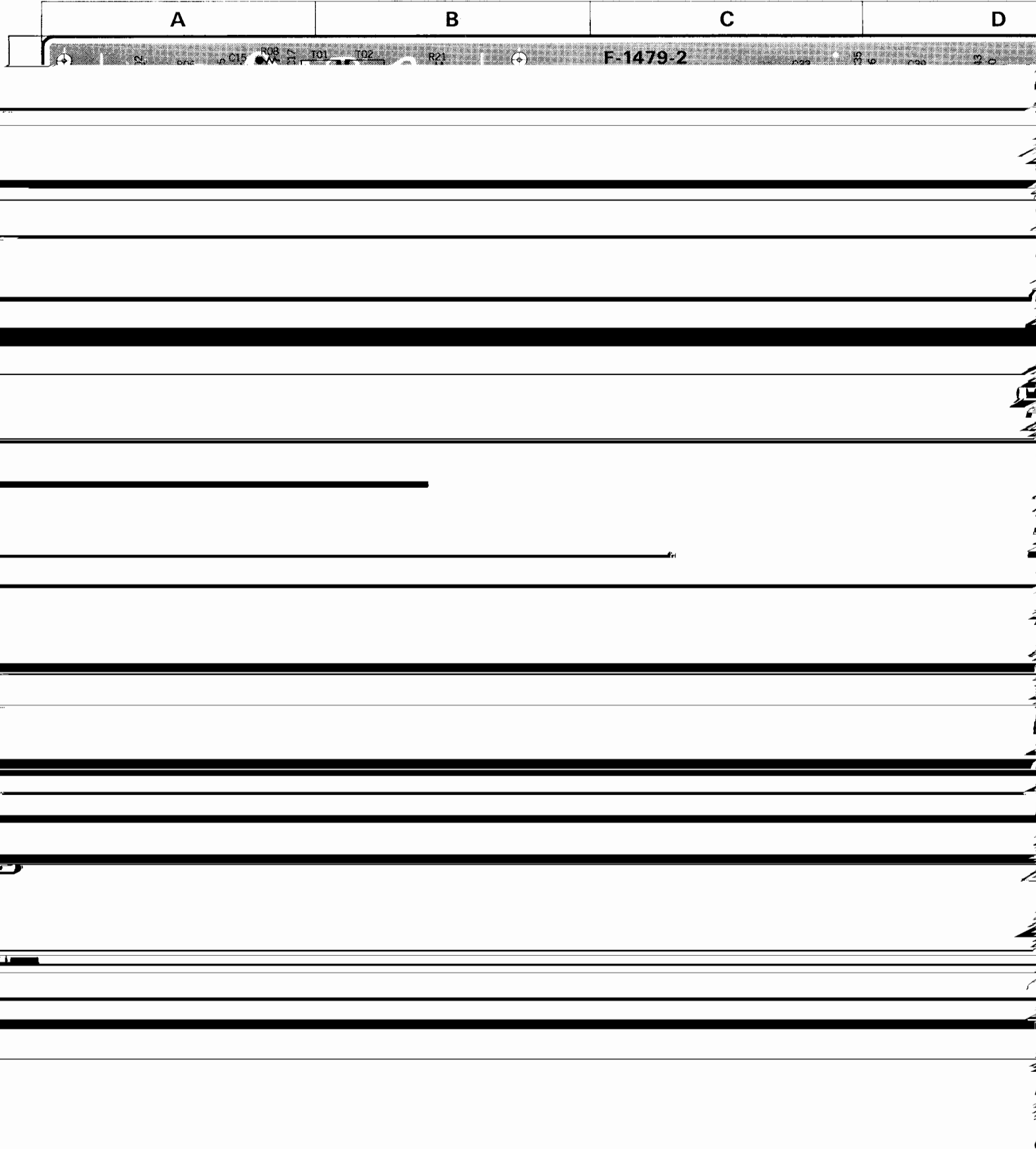
(Stock No. 7591850 Complete Circuit Board F-1487)

Conductor Side

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|-------------|----------------------------|
| R614 | 0106821 | 820Ω | 3 |
| R615 | 0106563 | 56kΩ | 1 |
| R616 | 0106563 | 56kΩ | 3 |
| R617 | 0106224 | 220kΩ | 1 |
| R618 | 0106224 | 220kΩ | 3 |
| R619 | 0106222 | 2.2kΩ | 1 |
| R620 | 0106222 | 2.2kΩ | 3 |
| R621 | 0106103 | 10kΩ | 1 |
| R622 | 0106103 | 10kΩ | 3 |
| R623 | 0106473 | 47kΩ | ± 5% 1/4W C.R. (E.L.R.) |
| R624 | 0106473 | 47kΩ | |
| R625 | 0106332 | 3.3kΩ | 1 |
| R626 | 0106332 | 3.3kΩ | 3 |
| R627 | 0106680 | 68Ω | 1 |
| R628 | 0106680 | 68Ω | 3 |
| R629 | 0106680 | 68Ω | 1 |
| R630 | 0106680 | 68Ω | 3 |
| R631 | 0106104 | 100kΩ | 1 |
| R632 | 0106104 | 100kΩ | 3 |
| R633 | 0107681 | 680Ω | ± 5% 1/4W C.R. |
| R634 | 0107681 | 680Ω | |
| R635 | 0106101 | 100Ω | ± 5% 1/4W C.R. (E.L.R.) |
| R636 | 0106101 | 100Ω | |
| R637 | 0107273 | 27kΩ | ± 5% 1/4W C.R. |
| R638 | 0107273 | 27kΩ | |
| R639 | 0106274 | 270kΩ | 1, 2 |
| R640 | 0106274 | 270kΩ | 2, 3 |
| R641 | 0106223 | 22kΩ | ± 5% 1/4W C.R. 1 |

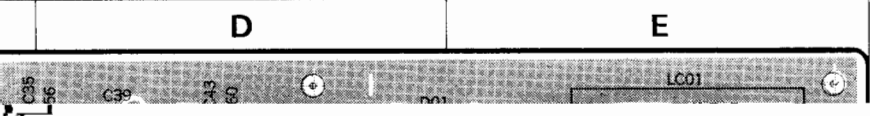


6-3. F-1479A Tuner Circuit Board (Stock No. 7520700 Complete Circuit Board F-1479A)
Conductor Side



D

E



2SA562
2SC1000



2SA678
2SC634A
2SC403C



2SC537
2SC930



2SC1364
2SC711
2SC738



2SC1047



| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------|----------|
| C65 | 0519105 | 2.2 μ F | 1 E |
| C66 | 0519105 | 2.2 μ F | 1 E |
| C67 | 0519105 | 2.2 μ F | 1 E |
| C68 | 0519105 | 2.2 μ F | 1, 2 E |
| C69 | 0656223 | 0.022 μ F | 1 B |
| C70 | 0656223 | 0.022 μ F | 2 B |
| C71 | 0519102 | 3.3 μ F | 2 B |
| C72 | 0600107 | 0.01 μ F | 2 B |
| C73 | 0656473 | 0.047 μ F | 2 B |
| C74 | 0669215 | 15pF | 2 B |
| C75 | 0600107 | 0.01 μ F | 2 B |
| C76 | 0620361 | 360pF | 2 B |
| C77 | 0669223 | 27pF | 2 B, C |
| C78 | 0656473 | 0.047 μ F | 2 B |
| C79 | 0656473 | 0.047 μ F | 2 B |
| C80 | 0512470 | 47 μ F | 2 B |
| C81 | 0656473 | 0.047 μ F | 2 C |
| C82 | 0656473 | 0.047 μ F | 2 C |
| C83 | 0656473 | 0.047 μ F | 2 C |
| C84 | 0656473 | 0.047 μ F | 2 C |
| C85 | 0512100 | 10 μ F | 2 C |
| C86 | 0656473 | 0.047 μ F | 2 C |
| C87 | 0601108 | 0.1 μ F | 2 C |
| C88 | 0512470 | 47 μ F | 2 C |
| C89 | 0656473 | 0.047 μ F | 2 C |
| C90 | 0656473 | 0.047 μ F | 2 C |
| C91 | 0656473 | 0.047 μ F | 2 C |
| C92 | 0669226 | 47pF | 2 C |
| C93 | 0600476 | 0.047 μ F | 2 C |
| C95 | 0600476 | 0.047 μ F | 2 C |
| C96 | 0600107 | 0.01 μ F | 2 C |
| C97 | 0601477 | 0.047 μ F | 2 C |
| C98 | 0510101 | 100 μ F | 2 D |
| C99 | 0656473 | 0.047 μ F | 2 C |
| C100 | 0502100 | 10 μ F | 2 A, B |
| C103 | 0620221 | 220pF | 2 D, E |
| C104 | 0669381 | 22pF | 2 C |
| R01 | 0107104 | 100k Ω | 1 A |
| R02 | 0107181 | 180 Ω | 1 A |
| R03 | 0106104 | 100k Ω | 1 A |
| R04 | 0106224 | 220k Ω | 1 A |
| R05 | 0106220 | 22 Ω | 1 A |
| R06 | 0106562 | 5.6k Ω | 1 A |
| R07 | 0107123 | 12k Ω | 1 A |
| R08 | 0106272 | 2.7k Ω | 1 A |
| R09 | 0107220 | 22 Ω | 1 A |
| R10 | 0106221 | 220 Ω | 1 A |
| R11 | 0106121 | 120 Ω | 1 A |
| R12 | 0107682 | 6.8k Ω | 1 A |
| R13 | 0106473 | 47k Ω | 1 A |
| R14 | 0107222 | 2.2k Ω | 1 A, B |
| R15 | 0106152 | 1.5k Ω | 1 B |
| R16 | 0106270 | 27 Ω | 1 B |
| R17 | 0106222 | 2.2k Ω | 1 B |
| R18 | 0107122 | 1.2k Ω | 1 B |
| R19 | 0106123 | 12k Ω | 1 B |
| R20 | 0106332 | 3.3k Ω | 1 B |
| R21 | 0107222 | 2.2k Ω | 1 B |
| R22 | 0106151 | 150 Ω | 1 B |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------|----------|
| R23 | 0107182 | 1.8k Ω | 1 B |
| R24 | 0106182 | 1.8k Ω | 1 B |
| R25 | 0106151 | 150 Ω | 1 B |
| R26 | 0106101 | 100 Ω | 1 B |
| R27 | 0106153 | 15k Ω | 1 B |
| R28 | 0106331 | 330 Ω | 1 B |
| R29 | 0107479 | 4.7 Ω | 1 B |
| R30 | 0113101 | 100 Ω | 1 B |
| R31 | 0106151 | 150 Ω | 1 C |
| R32 | 0107182 | 1.8k Ω | 1 B |
| R33 | 0106472 | 4.7k Ω | 1 B |
| R34 | 0106151 | 150 Ω | 1 C |
| R35 | 0106224 | 220k Ω | 1 B |
| R36 | 0106153 | 15k Ω | 1 B, C |
| R37 | 0106471 | 470 Ω | 1 C |
| R38 | 0107479 | 4.7 Ω | 1 C |
| R39 | 0113101 | 100 Ω | 1 C |
| R40 | 0106151 | 150 Ω | 1 C |
| R41 | 0107182 | 1.8k Ω | 1 C |
| R42 | 0106472 | 4.7k Ω | 1 C |
| R43 | 0107222 | 2.2k Ω | 1 C |
| R44 | 0106151 | 150 Ω | 1 C |
| R45 | 0106224 | 220k Ω | 1 C |
| R46 | 0106153 | 15k Ω | 1 C |
| R47 | 0106471 | 470 Ω | 1 C |
| R48 | 0113100 | 10 Ω | 1 C |
| R49 | 0107479 | 4.7 Ω | 1 C |
| R50 | 0106331 | 330 Ω | 1 C |
| R51 | 0106473 | 47k Ω | 1 C |
| R52 | 0106153 | 15k Ω | 1 C |
| R53 | 0107100 | 10 Ω | 1 C |
| R54 | 0106222 | 2.2k Ω | 1 C |
| R55 | 0106821 | 820 Ω | 2 C |
| R56 | 0107562 | 5.6k Ω | 1 D |
| R57 | 0107101 | 100 Ω | 1, 2 D |
| R58 | 0107100 | 10 Ω | 1 D |
| R59 | 0107103 | 10k Ω | 1, 2 D |
| R60 | 0107682 | 6.8k Ω | 1 D |
| R61 | 0107479 | 4.7 Ω | 1 D |
| R62 | 0106392 | 3.9k Ω | 2 D |
| R63 | 0107683 | 68k Ω | 2 D |
| R64 | 0106102 | 1k Ω | 2 D, E |
| R65 | 0106102 | 1k Ω | 2 D, E |
| R66 | 0107100 | 10 Ω | 1 D |
| R67 | 0107102 | 1k Ω | 2 D |
| R68 | 0107153 | 15k Ω | 2 D |
| R69 | 0106152 | 1.5k Ω | 2 D |
| R70 | 0106105 | 1M Ω | 2 D |
| R71 | 0106153 | 15k Ω | 2 D |
| R72 | 0106560 | 56 Ω | 2 D |
| R73 | 0107473 | 47k Ω | 2 D |
| R74 | 0107472 | 4.7k Ω | 2 D, E |
| R75 | 0107479 | 4.7 Ω | 2 D, E |
| R76 | 0107104 | 100k Ω | 2 D, E |
| R77 | 0107100 | 10 Ω | 2 D, E |
| R78 | 0107104 | 100k Ω | 2 D, E |
| R79 | 0107221 | 220 Ω | 1 E |
| R80 | 0107479 | 4.7 Ω | 1 E |
| R81 | 0106472 | 4.7k Ω | 2 E |

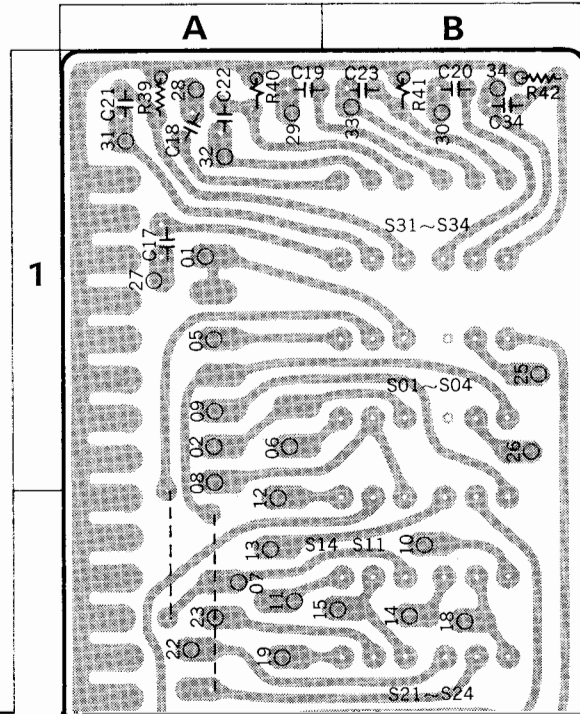
F-1479A Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|--------------------------------|----------|
| R82 | 0107151 | 150Ω ± 5 % 1/4W C.R. | 1, 2 E |
| R83 | 0106561 | 560Ω ± 5 % 1/4W C.R. (E.L.R.) | 2 E |
| R84 | 0107822 | 8.2kΩ ± 5 % 1/4W C.R. | 1, 2 E |
| R85 | 0106332 | 3.3kΩ | 1 E |
| R86 | 0106332 | 3.3kΩ | 2 E |
| R87 | 0106184 | 180kΩ | 1 E |
| R88 | 0106332 | 3.3kΩ | 1 E |
| R89 | 0106273 | 27kΩ | 1 E |
| R90 | 0106184 | 180kΩ | 1 E |
| R91 | 0106332 | 3.3kΩ | 2 E |
| R92 | 0106273 | 27kΩ | 2 E |
| R93 | 0106332 | 3.3kΩ ± 5 % 1/4W C.R. (E.L.R.) | 1 E |
| R94 | 0106391 | 390Ω | 1 E |
| R95 | 0106332 | 3.3kΩ | 1, 2 E |
| R96 | 0106391 | 390Ω | 2 E |
| R97 | 0106332 | 3.3kΩ | 2 E |
| R98 | 0106562 | 5.6kΩ | 2 E |
| R99 | 0106332 | 3.3kΩ | 2 E |
| R100 | 0106562 | 5.6kΩ | 2 E |
| R102 | 0107103 | 10kΩ | 2 B |
| R103 | 0107220 | 22Ω | 2 B |
| R104 | 0107102 | 1kΩ | 2 B |
| R105 | 0107224 | 220kΩ | 1, 2 B |
| R106 | 0106561 | 560Ω ± 5 % 1/4W C.R. | 1, 2 B |
| R107 | 0107561 | 560Ω ± 5 % 1/4W C.R. (E.L.R.) | 2 B |
| R108 | 0107392 | 3.9kΩ ± 5 % 1/4W C.R. | 2 B |
| R109 | 0107123 | 12kΩ | 2 B |
| R110 | 0106332 | 3.3kΩ ± 5 % 1/4W C.R. (E.L.R.) | 1 B, C |

6-4. F-1489 Mixing & Accessory Circuit Board

(Stock No. 7591870 Complete Circuit Board F-1489)

Conductor Side



Parts List

| Parts No. | Stock No. | Description | Position | Parts No. | Stock No. | Description | Position | | |
|-----------|------------|------------------|-----------------------|-----------|-----------------------|-------------|----------|-------|-----|
| TR01 | 0306071, 2 | 2SC1313 (G, H) | 3 A | R16 | 0106473 | 47kΩ | 3 A | | |
| | or | | | R17 | 0106473 | 47kΩ | 3 A | | |
| | 0305880, 1 | 2SC1000 (GR, BL) | | R18 | 0106473 | 47kΩ | 3 A | | |
| TR02 | 0306011, 2 | 2SC1222 (E, F) | 3 A | R19 | 0106563 | 56kΩ | 3 B | | |
| | or | | | R20 | 0106563 | 56kΩ | 3 B | | |
| | 0306071, 2 | 2SC1313 (G, H) | | R21 | 0106683 | 68kΩ | 3 B | | |
| TR03 | 0305880, 1 | 2SC1000 (GR, BL) | 3 B | R22 | 0106683 | 68kΩ | 3 B | | |
| | or | | | R23 | 0106334 | 330kΩ | 3 B | | |
| | 0306011, 2 | 2SC1222 (E, F) | | R24 | 0106334 | 330kΩ | 3 B | | |
| TR04 | 0306071, 2 | 2SC1313 (G, H) | 3 B | R25 | 0106562 | 5.6kΩ | 3 B | | |
| | or | | | R26 | 0106562 | 5.6kΩ | 3 B | | |
| | 0305880, 1 | 2SC1000 (GR, BL) | | R27 | 0106681 | 680Ω | 3 B | | |
| FET01 | 0370061 | 2SK24 (F) | FET 3 B | R28 | 0106681 | 680Ω | 3 B | | |
| | or | | | R29 | 0106274 | 270kΩ | 3 B | | |
| | 0370061 | 2SK24 (F) | | R30 | 0106274 | 270kΩ | 3 B | | |
| C01 | 0573108 | 0.1μF | 25V T.C. | 3 A | ± 5% ¼W C.R. (E.L.R.) | R31 | 0106683 | 68kΩ | 3 B |
| C02 | 0660101 | 100pF | ±10% 50V C.C. | 3 A | | R32 | 0106683 | 68kΩ | 3 B |
| C04 | 0573478 | 0.47μF | | 3 A, 3 B | | R33 | 0106472 | 4.7kΩ | 3 B |
| C05 | 0573478 | 0.47μF | | 3 A | | R34 | 0106472 | 4.7kΩ | 3 B |
| C06 | 0573478 | 0.47μF | | 3 A | | R35 | 0106102 | 1kΩ | 3 B |
| C07 | 0573688 | 0.68μF | 25V T.C. | 3 A, B | | R36 | 0106102 | 1kΩ | 3 B |
| C08 | 0573688 | 0.68μF | | 3 A, B | | R37 | 0106104 | 100kΩ | 3 B |
| C09 | 0573478 | 0.47μF | | 3 B | | R38 | 0106104 | 100kΩ | 3 B |
| C10 | 0573478 | 0.47μF | | 3 B | | R39 | 0106333 | 33kΩ | 1 A |
| C11 | 0510470 | 47μF | 6.3V E.C. | 3 B | | R40 | 0106333 | 33kΩ | 1 A |
| C12 | 0510470 | 47μF | | 3 B | R41 | 0106333 | 33kΩ | 1 B | |
| C13 | 0573339 | 3.3μF | | 3 B | R42 | 0106333 | 33kΩ | 1 B | |
| C14 | 0573339 | 3.3μF | | 3 B | | | | | |
| C15 | 0519106 | 4.7μF | 50V T.C. | 3 B | | | | | |
| C16 | 0519106 | 4.7μF | | 3 B | | | | | |
| C17 | 0620151 | 150pF | | 1 A | | | | | |
| C18 | 0620151 | 150pF | 50V P.C. | 1 A, B | | | | | |
| C19 | 0620151 | 150pF | | 1 B | | | | | |
| C20 | 0620151 | 150pF | | 1 B | | | | | |
| C21 | 0600227 | 0.022μF | | 1 A | | | | | |
| C22 | 0600227 | 0.022μF | | 1 A | | | | | |
| C23 | 0600227 | 0.022μF | 50V M.C. | 1 B | | | | | |
| C24 | 0600227 | 0.022μF | | 1 B | | | | | |
| C25 | 0657222 | 0.0022μF | 50V C.C. | | | | | | |
| R01 | 0106103 | 10kΩ | | 3 A | | | | | |
| R02 | 0106102 | 1kΩ | | 3 A | | | | | |
| R03 | 0106394 | 390kΩ | | 3 A | | | | | |
| R04 | 0106563 | 56kΩ | | 3 A | | | | | |
| R05 | 0106333 | 33kΩ | | 3 A | | | | | |
| R06 | 0106272 | 2.7kΩ | | 3 A | | | | | |
| R07 | 0106272 | 2.7kΩ | | 3 A | | | | | |
| R08 | 0106394 | 390kΩ | ± 5% ¼W C.R. (E.L.R.) | 3 A | | | | | |
| R09 | 0106474 | 470kΩ | | 3 A | | | | | |
| R10 | 0106274 | 270kΩ | | 3 A | | | | | |
| R11 | 0106332 | 3.3kΩ | | 3 A | | | | | |
| R12 | 0106152 | 1.5kΩ | | 3 A | | | | | |
| R13 | 0106682 | 6.8kΩ | | 3 B | | | | | |
| R14 | 0106682 | 6.8kΩ | | 3 B | | | | | |
| R15 | 0106473 | 47kΩ | | 3 A | | | | | |
| | | | | | 1130750 | Push Switch | | | |

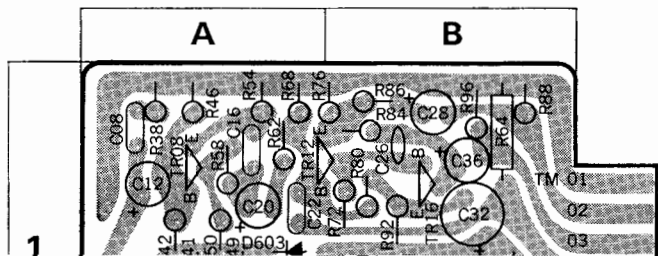
Abbreviations

| | |
|--|--|
| C.R. : Carbon Resistor | BP.E.C.: Bi-Pola Electrolytic Capacitor |
| S.R. : Solid Resistor | C.C. : Ceramic Capacitor |
| Ce.R. : Cement Resistor | Mi.C. : Mica Capacitor |
| M.R. : Metallized Film Resistor | O.C. : Oil Capacitor |
| M.C. : Mylar Capacitor | P.C. : Polystyrene Capacitor |
| E.C. : Electrolytic Capacitor | T.C. : Tantalum Capacitor |

6-5. F-2048 Vario-Matrix Circuit Board

(Stock No. 7650120 Complete Circuit Board F-2048)

Conductor Side



Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|----------------|----------|
| TR01 | 0305475 | 2SC871 (R) (F) | 2 B |
| TR02 | 0305475 | 2SC871 (R) (F) | 2 B |
| TR03 | 0305475 | 2SC871 (R) (F) | 2 A, B |
| TR04 | 0305475 | 2SC871 (R) (F) | 2 A, B |
| TR05 | 0300470 | 2SA726 (W) (F) | 3 A |
| | or | or | |
| | 0300410 | 2SA726 (R) (F) | 3 A |
| TR06 | 0305475 | 2SC871 (R) (F) | 3 A |
| TR07 | 0305475 | 2SC871 (R) (F) | 1 A |
| TR08 | 0300470 | 2SA726 (W) (F) | 1 A |
| | or | or | |
| | 0300410 | 2SA726 (R) (F) | 1 A |
| TR09 | 0305475 | 2SC871 (R) (F) | 2 B |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------|------------------------------------|
| C28 | 0513100 | 10 μ F | 25V E.C. 1 B |
| C29 | 0510101 | 100 μ F | 3 B |
| C30 | 0510101 | 100 μ F | 6.3V E.C. 3 B |
| C31 | 0510101 | 100 μ F | 1 B |
| C32 | 0510101 | 100 μ F | 1 B |
| C33 | 0573478 | 0.47 μ F | 3 B |
| C34 | 0573478 | 0.47 μ F | 25V T.C. 3 B |
| C35 | 0573478 | 0.47 μ F | 1 B |
| C36 | 0573478 | 0.47 μ F | 1 B |
| C37 | 0666151 | 150 pF | |
| C38 | 0666151 | 150 pF | 50V C.C. |
| C39 | 0666151 | 150 pF | |
| C40 | 0666151 | 150 pF | |
| C601 | 0513221 | 220 μ F | 2 A |
| C602 | 0513221 | 220 μ F | 25V E.C. 2, 3 A |
| C603 | 0513221 | 220 μ F | 1, 2 A |
| C604 | 0513100 | 10 μ F | 2 B |
| C605 | 0573108 | 0.1 μ F | 25V T.C. 2 B |
| C606 | 0573108 | 0.1 μ F | 2 B |
| R01 | 0106222 | 2.2k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 B |
| R02 | 0106222 | 2.2k Ω | (E.L.R.) 2 B |
| R03 | 0107224 | 220k Ω | 2 B |
| R04 | 0107224 | 220k Ω | 2 B |
| R05 | 0107104 | 100k Ω | 2 B |
| R06 | 0107104 | 100k Ω | 2 B |
| R07 | 0107222 | 2.2k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 B |
| R08 | 0107222 | 2.2k Ω | 2 B |
| R09 | 0107222 | 2.2k Ω | 2 B |
| R10 | 0107222 | 2.2k Ω | 2 B |
| R11 | 0107224 | 220k Ω | 2 B |
| R12 | 0106224 | 220k Ω | 2 B |
| R13 | 0106223 | 22k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 B |
| R14 | 0106223 | 22k Ω | (E.L.R.) 2 B |
| R15 | 0107152 | 1.5k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R16 | 0107152 | 1.5k Ω | 2 A |
| R17 | 0106152 | 1.5k Ω | 2 A |
| R18 | 0106152 | 1.5k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R19 | 0106224 | 220k Ω | (E.L.R.) 2 B |
| R20 | 0107224 | 220k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R21 | 0107224 | 220k Ω | 2 B |
| R22 | 0106224 | 220k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 B |
| R23 | 0107104 | 100k Ω | (E.L.R.) 2 A |
| R24 | 0107104 | 100k Ω | 2 A |
| R25 | 0107104 | 100k Ω | 2 A |
| R26 | 0107104 | 100k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R27 | 0107104 | 100k Ω | 2 A |
| R28 | 0107104 | 100k Ω | 2 A |
| R29 | 0107104 | 100k Ω | 2 A |
| R30 | 0107104 | 100k Ω | 2 A |
| R31 | 0106563 | 56k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R32 | 0106563 | 56k Ω | (E.L.R.) 2 A |
| R33 | 0107563 | 56k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R34 | 0106563 | 56k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 A |
| R35 | 0106563 | 56k Ω | (E.L.R.) 3 A |
| R36 | 0107563 | 56k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 3 A |
| R37 | 0106563 | 56k Ω | 1 A |
| R38 | 0106563 | 56k Ω | 1 A |
| R39 | 0106104 | 100k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 3 A |
| R40 | 0106224 | 220k Ω | (E.L.R.) 3 A |
| R41 | 0106224 | 220k Ω | 1 A |
| R42 | 0106104 | 100k Ω | 1 A |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------|------------------------------------|
| R43 | 0107224 | 220k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 3 A |
| R44 | 0106104 | 100k Ω | 3 A |
| R45 | 0106104 | 100k Ω | 1 A |
| R46 | 0106224 | 220k Ω | 1 A |
| R47 | 0106682 | 6.8k Ω | 3 A |
| R48 | 0106682 | 6.8k Ω | 3 A |
| R49 | 0106682 | 6.8k Ω | 1 A |
| R50 | 0106682 | 6.8k Ω | 1 A |
| R51 | 0106682 | 6.8k Ω | 3 A |
| R52 | 0106682 | 6.8k Ω | 3 A |
| R53 | 0106682 | 6.8k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 1 A |
| R54 | 0106682 | 6.8k Ω | (E.L.R.) 1 A |
| R55 | 0106223 | 22k Ω | 3 A |
| R56 | 0106223 | 22k Ω | 3 A |
| R57 | 0106153 | 15k Ω | 1 A |
| R58 | 0106153 | 15k Ω | 1 A |
| R59 | 0106223 | 22k Ω | 3 A |
| R60 | 0106223 | 22k Ω | 3 B |
| R61 | 0106223 | 22k Ω | 1 A |
| R62 | 0106223 | 22k Ω | 1 A |
| R63 | 0107104 | 100k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 1 B |
| R64 | 0107104 | 100k Ω | 1 B |
| R65 | 0106154 | 150k Ω | 3 A |
| R66 | 0106154 | 150k Ω | 3 A |
| R67 | 0106154 | 150k Ω | 1 A, B |
| R68 | 0106154 | 150k Ω | 1 A |
| R69 | 0106124 | 120k Ω | 3 B |
| R70 | 0106124 | 120k Ω | 3 B |
| R71 | 0106124 | 120k Ω | 1 B |
| R72 | 0106124 | 120k Ω | 1 B |
| R73 | 0106392 | 3.9k Ω | 3 A |
| R74 | 0106392 | 3.9k Ω | 3 B |
| R75 | 0106392 | 3.9k Ω | 1 B |
| R76 | 0106392 | 3.9k Ω | 1 A, B |
| R77 | 0106824 | 820k Ω | 3 B |
| R78 | 0106824 | 820k Ω | 3 B |
| R79 | 0106824 | 820k Ω | 1 B |
| R80 | 0106824 | 820k Ω | $\pm 5\%$ $\frac{1}{4}$ W C.R. 1 B |
| R81 | 0106123 | 12k Ω | (E.L.R.) 3 B |
| R82 | 0106123 | 12k Ω | 3 B |
| R83 | 0106123 | 12k Ω | 1 B |
| R84 | 0106123 | 12k Ω | 1 B |
| R85 | 0106123 | 12k Ω | 1 B |
| R86 | 0106123 | 12k Ω | 1 B |
| R87 | 0106104 | 100k Ω | 1 B |
| R88 | 0106104 | 100k Ω | 1 B |
| R89 | 0106122 | 1.2k Ω | 3 B |
| R90 | 0106122 | 1.2k Ω | 3 B |
| R91 | 0106122 | 1.2k Ω | 1 B |
| R92 | 0106122 | 1.2k Ω | 1 B |
| R93 | 0106104 | 100k Ω | 3 B |
| R94 | 0106104 | 100k Ω | 3 B |
| R95 | 0106104 | 100k Ω | 1 B |
| R96 | 0106104 | 100k Ω | 1 B |

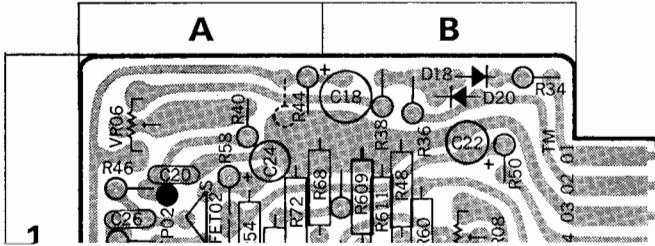
== Abbreviations ==

| | |
|--|--|
| C.R. : Carbon Resistor | BP.E.C.: Bi-Pola Electrolytic Capacitor |
| S.R. : Solid Resistor | C.C. : Ceramic Capacitor |
| Ce.R. : Cement Resistor | Mi.C. : Mica Capacitor |
| M.R. : Metallized Film Resistor | O.C. : Oil Capacitor |
| M.C. : Mylar Capacitor | P.C. : Polystyrene Capacitor |
| E.C. : Electrolytic Capacitor | T.C. : Tantalum Capacitor |

6-6. F-2047 Vario-Matrix Circuit Board

(Stock No. 7850110 Complete Circuit Board F-2047)

Conductor Side



Parts List

| Parts No. | Stock No. | Description | Position | |
|-----------|-----------|---------------|--------------|--------|
| TR01 | 0305732 | 2SC711 (F) | } Transistor | 3 A |
| TR02 | 0305732 | 2SC711 (F) | | 3 A |
| TR03 | 0305732 | 2SC711 (F) | | 3 A |
| TR04 | 0305732 | 2SC711 (F) | | 3 A |
| TR05 | 0305732 | 2SC711 (F) | | 3 B |
| TR06 | 0305732 | 2SC711 (F) | | 3 B |
| TR07 | 0305475 | 2SC871 (H)(F) | | 2 B |
| TR08 | 0305475 | 2SC871 (H)(F) | | 1 A, B |
| TR601 | 0305732 | 2SC711 (F) | 3 B | |
| TR602 | 0305475 | 2SC871 (H)(F) | 1 B | |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|--------------------|----------|
| C33 | 0513479 | 4.7 μ F 25V | 2 A, B |
| C34 | 0513479 | 4.7 μ F 25V | 1 A |
| C601 | 0510101 | 100 μ F 6.3V | 3 B |
| C602 | 0510101 | 100 μ F 6.3V | 3 B |
| C603 | 0513479 | 4.7 μ F 25V | 3 B |
| C604 | 0519102 | 3.3 μ F 50V | 1 B |
| C605 | 0600476 | 0.0047 μ F 50V | M.C. 1 B |
| R01 | 0106683 | 68k Ω | 3 A |
| R02 | 0106683 | 68k Ω | 3 A |
| R03 | 0106105 | 1M Ω | 3 A |
| R04 | 0106105 | 1M Ω | 3 A |
| R05 | 0106224 | 220k Ω | 3 A |
| R06 | 0106224 | 220k Ω | 3 A |
| R07 | 0106223 | 22k Ω | 3 A |
| R08 | 0106223 | 22k Ω | 3 A |
| R09 | 0106103 | 10k Ω | 3 A |
| R10 | 0106103 | 10k Ω | 3 A |
| R11 | 0106472 | 4.7k Ω | 3 A |
| R12 | 0106472 | 4.7k Ω | 3 A |
| R13 | 0106472 | 4.7k Ω | 3 A |
| R14 | 0106472 | 4.7k Ω | 3 A |
| R15 | 0106333 | 33k Ω | 3 A |
| R16 | 0106333 | 33k Ω | 3 A |
| R17 | 0110685 | 6.8M Ω | 3 A |
| R18 | 0110685 | 6.8M Ω | 3 A |
| R19 | 0106104 | 100k Ω | 3 B |
| R20 | 0106224 | 220k Ω | 3 B |
| R21 | 0106153 | 15k Ω | 3 A, B |
| R22 | 0106333 | 33k Ω | 3 A, B |
| R23 | 0106123 | 12k Ω | 3 A, B |
| R24 | 0106123 | 12k Ω | 3 A, B |
| R25 | 0106472 | 4.7k Ω | 3 B |
| R26 | 0106472 | 4.7k Ω | 3 B |
| R27 | 0106102 | 1k Ω | 3 B |
| R28 | 0106102 | 1k Ω | 3 B |
| R29 | 0107104 | 100k Ω | 3 B |
| R30 | 0106104 | 100k Ω | 3 B |
| R31 | 0107104 | 100k Ω | 3 B |
| R32 | 0106104 | 100k Ω | 3 B |
| R33 | 0106564 | 560k Ω | 2 B |
| R34 | 0106564 | 560k Ω | 1 B |
| R35 | 0106224 | 220k Ω | 2 B |
| R36 | 0106224 | 220k Ω | 1 B |
| R37 | 0106474 | 470k Ω | 2 B |
| R38 | 0106474 | 470k Ω | 1 B |
| R39 | 0107334 | 330k Ω | 2 A |
| R40 | 0106334 | 330k Ω | 1 A |
| R41 | 0106682 | 6.8k Ω | 2 A |
| R42 | 0106682 | 6.8k Ω | 2 A |
| R43 | 0106183 | 18k Ω | 2 A |
| R44 | 0106183 | 18k Ω | 1 A |
| R45 | 0106105 | 1M Ω | 2 A |
| R46 | 0106105 | 1M Ω | 1 A |
| R47 | 0107153 | 15k Ω | 2 B |
| R48 | 0107473 | 47k Ω | 1 B |
| R49 | 0106103 | 10k Ω | 2 B |
| R50 | 0106103 | 10k Ω | 1 B |
| R51 | 0106105 | 1M Ω | 2 A |
| R52 | 0106105 | 1M Ω | 1 A |
| R53 | 0107333 | 33k Ω | 2 A |
| R54 | 0107333 | 33k Ω | 1 A |

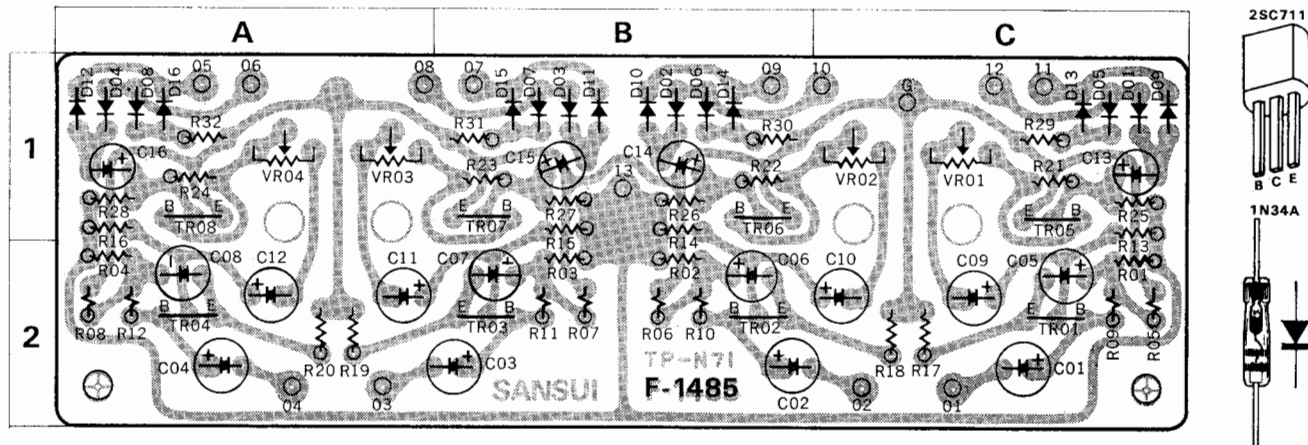
| Parts No. | Stock No. | Description | Position |
|-----------|-----------|-------------------|----------|
| R55 | 0106153 | 15k Ω | 2 A |
| R56 | 0106153 | 15k Ω | 1 A |
| R57 | 0106123 | 12k Ω | 2 A |
| R58 | 0106123 | 12k Ω | 1 A |
| R59 | 0107153 | 15k Ω | 2 B |
| R60 | 0107153 | 15k Ω | 1 B |
| R61 | 0106151 | 150 Ω | 2 A, B |
| R62 | 0107151 | 150 Ω | 1 A |
| R63 | 0107104 | 100k Ω | 2 B |
| R64 | 0106104 | 100k Ω | 1 B |
| R65 | 0107184 | 180k Ω | 2 B |
| R66 | 0106154 | 150k Ω | 1 B |
| R67 | 0107473 | 47k Ω | 2 B |
| R68 | 0107473 | 47k Ω | 1 A, B |
| R69 | 0107472 | 4.7k Ω | 2 B |
| R70 | 0106472 | 4.7k Ω | 1 B |
| R71 | 0107222 | 2.2k Ω | 2 B |
| R72 | 0107272 | 2.7k Ω | 1 A |
| R73 | 0107101 | 100 Ω | 2 A |
| R74 | 0107101 | 100 Ω | 1 A |
| R601 | 0106105 | 1M Ω | 3 A |
| R602 | 0106472 | 4.7k Ω | 3 B |
| R603 | 0106102 | 1k Ω | 3 B |
| R604 | 0107224 | 220k Ω | 3 B |
| R605 | 0106333 | 33k Ω | 3 B |
| R606 | 0106104 | 100k Ω | 2 B |
| R607 | 0106104 | 100k Ω | 2 B |
| R608 | 0106224 | 220k Ω | 1 B |
| R609 | 0107104 | 100k Ω | 1 B |
| R610 | 0106152 | 1.5k Ω | 1 B |
| R611 | 0107152 | 1.5k Ω | 1 B |
| R612 | 0106472 | 4.7k Ω | 1 B |
| VR01 | 1031120 | 20k Ω (B) | 2 A |
| VR02 | 1031120 | 20k Ω (B) | 1 A |
| VR03 | 1031120 | 20k Ω (B) | 2 A |
| VR04 | 1031120 | 20k Ω (B) | 1 A |
| VR05 | 1031180 | 1M Ω (B) | 2 A |
| VR06 | 1031180 | 1M Ω (B) | 1 A |
| VR07 | 1031140 | 100k Ω (B) | 2 B |
| VR08 | 1031140 | 100k Ω (B) | 1 B |
| 2260010 | A4-01775 | Test Pin | |

Abbreviations

| | |
|--|--|
| C.R. : Carbon Resistor | BP.E.C.: Bi-Pola Electrolytic Capacitor |
| S.R. : Solid Resistor | C.C. : Ceramic Capacitor |
| Ce.R. : Cement Resistor | Mi.C. : Mica Capacitor |
| M.R. : Metallized Film Resistor | O.C. : Oil Capacitor |
| M.C. : Mylar Capacitor | P.C. : Polystyrene Capacitor |
| E.C. : Electrolytic Capacitor | T.C. : Tantalum Capacitor |

6-7. F-1485 Meter Circuit Board (Stock No. 7591840 Complete Circuit Board F-1485)

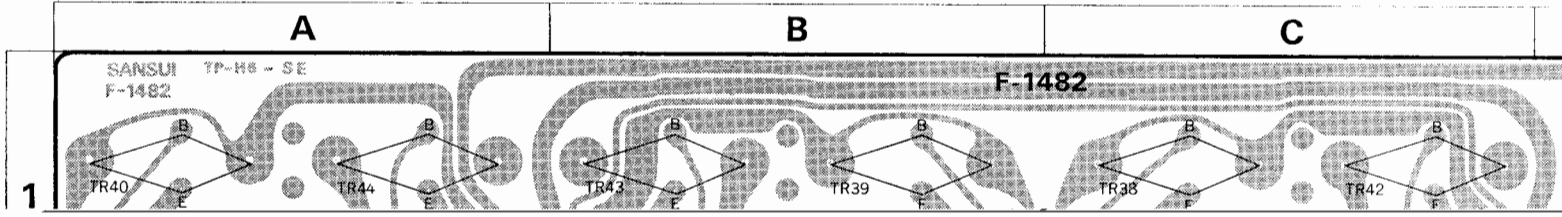
Conductor Side



Parts List

| Parts No. | Stock No. | Description | Position | Parts No. | Stock No. | Description | Position |
|-----------|-----------|--------------|----------|-----------|-----------|-------------------|--------------|
| TR01 | 0305732 | 2SC711 (F) | 2 C | C15 | 0519103 | 0.47 μ F | 1 B |
| TR02 | 0305732 | 2SC711 (F) | 2 B | C16 | 0519103 | 0.47 μ F | 50V E.C. 1 A |
| TR03 | 0305732 | 2SC711 (F) | 2 B | R01 | 0106824 | 820k Ω | 2 C |
| TR04 | 0305732 | 2SC711 (F) | 2 A | R02 | 0106824 | 820k Ω | 2 B |
| TR05 | 0305732 | 2SC711 (F) | 1 C | R03 | 0106824 | 820k Ω | 2 B |
| TR06 | 0305732 | 2SC711 (F) | 1 B | R04 | 0106824 | 820k Ω | 2 A |
| TR07 | 0305732 | 2SC711 (F) | 1 B | R05 | 0106104 | 100k Ω | 2 C |
| TR08 | 0305732 | 2SC711 (F) | 1 A | R06 | 0106104 | 100k Ω | 2 B |
| D01 | 0310400 | 1N34A | 1 C | R07 | 0106104 | 100k Ω | 2 B |
| D02 | 0310400 | 1N34A | 1 B | R08 | 0106104 | 100k Ω | 2 A |
| D03 | 0310400 | 1N34A | 1 B | R09 | 0106474 | 470k Ω | 2 C |
| D04 | 0310400 | 1N34A | 1 A | R10 | 0106474 | 470k Ω | 2 B |
| D05 | 0310400 | 1N34A | 1 C | R11 | 0106474 | 470k Ω | 2 B |
| D06 | 0310400 | 1N34A | 1 B | R12 | 0106474 | 470k Ω | 2 A |
| D07 | 0310400 | 1N34A | 1 B | R13 | 0106104 | 100k Ω | 1 C |
| D08 | 0310400 | 1N34A | 1 A | R14 | 0106104 | 100k Ω | 1 B |
| D09 | 0310400 | 1N34A | 1 C | R15 | 0106104 | 100k Ω | 1 B |
| D10 | 0310400 | 1N34A | 1 B | R16 | 0106104 | 100k Ω | 1 A |
| D11 | 0310400 | 1N34A | 1 B | R17 | 0106103 | 10k Ω | 2 C |
| D12 | 0310400 | 1N34A | 1 A | R18 | 0106103 | 10k Ω | 2 C |
| D13 | 0310400 | 1N34A | 1 C | R19 | 0106103 | 10k Ω | 2 A |
| D14 | 0310400 | 1N34A | 1 B | R20 | 0106103 | 10k Ω | 2 A |
| D15 | 0310400 | 1N34A | 1 B | R21 | 0106105 | 1M Ω | 1 C |
| D16 | 0310400 | 1N34A | 1 A | R22 | 0106105 | 1M Ω | 1 B |
| C01 | 0515109 | 1 μ F | 2 C | R23 | 0106105 | 1M Ω | 1 B |
| C02 | 0515109 | 1 μ F | 2 B | R24 | 0106105 | 1M Ω | 1 A |
| C03 | 0515109 | 1 μ F | 2 B | R25 | 0106472 | 4.7k Ω | 1 C |
| C04 | 0515109 | 1 μ F | 2 A | R26 | 0106472 | 4.7k Ω | 1 B |
| C05 | 0515109 | 1 μ F | 2 C | R27 | 0106472 | 4.7k Ω | 1 B |
| C06 | 0515109 | 1 μ F | 2 B | R28 | 0106472 | 4.7k Ω | 1 A |
| C07 | 0515109 | 1 μ F | 2 B | R29 | 0106822 | 8.2k Ω | 1 C |
| C08 | 0515109 | 1 μ F | 2 A | R30 | 0106822 | 8.2k Ω | 1 B |
| C09 | 0515109 | 1 μ F | 2 C | R31 | 0106822 | 8.2k Ω | 1 B |
| C10 | 0515109 | 1 μ F | 2 C | R32 | 0106822 | 8.2k Ω | 1 A |
| C11 | 0515109 | 1 μ F | 2 A | VR01 | 1032151 | 200k Ω (B) | 1 C |
| C12 | 0515109 | 1 μ F | 2 A | VR02 | 1032151 | 200k Ω (B) | 1 C |
| C13 | 0519103 | 0.47 μ F | 1 C | VR03 | 1032151 | 200k Ω (B) | 1 A |
| C14 | 0519103 | 0.47 μ F | 1 B | VR04 | 1032151 | 200k Ω (B) | 1 A |

6-8. F-1482 Driver Circuit Board (Stock No. 7570790 Complete Circuit Board F-1482) Conductor Side



| | |
|---|---|
| C | D |
|---|---|

| Parts No. | Stock No. | Description | Position | Parts No. | Stock No. | Description | Position | |
|-----------|-----------|-------------|-------------------|-----------|-----------|-------------|----------|-----|
| C19 | 0660150 | 15pF | ±10% 50V E.C. 2 B | R24 | 0107103 | 10kΩ | 2 A | |
| C20 | 0660150 | 15pF | | 2 A | R25 | 0107682 | 6.8kΩ | 2 D |
| C21 | 0531101 | 100μF | 10V BP.E.C. 2 C | R26 | 0107682 | 6.8kΩ | 2 C | |
| C22 | 0531101 | 100μF | | 2 C | R27 | 0107682 | 6.8kΩ | 2 B |
| C23 | 0531101 | 100μF | | 2 B | R28 | 0107682 | 6.8kΩ | 2 A |
| C24 | 0531101 | 100μF | | 2 A | R29 | 0107682 | 6.8kΩ | 2 D |
| C25 | 0600107 | 0.1μF | ±5% 50V M.C. 2 C | R30 | 0107682 | 6.8kΩ | 2 C | |
| C26 | 0600107 | 0.1μF | | 2 C | R31 | 0107682 | 6.8kΩ | 2 B |
| C27 | 0600107 | 0.1μF | | 2 B | R32 | 0107682 | 6.8kΩ | 2 A |
| C28 | 0600107 | 0.1μF | | 2 A | R33 | 0107221 | 220Ω | 2 D |
| C29 | 0660470 | 470pF | ±10% 50V C.C. 2 C | R34 | 0107221 | 220Ω | 2 C | |
| C30 | 0660470 | 470pF | | 2 C | R35 | 0107221 | 220Ω | 2 B |
| C31 | 0660470 | 470pF | | 2 B | R36 | 0107221 | 220Ω | 2 A |
| C32 | 0660470 | 470pF | | 2 A | R37 | 0107683 | 68kΩ | 2 D |
| C33 | 0515330 | 33μF | 50V E.C. 2 C | R38 | 0107683 | 68kΩ | 2 C | |
| C34 | 0515330 | 33μF | | 2 C | R39 | 0107683 | 68kΩ | 2 B |
| C35 | 0515330 | 33μF | | 2 B | R40 | 0107683 | 68kΩ | 2 A |
| C36 | 0515330 | 33μF | | 2 A | R41 | 0107392 | 3.9kΩ | 2 D |
| C37 | 0660220 | 22pF | ±5% 1/4W C.R. 2 C | R42 | 0107392 | 3.9kΩ | 2 C | |
| C38 | 0660220 | 22pF | | 2 C | R43 | 0107392 | 3.9kΩ | 2 B |
| C39 | 0660220 | 22pF | | 2 B | R44 | 0107392 | 3.9kΩ | 2 A |
| C40 | 0660220 | 22pF | | 2 A | R45 | 0107822 | 8.2kΩ | 2 D |
| C41 | 0657222 | 0.0022μF | ±10% 50V C.C. 2 D | R46 | 0107822 | 8.2kΩ | 2 C | |
| C42 | 0657222 | 0.0022μF | | 2 C | R47 | 0107822 | 8.2kΩ | 2 B |
| C43 | 0657222 | 0.0022μF | | 2 B | R48 | 0107822 | 8.2kΩ | 2 A |
| C44 | 0657222 | 0.0022μF | | 2 A | R49 | 0107471 | 470Ω | 2 D |
| C45 | 0657473 | 0.047μF | | 2 D | R50 | 0107471 | 470Ω | 2 C |
| C46 | 0657473 | 0.047μF | | 2 C | R51 | 0107471 | 470Ω | 2 B |
| C47 | 0657473 | 0.047μF | | 2 B | R52 | 0107471 | 470Ω | 2 A |
| C48 | 0657473 | 0.047μF | | 2 A | R53 | 0107473 | 47kΩ | 2 D |
| C49 | 0657473 | 0.047μF | | 2 D | R54 | 0107473 | 47kΩ | 2 C |
| C50 | 0657473 | 0.047μF | | 2 C | R55 | 0107473 | 47kΩ | 2 B |
| C51 | 0657473 | 0.047μF | | 2 B | R56 | 0107473 | 47kΩ | 2 A |
| C52 | 0657473 | 0.047μF | | 2 A | R57 | 0107101 | 100Ω | 2 D |
| C53 | 0657473 | 0.047μF | 2 D | R58 | 0107101 | 100Ω | 2 C | |
| C54 | 0657473 | 0.047μF | 2 C | R59 | 0107101 | 100Ω | 2 B | |
| C55 | 0657473 | 0.047μF | 2 B | R60 | 0107101 | 100Ω | 2 A | |
| C56 | 0657473 | 0.047μF | 2 A | R61 | 0107101 | 100Ω | 2 D | |
| R01 | 0107154 | 150kΩ | ±5% 1/4W C.R. 2 D | R62 | 0107101 | 100Ω | 2 C | |
| R02 | 0107154 | 150kΩ | | 2 C | R63 | 0107101 | 100Ω | 2 B |
| R03 | 0107154 | 150kΩ | | 2 B | R64 | 0107101 | 100Ω | 2 A |
| R04 | 0107154 | 150kΩ | | 2 A | R65 | 0103471 | 470Ω | 2 D |
| R05 | 0107103 | 10kΩ | | 2 D | R66 | 0103471 | 470Ω | 2 C |
| R06 | 0107103 | 10kΩ | | 2 C | R67 | 0103471 | 470Ω | 2 B |
| R07 | 0107103 | 10kΩ | | 2 B | R68 | 0103471 | 470Ω | 2 A |
| R08 | 0107103 | 10kΩ | | 2 A | R69 | 0107562 | 5.6kΩ | 2 D |
| R09 | 0107104 | 100kΩ | | 2 D | R70 | 0107562 | 5.6kΩ | 2 C |
| R10 | 0107104 | 100kΩ | | 2 C | R71 | 0107562 | 5.6kΩ | 2 B |
| R11 | 0107104 | 100kΩ | ±5% 1/4W C.R. 2 A | R72 | 0107562 | 5.6kΩ | 2 A | |
| R12 | 0107104 | 100kΩ | | 2 B | R73 | 0107152 | 1.5kΩ | 2 D |
| R13 | 0107822 | 8.2kΩ | | 2 A | R74 | 0107152 | 1.5kΩ | 2 C |
| R14 | 0107822 | 8.2kΩ | | 2 D | R75 | 0107152 | 1.5kΩ | 2 B |
| R15 | 0107822 | 8.2kΩ | | 2 C | R76 | 0107152 | 1.5kΩ | 2 A |
| R16 | 0107822 | 8.2kΩ | | 2 B | R77 | 0107330 | 33Ω | 2 D |
| R17 | 0107822 | 8.2kΩ | | 2 A | R78 | 0107330 | 33Ω | 2 C |
| R18 | 0107473 | 47kΩ | | 2 D | R79 | 0107330 | 33Ω | 2 B |
| R19 | 0107473 | 47kΩ | | 2 C | R80 | 0107330 | 33Ω | 2 A |
| R20 | 0107473 | 47kΩ | | 2 B | R81 | 0107689 | 6.8Ω | 2 D |
| R21 | 0107103 | 10kΩ | ±5% 1/4W C.R. 2 C | R82 | 0107689 | 6.8Ω | 2 C | |
| R22 | 0107103 | 10kΩ | | 2 A | R83 | 0107689 | 6.8Ω | 2 B |
| R23 | 0107103 | 10kΩ | | 2 C | R84 | 0107689 | 6.8Ω | 2 A |
| | | | | 2 B | R85 | 0107472 | 4.7kΩ | 2 D |
| | | | | 2 A | | | | |

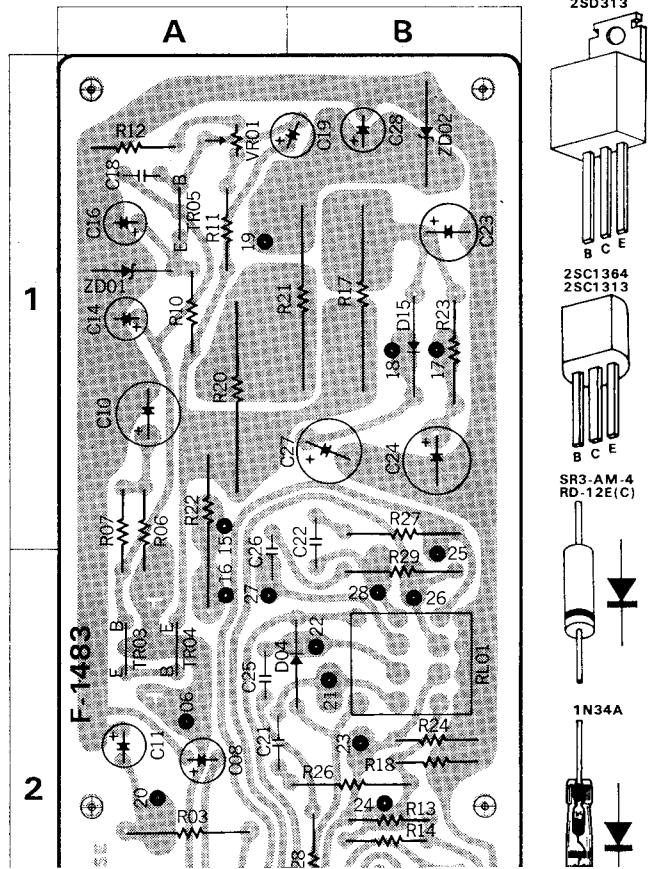
F-1482 Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------------|----------|
| R86 | 0107472 | 4.7kΩ | 2C |
| R87 | 0107472 | 4.7kΩ | 2B |
| R88 | 0107472 | 4.7kΩ | 2A |
| R89 | 0107100 | 10Ω | 2D |
| R90 | 0107100 | 10Ω | 2C |
| R91 | 0107100 | 10Ω | 2B |
| R92 | 0107100 | 10Ω | 2A |
| R93 | 0107100 | 10Ω | 1D |
| R94 | 0107100 | 10Ω | 1C |
| R95 | 0107100 | 10Ω | 1B |
| R96 | 0107100 | 10Ω | 1A |
| R105 | 0107689 | 6.8Ω | 1D |
| R106 | 0107689 | 6.8Ω | 1C |
| R107 | 0107689 | 6.8Ω ± 5% 1/4W C.R. | 1B |
| R108 | 0107689 | 6.8Ω | 1A |
| R109 | 0107689 | 6.8Ω | 1D |
| R110 | 0107689 | 6.8Ω | 1C |
| R111 | 0107689 | 6.8Ω | 1B |
| R112 | 0107689 | 6.8Ω | 1A |
| R121 | 0107221 | 220Ω | 1D |
| R122 | 0107221 | 220Ω | 1C |
| R123 | 0107221 | 220Ω | 1B |
| R124 | 0107221 | 220Ω | 1A |
| R125 | 0107221 | 220Ω | 1D |
| R126 | 0107221 | 220Ω | 1C |
| R127 | 0107221 | 220Ω | 1B |
| R128 | 0107221 | 220Ω | 1A |
| R129 | 0132479 | 4.7Ω | 2D |
| R130 | 0132479 | 4.7Ω | 2C |
| R131 | 0132479 | 4.7Ω | 2B |
| R132 | 0132479 | 4.7Ω | 2A |
| R133 | 0133478 | 0.47Ω | 1D |
| R134 | 0133478 | 0.47Ω | 1C |
| R135 | 0133478 | 0.47Ω | 1B |
| R136 | 0133478 | 0.47Ω | 1A |

6-9. F-1483 Protector & Power Circuit Board

(Stock No. 7500870 Complete Circuit Board F-1483)

Conductor Side



| Parts No. | Stock No. | Description | Position |
|-----------|------------------|----------------------|------------------------|
| TR01 | 0305891, 2 | 2SC634A (6, 7) | } Transistor 2 A |
| TR02 | 0305891, 2 | 2SC634A (6, 7) | |
| TR03 | 0305930, 1 | 2SC1211 (C, D) | |
| TR04 | 0308392, 3 | 2SD313 (E, F) | |
| TR05 | 0306070, 1 | 2SC1313 (F, G) | } 1 A |
| | or 0306132, 3 | or 2SC1364 (7, 8) | |
| D01 | 0310340 | 10D-1 | } Diode 3 A |
| D02 | 0311070 | 2B2DM | |
| D03 | 0310340 | 10D-1 | |
| D04 | 0310340 | 10D-1 | |
| D05 | 0311240 | SR3-AM-4 | |
| D06 | 0311240 | SR3-AM-4 | |
| D07 | 0311240 | SR3-AM-4 | |
| D08 | 0311240 | SR3-AM-4 | |
| D09 | 0310400 | 1N34A | |
| D10 | 0310400 | 1N34A | |
| D11 | 0310400 | 1N34A | |
| D12 | 0310400 | 1N34A | |
| D13 | 0310400 | 1N34A | |
| D14 | 0310400 | 1N34A | |
| D15 | 0310340 | 10D-1 | |
| ZD01 | 0316300 | RD-12E (C) | } Zener Diode 1 A |
| ZD02 | 0315090 | ZB-1-13 | |
| RL01 | 1150101 | MY4-0-US-SA Relay | 2 B |
| C01 | 0511102 | 1000 μ F | 10V E.C. 3 B |
| C02 | 0659011 | 0.01 μ F | } 500V C.C. 2 A |
| C03 | 0659011 | 0.01 μ F | |
| C04 | 0659011 | 0.01 μ F | |
| C05 | 0659011 | 0.01 μ F | |
| C06 | 0515330 | 33 μ F | |
| C07 | 0519302 | 220 μ F | 50V } 3 B 80V } 2 A |

| Parts No. | Stock No. | Description | Position |
|-----------|------------|---|--------------------------------------|
| R10 | 0107562 | 5.6k Ω | } $\pm 5\%$ $\frac{1}{4}$ W C.R. 2 B |
| R11 | 0107223 | 22k Ω | |
| R12 | 0107822 | 8.2k Ω | |
| R13 | 0107473 | 47k Ω | |
| R14 | 0107473 | 47k Ω | |
| R15 | 0107473 | 47k Ω | |
| R16 | 0107473 | 47k Ω | |
| R17 | 0182331 | 300 Ω $\pm 10\%$ 2W Ce.R. | |
| R18 | 0107332 | 3.3k Ω | |
| R19 | 0107332 | 3.3k Ω | |
| R22 | 0132101 | 100 Ω $\pm 10\%$ 2W Ce.R. | 1, 2 A |
| R23 | 0104220 | 22 Ω $\pm 5\%$ 1W | } C.R. 2 B |
| R24 | 0107332 | 3.3k Ω $\pm 5\%$ $\frac{1}{4}$ W | |
| R25 | 0107332 | 3.3k Ω $\pm 5\%$ $\frac{1}{4}$ W | |
| VR01 | 1035090 | 2.2k Ω (B) Solid Volume | 1 A |
| F01 | 0432900, 1 | 5A Wired-in Fuse | 3 B |
| F02 | 0432850, 1 | 2A Wired-in Fuse | 3 A |
| F03 | 0432850, 1 | 2A Wired-in Fuse | 3 B |
| F04 | 0432830, 1 | 1A Wired-in Fuse | 3 B |
| | 2250020 | Fasten Tab | |

6-10. F-1490 De-emphasis Circuit Board

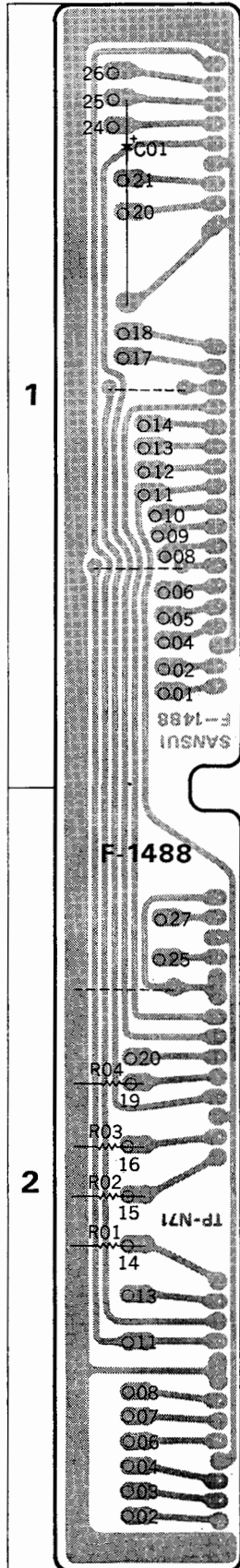
(Stock No. 7591880 Complete Circuit Board F-1490)

Conductor Side



6-11. F-1488 Connector Joint Circuit Board (Stock No. 7591860 Complete Circuit Board F-1488)

Conductor Side

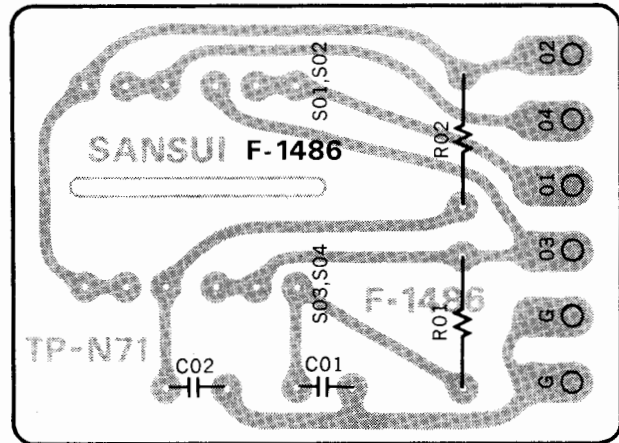


Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|----------------------|----------------------------------|
| C01 | 0504221 | 220 μ F 35V E.C. | 1 |
| R01 | 0107474 | 470k Ω | } $\pm 5\%$ $\frac{1}{4}$ W C.R. |
| R02 | 0107474 | 470k Ω | |
| R03 | 0107474 | 470k Ω | |
| R04 | 0107474 | 470k Ω | |
| | 2420150 | 10P Connector | |
| | 2420160 | 14P Connector | |
| | 2420170 | 18P Connector | |

6-12. F-1486 Filter Circuit Board (Stock No. 7591830 Complete Circuit Board F-1486)

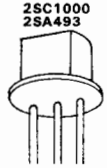
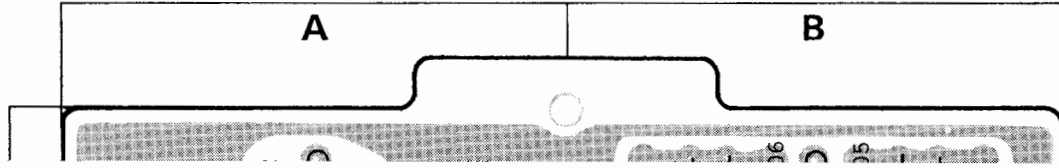
Conductor Side



Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------------|
| C01 | 0600187 | 0.018 μ F $\pm 5\%$ 50V M.C. |
| C02 | 0600187 | 0.018 μ F $\pm 5\%$ 50V M.C. |
| R01 | 0107824 | 820k Ω |
| R02 | 0107824 | 820k Ω |
| S01-04 | 1130760 | Push Switch |

6-13. F-1484 Tone Control Circuit Board (Stock No. 7560740 Complete Circuit Board F-1484)
Conductor Side

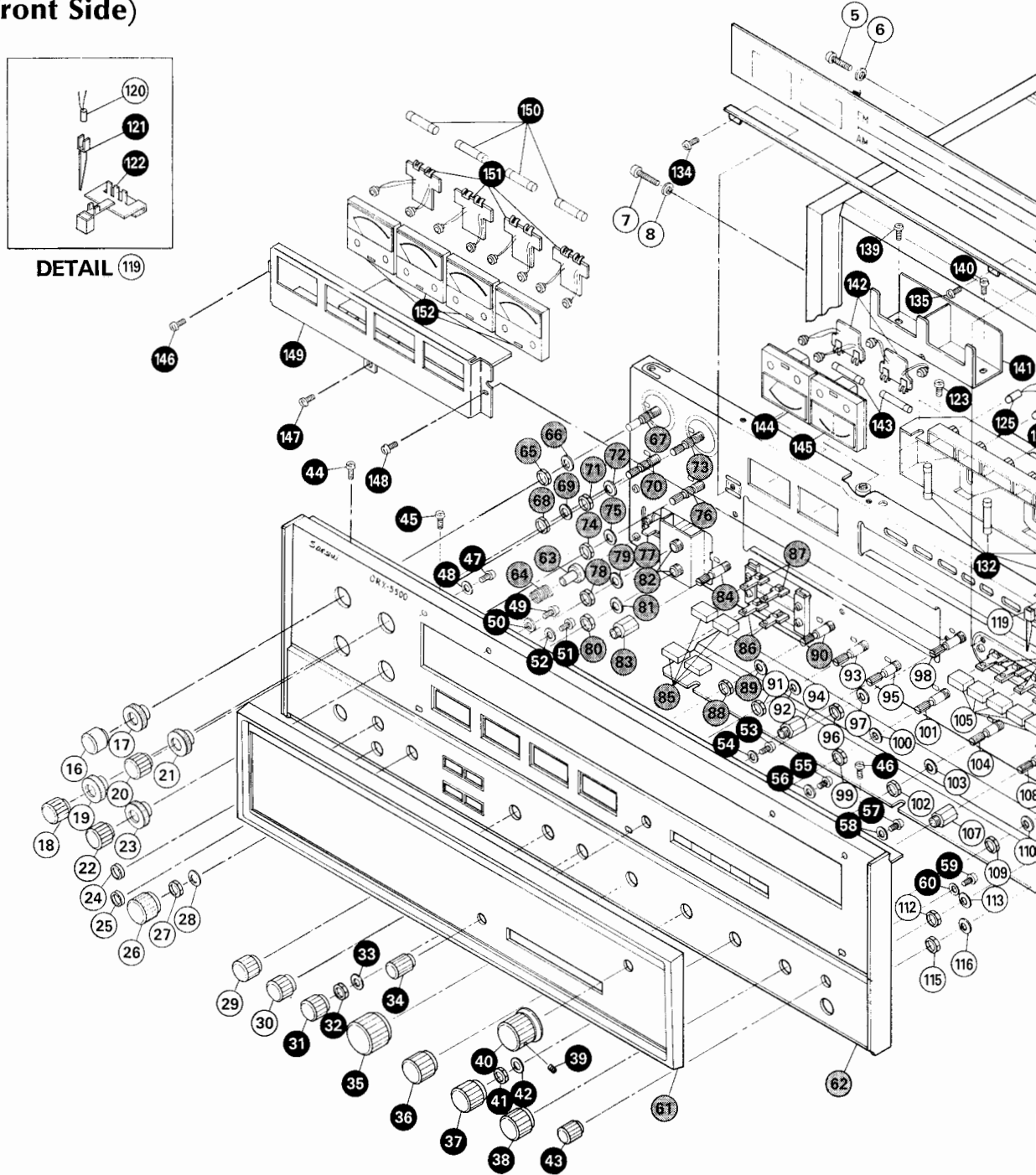


| Parts No. | Stock No. | Description | Position | Parts No. | Stock No. | Description | Position | | |
|-----------|-----------|----------------|--------------------------|-----------|-----------|-------------|-----------------------|------------------------------|-----|
| C01 | 0519101 | 1 μ F | 50V E.C. | 1 A | R33 | 0107224 | 220k Ω | 2 A | |
| C02 | 0519101 | 1 μ F | | 1 A | R34 | 0107224 | 220k Ω | 2 B | |
| C03 | 0512470 | 47 μ F | 16V E.C. | 1 A | R35 | 0107222 | 2.2k Ω | 2 B | |
| C04 | 0512470 | 47 μ F | | 1 A | R36 | 0107222 | 2.2k Ω | ± 5 % 1/4W C.R. 2 A, B | |
| C05 | 0660470 | 47 pF | 50V C.C. | 1 A | R37 | 0107183 | 18k Ω | | 2 B |
| C06 | 0660470 | 47 pF | | 1 A | R38 | 0107183 | 18k Ω | 2 B | |
| C07 | 0512330 | 33 μ F | 16V E.C. | 1 A | R39 | 0107472 | 4.7k Ω | 2 B | |
| C08 | 0512330 | 33 μ F | | 1 A | R40 | 0107472 | 4.7k Ω | 2 B | |
| C09 | 0519102 | 3.3 μ F | 50V E.C. | 1, 2 A | R41 | 0106683 | 68k Ω | 1 B | |
| C10 | 0519102 | 3.3 μ F | | 1, 2 A | R42 | 0106683 | 68k Ω | 1 B | |
| C11 | 0600476 | 0.0047 μ F | ± 5 % 50V M.C. | 2 A | R43 | 0106394 | 390k Ω | 1 B | |
| C12 | 0600476 | 0.0047 μ F | | 2 A | R44 | 0106394 | 390k Ω | 1 B | |
| C13 | 0600826 | 0.0082 μ F | | 2 A | R45 | 0106563 | 56k Ω | 1 B | |
| C14 | 0600826 | 0.0082 μ F | | 2 A | R46 | 0106563 | 56k Ω | 1 B | |
| C15 | 0600227 | 0.022 μ F | | 2 B | R47 | 0106561 | 560 Ω | 2 B | |
| C16 | 0600227 | 0.022 μ F | | 2 B | R48 | 0106561 | 560 Ω | 2 B | |
| C17 | 0600227 | 0.022 μ F | | 2 B | R49 | 0106562 | 5.6k Ω | 1 B | |
| C18 | 0600227 | 0.022 μ F | | 2 B | R50 | 0106562 | 5.6k Ω | 1 B | |
| C19 | 0600476 | 0.0047 μ F | | 2 B | R51 | 0106154 | 150k Ω | 1 B | |
| C20 | 0600476 | 0.0047 μ F | | 2 A | R52 | 0106154 | 150k Ω | ± 5 % 1/4W C.R. (E.L.R.) 1 B | |
| C21 | 0519101 | 1 μ F | 50V E.C. | 1, 2 B | R53 | 0106682 | 6.8k Ω | | 1 B |
| C22 | 0519101 | 1 μ F | | 1, 2 B | R54 | 0106682 | 6.8k Ω | 1 B | |
| C23 | 0512100 | 10 μ F | 16V E.C. | 1 B | R55 | 0106821 | 820 Ω | 1 B | |
| C24 | 0512100 | 10 μ F | | 1 B | R56 | 0106821 | 820 Ω | 1 B | |
| C25 | 0660470 | 47 pF | 50V C.C. | 1 B | R57 | 0106220 | 22 Ω | 1 B | |
| C26 | 0660470 | 47 pF | | 1 B | R58 | 0106220 | 22 Ω | 1 B | |
| C27 | 0512100 | 10 μ F | 16V E.C. | 1 B | R59 | 0106332 | 3.3k Ω | 1 B | |
| C28 | 0512100 | 10 μ F | | 1 B | R60 | 0106332 | 3.3k Ω | 1 B | |
| C29 | 0519101 | 1 μ F | 50V E.C. | 1 B | R61 | 0106563 | 56k Ω | 1 B | |
| C30 | 0519101 | 1 μ F | | 1 B | R62 | 0106563 | 56k Ω | 1 B | |
| R01 | 0106102 | 1k Ω | ± 5 % 1/4W C.R. (E.L.R.) | 1 A | R63 | 0106104 | 100k Ω | 1 B | |
| R02 | 0106102 | 1k Ω | | 1 A | R64 | 0106104 | 100k Ω | 1 B | |
| R03 | 0106474 | 470k Ω | | 1 A | VR01 | 1020250, 1 | 100k Ω (W) × 2 | Variable Resistor 2 A | |
| R04 | 0106474 | 470k Ω | | 1 A | VR02 | 1020250, 1 | 100k Ω (W) × 2 | | 2 A |
| R05 | 0106274 | 270k Ω | | 1 A | VR03 | 1020240, 1 | 100k Ω (B) × 2 | | 2 B |
| R06 | 0106274 | 270k Ω | | 1 A | VR04 | 1020240, 1 | 100k Ω (B) × 2 | | 2 B |
| R07 | 0106394 | 390k Ω | | 1 A | | | | | |
| R08 | 0106394 | 390k Ω | | 1 A | | | | | |
| R09 | 0106183 | 18k Ω | | 1 A | | | | | |
| R10 | 0106183 | 18k Ω | | 1 A | | | | | |
| R11 | 0106102 | 1k Ω | 1 A | | | | | | |
| R12 | 0106102 | 1k Ω | 1 A | | | | | | |
| R13 | 0106123 | 12k Ω | 1 A | | | | | | |
| R14 | 0106123 | 12k Ω | 1 A | | | | | | |
| R15 | 0106123 | 12k Ω | 1 A | | | | | | |
| R16 | 0106123 | 12k Ω | 1 A | | | | | | |
| R17 | 0106821 | 820 Ω | 2 A | | | | | | |
| R18 | 0106821 | 820 Ω | 2 A | | | | | | |
| R19 | 0106221 | 220 Ω | 2 A | | | | | | |
| R20 | 0106221 | 220 Ω | 2 A | | | | | | |
| R21 | 0106682 | 6.8k Ω | 1 A | | | | | | |
| R22 | 0106682 | 6.8k Ω | 1 A | | | | | | |
| R23 | 0107224 | 220k Ω | ± 5 % 1/4W C.R. | 2 A | | | | | |
| R24 | 0107224 | 220k Ω | | 2 A | | | | | |
| R25 | 0107222 | 2.2k Ω | | 2 A | | | | | |
| R26 | 0107222 | 2.2k Ω | | 2 A | | | | | |
| R27 | 0107183 | 18k Ω | | 2 B | | | | | |
| R28 | 0107183 | 18k Ω | | 2 B | | | | | |
| R29 | 0107222 | 2.2k Ω | | 2 A | | | | | |
| R30 | 0107222 | 2.2k Ω | | 2 B | | | | | |
| R31 | 0107472 | 4.7k Ω | | 2 B | | | | | |
| R32 | 0107472 | 4.7k Ω | | 2 B | | | | | |

— Abbreviations —

| | |
|--|--|
| C.R. : Carbon Resistor | BP.E.C.: Bi-Pola Electrolytic Capacitor |
| S.R. : Solid Resistor | C.C. : Ceramic Capacitor |
| Ce.R. : Cement Resistor | Mi.C. : Mica Capacitor |
| M.R. : Metallized Film Resistor | O.C. : Oil Capacitor |
| M.C. : Mylar Capacitor | P.C. : Polystyrene Capacitor |
| E.C. : Electrolytic Capacitor | T.C. : Tantalum Capacitor |

6-14. Other Parts (Front Side)

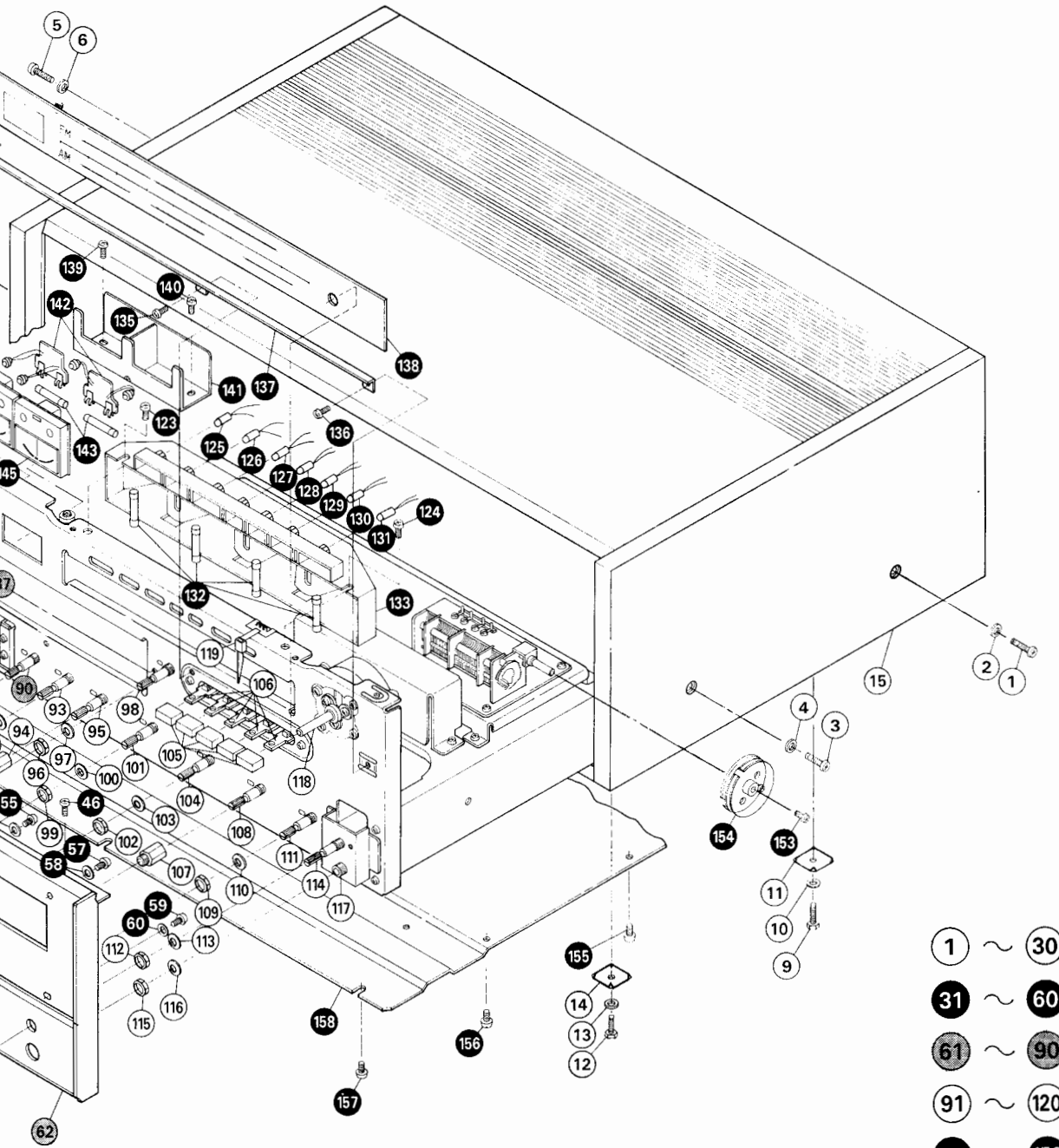


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-----------------------------|
| 1 | 5100173 | Binding Head Screw, M4 × 25 |
| 2 | 5186110 | Plain Washer, 4φ |
| 3 | 5100173 | Binding Head Screw, M4 × 25 |
| 4 | 5186110 | Plain Washer, 4φ |
| 5 | 5100173 | Binding Head Screw, M4 × 25 |
| 6 | 5186110 | Plain Washer, 4φ |
| 7 | 5100173 | Binding Head Screw, M4 × 25 |
| 8 | 5186110 | Plain Washer, 4φ |

| Parts No. | Stock No. | Description |
|-----------|-----------|-----------------------------|
| 9 | 5104571 | Hexagon Head Bolts, M4 × 23 |
| 10 | 5121260 | Spring Washer, 4φ |
| 11 | 5186091 | Nail Washer |
| 12 | 5104571 | Hexagon Head Bolts, M4 × 23 |
| 13 | 5121260 | Spring Washer, 4φ |
| 14 | 5186091 | Nail Washer |
| 15 | 5726820 | Wood Case |
| 16 | 5317671 | WO-1 Type Knob, BASS volume |

| Parts No. |
|-----------|
| 17 |
| 18 |
| 19 |
| 20 |
| 21 |
| 22 |
| 23 |
| 24 |



- 1 ~ 30
- 31 ~ 60
- 61 ~ 90
- 91 ~ 120
- 121 ~ 158

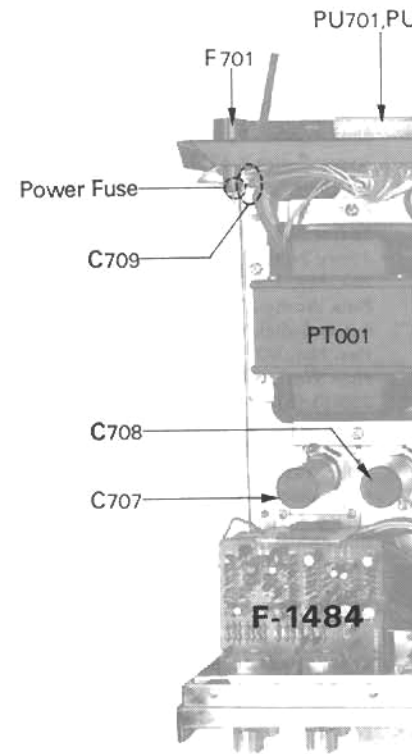
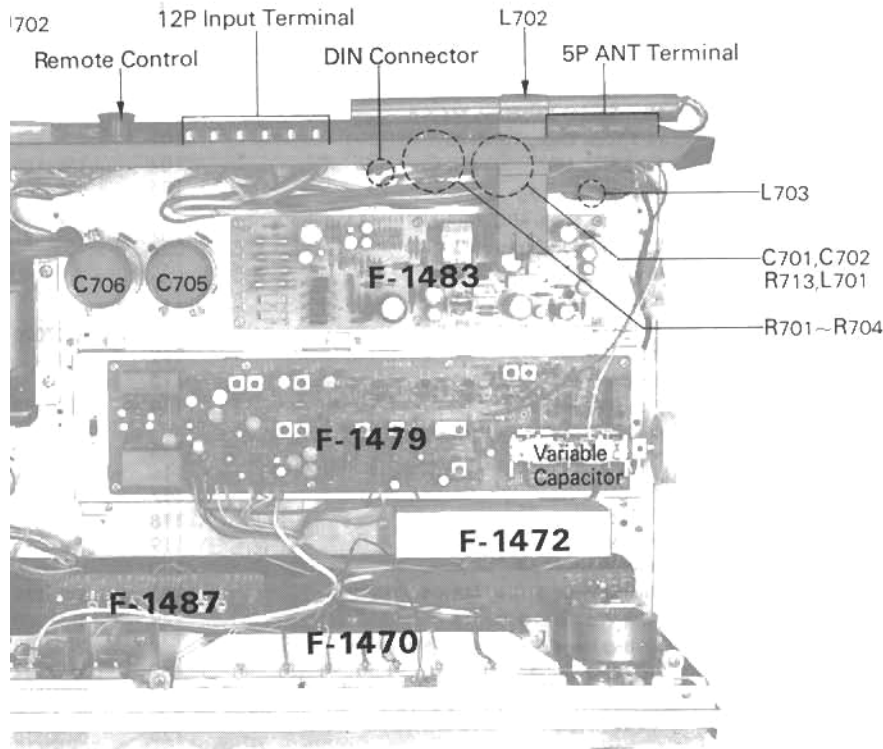
| Parts No. | Stock No. | Description |
|-----------|-----------|-------------------------------|
| 17 | 5317682 | WI-1 Type Knob, BASS volume |
| 18 | 5317671 | WO-1 Type Knob, BASS volume |
| 19 | 5317682 | WI-1 Type Knob, BASS volume |
| 20 | 5317671 | WO-1 Type Knob, TREBLE volume |
| 21 | 5317682 | WI-1 Type Knob, TREBLE volume |
| 22 | 5317671 | WO-1 Type Knob, TREBLE volume |
| 23 | 5317682 | WI-1 Type Knob, TREBLE volume |
| 24 | 5176052 | Jack Nut |

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------------------------|
| 25 | 5176052 | Jack Nut |
| 26 | 5317642 | M-2 Type Knob, SPEAKER switch |
| 27 | | Hex. Nut, M9 |
| 28 | | Plain Washel, 9φ |
| 29 | 5317652 | S-2 Type Knob, BALANCE volume |
| 30 | 5317652 | S-2 Type Knob, BALANCE volume |
| 31 | 5317652 | S-2 Type Knob, BALANCE volume |
| 32 | | Hex. Nut, M9 |

| Parts No. | Stock No. | Description |
|-----------|------------|--|
| 33 | | Plain Washer, 9φ |
| 34 | 5317811 | P-5 Type Knob, LEVEL SET volume |
| 35 | 5317632 | L-2 Type Knob, VOLUME |
| 36 | 5317642 | M-2 Type Knob, FUNCTION switch |
| 37 | 5317642 | M-2 Type Knob, DIRECTION switch |
| 38 | 5317642 | M-2 Type Knob, SELECTOR switch |
| 39 | 5106061 | Hex. Socket Setscrew, M4 × 6 |
| 40 | 5317780 | N-5 Type Knob, TUNING |
| 41 | | Hex. Nut, M9 |
| 42 | | Plain Washer, 9φ |
| 43 | 5317811 | P-5 Type Knob, MIC. MIXING LEVEL volume |
| 44 | 5101043 | Binding Head Screw, M3 × 6 |
| 45 | 5101043 | Binding Head Screw, M3 × 6 |
| 46 | 5101043 | Binding Head Screw, M3 × 6 |
| 47 | 5101042 | Binding Head Screw, M3 × 5 |
| 48 | 5120141 | Plain Washer, 3φ |
| 49 | 5101042 | Binding Head Screw, M3 × 5 |
| 50 | 5120141 | Plain Washer, 3φ |
| 51 | 5101042 | Binding Head Screw, M3 × 5 |
| 52 | 5120141 | Plain Washer, 3φ |
| 53 | 5101042 | Binding Head Screw, M3 × 5 |
| 54 | 5120141 | Plain Washer, 3φ |
| 55 | 5101042 | Binding Head Screw, M3 × 5 |
| 56 | 5120141 | Plain Washer, 3φ |
| 57 | 5101042 | Binding Head Screw, M3 × 5 |
| 58 | 5120141 | Plain Washer, 3φ |
| 59 | 5101042 | Binding Head Screw, M3 × 5 |
| 60 | 5120141 | Plain Washer, 3φ |
| 61 | 5308891 | Smoked Plate Frame |
| | 5047680 | Smoked Plate |
| 62 | 7006902 | Front Panel |
| 63 | 7106083 | Push Button, POWER switch |
| 64 | 6906031 | Spring, POWER switch |
| 65 | | Hex. Nut, M11 |
| 66 | | Plain Washer, 11φ |
| 67 | 1020240, 1 | 100kΩ (B) × 2 BASS Volume |
| 68 | | Hex. Nut, M11 |
| 69 | | Plain Washer, 11φ |
| 70 | 1020240, 1 | 100kΩ (B) × 2 BASS Volume |
| 71 | | Hex. Nut, M11 |
| 72 | | Plain Washer, 11φ |
| 73 | 1020250, 1 | 100kΩ (W) × 2 TREBLE Volume |
| 74 | | Hex. Nut, M11 |
| 75 | | Plain Washer, 11φ |
| 76 | 1020250, 1 | 100kΩ (W) × 2 TREBLE Volume |
| 77 | 1130290 | Push Switch, POWER switch |
| 78 | | Hex. Nut, M9 |
| 79 | | Plain Washer, 9φ |
| 80 | | Hex. Nut, M9 |
| 81 | | Plain Washer, 9φ |
| 82 | 2430200 | Headphone Jack |
| 83 | 5236491 | Spacer Nut, M9 |
| 84 | 1102500, 1 | Rotary Switch Y-224, 244, SPEAKER switch |
| 85 | 5326380 | Push Button, LOW & HIGH FILTER switch |
| 86 | 1130760 | Push Switch (2 Stage) |
| 87 | 1130760 | Push Switch (2 Stage) |
| 88 | | Hex. Nut, M8 |
| 89 | | Plain Washer, 8φ |
| 90 | 1010400, 1 | 250kΩ (HB) BALANCE Volume |
| 91 | | Hex. Nut, M8 |
| 92 | | Plain Washer, 8φ |
| 93 | 1060250, 1 | 250kΩ (HB) × 4 BALANCE Volume |
| 94 | 5236451 | Spacer Nut, M8 |
| 95 | 1010400, 1 | 250 (HB) BALANCE Volume |

| Parts No. | Stock No. | Description |
|-----------|------------|---|
| 96 | | Hex. Nut, M8 |
| 97 | | Plain Washer, 8φ |
| 98 | 1060260, 1 | 250kΩ (B) × 4 LEVEL SET Volume |
| 99 | | Hex. Nut, M9 |
| 100 | | Plain Washer, 9φ |
| 101 | 1060240, 1 | 250kΩ (B) × 4 VOLUME |
| 102 | | Hex. Nut, M9 |
| 103 | | Plain Washer, 9φ |
| 104 | 1106120 | Rotary Switch Y-6217, FUNCTION switch |
| 105 | 5326380 | Push Button, accessory switch |
| 106 | 1130750 | Push Switch (5 Stage) |
| 107 | 5236491 | Spacer Nut, M9 |
| 108 | | Rotary Switch Y-244, DIRECTION switch |
| 109 | | Hex. Nut, M9 |
| 110 | | Plain Washer, 9φ |
| 111 | 1107020 | Rotary Switch Y-7177, SELECTOR switch |
| 112 | | Hex. Nut, M7 |
| 113 | | Plain Washer, 7φ |
| 114 | 1060280 | 250kΩ (B) × 2, 50kΩ (B) × 2 MIC, MIXING LEVEL Volume |
| 115 | | Hex. Nut, M12 |
| 116 | | Plain Washer, 12φ |
| 117 | 2430170 | Microphone Jack |
| 118 | 7036361 | Tuning Ass'y |
| 119 | | Dial Pointer Ass'y |
| 120 | 0400200 | Pilot Lamp, lead type (6.3V 75mA) |
| 121 | 5416050 | Dial Pointer |
| 122 | 5416300 | Holder, dial pointer |
| 123 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 124 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 125 | 0400300 | Lead Type Lamp (7V 100mA), STEREO indicator |
| 126 | 0400310 | Lead Type Lamp (7V 100mA), PHONO-2 indicator |
| 127 | 0400330 | Lead Type Lamp (7V 100mA), PHONO-1 indicator |
| 128 | 0400300 | Lead Type Lamp (7V 100mA), FM indicator |
| 129 | 0400290 | Lead Type Lamp (7V 100mA), AM indicator |
| 130 | 0400320 | Lead Type Lamp (7V 100mA), AUX-1 indicator |
| 131 | 0400310 | Lead Type Lamp (7V 100mA), AUX-2 indicator |
| 132 | 0420040 | Fuse Type Lamp (7V 300mA) |
| 133 | 5066211 | Indicator Box |
| 134 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 135 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 136 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 137 | 5269240 | Stopper, dial scale |
| 138 | 5407510 | Dial Scale |
| 139 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 140 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 141 | 5269250 | Holder, tuning & signal meter |
| 142 | 7726050 | Meter Lamp Unit |
| 143 | 0420040 | Fuse Type Lamp (7V 300mA) |
| 144 | 4300610 | Signal Meter |
| 145 | 4300600 | Tuning Meter |
| 146 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 147 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 148 | 5109122 | Binding Head Tapping Screw, M3 × 8 |
| 149 | 5269250 | Holder, level meter |
| 150 | 0420040 | Fuse Type Lamp (7V 300mA) |
| 151 | 7726050 | Meter Lamp Unit |
| 152 | 4300620 | Level Meter |
| 153 | 5101123 | Binding Head Screw, M2, 6 × 6 |
| 154 | 6146651 | Dial Pulley |
| 155 | 5101161 | Binding Head Screw, M4 × 6 |
| 156 | 5101161 | Binding Head Screw, M4 × 6 |
| 157 | 5101161 | Binding Head Screw, M4 × 6 |
| 158 | 5058100 | Bottom Plate |

Other Parts (Top Side)



Top Side Parts List

| Parts No. | Stock No. | Description | Parts No. | Stock No. | Description |
|-----------|-----------|---------------|-----------|-----------|------------------------------|
| C701 | 0657473 | 0.047 μ F | PU701 | 2410090 | Voltage Selector, plug |
| C702 | 0657473 | 0.047 μ F | PU702 | 2410080 | Voltage Selector, socket |
| C705 | 0559107 | 10000 μ F | PT001 | 4001360 | Power Transformer |
| C706 | 0559107 | 10000 μ F | | 2430040 | DIN Connector |
| C707 | 0559501 | 1000 μ F | | 2010020 | 9P Remote Control Socket |
| C708 | 0559501 | 1000 μ F | | 2410540 | 9P Remote Control Dummy Plug |
| C709 | 0605477 | 0.047 μ F | | 2290110 | 5P Antenna Terminal |
| R701 | 0107104 | 100k Ω | | 2200360 | 12P Input Terminal |
| R702 | 0107184 | 180k Ω | | | |
| R703 | 0107184 | 180k Ω | | | |
| R704 | 0107104 | 100k Ω | | | |
| R713 | 0107221 | 220 Ω | | | |

Abbreviations

Carbon Resistor
 Metal Resistor
 Film Resistor
 Electrolytic Capacitor

BP.E.C.: Bi-Polar Electrolytic Capacitor
 C.C.: Ceramic Capacitor
 M.C.: Mica Capacitor
 O.C.: Oil Capacitor
 P.C.: Polystyrene Capacitor
 T.C.: Tantalum Capacitor

L701 4290030 1 μ H Coil
 L702 4200550 Bar Antenna Coil
 L703 4290021 75 Ω : 300 Ω FM Balun

F701 { 2300060 Fuse Holder
 0431290, 2 6A Power Fuse (100V, 117V)
 0431310 3.5A Power Fuse (220V, 240V)

C.R. : Carbon Resistor
 S.R. : Solenoid Resistor
 Ce.R. : Ceramic Resistor
 M.R. : Metal Resistor
 M.C. : Mica Resistor
 E.C. : Electrolytic Resistor



6-16. Other Parts (Bottom Side)



| | | |
|------|---------|-------------|
| TR38 | 0305631 | 2SC1030 (B) |
| TR39 | 0305631 | 2SC1030 (B) |
| TR40 | 0305631 | 2SC1030 (B) |
| TR41 | 0300551 | 2SA756 (B) |
| TR42 | 0300551 | 2SA756 (B) |

Transistor

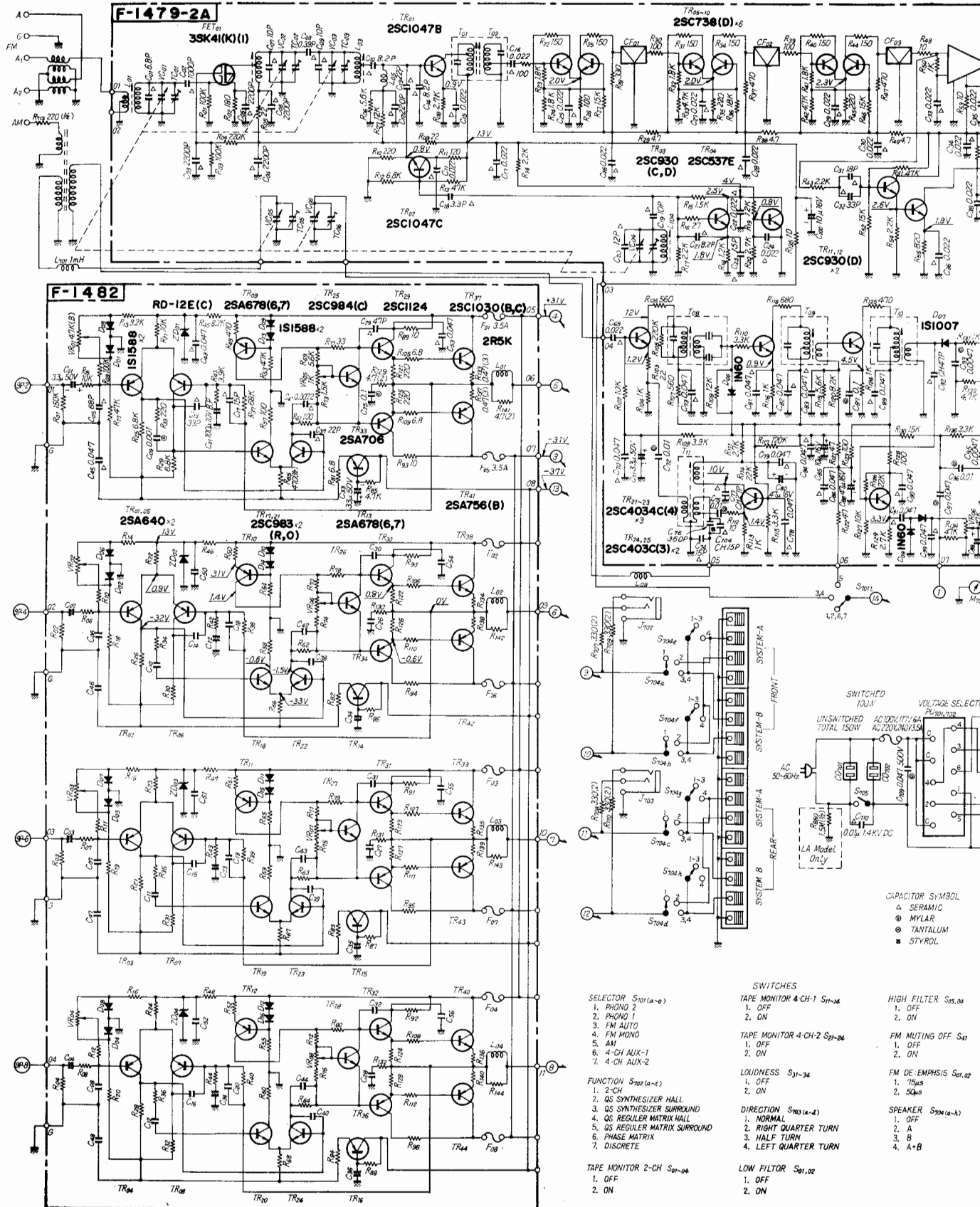
| | | |
|------|---------|-----------------|
| J701 | 2430170 | Microphone Jack |
| J702 | 2430200 | Headphone Jack |
| J703 | 2430200 | Headphone Jack |

| | |
|---------|-----------------------------|
| 3820040 | AM/FM Antenna |
| 9207610 | Operating Instruction |
| 9227610 | Operating Instruction Sheet |

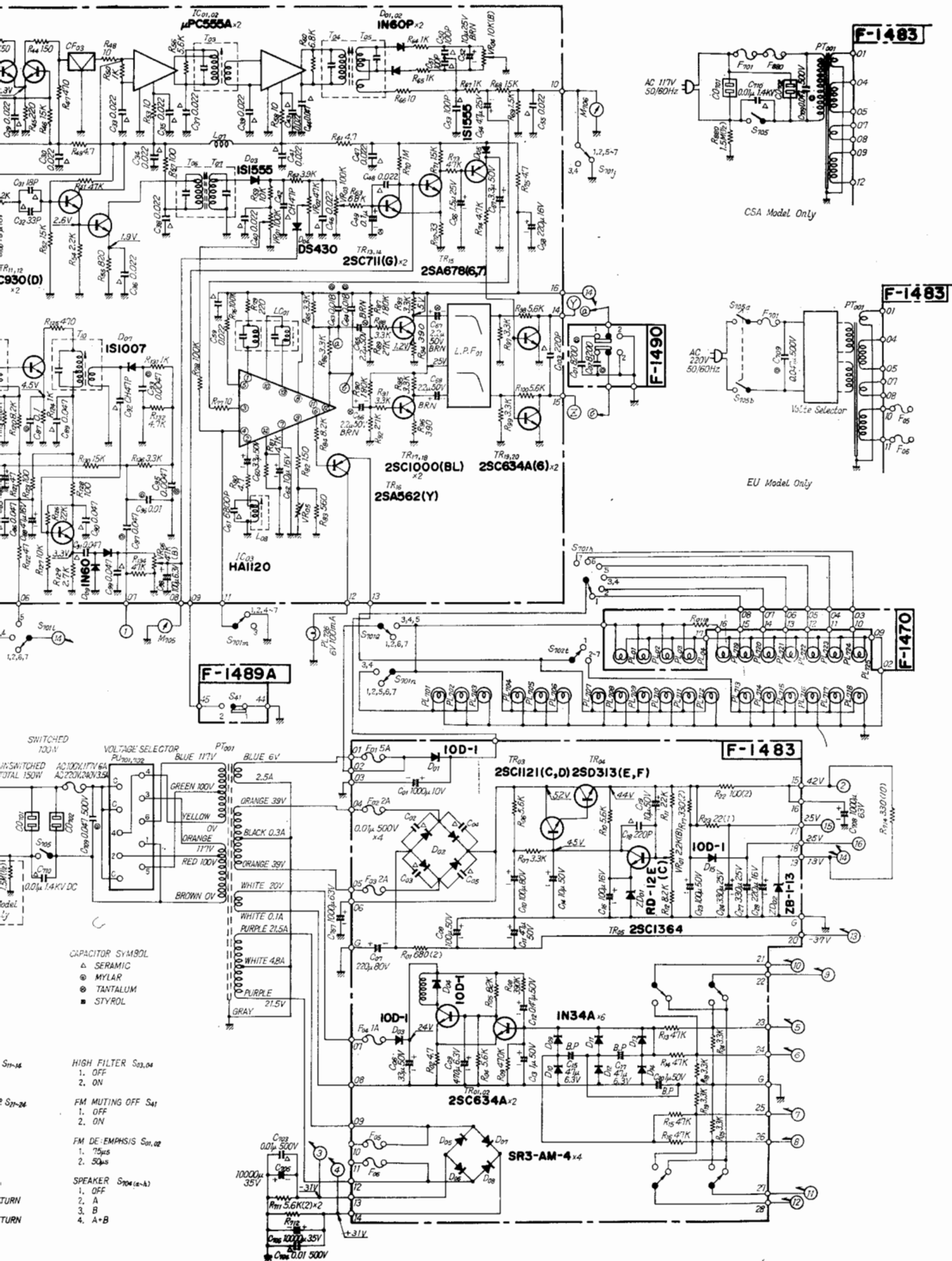
Small
HALF TURN



10. SCHEMATIC DIAGRAM OF TUNER SECTION

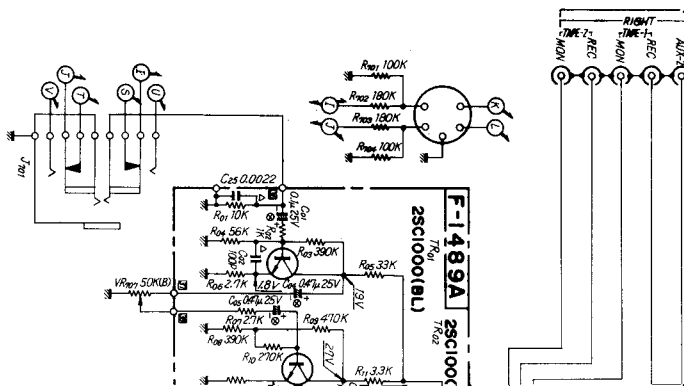
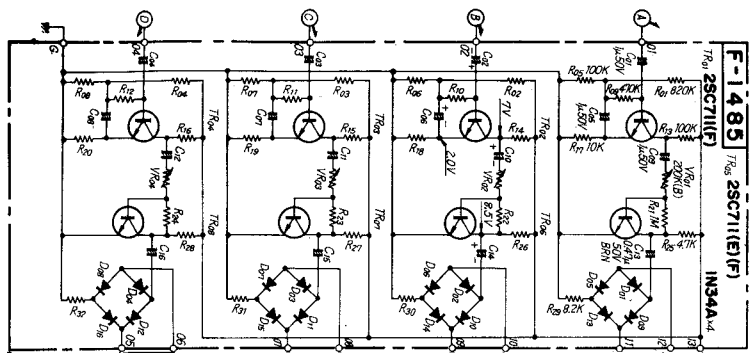


* Design and specifications subject to change without notice for improvements.



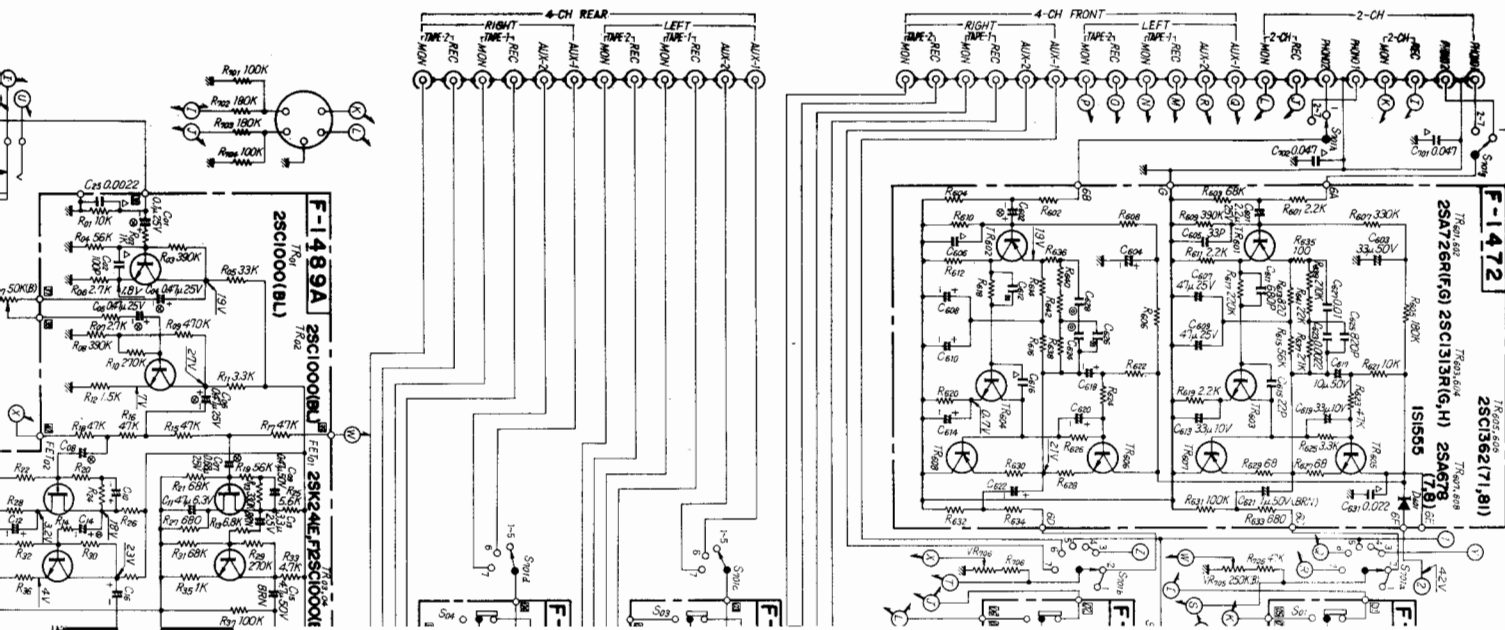
11. SCHEMATIC DIAGRAM OF AUDIO SECTION

* Design



ION

* Design and specifications subject to change without notice for improvements.



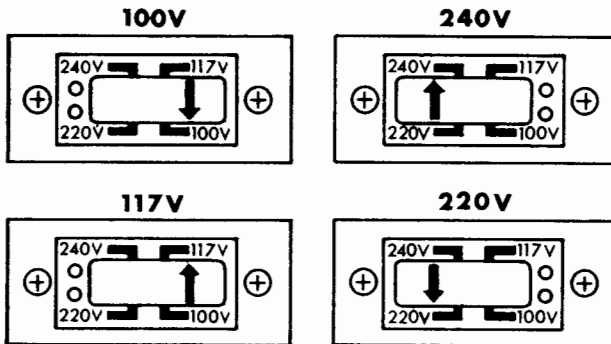
12. MAINTENANCE

12-1. Voltage Adjustment

The Voltage Selector on the rear panel enables you to operate at correct voltage in any areas. The voltage has been preadjusted at the factory, but can be easily changed as follows, according to the line voltage using in your area.

- 1) Remove the two screws securing the name plate on the unit's rear panel, then remove the name plate.
- 2) Unplug the Voltage Selector plug once, and reset it so that the arrow mark on it faces the correct voltage indication. Also change the power fuse when the power supply voltage has change. For 100/117 volt operation, use a 6-ampere glass-tubed fuse. For 220/240 volt operation, use a 3.5-ampere one.

Note: The Voltage Selector can be used to eliminate the trouble caused by the considerable voltage fluctuation. In this case, it should be set to the peak voltage.





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