



# STR-7055

GEP Model



## FM STEREO/FM-AM RECEIVER

### SPECIFICATIONS

#### Fm Tuner Section

**Frequency range:** 87.5 MHz to 108 MHz  
**Usable sensitivity:** 1.6  $\mu$ V (S/N = 30 dB)  
**Signal-to-noise ratio:** 70 dB  
**Capture ratio:** 1.0 dB  
**Frequency response:** 20 Hz to 15 kHz  $\pm$  1 dB  
**Stereo separation:** Better than 38 dB at 400 Hz

Driven separately at 1 kHz (each channel)  
 60 watts (8 ohms)  
 80 watts (4 ohms)

**Dynamic power output:** 136 watts total (8 ohms)  
 (IHF constant power supply method)  
 200 watts total (4 ohms)

**Harmonic distortion:** Less than 0.2 % at rated output  
 Less than 0.1 % at 1 watt output

#### General

**System:** Superheterodyne fm/a-m,  
 Switching MPX  
 Complementary symmetry circuit  
 (SEPP OTL)  
 Direct output coupling

**Power requirements:** 100, 120, 220, 240 volts 50/60 Hz

**Power consumption:** 300 watts

**Dimensions:** 471 (w) x 157 (h) x 375 (d) mm  
 18 $\frac{1}{4}$  (w) x 6 $\frac{3}{16}$  (h) x 14 $\frac{3}{4}$  (d) inches

**Net weight:** 15.3 kg (33 lb 11 oz)

#### A-m Tuner Section

**Frequency range:** 530 kHz to 1,605 kHz  
**Sensitivity:** 53 dB/m, built-in bar antenna  
 at 1,000 kHz  
 30  $\mu$ V, external antenna  
**Signal-to-noise ratio:** 50 dB at 50 mV/m

#### Audio Amplifier Section

##### Continuous RMS

**power output:** Both channels driven simultaneously  
 (rated output, less than 0.2 % THD)  
 35 + 35 watts (8 ohms) at 20 Hz  
 to 20 kHz  
 45 + 45 watts (8 ohms),  
 55 + 55 watts (4 ohms) at 1 kHz

**SONY**<sup>®</sup>  
**SERVICE MANUAL**

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## SERVICING NOTES

## 1. CAUTIONS ON HANDLING IC's

- Excessive heat may destroy an IC. Never reinstall a used IC.
- Check the related components for defects before replacing the IC.
- When installing new IC's, do not apply excessive heat. Solder quickly while holding a wet rag on the heat-sink tab as shown in Fig. A.
- Do not short adjacent IC leads when performing electrical checks as this might damage the IC.
- Always solder the IC heat sink to the printed circuit board to avoid damage.

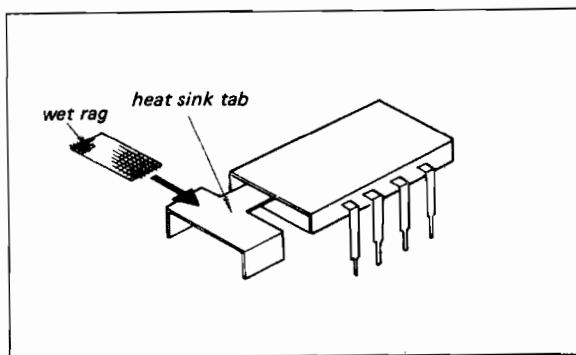


Fig. A. IC installation

## 2. NYLON RIVET REMOVAL

- To remove the nylon rivet, push its end with a tweezers as shown in Fig. B.
- To reinstall the rivet, insert the flared part into the opening first, then push its head as far as it will go.

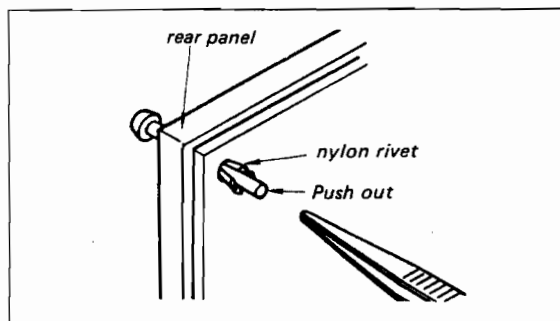


Fig. B. Nylon rivet removal

## SECTION 1 TECHNICAL DESCRIPTION

### 1-1. SPECIFICATIONS

#### Fm Tuner Section

Frequency range: 87.5 MHz to 108 MHz

Antenna terminals: 300 ohms balanced  
75 ohms unbalanced

Intermediate frequency: 10.7 MHz

Sensitivity: 2.0  $\mu$ V (IHF)  
1.6  $\mu$ V (S/N = 30 dB)

Image rejection: 70 dB

I-f rejection: 100 dB

Spurious rejection: 90 dB

A-m suppression: 56 dB

Capture ratio: 1.0 dB

Selectivity: 70 dB, IHF

Signal-to-noise ratio: 70 dB

Frequency response: 20 Hz to 15 kHz  $\pm$  1 dB

Harmonic distortion: Mono 0.2 % at 400 Hz, 100 % modulation  
Stereo 0.5 % at 400 Hz, 100 % modulation

Stereo separation: Better than 38 dB at 400 Hz

19 kHz, 38 kHz suppression: 40 dB

SCA suppression: 55 dB

#### A-m Tuner Section

Frequency range: 530 kHz to 1,605 kHz

Antenna: Built-in bar antenna and external antenna terminal

Intermediate frequency: 455 kHz

Sensitivity: 53 dB/m, built-in bar antenna at 1,000 kHz

Image rejection: 30  $\mu$  V, external antenna  
50 dB at 1,000 kHz

I-f rejection: 40 dB at 1,000 kHz

Signal-to-noise ratio: 50 dB at 50 mV/m

Harmonic distortion: 0.8 % at 50 mV/m

#### Audio Amplifier Section

Continuous RMS power output: Both channels driven simultaneously  
(rated output) 35 + 35 watts (8 ohms)  
(Less than 0.2 % THD) at 20 Hz to 20 kHz  
45 + 45 watts (8 ohms),  
55 + 55 watts (4 ohms) at 1 kHz  
Driven separately at 1 kHz  
(each channel)  
60 watts (8 ohms)  
80 watts (4 ohms)

Dynamic power output: 136 watts total (8 ohms)  
(IHF constant power supply method) 200 watts total (4 ohms)

Power bandwidth, IHF: 15 Hz to 35 kHz

Damping factor: 50 (8 ohms)

Harmonic distortion: Less than 0.2 % at rated output  
Less than 0.1 % at 1 watt output

IM distortion: (60 Hz : 7 kHz = 4 : 1)  
Less than 0.2 % at rated output  
Less than 0.1 % at 1 watt output

Frequency response: PHONO RIAA equalization curve  $\pm$  1 dB  
AUX TAPE REC/PB (input) } 10 Hz to 70 kHz  $\begin{matrix} +0 \\ -3 \end{matrix}$  dB

POWER AMP } 10 Hz to 100 kHz  $\pm 0$  dB  
 at 1 watt output

Signal-to-noise ratio:

	S/N	Weighting network	Input level
PHONO	70 dB	B	3 mV
AUX	90 dB	A	250 mV
TAPE			
REC/PB (input)			
POWER AMP	100 dB		1 V

Input sensitivity and impedance:

	Maximum sensitivity	Impedance
PHONO	2 mV	47 k ohms
AUX	150 mV	50 k ohms
TAPE		
REC/PB (input)		
POWER AMP	1 V	50 k ohms

**Note:** Maximum sensitivity means the input level at which the rated output is provided into 8 ohms (with both channels driven at full volume) at 1 kHz.

Output level and impedance:

	Level	Impedance
REC OUT	250 mV	10 k ohms
REC/PB (output)	30 mV	82 k ohms
PREAMP OUTPUT	1 V	4.7 k ohms

**HEADPHONE:** Accepts all low and high impedance headphones.

**SPEAKER:** Accepts 4 ~ 16 ohm speakers.

**Tone controls:** BASS  $\pm 10$  dB at 100 Hz  
 TREBLE  $\pm 10$  dB at 10 kHz

**High filter:** 12 dB/oct. above 9 kHz

**Low filter:** 12 dB/oct. below 50 Hz

**Loudness control:** + 10 dB at 50 Hz, + 4 dB at 10 kHz  
 (Attenuation : 30 dB)

**General:**

**System:** Superheterodyne fm/a-m, switching MPX  
 Complementary symmetry circuit  
 (SEPP OTL), Direct output coupling

**Power requirements:** 100, 120, 220, 240 volts 50/60 Hz

**Power consumption:** 300 watts

**Dimensions:** 471 (w) x 157 (h) x 375 (d) mm  
 18 $\frac{1}{4}$  (w) x 6 $\frac{3}{16}$  (h) x 14 $\frac{3}{4}$  (d) inches

**Net weight:** 15.3 kg (33 lb 11 oz)

**Shipping weight:** 18.6 kg (41 lb 2 oz)

## 1-2. CIRCUIT DESCRIPTION DIGEST

### 1. Noise Elimination Circuit for Tuner Section

This circuit is used to eliminate noises due to B+ voltage fluctuation of tuner when changing the FUNCTION switch S1 to FM or AM from other position. Referring to Fig. 1-1, when S1 is changed

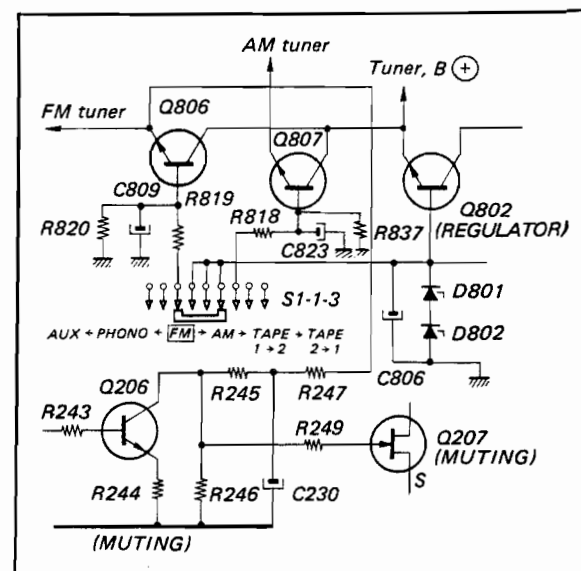


Fig. 1-1. Noise elimination circuit for tuner section

to FM, Q806 is gradually turned on due to the time constant circuit of R819 and C809 and supplies B+ voltage to the FM tuner circuit.

However, Q206 is turned off during the time constant of R247 and C230 since Q806 is turned on, killing the detector output.

Thus, the "pop" noise is completely eliminated through these two circuits.

R820 is for discharging C809 when FM circuit is disengaged.

When S1 is changed to AM, Q807 is gradually turned on due to the time constant circuit of R818 and C823, supplying power to the a-m local oscillator at A-M mode.

## 2. Audio Muting Circuit

This muting circuit is used to eliminate the "pop" noise generated when the POWER switch is set to ON or OFF and operates as follows: Referring to Fig. 1-2, when the POWER switch is set to ON, B+ and B- voltages increase quickly to its normal operating voltage. Q803 is off due to the long time constant circuit of R808 and C807. Q804 and Q603 are forced into conduction as the bleeder circuit R810, R811 and R812 are designed so that the point "C" becomes positive. Thus, noises in the pre-stage amplifiers are effectively grounded through Q603.

About 2.5 seconds later after POWER switch is set to ON, Q803 is on as C807 is fully charged. This grounds point "D", forcing point "C" negative. As a result, Q804 and Q603 are off, stopping the muting. Conversely, when the POWER switch is set to OFF, Q803 is immediately turned off as C807 is discharged by R807. C808 holds positive voltage due to the long time constant circuit of R809 and C808, and D809 (reverse resistance). As a result, Q804 and Q603 are turned on, thus PREAMP OUT is effectively grounded.

Referring to Fig. 1-3, Q805 removes the residual "pop" noises caused by unbalanced discharging characteristics of B+ and B- power supply circuit at power off. These noises cannot be removed by the muting circuit previously described.

Q805 operates as follows:

Q805 is normally off, as the base circuit is reverse biased due to the bleeder circuit.

After power is off, when the difference of absolute value of B+ and B- exceeds some extent, Q805 is forward biased and C901 is discharged quickly through Q805 and R817, maintaining equal discharging of B+ and B- power supply.

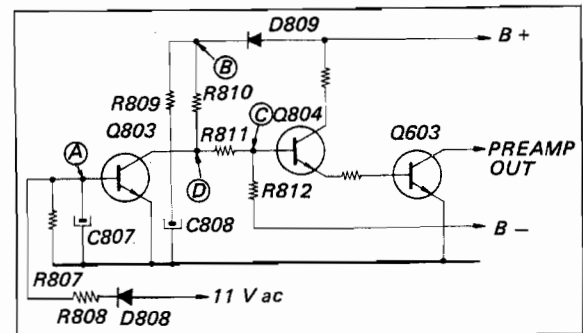


Fig. 1-2. Audio muting circuit (1)

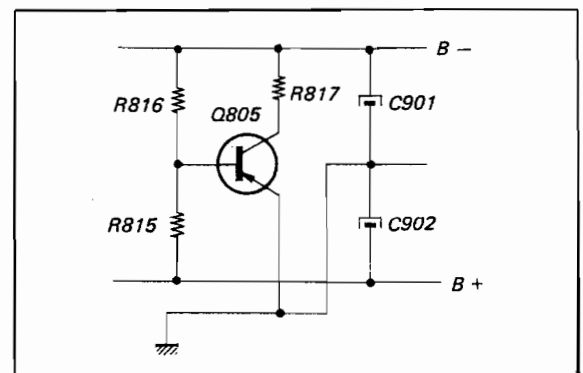


Fig. 1-3. Audio muting circuit (2)

## 3. Speaker Protection Circuit

In a direct-coupled power amplifier, some faults in transistors appear a large dc voltage across the speaker output terminal.

This might damage a delicate speaker system. The speaker protection circuit is used to remove the dc voltage as shown in Fig. 1-4.

The speaker protection is performed by two ways. One is the circuitry itself (self-defensible) and the other is additional protection circuit (Q708, Q109 and Q710).

They operate as follows:

- (1) In case that any of power transistors (Q706, Q707, Q901 and Q902) shorted.

If Q901 is shorted, for example, excessive current flows in this transistor and a large positive dc voltage will appear across the speaker output terminal (point "a" in Fig. 1-4).

This voltage is fed-back to the base of Q703 through R710. Q703 is turned off and Q705 is excessively forward biased. Thereby, large

bias voltage enough to short Q902 is applied to the base of Q707.

As a result, excessive current flows in Q901 and Q902, pulling voltage at point "a" back to zero, then the fuses in the power supply circuit are blown. Same is true when Q902 is shorted, except for the negative dc voltage at point "a". Then Q705 is off and Q901 is forced to short. Thus, speaker is protected even if one of the power transistor is shorted by accident, by forcing the other power transistor into secondary break-down.

- (2) In case that any of Q701, Q702, Q703 shorted Q705 is forced to either excessively forward biased or cutoff.

**When Q705 is excessively forward biased**

Q707 and Q902 are turned on and negative dc voltage will appear at point "a". This voltage turns Q709 and Q710 on, shorting Q707 base to ground. As a result, current flows in Q707 and Q902 decrease and the point "a" voltage becomes effectively low.

**When Q705 is forced to cutoff**

Q706 and Q901 are turned on and the positive dc voltage will appear at point "a". This voltage turns Q708 on, shorting Q706 base to ground and maintaining the point "a" voltage low as previously described.

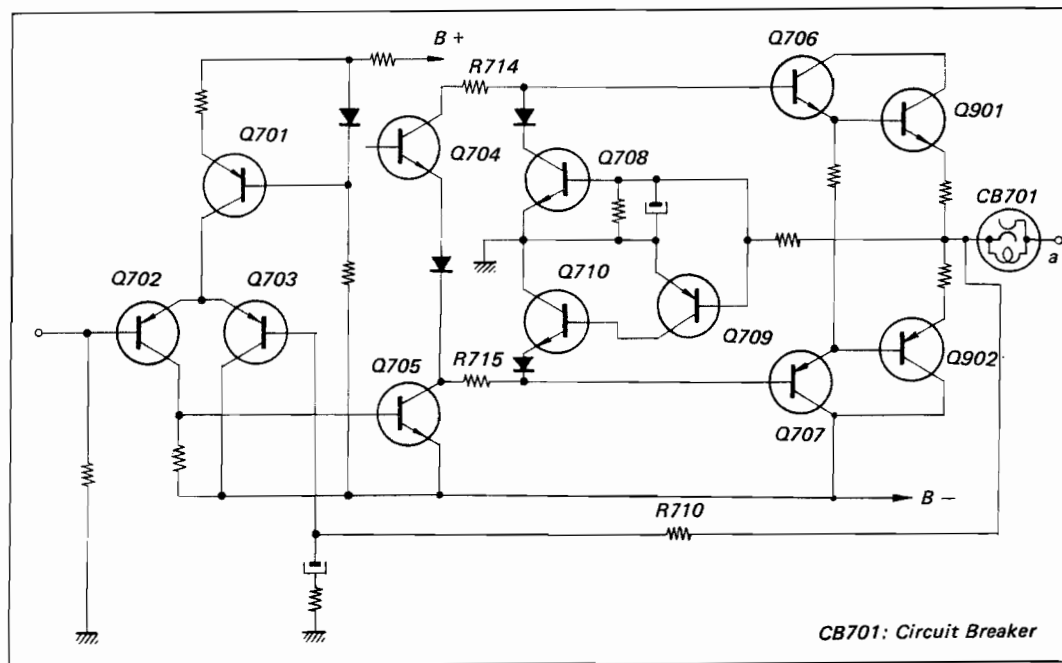
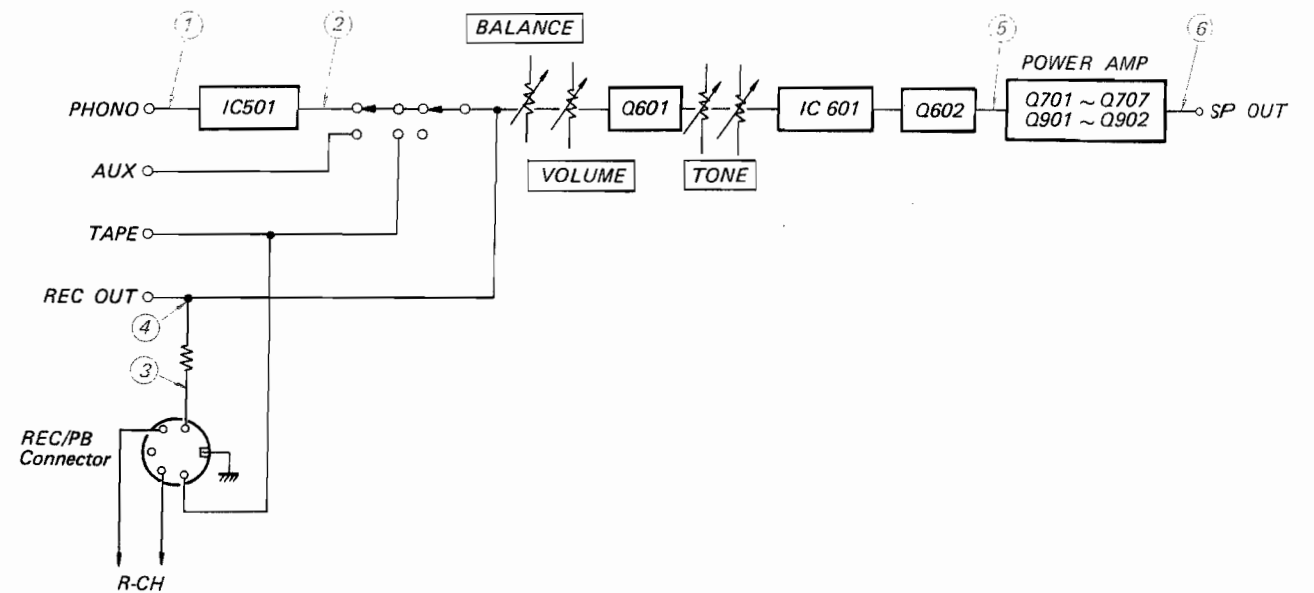
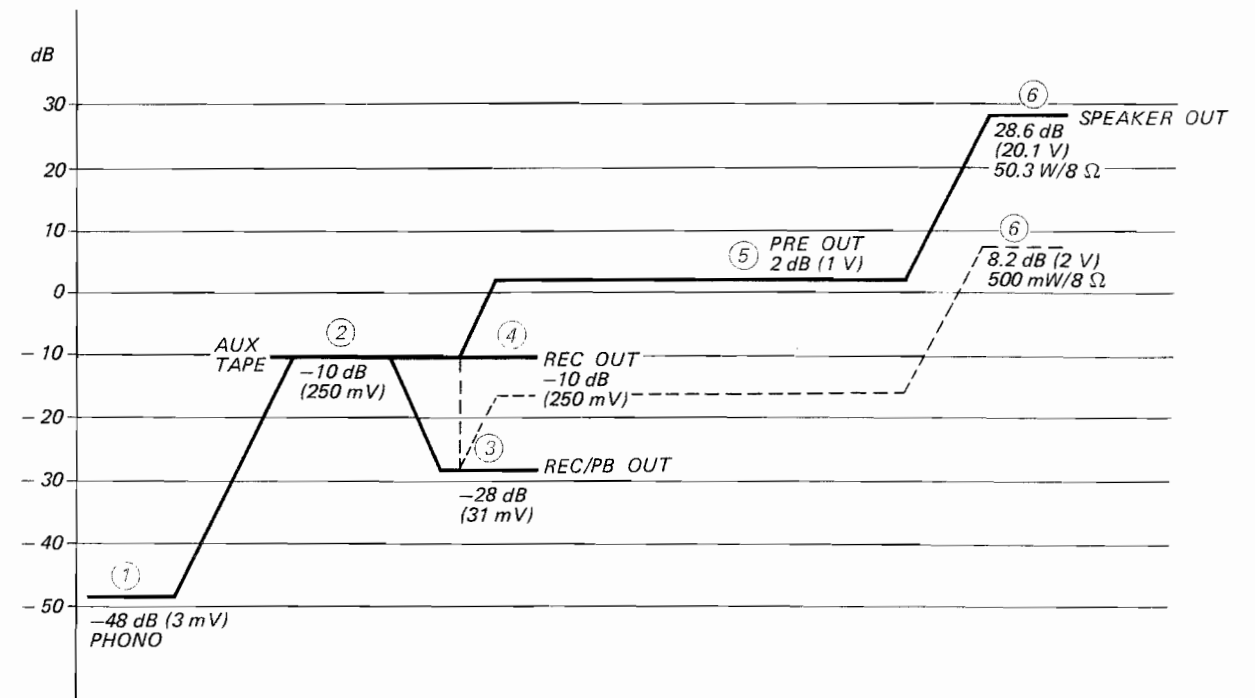


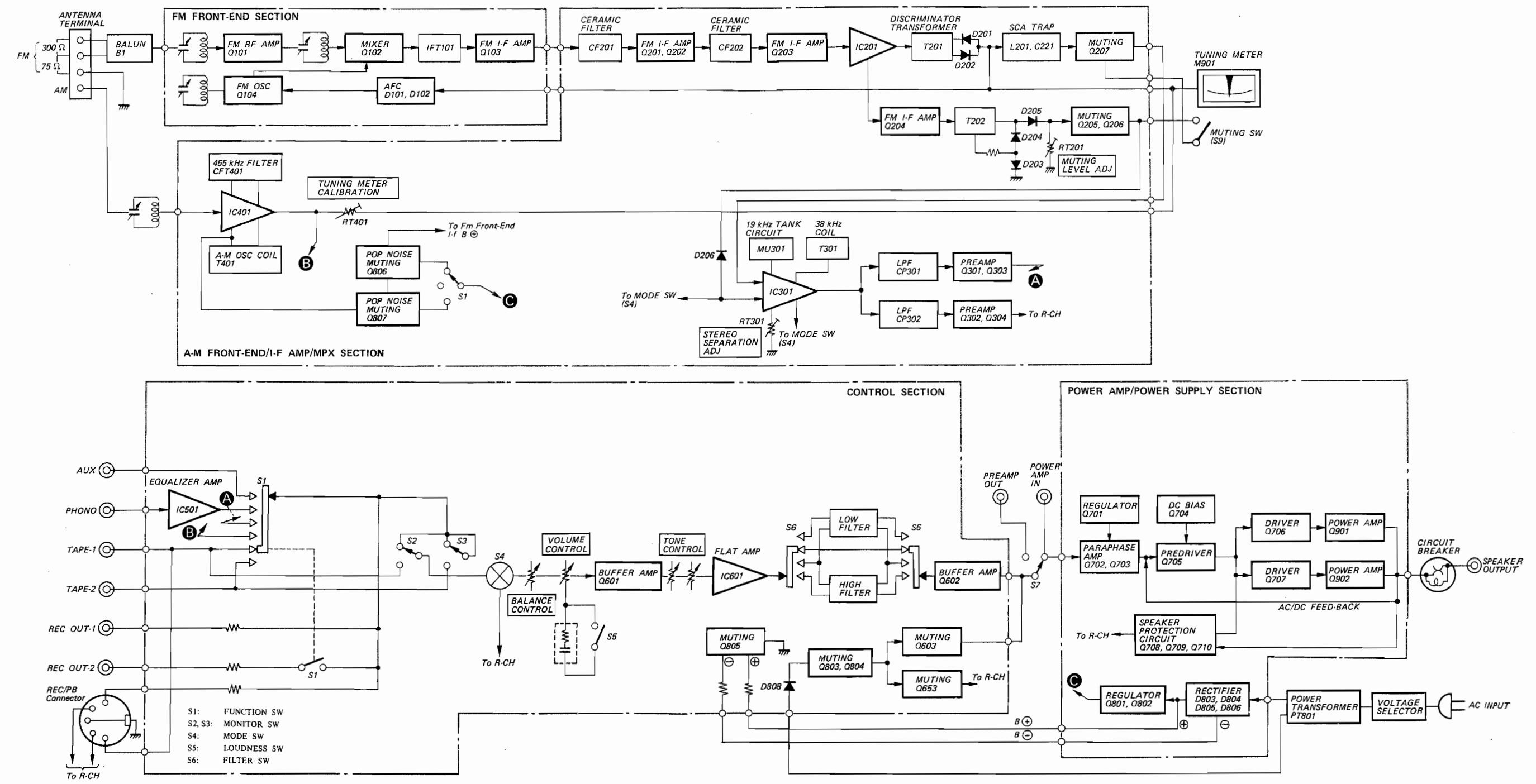
Fig. 1-4. Speaker protection circuit

**1-3. LEVEL DIAGRAM**

Note: Signal voltages are measured with ac VTVM and expressed in dB referred to 0.775 V, 1 kHz.



1-4. BLOCK DIAGRAM





## SECTION 2

### DISASSEMBLY AND REPLACEMENT

**Note:** All screws are Phillips (cross recess) type unless otherwise indicated.  
(-): slotted head

#### 2-1. BOTTOM PLATE REMOVAL

Remove the eight self-tapping screws shown in Fig. 2-1. This frees the bottom plate.

#### 2-2. FRONT PANEL REMOVAL

1. Remove all the knobs on the front panel.
2. Remove the three self-tapping screws shown in Fig. 2-1.
3. Remove the three screws shown in Fig. 2-2. This frees the front panel.

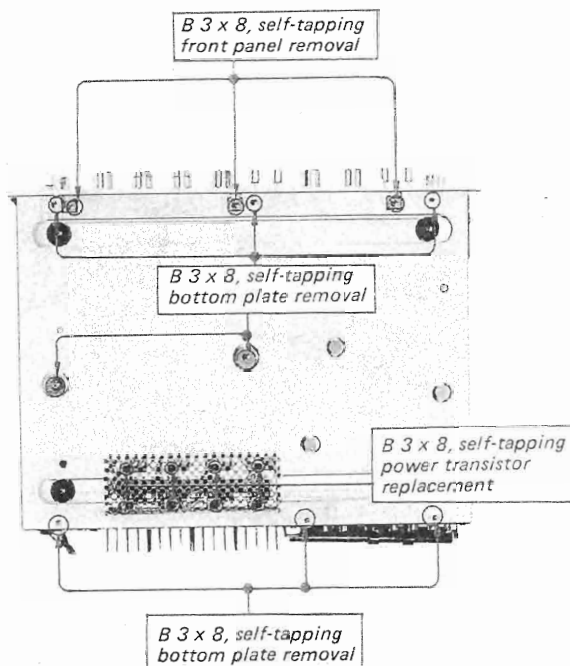


Fig. 2-1. Bottom plate and front panel removal

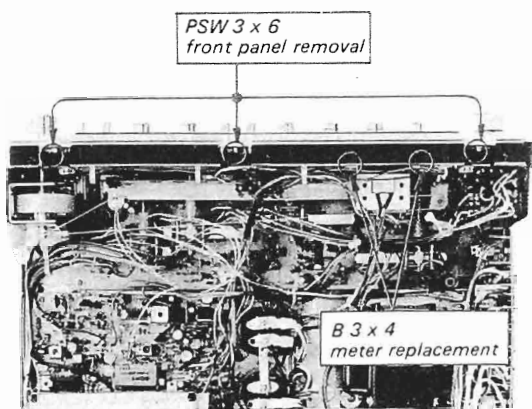


Fig. 2-2. Front panel removal and meter replacement

#### 2-3. DIAL-CORD RESTRINGING

##### Preparation

1. Cut a 1,600 mm (63-inch) length of 0.3 mm ( $1/64$ -inch) diameter dial cord.
2. Turn the tuning capacitor shaft fully clockwise.
3. Install the tuning drum as shown in Fig. 2-4.
4. Tie the end of the cord to a spring as shown in Fig. 2-3.
5. Hook the spring to the stud of drum as shown in Fig. 2-4.

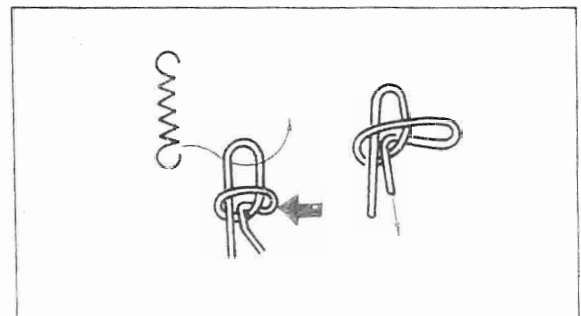


Fig. 2-3. Tying square knot in the tension spring

##### Procedure

1. String the dial cord in order as shown in Fig. 2-4.

**Note:** At the finish point, pass the doubled end of the cord through the eyelet (see Fig. 2-5) and tighten the cord and squeeze the eyelet so that the spring is under tension. Make two knots in the cord end to keep it from slipping out of the eyelet as shown in Fig. 2-5.

2. After completing the dial cord stringing, make sure that the tuning system properly works.
3. Put the pointer on the pointer guide as shown in Fig. 2-6 and bend the pointer guide tab as shown in Fig. 2-7, if necessary.
4. Tune the receiver to the local fm station. Move the pointer to the position where the dial indication coincides with the local station's carrier frequency. Apply a drop of contact cement to it.

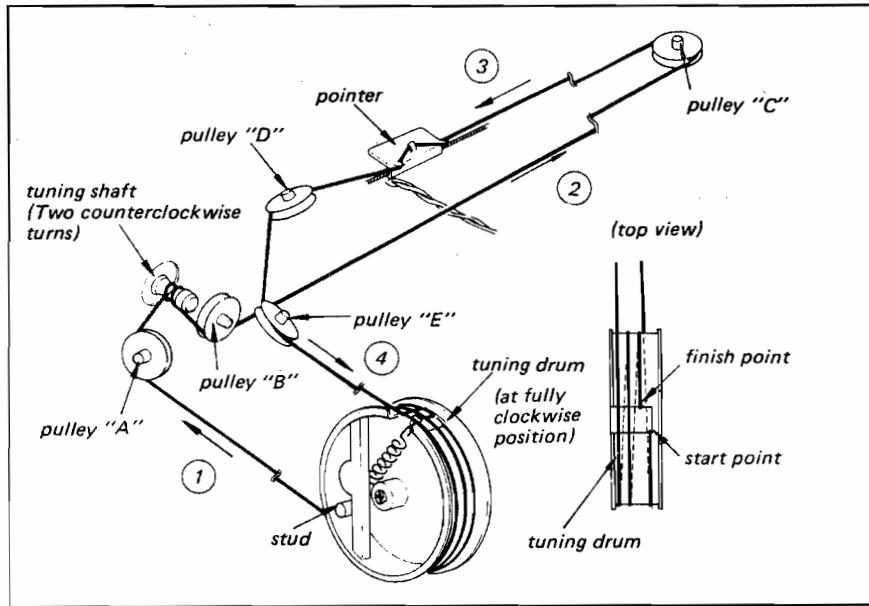


Fig. 2-4. Dial cord stringing

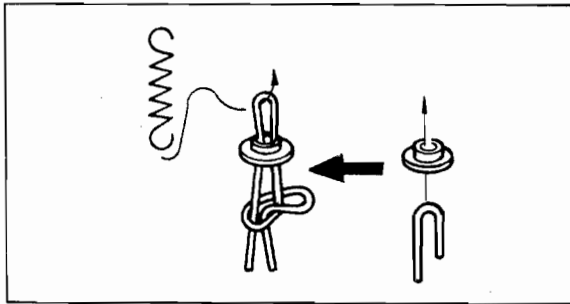


Fig. 2-5. Details of dial cord finish

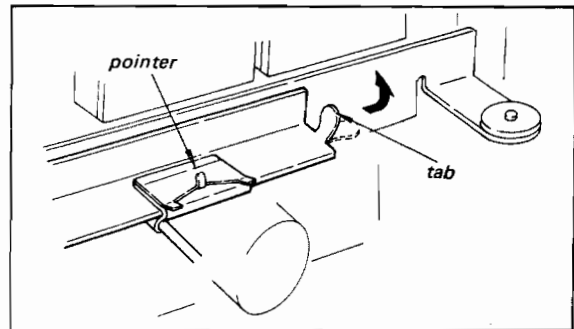


Fig. 2-7. Dial pointer installation (2)

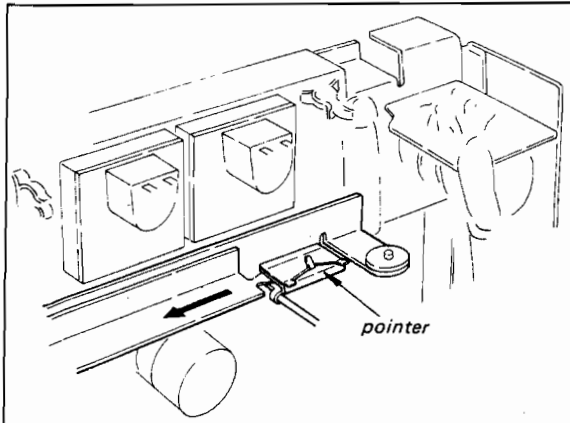


Fig. 2-6. Dial pointer installation (1)

#### 2-4. POWER TRANSISTOR REPLACEMENT

1. Remove the twelve self-tapping screws (eight at rear bottom and four at rear top) as shown in Fig. 2-1 and Fig. 2-8.
2. Remove the two screws securing the power transistor to the heat sink.

**Note:** When replacing the power transistor, apply a coating of a heat-transferring grease to both sides of the mica insulator. Any excess grease squeezed out when the mounting bolts are tightened should be wiped off with a clean cloth. This prevents it from accumulating conductive dust particles that might eventually cause a short.

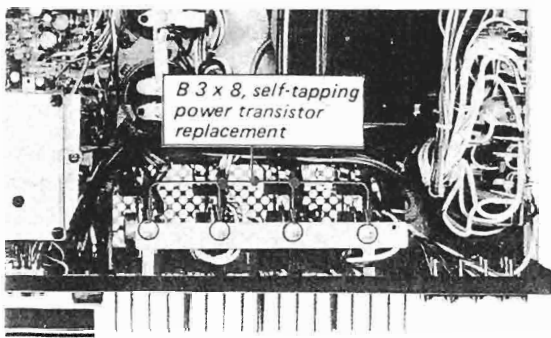


Fig. 2-8. Power transistor replacement

2-5. DIAL GLASS REMOVAL

1. Remove the front panel ass'y.
2. Remove the five screws shown in Fig. 2-9. This frees the dial glass.

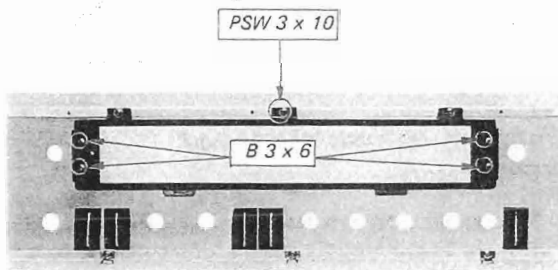


Fig. 2-9. Dial glass removal

2-6. METER REPLACEMENT

1. Remove the meter lamp shade by removing the two screws shown in Fig. 2-2.
2. Carefully remove the defective meter from the front subchassis and install a new one.

2-7. VOLUME CONTROL REPLACEMENT

1. Remove the power amp/power supply board by removing the two nylon rivets.
2. Remove the power amp circuit board bracket (C) located near the front subchassis by removing the screw shown in Fig. 2-11.
3. Remove the front panel as described in Procedure 2-2.
4. Remove the nut securing the VOLUME control to the front subchassis shown in Fig. 2-10.

(continued to Page 12)

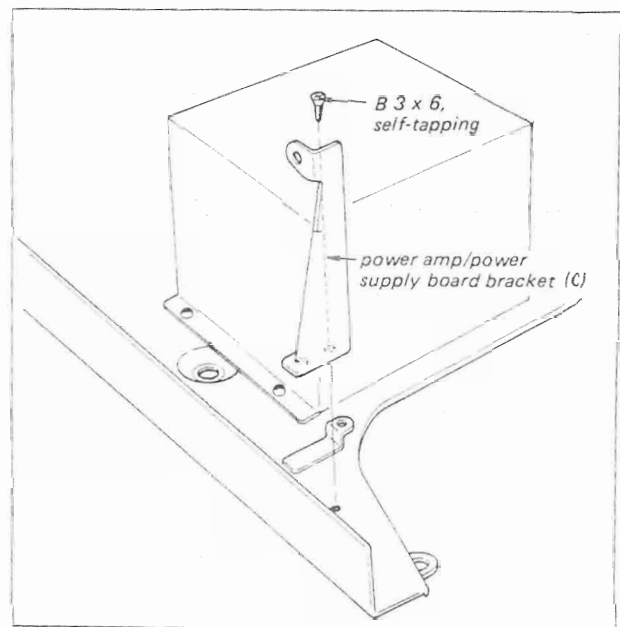


Fig. 2-11. VOLUME control replacement

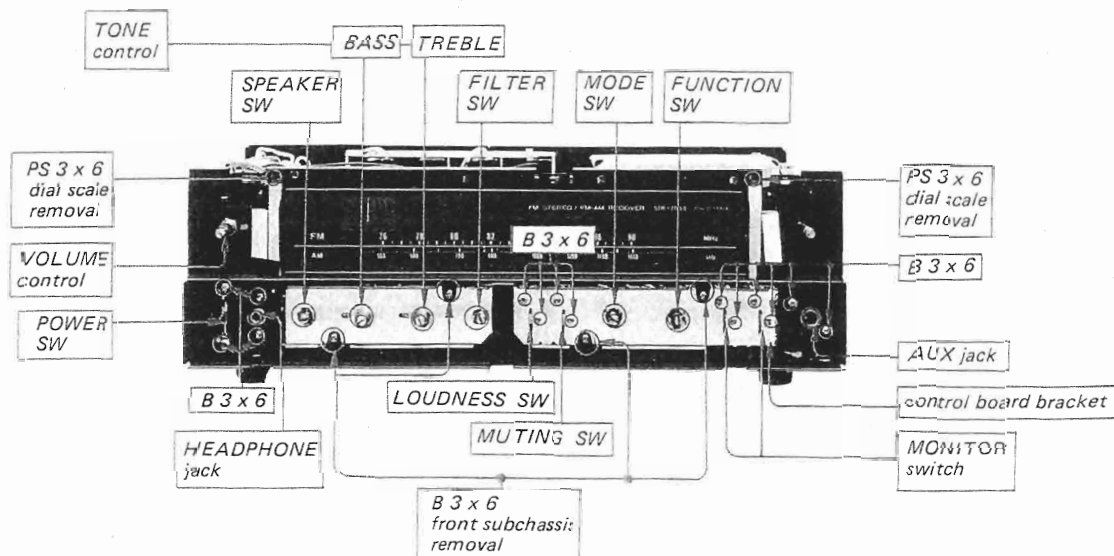


Fig. 2-10. Control, jack and switch replacement (1)

5. Remove the loudness control board along with the VOLUME control.
6. Cut each lug of the defective control on the board.
7. Unsolder and remove the clipped lugs, and clean out the holes in the printed circuit board.
8. Install a new one.

## 2-8. CONTROL, JACK AND SWITCH REPLACEMENT

Prepare for replacing any of the controls, jacks or switches by removing the front panel described in Procedure 2-2.

**Note:** Before removing the front subchassis, fasten the dial cord to the drum, pulleys with cellophane tape. This helps you to restring the dial cord.

### POWER Switch, HEADPHONE, AUX Jacks

1. Remove the two screws securing the defective switch or jack to the front subchassis as shown in Fig. 2-10.
2. Remove the switch or jack, and unsolder its leads.
3. Install a new one.

### SPEAKER, FILTER, MODE and FUNCTION Switches

1. Remove the retaining ring securing the defective switch, located at the back side of control board bracket, as shown in Fig. 2-12.
2. Pull out the shaft of the defective switch with a screwdriver as shown in Fig. 2-13.

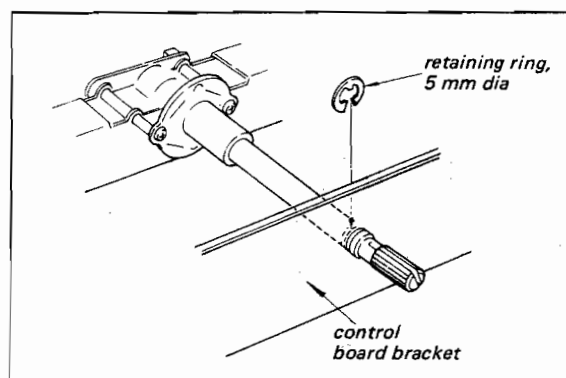


Fig. 2-12. Control board removal

3. Remove the bottom plate as described in Procedure 2-1.
4. With a soldering iron having a solder-sucking tip, clean the solder from each lug of the defective switch and the printed circuit board.
5. Remove the switch and install a new one.

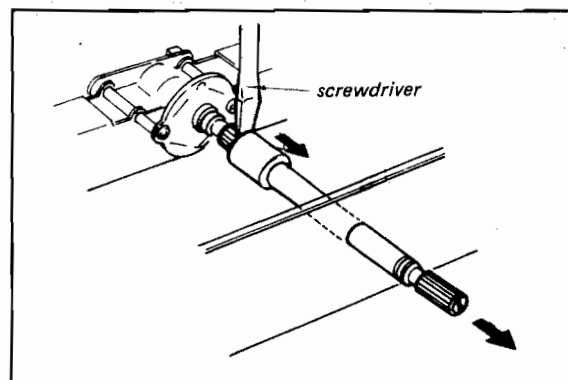


Fig. 2-13. Switch shaft removal

### LOUDNESS, MUTING Switches and TONE controls

1. Remove the four screws (B 3 x 6) securing the control board bracket to the subchassis as shown in Fig. 2-10.
2. Remove the three screws (PSW 3 x 6) securing the control board to the chassis as shown in Fig. 2-14.
3. Remove the nut securing the defective control or two screws (B 3 x 6) securing the defective switch to the control board bracket as shown in Fig. 2-10.
4. Remove the bottom plate as described in Procedure 2-1.
5. Move the control board in the direction of the power transformer as far as it goes. This helps in unsoldering the defective part on the board.
6. With a soldering iron having a solder-sucking tip, clean the solder from each lug of the defective part and the printed circuit board.
7. Remove the defective part and install a new one.

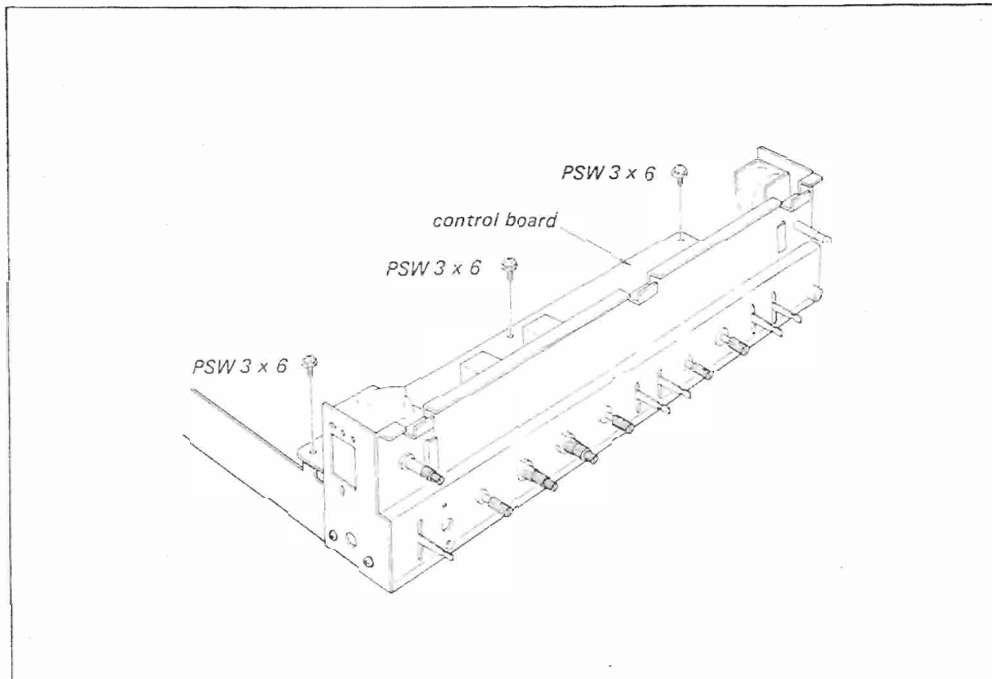
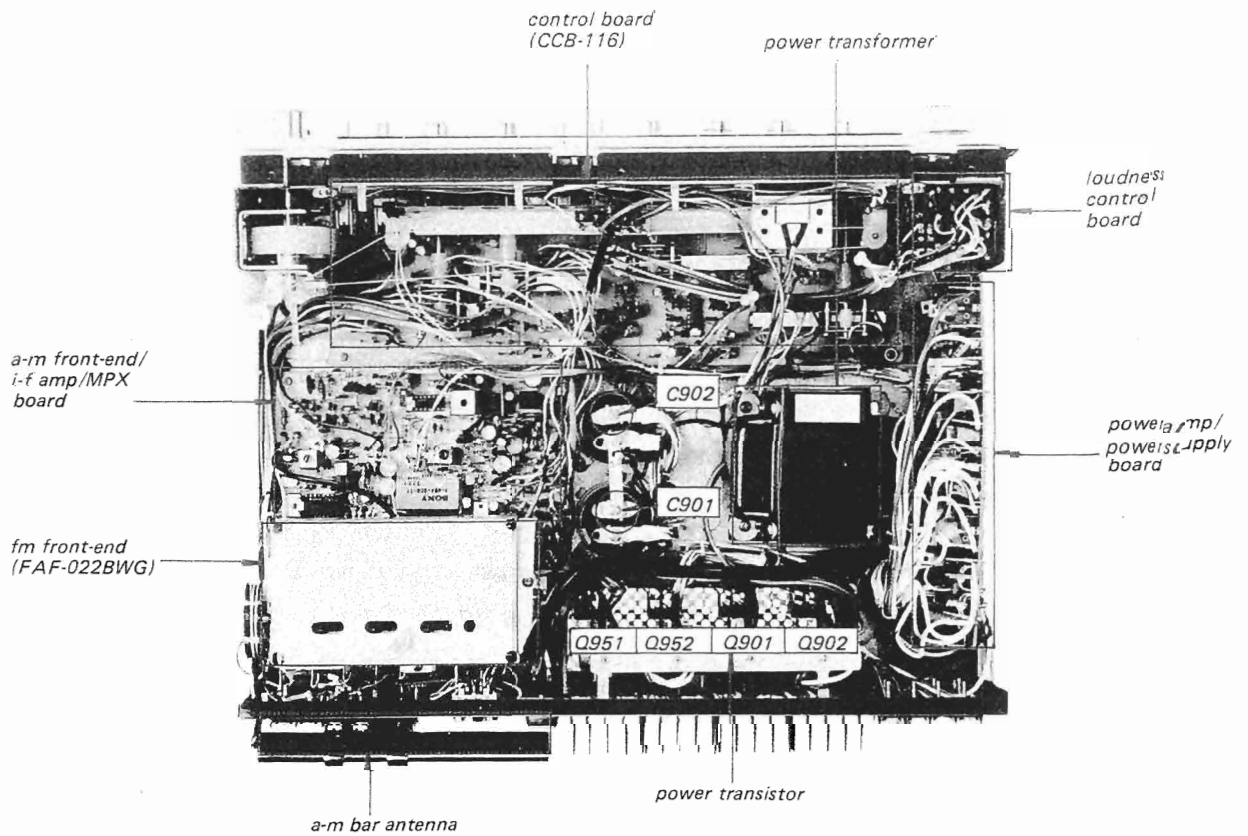


Fig. 2-14. Control, jack and switch replacement (2)

2-9. CHASSIS LAYOUT



## SECTION 3 ALIGNMENT AND ADJUSTMENTS

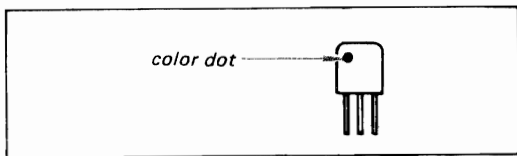
### 3-1. FM I-F STRIP ALIGNMENT

**CAUTION**

The ceramic filters in the fm i-f circuit are selected according to their specified center frequencies and color coded as shown in Fig. 3-1, and listed in Table 3-1. Check the color code of the filters to identify the same center frequency when replacing any of these filters.

**TABLE 3-1.**

FM I-F CERAMIC FILTERS		
Part No.	Color	Specified Center Freq.
1-527-507-11	red	10.70 MHz
1-527-507-21	black	10.66 MHz
1-527-507-31	white	10.74 MHz
1-527-507-41	green	10.62 MHz
1-527-507-51	yellow	10.78 MHz



*Fig. 3-1. Fm i-f ceramic filter*

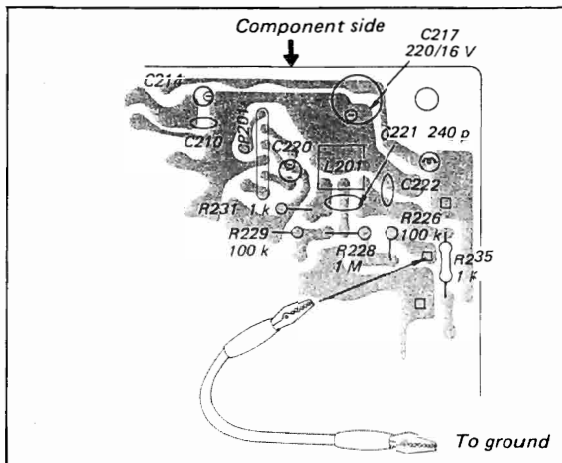
**Note:** Fm i-f strip alignment should be performed only after replacing IFT101 in the front-end.

**Test Equipment Required**

1. Fm signal generator
2. Ac VTVM
3. Oscilloscope
4. Alignment tools
5. Headphone

**Preparation**

1. Remove the shield case.
2. Connect the test equipment and a headphone as shown in Fig. 3-4.
3. Short the test point of R226 (AFC circuit) on the a-m front-end/i-f amp/MPX board to ground as shown in Fig. 3-2.

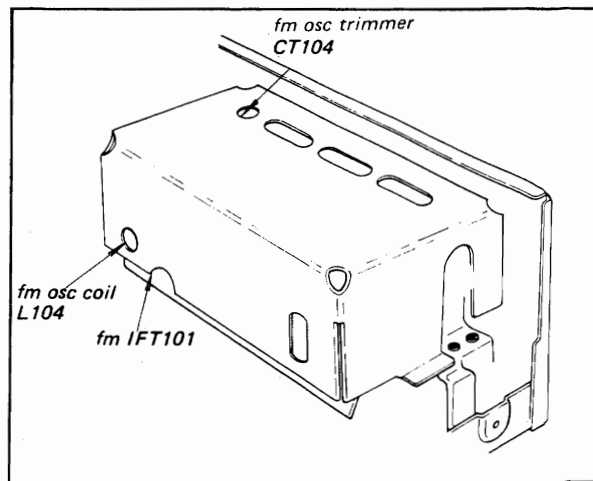


*Fig. 3-2. Interruption of afc circuit*

**Note:** This alignment is needed only after IFT101 in the front-end, rf trimmer capacitors (CT102, CT103), or T201 (discriminator transformer) has been replaced or repaired.  
All signal generator output levels specified in the fm section are for terminated output.

**Procedure**

1. With the test equipment connected as shown in Fig. 3-4, set the signal-generator controls as follows:
  - Carrier frequency . . . . . 98 MHz
  - Modulation . . . . . Fm, 400 Hz, 100 %  
(75 kHz deviation)
  - Output level . . . . . 30  $\mu$ V (30 dB)
2. Set the receiver controls as follows:
  - FUNCTION switch . . . . . FM
  - VOLUME control . . . . . Minimum
  - MUTING switch . . . . . OFF



*Fig. 3-3. Adjustment parts location*

3. Turn the core of fm i-f transformer IFT101 (See Fig. 3-3) and the bottom core (primary side) of discriminator transformer T201 (See Fig. 3-10) to obtain maximum output with the alignment tool.

**3-2. FM DISCRIMINATOR ALIGNMENT**

**Note:** There are two or three methods of discriminator alignment, but only the simplified method using the tuner TUNING meter is described here.

**Test Equipment Required**

1. Oscilloscope
2. Alignment tools
3. Headphone

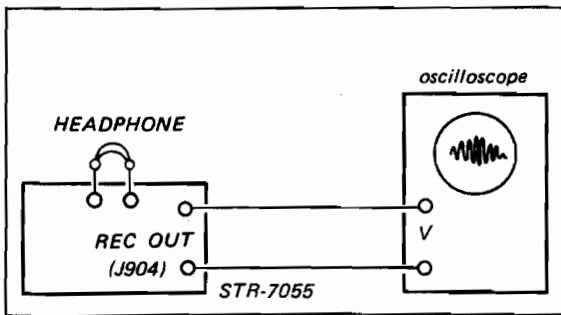


Fig. 3-5. Discriminator alignment test setup

**Preparation**

1. Remove the shield case.
2. Connect the input cable of the oscilloscope to REC OUT jack (J904) as shown in Fig. 3-5.
3. Short the test point of R226 (AFC circuit) on the a-m front-end/i-f amp/MPX board to ground as shown in Fig. 3-2.

**Procedure**

1. With the test equipment connected as shown in Fig. 3-4, set the receiver controls as follows:

FUNCTION switch . . . . FM  
 VOLUME control . . . . Minimum  
 MUTING switch . . . . . OFF

2. Tune the receiver to a vacant spot in the band (no signal input). Listen to the headphone and watch the oscilloscope to confirm that the receiver is not receiving any off-the-air signal.
3. Turn the top core (secondary side) of discriminator transformer T201 (See Fig. 3-10) to obtain a null-point reading on the TUNING meter with the alignment tool. If the discriminator transformer T201 is not aligned correctly, some deviation on the TUNING meter will be observed.

**Note:** Turn the core carefully and slowly. At both extreme positions of the top core, a null point will be observed. The real null point should be obtained in the middle of the core thread length.

4. Repeat the above mentioned steps and fm i-f strip alignment (procedure 3-1) alternately two or three times.

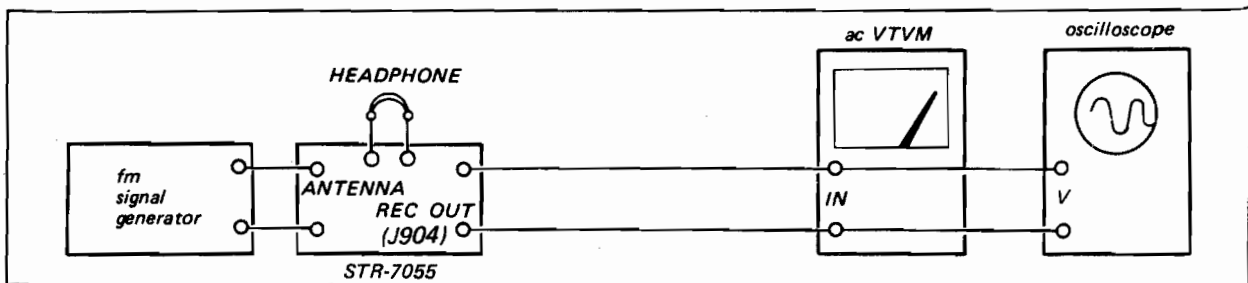


Fig. 3-4. Fm i-f, discriminator, muting and front-end alignment test setup



**3-3. FM FREQUENCY COVERAGE ALIGNMENT**

**CAUTION**

Never attempt alignment of the front-end section except for the frequency-coverage and dial-calibration adjustments. The fm front-end section has been carefully adjusted at the factory, so very little adjustment is necessary in the field. Alignment need not be performed when the front-end FET is replaced since changes in FET parameters have little effect upon tuning. If an rf-stage adjustment is required, ask your nearest SONY Service Station to send your unit to the Factory Service Center for a complete front-end alignment. Exercise caution when returning the faulty unit so that it is not damaged in transit. The warranty will not cover damage incurred in transit to the Factory Service Center.

**Note:** Before starting this alignment, the discriminator alignment should be performed.

**Signal Generator Method**

**Test Equipment Required**

1. Fm signal generator
2. Ac VTVM
3. Alignment tools

**Preparation**

1. Short the test point of R226 (AFC circuit) to ground as shown in Fig. 3-2.
2. Connect the test equipment as shown in Fig. 3-4.
3. Set the receiver controls as follows:

FUNCTION switch . . . . FM  
 VOLUME control . . . . Minimum

**Procedure**

Follow the procedures given in Table 3-2 when performing this alignment with an fm signal generator. Be sure that the dial is mechanically calibrated as described in Procedure 2-3 on page 9.

**Off-the-Air Signal Method**

An accurate dial calibration and a frequency-coverage alignment can also be performed by utilizing off-the-air local fm signals. However, before performing the following procedure, be sure that the dial pointer is correctly positioned as described in Procedure 2-3 on page 9.

**Procedure**

1. Tune the receiver to the lowest-frequency station in your locality.
2. Check the dial scale for a calibration accuracy of  $\pm 100$  kHz from the carrier frequency of the station. If the dial-accuracy deviation exceeds this limit, adjust the local-oscillator coil L104 (See Fig. 3-3) slightly until optimum dial calibration is obtained.
3. Tune the receiver to the highest-frequency station in your locality. If the dial-calibration error is excessive, adjust local-oscillator trimmer CT104 (See Fig. 3-3) to obtain maximum calibration accuracy

**3-4. FM STEREO SEPARATION ADJUSTMENT**

**Test Equipment Required**

1. Fm stereo signal generator
2. Ac VTVM
3. Oscilloscope

**TABLE 3-2 FM FREQUENCY COVERAGE ALIGNMENT**

Step	Coupling Between Receiver and SG	SG Frequency and Output Level (terminated)	Receiver Dial Indication	Ac VTVM Connection	Adjust	Indication
1.	Direct	87.5 MHz 400 Hz 30 % Mod. Output level as low as possible	87.5 MHz	REC OUT (J904)	OSC coil L104 See Fig. 3-3	Maximum VTVM reading
2.		108 MHz 400 Hz 30 % Mod. Output level as low as possible	108 MHz		OSC trimmer CT104 See Fig. 3-3	



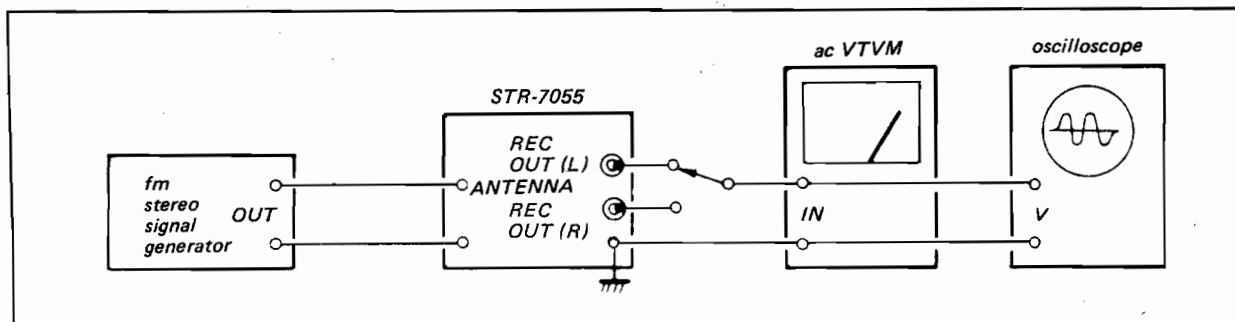


Fig. 3-6. Fm stereo separation adjustment test setup

### Preparation

1. Remove the shield case.
2. Connect the test equipment as shown in Fig. 3-6, then set the fm stereo signal generator controls as follows:

Carrier frequency . . . . . 98 MHz  
 Output level . . . . . 1,000  $\mu$ V (60 dB)  
 Mode . . . . . Stereo  
 Audio (400 Hz) Mod . . . . 67.5 kHz (90 %)  
 Pilot (19 kHz) Mod . . . . . 7.5 kHz (10 %)

**Note:** 75 kHz (100 %) if the metering indicates total modulation (audio-pilot).

3. Set the receiver controls as follows:

FUNCTION switch . . . . . FM  
 VOLUME control . . . . . Minimum

### Procedure

1. Precisely tune the receiver to the carrier frequency of stereo signal generator, then turn the top core of switching transformer T301 (See Fig. 3-10) to obtain maximum output at the left channel. Note that this adjustment has a close relationship with stereo distortion.
2. Record the output level of the left channel when the stereo signal generator input selector is set to the left channel.
3. Switch the stereo signal generator input selector to the right channel and read the residual signal level in the left channel.
4. The output-level to residual-level ratio represents the separation. Adjust separation adj. control RT301 (See Fig. 3-10) for minimum residual level. Check the right channel for separation. Usually, about an 8 to 9 dB difference in channel separation exists. Readjust RT301 for minimum difference between left- and right-channel separation. While doing this, remember that the output level also changes according to the setting of RT301.

### 3-5. MUTING ADJUSTMENT

**Note:** Readjustment is necessary after replacing Q204 (FET) or if the muting point upon TUNING meter deflection is not symmetrical when detuning higher or lower than the reference carrier frequency. Two methods of muting adjustment are available, signal generator adjustment and adjustment by using an off-the-air signal. You can use either of them.

#### Signal Generator Method

#### Test Equipment Required

1. Fm signal generator
2. Ac VTVM or oscilloscope
3. Screwdriver with 3 mm ( $1/8$ " ) blade

#### Preparation

1. Remove the shield case.
2. Short the test point of R226 (AFC circuit) on the a-m front-end/i-f amp/MPX board to ground as shown in Fig. 3-2.
3. With the test equipment connected as shown in Fig. 3-4, set the signal generator controls as follows:

Carrier frequency . . . . . 98 MHz  
 Modulation . . . . . Fm, 400 Hz, 30 %  
 (22.5 kHz deviation)  
 Output level . . . . . 1,000  $\mu$ V (60 dB)

4. Set the receiver controls as follows:

FUNCTION switch . . . . . FM  
 MUTING switch . . . . . ON  
 VOLUME control . . . . . Minimum

#### Procedure

1. Turn RT201 (See Fig. 3-10) fully clockwise.
2. Follow the procedure given in Table 3-3. Tune the receiver to the SG frequency, then adjust T202

**TABLE 3-3 MUTING ADJUSTMENT**

Coupling Between Tuner and SG	SG Frequency and Output Level	Receiver Dial Indication	Adjust	Remarks
Direct	98 MHz 400 Hz 30 % Mod. 1,000 $\mu$ V (60 dB)	98 MHz	T202 See Fig. 3-10.	Turn T202 to obtain proper muting operation.

(See Fig. 3-10) for proper muting operation. Muting should begin at point equidistant from zero center.

**Off-the-Air Signal Method**

Accurate muting circuit adjustment can also be performed by utilizing an off-the-air local fm signal instead of the fm signal generator.

**3-6. A-M I-F STRIP ALIGNMENT**

**Note:** The i-f transformers (CFT401 and T402) in the a-m i-f amplifier circuit are adjusted at the factory, so very little adjustment is necessary in the field even if replacing any of these i-f transformers.

**3-7. A-M FREQUENCY COVERAGE AND TRACKING ALIGNMENT**

**Preparation**

1. Connect the test equipment as shown in Fig. 3-7.
2. Set the receiver controls as follows:

FUNCTION switch . . . . AM  
VOLUME control . . . . Minimum

**Signal Generator Method**

**Test Equipment Required**

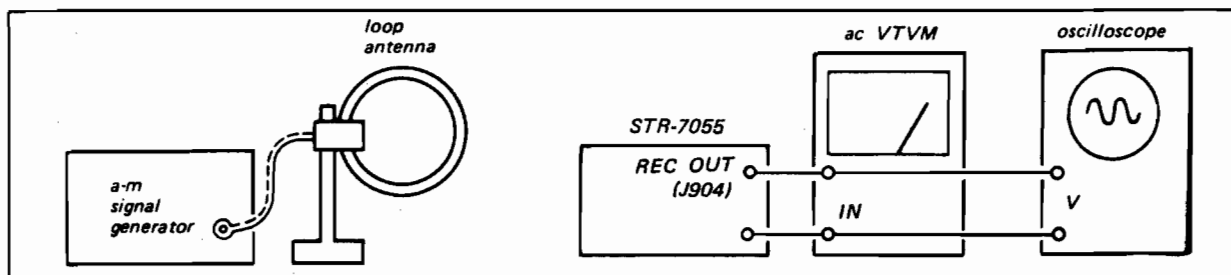
1. A-m signal generator
2. Loop antenna
3. Ac VTVM or oscilloscope

**Procedure**

With the test equipment connected as shown in Fig. 3-7, follow the procedures given in Table 3-4 when performing this alignment with an a-m signal generator.

**Off-the-Air Signal Method**

An accurate frequency-coverage and tracking alignment can also be performed by utilizing off-the-air local a-m signals.



*Fig. 3-7. A-m frequency coverage and tracking alignment test setup*

TABLE 3-4. A-M FREQUENCY COVERAGE AND TRACKING ALIGNMENT

A-M FREQUENCY COVERAGE ALIGNMENT		SG Coupling . . . . Loop Antenna SG Output Level . . 400 Hz, 30 % (as low as possible)			
Step	SG Frequency	Receiver Dial Indication	Ac VTVM Connection	Adjust	Indication
1.	550 kHz	550 kHz	REC OUT (J904)	OSC coil T401 See Fig. 3-10.	Maximum VTVM reading
2.	1,600 kHz	1,600 kHz		OSC trimmer CT402 See Fig. 3-10.	
A-M TRACKING ALIGNMENT		SG Coupling . . . . Loop Antenna SG Output Level . . 400 Hz, 30 % (as low as possible)			
1.	600 kHz	Tune to the SG signal.	REC OUT (J904)	Bar antenna coil L901	Maximum VTVM reading
2.	1,400 kHz			Antenna trimmer CT401 See Fig. 3-10.	

### 3-8. TUNING METER CALIBRATION

#### Test Equipment Required

1. A-m signal generator
2. Loop antenna
3. Alignment tools

#### Preparation

1. Remove the shield case.
2. Connect the test equipment as shown in Fig. 3-8.
3. Set the a-m signal generator controls as follows:

Carrier frequency . . . . . 1,000 kHz  
Output level . . . . . 104 dB/m at AM antenna  
Modulation (400 Hz) . . . . . 30 %

4. Set the receiver controls as follows:

VOLUME control . . . . . Minimum  
FUNCTION switch . . . . . AM  
MODE switch . . . . . MONO  
MONITOR switch . . . . . SOURCE

#### Procedure

Precisely tune the receiver to the signal and adjust RT401 (See Fig. 3-10) to obtain the meter pointer within 1 mm ( $\frac{3}{64}$ "') left of its maximum indication as shown in Fig. 3-9.

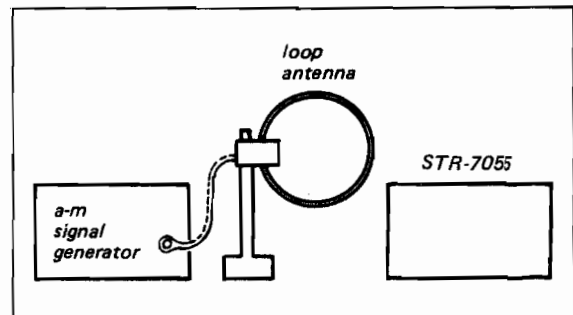


Fig. 3-8. Tuning meter calibration test setup

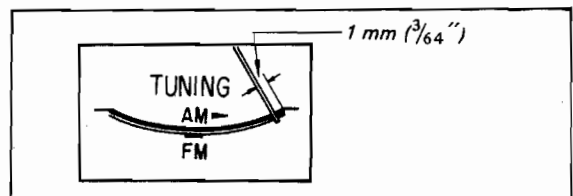


Fig. 3-9. TUNING meter calibration

X ( als Vorlage vorhanden )

**Adjustment Parts Location**

A-m Front-End/I-f Amplifier/MPX Board  
- Component Side -

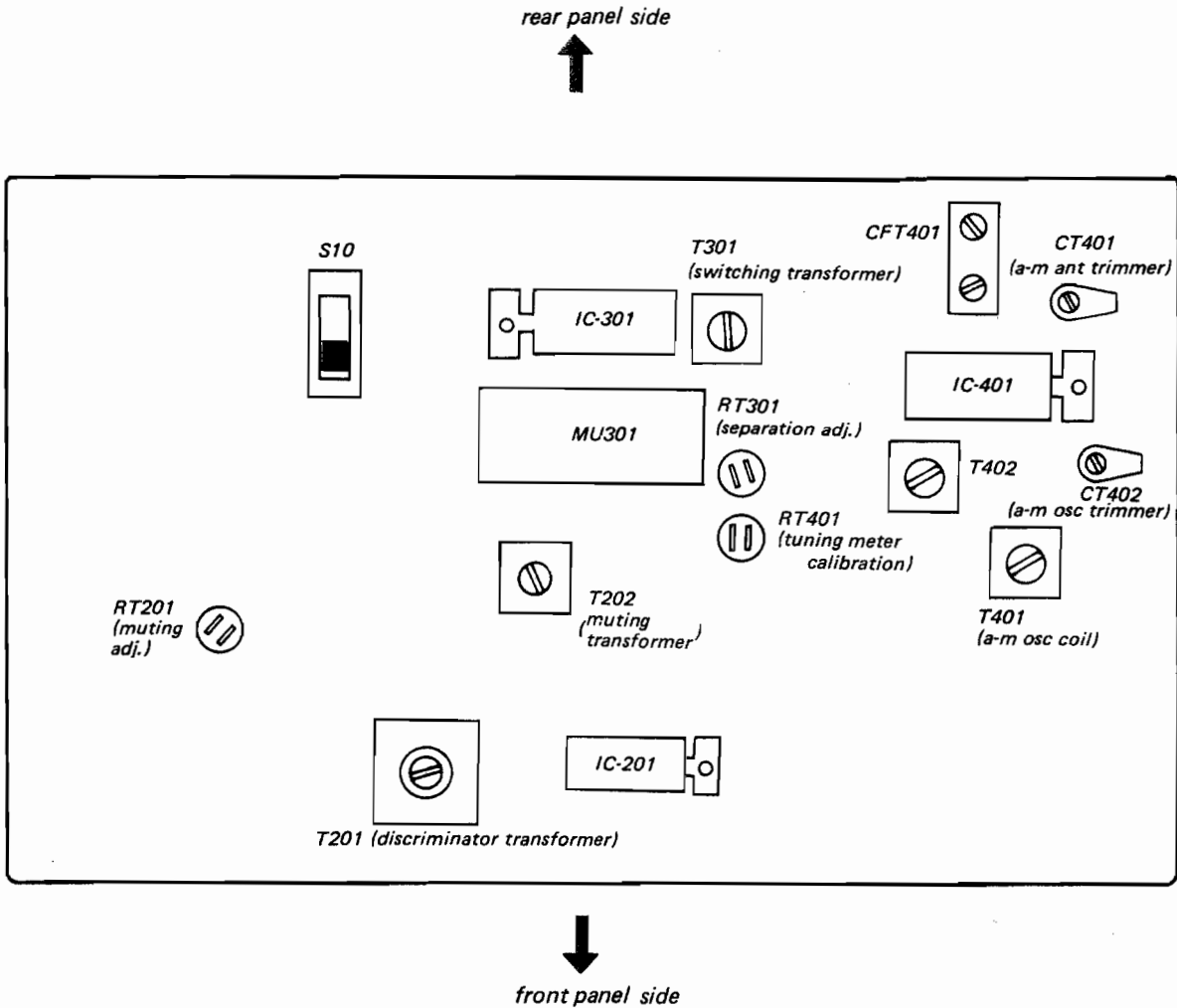


Fig. 3-10. Adjustment parts location

### 3-9. POWER AMPLIFIER ADJUSTMENT

#### Dc Bias Adjustment

Serious deficiencies in performance, such as thermal runaway of power transistors, will result if this adjustment is improperly made.

#### CAUTION

To avoid accidental power transistor damage, increase the ac line voltage gradually, using a variable transformer.

#### Test Equipment Required

1. Dc millivoltmeter
2. Variable transformer
3. Screwdriver, 3 mm ( $\frac{1}{8}$ " ) blade

#### Preparation

1. Remove the shield case.
2. Connect the dc millivoltmeter across the test points as shown in Fig. 3-11.
3. Turn the adjustable resistors RT701 and RT751 on the power amp/power supply board fully counterclockwise as shown in Fig. 3-11.
4. Set the variable transformer for minimum output.

#### Procedure

1. Turn on POWER switch, and increase the line voltage up to the rated value (120 V).
2. Allow about five minutes for warm-up.
3. Adjust RT701 (RT751) for 50 mV reading on the meter.

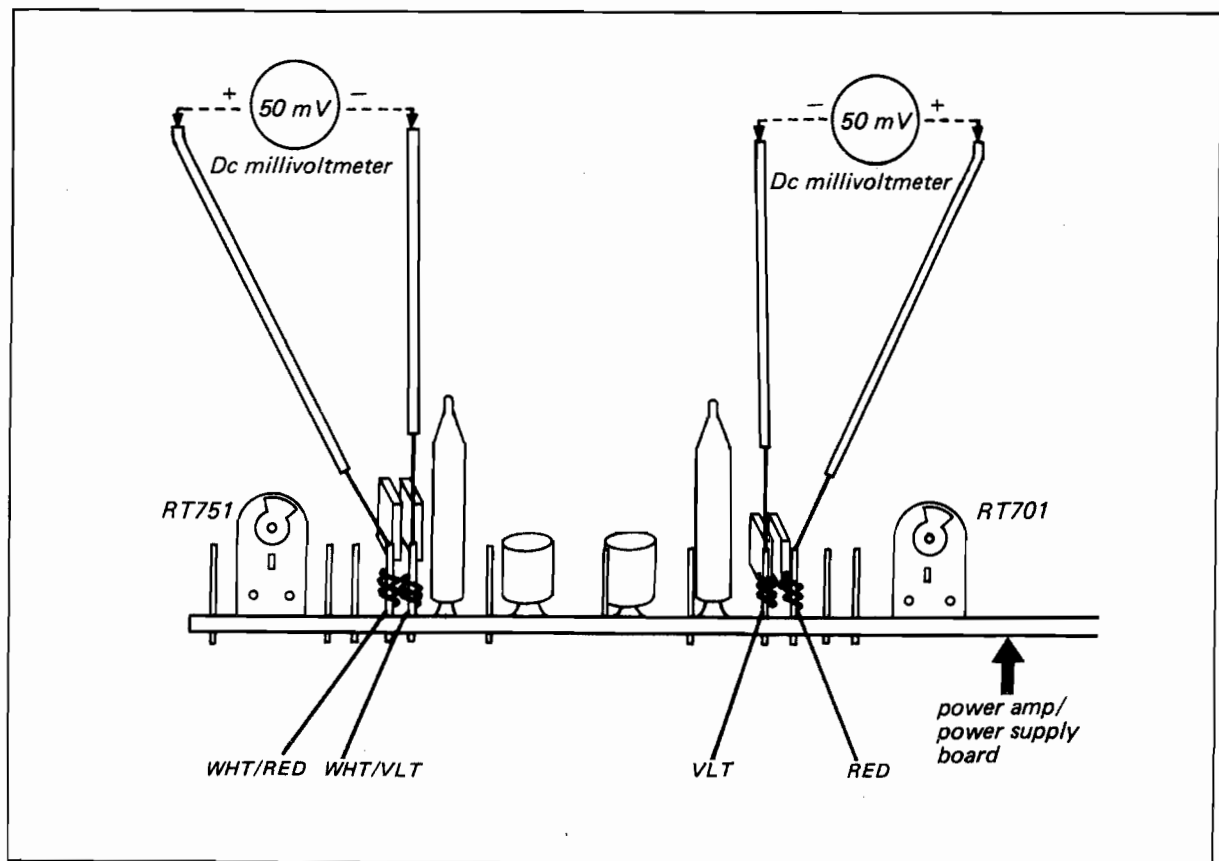


Fig. 3-11. Power amplifier adjustment test setup

## SECTION 4 REPACKING

The STR-7055 original shipping carton and packing materials are the ideal containers for shipping the unit. However to secure the maximum protection,

the STR-7055 must be repacked in these materials precisely as before. The proper repacking procedures are shown in Fig. 4-1.

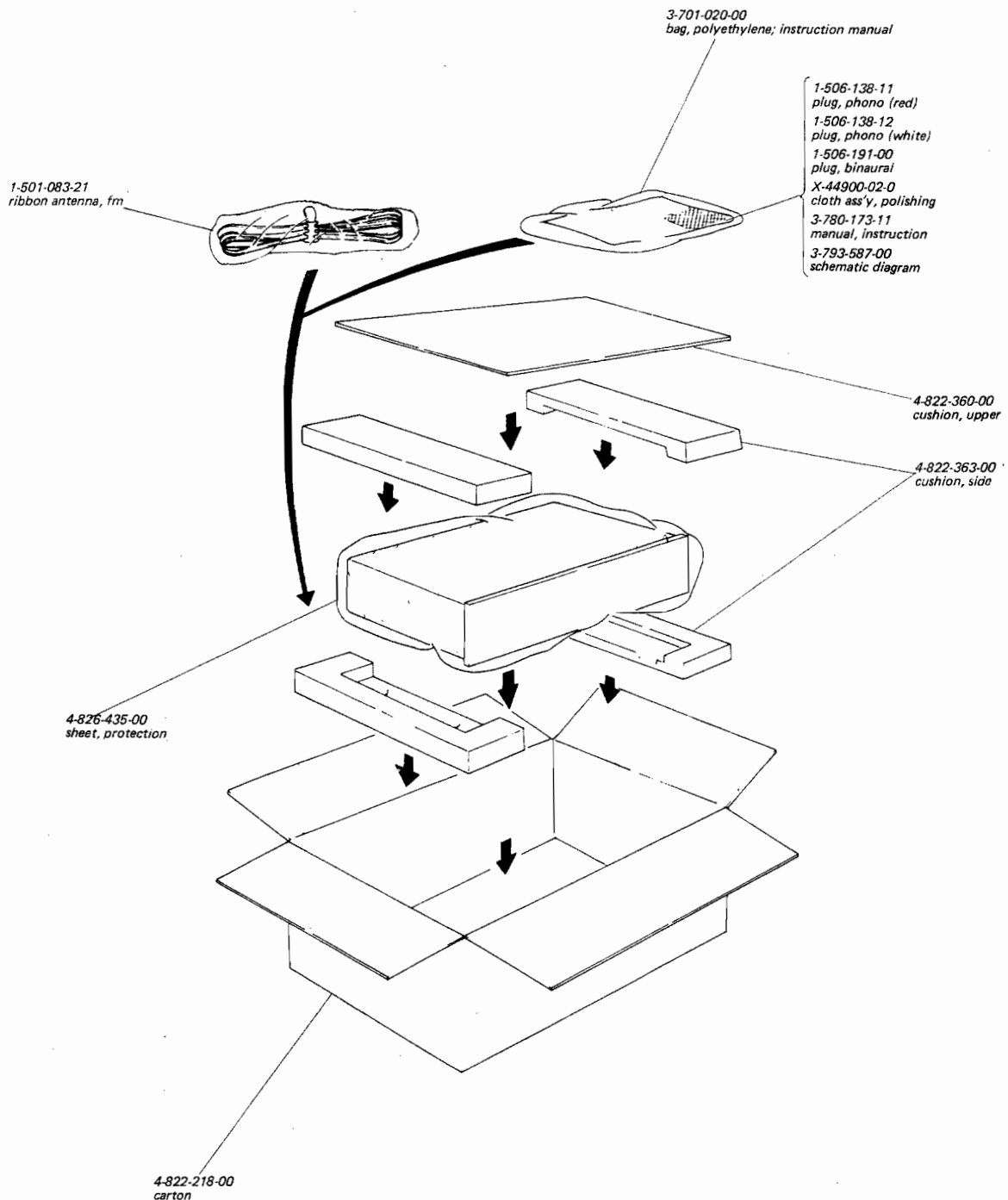
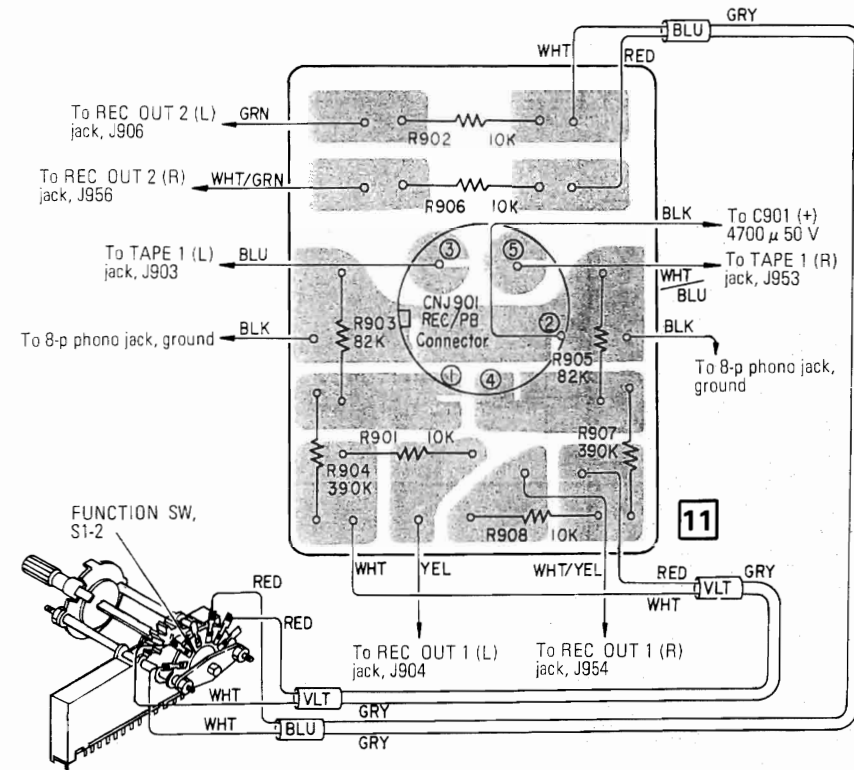


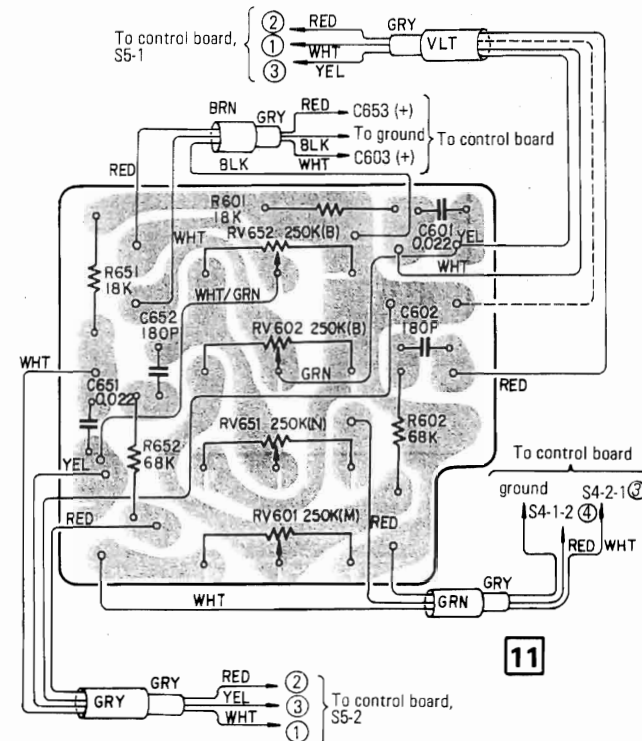
Fig. 4-1. Repacking

SECTION 5  
DIAGRAMS

5-1. MOUNTING DIAGRAM - REC/PB Connector Board -  
- Conductor Side -



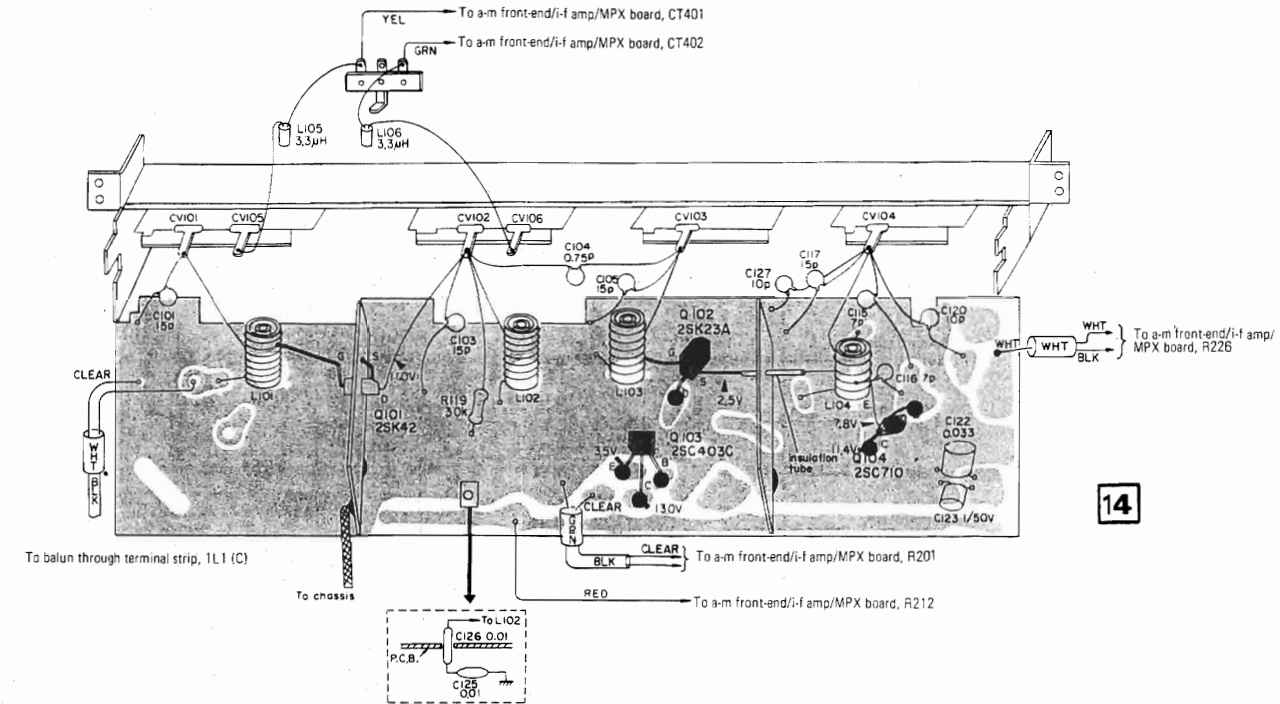
5-2. MOUNTING DIAGRAM - Loudness Control Board -  
- Conductor Side -



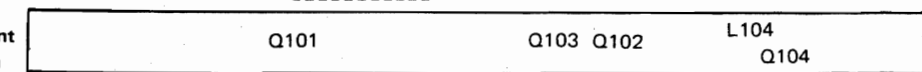
SECTION 5  
DIAGRAMS

5-3. MOUNTING DIAGRAM - Fm Front-End -  
(FAF-022BWG)

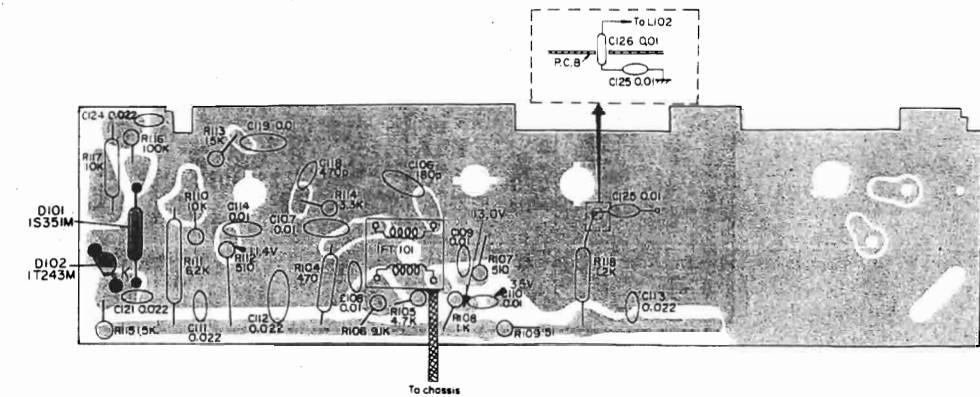
- Conductor Side -



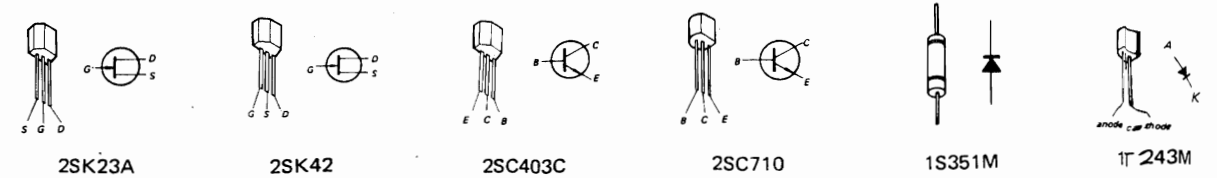
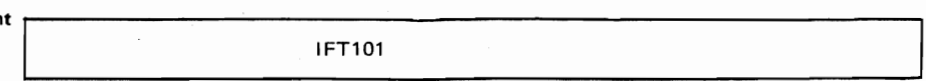
Transistor  
and Adjustment  
Parts Location



- Component Side -

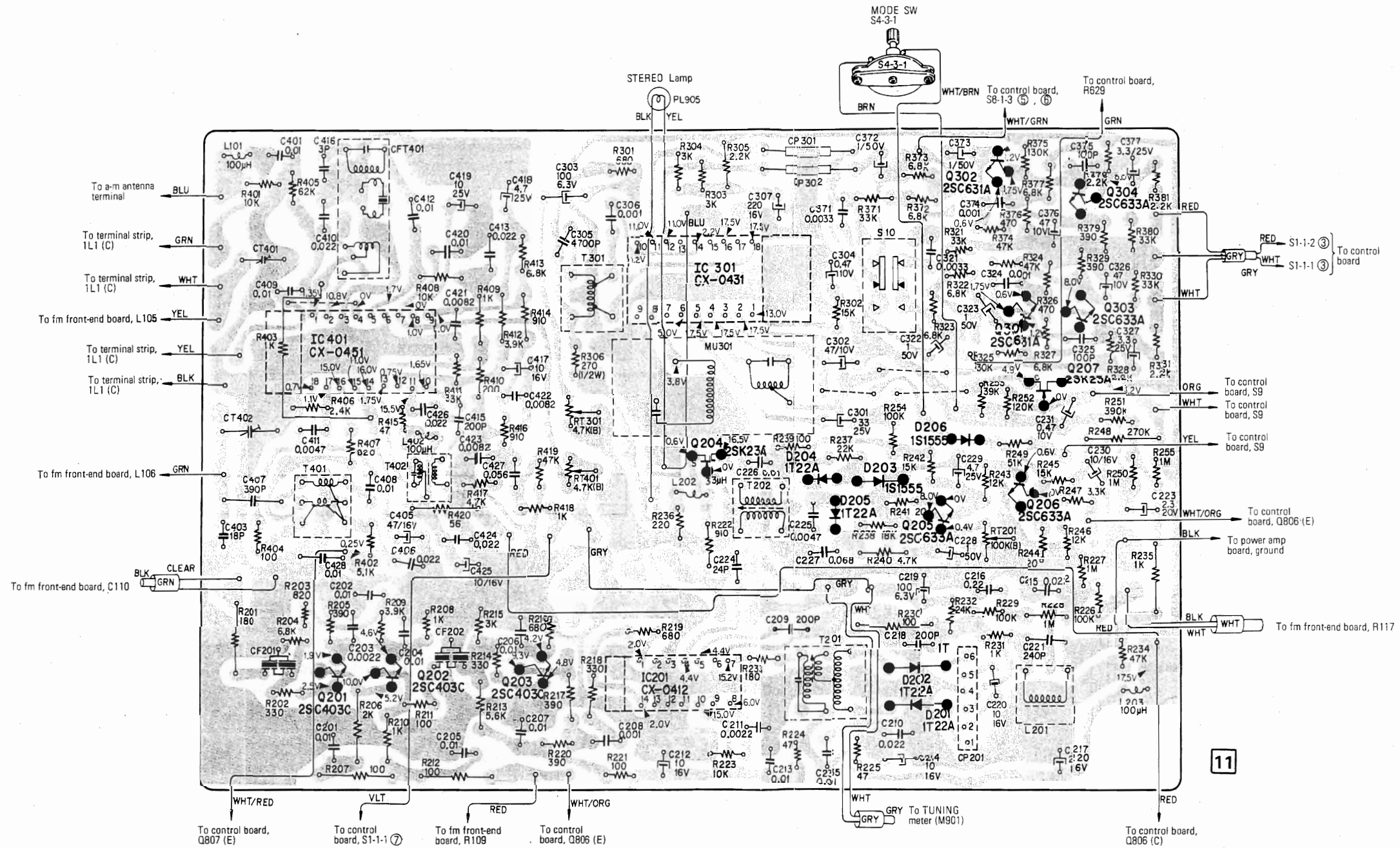


Adjustment  
Parts  
Location





5-4. MOUNTING DIAGRAM - A-m Front-End/I-f Amplifier/MPX Board -  
- Conductor Side -



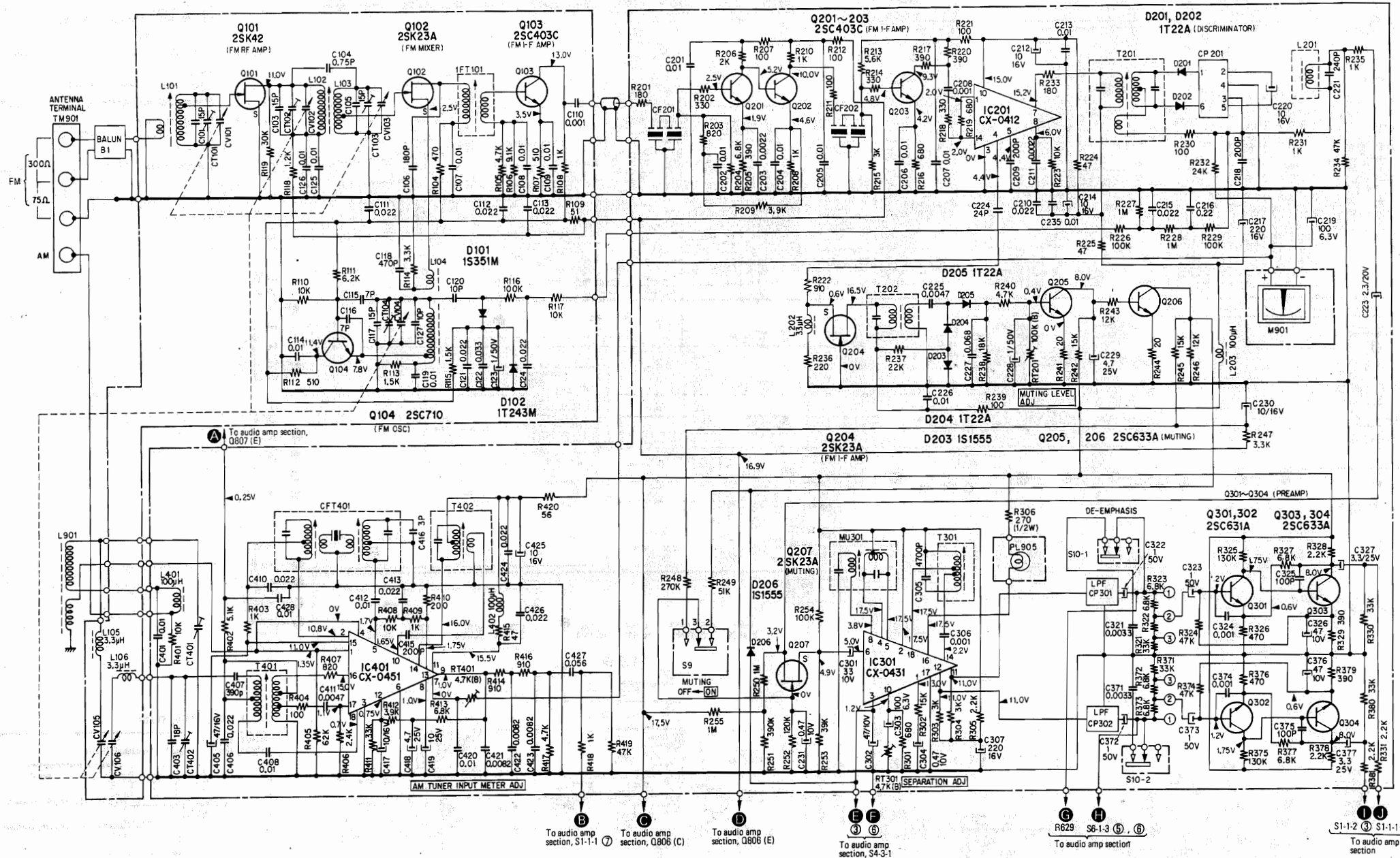
- 2SC403C
- 2SC631A
- 2SC633A
- 2SK23A
- CX-0412
- CX-0431
- CX-0451
- 1T22A
- 1S1555

Parts Location

Q	Q201	Q202	Q203	Q204	Q205	Q302	Q207	Q304
D					D204	D205	D203	D202
ADJ	CT401	CFT401	T301	T202	T201	RT201		



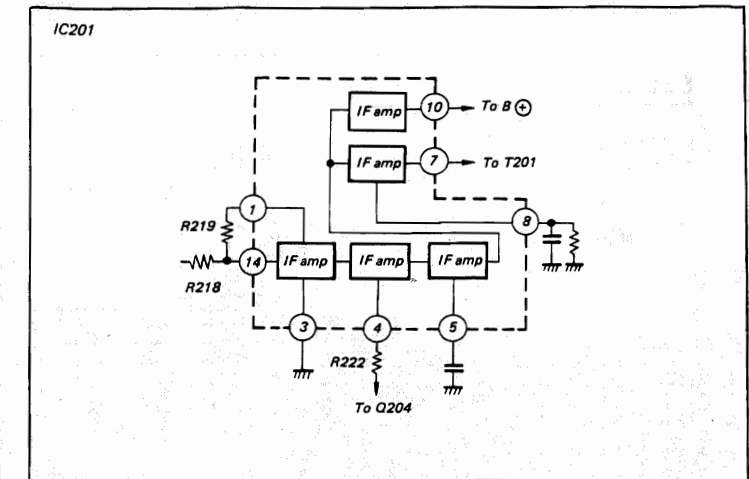
5-5. SCHEMATIC DIAGRAM – Tuner Section –



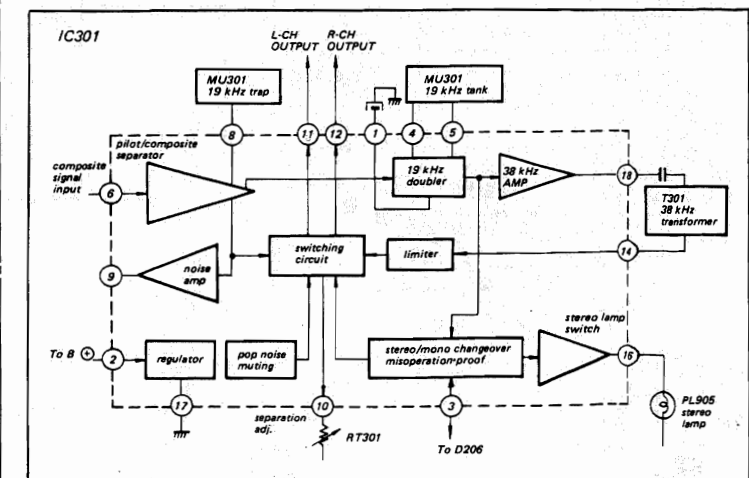
Ref. No.	Description	Position
S9	MUTING switch	ON
S10	DE-EMPHASIS switch	75 $\mu$ sec (50 $\mu$ sec–75 $\mu$ sec)

**Note:**  
 All resistance values are in ohms. k = 1000, M = 1000 k.  
 All capacitance values are in  $\mu$ F except as indicated with p, which means  $\mu$ F.  
 Voltage variations may be noted because of normal production tolerances.  
 All voltages are dc measured with a VOM which has an input impedance of 20 k ohms/volt. No signal in.

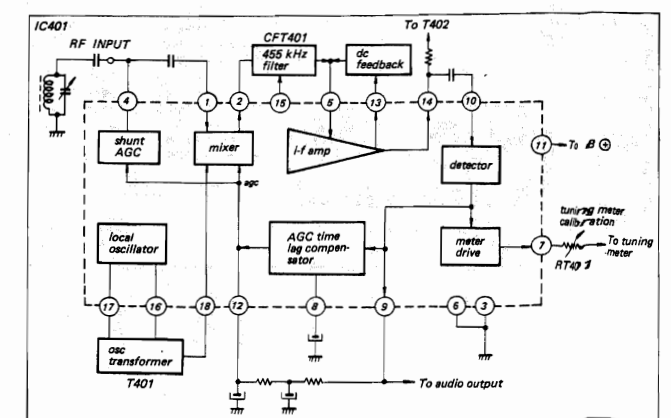
IC BLOCK DIAGRAM



Detailed IC (CX-0412) diagram

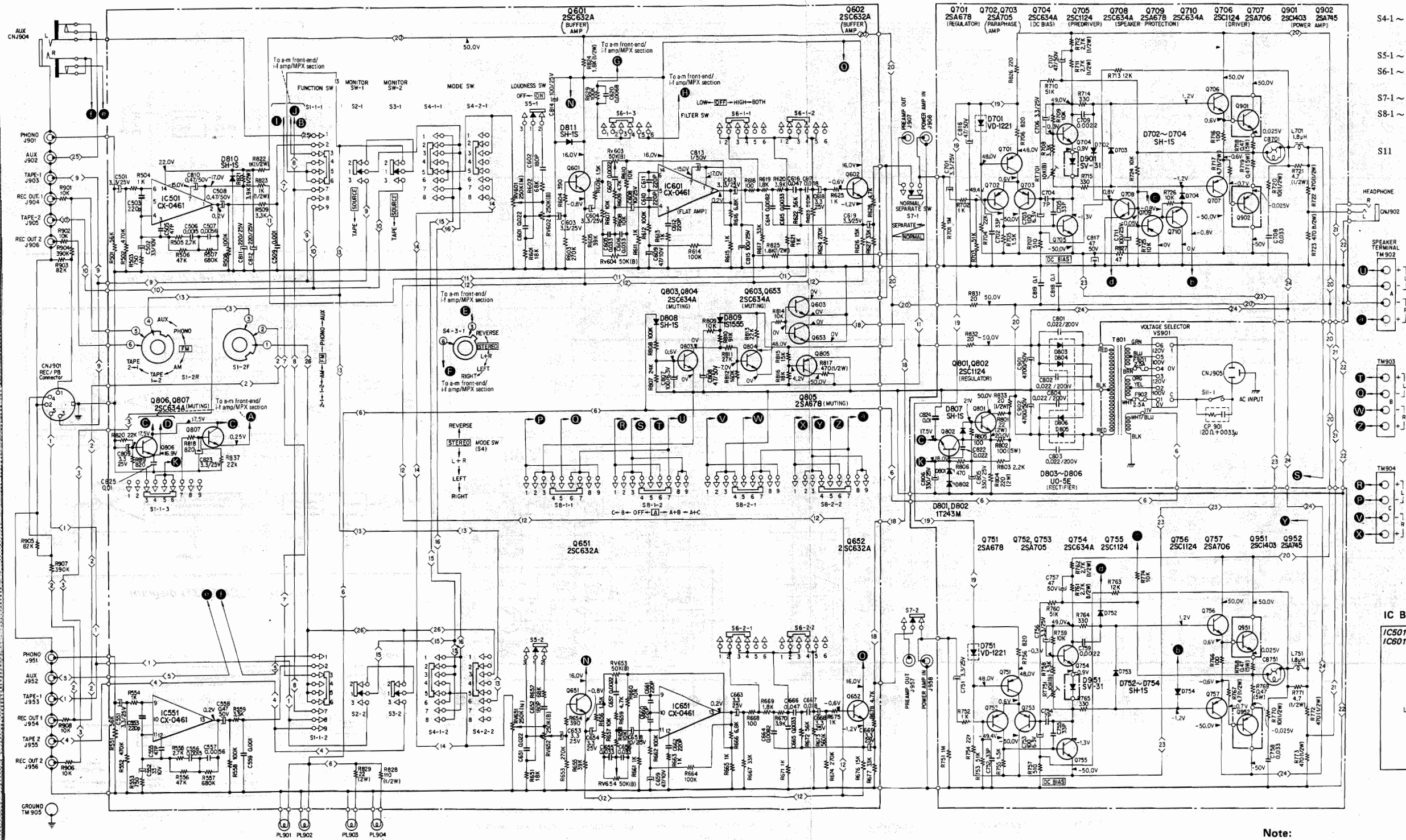


Detailed IC (CX-0431) diagram

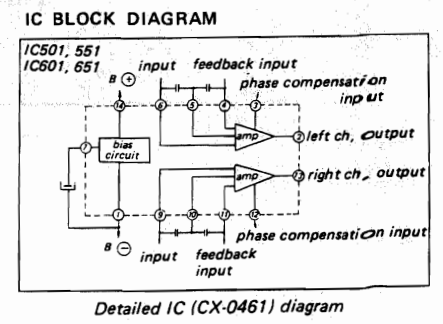


Detailed IC (CX-0451) diagram

5-6. SCHEMATIC DIAGRAM - Audio Amplifier Section -



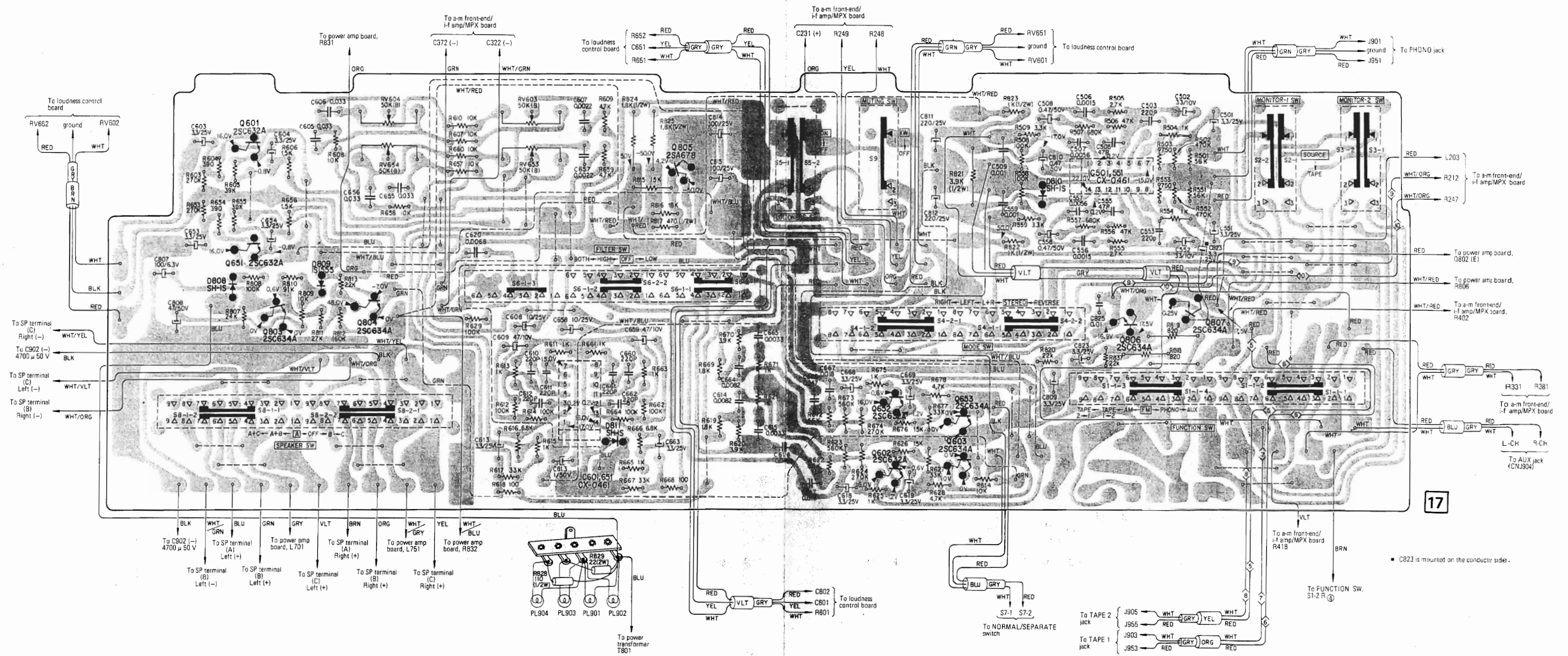
Ref. No.	Description	Position
S1-1 ~ 4	FUNCTION switch [AUX - PHONO - FM - AM - (TAPE PRINT 1 + 2) - (TAPE PRINT 2 + 1)]	FM
S2-1 ~ 2	MONITOR-1 switch (SOURCE - TAPE)	SOURCE
S3-1 ~ 2	MONITOR-2 switch (SOURCE - TAPE)	SOURCE
S4-1 ~ 3	MODE switch [REVERSE - STEREO - (L + R) - LEFT - RIGHT]	STEREO
S5-1 ~ 2	LOUDNESS switch	ON
S6-1 ~ 2	FILTER switch (LOW - OFF - HIGH - BOTH)	OFF
S7-1 ~ 2	NORMAL/SEPARATE switch	NORMAL
S8-1 ~ 2	SPEAKER switch [C - B - OFF - A - (A + B) - (A + C)]	A
S11	POWER switch	ON



**Note:**  
 All resistance values are in ohms. k = 1000, M = 1000 k.  
 All capacitance values are in  $\mu\text{F}$  except as indicated with p,  
 which means  $\mu\text{mF}$ .  
 All voltages are dc measured with a VOM which has an input  
 impedance of 20 k ohms/volt. No signal in.  
 All voltages represent an average value.



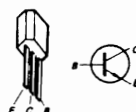
5-7. MOUNTING DIAGRAM – Control Board –  
– Conductor Side – (CCB-116)



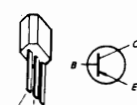
Parts Location

Q	Q601 Q651	Q803	Q804	Q805	Q652 Q602	Q653 Q603	Q806	Q807
D	D808	D809	D811	D810				

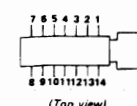
2SC632A  
2SC634A



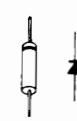
2SA678



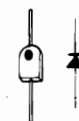
CX-0461



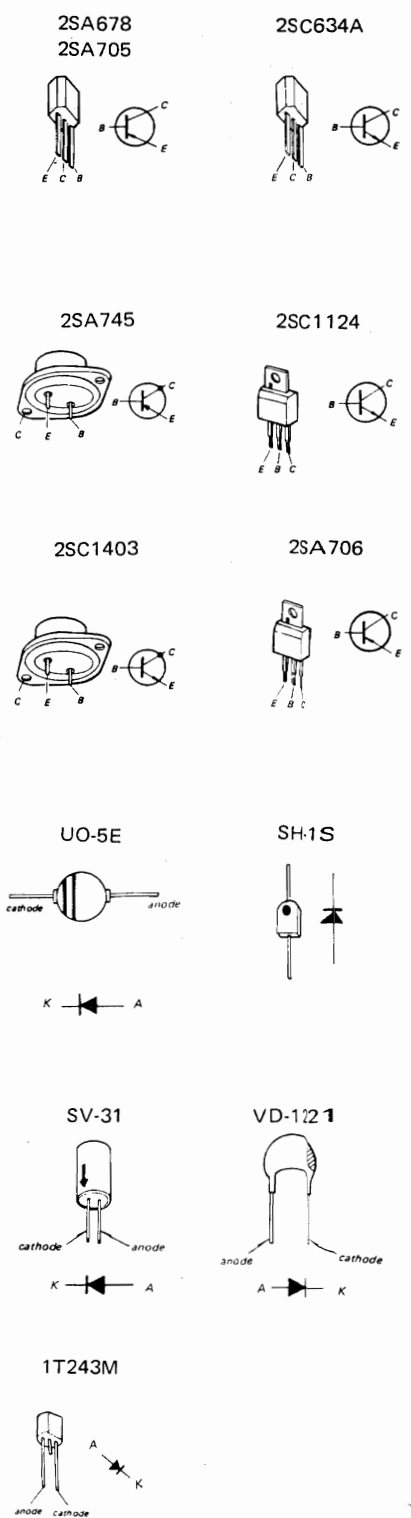
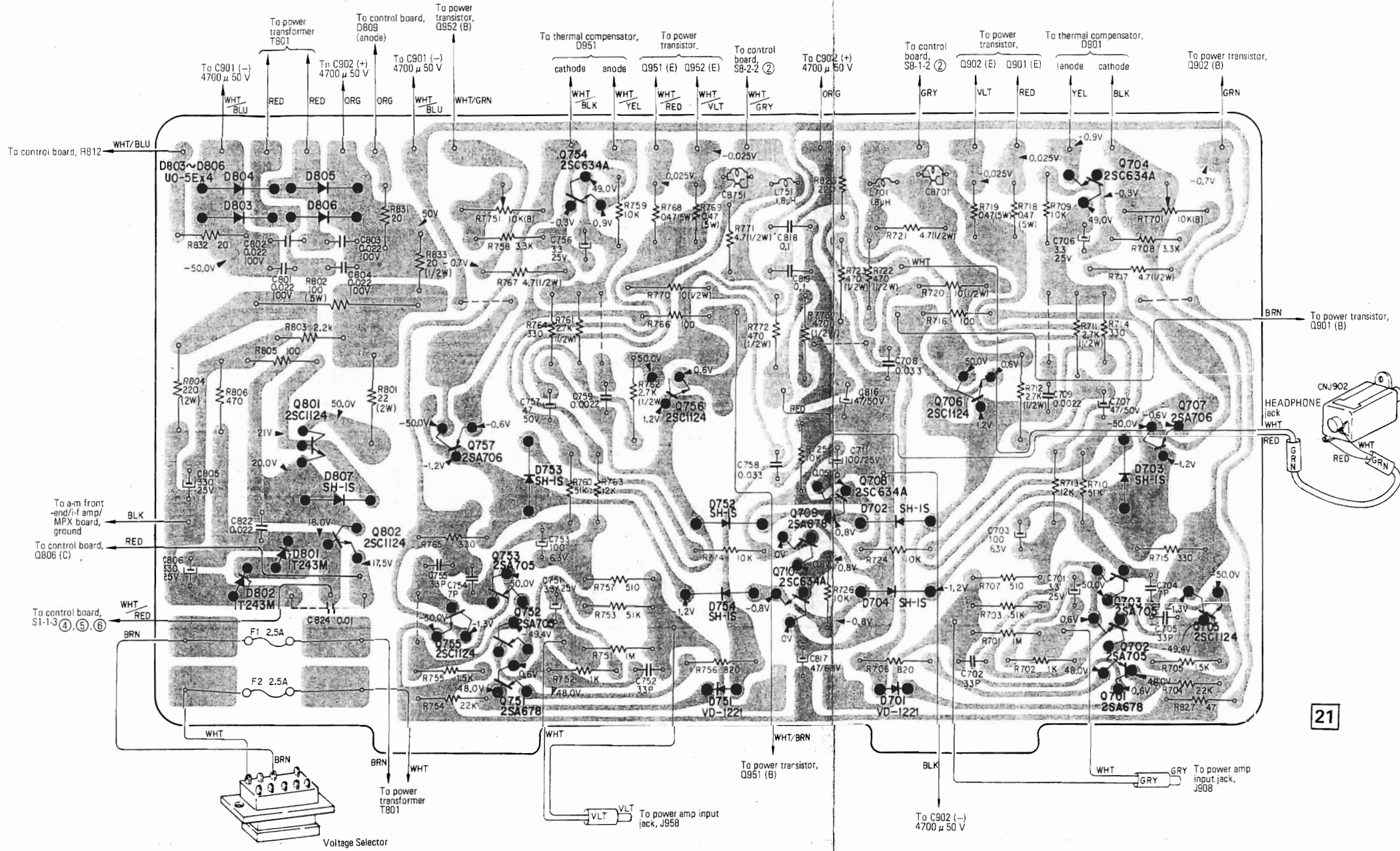
1S1555



SH-1S



5-8. MOUNTING DIAGRAM – Power Amplifier/Power Supply Board –  
– Conductor Side –



Parts Location

Q	Q801	Q802	Q757	Q753	Q754	Q756	Q709	Q708	Q706	Q704	Q703	Q702	Q701	Q707	Q705
D	D804	D805		D753		D752	D754	D702	D704		D703				
	D803	D806				D751	D751	D701							
ADJ		D807		RT751										RT701	

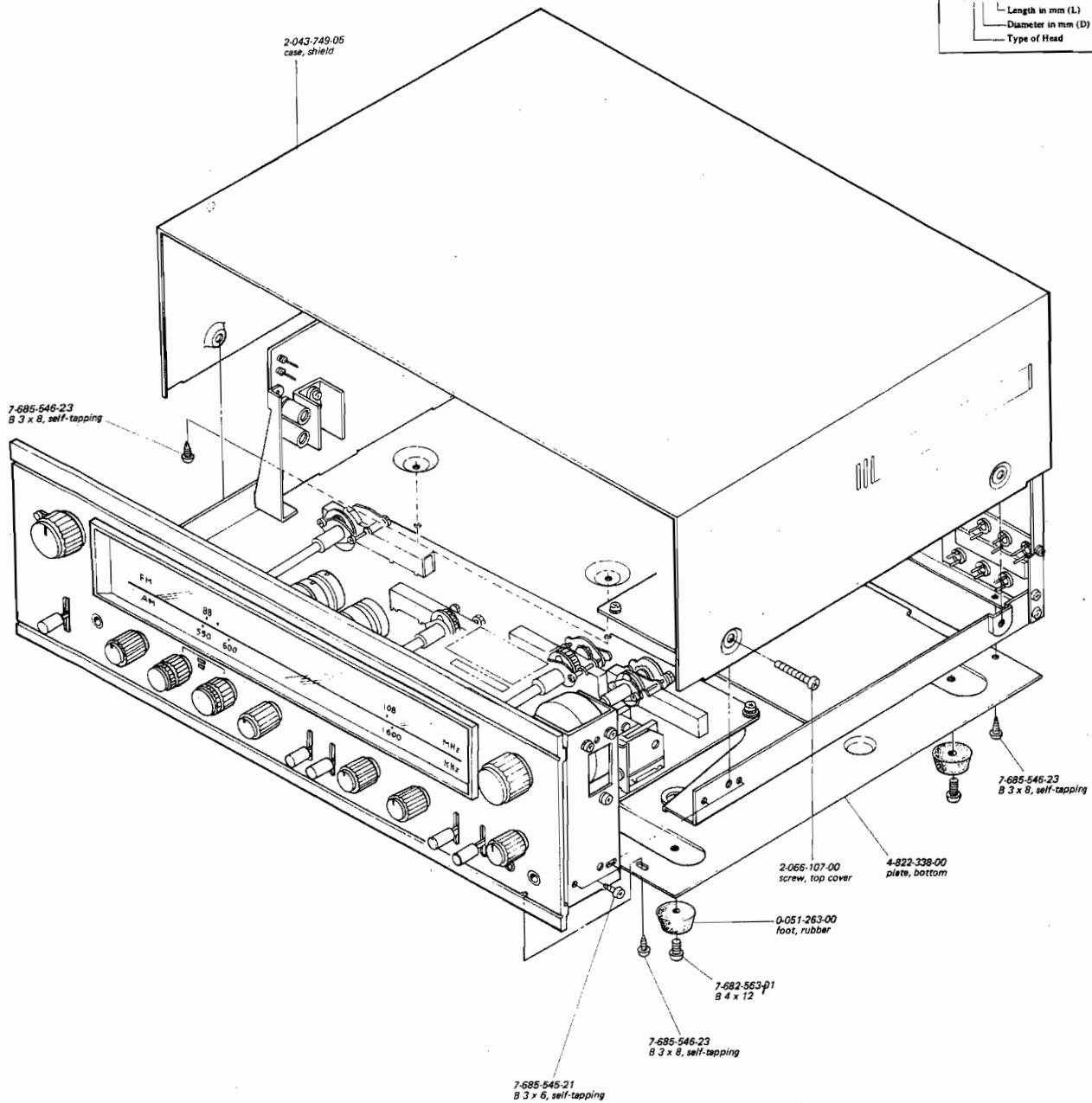
**SECTION 6  
EXPLODED VIEWS**

**- Hardware Nomenclature -**

P	- Pan Head Screw	
PS	- Pan Head Screw with Spring Washer	
K	- Flat Countersunk Head Screw	
B	- Binding Head Screw	
SC	- Set Screw	
E	- Retaining Ring (E Washer)	
	W - Washer	
	SW - Spring Washer	
	LW - Lock Washer	
	N - Nut	

**- Example -**

Type of Slot  
 P 3 x 10  
 Length in mm (L)  
 Diameter in mm (D)  
 Type of Head



**Note:** All screws in this service manual are **P**hillips type (cross recess type) unless otherwise indicated. (-): slotted head.



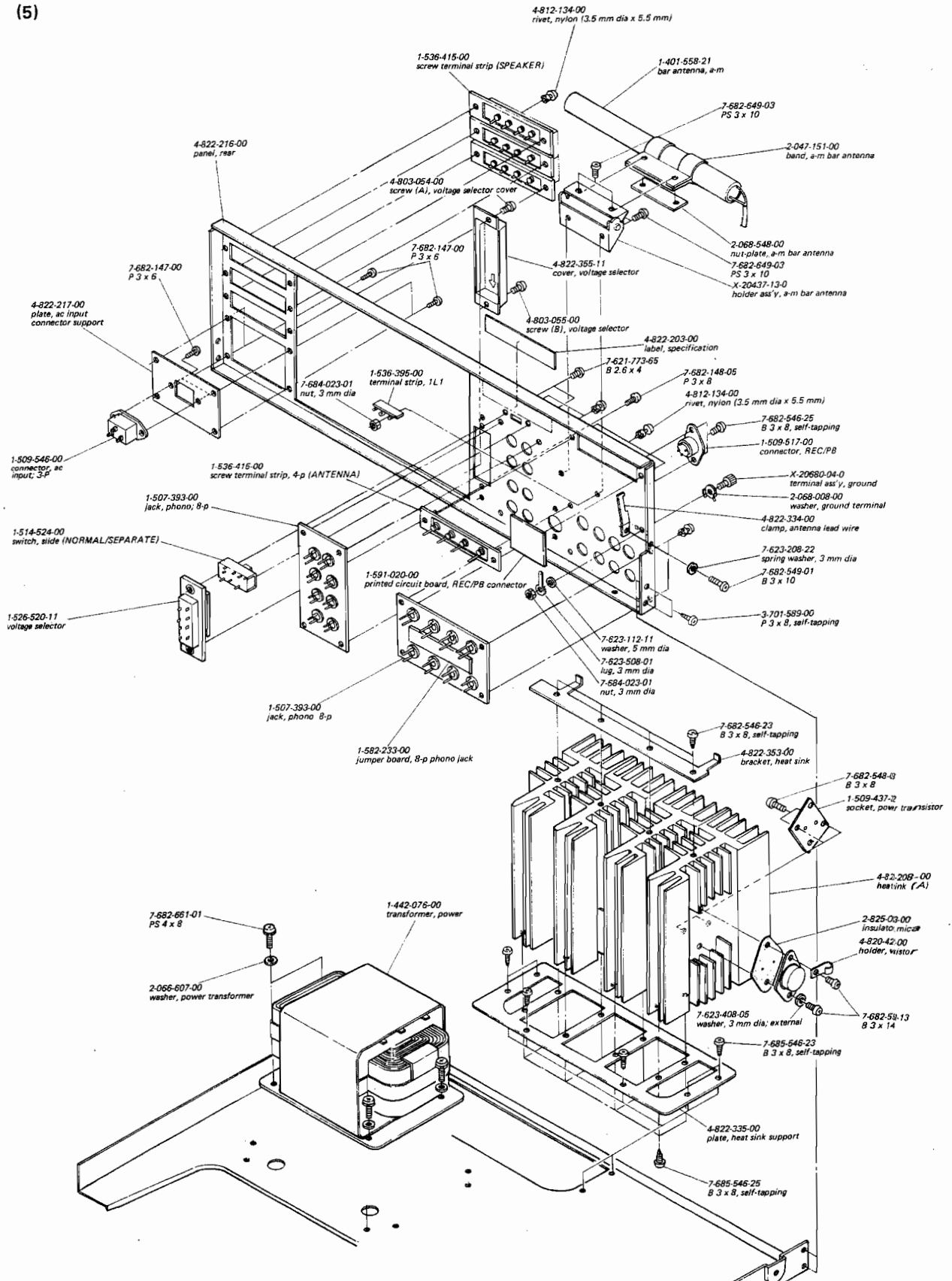








(5)



## SECTION 7

### ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>COMPLETE CIRCUIT BOARDS</b>			Q902(Q952)	transistor	2SA745
8-982-730-11	fm front-end (FAF-022BWG)		IC201	IC	CX-0412
X-48222-22-0	a-m front-end/i-f amp/MPX		IC301	IC	CX-0431
X-48266-21-0	control (CCB-116)		IC401	IC	CX-0451
X-48222-24-0	loudness control		IC501(IC551)	IC	CX-0461
X-48222-21-2	power amp/power supply		IC601 (IC651)	IC	CX-0461
X-48222-25-0	REC/PB connector		D101	diode	1S351 M
<b>SEMICONDUCTORS</b>			D102	diode	1T243 M
Q101	FET	2SK42	D201	diode	1T22A
Q102	FET	2SK23A	D202	diode	1T22A
Q103	transistor	2SC403C	D203	diode	1S1555
Q104	transistor	2SC710	D204	diode	1T22A
Q201	transistor	2SC403C	D205	diode	1T22A
Q202	transistor	2SC403C	D206	diode	1S1555
Q203	transistor	2SC403C	D701(D751)	diode	VD-1221
Q204	FET	2SK23A	D702(D752)	diode	SH-1S
Q205	transistor	2SC633A	D703(D753)	diode	SH-1S
Q206	transistor	2SC633A	D704(D754)	diode	SH-1S
Q207	FET	2SK23A	D801	diode	1T243 M
Q301	transistor	2SC631A	D802	diode	1T243 M
Q302	transistor	2SC631A	D803	diode	UO-5E
Q303	transistor	2SC633A	D804	diode	UO-5E
Q304	transistor	2SC633A	D805	diode	UO-5E
Q601(Q651)	transistor	2SC632A	D806	diode	UO-5E
Q602(Q652)	transistor	2SC632A	D807	diode	SH-1S
Q603(Q653)	transistor	2SC634A	D808	diode	SH-1S
Q701(Q751)	transistor	2SA678	D809	diode	1S1555
Q702(Q752)	transistor	2SA705	D810	diode	SH-1S
Q703(Q753)	transistor	2SA705	D811	diode	SH-1S
Q704(Q754)	transistor	2SC634A	D901(D951)	diode	SV-31
Q705(Q755)	transistor	2SC1124	<b>TRANSFORMERS, COILS AND INDUCTORS</b>		
Q706(Q756)	transistor	2SC1124	B1	1-417-014-21	balun
Q707(Q757)	transistor	2SA706	CFT401	1-403-150-00	CFT
Q708	transistor	2SC634A	IFT101	1-403-295-12	IFT, fm 10,7 MHz
Q709	transistor	2SA678	L101	1-401-489-00	coil, fm antenna
Q710	transistor	2SC634A	L102	1-425-446-12	coil, rf1
Q801	transistor	2SC1124	L103	1-425-668-00	coil, rf2
Q802	transistor	2SC1124	L104	1-405-377-00	coil, fm osc
Q803	transistor	2SC634A	L105	1-407-184-00	inductor, micro 3.3 $\mu$ H
Q804	transistor	2SC634A	L106	1-407-184-00	inductor, micro 3.3 $\mu$ H
Q805	transistor	2SA678	L201	1-407-418-00	coil, trap; SCA
Q806	transistor	2SC634A	L202	1-407-163-00	inductor, micro 33 $\mu$ H
Q807	transistor	2SC634A	L203	1-407-169-00	inductor, micro 100 $\mu$ H
Q901(Q951)	transistor	2SC1403	L401	1-407-169-00	inductor, micro 100 $\mu$ H
			L402	1-407-169-00	inductor, micro 100 $\mu$ H

<u>Ref. No</u>	<u>Part No.</u>	<u>Description</u>
L701(L751)	1-407-592-00	inductor, micro 1.8 $\mu$ H
L901	1-401-558-21	bar antenna, a-m
MU301	1-464-009-00	MPX unit
T201	1-403-291-00	transformer, discriminator 10.7 MHz
T202	1-403-299-00	transformer, muting
T301	1-425-729-00	transformer, switching 38 kHz
T401	1-405-459-00	coil, a-m osc
T402	1-403-128-00	IFT, a-m
T801	1-442-076-00	transformer, power

**CAPACITORS**

All capacitance values are in  $\mu$ F except as indicated with p, which means  $\mu$  $\mu$ F.

C101	1-102-880-11	15 p	$\pm 0.5$ pF	50 V	ceramic
C102		-----			
C103	1-102-880-11	15 p	$\pm 0.5$ pF	50 V	ceramic
C104	1-102-064-11	0.75 p	$\pm 10$ %	50 V	ceramic
C105	1-102-880-11	15 p	$\pm 0.5$ pF	50 V	ceramic
C106	1-102-848-11	180 p	$\pm 0.5$ pF	50 V	ceramic
C107	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C108	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C109	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C110	1-101-918-11	0.001	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C111	1-101-924-11	0.022	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C112	1-101-924-11	0.022	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C113	1-101-924-11	0.022	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C114	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C115	1-102-875-11	7 p	$\pm 5$ %	50 V	ceramic
C116	1-102-875-11	7 p	$\pm 5$ %	50 V	ceramic
C117	1-102-986-11	10 p	$\pm 0.5$ pF	50 V	ceramic
C118	1-102-114-11	470 p	$\pm 10$ %	50 V	ceramic
C119	1-101-118-11	0.01	$\pm 20$ %	50 V	ceramic
C120	1-102-986-11	10 p	$\pm 0.5$ pF	50 V	ceramic
C121	1-101-924-11	0.022	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C122	1-105-679-12	0.033	$\pm 10$ %	50 V	mylar
C123	1-121-391-11	1		50 V	electrolytic
C124	1-101-924-11	0.022	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C125	1-101-118-11	0.01	$\pm 20$ %	50 V	ceramic
C126	1-101-118-11	0.01	$\pm 20$ %	50 V	ceramic
C127	1-102-986-11	10 p	$\pm 0.5$ pF	50 V	ceramic
C201	1-101-118-11	0.01	$\pm 20$ %	50 V	ceramic
C202	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C203	1-102-100-11	0.0022	$\pm 5$ %	50 V	ceramic
C204	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C205	1-101-118-11	0.01	$\pm 20$ %	50 V	ceramic
C206	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C207	1-101-923-11	0.01	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C208	1-101-918-11	0.001	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic
C209	1-102-977-11	200 p	$\pm 5$ %	50 V	ceramic
C210	1-101-924-11	0.022	$\begin{matrix} +80 \\ -20 \end{matrix}$ %	25 V	ceramic

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C211	1-102-100-11	0.0022 $\pm 5$ % 50 V ceramic
C212	1-121-651-11	10 16 V electrolytic
C213	1-101-118-11	0.01 $\pm 20$ % 50 V ceramic
C214	1-121-651-11	10 16 V electrolytic
C215	1-105-677-12	0.022 $\pm 10$ % 50 V mylar
C216	1-105-689-12	0.22 $\pm 10$ % 50 V mylar
C217	1-123-068-11	220 16 V electrolytic
C218	1-102-977-11	200 p $\pm 5$ % 50 V ceramic
C219	1-121-413-11	100 6.3 V electrolytic
C220	1-121-651-11	10 16 V electrolytic
C221	1-107-140-11	240 p $\pm 10$ % 50 V silvered mica
C222		-----
C223	1-131-196-11	2.3 20 V tantalum
C224	1-102-960-11	24 p $\pm 5$ % 50 V ceramic
C225	1-101-922-11	0.0047 $\begin{matrix} +80 \\ -20 \end{matrix}$ % 25 V ceramic
C226	1-101-923-11	0.01 $\begin{matrix} +80 \\ -20 \end{matrix}$ % 25 V ceramic
C227	1-105-683-12	0.068 $\pm 10$ % 50 V mylar
C228	1-121-391-11	1 50 V electrolytic
C229	1-121-395-11	4.7 25 V electrolytic
C230	1-121-651-11	10 16 V electrolytic
C231	1-127-022-11	0.47 $\pm 10$ % 10 V solid aluminum
C235	1-101-118-11	0.01 $\pm 20$ % 50 V ceramic
C301	1-121-402-11	33 10 V electrolytic
C302	1-121-352-11	47 10 V electrolytic
C303	1-121-413-11	100 6.3 V electrolytic
C304	1-127-022-11	0.47 10 V solid aluminum
C305	1-103-575-11	4,700 p $\pm 5$ % 50 V styrol
C306	1-105-661-12	0.001 $\pm 10$ % 50 V mylar
C307	1-123-068-11	220 16 V electrolytic
C321(C371)	1-106-013-12	0.0033 $\pm 5$ % 50 V mylar
C322(C372)	1-121-912-11	1 50 V electrolytic
C323(C373)	1-121-912-11	1 50 V electrolytic
C324(C374)	1-105-661-12	0.001 $\pm 10$ % 50 V mylar
C325(C375)	1-102-973-11	100 p $\pm 5$ % 50 V ceramic
C326(C376)	1-121-352-11	47 10 V electrolytic
C327(C377)	1-121-392-11	3.3 25 V electrolytic
C401	1-105-673-12	0.01 $\pm 10$ % 50 V mylar
C402		-----
C403	1-102-953-11	18 p $\pm 25$ % 25 V ceramic
C405	1-121-409-11	47 16 V electrolytic
C406	1-105-677-12	0.022 $\pm 10$ % 50 V mylar
C407	1-103-715-11	390 p $\pm 5$ % 25 V styrol
C408	1-101-923-11	0.01 $\begin{matrix} +80 \\ -20 \end{matrix}$ % 25 V ceramic
C409	1-101-923-11	0.01 $\begin{matrix} +80 \\ -20 \end{matrix}$ % 25 V ceramic
C410	1-105-677-12	0.022 $\pm 10$ % 50 V mylar
C411	1-105-669-12	0.0047 $\pm 10$ % 50 V mylar
C412	1-101-923-11	0.01 $\begin{matrix} +80 \\ -20 \end{matrix}$ % 25 V ceramic
C413	1-105-677-12	0.022 $\pm 10$ % 50 V mylar
C414		-----

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C415	1-102-977-11	200 p ± 5 % 50 V ceramic
C416	1-102-936-11	3 p ± 0.25 pF 25 V ceramic
C417	1-121-651-11	10 16 V electrolytic
C418	1-121-395-11	4.7 25 V electrolytic
C419	1-121-398-11	10 25 V electrolytic
C420	1-101-923-11	0.01 $\begin{matrix} + 80 \\ - 20 \end{matrix}$ % 25 V ceramic
C421	1-105-672-12	0.0082 ± 10 % 50 V mylar
C422	1-105-672-12	0.0082 ± 10 % 50 V mylar
C423	1-105-672-12	0.0082 ± 10 % 50 V mylar
C424	1-101-924-11	0.022 $\begin{matrix} + 80 \\ - 20 \end{matrix}$ % 25 V ceramic
C425	1-121-651-11	10 16 V electrolytic
C426	1-101-924-11	0.022 $\begin{matrix} + 80 \\ - 20 \end{matrix}$ % 25 V ceramic
C427	1-105-682-12	0.056 ± 10 % 50 V mylar
C428	1-101-923-11	0.01 $\begin{matrix} + 80 \\ - 20 \end{matrix}$ % 25 V ceramic
C501(C551)	1-131-206-11	3.3 25 V tantalum
C502(C552)	1-121-925-11	33 10 V electrolytic
C503(C553)	1-102-978-11	220 p ± 5 % 50 V ceramic
C504(C554)	-----	-----
C505(C555)	1-101-880-11	47 p ± 5 % 50 V ceramic
C506(C556)	1-106-005-12	0.0015 ± 5 % 50 V mylar
C507(C557)	1-106-019-12	0.0056 ± 5 % 50 V mylar
C508(C558)	1-121-911-11	0.47 50 V electrolytic
C509(C559)	1-105-661-12	0.001 ± 10 % 50 V mylar
C601(C651)	1-105-677-12	0.022 ± 10 % 50 V mylar
C602(C652)	1-107-137-11	180 p ± 10 % 50 V silvered mica
C603(C653)	1-131-206-11	3.3 25 V tantalum
C604(C654)	1-121-392-11	3.3 25 V electrolytic
C605(C655)	1-105-679-12	0.033 ± 10 % 50 V mylar
C606(C656)	1-105-679-12	0.033 ± 10 % 50 V mylar
C607(C657)	1-105-665-12	0.0022 ± 10 % 50 V mylar
C608(C658)	1-121-398-11	10 25 V electrolytic
C609(C660)	1-121-352-11	47 10 V electrolytic
C610(C660)	1-102-978-11	220 p ± 5 % 50 V ceramic
C611(C661)	1-102-978-11	220 p ± 5 % 50 V ceramic
C612(C662)	1-102-978-11	220 p ± 5 % 50 V ceramic
C613(C663)	1-121-392-11	3.3 25 V electrolytic
C614(C664)	1-106-023-12	0.0082 ± 5 % 50 V mylar
C615(C665)	1-106-013-12	0.0033 ± 5 % 50 V mylar
C616(C666)	1-106-041-12	0.047 ± 5 % 50 V mylar
C617(C667)	1-106-031-12	0.018 ± 5 % 50 V mylar
C618(C668)	1-121-392-11	3.3 25 V electrolytic
C619(C669)	1-121-392-11	3.3 25 V electrolytic
C620	1-105-671-12	0.0068 ± 10 % 50 V mylar
C701(C751)	1-121-392-11	3.3 25 V electrolytic
C702(C752)	1-102-963-11	33 p ± 5 % 50 V ceramic
C703(C753)	1-121-413-11	100 6.3 V electrolytic
C704(C754)	1-102-944-11	7 p ± 5 % 50 V ceramic
C705(C755)	1-102-963-11	33 p ± 5 % 50 V ceramic
C706(C756)	1-121-392-11	3.3 25 V electrolytic
C707(C757)	1-123-058-11	47 50 V electrolytic
C708(C758)	1-105-679-12	0.033 ± 10 % 50 V mylar

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C709(C759)	1-105-665-12	0.0022 ± 10 % 50 V mylar
C711	1-121-935-11	100 25 V electrolytic
C801	1-105-917-12	0.022 ± 10 % 200 V mylar
C802	1-105-917-12	0.022 ± 10 % 200 V mylar
C803	1-105-917-12	0.022 ± 10 % 200 V mylar
C804	1-105-917-12	0.022 ± 10 % 200 V mylar
C805	1-123-065-11	330 25 V electrolytic
C806	1-123-065-11	330 25 V electrolytic
C807	1-121-413-11	100 6.3 V electrolytic
C808	1-121-411-11	47 50 V electrolytic
C809	1-121-392-11	3.3 25 V electrolytic
C810	1-121-726-11	0.47 50 V electrolytic
C811	1-121-936-11	220 25 V electrolytic
C812	1-121-936-11	220 25 V electrolytic
C813	1-121-391-11	1 50 V electrolytic
C814	1-121-935-11	100 25 V electrolytic
C815	1-121-935-11	100 25 V electrolytic
C816	1-123-058-11	47 50 V electrolytic
C817	1-123-058-11	47 50 V electrolytic
C818	1-105-725-12	0.1 ± 10 % 100 V mylar
C819	1-105-725-12	0.1 ± 10 % 100 V mylar
C820	-----	-----
C821	-----	-----
C822	1-105-677-12	0.022 ± 10 % 50 V mylar
C823	1-121-392-11	3.3 25 V electrolytic
C824	1-105-673-12	0.01 ± 10 % 50 V mylar
C825	1-105-673-12	0.01 ± 10 % 50 V mylar
C901	1-123-101-11	4,700 50 V electrolytic
C902	1-123-101-11	4,700 50 V electrolytic
CT401,402	1-141-095-00	capacitor, trimmer
CV101,102	1-151-232-12	capacitor, tuning
CV103,104		
CV105,106		
CT101,102		
CT103,104		

### RESISTORS

All resistors are in  $\Omega$ , ± 5 %, ¼ W and carbon type unless otherwise indicated.

R101	-----
R102	-----
R103	-----
R104	1-244-665-11 470
R105	1-242-689-11 4.7 k
R106	1-242-696-11 9.1 k
R107	1-242-666-11 510
R108	1-242-673-11 1 k
R109	1-242-642-11 51
R110	1-242-697-11 10 k
R111	1-244-692-11 6.2 k
R112	1-242-666-11 510
R113	1-242-677-11 1.5 k
R114	1-242-685-11 3.3 k

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R115	1-242-677-11	1.5 k
R116	1-242-721-11	100 k
R117	1-244-697-11	10 k
R118	1-244-675-11	1.2 k
R119	1-244-708-11	30 k
R201	1-244-655-11	180
R202	1-242-661-11	330
R203	1-242-671-11	820
R204	1-242-693-11	6.8 k
R205	1-242-663-11	390
R206	1-242-680-11	2 k
R207	1-244-649-11	100
R208	1-242-673-11	1 k
R209	1-242-687-11	3.9 k
R210	1-242-673-11	1 k
R211	1-242-649-11	100
R212	1-244-649-11	100
R213	1-242-691-11	5.6 k
R214	1-242-661-11	330
R215	1-242-684-11	3 k
R216	1-242-669-11	680
R217	1-242-663-11	390
R218	1-242-661-11	330
R219	1-242-669-11	680
R220	1-242-663-11	390
R221	1-244-649-11	100
R222	1-242-672-11	910
R223	1-242-697-11	10 k
R224	1-242-641-11	47
R225	1-242-641-11	47
R226	1-242-721-11	100 k
R227	1-242-745-11	1 M
R228	1-242-745-11	1 M
R229	1-242-721-11	100 k
R230	1-244-649-11	100
R231	1-242-673-11	1 k
R232	1-242-706-11	24 k
R233	1-242-655-11	180
R234	1-242-713-11	47 k
R235	1-244-673-11	1 k
R236	1-242-657-11	220
R237	1-242-705-11	22 k
R238	1-242-703-11	18 k
R239	1-242-649-11	100
R240	1-242-689-11	4.7 k
R241	1-242-632-11	20
R242	1-242-701-11	15 k
R243	1-242-699-11	12 k
R244	1-242-632-11	20
R245	1-242-701-11	15 k
R246	1-242-699-11	12 k
R247	1-242-685-11	3.3 k

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R248	1-244-731-11	270 k
R249	1-242-714-11	51 k
R250	1-242-745-11	1 M
R251	1-242-735-11	390 k
R252	1-242-723-11	120 k
R253	1-242-711-11	39 k
R254	1-242-721-11	100 k
R255	1-242-745-11	1 M
R301	1-242-669-11	680
R302	1-242-701-11	15 k
R303	1-242-684-11	3 k
R304	1-242-684-11	3 k
R305	1-242-681-11	2.2 k
R306	1-202-559-11	270 ± 5 % ½ W composition
R321(R371)	1-242-709-11	33 k
R322(R372)	1-242-693-11	6.8 k
R323(R373)	1-242-693-11	6.8 k
R324(R374)	1-242-713-11	47 k
R325(R375)	1-242-724-11	130 k
R326(R376)	1-242-665-11	470
R327(R377)	1-242-693-11	6.8 k
R328(R378)	1-242-681-11	2.2 k
R329(R379)	1-242-663-11	390
R330(R380)	1-242-709-11	33 k
R331(R381)	1-242-681-11	2.2 k
R401	1-242-697-11	10 k
R402	1-242-690-11	5.1 k
R403	1-244-673-11	1 k
R404	1-242-649-11	100
R405	1-242-716-11	62 k
R406	1-242-682-11	2.4 k
R407	1-242-671-11	820
R408	1-242-697-11	10 k
R409	1-242-673-11	1 k
R410	1-242-656-11	200
R411	1-242-709-11	33 k
R412	1-242-687-11	3.9 k
R413	1-242-693-11	6.8 k
R414	1-242-672-11	910
R415	1-242-641-11	47
R416	1-242-672-11	910
R417	1-242-689-11	4.7 k
R418	1-242-673-11	1 k
R419	1-242-713-11	47 k
R420	1-244-643-11	56
R501(R551)	1-242-715-11	56 k
R502(R552)	1-242-737-11	470 k
R503(R553)	1-242-670-11	750
R504(R554)	1-242-673-11	1 k
R505(R555)	1-242-683-11	2.7 k

# STR-7055

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R506(R556)	1-242-713-11	47 k	R719(R769)	1-217-158-11	0.47 ± 5 % 5 W metal
R507(R557)	1-242-741-11	680 k	R720(R770)	1-202-525-11	10 ± 5 % ½ W composition
R508(R558)	1-242-721-11	100 k	R721(R771)	1-202-511-11	4.7 ± 5 % ½ W composition
R509(R559)	1-242-685-11	3.3 k	R722(R772)	1-202-565-11	470 ± 5 % ½ W composition
R601(R651)	1-244-703-11	18 k	R723(R773)	1-202-565-11	470 ± 5 % ½ W composition
R602(R652)	1-244-717-11	68 k	R724(R774)	1-244-697-11	10 k
R603(R653)	1-242-731-11	270 k	R725	1-244-697-11	10 k
R604(R654)	1-242-663-11	390	R726	1-244-697-11	10 k
R605(R655)	1-242-711-11	39 k	R801	1-207-630-11	22 ± 5 % 2 W wirewound
R606(R656)	1-242-677-11	1.5 k	R802	1-207-686-11	100 ± 5 % 5 W wirewound
R607(R657)	1-242-697-11	10 k	R803	1-244-681-11	2.2 k
R608(R658)	1-242-697-11	10 k	R804	1-207-667-11	220 ± 5 % 2 W wirewound
R609(R659)	1-242-689-11	4.7 k	R805	1-244-649-11	100
R610(R660)	1-242-697-11	10 k	R806	1-244-665-11	470
R611(R661)	1-242-673-11	1 k	R807	1-242-706-11	24 k
R612(R662)	1-242-721-11	100 k	R808	1-242-721-11	100 k
R613(R663)	1-242-673-11	1 k	R809	1-244-697-11	10 k
R614(R664)	1-242-721-11	100 k	R810	1-242-720-11	91 k
R615(R665)	1-242-673-11	1 k	R811	1-242-707-11	27 k
R616(R666)	1-242-693-11	6.8 k	R812	1-242-726-11	160 k
R617(R667)	1-242-709-11	33 k	R813	1-242-705-11	22 k
R618(R668)	1-242-649-11	100	R814	1-244-697-11	10 k
R619(R669)	1-242-679-11	1.8 k	R815	1-242-701-11	15 k
R620(R670)	1-242-687-11	3.9 k	R816	1-242-703-11	18 k
R621(R671)	1-242-673-11	1 k	R817	1-202-565-11	470 ± 5 % ½ W composition
R622(R672)	1-242-715-11	56 k	R818	1-244-671-11	820
R623(R673)	1-242-739-11	560 k	R819	1-244-671-11	820
R624(R674)	1-242-731-11	270 k	R820	1-242-705-11	22 k
R625(R675)	1-242-673-11	1 k	R821	1-202-587-11	3.9 k ± 5 % ½ W composition
R626(R676)	1-242-701-11	15 k	R822	1-202-573-11	1 k ± 5 % ½ W composition
R627(R677)	1-242-709-11	33 k	R823	1-202-573-11	1 k ± 5 % ½ W composition
R628(R678)	1-242-689-11	4.7 k	R824	1-202-579-11	1.8 k ± 5 % ½ W composition
R629	1-242-721-11	100 k	R825	1-202-579-11	1.8 k ± 5 % ½ W composition
R701(R751)	1-244-745-11	1 M	R826	1-244-657-11	220
R702(R752)	1-244-673-11	1 k	R827	1-244-641-11	47
R703(R753)	1-244-714-11	51 k	R828	1-202-550-11	110 ± 5 % ½ W composition
R704(R754)	1-244-705-11	22 k	R829	1-207-630-11	22 ± 5 % 2 W wirewound
R705(R755)	1-244-677-11	1.5 k	R831	1-244-632-11	20
R706(R756)	1-244-671-11	820	R832	1-244-632-11	20
R707(R757)	1-244-666-11	510	R833	1-213-121-11	20 ± 5 % ½ W fuse, metal-coate
R708(R758)	1-244-685-11	3.3 k	R837	1-244-705-11	22 k
R709(R759)	1-244-697-11	10 k	R901(R908)	1-244-697-11	10 k
R710(R760)	1-244-714-11	51 k	R902(R906)	1-244-697-11	10 k
R711(R761)	1-202-583-11	2.7 k ± 5 % ½ W composition	R903(R905)	1-244-719-11	82 k
R712(R762)	1-202-583-11	2.7 k ± 5 % ½ W composition	R904(R907)	1-244-735-11	390 k
R713(R763)	1-244-699-11	12 k	RT201	1-222-845-00	100 k (B), adjustable
R714(R764)	1-244-661-11	330	RT301	1-221-978-00	4.7 k (B), adjustable
R715(R765)	1-244-661-11	330	RT401	1-221-978-00	4.7 k (B), adjustable
R716(R766)	1-244-649-11	100			
R717(R767)	1-202-511-11	4.7 ± 5 % ½ W composition			
R718(R768)	1-217-158-11	0.47 ± 5 % 5 W metal			

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
RT701 (RT751)	1-221-967-00	10 k (B), adjustable
RV601 (RV651)	1-224-102-11	250 k(M)/250 k (M), variable (VOLUME)
RV602 (RV652)	1-224-102-11	250 k (B)/250 k (B), variable (BALANCE)
RV603 (RV653)	1-224-101-11	50 k (B), variable (TREBLE)
RV604 (RV654)	1-224-101-11	50 k (B), variable (BASS)
<b>SWITCHES</b>		
S1	1-516-252-00	rotary/slide (FUNCTION)
S2	1-516-036-00	lever (MONITOR 1)
S3	1-516-036-00	lever (MONITOR 2)
S4	1-516-196-00	rotary/slide (MODE)
S5	1-516-036-00	lever (LOUDNESS)
S6	1-516-197-00	rotary/slide (FILTER)
S7	1-514-524-00	slide (NORMAL/SEPARATE)
S8	1-516-198-00	rotary/slide (SPEAKER)
S9	1-516-036-00	lever (MUTING)
S10	1-514-448-00	slide (DE-EMPHASIS)
S11	1-516-315-00	lever (POWER)
<b>FILTERS</b>		
	1-527-507-11	fm i-f, ceramic 10.70 MHz (red)
	1-527-507-21	fm i-f, ceramic 10.66 MHz (black)
CF201,202	1-527-507-31	fm i-f, ceramic 10.74 MHz (white)
	1-527-507-41	fm i-f, ceramic 10.62 MHz (green)
	1-527-507-51	fm i-f, ceramic 10.78 MHz (yellow)
CP301,302	1-231-224-00	filter, low-pass

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>MISCELLANEOUS</b>		
CB701 (CB751)	1-532-320-00	breaker, circuit
CP201	1-231-193-00	encapsulated component
CP901	1-231-057-00	encapsulated component, 0.033 $\mu$ F + 120 $\Omega$
CNJ901	1-509-517-00	connector, REC/PB
CNJ902	1-507-265-00	jack, HEADPHONE
CNJ904	1-507-170-00	jack, AUX
CNJ905	1-509-546-00	connector, ac; 3-p
F901,902	1-532-252-00	fuse, 2.5 A
J901-908 (J951-958)	1-507-393-00	jack, phono; 8-p
M901	1-520-154-00	meter, TUNING
PL901,902	1-518-116-00	lamp, dial 11 V/0.36 A
PL903	1-518-124-00	lamp, TUNING 8 V/0.25 A
PL904	1-518-151-00	pointer (with lamp)
PL905	1-518-158-00	lamp, STEREO 8 V/0.03 A
VS901	1-526-520-11	selector, voltage
	1-509-437-22	socket, power transistor
	1-517-058-00	holder, meter lamp
	1-533-090-00	holder, dial lamp
	1-535-054-00	lug terminal (A)
	1-535-055-00	lug terminal (B)
	1-536-353-00	terminal post, U-shaped(single)
	1-536-354-00	terminal post (C)
	1-536-355-00	terminal post, U-shaped(double)
	1-536-395-00	terminal strip, 1L1 (C)
	1-536-398-00	terminal strip, 2L2 (C)
TM901 ~ 904	1-536-415-00	screw terminal strip, 4-p (ANTENNA)
	1-582-233-00	jumper board, 8-p phono jack

**STR-7055**