

## 4. ADJUSTMENTS

### 1. Test & Adjustment point

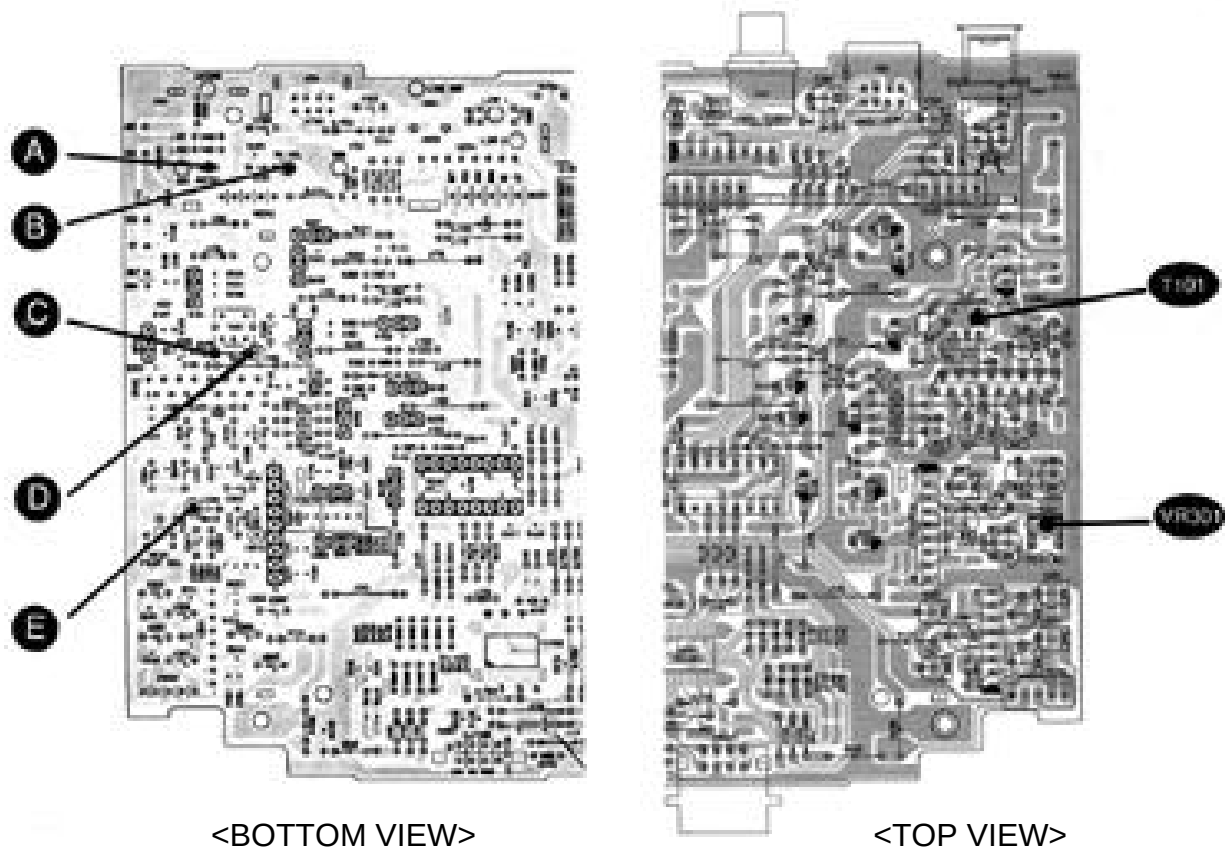


Figure 1. MAIN PCB Board

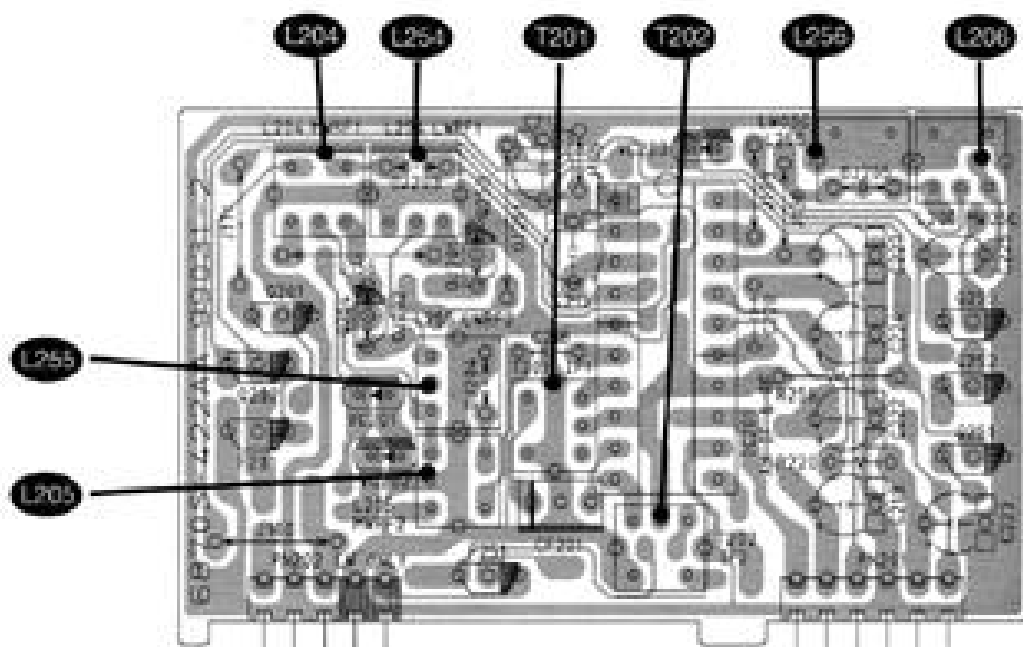


Figure 2. RF PCB Board

2. FM Adjustment

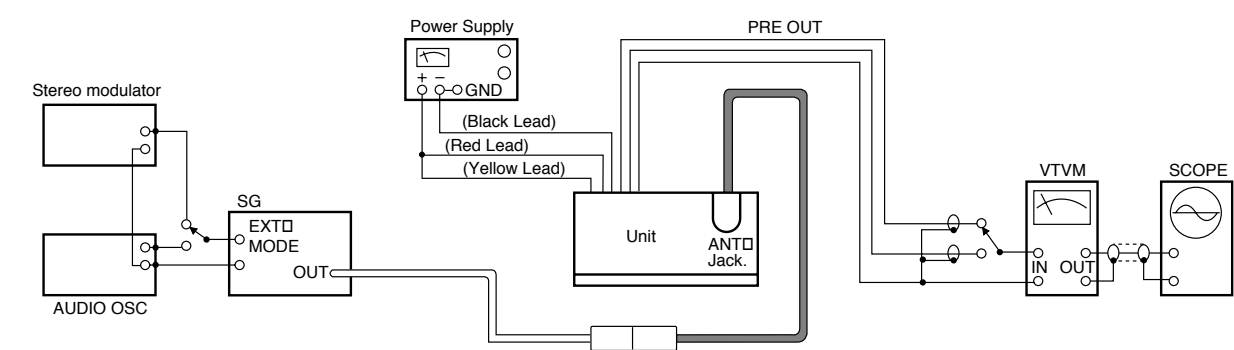


Figure 3.

- (1) The impedance of FM antenna terminal is 75Ω.  
Therefore, connect coaxial cable (3C-2V etc.) between FM SG and antenna terminal when wiring.

| Type \ Item                   | FM SSG Attenuator Indication | Available Power Ratio | Antenna Terminal Voltage |
|-------------------------------|------------------------------|-----------------------|--------------------------|
| Open indication type          | 0dB<br>60dB                  | 5.2dBf<br>65.2dBf     | 6 dB/μV<br>66dB/μV       |
| Load or close indication type | 0dB<br>54dB                  | 11.2dBf<br>65.2dBf    | 12dB/μV<br>66dB/μV       |

- (2) There are two kind in indication of FM SG output attenuator.
- 1) Attenuator with marking of 75Ω open...open indication type.
  - 2) Attenuator with marking of 75Ω load or close ... load or close indication type.
- (3) FM SG output level in this FM adjustment are described as open indication type. The left table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltage (dB/μV) in each indication type.

Notes:

- 1. BAND Switch.....FM
- 2. BALANCE .....Center
- 3. TREBLE/BASS .....Center
- 4. Connect as shown in figure 3.
- 5. Refer to figure 1~2 for Adjustment Points.

| STEP | SUBJECT        | FEED SIGNAL                          |                        | MEASURE OUTPUT                              | ADJUSTMENT | ADJUST FOR   |
|------|----------------|--------------------------------------|------------------------|---------------------------------------------|------------|--------------|
|      |                | FROM                                 | TO                     |                                             |            |              |
| 1    | Discriminator  | 98MHz 60dB<br>22.5kHz Dev.<br>FM SSG | ANT Jack or<br>Point A | Between Point C & Point D<br>DC Volt Meter. | T101       | DC 0V ±10mV  |
| 2    | MPX Adjustment | 98MHz 60dB<br>75kHz Dev<br>FM SSG    | Same as above          | Between Point E,<br>Frequency Counter       | VR301      | 76kHz ± 50Hz |

3. AM(MW) Adjustment

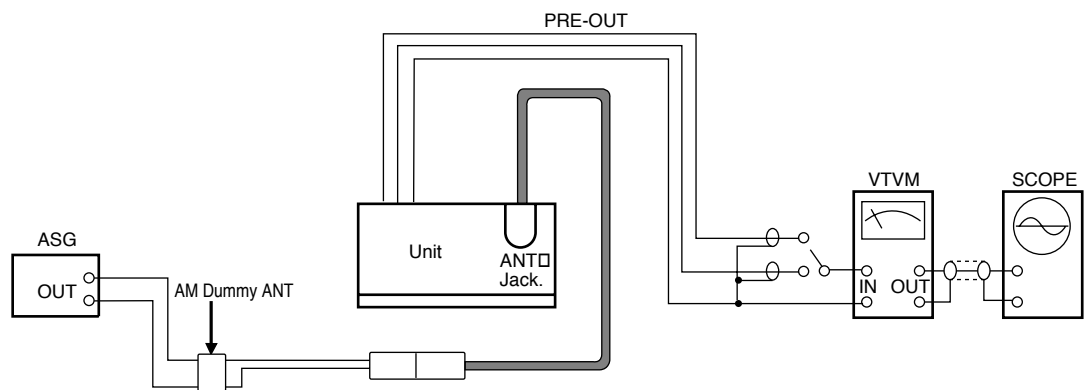


Figure 4.

- Notes:**
- 1. BAND Switch.....AM(MW)
  - 2. Connect as shown in figure 4.
  - 3. Refer to figure 1~2 for Adjustment Points.

| STEP | SUBJECT                                        | FEED SIGNAL                                                     |                               | MEASURE OUTPUT                                   | ADJUSTMENT           | ADJUST FOR      |
|------|------------------------------------------------|-----------------------------------------------------------------|-------------------------------|--------------------------------------------------|----------------------|-----------------|
|      |                                                | FROM                                                            | TO                            |                                                  |                      |                 |
| 1    | 520 or 522kHz<br><br>Tuning Voltage Adjustment | No Input                                                        |                               | LCD Display<br>(Reception Frequency)             | TUNE + / -<br>Button | 520 or 522kHz   |
|      |                                                |                                                                 |                               | Between Point <b>B</b> and GND,<br>DC Volt Meter | L206                 | DC 1.2V ± 0.05V |
| 2    | IF Coil Adjustment                             | 600kHz or 603kHz<br>ANT input, 30dB,<br>400Hz (30% MOD)<br>SSG. | ANT Jack<br>or Point <b>A</b> | Output L or R ch,<br>VTVM & Oscilloscope         | T201 & T202          | Max. Output     |
| 3    | 600kHz<br>or 603kHz<br>RF Adjustment           | 600kHz or 603kHz<br>ANT input, 30dB,<br>400Hz (30% MOD)<br>SG.  | Same as<br>above              | LCD Display<br>(Reception Frequency)             | TUNE + / -<br>Button | 600 or 603kHz   |
|      |                                                |                                                                 |                               | Output L or R ch,<br>VTVM & Oscilloscope         | L204 & L205          | Max. Output     |

4. LW Adjustment(Optional)

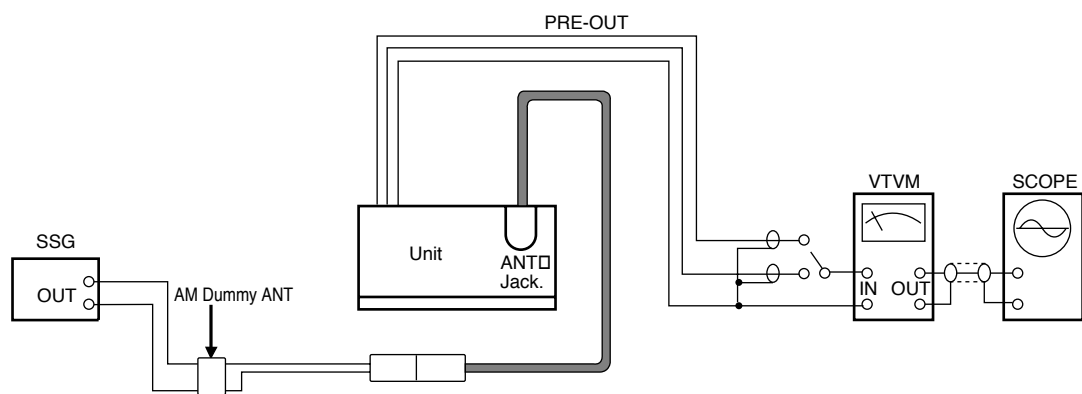


Figure 5.

- Notes:**
- 1. BAND Switch.....LW
  - 2. Connect as shown in figure 5.
  - 3. Refer to figure 1~2 for Adjustment Points.

| STEP | SUBJECT                                 | FEED SIGNAL                                           |                               | MEASURE OUTPUT                                   | ADJUSTMENT           | ADJUST FOR    |
|------|-----------------------------------------|-------------------------------------------------------|-------------------------------|--------------------------------------------------|----------------------|---------------|
|      |                                         | FROM                                                  | TO                            |                                                  |                      |               |
| 1    | 144kHz<br><br>Tuning Voltage Adjustment | No Input                                              |                               | LCD Display<br>(Reception Frequency)             | TUNE + / -<br>Button | 144kHz        |
|      |                                         |                                                       |                               | Between Point <b>B</b> and GND,<br>DC Volt Meter | L256                 | DC 1.2V±0.05V |
| 2    | 150kHz<br>RF Adjustment                 | 150kHz<br>ANT input, 30dB,<br>400Hz (30% MOD)<br>SSG. | ANT Jack<br>or Point <b>A</b> | LCD Display<br>(Reception Frequency)             | TUNE + / -<br>Button | 150kHz        |
|      |                                         |                                                       |                               | Output L or R ch,<br>VTVM & Oscilloscope         | L254 & L255          | Max. Output   |

5. Cassette Deck Adjustment

- (1) Before this adjustment, clean PLAYBACK head surface.
- (2) For this adjustment, use test tape MTT-114.
- (3) VOLUME.....Center
- (4) BALANCE .....Center
- (5) TREBLE/BASS .....Center
- (6) Connect as shown in figure 6.

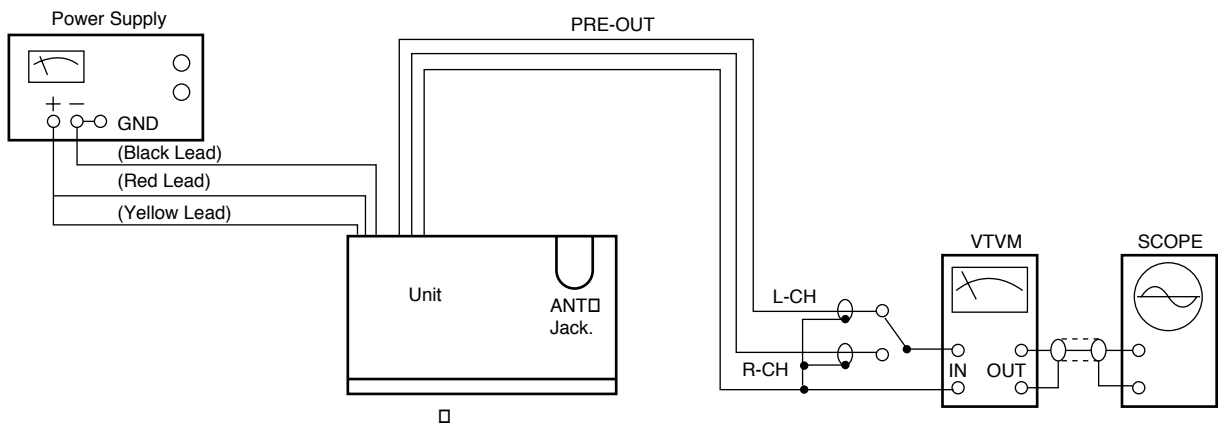


Figure 6.

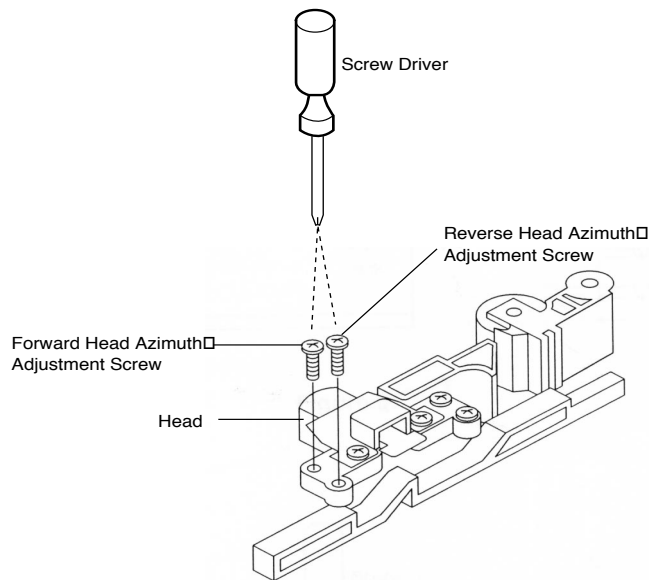


Figure 7.

| SUBJECT              | MEASURE OUTPUT                           | SETTING                                    | ADJUSTMENT                                        | ADJUST FOR                                    | REMARKS                                           |
|----------------------|------------------------------------------|--------------------------------------------|---------------------------------------------------|-----------------------------------------------|---------------------------------------------------|
| P.B. Head Adjustment | L-CH, R-CH, VTVM and Scope See figure 6. | Playback (FWD & REV) the TEST TAPE MTT-114 | Adjust the azimuth adjusting screw (in figure 7). | MAX. Output both channels on FWD and REV PLAY | After this adjustment, lock the screw with paint. |