

DISASSEMBLY

- 1) Remove two set screws on each side of the case and case itself.
- 2) Loosen a set screw with a hexagonal screw driver having 2 mm width across flats and pull off the tuning knob frontward. (marked A on Fig. 1)
- 3) Remove Twelve set screws and the bottom plate.
- 4) Take off six set screws (marked B on Fig. 1) and disassemble the front panel frontward.
- 5) Remove four set screws (marked C on Fig. 1) and disassemble the shield plate.
- 6) Remove two set screws (marked D on Fig. 2) and take the lamp assembly to pieces.
- 7) When disassembling the frequency indicating printed circuit board, remove two set screws (marked E on Fig. 2).
- 8) When 7) is completed, parts in the printed circuit board (APC-1) can be replaced.
- 9) Remove two set screw (marked F on Fig. 3) and the LED assembly from the front chassis.
- 10) When removing the LED assembly holder, take off two set screws (marked G on Fig. 4) by turning them frontward. Then, the LED in the printed circuit board can be replaced.

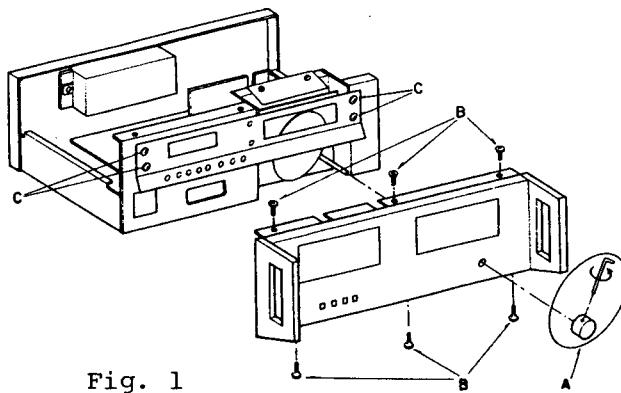


Fig. 1

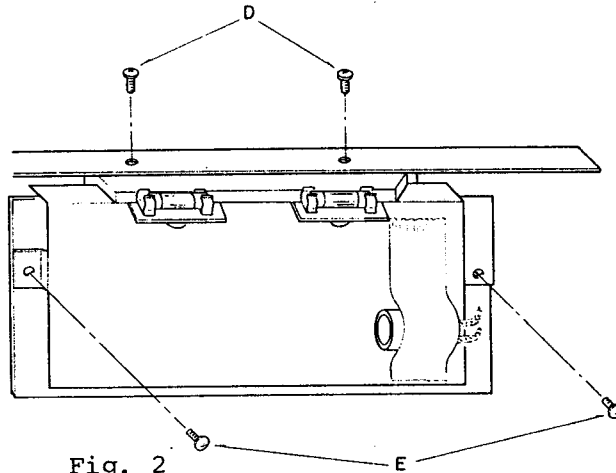


Fig. 2

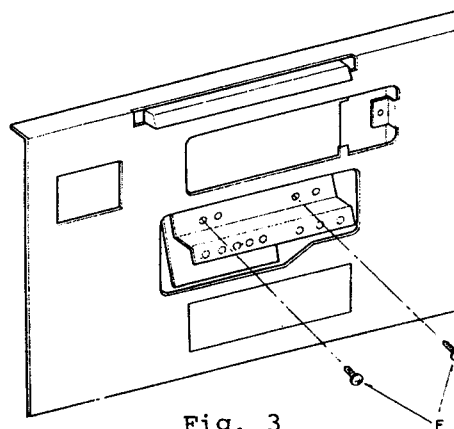


Fig. 3

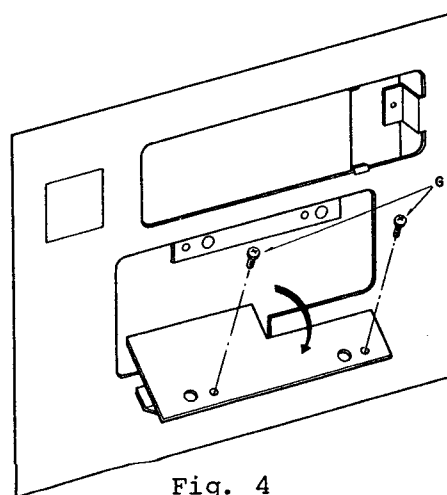


Fig. 4

1. Front End Tracking

- 1) Connect the output of the signal generator to FM-ANT terminals of the set. Take the output of the set out of AFT-26 terminals (10) and connect it to the AC voltmeter.
- 2) The tuning knob should be tuned with minimum frequency by turning it counterclockwise. Set the frequency of SG to 87.5 MHz and adjust L5 coil so only the central one (green) of the tuning indicator lamps glows.
- 3) The tuning knob should be tuned with maximum frequency by turning it clockwise. Set the frequency of SG to 109 MHz and adjust CT5 trimmer capacitor so only the central one (green) of the tuning indicator lamps puts light on.
- 4) Repeat 2) and 3) several times.
- 5) Turn the tuning knob and tune it to 88 MHz.
Set the frequency of SG to 88 MHz and adjust L1, L2 and L3 coils so AC voltmeter indication becomes maximum.
- 6) Turn the tuning knob and tune it to 108 MHz.
Set the frequency of SG to 108 MHz and adjust CT1, CT2, CT3 and CT4 trimmer capacitor so AC voltmeter indication becomes maximum.
- 7) Turn in a broadcasting station and see indication values on the scale and digital part agree with the station's frequency. If not, tune if accurately again and adjust L5 coil until the lock indicator lights up. Make tracking adjustment once more after readjustment.

2. Discriminating Transformer

- ① Wide IF-band discriminating transformer
 - (1) Set the frequency of SG to 98 MHz 1 kHz MONO 100% modulation and tune the set. At this time, set IF-band switch to "WIDE".
 - (2) Reduce the output of SG, connect a DC voltmeter to R220 (100Ω) carbon resistor, and adjust the upper coil of T202 discriminating transformer so the indication of the meter becomes 0(V).
 - (3) Increase the output of SG to about 80 dBf. Connect a distortion meter to the output of the set and adjust the lower coil of T202 discriminating transformer so distortion factor becomes minimum.
- ② Narrow IF-band discriminating transformer
 - (1) Set the frequency of SG to 98 MHz 1 kHz MONO 100% modulation and tune the set. At this time, set IF-band switch to "NARROW".
 - (2) Decrease the output of SG and adjust the upper coil of T203 discriminating transformer so the DC voltages of IC204 terminals (7) and (10) agree with each other.
 - (3) Increase the output of SG to about 60 dBf. Connect a distortion meter to the output of the set and adjust the lower coil of T203 discriminating transformer so distortion factor becomes minimum.

3. PLL Loop Gain

Connect an oscilloscope which allows the observation of direct current to the pin terminals (51) of APC-2 print substrate. Required range of the oscilloscope to be used: vertical ... 0.5 ~ 1 V/cm, sweep ... 1 ~ 2 mS/cm. Tune the set to 98 MHz in the absence of input signal. When slowly turning the tuning knob clockwise to tune the set to a high level, horizontal signal line on the oscilloscope gradually rises in the direction of (1) in Fig. I and suddenly drops at a certain level.

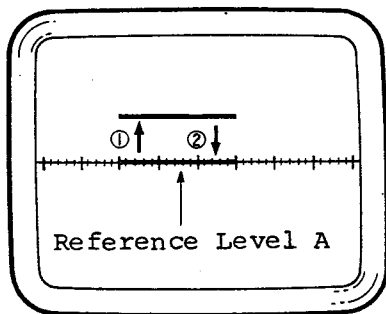


Fig. I

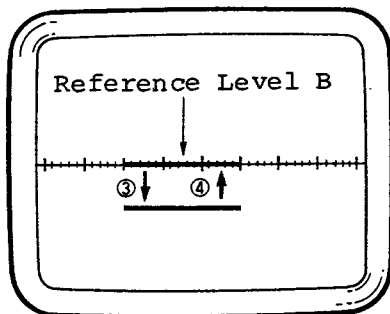


Fig. II

At this moment, stop the knob and define thus-obtained level Reference Level A. Next, turn the tuning knob counterclockwise slowly. Then, the horizontal signal line on the oscilloscope gradually lowers in the direction of (3) in Fig. II and suddenly rises at a certain level. At this moment, stop the knob and define thus-obtained level Reference Level II. Adjust VR102 so Reference Levels A and B agree with each other.

4. PLL DC Potential

Connect the oscilloscope kept in such condition as described in 3 to the terminals (29) of AFT-26 printed circuit board and adjust bright line to Reference Lines on the screen. Next, connect the oscilloscope to the terminals (51) of APC-2 printed circuit board and adjust VR101 so the wave forms obtained in the neighbourhood of 98 MHz when the tuning knob is turned clockwise and counterclockwise respectively come into contact with each other at Reference Levels. If loop gain varies at this time, make loop gain adjustment again.

5. NARROW Output Level

Set the frequency of SG to 98 MHz 1 kHz MONO 100% modulation and its output to 80 dBf. Tune the set to 98 MHz by turning the tuning knob, set IF BAND to WIDE, and confirm output level with an AC voltmeter. Next, set IF BAND to NARROW and adjust VR201 so equal output level is obtained.

6. AIR CHECK Oscillation Level

Set AIR CHECK to ON in such condition as described in 5. Adjust VR701 so output level comes to -6 dB from the value obtained in 5.

7. Signal Indicator Lighting Level

Set the frequency of SG to 98 MHz 1 kHz MONO 100% modulation, tune the set to 98 MHz, and adjust VR202 so three and four LEDs for the signal indicator glow at 55 and 60 dBf respectively.

8. Stereo Separation

Set the frequency of SG to 98 MHz 1 kHz STEREO L or R 45% pilot 10% modulation and its output to 80 dBf. Tune the set to 98 MHz, set MODE to AUTO and IF BAND to WIDE, adjust VR302 so other channels' leakage is equal and minimum in the both directions (L → R and R → L). Next, set IF BAND to NARROW and adjust VR303 in the same manner.