

Subsection

2.983(d)(9): Factory Tune-up Procedure

Test Equipment

1. BNC-P to MM121454 Coaxial RF cable	Audio Technica custom RF cable
2. DC Power Supply	Leader LPS-160-2
3. Audio Signal Generator	Leader LAG-126S
4. Modulation Meter (FM liner detector)	Anritsu MS61A
5. Spectrum Analyzer	Advantest R3361D
6. RF Power Meter	Anritsu MS 4803A
7. RF Power Sensor	Anritsu MA4701A
8. Oscilloscope	Tektronix 475A
9. DC Volt Meter	Fluke 79
10. AC milli Volt Meter	Leader LMV-1817

Adjustment of T5000 Main circuit board

1. Adjusting the frequency:

1-1. Setting of the measurement equipment and T5000D

a. Setting of Spectrum Analyzer

- Center frequency: 668.00 MHz
- Frequency span: 200kHz
- Counter mode: ON

b. Setting of LCD for T5000D

- Frequency: 668.000MHz
- RF-POWER: HI
- GAIN: -6dB

1-2. Frequency set up:

- Adjust the T5000D carrier frequency by rotating the TC301 on the PCB of T5000D
- Set the main carrier peak of to the spectrum analyzer's center frequency.

2. Adjusting Carrier Peak:

2-1. Setting of measurement equipment and T5000D

hba. Setting of Spectrum Analyzer

- Center Frequency: 668.000MHz
- Frequency Span: 200kHz
- Counter Mode: OFF

b. Setting of T5000D

- Same as 1-1-b

2-2. Adjustment of T5000D

- a. Adjusts the TC302 on PCB of T5000D and set the main carrier to have peak.

3. Adjustment of RF Power:

3-1. Setting of measurement equipment and T5000D

a. Setting of RF Power meter

- Measurement range: Auto-mode

b. Setting of T5000D

- Frequency : 668.000MHz
- RF-POWER HI & LOW
- GAIN -6dB

3-2. Adjustment of T5000D

- a. Adjust the RF output power by rotating the VR301 on PCB of T5000D and set VR301 to have RF power meter at 35mW
- b. Adjust the LCD POWER of T5000D to LOW.
- c. Adjust and set the VR300 to have RF power meter at 10mW.

4. Adjustment of deviation

4-1. Setting of measurement equipment and T5000D

a. Setting of Deviation Meter

- Sensitivity : P-P/2
- Measurement Range: 100kHz
- HPF: 50Hz
- LPF: 20kHz
- Measurement Frequency: 668.000MHz

b. Input Audio Signal (Apply to CN2)

- Frequency: 1kHz
- Signal level: +4dBV (CN2 terminal voltage)

c. Setting of T5000D

- Same as 1-1-b

4-2. Adjusting T5000D

a. Adjust and set the VR3 on PCB of T5000D to have deviation meter to set $\pm 40\text{kHz}$.

5. Adjustment of Tone Deviation

5-1. Setting of measurement equipment and T5000D

a. Setting of Deviation Meter

- Sense: PP/2

- Measurement range: 3kHz

- HPF: 4kHz

- LPF: 120kHz

- Measurement frequency: 668.000MHz

b. Setting of T5000D

- Same as 1-1-b

5-2. Adjustment of T5000D

a. Adjust the tone signal modulation level by rotating the VR4 on PCB of T5000D and set the VR4 to have the deviation meter to set $\pm 2\text{kHz}$.