

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 T1000 circuit board

1. Adjusting the frequency:

1-1. Measurement equipment and T1000D set up

a. Spectrum Analyzer Set up

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

b. T1000D LCD Setting

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

1-2. Frequency set up:

- a. Adjust the T1000D carrier frequency by rotating the TC201 on the PCB of T1000D and set the main carrier peak to the spectrum analyzer's center frequency.

2. RF Power Adjustment

2-1. Measurement equipment and T1000D set up

- a. RF Power meter set up
 - Measurement range: Auto-mode
- b. T1000D Setting
 - Frequency: 668.000MHz
 - RF-POWER HI & LOW
 - GAIN -6dB

2-2. T1000D adjustment

- a. Adjust the RF output power by rotating the VR351 on PCB of T1000D and set VR351 to have RF power meter at .005 W ERP
- b. Adjust the LCD POWER of T1000D to LOW.
- c. Adjust and set the VR352 to have RF power meter at .002 W ERP

3. Deviation adjustment

3-1. Measurement equipment and T1000D set up

- a. Deviation Meter set up
 - Sensitivity: P-P/2
 - Measurement Range: 100kHz
 - HPF: 50Hz
 - LPF: 20kHz
 - Measurement Frequency: 668.000MHz
- b. Audio Signal (Apply to CN3)
 - Frequency: 1kHz
 - Signal level: +4dBV (CN2 terminal voltage)
- c. T1000D setting
 - Frequency: 668.000MHz
 - RF-POWER: HI
 - GAIN: -6dB

3-2. Adjusting T1000D

- a. Adjust and set the VR3 on PCB of T1000D to have deviation meter to set +/-40kHz.

4. Tone Deviation Adjustment

4-1. Measurement equipment and T1000D set up

a. Setting of Deviation Meter

- Sense: P-P/2
- Measurement range: 3kHz
- HPF: 4kHz
- LPF: 120kHz
- Measurement frequency: 668.000MHz

b. T1000D Setting

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

4-2. T1000D Adjustment

- ##### a. Adjust the tone signal modulation level by rotating the VR51 on PCB of T1000D and set the VR51 to have the deviation meter to set +/-2kHz.