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

Test Equipment

1.	BNC-P Coaxial RF cable	Audio Technica custom RF cable
2.	DC Power Supply	Kenwood PR-18
3.	Audio Signal Generator	Leader LAG126
4.	Modulation Meter (FM liner detector)	Anritsu MS61A
5.	Spectrum Analyzer	Advantest R3261A
6.	Pre amplifier	Anritsu MH648A
7.	Oscilloscope	Iwatsu SS-5705
8.	DC Volt Meter	Advantest TR6845
9.	AC Millivolt Meter	National VP9680A

Adjustment of T75 circuit board

1. Connect the audio circuit board and RF circuit board of ATW-T75 and install it in to the PCB fixture.
2. Supply 9V from DC power supply to the power supply terminal (CNP 6 and 7) of T75
3. Connect BNC-P coaxial RF cable with input connector of Spectrum analyzer.
4. Connect BNC-P coaxial RF cable to CNP3 terminal of T75
5. Set T75 to channel “50”.
6. Set the center frequency of Spectrum analyzer to oscillation frequency of T75, and set frequency span to 3.5GHz.
7. Set the power switch of T75 (SW1) to ST-BY position. Make sure to confirm that when turn the power on, power LED flash momentary.
8. Make sure that RF signal appears on Spectrum analyzer and no parasitic oscillation observed.
9. Adjust and set the VR4 where Maximum RF output (10 +/- 3dBm) could obtainable as well as power supply current not exceeded 50mA.
10. Adjust and set the VC2 where Maximum RF output could obtainable as well as spurious level could set minimum (less than 50dB).
11. Set frequency span of the Spectrum analyzer to 100KHz.
12. Set RF signal on the Spectrum analyzer to a desired Oscillating frequency by turning the VC1 onT75.
13. Gradually reduce power supply voltage from 9 V to 6.5V and make sure that Oscillating frequency stay same.
14. Check the power indicator LED start to lights when power supply voltage reached to 6.5V.
15. Set frequency span to “3.5GHz”.
16. Gradually move power supply voltage from 9 V to 6.5V and make sure that no parasitic oscillation observed.
17. Set the Power supply voltage back to 9V.
18. Remove the BNC-P coaxial RF cable from the input connector of Spectrum analyzer, and connect it to the Preamplifier.
19. Make sure that the Preamplifier and Modulation Meter (FM linear detector) are connected together.
20. Input –28.3dBV at 1kHz signal from the Audio signal generator to the Mic input of T75 by checking the level of the signal on AC milli voltmeter.
21. Set T75 Mic trimmer (VR1) to maximum and GT trimmer (VR2) to minimum.
22. Set T75 to channel “50” and set the frequency range of the Modulation meter (FM linear detector) to the oscillation frequency of T75
23. Make sure that Oscilloscope has no irregular wave. Then, set the modulation levels appeared on the Modulation meter (FM linear detector) to +/-30KHz by turning VR3 on T75.
24. Set T75 to channel “00” and “99”. Make sure that Deviation of the each cannel stays same.

25. Switch signal input of T75 from Mic to GT, set Mic trimmer (VR1) to minimum and GT trimmer (VR2) to maximum.
26. Input –28.3dB at 1kHz signal from audio signal generator to GT input of T75 by checking the level of the signal on AC millivolt meter.
27. Set T75 to channel “00”,”50” and “99”. Make sure that deviation on each channel stays 15 +/- 2kHz.