

Subsection

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

Test Equipment

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| 1. BNC-P 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 T214 Main circuit board

1. Install the main circuit board of ESW-T214 to the PCB fixture.
2. Supply 3V from DC power supply to the power supply terminal of T214
3. Connect BNC-P coaxial RF cable with input connector of Spectrum analyzer.
4. Connect BNC-P coaxial RF cable to J1 terminal of T214.
5. Set T214 to channel "50".
6. Set the center frequency of Spectrum analyzer to oscillation frequency of T214. And set frequency span to 200KHz.
7. Turn the power switch of T214(SW2) on, and set the SW5 on T214 to "Hi"
8. Make sure that RF signal appears on Spectrum analyzer.
9. Set the RF signal on Spectrum analyzer to a desired Oscillating frequency by turning the TC2 on T214.
10. Set the RF signal on Spectrum analyzer to its maximum level by turning the TC1 on T214.
11. Remove the BNC-P coaxial RF cable from the input connector of Spectrum analyzer, and connect it to the RF power meter.
12. Make sure that the RF power sensor and RF power meter are connected together.
13. Adjust the RF output power to 10mW by turning the VR3 on T214.
14. Set the SW5 on T214 to "Low".
15. **Make sure that the RF output power to 5mW.**
16. Make sure that on both channel "00" and "99", the RF out put power stays over 10mW when Sw5 of T214 is on "HI" and that it stays 5mW when SW5 of T214 is on "LOW"
17. Input the -62dBV at 1kHz signal from Audio signal generator to the AF input of T214 by checking the level of the signal on AC milli voltmeter.
18. Remove the BNC-P Coaxial RF cable from RF power meter, then connect it with the input connector of Modulation Meter (FM linear detector).
19. Set T214 to channel "50" and set the frequency range of the Modulation meter (FM linear detector) to the oscillation frequency of T214
20. Make sure that Oscilloscope has no irregular wave. Then, adjust the indicator of Modulation meter (FM linear detector) to $\pm 5\text{KHz}$ by turning VR1 on T214
21. Set T214 to channel "00" and "90". Make sure that Deviation of the each cannel stays $5\text{KHz}/1\text{kHz}$.
22. Remove the BNC-P coaxial RF cable from Modulation meter (FM linear detector) then connect it with input connector of the Spectrum Analyzer.
23. Set T214 to channel "50" and make terminal (+) and terminal (-) of AF input short circuit.
24. Set the Frequency span of Spectrum analyzer to 200KHz.
25. **Make sure that the tone level on Spectrum analyzer 30dB lower than main RF signal.**
26. Set the center frequency of Spectrum analyzer to "1.8GHz". Set the frequency span to "3.5GHz".

27. Make sure spurious level on Spectrum analyzer stays 30dB lower than main RF signal level