

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 | 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 T601 circuit board

1. Connect the audio, switch and RF circuit board of ATW-T601.
2. Supply 9V from DC power supply to the power supply terminal (CNP 24 and 25) of T601
3. Connect BNC-P coaxial RF cable with input connector of Spectrum analyzer.
4. Connect BNC-P coaxial RF cable to JK100 terminal of T601
5. Set T601 to channel "3".
6. Set the center frequency of Spectrum analyzer to oscillation frequency of T601, and set frequency span to 3GHz.
7. Set the power switch of T601 (SW50) to ST-BY position. Make sure to confirm that when turn the power on, power LED lights.
8. Make sure that RF signal appears on Spectrum analyzer and no parasitic oscillation observed.
9. Adjust and set the VR100 where Maximum RF output (10mW) could obtainable as well as power supply current not exceeded 65mA and spurious level could set minimum (less than 45dB).
10. Set frequency span of the Spectrum analyzer to 100KHz.
11. Set RF signal on the Spectrum analyzer to a desired Oscillating frequency by turning the VC130 on T601.
12. Gradually reduce power supply voltage from 9 V to 6.5V and make sure that Oscillating frequency stay same.
13. Check the power indicator LED start to blink I when power supply voltage reached to 6.5V.
14. Set frequency span to maximum.
15. Gradually move power supply voltage from 9 V to 6.5V and make sure that no parasitic oscillation observed.
16. Set the Power supply voltage back to 9V.
17. Remove the BNC-P coaxial RF cable from the input connector of Spectrum analyzer, and connect it to the Preamplifier.
18. Make sure that the Preamplifier and Modulation Meter (FM linear detector) are connected together.
19. Input -38.0dBV at 1kHz signal from the Audio signal generator to the Mic input of T601 by checking the level of the signal on AC milli voltmeter.
20. Set T601 trimmer (VR1) to maximum.
21. Set T601 to channel "3" and set the frequency range of the Modulation meter (FM linear detector) to the oscillation frequency of T601
22. Make sure that Oscilloscope has no irregular wave. Then, set the modulation levels appeared on the Modulation meter (FM linear detector) to $\pm 10\text{KHz}$ by turning VR2 on T601.
23. Set T601 to channel "0" and "7". Make sure that Deviation of the each channel stays same.
24. Switch signal input of T601 from Mic to GT.

25. Input -24.6dB at 1kHz signal from audio signal generator to GT input of T601 by checking the level of the signal on AC millivolt meter.
26. Set T601 to channel "0", "3" and "7". Make sure that deviation on each channel stays $15 \pm 2\text{kHz}$.