



*New Japan Radio Co., Ltd.*

Technical  
Information

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NewJRC strongly recommend this moding test, after the radar design is finished. The purpose of the moding test is to confirm the reliability of the microwave transmission line combination and the pulse driving circuit included the modulator in the radar system.

## MODING TEST PROCEDURE

1. Install the magnetron on your radar system.
2. Completely install the protector, receiver and antenna, and normally operate the radar system.
3. Connect the high voltage probe to the high voltage terminal.
4. Set the oscilloscope to single sweep and higher trigger level than the normal anode voltage.
5. After a few minutes operation, reduce the heater voltage to 0 V.
6. A few minutes later, the magnetron becomes unstable, at last, it stop oscillation.
7. Some times reduced heater voltage can't make the unstable oscillation of the magnetron. Then reduce the preheat time.
8. Repeat step 4 to 7 for several times.
9. After these operations, confirm the high voltage surge level and verify the radar performance is not degraded.

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If something were damaged at step 6, the same thing would happen at the end of the magnetron life. Please redesign the damaged section for avoid the failure in the field. As the result of this test, the magnetron will be failed, since this test is very severe for the magnetron. Please carry out the moding test at the design stage.