

MFJ

Switchable Dummy Load

Model MFJ-251

INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment

MFJ ENTERPRISES, INC.

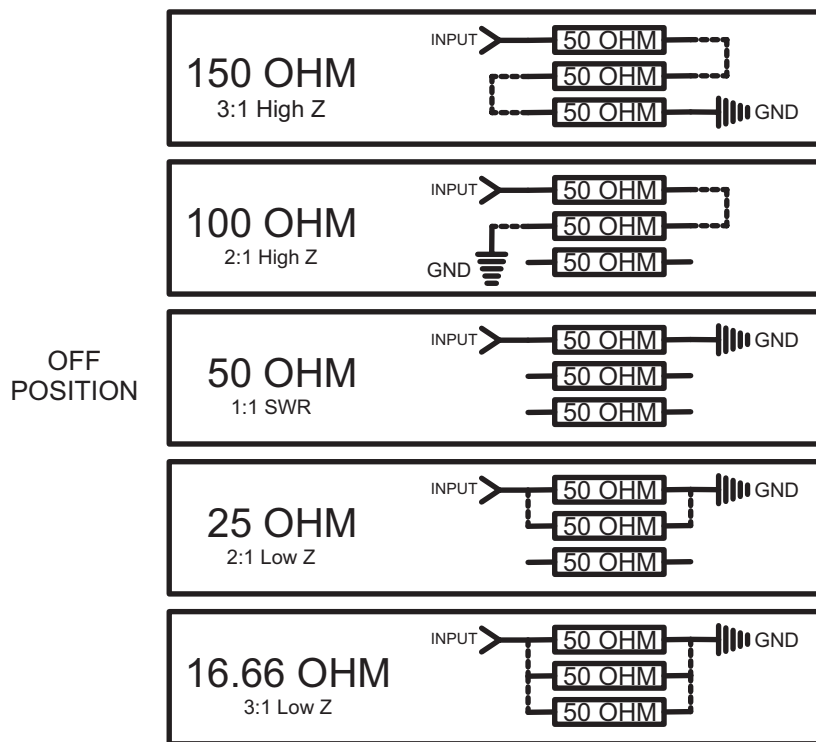
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Introduction

Thank you for purchasing the MFJ-251 switchable dummy load. The MFJ-251 will simulate high and low impedance loads of 1:1, 2:1, and 3:1. These loads are useful in testing equipment to verify proper operation or troubleshooting station problems.

Theory of Operation

The MFJ-251 uses three 50 ohm high power resistors that can be switched in or out of the circuit to form five resistance values at the coaxial input. It does this through a series of relays that place each of the resistors in series or parallel to create the resistance values needed for 2:1 or 3:1 matches. The front mounted switch sends 12vdc power to the relays needed for each arrangement of the resistors. When the unit is in the off position or power is removed from the power jack, the MFJ-251 defaults into the 50 ohm mode to become a standard dummy load.

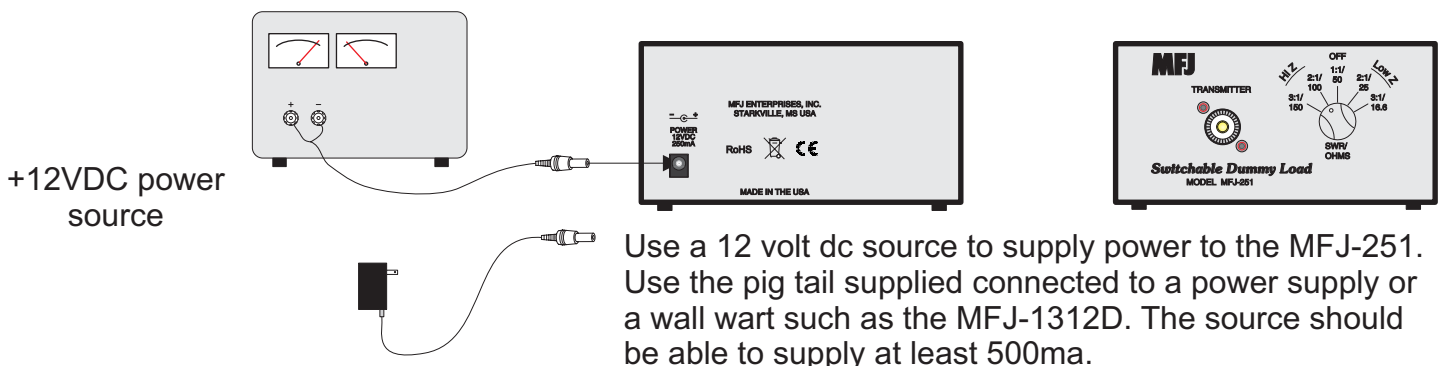


Derating Curve

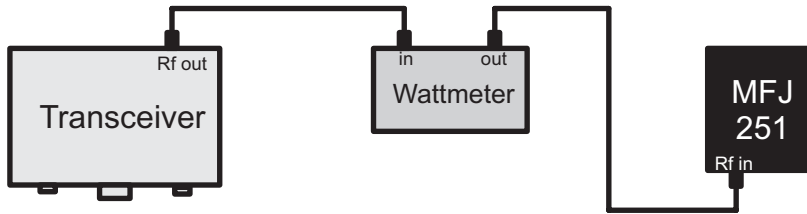


Impedance: 50 ohms \pm 10%
 VSWR : Max 1.3:1 0-30Mhz
 Power: 300 watts for 30 sec
 (5 min cool down)

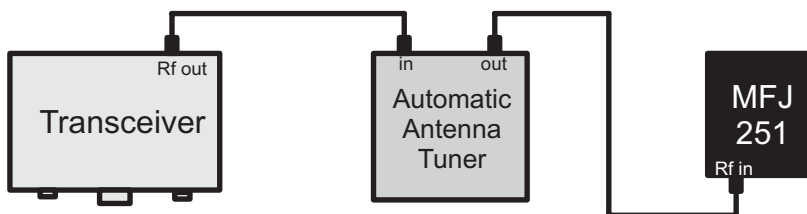
Connections



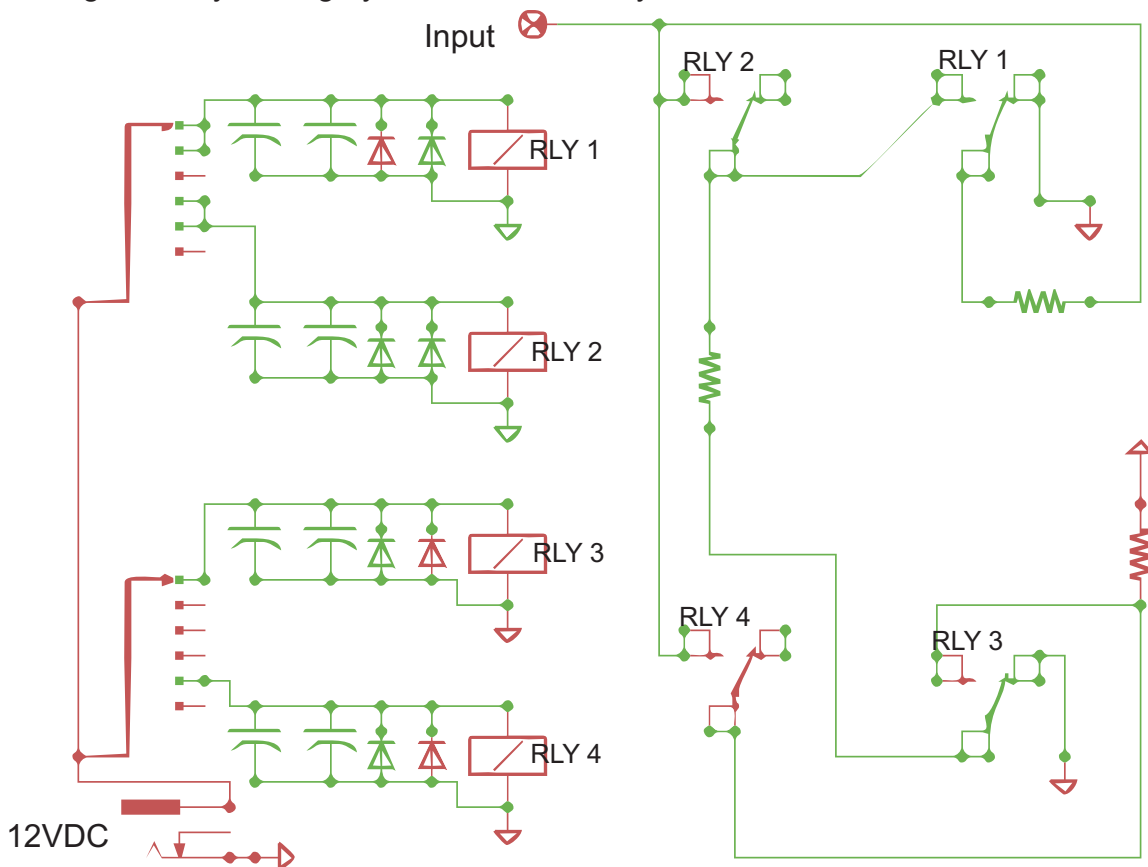
Operation



This diagram shows how the MFJ-251 could be used to verify accuracy of a wattmeter. Use the lowest power setting on the transceiver when testing. Do not transmitted high power into the dummy load when using the 2:1 or 3:1 settings. Doing this may damage your transceiver.



This diagram shows how the MFJ-251 could be used to verify the tuning capability of a automatic or manual antenna tuner. The MFJ-251 provides a purely resistive load to the tuner. Use the lowest power setting (5-10 watts) on the transceiver when testing. Do not transmitted high power into the dummy load or through the tuner when tuning. Doing this may damage your transceiver or your tuner.



FULL 12 MONTH WARRANTY

MFJ Enterprises, Inc. warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free from defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied.

1. The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original of machine reproduction or such proof of purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.
2. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product under warrantee provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order for **\$7.00** covering postage and handling.
3. MFJ Enterprises, Inc. will supply replacement parts free of charge for any MFJ product under warranty upon request. A dated proof of purchase and a **\$7.00** personal check, cashiers check, or money order must be provided to cover postage and handling.
4. This warranty is **NOT** void for owners who attempt to repair defective units. Technical consultation is available by calling (601) 323-5869.
5. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.
6. Wired and tested PC board products are covered by this warranty provided **only the wired and tested PC board product is returned**. Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, or cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense unrepaired.
7. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.
8. **Out-of-Warranty Service:** MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.
9. This warranty is given in lieu of any other warranty expressed or implied.
10. MFJ Enterprises, Inc. reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
11. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to **MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, Mississippi 39759, USA** and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase.
12. This warranty gives you specific rights, and you may also have other rights which vary from state to state.