MFJ

MFJ QRPocket Antenna Tuner

Model MFJ-9201

INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment

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VERSION 1A

INTRODUCTION

The MFJ-9201 QRPocket Antenna Tuner was specially compact-built for MFJ-9200 series QRPocket CW Transcievers and other rigs with a built-in SWR Meter.

You can operate 80 through 10 Meters -- anywhere with any transceiver -- use any coax fed or random wire antenna. It's great for mobile, base, backpack, etc. The MFJ-9201 handles 100 watts RF output and has a tuner bypass switch. The MFJ-9201 has BNC connectors for input and output.

INSTALLATION

The MFJ-9201 should be installed between the transmitter and antenna.

1. Locate the tuner in a convenient location at the operating position.
2. Use a 50 ohm coaxial cable to connect the transmitter or transceiver to the BNC connector labeled **XMTR** on the tuner.

3.Connect an antenna feedline to the antenna BNC connector labeled **ANT**.

OPERATION

This tuner has a **BYPASS/TUNE** switch located on the unit. Simply place the switch toward the **BYPASS** position to completely bypass the tuning circuit. Change the switch toward the **TUNE** position to place the tuning circuit between the transmitter/transceiver and the antenna.

In this tuner the **TRANSMITTER** and **ANTENNA** matching controls have maximum capacitance at position 0 (fully meshed), and minimum capacitance at position 10 (fully open). Be sure to use the highest possible capacitance for each band. This will provide the smoothest tuning, highest efficiency, and greatest power handling capability.

The **INDUCTANCE** switch has maximum inductance in positions "A" and "B", with minimum inductance in position "L". The use of two maximum inductance settings improves the voltage rating and helps prevent carbon arcing. Less inductance is needed as the frequency is increased. If too little inductance is used, the tuner may not match the load properly. If too much inductance is used, the tuner will be "touchy", power handling will be compromised (capacitors could arc, etc.) and the bandwidth will not be as wide.

Special Note: Always use the minimum amount of inductance as possible. Minimum inductance gives the best efficiency, maximum power handling, and widest bandwidth.

The MFJ-9201 covers 80 through 10 meters. **Do not operate on 160 meters.**

Tuning Procedure:

1. Position the **TRANSMITTER** control to 5 on the corresponding scale.
2. Position the **ANTENNA** control to 0 on the corresponding scale.
3. Place the **BYPASS/TUNE** switch in the **TUNE** position.
4. Apply just enough power to obtain noticeable deflection on your reflected power meter or SWR meter.
5. Adjust the **INDUCTOR** control for lowest deflection on the reflected power.
6. Carefully adjust the **TRANSMITTER** control for the lowest reflected power, then increase the **ANTENNA** control slightly and adjust the **TRANSMITTER** control for the lowest reflected power. Again, increase the **ANTENNA** control slightly and adjust the **TRANSMITTER** control for lowest reflected power. Repeat this process for lowest reflected power.

   Note: These controls interact. Go back and forth between these adjustments as many times as required until the lowest reflected power (best SWR) is obtained.

7. After the lowest reflected power (or SWR) is obtained in step 6, use the **INDUCTOR** switch to reduce the inductance one switch position (L is the lowest inductance setting). Adjust the **TRANSMITTER** and **ANTENNA** controls for the lowest SWR. Continue this process until the lowest SWR cannot be repeated, then use the **INDUCTOR** switch to increase the inductance by one switch position (A is the highest inductance setting). Tune for lowest SWR.

WARNING: Never transmit while changing the INDUCTOR switch.

   Note: Always use as little inductance as possible. Step 7 minimizes the inductance and maximizes the capacitance.

8. After a low SWR is obtained, the transmitter power may be increased to any value up to 100 watts.

WARNING: Do not exceed 100 watts output. You will damage the tuner!