

## MFJ-1750/1752

### *Instruction Manual*

Thank you for purchasing the MFJ-1750/1752. The 1750 is a 5/8 wave antenna designed for operation on 144-148 MHz. The 1752 is designed to operate on the 220 MHz band.

The MFJ-1750/1752 is shipped partially assembled; you should have received the following parts:

Item	Quan.	Description
A	4	Radials
B	1	Chassis and radiator assembly
C	1	Chassis cover
D	4	#6-32 x 1/2 screw & nut
E	4	#6 self tapping screw
F	1	Clamp assembly

### Assembly Instructions

1- Refer to Figures 1 and 2. Insert one of the 6-32 x 1/2 screws into hole 1 and place a 6-32 nut on the screw. The screw should be installed so that the nut is on the inside.

2- The four remaining screws and nuts can be installed in the same manner, with one screw through hole 2, one through hole 3, and one through hole 4.

3- You are now ready to install three of the radials. First position the chassis as shown in Figures 1 and 2. Next insert a radial, straight end first, into hole A. All radials must be inserted through the hole from the inside of the chassis. The hooked end can now be secured with the screw in hole 1.

4- Two more radials can be installed in the same way as the above process. One radial should be inserted through hole B and secured using the screw in hole 2. Another can be inserted through hole C and secured by the screw in hole 3.

5- The remaining radial will emerge from the chassis through the chassis through hole D located in the cover. To achieve this, loosely fasten the screw in hole 4. The hook in the radial should be turned to match the others. The screw should be tight enough to hold the radial, but should allow vertical movement, so that the cover might be properly aligned.

6- Insert the radial through hole D, in the cover. Fasten the cover to the chassis using the four #6 self tapping screws. Now the screw in hole 4 should be tightened.

7- The clamp assembly should be assembled as shown in Figure 2.

## SAFETY PRECAUTIONS

**WARNING:**

- This antenna is an electrical conductor contact with power lines can result in death, or serious injuries.
- Do not install this antenna where there is any possibility of contact with power cables or service drop to buildings.
- The antenna supporting mast and/or tower should not be close to any power lines during installation or removal in the event the system should accidentally fall.
- Follow the guidelines for antenna installation recommended by the U.S. consumer product safety commission.
- Keep this antenna out of reach of adults, children, and animals. Any contact with this antenna while transmitting will cause severe RF burns, and voltages that KILL. The ends of the elements can cause eye injuries, serious RF burns or both.
- Keep the antenna away from you to prevent exposure to high levels of electromagnetic field radiation. Especially if you are using more than 20 Watts of RF power.
- Never operate this antenna near RF sensitive medical devices such as pacemakers.
- Be careful while climbing and carrying the antenna. It is heavy enough to cause you to lose your balance if it is handled too casually.

## Installation Instructions

The MFJ-1750/1752 can be mounted on any 1" to 1-1/2" tubular mast. The mast may be a conductive (metal) or a non-conductive (pvc) material.

**WARNING: DO NOT MOUNT THIS ANTENNA NEAR POWER LINES!**

Death or serious injury can result.

For optimum performance the antenna should be mounted as high as possible. However, if the mast itself is located on a high elevation, such as a hill or mountain, the need for a tall mast will not be as critical.

To mount the antenna on the mast, insert the mast into the clamp as shown in figure 2. Make sure that the mast is mounted on the front of the chassis, as shown in figure 2.

The coax from your radio may now be connected to the antenna. the connector is an SO-239, so the connection should be fast and easy using a standard PL-259 connector on you coax.

## GROUNDING CONSIDERATIONS

Although this antenna is designed to operate efficiently without equiring an earth ground, SAFETY GROUNDING must still be provided to protect equipment, property, and people from the hazards of lighting strikes and other weather related electrical discharges. The coaxial cable feeding the antenna should have the shield grounded to eliminate the risk of any indoor equipment failure and not allow hazardous voltages to appear indoors and create a shock hazard.

Adequate protection can be accomplished by grounding the shield of the coax where it enters the building to a good earth ground or burying the cable in the earth for several feet before it enters the building. For maximum lightning protection, during threatening weather conditions, the coaxial cable should be totally disconnected from the station.

A less effective method of protecting station equipment is to install an in-line coaxial lightning arrestor with a heavy duty ground wire to a suitable earth ground, or a safety switching system as part of the basic ham station equipment.

## MAINTENANCE

Your antenna is constructed of heavy duty non-corrosive materials and should withstand normal climates for many years. The use of some type of coaxial connector moisture protection is recommended at the bottom coax connection and also around the center-feed connections, especially in coastal areas where salty mist is commonplace.

GE makes a pure silicone grease called "**SILICONE DIELECTRIC COMPOUND**" that can be applied SPARINGLY to the threaded area of the female connector. This compound, or even a clear silicone heat sink compound, will prevent moisture from entering the connector through the threads and protect the connectors from corrosion. THIS IS THE SAME TYPE OF SEALER THAT COMMERCIAL ANTENNA INSTALLERS AND CATV COMPANIES USE WITH GREAT SUCCESS.

A less desirable, but still adequate sealer is the automobile seam sealer commonly sold as "coax seal". This is a semi-pliable black sealing compound.

When installing any "coax seal", NEVER completely cover the barrel of the coax connector. The sealer should ONLY be placed near the junction of the threaded part of the chassis connector and the knurled area of the male connector. This will leave the bottom of the male outer sleeve open and permit the connector to "breathe" so it does NOT collect moisture!

## Tuning Instructions

The MFJ-1750 has been preset for low SWR through the 2 meter band, and the MFJ-1752 has been preset for low SWR through the 220 MHz band. However, SWR can change from place to place; so some adjustment might be necessary.

After installing the antenna, check the SWR. For the MFJ-1750, the SWR should be lowest at 146 MHz. For the MFJ-1752, the SWR should be lowest at 223.5 MHz.

If the antenna needs to be adjusted, first remove the cover of the antenna and loosen the radiator retaining nut (see Figure 2). If the SWR is lowest on a frequency above the desired operating frequency lengthen the radiator. If the SWR is lowest on a frequency below the desired operating frequency, shorten the radiator.

Be careful when tightening the retaining nut on the radiator. If the retaining nut is too tight, the ceramic insulator may be damaged.

## TECHNICAL ASSISTANCE

If you have any problem with this unit first check the appropriate section of this manual. If the manual does not reference your problem or your problem is not solved by following the manual you may call MFJ toll-free at 1-800-647-TECH (8324) or FAX to 601-323-6551, or Internet: 76206.1763@Compuserve.com. Outside of the continental U.S.A. 601-323-5869. You will be best served if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask.

You can also send questions to MFJ Enterprises, INC., P.O. Box 494, Mississippi State, MS 39762. Send a complete description of your problem, an explanation of exactly how you are using your unit and a complete description of your station

## 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 or machine reproduction of 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 no charge to the original owner, any defective product under warranty 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 charges free of charge for any MFJ product under warranty upon request. A dated proof of purchase and a **\$5.00** 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 unrepaid.
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 charges will be shipped COD to the owner.
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.