

## **INTRODUCTION**

The MFJ-1779A half-wavelength, single-band dipole is a center-fed antenna that can be tuned for resonance anywhere in the 160 meter amateur band (1.8-2.0 MHz). It will handle full legal limit power. The dipole is made using number 14 stranded copper wire, a durable center insulator with a SO-239 coax connector, and is terminated with ceramic insulators. The dipole should be shortened to the required length, and enough wire is provided for resonance at 1.8 MHz..

## **CHOOSING A LOCATION**

Choose a location as clear as possible from obstructions such as other antennas, buildings, and power lines. ***Never place any antenna near power lines.*** Try to keep the antenna away from metal structures, which will affect its performance.

The optimum height of any dipole is one-half wavelength of the operating frequency above ground or higher. This can be calculated in feet by dividing 468 by the frequency in MHz. Optimum antenna height always varies due to different ground conditions and nearby objects.

The antenna should be suspended using a weather resistant, non-metallic rope. Always leave a few extra inches in the support rope to allow for wind movement of the antenna, especially important when trees are used for supports. Dipoles can be installed in three different ways:

**Horizontal:** Requires two supports as far apart as the length of the antenna (about 270 feet for 160 Meters). Because of its length (and consequent weight) this antenna must also be supported in the middle.

**Inverted “V”:** A more likely installation for an antenna of this length. The center insulator should be the highest point of the antenna; tie off the ends to any convenient points and get the ends of the antenna as high as possible.

**Sloped:** One end of the antenna is supported as high as possible and the other end tied off to a support at ground level.

## **TOOLS AND ACCESSORIES FOR ASSEMBLY**

- SWR analyzer (an **MFJ-259**) or SWR meter and HF radio
- Weather resistant, strong non-metallic rope
- Wire cutters (large enough to cut #14 wire)
- Coax

***Always hang the antenna in the desired operating position for tuning. Check the resonant point of the antenna before removing any wire.***

1. Attach a suitable length of strong nylon rope to the center insulator. Remember to install enough rope to raise and lower the antenna for tuning.
2. Attach a suitable length of 50-ohm coax to the antenna.
3. Install the insulators on each end of the antenna temporarily by placing the wire through one end hole of the insulator and winding it back around the dipole wire.
4. Attach rope to the center and end insulators.
5. Raise the antenna into position.
6. Check the resonant frequency of the antenna using an SWR analyzer or a transmitter/SWR meter. The resonance point should be near or below the bottom of the 160 meter band (1.8 MHz).
7. To raise the resonance point, remove equal lengths of wire from each end of the antenna. Start by removing about two feet from each end and re-check the resonance point.
8. When the desired resonant frequency is reached wrap the wire ends securely to the end insulators

***WARNING: Never place any antenna where contact with power lines is possible. You can be electrocuted.***

## **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 reading the manual you may call *MFJ Technical Service* at **662-323-0549** or the *MFJ Factory* at **662-323-5869**. You will be best helped 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 by mail to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759; by Facsimile to 662-323-6551; or by email to [techinfo@mfjenterprises.com](mailto:techinfo@mfjenterprises.com). Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.