

## **INTRODUCTION**

The MFJ Ground-Coupled Portable Antenna Base gives you a stable way to mount your vertical antenna and provides an effective ground by just setting the base down and standing on it to push the legs firmly into the ground. It will support many multi-band verticals.

You can operate 160 Meters thru 2 Meters and above almost anywhere with an effective signal. It is perfect for traveling or for semi-permanent summer or winter homes. You can easily set up and take down your vertical antenna for stealth operation if you live in an antenna-restricted area.

The base can support a lightweight multi-band like the MFJ-1795, Hy-Gain 18AVS, or Hy-Gain 14 AVQ. A screwdriver antenna can also be used with the base. This will provide a semi-permanent installation. You can even hide the base by covering it with dirt.

The base is also equipped with a 3/8" stud for mounting the MFJ HF Mobile Ham-tenna™ whips. The whips can be mounted either on the antenna base or on the vertical bracket.

The MFJ-1910 Telescoping Fiberglass Mast is well supported by the Antenna Base. This provides a simple support for wire antennas.

A built-in antenna mount with two U-bolts lets you mount most standard and even many homemade vertical antennas. A SO-239 coax connector is attached to the mount for easy connection.

## **TOOLS AND SUPPLIES**

Construction area: This kit requires a large, clean, well-lighted area where you can easily organize and handle all the included hardware. Safety is always important! Use a suitable high temperature stand for your soldering iron, and keep the work area free of clutter.

The following common bench items are recommended for assembly of this kit:

- Soldering Iron (grounded-tip and temperature-controlled preferred)
- High-temperature Iron Holder with Cleaning Sponge
- Solder, 60/40 or 37/63 with rosin or "no-clean" flux
- 1 set Standard Size Wrenches or Crescent Wrench
- Flat-tip Screwdriver
- Phillips-tip Screwdriver
- Regular Pliers
- \_" Wrench

## **PARTS LIST**

Your kit should contain all of the parts listed below. Please identify and inventory each item on the checklist before you start building. If any parts are missing or damaged, refer to the manual's warranty section for replacement

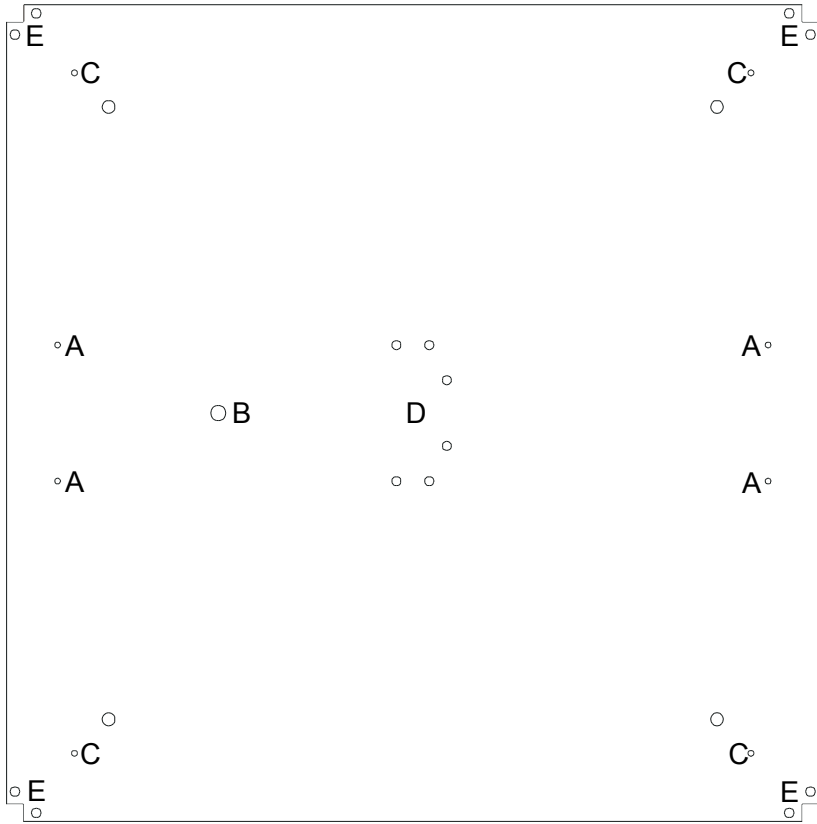
instructions. If you cannot positively identify an item, set it aside until all other items are checked off. You may then be able to identify it by process of elimination. Finally, your Portable Antenna Base will go together easier if parts are organized by type. Use this inventory as an opportunity to sort and arrange parts so you can identify and find them quickly.

<input checked="" type="checkbox"/>	Qty	Part Description
	8	Bolt – 1/4-20 x 3/8"
	4	Bolt – 10-24 x 5/8"
	4	Screw – 8/32" x 1/2"
	4	Screw – 8/32" x 3/8"
	6	Bolt – 1/4-20 x "
	4	Wing Nut – 10-24"
	4	Nut – 10-24"
	14	Nut – 1/4-20"
	4	Nut – 6/32"
	14	Lock Washer – 1/4"
	8	Lock Washer – 3/16 "
	2	Coax Connector – SO-239
	1	3/8"-24 bolt
	1	Shoulder Washer
	1	Flat Fiberglass Washer
	1	Antenna Coupling Nut 3/8"-24"
	1	Solder Lug
	1	Ground Plate – 2' x 2'
	1	Tower
	4	Foot
	2	Bushing
	2	U-Bolt Assembly
	2	Handle
	1	Wire

### **GROUND PLATE DIAGRAM**

The following diagram shows the hole locations on the ground plate.

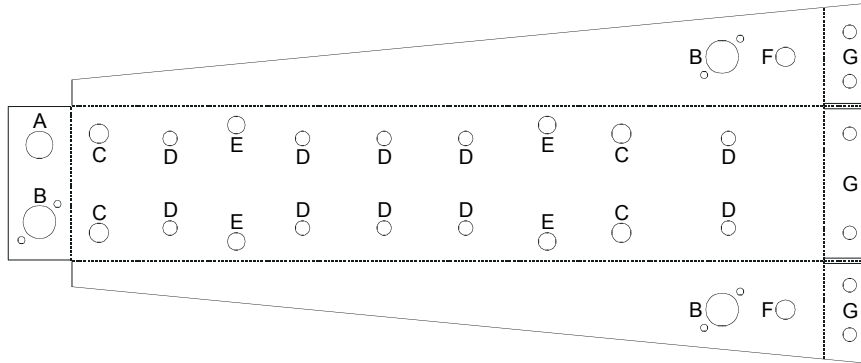
*Note: This is a flat drawing of the ground plate before bending.*



### **TOWER DIAGRAM**

The following diagram shows the hole locations on the ground plate.

*Note: This is a flat drawing of the ground plate before bending.*



## **STEP-BY-STEP ASSEMBLY INSTRUCTIONS**

***WARNING: SHARP EDGES!*** Be careful not to get cut. The metal contains sharp edges that may cut you if you are not careful.

Before attaching any hardware to the ground plate, tower, or feet, be sure to remove the protective plastic film that is attached to the surface of these items. It is recommended to use a clean cloth and degreaser to wipe all surfaces clean of dirt and grime prior to assembly.

*Note: The lip on the ground plate should be oriented upward during assembly.*

### **1. Prepare tower for installation.**

Locate the tower, and the parts bag containing two small black bushings, two SO-239 coax connectors, and four 4-40" x 3/8 " screws with kep-nuts and fiberglass washer.

Press the bushings into the small holes on either side of the tower near the base. The holes are labeled F on the Tower Plate diagram page 4.

Locate four 4-40 x 3/8" screws and four 4-40 hex nuts. Insert the SO-239 connectors in holes B on the Tower Plate diagram (page 4). Secure the connectors in place with the screws and nuts.

*Note: The feed-point can be positioned on top of the tower if needed using hole B shown on the tower diagram (page 4).*

### **2. Attach handles.**

Locate two handles, four 8/32 x 1-2" screws, and 2 3/16 lock washers.

Place a lock washer on each screw.

Insert the 8/32 x 3/8" screws from the bottom of the base plate through the holes marked A on page 3. Place the handles over the screws on top of the base plate and secure them using a flat head screwdriver.

### 3. Attach mobile antenna mount.

*Note: A mobile whip may be attached to the base plate or the top of the tower.*

Decide if the mount will be placed on the base plate (hole B page 3). or the tower (hole A page 4) Follow the appropriate instructions below.

- **Attaching a mobile whip to the base plate**

Locate the 3/8"-24 x 16mm" bolt, lock washer, shoulder washer, coupling nut, fiberglass flat washer, and solder lug.

Place the lock washer, and shoulder washer onto the bolt

Insert the bolt from the bottom of the base plate through hole **B** (page 3)

Place the fiberglass flat washer, solder lug, 3/8" int. lock washer onto the bolt and secure the assembly in place with the 3/8- 24" coupling nut. Tighten the coupling nut to secure the assembly in place.

- **Attaching a mobile whip to the tower**

Locate the 3/8"-24 x 16mm" bolt, coupling nut, fiberglass flat washer, shoulder washer, lock washer, and solder lug.

Place the lock washer, solder lug, and shoulder washer onto the bolt

Slide the bolt through the bottom hole **A** (page 4)

Place the fiberglass flat washer, 3/8 int. lock washer onto the bolt and secure the assembly in place with the 3/8- 24" coupling nut. Tighten the coupling nut to secure the assembly in place.

*Note: It is imperative that the shoulder washer be seated inside the hole to insure that the bolt is insulated from the base.*

### 4. Attach radial wire mounts.

Locate four 10-24 x 5/8" bolts, nuts, lock washers, and wing nuts.

Place the bolts through the bottom of the holes labeled **C** (page 3) near the four corners of the ground plate.

Place a lock washer over each of the bolts and secure them in place with a 10-24" nut.

Place a wing nut onto each of the bolts and hand-tighten.

### 5. Attach tower.

Locate prepared tower

Locate six 1/4-20 x 1/2" bolts, nuts, and lock washers.

Align tower with holes labeled **D** (page 3) in center of ground plate.

*Note: Tower may need to be adjusted by hand for holes to align. This can be done by putting the six bolts in before tightening.*

Place bolts through the top holes labeled **D** (page 3), place lock washers on, and tighten with nuts.

## 6. Attach Feet.

Locate four feet, eight 1/4-20 x 3/8 " bolts, nuts, and lock washers.

Align holes in feet with holes labeled **E** (page 3) at the corners of the lip on the ground plate.

*Note: Feet may need to be adjusted for holes to align. This can be done by putting the two bolts in before securing the feet in place.*

Place a 1/4-20 x 3/8 bolt through each of the holes attaching the feet to the base plate. Place a \_" lock washer and a \_" nut on each of the bolts and tighten them securely.

## 7. Attach wire.

Locate wires.

Solder one end of the wire to the solder lug, and the other end to the center pin of one of the SO-239 connectors.

*Note: If adding a vertical tower, the pole can be attached to the back of the tower with the U-Bolts, and a wire can be attached to the free SO-239 connector.*

## 8. Antenna Installation.

Locate all of the hardware needed to mount the antenna to the tower such as u-bolts.

Using the diagram on page 4 identify the proper holes to be used.

The following is a list of the holes and their intended use. Refer to the tower diagram on page 4 of this manual.

- A. 3/8" Mobile Whip Mount
- B. SO-239 Coax Connector
- C. Hy-Gain 14AVQ and 18AVS
- D. MFJ 1795
- E. MFJ 1910 Telescoping Fiberglass Mast
- F. Plastic Bushing
- G. Ground Plate Attachment Points

*Note: The holes marked C on the diagram (page 4) are fitted to enclose the plastic bushing supplied in the parts. This may be needed on some antenna installations.*

## **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.