

# **MFJ**

## ***Big Stick***

### **Portable HF Vertical Antenna**

**Model MFJ-2286**



#### **INSTRUCTION MANUAL**

**CAUTION: Read All Instructions Before Operating Equipment**

## **MFJ ENTERPRISES, INC.**

300 Industrial Park Road  
Starkville, MS 39759 USA  
Tel: 662-323-5869 Fax: 662-323-6551

## MFJ-2286 *Big Stick*<sup>TM</sup> Portable HF Antenna

**Introduction:** Congratulations on the purchase of your MFJ-2286 portable HF antenna. MFJ's "Big Stick" is a 1/4-wave monopole design featuring an exceptionally rugged 17-foot stainless-steel collapsible whip plus a slide-tuned high-Q loading coil that extends coverage to 7 MHz and below.

### Specifications:

Frequency Coverage	7 MHz to 55 MHz, extendable to 5.35 MHz (60-M) with a counterpoise
Element Length	Up to 18 feet, vertically polarized
Mast Diameter	Up to 1" OD, vertical or horizontal mounting,
Transport Length	27-3/4"
Weight	2.0 Pounds

**Assembly:** The MFJ-2286 assembles with four major components:

- Base Block Assembly
- Loading Coil Assembly
- Stainless Steel Collapsible Whips (17')
- Counterpoise Wire



- Install coil assembly with tap-wire end toward the Base Block.
- Install the whip on top of the coil assembly.
- Connect your 50-Ohm coax feed to the SO-239 connector.
- Mount the Base Block on any suitable support pole up to 1" OD.
- For low-frequency bands, install four 12'-foot counterpoise wires (see text).

Tighten the coil assembly and Whip by hand to avoid applying excessive torque. Before installing on a mount, check the area to confirm the whip is well clear of wires and metallic structures.

***Warning: Never assemble or install your antenna in close proximity to power lines or entrance cables. Accidental contact with utility lines can result in serious injury or death.***

**Tuning Procedure:** The MFJ-2286 is a ground-mounted monopole, so tuning settings and SWR are highly dependent on the characteristics of the counterpoise connected to the base block. For 60 through 17 Meters, we suggest laying out four 12-foot insulated wire radials around the base. A 50-foot roll of insulated wire is included with your antenna for making these four radials. Tuning data is shown on the chart below:

Frequency	E1	L1	Measured SWR
7.15	Full Length	3-3/8"	1.3:1 (radials)
10.11	Full Length	1-7/8"	1.3:1 (radials)
14.15	Full Length	5/8"	1:1 (radials)
18.11	13'	Shorted	1.4:1 (radials)
21.20	~11'	Shorted	-----
24.93	~ 9'	Shorted	-----
28.50	~ 8'	Shorted	-----
50.10	~4' 6"	Shorted	-----

All lengths for E1 include the whip plus coil assembly. "Shorted" means position the coil clip at the top end of the coil so all turns are shorted out. For bands below 17-M, minor adjustments to coil L1 may be required to achieve minimum SWR. For 15 through 6 Meters, the 12-foot radial kit may not be optimal and the antenna mount alone may provide a sufficient counterpoise. To set up for 21 MHz and higher, simply set the element length shown on the chart, then increase or decrease it until resonance falls in-band. Length may vary significantly, depending on the counterpoise. Note that all tuning data was gathered with an in-line balun installed at the antenna to prevent the coax shield from becoming part of the radial system and conducting RF back to the operating position.

**In Case of Trouble:** If you are unable to obtain low SWR, if settings deviate widely from the chart, or if SWR jumps intermittently, check the following:

- Are the coil assembly and the whip seated firmly in the mount?
- Is there damage to the coil or attachment wire?
- Is the coax feed shorted, open, or intermittent?
- (Above 20-M) Are all of L1's turns bypassed by the slider?
- Is your feedline impacting tuning? If so, ferrite beads or an inline balun will help.

## 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 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 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 parts 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 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.