

MFJ

PowerLite OCFD Wire Antenna

40/20/10/6 meters

Model MFJ-2012

INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment

MFJ ENTERPRISES, INC.

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Starkville, MS 39759 USA
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DISCLAIMER

Information in this manual is designed for **user purposes only** and is *not* intended to supersede information contained in customer regulations, technical manuals/documents, positional handbooks, or other official publications. The copy of this manual provided to the customer will *not* be updated to reflect current data.

Customers using this manual should report errors or omissions, recommendations for improvements, or other comments to MFJ Enterprises, 300 Industrial Park Road, Starkville, MS 39759. Phone: (662) 323-5869; FAX: (662) 323-6551. Business hours: M-F 8-4:30 CST.

MFJ-2012 PowerLite Off-Center Fed Dipole for 40/20/10/6 meters

Introduction

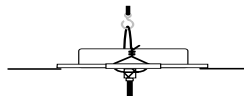
Thank you for purchasing the MFJ-2012 OCFD. The MFJ-2012 is a "no-compromise" OCFD design for 40, 20, 10, and 6 Meters that delivers legal-limit power handling, low SWR, high efficiency, wide bandwidth, and instantaneous frequency agility.

Installing Feedline

Use any 50-Ohm coax cable that is consistent with your station's output power. RG-58 or RG-8X (Mini-8) cable is good for low power operation (up to 100-Watts), but RG-8 or a low-loss equivalent such as Belden 9914 strongly recommended when running a legal-limit amplifier. The antenna's feed block accepts a standard PL-259 connector.

General Installation

The MFJ-2012 is 67 feet long, which is the same length as a 40-meter dipole. Recommended mounting height is between 30 and 70 feet above ground. When possible, choose a location that is in the clear and free from large conductive surfaces, dense vegetation, or parallel wires that could interfere with normal operation. If a high support is available near the feed point, attach a halyard to the feed block and raise the antenna up to eliminate sag.

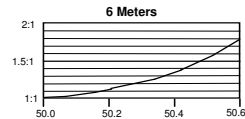
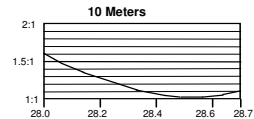
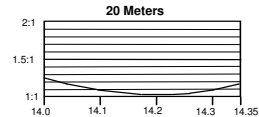
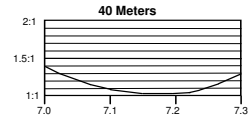


Power Rating

The MFJ-2012 is rated at 1500 Watts PEP on SSB and CW and has been tested extensively at that power level. However, for operating modes with higher power density such as RTTY, SSTV, and AM, we recommend reducing the 1500-Watt rating by 50% or more. This reduction is necessary because, even though the matching network is over 98% efficient, it is housed in a confined enclosure where heat buildup may occur during long transmissions ($1500\text{-W} \times .02 = 30\text{-W}$ of heating).

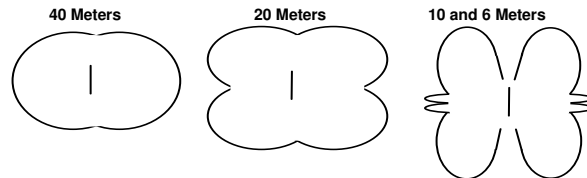
SWR

The sample SWR plots shown below were taken through 60 feet of low-loss (RG-8X) cable with the antenna mounted 45 feet above ground in a typical back-yard residential installation.



Patterns and Gain

When mounted at 45 feet above average ground, on 40 Meters, expect the MJ-2012 to deliver a dipole pattern with 6-dBi gain. On 20 Meters, the pattern changes to a full-wave clover-leaf with peaks up to 9-dBi. On 10 and 6 Meters, pattern lobes become more "end-fire" with up to 11-dBi peaks. When orienting, note that for best DX, a "broadside" orientation may not be optimal.



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. Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.

LIMITED 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 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, cashier's check, or money order for **\$10.00** covering postage and handling.

3. This warranty is **NOT** void for owners who attempt to repair defective units. Technical consultation is available by calling the Service Department at 662-323-0549 or the MFJ Factory at 662-323-5869.

4. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.

5. 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.

6. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.

7. **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.

8. This warranty is given in lieu of any other warranty expressed or implied.

9. 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.

10. 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.

11. This warranty gives you specific rights, and you may also have other rights which vary from state to state.



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