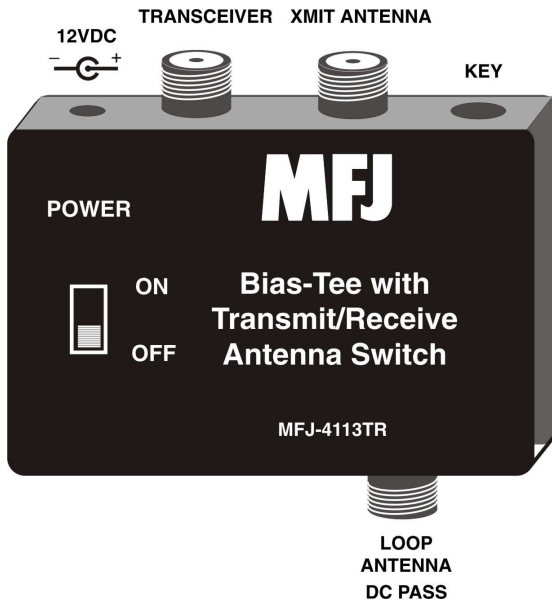


## MFJ-4113TR BIAS-TEE WITH TX/RX SWITCH

### Introduction

The MFJ-4113TR is designed to allow connection of a receive only antenna to your antenna system in addition to the transmit antenna. It is also used for MFJ-1886TR receive loop antenna and similar antennas. A key line connection to the transiever switches the receive antenna out of the circuit when the radio goes into transmit mode. DC bias current is also applied to the coax connection for the loop antenna when in receive mode. During transmit, the bias current is removed from the receive antenna.

### CONNECTIONS



#### 12VDC

Connect your power supply for the MFJ-4113TR to this jack. The power requirements for this unit are 12 volts DC at 500ma. If your using this unit with the MFJ-1886 LOOP, use the power supply that came with the loop. The loop power supply is non-switching and produces less noise.

#### TRANSCEIVER

Use a coax jumper (not supplied) to connect this to your transiever.

**XMIT ANTENNA**

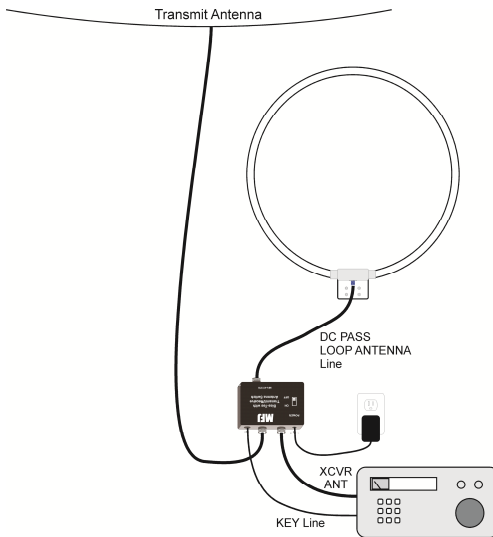
Connect your antenna that you want to use for transmit to this connector.

**KEY**

This jack should be connected to your transceivers key line. On some ICOM radios this may be labeled as SEND. On other radios, this connection may be incorporated into the REMOTE or ACCESSORY jack. This is normally the line that is used to key a linear amplifier. This line must be connected for proper operation of the switch. Failure to do so will cause RF energy to be sent to the Receive only antenna and WILL cause damage to it. The MFJ-4113TR should click when the key line is shorted to ground by the radio. Verify its proper operation before attempting to use the switch with your antennas.

**LOOP ANTENNA (DC Pass)**

This is where the receive only antenna such as the MFJ-1886 should be connected. DC bias voltage from this connector will power the MFJ-1886 in receive mode and will remove power when the switch is in transmit mode.

**Wiring To A Receive Antenna**

1. Connect the Antenna jack on the transceiver to the TRANSCEIVER jack on the MFJ-4113TR.
2. Connect the Transmit Antenna to the XMIT ANTENNA jack.
3. Connect the MFJ-1886 line or other receive antennas to the DC PASS LOOP ANTENNA jack.
4. Connect the KEY jack to the transceiver KEY line.
5. Connect 12 DC volt power source to the +12V jack. Center pin is positive.

**WARNING!!!!!!** 12VOLTS DC is present on this connector when the unit is switched on. Do not short the center pin of the connector to ground. Do not insert a Balun or other device between this connector and the antenna that has a DC ground connection or will prevent the DC from passing through it.

### **Operation:**

When properly connected to the transiever, the MFJ-4113TR will operate in conjunction with the radio switching the antennas automatically from tx to rx without input from the operator.

- When the unit is off, the transmit antenna is selected by default.
- When the unit is on, the Loop antenna is connected to the transceiver.
- When the unit is on and the key line voltage is shorted to ground, the Xmit antenna is selected.

### **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.

## 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 MFJ's option without charge to the original owner any defective product provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order for **\$10.00** 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 **\$8.00** 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 (662) 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 Rd, 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 and a telephone number.
12. This warranty gives you specific rights, and you may also have other rights, which vary from state to state.