

## MFJ-58B PVC Cross Loop Antenna Kit

### Introduction:

The *MFJ – 58B PVC Cross Loop Antenna Kit* was designed to be used with the *MFJ-933, MFJ-935B and MFJ-936B series of Small High Efficiency Loop Tuners* to provide coverage from 5.330 to 29.700 MHz (60-10 meters) by using only four loop lengths. The lengths provided in this kit are designed to be most efficient at the highest frequency of the band covered by each loop length (see **Table 1**); however, each loop length can be tuned lower in frequency with some efficiency loss. Exact frequency coverage and efficiency depends on each individual installation involving choice of wire length, shape of loop, height above ground level, and operating environment.

<u>Loop Length</u>	<u>Band Coverage</u>
28 feet -----	60 – 40 Meters (5.330 – 7.300 MHz)
13 feet -----	30 – 20 Meters (10.100 – 14.350 MHz)
7 feet -----	20 – 15 Meters (14.000 – 21.450 MHz)
4 feet -----	17 – 10 Meters (18.068 – 29.700 MHz)

**Table 1: Band Coverage for each Loop Length**

### Parts included in this kit:

- 3 – Long PVC cross arms, each with a notch and attached clips for loop wire attachment
- 1 – Long PVC cross base, un-notched for use with the 13 ft long loop
- 1 – Short PVC cross base, un-notched for use with the 7 and 4 ft long loop
- 1 – PVC cross connector
- 1 – Insulated 10 gauge flexible loop wire for 60-40m, 28 ft long
- 1 – Insulated 10 gauge flexible loop wire for 30-20m, 13 ft long
- 1 – Insulated 10 gauge flexible loop wire for 20-15m, 7 ft long
- 1 – Insulated 10 gauge flexible loop wire for 17-10m, 4 ft long
- 6 – Loop wire clips for use with the 60/40m loop

## Installation Instructions:

### I. 28 ft Loop (60 - 40 Meters)

1. Place the *Loop Tuner* at the chosen place of operation next to a bookshelf, curtain or other suitable support so the loop can be attached using the wire clips provided.
  - a. Spread out the wire clips so there is equal distance between them.
  - b. Using the clips, suspend the 28-foot flexible loop wire from the support such that the loop is in the shape of a circle. Other shapes such as a square or diamond will also work, but the efficiency of the loop will drop as the shape of the loop collapses.
  - c. Attach the lugs to the antenna terminals on the rear panel of the *Loop Tuner* using the wing nuts on the terminals.
2. Read and follow the *Loop Tuner* instruction manual for system operation.

### II. 13 ft Loop (30 – 20 Meters)

1. Assemble the PVC Cross Mount as shown in Figure 1.
  - a. Place the *Notched PVC Cross Arms* on each side and top of the *PVC Cross Connector*.
  - b. Place the *Un-notched PVC Long Cross Base* on the bottom of the *PVC Cross Connector* and fit it into the *Cap* on the top of the *Loop Tuner* as shown in Figure 1.
2. Place the *Loop Tuner* at the chosen place of operation and attach the *13-foot Flexible Loop* as shown in Figure 1.
  - a. Place the *13-foot Flexible Loop* wire around the PVC cross mount fitting the wire into the notches on the *Notched PVC Cross Arms* forming a loop.
  - b. Attach the lugs to the antenna terminals on the rear panel of the *Loop Tuner* using the wing nuts on the terminals.
3. Read and follow the *Loop Tuner* instruction manual for system operation.

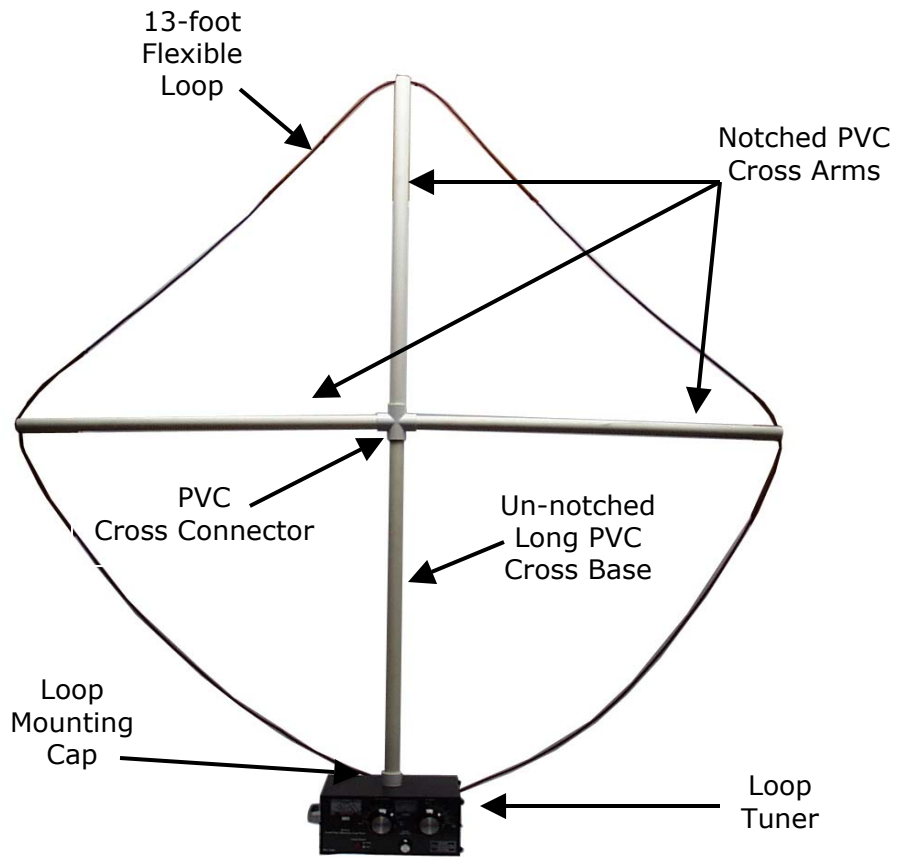
### III. 7 ft Loop (20 – 15 Meters)

1. Assemble the PVC Cross Mount as shown in Figure 2.
  - a. Place the *Notched PVC Cross Arms* on each side and top of the *PVC Cross Connector* . .

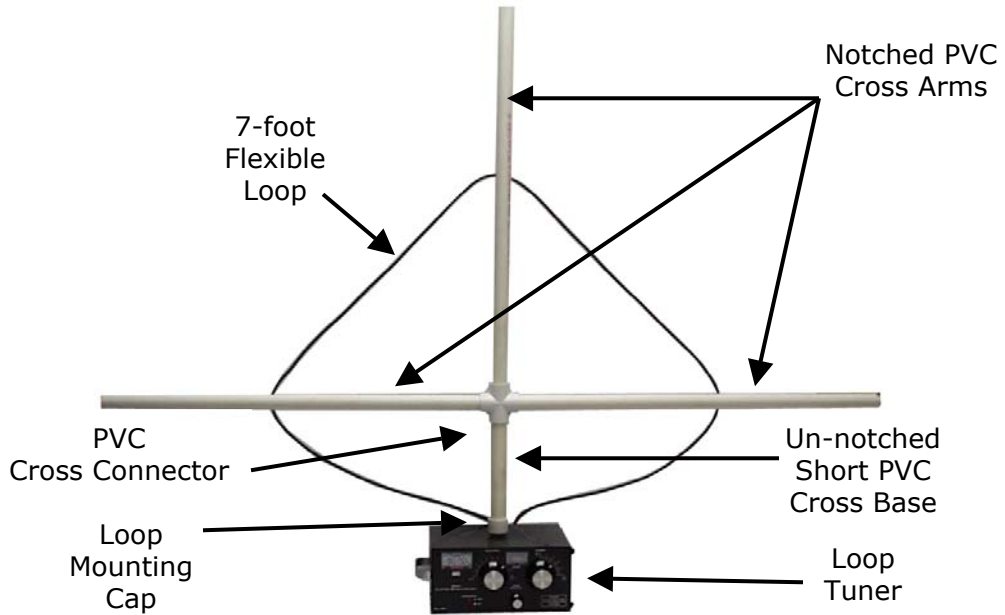
- b. Place the *Un-notched short PVC Cross Base (not shown)* on the bottom of the *PVC cross Connector* and fit it into the *Cap* on the top of the *Loop Tuner*.
  2. Place the *Loop Tuner* at the chosen place of operation and attach the *7-foot Flexible Loop*.
    - a. Place the *7-foot Flexible Loop* wire around the PVC cross mount fitting the wire into the ***outer*** clips on the *Notched PVC Cross Arms* forming a loop.
    - b. Attach the lugs to the antenna terminals on the rear panel of the *Loop Tuner* using the wing nuts on the terminals.
  3. Read and follow the *Loop Tuner* instruction manual for system operation.

#### IV. 4 ft Loop (15-10 Meters)

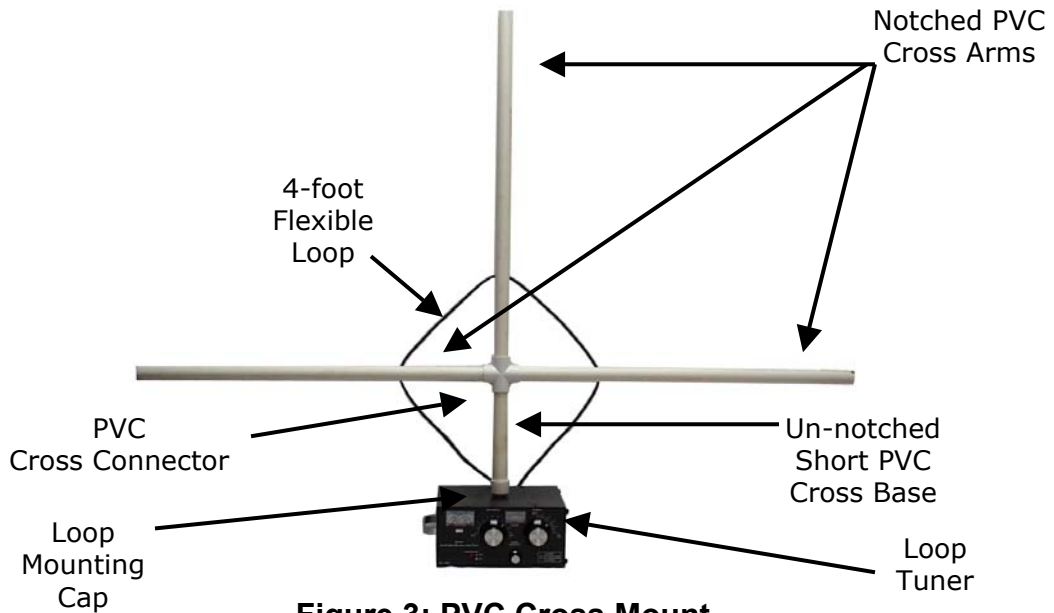
1. Assemble the PVC cross mount As shown in Figure 3.
  - a. Place the *Notched PVC Cross Arms* on each side and top of the *PVC Cross Connector*. Note that the arms are labeled “Left”, “Right” and “Top”.
  - b. Place *Un-notched short PVC Cross Base (not shown)* on the bottom of the *PVC cross Connector* and fit into the *Cap* on the top of the *Loop Tuner* .
2. Place the *Loop Tuner* at the chosen place of operation and attach the *4-foot Flexible Loop*.
  - a. Place the *4-foot Flexible Loop* wire around the PVC cross mount fitting the wire into the ***inner*** clips on the *Notched PVC Cross Arms* forming a loop.
  - b. Attach the lugs to the antenna terminals on the rear panel of the *Loop Tuner* using the wing nuts on the terminals.
3. Read and follow the *Loop Tuner* instruction manual for system operation.



**Figure 1: PVC Cross Mount  
13-Foot Loop Assembly**



**Figure 2: PVC Cross Mount  
7-Foot Loop Assembly**



**Figure 3: PVC Cross Mount  
4-Foot Loop Assembly**