

MFJ-58B PVC Cross Loop Antenna Kit

Introduction:

The MFJ – 58B PVC Cross Loop Antenna Kit was designed to be used along with the MFJ-933, MFJ-935B and MFJ-936B Small High Efficiency Loop Tuners to provide coverage on 7.000 – 29.700 MHz by using only four loop lengths. The lengths provided in this kit are designed to be most efficient on the highest frequency of the band coverage for each particular loop length (see **Table 1**), and 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 -----	40 Meters (7.000 – 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, notched for loop wire
- 1 – Long PVC cross base, un-notched for use with 13 and 7 ft long loop
- 1 – Short PVC cross base, un-notched for use with 4 ft long loop
- 1 – PVC cross connector
- 1 – Insulated, 10 gauge flexible loop wire for 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 40m loop
- 3 – Loop support bands, for use with the 4 ft long loop

Installation Instructions:

I. 28 ft Loop (40 M)

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 wire clips out so that there is equal distance between them.
 - b. Using the clips, suspend the 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 rear panel of the tuner using the wing nut terminals provided on the back of the Loop Tuner.
2. Read and follow *Loop Tuner* instruction manual for system operation.

II. 13 ft Loop (30 – 20 M)

1. Assemble the PVC Cross Mount as shown in Figure 1.
 - a. Place *Notched PVC Cross Arms (2)* on each side and top of the *PVC Cross Connector (3)*.
 - b. Place *Un-notched PVC Cross Base (4)* on the bottom of the *PVC cross Connector (3)* and fit into the *Cap (5)* on the top of the *Loop Tuner (6)* as shown in Figure 1.
2. Place the *Loop Tuner (6)* at the chosen place of operation and attach the *Flexible Loop (1)* as shown in Figure 1.
 - a. Place the *Flexible Loop (1)* wire around the PVC cross mount and fit into the notches on the *Notched PVC Cross Arms (2)* forming a loop.
 - b. Attach the lugs to the rear panel of the tuner using the wing nut terminals provided on the back of the Loop Tuner.
3. Read and follow Loop Tuner instruction manual for system operation.

III. 7 ft Loop (20 - 15M)

1. Assemble the PVC Cross Mount.
 - a. Place *Notched PVC Cross Arms (2)* on each side and top of the *PVC Cross Connector (3)*. Make sure the Loop support bands are on the cross arms. Position them in the center of the cross arms as shown in figure 1.

- b. Place *Un-notched short PVC Cross Base (not shown)* on the bottom of the *PVC cross Connector (3)* and fit into the *Cap (5)* on the top of the *Loop Tuner (6)*.
 2. Place the *Loop Tuner (6)* at the chosen place of operation and attach the *Flexible Loop (1)*.
 - a. Place *Notched PVC Cross Arms (2)* on each side and top of the *PVC Cross Connector (3)*. Make sure the Loop support bands are on the cross arms. Position them in the center of the cross arms as shown in Figure 1.
 - b. Place *Un-notched short PVC Cross Base (not shown)* on the bottom of the *PVC cross Connector (3)* and fit into the *Cap (5)* on the top of the *Loop Tuner (6)*.
 3. Read and follow Loop Tuner instruction manual for system operation.

IV. 4 ft Loop (M)

1. Assemble the PVC cross mount.
 - a. Place *Notched PVC Cross Arms (2)* on each side and top of the *PVC Cross Connector (3)*. Make sure the Loop support bands are on the cross arms. Position them in the center of the cross arms as shown in figure 1.
 - b. Place *Un-notched short PVC Cross Base (not shown)* on the bottom of the *PVC cross Connector (3)* and fit into the *Cap (5)* on the top of the *Loop Tuner (6)*.
2. Place the *Loop Tuner (6)* at the chosen place of operation and attach the *Flexible Loop (1)*.
 - a. Place *Notched PVC Cross Arms (2)* on each side and top of the *PVC Cross Connector (3)*. Make sure the Loop support bands are on the cross arms. Position them in the center of the cross arms as shown in Figure 1.
 - b. Place *Un-notched short PVC Cross Base (not shown)* on the bottom of the *PVC cross Connector (3)* and fit into the *Cap (5)* on the top of the *Loop Tuner (6)*.
3. Read and follow Loop Tuner instruction manual for system operation.

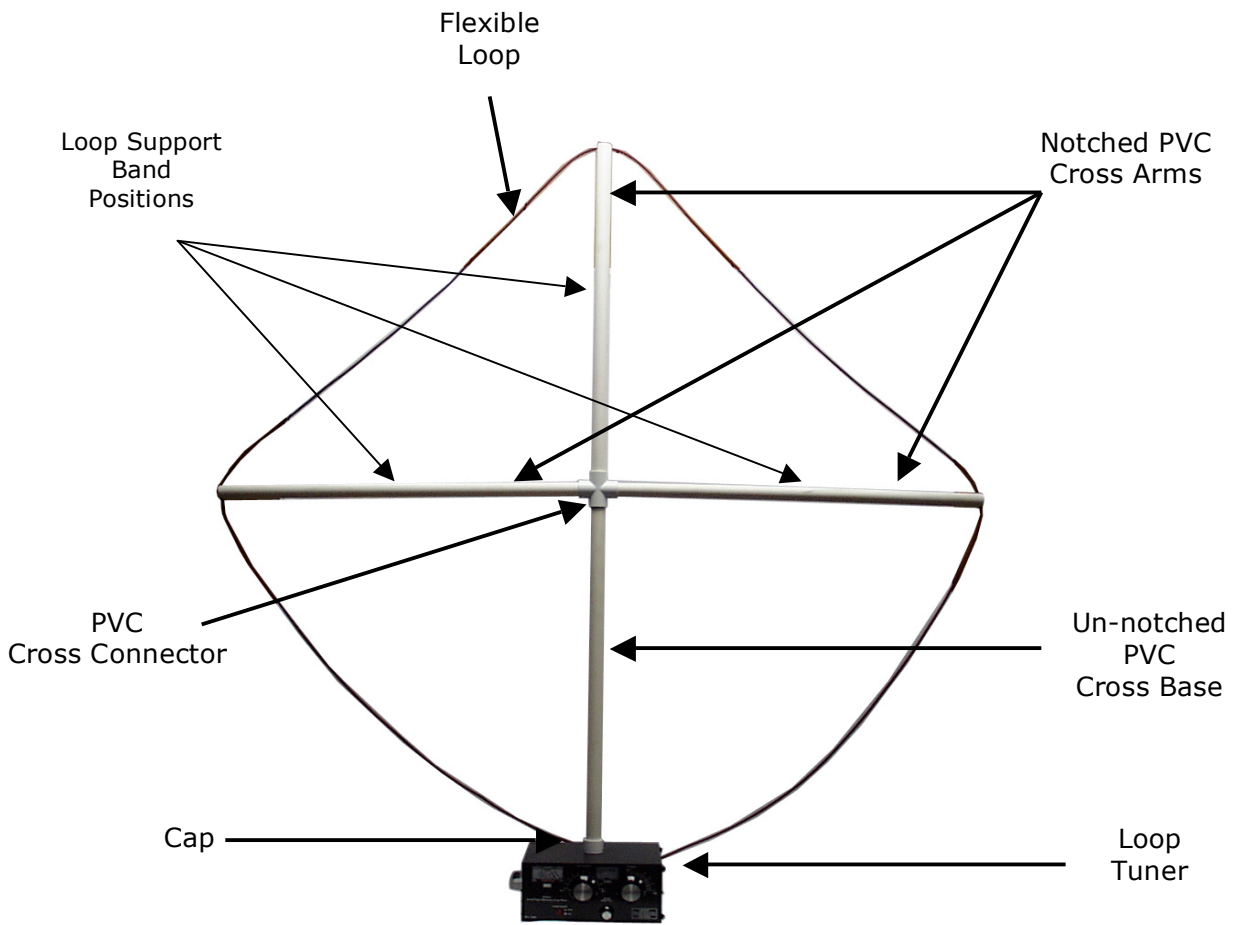


Figure 1: PVC Cross Mount Loop Assembly