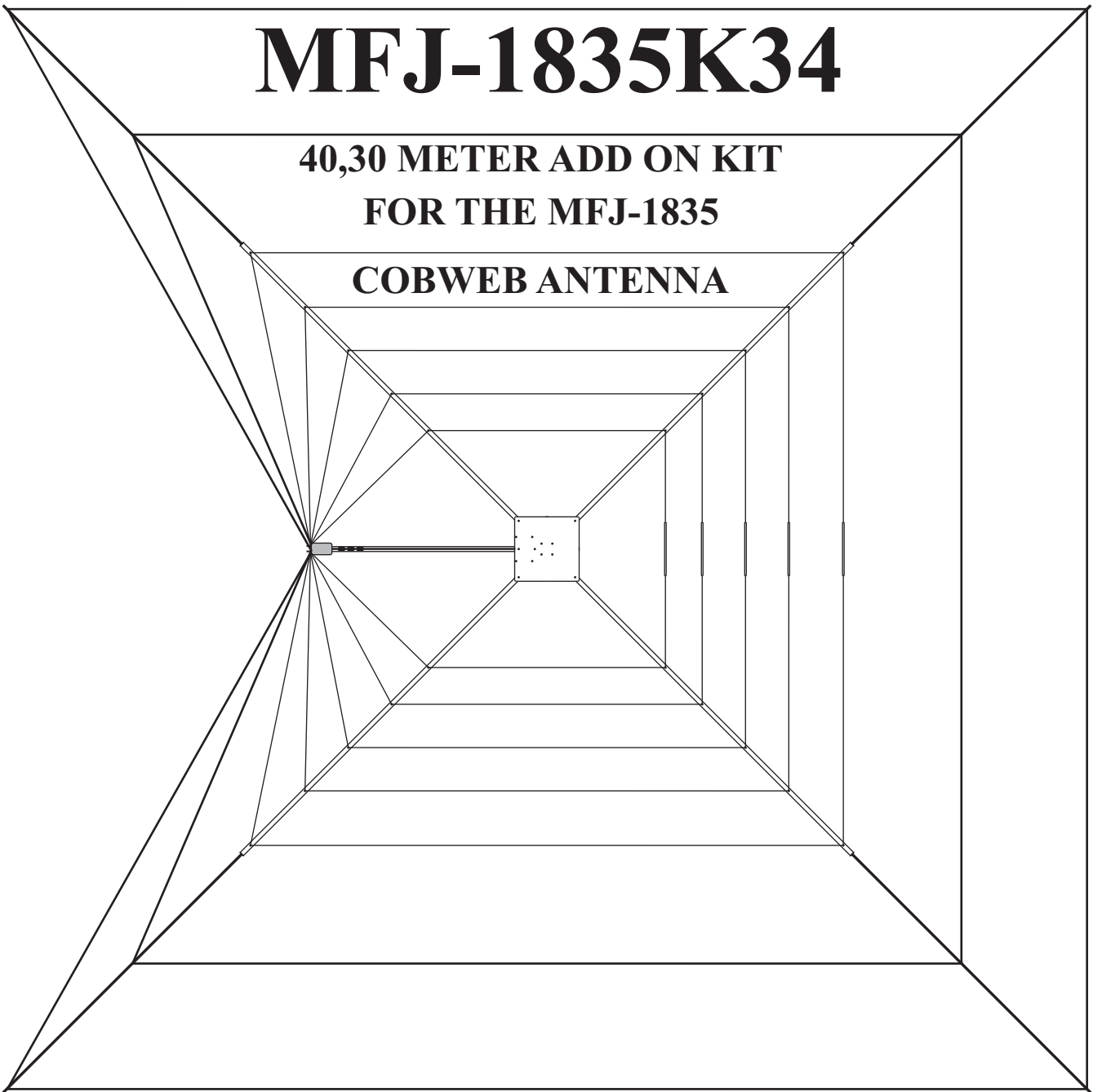


# MFJ-1835K34

**40,30 METER ADD ON KIT  
FOR THE MFJ-1835  
COBWEB ANTENNA**



## INSTRUCTION MANUAL

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

# MFJ

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## Introduction

Thank you for purchasing the MFJ-1835K34 add on kit. This kit will add 30 and 40 meters to any MFJ-1835 Cobweb antenna. The kit consist of extension arms and a support system that allow the addition of 2 sets of wires needed to tune the antenna to the 30 and 40 meter bands. It uses all the original components of the antenna including the match box and antenna structure. This kit has been designed so that little modification of the original antenna is needed.

## Preparation

The MFJ-1835 is a fairly lightweight and small antenna. This kit will not affect the weight of the antenna very much but it will effectively double the size of the antenna. Six feet of additional tube will be added to the end of each of the support arms. Make sure you have enough room for the modification of the antenna and placement when it is finished. The assembly of the add on kit is mostly the same as the original assembly except for the support ropes. If your MFJ-1835 is already installed in an operating location, it must be removed before the kit can be added. It is a good idea to have a temporary mast about 5 feet off the ground to hold the antenna while you are working on it. You will need to be able to reach the support arms to route the element wires and attach the support rope. If you don't have a mast available, the antenna will sit on the ground without problems. The antenna support arms can be installed on a flat surface like a garage floor if needed. The antenna assembly will go quickly and is fairly easy but take your time anyway. As with all antennas, safety glasses are recommended during the assembly and tuning. We don't want you to "Poke your eye out". Pick a clear open spot and assemble the antenna away from other people. Do not allow children in the assembly area. Only the people involved in the construction should be near. If you plan to assemble the antenna over grass, be prepared to go on a lawn safari to find the hardware that you drop. It's not a question of if, but when you drop something. A few extra parts have been included in the parts pack for just such a adventure. Assembly can be done by one person but when the antenna is to be mounted or moved, plan to have a friend help. It is not wise to attempt to install any antenna without help. Don't rush. The more time you put into the antenna, the happier you will be with the results.

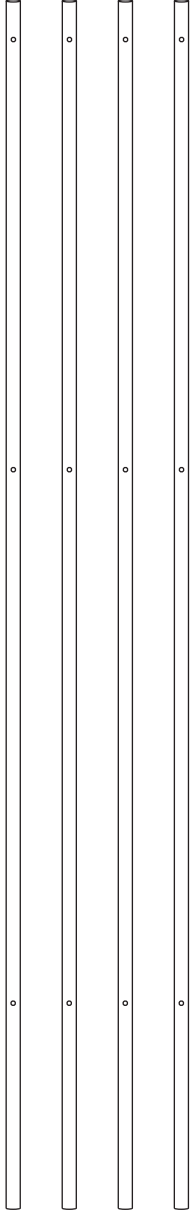
# WARNING

KEEP THIS ANTENNA  
AWAY FROM POWER LINES

Never mount or move any antenna where it can come into contact with power lines. If this antenna comes into contact with power lines, it can KILL you. Never mount any antenna where if it fell it could come into contact with power lines.

# In the box

4 element arms



2 insulators



30 and 40 meter element wire



Parts pack



support mast



support ring



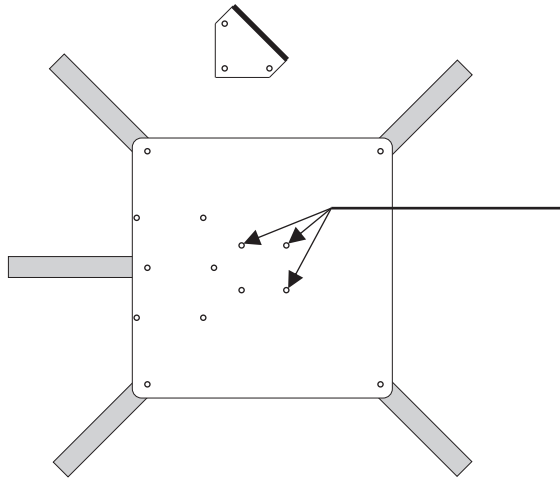
support rope



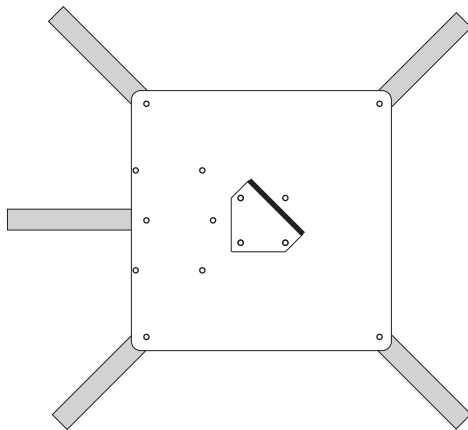
support bracket



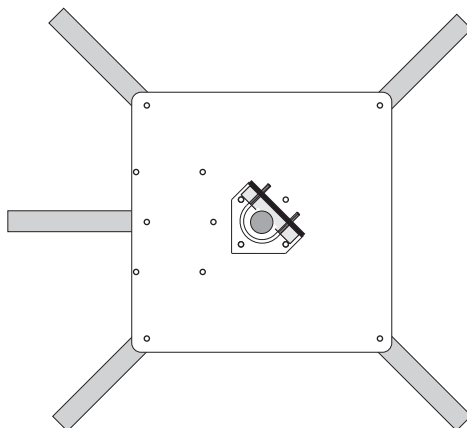
## Support Mast Assembly



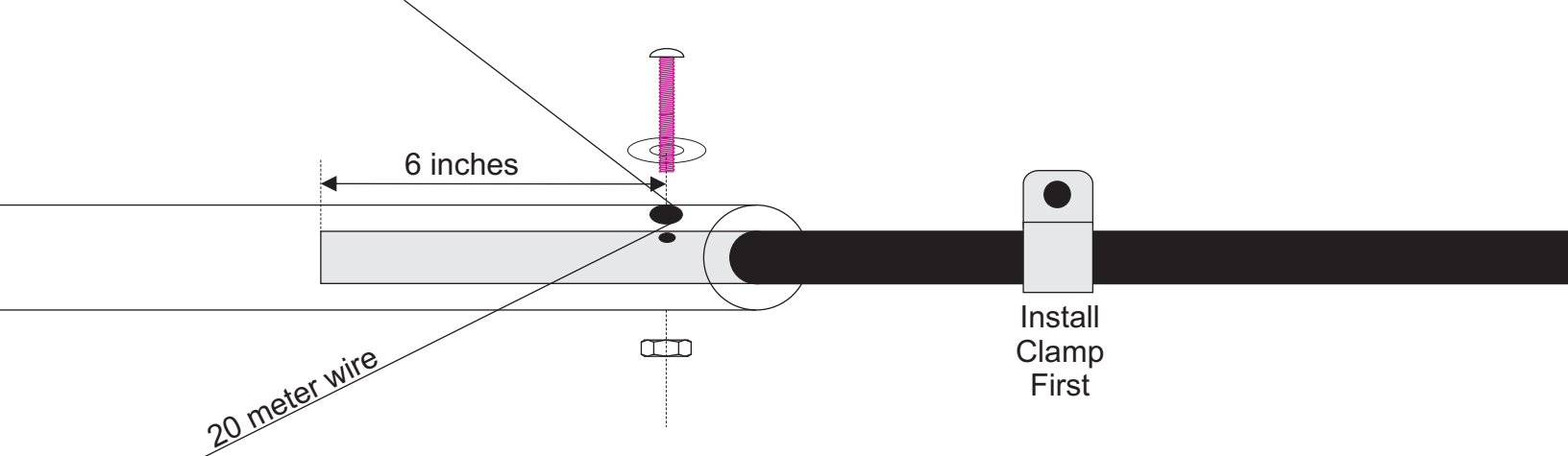
Remove three of the screws from middle of the top plate. It doesn't matter which 3 of the 4 you choose. The support arms shouldn't move with the element wires holding them in place.



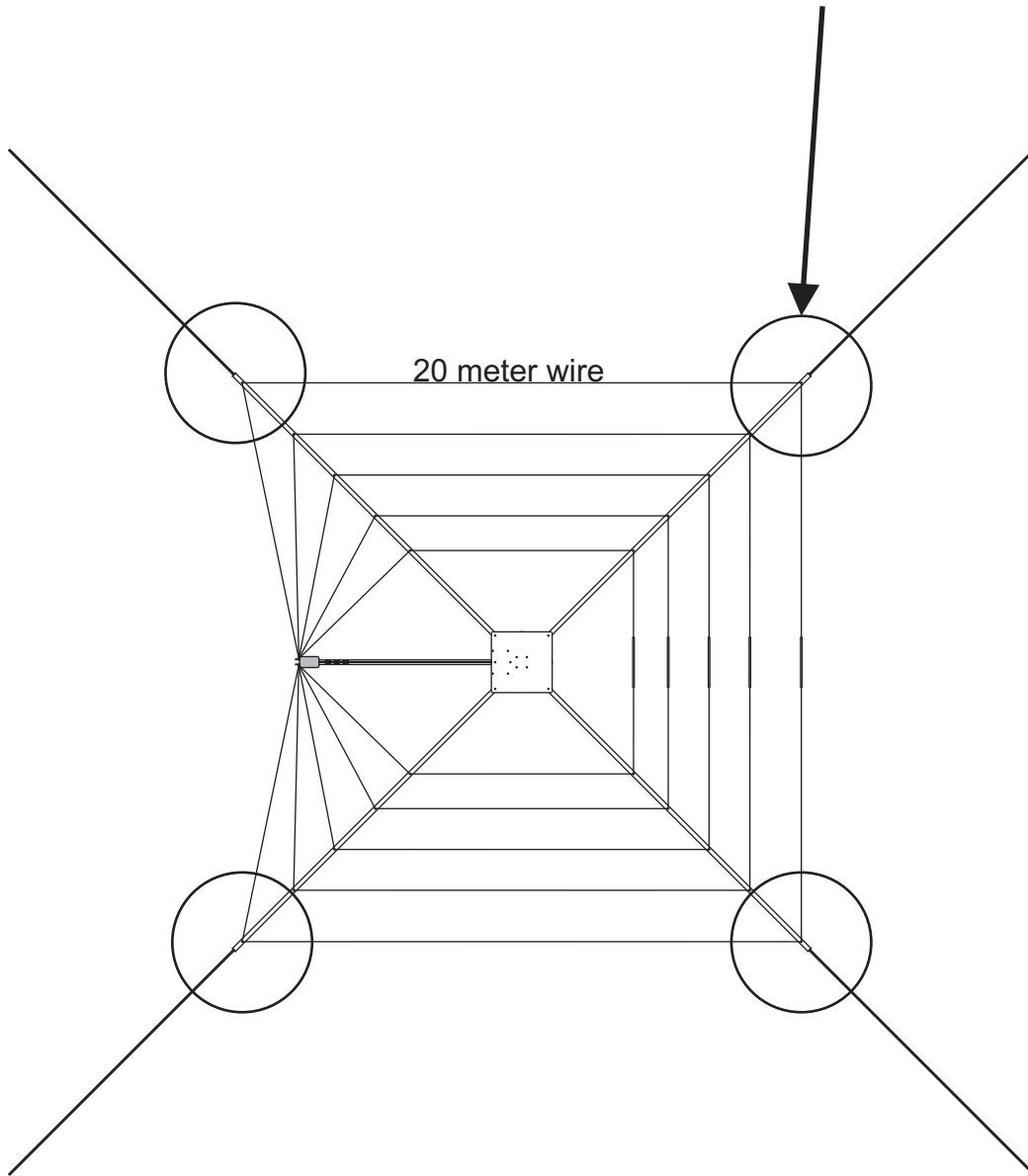
Install the support mast bracket using the longer 6-32 x 1-1/4 screws supplied with the kit. The screws you removed will not be needed.



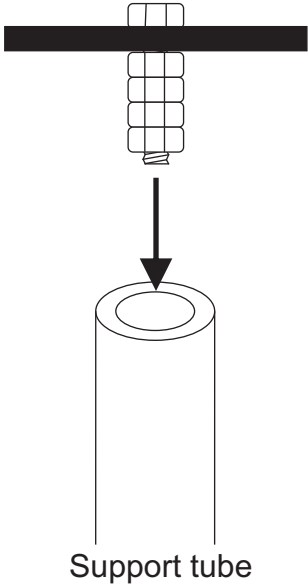
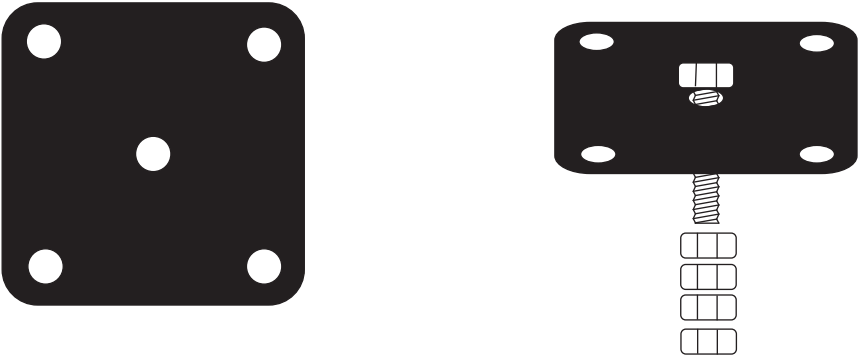
Install u-bolt and support tube. The tube should rest on top of the plate. Tighten the u-bolt snug but do not crush the tube.



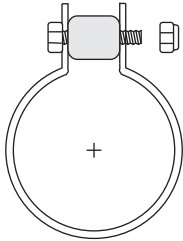
Slide a clamp over the  $\frac{1}{2}$  inch fiberglass tube. Carefully remove the screw securing the 20 meter wire and insert the  $\frac{1}{2}$  inch tube into the  $\frac{3}{4}$  tube. Use the end that has a hole about 6 inches from one side. Align the holes so that you can reinstall the screw with the 20 meter wire under the washer just as it was before. The hole in the  $\frac{1}{2}$  fiberglass is just large enough for the 6-32 to thread through it. You may have to use a screw driver to thread it through the tube. Repeat this for the other three element arms.



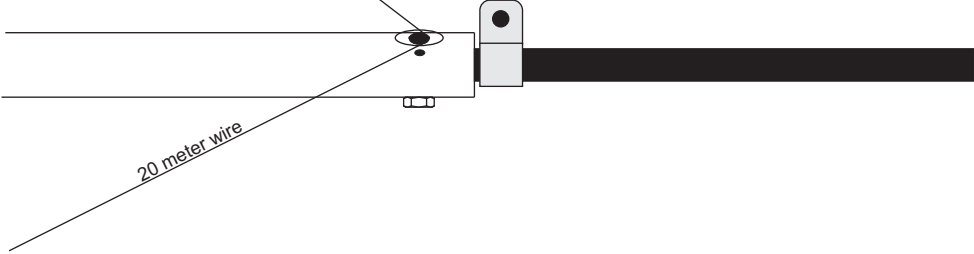
Insert the 1/4-20 bolt into the center of the rope ring. Thread all four 1/4-20 nuts onto the bolt and use a wrench to lock them in place.



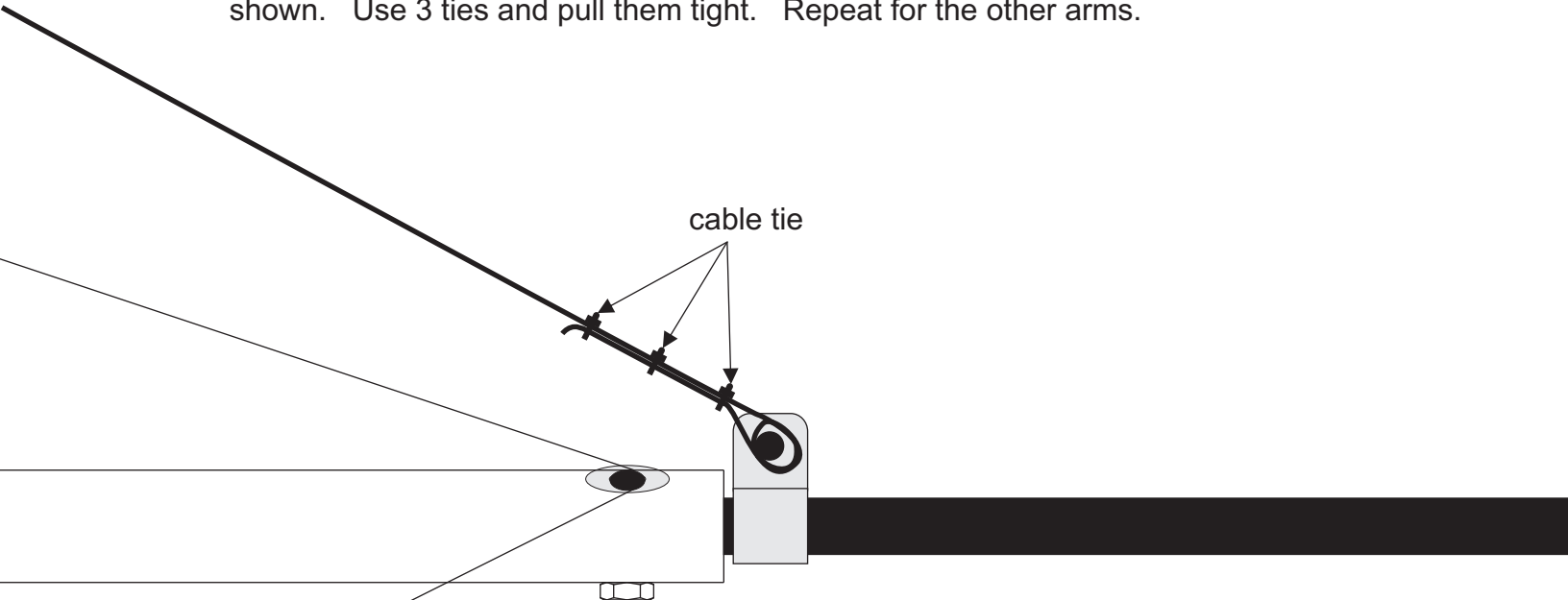
Insert this assembly into the support tube. Tension on the support ropes will hold it in place when the antenna is fully assembled.



Use the 10-24 bolt and nylon lock nut to secure the clamp to the 1/2 inch tube. Insert the spacer inside the clamp before inserting the screw. The spacer will allow the bolt to tighten while leaving the clamp slightly loose on the tube. The clamp should rest against the 3/4 tube with the bolt on top.

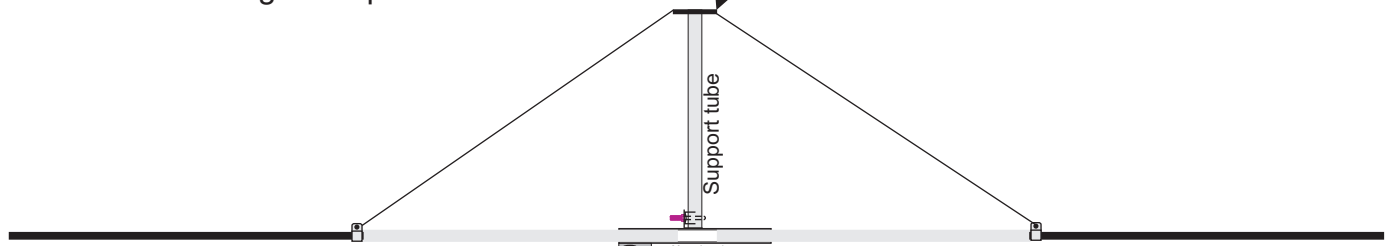
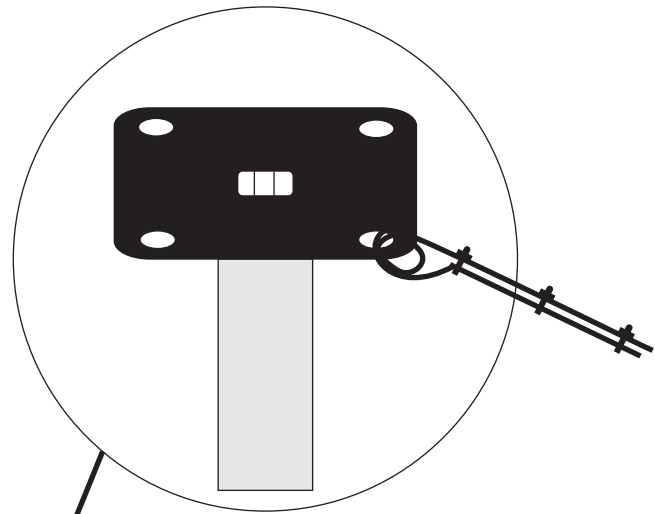


Take the support rope supplied and cut it into 4 equal sections. Use one section for each element arm. Double loop one end around the spacer inside the clamp. Leave about 3 inches excess and use the cable ties to secure it back to itself as shown. Use 3 ties and pull them tight. Repeat for the other arms.



20 meter wire

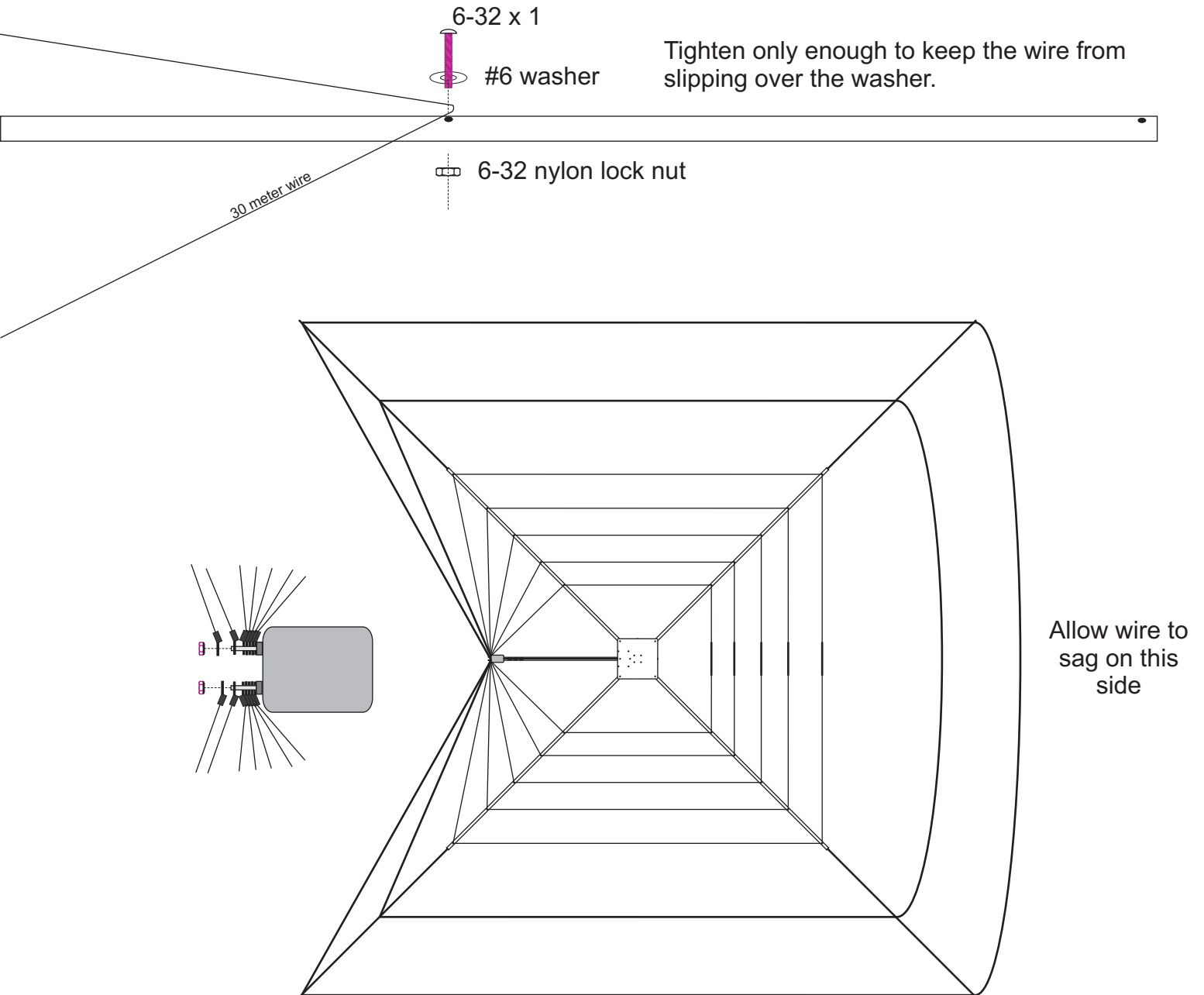
Connect the support rope to the support ring in the same way. Pull the rope tight so that the sag is completely removed from the element. Do opposing sides at the same time if possible. The support tube may try to flex to one side or the other if tension is uneven on the pole. If you only do one element at a time, hold the support tube so that it is perpendicular to the mounting plate when tensioning the rope.



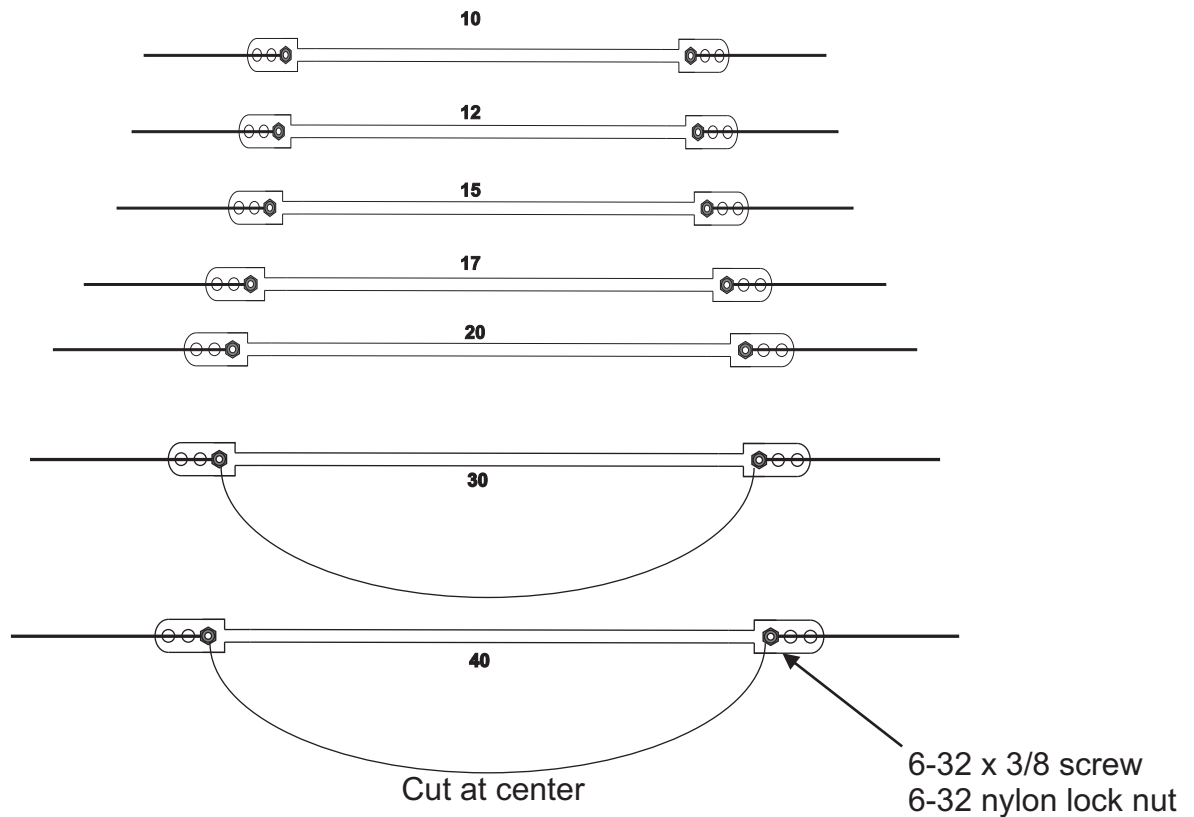
Tension so there is no sag in the element tube

## Routing the wires

Start with the 30 meter wire. Remove the nut on the matching box securing the 10-20 meter wires on one side. Put one of the eyelets over the bolt and thread the bolt back on to hold the wire. There are two holes in each ½ section of tubing. Route the 30 meter wire along the innermost holes using the 6-32 screws, washer and nuts in the same manner as the 10-20 wires. Allow the wire to sag on the side opposite the matching box. Complete the routing by connecting the other end to the bolt on the other side of the matching box. The wire is too long on purpose.



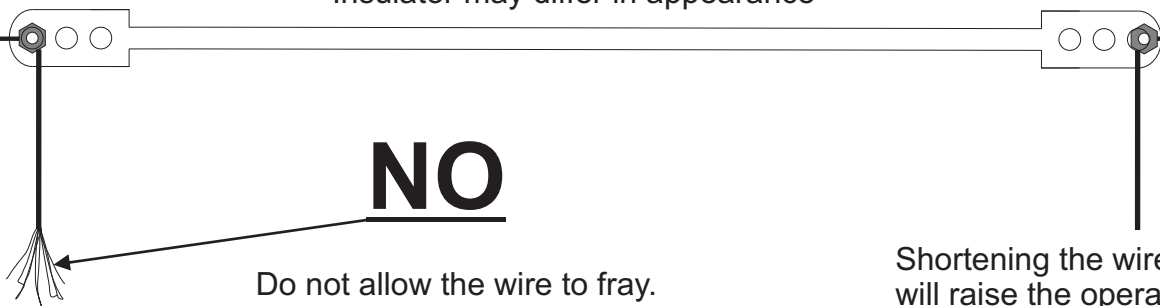




Install the 30-40 meter insulators by aligning them with the 10-20 meter insulators. Pull the wire and tension each side equally. Allow the wire to sag enough so that the tension is very small. Allow excess wire to sag under the insulator. Loop the wire around the screw and tighten the nut. Cut the excess wire in the center of the sag. The excess wire that hangs down will be used to tune the antenna.

Tuning adjustment is done by trimming the excess wire. The excess wire will cause the antenna to be tuned to a frequency below the band. Cutting the wire on each side evenly a little bit at a time, will raise the frequency. Note that there are extreme high voltages present at the tips of the wires and arcing may occur while transmitting if the wire is frayed. Solder the tips of the wire to prevent them from fraying after tuning is done.

Insulator may differ in appearance



**NO**

Do not allow the wire to fray. Soldering the tip of the wire is a good solution. Extreme high voltage is present at the tips of the wires. Fraying will cause arcing that could melt the wire or insulators.

Shortening the wire will raise the operating frequency.

When testing the antenna for resonance, it must be off the ground at least ten feet. The antenna will not function properly if it is any closer to the ground. 40-30 meters will shift in frequency (possibly out of the band) if the antenna is tuned too close to the ground and then raised. Use a good SWR analyzer to test the antenna before mounting it back in its original location. Check the other bands to make sure they have not shifted during addition of the new elements. If any of the other bands have moved, they may be re-tuned using the same method as the 40-30 wires. If you cut the wire too short, you may solder some of the excess wire back on to lengthen it. You may also loop new wire around the insulator screws if desired.

## Parts List

P/N	DESCRIPTION	QTY
884-40500-6	1/2 INCH 6FT FG TUBE	4
L20-1932	40 meter wire	71ft
	30 meter wire	53ft
656-1000S	6-32 X 1 SCREW	9
656-1500S	6-32 X 1-1/2 SCREW	3
	6-32 X 3/8 SCREW	4
561166	#6 WASHER	9
705-0632S-NL	6-32 NYLON NUT	15
090287	SUPPORT ROPE	30FT
	SUPPORT TUBE 3/4 X 29	1
758-9199	UBOLT SET	1
	ROPE RING	1
	UBOLT BRACKET	1
502958	1/4-20 X 1 BOLT	1
554099	1/4 HEX NUT	4
745-2158B	CABLE TIE	25
	1/2 clamp	4
160110	spacer	4
014388	10-24 x 1 screw	4
705-1032S-NL	10-24 nylon lock nut	4
737-0115	insulator	2

# NOTES

## 12 MONTH LIMITED 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, 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 (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 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.