

SteppIR TM ***Antenna Systems***

Yagi

Dipole

Vertical

(Patent# 6,677,914)

2E - 3E High Wind Kit Manual



SteppIR Antennas

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Table of Contents

<u>TOPIC</u>	Page
Table of Contents	2
SteppIR Why Compromise?	3
Parts List	4
Drawings - Boom to Mast Plate	5 - 6
Assembly Instructions	7-11

SteppIR - Why Compromise?

The SteppIR antenna was originally conceived to solve the problem of covering the six ham bands (20m, 17m, 15m, 12m, 10m and 6m) on one tower without the performance sacrifices caused by interaction between all of the required antennas.

Yagis are available that cover 20 meters through 10 meters by using interlaced elements or traps or log periodic techniques, but do so at the expense of significant performance reduction in gain and front to back ratios. With the addition of the WARC bands on 17m and 12m, the use of interlaced elements and traps has clearly been an exercise in diminishing returns.

Obviously, an antenna that is precisely adjustable in length while in the air would solve the frequency problem, and in addition would have vastly improved performance over existing fixed length yagis. The ability to tune the antenna to a specific frequency, without regard for bandwidth, results in excellent gain and front to back at every frequency.

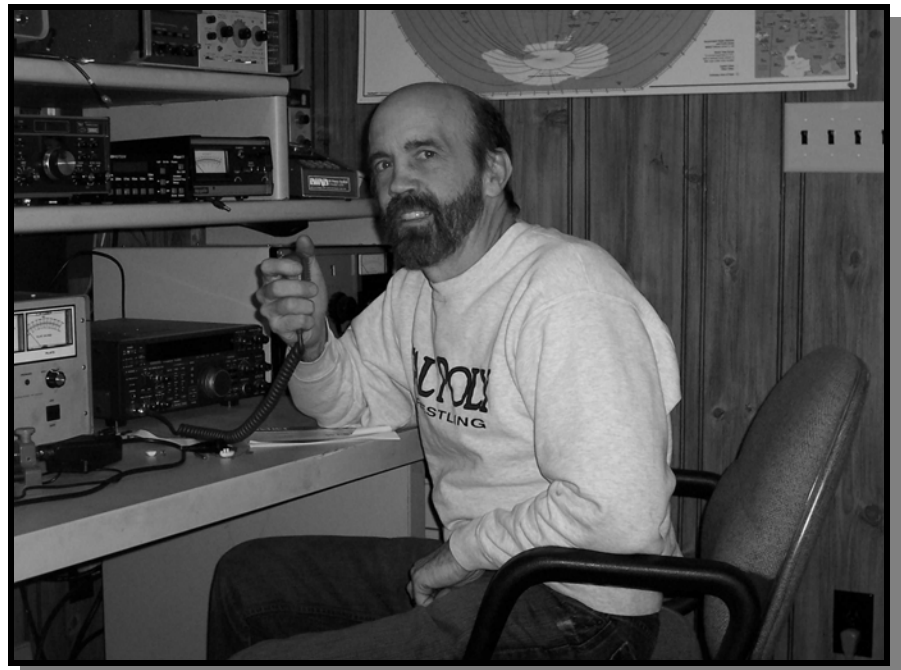
The SteppIR design was made possible by the convergence of determination and high tech materials. The availability of new lightweight glass fiber composites, Teflon blended thermoplastics, high conductivity copper-beryllium and extremely reliable stepper motors has allowed the SteppIR to be a commercially feasible product.

The current and future SteppIR products should produce the most potent single tower antenna systems ever seen in Amateur Radio! We thank you for using our SteppIR antenna for your

Warm Regards,

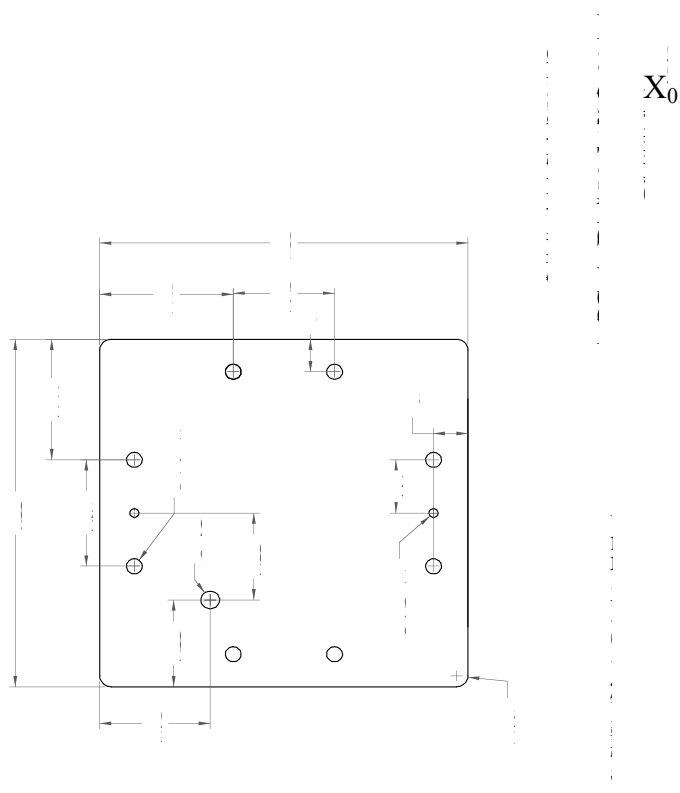
Mike Mertel

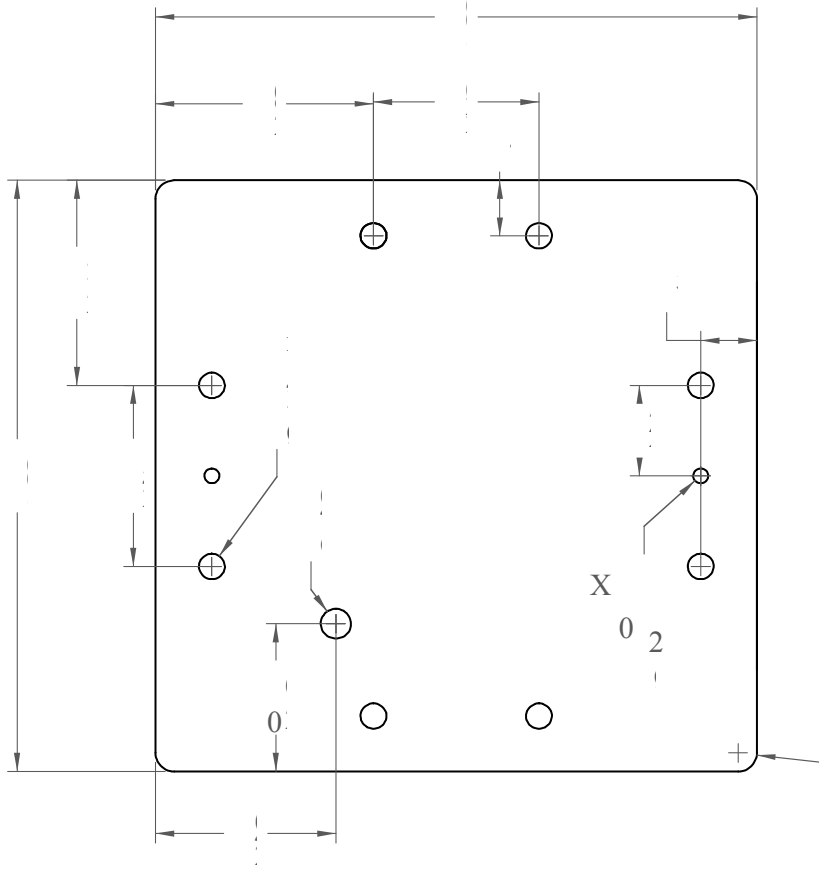
Michael (Mike) Mertel - K7IR
President



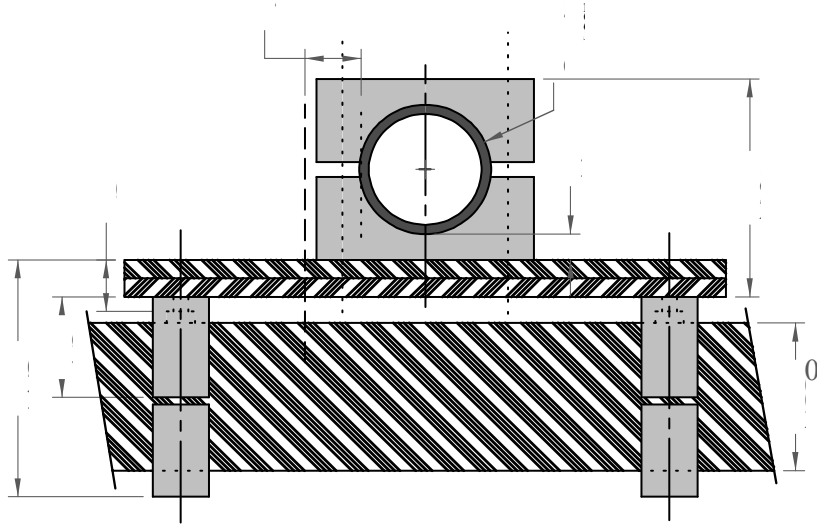
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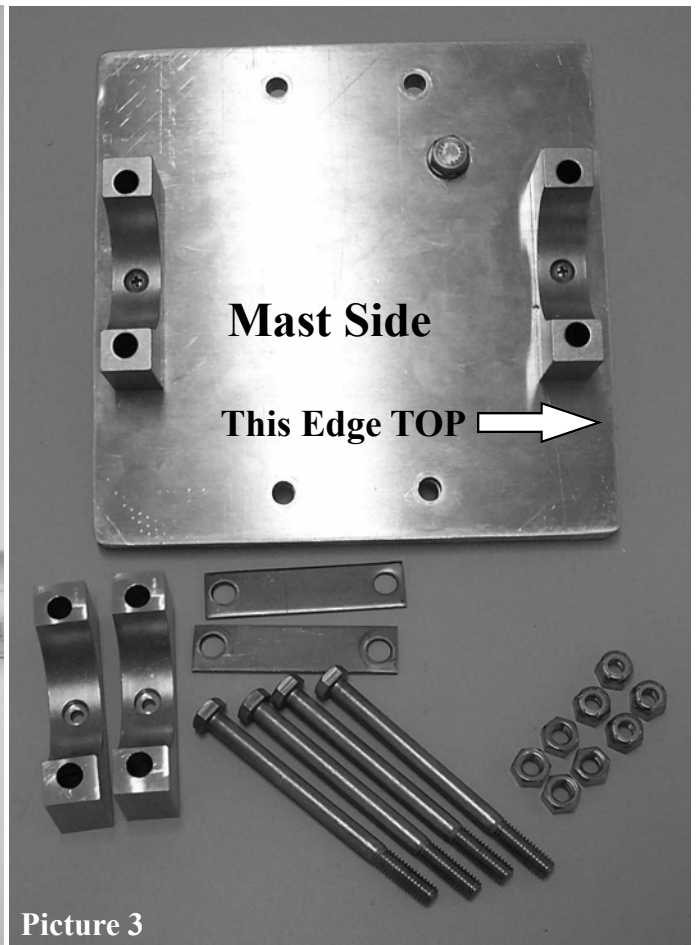
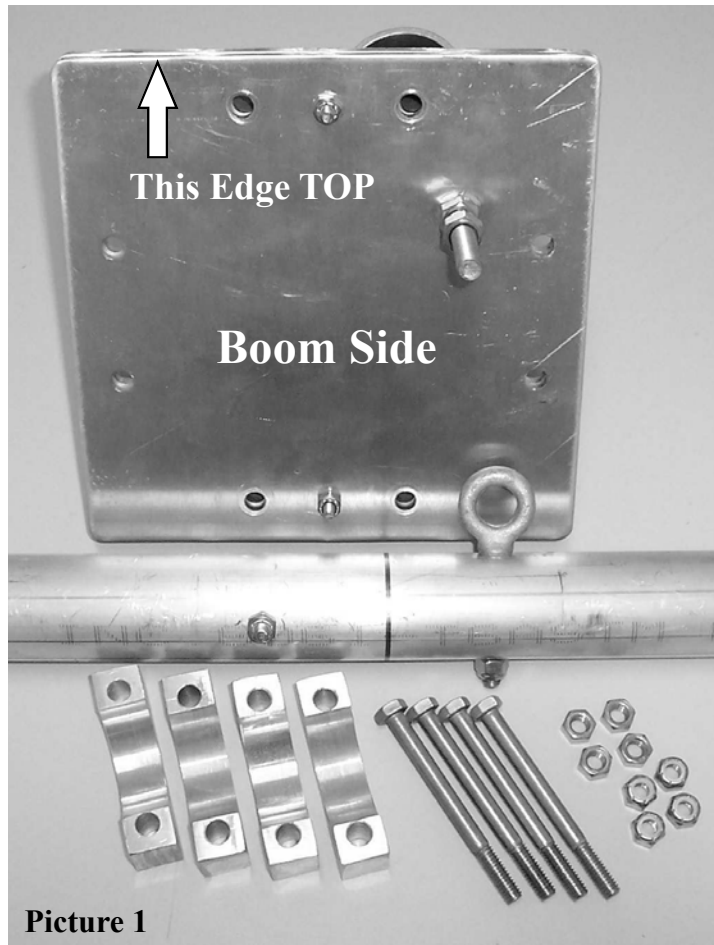
Material: 1/4" 5053 Aluminum



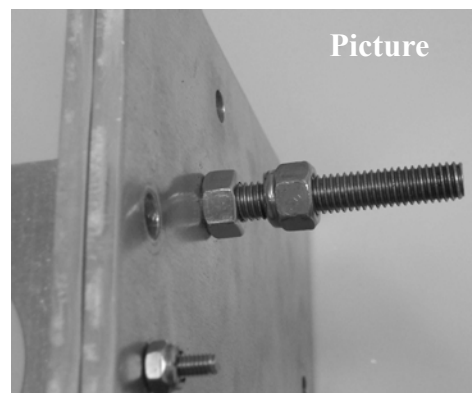
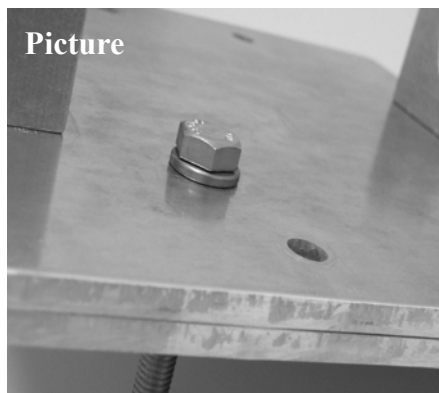
SteppIR Antennas Inc.
BOOM/TO MAST Plate, 8" HW
10-XXXX-XX

The high wind kit for the 2 and 3 element Yagis will consist of additional hardware to provide a stronger and more secure mounting in environments where severe winds may be a problem.

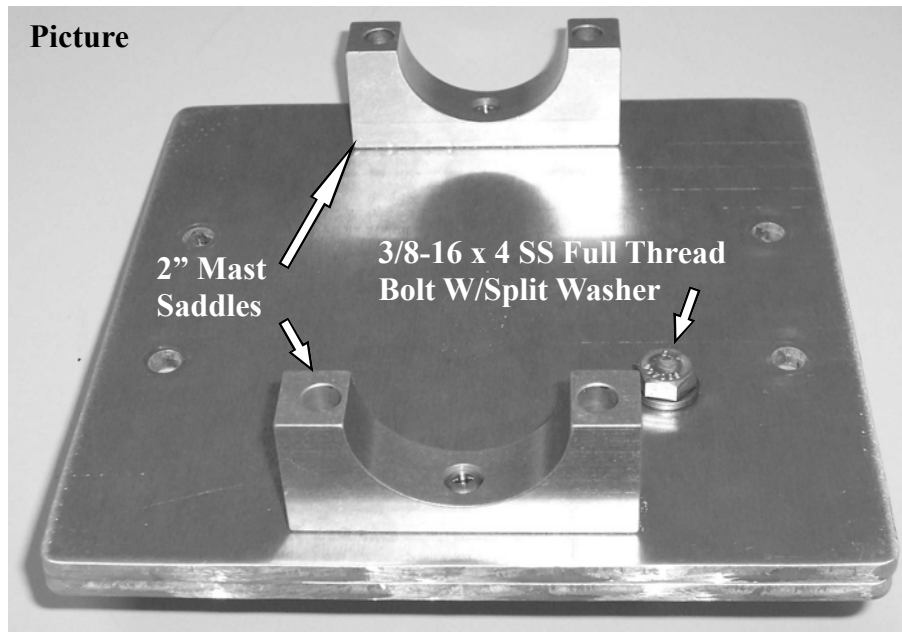
This will be a pictorial description of the assembly of this kit:



- ☐ Put the two mast plates together making sure all the holes line up
- ☐ Put a split washer on the 3/8-16 x 4" SS Full-Thread Bolt
- ☐ Insert the 3/8-16 x 4" SS Full-Thread Bolt through the two plates as seen in **Picture 1** & **Picture 5**
- ☐ Install a standard 3/8-16 nut and tighten (make sure all holes align)
- ☐ Install a standard 3/8-16 Nylok nut as seen in (**Picture 7**)

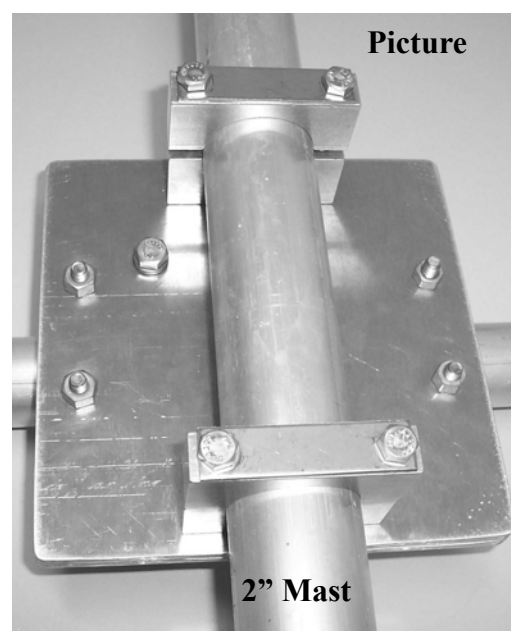


□



If you are going to mount the mast plate to a temporary mast then continue your antenna assembly:

- Put the mast plate assembly against the mast
- Assemble a reinforcing strap with two 5/16-18 x 4" SS bolts into a 2" short saddle (with center hole) and install as seen in **(Picture 13)**.
- Install the 5/16-18 SS Nylok nuts and tighten
- Repeat for second mast clamp



Boom Installation for 2 Element (20m - 6m):

- ☐ Measure the overall length of the boom and mark the midpoint

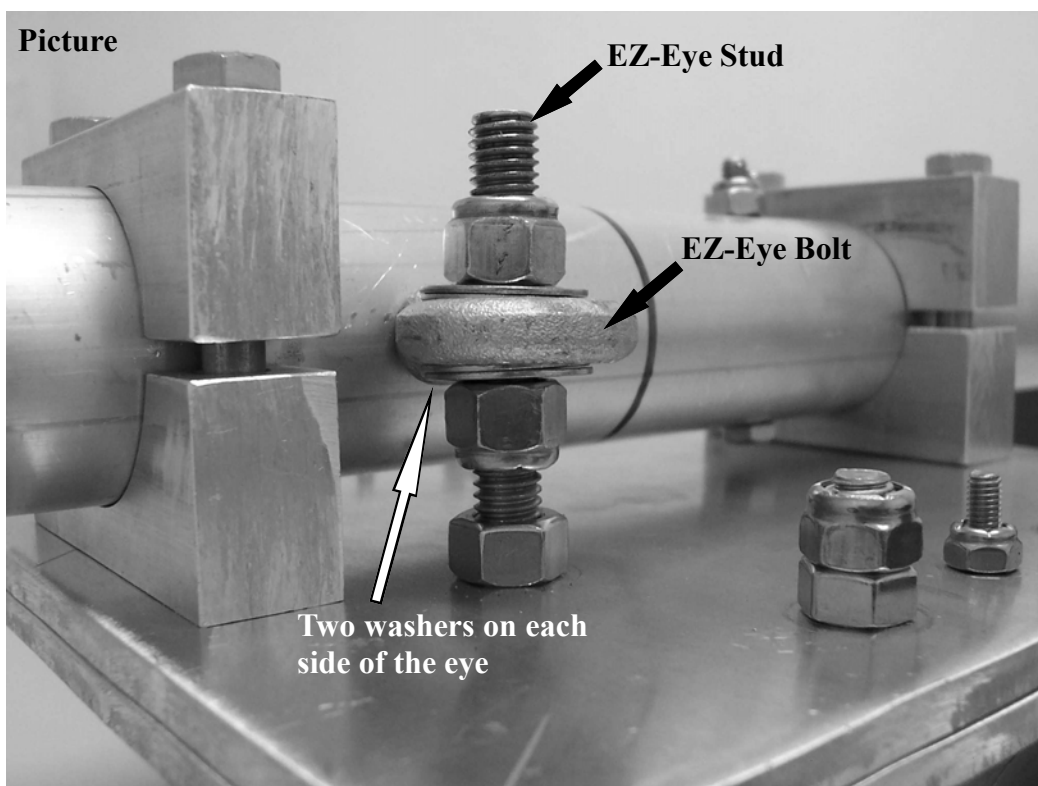
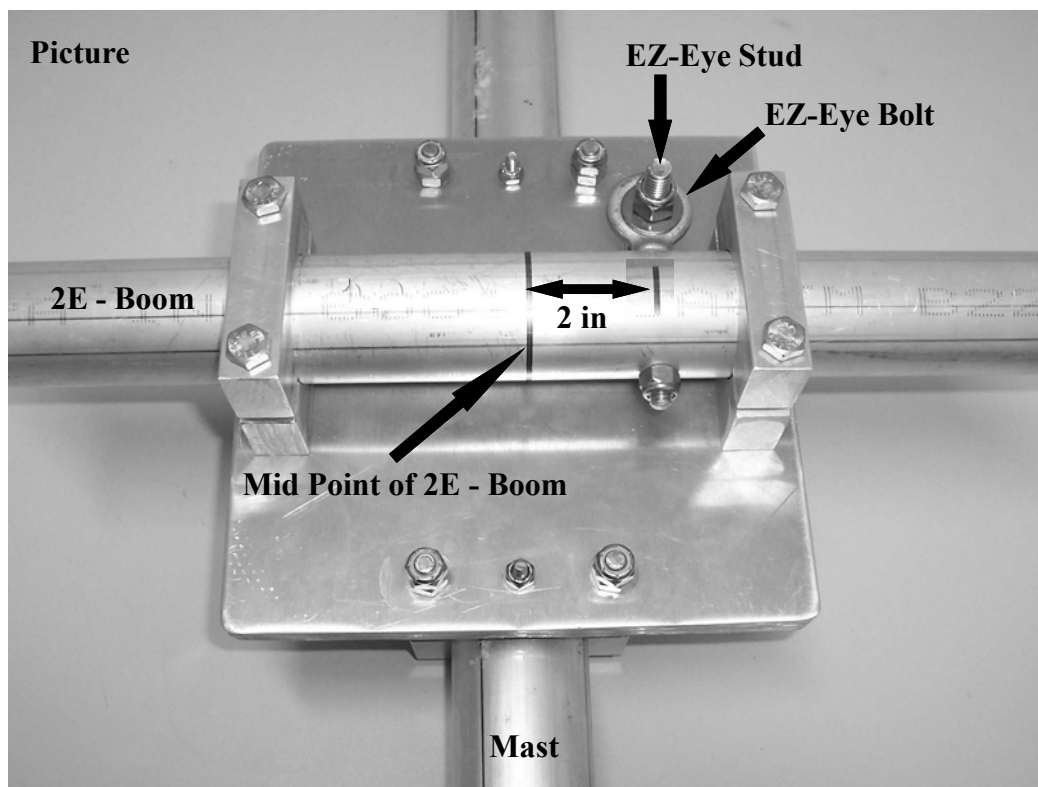
Boom Installation for 2 Element (W/40m-30m Dipole):

- ☐ Temporarily mount the boom as shown in the 40m-30m Dipole manual choosing your location
- ☐ Mark the boom directly under the EZ-Eye stud
- ☐ Remove the boom.

Continue:

- ☐ Place the boom on a flat level surface with the element mounting surfaces up
- ☐ Check to make sure the element mounting surfaces are level
- ☐ Mark the top center of the boom **2"** from your center
- ☐ **DO** make sure the mark is on the **top center** of the boom
- ☐ Center punch the mark
- ☐ Drill **straight** down through both sides of the boom with the "N" (.320") drill bit (that is provided)
- ☐ Install the 5/16-18 eye bolt with the eye parallel to the boom (**Picture 15**)
- ☐ Install a 5/16-18 SS Nylok nut and tighten
- ☐ Put two 3/8" flat washers on the EZ-Eye stud (**Picture 16**)
- ☐ Hang the boom, using the EZ-Eye, on the EZ-Eye stud
- ☐ Put two more 3/8" flat washers on the EZ-Eye stud (**Picture 16**)
- ☐ Install 3/8-16 SS Nylok nut (do not tighten now) (**Picture 16**)
- ☐ Install two 1-3/4" saddles on the first side
- ☐ Insert two 5/16-18 x 4-3/8" SS bolts
- ☐ Install two 5/16-18 SS Nylok nuts (do not tighten now)
- ☐ Do the other side the same way
- ☐ Adjust the two Nylok nuts on the EZ-Eye stud to make sure the boom is level
- ☐ Tighten the Nylok nuts on the boom saddle clamps and EZ-Eye

NOTE: The EZ-Eye can be adjusted later to relevel the antenna by loosening the bolts on the boom saddle clamps and then adjusting the two Nylok nuts that position the EZ-Eye. Be sure to tighten all nuts when finished.



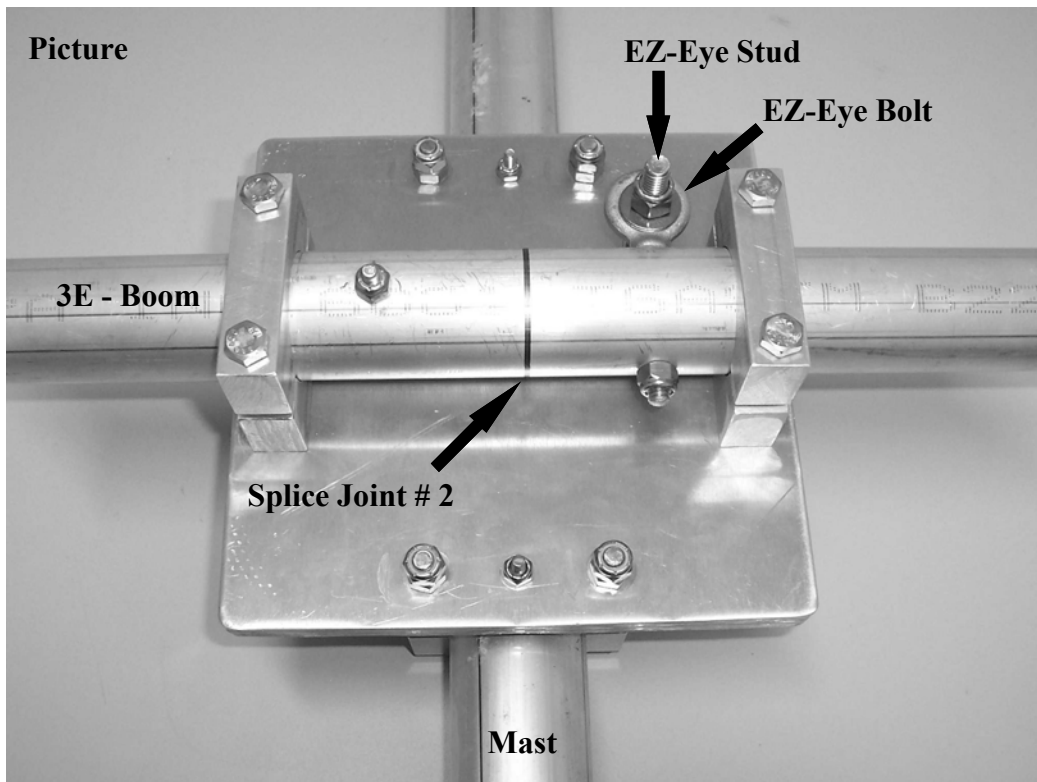
Boom Installation for 3 Element:

- ☐ Remove the vertical 1/4-20 bolt from the #2 splice
- ☐ Drill out the hole with the included “N” (.320”) drill bit
- ☐ Install the 5/16-18 eye bolt with the eye parallel to the boom (**Picture 17**)
- ☐ Install a 5/16-18 SS Nylok nut and tighten

NOTE: Make sure the horizontal bolt in the #2 splice has the head on the mast plate side of the boom to allow proper clearance

- ☐ Put two 3/8” flat washers on the EZ-Eye stud (**Picture 16**)
- ☐ Hang the boom, using the EZ-Eye, on the EZ-Eye stud
- ☐ Put two more 3/8” flat washers on the EZ-Eye stud (**Picture 16**)
- ☐ Install 3/8-16 SS Nylok nut (do not tighten now) (**Picture 16**)
- ☐ Install two 1-3/4” saddles on the first side
- ☐ Insert two 5/16-18 x 4-3/8” SS bolts
- ☐ Install two 5/16-18 SS Nylok nuts (do not tighten now)
- ☐ Do the other side the same way
- ☐ Adjust the two Nylok nuts on the EZ-Eye stud to make sure the boom is level
- ☐ Tighten the Nylok nuts on the boom saddle clamps and EZ-Eye

NOTE: The EZ-Eye can be adjusted later to relevel the antenna by loosening the bolts on the boom saddle clamps and then adjusting the two Nylok nuts that position the EZ-Eye. Be sure to tighten all nuts when finished.





L i m i t e d W a r r a n t y

These products have a limited warranty against manufacturer's defects in materials or construction for two (2) years from date of sale. Do not modify this product or change physical construction without the written permission of SteppIR Antennas Inc. This limited warranty is automatically void if improper selection, installation, unauthorized modifications or physical abuse beyond the manufacturer's control has occurred. Manufacturer's responsibility is strictly limited to repair or replacement of defective components. The manufacturer assumes no further liability.

Thank you for choosing SteppIR!!



SteppIR TM ***Antenna Systems***

Yagi

Dipole

Vertical

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