

Antenna: The H-Pole One with *MyBalun*[®]

Manufacturer: QYQ Intergalactic (QYQIntergalactic.com)

Revision: 1 (May, 2017)

Band: 6M

Gain: 1.97 dBi

Pattern: Bi-directional (broadside), horizontally polarized

SWR: < 1.5:1, 50 Mhz-54 Mhz

Engineers: Scoop, N6QYQ; Buzz, KI6WD

Presented by K6NFF and the NFFARC (nffarc.com)

MyBalun[®] used by permission and sold separately, see MyBalun.com for details



Parts:

- 1 x 10' length of 3/4" thinwall copper pipe
- 1 x 10' length of 1/2" thinwall copper pipe
- 2 x 1/2" to 3/4" copper tee
- 2 x 12" inch length of 3/4" PVC pipe
- 1 x 3/4" PVC tee
- 1 x 10' length of 2" *MyBalun*[®] (fence pole or TV mast)
- 1 x 14" length of 3/4" fiberglass rod
- 1 x SO-239 UHF chassis connector
- 2 x crimp lugs, eyelet or spade
- 4 x small nut and bolt, approx 1 1/2"
- 2 x small nut and bolt, approx 1"
- 6 x small sheet metal screw, approx 3/8" to 1/2"

Fabrication and assembly:

With a grinder and PVC glue:

1. Grind/sand the 3/4" PVC tee free of bumps.
2. Glue PVC tee and 12" PVC pipe sections. Set aside to dry.

With a pipe cutter and torch:

3. Cut two 34.75" sections of 3/4" copper pipe.
4. Cap each end of 1/2" copper pipe.
5. Cut two 15" capped 1/2" sections.
6. Cap each 1/2" pipe end again.
7. Cut two more 15" capped 1/2" sections.
8. Solder two copper 1/2" to 3/4" tee "End Thingy" assemblies. (Fig. 1)

With a hacksaw:

9. Cut a 14"(?) section of 3/4" fiberglass rod.
10. Measure and cut the *MyBalun*[®] (mast) 5'(?) up from the crimped end.
11. Split to 3" depth, the wide end of the 5'(?) *MyBalun*[®] (mast) section.
12. Split 3/4" PVC tee assembly to form a trough. (Fig. 2)

With a drill:

13. Center, mark and drill fiberglass rod and 3/4" copper mounting holes together (one end at a time). Allow 1/2" spacing between element sections.



H-Pole One with optional *MyBalun*[®]

14. Drill feed point holes in 3/4" copper. Just barely penetrate the fiberglass rod inside so that a mark is left.
15. Disassemble fiberglass and 3/4" copper.
16. Using a larger drill bit, drill out marks made in the fiberglass rod in step 11 above. They should be deep/wide enough to accommodate the feed point screws without stressing the fiberglass.
17. Mark and drill element attachment holes in lower PVC tee trough assembly.
18. Force lower PVC tee protrusion into split in *MyBalun*[®] (mast) end. (Fig. 3)
19. Drill and set the *MyBalun*[®] (mast)/PVC tee assembly with a sheet metal screw. This must be on the *MyBalun*[®] (mast) side opposite the feed point.
20. Measure and mark (?)" from feed point down the 2" *MyBalun*[®] (mast). This must be on the *MyBalun*[®] (mast) side opposite the feed point.
21. Drill (?)" hole for SO-239 connector.
22. Insert SO-239, mark and drill mounting holes.
23. With "End Thingies" firmly seated onto main element, and level in reference to the *MyBalun*[®] (mast), drill copper 3/4" tee and 3/4" element end together. Repeat on the other end.

With a soldering iron:

24. Cut (?)" section of COAX.
25. On one end of COAX, trim 1 1/4" of the jacket and prep the braid.
26. Strip dielectric from center conductor to 1/8" past braid.
 - a) Optional: Firmly grab COAX close to stripped end. With needle-nose pliers, firmly grab center conductor and push toward hand. With sufficient pressure applied, allow needle-nose pliers to slip and plunge firmly into weak-hand index finger.
27. Measure and cut center conductor, and solder into SO-239 connector. Tape center conductor assembly liberally.
28. On other end of COAX, split 1 1/4" and install eye lugs.
29. Insert eye lug end of COAX into hole drilled for SO-239 and feed through top of *MyBalun*[®] (mast)/PVC tee assembly.
30. Affix the SO-239 connector taking care to fan the COAX braid around the lower mounting hole.
31. Trim and solder braid where it protrudes from the SO-239 base.

Final assembly:

32. Loosely attach the main element assembly to the *MyBalun*[®] (mast)/PVC tee assembly with nuts and bolts. (Fig. 3)
33. Attach the feed point lugs to the main element.
34. Tighten the main element to the *MyBalun*[®] (mast)/tee assembly allowing the feed point to reseed into the tee.
35. Install the "End Thingies" and secure with nut and bolt.

Use:

36. Hoist into the air and enjoy!

Salutation:

37. 73

Fig 1. “End Thingy” Assembly

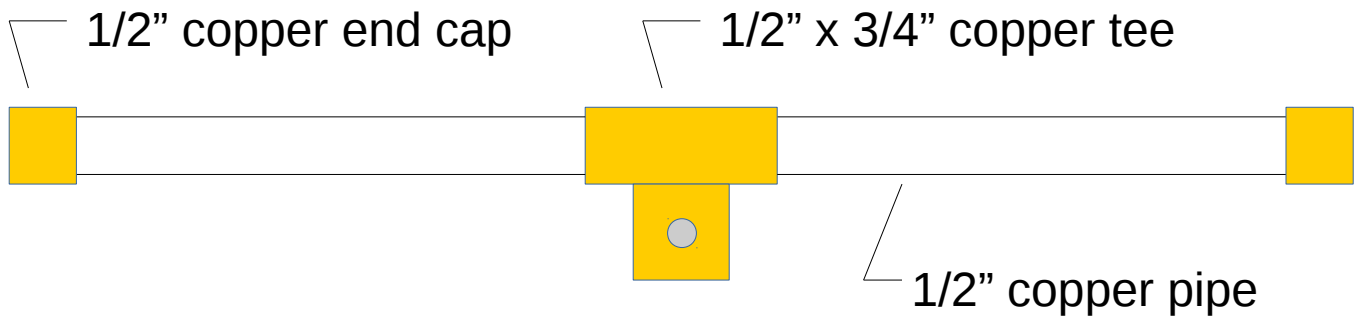


Fig 2. PVC Mount Assembly

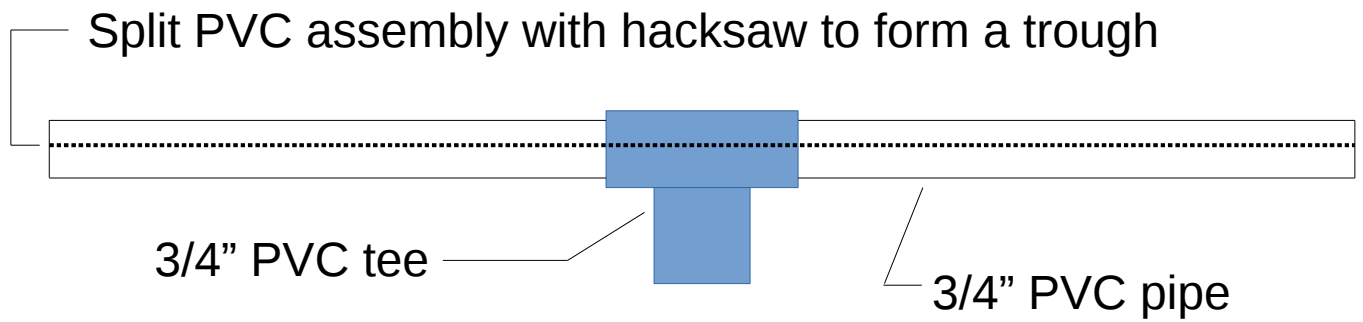


Fig 3. Main Element Assembly

