



#2 from R –AL-18
Right Most – AL-23



L to R: .875, .750, .625 & .500 (AL-23 ONLY)



Fig 1



Fig 3

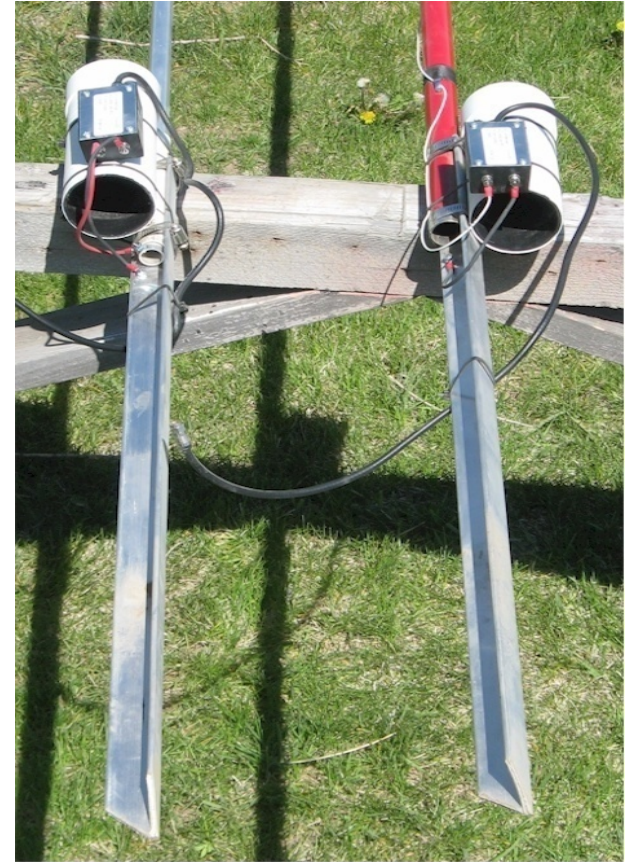


Fig 4

Please read and familiarize yourself with these Instructions before starting assembly. Also verify you have all the parts.

WARNING: Avoid HAZARDOUS LOCATIONS. Stay Clear of Power Lines And or any overhead obstructions.



Hi-Z Antennas™ Models AL-18, AL-24 Vertical Assembly Instructions – pg 2/3

1. Locate angle aluminum mounts. Attach 6X32 SS screw with one 8x32 SS K-lock in pre-drilled hole. This is the top of the mount.
2. Pound the angle aluminum mounts into the ground at the desired locations, leaving ~10" above the ground.
3. Locate the two each 8" wires and Red Terminals (4ea). Strip all four ends and crimp on the 4 Red terminals. Option: solder each terminal.
4. For AL-18 – locate the 3 tubes; .875, .750 and .625 diameter, use the 2 smaller SS clamps to clamp the 3 tubes at the 2 overlap points.
5. **FOR AL-24 ONLY** - locate the 4 tubes; .875, .750, .625 and .500 diameter, use the 3 smaller SS clamps to clamp the 4 tubes at the 3 overlap points. At each overlap insert 3 inches of tubing and clamp. Use a little NO-OX grease on the tubing at each overlapping joint.
7. For both the AL-18 & 24; on the .875 bottom section (hole drilled for SS screw), place 1.5 wraps of electrical tap at 1 and 5 inches from the drilled end. See Fig.1
8. See page 3 for mounting detail.
9. Install vertical terminal, a 6x32x 1/2" SS screw with the head located in the inside of the base tube. Install one 6x32 K-lock nut and tighten.
10. Bring the base tube together with the angle mount and overlap 6". Slide the large SS clamps over this overlap. Fig. 3
11. See page 3 for mounting detail, then tighten S/S clamps.
12. Attach one end of the 8" wire to the screw terminal (step 3) with 6x32 k-lock.
13. Attach one end of the other 8" wire (step 3) to vertical base tube terminal (step 9) with 6x32 k-lock.
14. Position the 3" white pipe with cap positioned on top as shown in Fig. 3 and attach 2 cable ties as shown.
15. Attach one wire to Hi-Z amp –Antenna terminal. Attach other wire to Hi-Z amp – ground terminal.
16. Hi-Z amp ANTENNA terminal to 6x32 screw at base of vertical. The Hi-Z GROUND terminal attaches to 6x32 screw on the angle base mount post.
17. Maintain as much separation as possible with these wires connecting the Hi-Z amp. Minimum 1" or more is very doable.
18. Attach the RG-6 coax as shown in FIG 4 with a 180 degree radius bend, not too tight a bend and push up into white pipe, all the way, FIG 3.
19. Place assembled vertical into ground location as foot print layout. Dress out RG-6 coax as required.
20. Place mounting angle per the foot print required for your array, at least 2 feet to no more than 2' 3" in the earth.
21. There is an extra SS clamp. Place this clamp on the base of the vertical just on top of the PVC insulator.
22. CONGRADUATIONS. You are SO close to receiving signals that you previously could not hear.



Low C- PVC vertical base insulator



CHOOSING A LOCATION FOR THE ANTENNA

For best performance, mount the antenna in a clear location away from buildings, towers, feedlines, utility wires, and other antennas.

Never mount this antenna in a location that will permit unsuspecting people to come in contact with any part of the antenna.

Never mount this antenna where a mechanical failure might allow the antenna to contact power lines or other utility wires.

Always ground the feedline to a good earth ground at the point where it enters a building for lightning protection.



BOM per vertical:

- 1 - 6' .875 tube
- 1 - 6' .750 tube
- 1 - 6' .625 tube
- 1 - 6' .500 tube (AL-23 Only)
- 4- Stainless small clamps OR 3 for AL-18
- 2- Stainless clamps – base mounting
- 1 – Angle Aluminum mount
- 2 – 6x32 SS PH screw
- 4 – 6x32 SS k-locks
- 4 – Cable Ties
- 1- Low C PVC vertical base insulator
- 2 – 8" wires with terminals
- 1 – 8" x 3" PVC tube Hi-Z Amp WX cover
- 1 – 3" PVC cap
- 1 – tube of no-ox grease



Hi-Z AL Series Base Insulator Field Upgrade - pg 3/3



Holding clamp. Clamp so that the lower section of tubing end is exposed to connect Hi-Z Amp, $\sim 5/8''$, just enough to Make easy connections to the wire connecting the Hi-Z Amp

Located so that the top of the coupler Extends about 1.25" above the angle mount

Upper clamp, clamped at Top of the Angle aluminum mount

Lower Clamp, clamped in the Middle of the PVC coupler

The standard insulator while being satisfactory has a higher Pf value than desired. The new insulator on average lowers the capacitance by $\sim 55-60$ pf. This will allow the Hi-Z Amp to produce from 2-3db higher gain and therefore increasing system performance. As well as increasing the physical spacing of the element from the base mount.

Antenna terminal to Hi-Z Amp

