

VE2ZAZ "Arrowoid" Antenna



Working SO-50 Part II

John Kludt, K4SQC

AMSAT Field Coordinator for Georgia

In the last installment we discussed the basics needed to work SO-50, the FM satellite. In addition to the Arrow and the Elk, I mentioned the Arrow-like antenna designed by Bertrand Zauhar, VE2ZAZ. His article can be found at:

[http://ve2zaz.net/Arrow Ant/Arrow Style Ant.htm](http://ve2zaz.net/Arrow%20Ant/Arrow%20Style%20Ant.htm)

A while back we did a club build of this antenna and found a few things that may help you should you decide to build one. The antenna has been field tested and I have had several good QSO's over SO-50 using this antenna and a Baofung. So we know it does work!

Here are some of the things we learned:

- Aluminum rod is really cheap and brass/copper rod is really expensive. What works the best is aluminum for the parasitic elements and brass for the driven elements. Why brass or copper – so you can solder on the feedlines!
- To tune the antenna, just attach an antenna analyzer and begin removing material from the free end of the driven element. You won't have to remove much from the 144MHz driven element. The 435 MHz driven element is another story. The dielectric constant of the PVC boom is enough to really make a difference. Again start nibbling away on the free end of the 435 MHz driven element. To get a match at 435 we had to remove almost one inch from the free end. Go slow! You can always cut off a little more but adding a little more is a real challenge!
- For ease of carrying around you can put the little pressure nut on one side only (in the case of the driven element the side with the loop in it) and take them out when not in use. If you do use that approach, be sure to route the feedlines outside the handle. For a more permanent installation you can route the feedlines inside the handle and place the diplexer inside the handle as well. The diplexers are good for 10 watts.
- Tennis handle wrap makes a nice easy to grip addition to the hand end of the boom.