

EmComm - Field Antennas

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First, I must explain I am not an expert on antennas. But I thought I would share some of what I learned -- that will make this a short article! There are others in the club much more experienced in this area than me.

When I do EmComm Community events with the MCECG (Maricopa County Emergency Communication Group) I am operating on 2 m and sometimes 70 cm bands. For these events, I normally use my Handheld or sometimes my Mobile radio. One thing I have learned with handhelds, is the stock "rubber duck" antenna usually does not give the best performance. On my Kenwood TH74, I replaced the stock antenna with a diamond SRH77CA antenna for about \$25. This 15-inch antenna makes a noticeable improvement in reception and transmission. If you are going to use your HT for an EmComm event, consider the minor investment in upgrading your antenna but, be mindful of the connector on your HT.

Another option is to use a mobile mag mount antenna either mounted on a vehicle or on a pizza pan (a ground plane is needed so you do need to attach the magnet to a big piece of metal). I have also used a diamond vertical antenna mounted on an MFJ tripod. This works well with my mobile radio for those events where I'm out in the boonies. It's just difficult to hike in with.



My final option is my Buddipole. A Buddipole is like an erector set for antennas. You can build a dipole, vertical or even Yagi for UHF, VHF, and HF. The challenge with HF is getting a full-size antenna and getting it up high enough. But it is a fun way to learn about antennas. You will probably need to buy extra parts to add to what is in the standard bundle. But it is portable and easy to setup.

While you can use an adapter to mate the antenna to your transceiver antenna connector, adapters do introduce a small amount of signal loss. The rule of thumb is use what is required to make the connection but to keep it to a minimum. If you want to put something on your Christmas list, consider adding a connection adapter kit. It will cost about \$100 but will allow you to make any connection adapter you need. It is a pricey but worthwhile kit.



A reference for understanding antennas is a book available in the Phoenix public library: Practical Antenna Handbook by Joseph J Carr. There is also an edition available at the West Valley Electronics Club library (aka The Shack). I bought a kindle version so I would always have it available in the field, plus it was a bit cheaper than the printed version.

Of course, you can make your own antenna! I challenge you to check out the next field day and the antennas in use. Now those guys know what they're doing!

References:

- MCECG: <https://mcecg.net/guest/>
- Practical Antenna Handbook: [Amazon.com : practical antenna handbook](https://www.amazon.com/practical-antenna-handbook)
- Buddipole: <https://www.buddipole.com/>
- Connection Adapter Kit: [LP AK-30-TGN Adapters RF, AK30TGN \(hamradio.com\)](https://www.hamradio.com/LP-AK-30-TGN-Adapters-RF-AK30TGN)
- Diamond SRH77CA: [DIAMOND SRH77CA Antenna HT Dual Band 2m-70cm, SRH77CA \(hamradio.com\)](https://www.hamradio.com/DIAMOND-SRH77CA-Antenna-HT-Dual-Band-2m-70cm-SRH77CA)