

Tech corner – Cookie sheet antenna

Some hams who really want to get their VHF / UHF signals out of their homes better than what their stock antennas can, find that they can't (or won't) install an outdoor antenna on their roofs, for whatever reason. Still others look for a temporary or portable, but effective solution to their dual-band needs. As a result, they turn to an old-but-good remedy: the cookie sheet antenna.

The typical cookie sheet antenna is made of nothing more than a magnetic-mount antenna stuck to a steel cookie sheet, often the same cookie sheet on which your mother used to make cookies. Well, that's pretty simple, but not really worthy of a Tech article, in my opinion. So, I thought I'd take the project up a notch, and make one using a through-hole mount instead. This design has two added benefits: it performs a little better, and it allows for the use of non-magnetic sheets, such as those made out of aluminum.

For the cookie sheet in this project, I used a pizza pie tin, because it cost a dollar at the nearest dollar store, and I didn't need to ruin one of my wife's good cookie sheets. So, technically, I suppose what we're building here is actually a pizza pie-tin antenna. If you think about it, you can actually make the sheet out of cardboard covered in aluminum foil.

Parts list

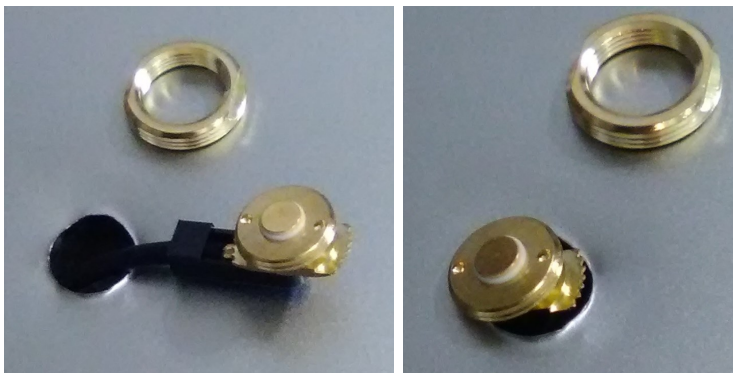
One [Tram 1180 dual-band NMO mount antenna](#)

One [Tram 1250 MNO mount](#)

One [metal cookie sheet](#) or [pizza tin](#)

Construction

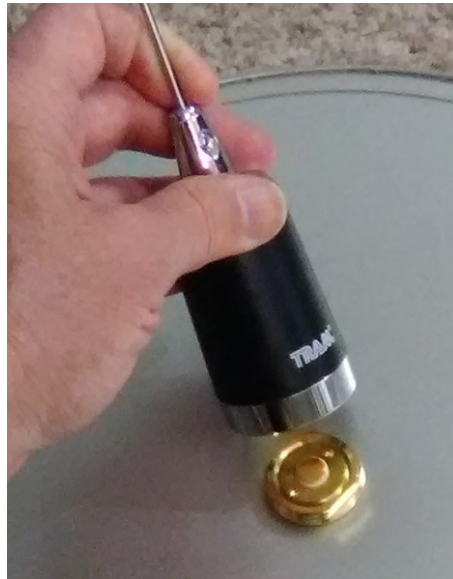
Locate the center of the metal sheet (center is best, but near one of the edges is very acceptable), and [drill](#) or [punch](#) a 13/16" hole. In this case, I used a [13/16" Greenlee punch](#) to do the job, because a punch tends to make a cleaner hole.



Remove the outer brass ring from the NMO mount, slip (you might have to force) the threaded mount body up through the underside of the hole. Place the outer brass ring back onto the NMO mount body, tightly on to the sheet.



Tech corner – Your own PCBs, cont'd



Screw the NMO connector of the antenna onto the NMO mount of your sheet, and you're done!

Have fun

The Tram 1250 mount has a length of coax attached from the factory, and it terminates with a PL-259 connector, suitable for most mobile radios. You'll need to purchase an appropriate adapter or [pigtail](#), if you plan to use the antenna with a handheld radio. *Also, making this antenna will provide you with a little experience toward a) installing a hole-mounted antenna on your vehicle and b) installing NMO mounts, side benefits.*

You'll find the best results when you place the cookie sheet antenna near a window or sliding glass door, but experiment to be sure. You (and your contacts) might be amazed just how much better you sound, even though you're still indoors.

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