

RECEIVING LOOP ANTENNA EXPERIMENTING

Part Two

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This series of photos shows how I created my Hula Loop.

I acquired an MLA-30+ active loop receiving antenna a couple of years ago. The original wire element was quite flimsy and it required a lot of support to hold its shape. When I moved to a new apartment, the antenna stayed in storage.

Fast forward to my current apartment, where I have the space, and my retirement, by which I now have the time, to experiment with indoor antennae. I discarded the flimsy wire loop from the MLA-30+ and replaced it with the same length of 16 ga solid copper insulated* wire. That worked just as well electrically, but I was not satisfied with the amount of support still required to keep it round.

Then I had an idea. For under \$2, I bought a completely hollow Hula hoop from a local Five Below store. I separated the ends and ran the 16 ga wire through the inside, then put it back together after cutting slits to bring the wire out on either end of the plug that holds it together. I then connected the wire to the terminals on the MLA-30+.

Eureka! Now I had a sturdy (and quite large) active loop antenna. But it was not amenable to mounting and rotating the way I had used my other loops. Also, I wanted to get the loop above the window screens in my living room.

I had also been experimenting with integration of 3D printing into my radio hobbies. I had already printed frames for smaller loops of wire. This was not going to require anything that elaborate. Then, in a seemingly unrelated development, MeTV became available via streaming on my smart TV. That meant that I could watch Svengoolie on Saturdays without needing the TV antenna in front of the window on a steel tripod.

I removed the TV antenna and dug my old Archer TV rotator (I've had it since around 1980) and put it onto the tripod, which is the only mount I have that is robust enough to support it. Then I printed the support parts shown in the photos. I was happy to find that they actually fit together well enough that I did not need to epoxy them together, so the whole thing can be disassembled and moved if necessary.

* Insulation makes no difference to an antenna, but must be accounted for in tight spaces.



Support
parts in
printer.

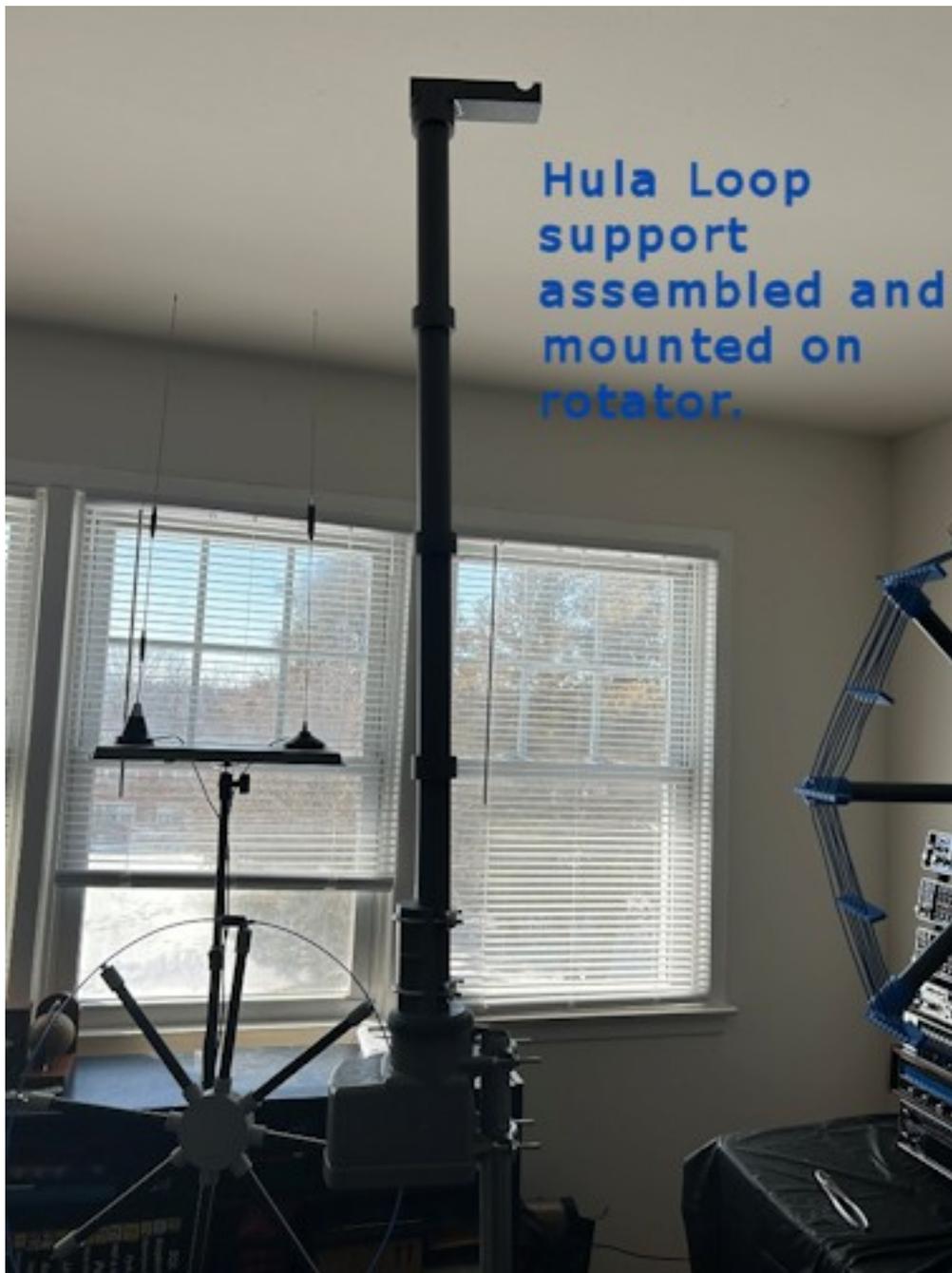
I had to make
a fourth set so
it would be
tall enough.



Top segment
with lateral
support, cutout
for hoop.



Hula Loop
support
assembled and
mounted on
rotator.



Hula Loop on TV rotator



MLA-30+ amplifier
mounted at feedpoint.

