

2.4 GHz Pringles Can Yagi Antenna (12-15 dBi)



Parts List:

Part	Approx Cost
All-thread, 5 5/8" long 1/8" OD	\$1.00
two nylon lock nuts	\$0.10
five 1" washers, 1/8" ID	\$0.10
6" aluminum tubing, 1/4" ID	\$0.75
female N connector	\$3.00
1 1/2" piece of 12-gauge solid copper wire	-
a tall Pringles can (any flavor)	\$1.50
Scrap plastic disc, 3" across (like another Pringles lid)	-
TOTAL:	\$6.45

Required Tools: Ruler, Scissors, Pipe Cutter/Hack saw, Heavy Duty Cutters, Hot Glue Gun, Soldering Iron.

Front Collector Construction:

Mark and cut four pieces of tubing, about 1 15/64 inches (a quarter wavelength). Cut the all-thread to 5 5/8 inches. Pierce a hole in the Pringles can lid big enough for the all-thread to pass through. Cut a 3 inch plastic disc just big enough to fit snugly inside the can. Poke a hole in the center of it, and slip it over the lengths of pipe.

Now assemble the pipe. The pipe is a sandwich that goes on the all-thread as follows:

Nut, lid, washer, pipe, washer, pipe, washer, pipe-with-plastic, washer, pipe, washer, nut.

Tighten the nuts to be snug.. you now have the front collector.

Preparing the Can

Wipe out the can and measure 3 3/8 inches from the bottom of the can. Cut a hole just big enough for the connector to pass through. This "sweet spot" is usually directly between "Sodium" and "Protein."

Element Construction

Straighten the heavy copper wire and solder it to the connector. When inside the can, the wire should be

just below the midpoint of the can (1 1/16").

Hot glue or use the nut and washer if your N connector has one to hold the connector in place.

Finally insert the collector assembly into the can and close the lid.

The inside end of the pipe should not touch the copper element; it should be just forward of it. If it touches, your all-thread is probably too long.

There you go. Keep in mind when connecting your coax that you're screwing into cardboard. It's very easy to forget and accidentally tear the wall of the can.