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QRP Special!

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On the cover: Curt Black, WR5J, of Seattle, Washington. Details on page 112.



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If antenna restrictions are keeping you off the air, KC7O has a few ideas about stealth antennas that won't meet with objections in many neighborhoods, and that will put a QRP signal on the air from a 100-watt transmitter! Or perhaps, as Allen puts it, "drizzle" power.

100-Watt QRP

BY ALLEN WOLFF,* KC7O

First of all, if you are a purist, please don't bother reading any further. I'm sure this article will frustrate you no end. However, if you have the heart of a true ham, read on. Here's a method of making QRP contacts with essentially no "real" antennas.

CC&Rs (Covenants, Conditions, and Restrictions) and HOAs (Home Owner Associations) are the bane of today's active hams and probably have put an end to many a ham's radio freedom and pursuit of happiness. We lived in an apartment during our first year of marriage and I was frustrated with the limited ability to have "real" antennas. Yet, with coax to the roof and #28 wire strung between rubber bands tied to vent pipes, I managed to make contacts. How efficient was that antenna? Who knows? Did I make contacts? Yes—end of story.

Icicle Light Antenna

Fast forward to a few years ago, before Christmas, while I was putting up icicle lights on my balcony. I had a thought: How about using the icicle lights for an antenna? I constructed a relay box that had 110V and coax in, and had two sockets out for strings of icicle lights. When the power was on, the coax was disconnected and when the power was off the light strings were connected to the coax through 0.1- μ F 1.4-KV disc capacitors and formed a dipole. Using my FT-817, with a tuner at the rig and about 50 feet of coax to the relay Christmas light contraption I made an SSB contact to Oregon. The losses were probably enormous, but a contact was made.

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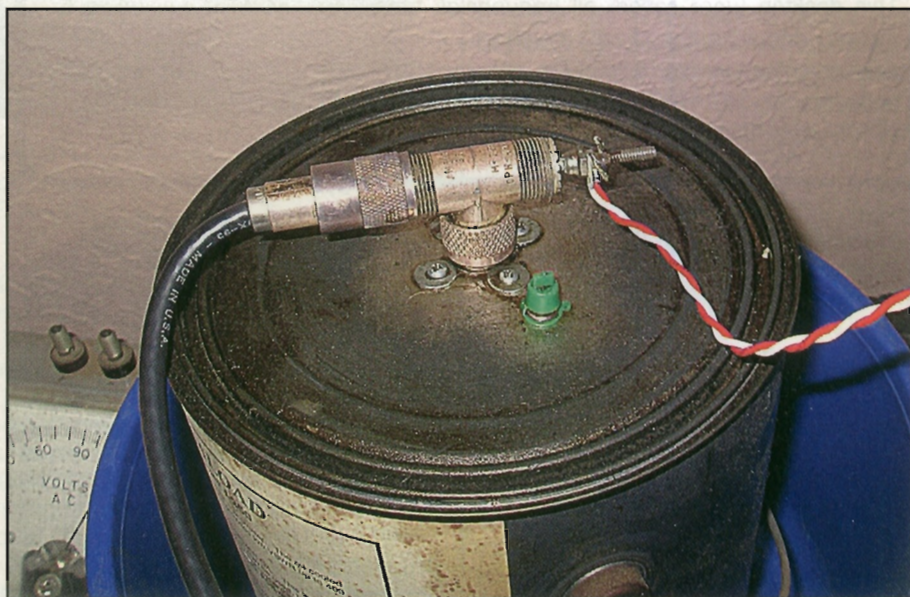


Photo A— Splitting your power between a dummy load and a random-length wire keeps your rig happy (it sees the 50 ohms of the dummy load) and lets you make contact with whatever power manages to "drizzle" out of the wire.

This article is not about the relay contraption itself, but about making contacts by not using traditional antennas as we know and love them. My previous experiences and a number of commercial antennas got the juices flowing. One commercial HF vertical uses no radials and consists of a black blob at the base and has a broad response across the HF bands. Another, a folded dipole, uses a balun at the feed point and a huge resistor in the middle. Years ago, MaxCom¹ had an all-band "Automatic Antenna Matcher" box which consisted of a balun and three power resistors located in the center of a dipole. These antennas all seem to work after a fashion, some much better than oth-

ers. OK, so let's try a variation on those themes.

A Dummy-Load Dipole

How about feeding your 100-watt transmitter into a dummy load using a coax tee (photo A) and then run a wire (as long as you can make it) out of the center conductor at the other end of the tee? (A banana plug fits nicely.)

Using the above setup I made some on-the-air tests. The dummy load was hooked to one leg of an open-wire-fed dipole and compared with a Cushcraft R-7 vertical. This was done on 40 and 20 meters with 100 watts SSB and the results were amazing. On 20 meters,

Photo B— How to turn your Christmas lights into an antenna. Just tie together the hot and neutral leads from the lights and wire to the center conductor of the PL-259 coax connector.



my signal (from southern California) was observed to be the same in Oklahoma on both antennas, and on 40 meters the dummy load antenna was about three S units down, but FB copy in Arizona. Received signals are usually very strong, though, so the attenuation of the received signal will not make a significant difference. I wouldn't even venture to figure the efficiency of this setup, but this is an issue of making contacts or not even trying. CW and PSK contacts should be even easier than SSB due to their narrow bandwidth.

The point is that anyone can get on the air using a very simple setup without antenna tuners or traditional antennas. All you need is a dummy load capable of handling 100 watts continuously and wire. The radio is always happy and you don't have to fuss with antenna tuners and coax loss. Christmas lights are ideal, because there are two wires that run continuously from plug to socket and they are an acceptable part of most neighborhoods. In fact, in some areas, they can stay up all year. If you have to take them down, put up and disguise a thin insulated wire where they were strung. To use the Christmas lights as an antenna, just short the hot and neutral of the Christmas lights together and connect them to the dummy load center conductor (see photos B and C). There should be no coax between the dummy load and your "antenna" (photo D). And no, the lights (LED or incandescent) will not light up and give you away. If you have an extension cord in series with the Christmas lights, make it part of the antenna, too. Just try to keep it off the ground. If the dummy load has to live outside, protect it against the weather.

I spoke to a local ham who is "Ham

Strung" in an apartment and told him that I guarantee he will make more contacts with this method than he will with his transceiver squirreled away in his closet!

I don't know whether the QRP community would consider this method QRP, but they should at least consider it a "type" of QRP. Ron, K7RJ, after reading a draft of this article, noted "... but the idea of putting a load out there so the transmitter is always happy and just living with whatever drizzles to the wire is great." Maybe users of this method could be called "Drizzlers" rather than QRPers.

I encourage CC&R and HOA-restricted hams and the rest of you to give this

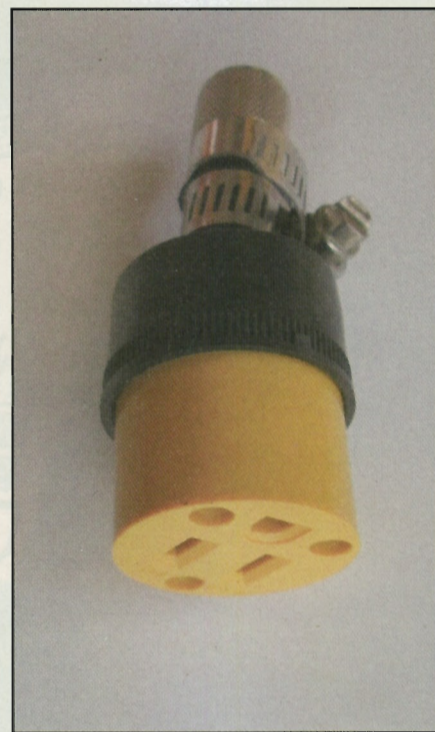


Photo C— Once the adapter is put together, just plug the lights into one side and connect the PL-259 end to the coax tee (see photo D).

a try and let CQ's QRP Editor Cam Hartford, N6GA, know via e-mail at <qrp@cq-amateur-radio.com>. Pass on the "100-Watt QRP" word.

Note

1. QST, November 1984, pp. 53 & 54.



Photo D— The Christmas light adapter connected to the coax tee at the dummy load. Note that the lights are plugged in directly with no additional feedline.