

# The Radio Hotel - The Illusive Wet Noodle and 200 Degrees

by Rick Hiller – W5RH

## The Illusive Wet Noodle

We've all heard them. Those catch phrases, similes and metaphors, addressing various areas of our lives....Better than sliced bread, slicker than s--t [etf], faster than a speeding bullet, busy as a bee, like a knife thru butter and others. In Ham Radio ours is "the Wet Noodle". You hear the Old Timers say, "...years ago, when 10 Meters was open, you'd just throw up a wet noodle and work the world". Then they'd add... "on 5 watts". I wish we had those times now HI.

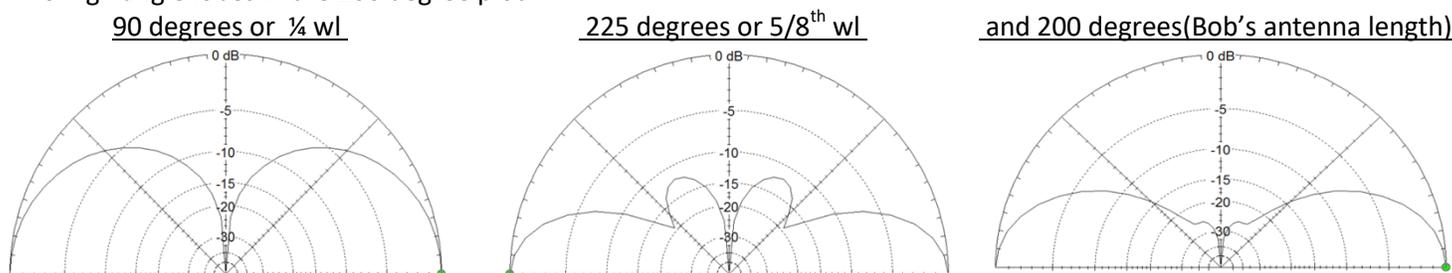
OK, propagation was great back then, but a wet noodle? Why a 'wet' noodle? Why not a dry noodle? And is it wet with water or chicken broth or tomato sauce, even better yet, maybe, salt water for better conductivity. What pasta is best shape for the noodle? Rigatoni, manicotti, spaghetti? All cut to the proper length, of course. What type of pasta flour makes the best pasta antenna material? Checking my local grocery store shelf I found semolina and rice flour based, egg based and also gluten free flour pasta products.

So, just what is a Wet Noodle antenna? A QST Search back to 1915 shows up blank and a Google search shows a few references, but all to the same item on QRZ. You see, some Ham wrote about it on the internet in that he did try and use a vertical made of a wet noodle and he was successful in hitting a local repeater, but he was also successful in hitting that repeater by touching his finger to the SMA jack on the top of the rig. So, nothing magical about the wet noodle from that story. No other anecdotal evidence was found. Also, BTW, EZNEC does not come with an example Wet Noodle model.

Unfortunately, in summary, it seems that from what I have found, the wet noodle will remain illusive, along with hunting Snipes, left handed smoke shifters, Sasquatch, Nessie and Jackalopes. My guess is that the Wet Noodle Antenna was an invention of, the infamous, Larson E. Rapp, W1OU, of Kippering-On-The-Charles, CT. It kind of fits in with his other inventions and ideas. [Goggle "Larson E. Rapp"...K5HM's nemesis.]

## 200 Degrees

Not a wet noodle, but a real antenna of 200 electrical degrees of vertical metal. OK, so what is so magical about 200 electrical degrees? In vertical antennas it is the magic number of electrical degrees that produces the lowest radiation lobe and most gain out of a vertical without, and here is the kicker, without producing any other high angle lobes. Everybody knows the 1/4 wave vertical, or 90 electrical degrees, and the pattern it produces and we all know of the quite common 5/8<sup>th</sup> wavelength mobile "gain" antenna or 225 degrees electrical. At the iHOP breakfast awhile back, Bob Stroupe, WB5JWN, one of our resident commercial broadcast engineers, corrected me in a statement that I had made. I stated that the 5/8<sup>th</sup> wl antenna was the most gain you could get out of a linear wire. Bob corrected that to 200 degrees. Showing this, below, are 3 vertical pattern pictures from EZNEC over "perfect ground". Note that there are no high angle lobes in the 200 degree plot.



5/8<sup>th</sup> wl is easy to match, as it requires only xL (a coil) to do so, hence its use in mobile set ups. The 200 degree vertical is used in commercial broadcast. Perfect ground is approached with a very extensive and efficient radial system required by the FCC of all AM broadcast stations, as their goal is a very strong ground wave for local reception.

Note: The full "200 Degree" article and gain patterns are on the BVARC web site "Tech Articles" page.

Enjoy your hobby. 73...Rick – W5RH

Next time.... Where the Rubber Meets the Road