



## RTC-TH EmComm: A humorous-Lee and Serious-Lee Considered Antenna Report

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*My dreams revolved around Sparky, the Batt-mobile.*

In spite of what I had heard about “size doesn’t matter”, the truth is it really does when it comes to antennas. So I went about looking for the biggest antenna around, and I found it not too far away at Wat Sop Yao. But you see the proportions and limits when put it on Sparky (see photo on right).

As you can see, as big as this tower is, using it with Sparky would be a bit ungainly and the asymmetry of it all makes it look like we are trying a bit too hard. And on a more practical note, you can see from the nearby power pole, vertical clearance becomes a major issue, and a tip up alternative didn’t seem to be in the cards.

Well, the tower near the temple was “way over the top” quite literally. I’m reasonable and able to compromise. So I went looking for something a bit smaller or “less tall”. Luckily I found something not too far away. However, it was a guyed tower design which I hoped to avoid. Still, overall it seemed a better proportional size than the previous free standing tower.

Even when not considering the number of

Shortly after Mark got me into Ham radio, he took on the burden of being my Elmer. From the start, 2 things stuck in my head from his early admonitions: 1) Ham radio is all about experimenting. You will find there’s a lot of theory and opinions about what does and doesn’t work. But in the end, reality has a way of proving the impossible can work even if we don’t know how or why. 2) It’s all about antennas. The best equipment and set up in the world won’t do a bit of good if you have a lousy antenna.



The antenna was big and tall; too big and too tall.



guy lines to maintain, it was obvious the height issue was still there. We couldn't even get out of the drive way without running into overhead lines! No, this was not going to work either. (See photo at the left.)

OK, it was obvious by now that a more conventional antenna would have to do. So I turned to the traditional mobile whip. I tried mounting a Kenji center-loaded DP 2



This guyed tower model seemed a better fit, but... CLE on a bracket at the right front corner of the roof. This looked pretty good (see photo below). But a serious problem came when trying to park in the covered garage. Farther back into the garage is an even lower door frame leading to Sparky's final parking spot. The antenna whip was too stiff and I was afraid of damaging the antenna by having it hit the door sill or by putting excessive wear on the fittings by attaching and detaching it every time I went in or out of the garage. The Tram 1150 with its NMO magnetic mount encountered the same problem as the Kenji. The Tram 1150 could be



*The Kenji DP 2C: too tall*



*The Tram 1150 mag mount: too tall*



*The "button" mag mount: OK*



mounted / dismounted each time, but the magnet has a fairly hefty pull on it. The only mobile VHF antenna that allows for a simple “pull out / pull in parking” was a  $\frac{1}{4}$  wave button magnet mount. Such is the reality of life. So I opted for the ease and convenience of just putting the  $\frac{1}{4}$  wave button mag mount on and leaving it. This way I don't have to bother mounting and dismounting the VHF mobile antenna.

Making do and living with the  $\frac{1}{4}$  wave button mag mount was the path of least resistance. Other alternatives (e.g. building a garage with 3.5 m vertical clearance) would be costly especially considering we have 2 or 3 possible garaging / operating locations

When roving, additional “reach out and touch someone” performance is available in our stop ‘n park mode to set up either the Slingshot beam or the 450 window line Slim Jim on the portable push up masts. I figure if the extended range is that important, then the 10-15 minutes to set up the temporary push up masts is justifiable.



*The Slingshot beam at max mast height: tip of elements is 5.16 m AGL; feed point at 3.86m AGL.*



*The 450 Window Line Slim Jim at max mast height: tip of antenna at 5.85m AGL; feed point at 4.35m AGL.*

In the works is a plan to interface our ICOM 2200T mobile rig with our dedicated EchoLink computer in SysOp Link mode. While roving in the local area, we could contact our EchoLink station, and if the internet is working, extend the reach of Sparky's HT to the world with just the  $\frac{1}{4}$  wave button mag mount!

To get optimum flexibility and utility from the limited number of radios we have, we designed and intalled the base station antennas at the town location with easy access for

Sparky or Sam. The antenna feed lines go to a secured weatherized enclosure at ground level for the station Ground Bus. The enclosure is in easy reach of a parking position for Sparky and/or Sam. The antenna feed lines from the antennas connect to ICE lightning arrestors. If the HF or VHF mobile rig is mounted in Sparky, it is easy to connect the jumper from the ICE unit to the vehicle antenna switch. The town station has a multiband Diamond CP6 (left in photo) and a the ICOM 2200T could use the Spectral Isopole 144



*Out town location antennas: Diamond CP^ (left), Spectral Isopole 144 (right).*

for VHF (on right in the photo).

The farm station will be located in a steel container which was recently moved into place. It will have a similar ground ring and station bus as the town station so any radios in Sparky or Sam can use the farm antennas. There is no phone line connection available at this time so high speed internet is not possible.



*The farm "shack" will be this container.*

The container will also function as the farm office, weather station as well as ham shack. The antenna plan for the farm station is in development. At this time, we are thinking of making a tip up mast that support weather station sensors, an Arrow J-Pole VHF antenna and have cross arms with halyards to hoist various HF wire antennas. The actual mast may be patterned on the 12-15 m tall unguyed tip up flag poles seen in front of many government buildings and schools. Until the farm station antennas are installed, Sparky can use the portable push up masts to mount its own selection of optional antennas. 🌐