Packaging your Station

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Coax loss is a problem at 2.4ghz. If you have a high gain antenna but need 30' of coax to get from your AP or Router to the antenna, you just lost a bunch of gain. The problem occurs in both directions. Loss of transmitted power means less to hear on the other end. Your unit also went partially deaf by the coax loss between the signals the antenna heard and what actually gets to the AP or router.

 You can eliminate this problem by using short jumpers and keeping the AP or router near the antenna. This requires two things. You have to power the network device (and any booster amp you might be using) and you need to get a CAT5 patch cord back to the computer. If the devices are put in a weatherproof box, **POE** (power over Ethernet) can be used to both talk to and power the remote box. This allows you to set the antenna out, have the box with the antenna and you up to 100 meters away. 328' is quite a bit and seldom proves to be a limiting factor.

 If you will be operating portable, consider the tripod or mount you will use. Ease of setup, size when folded for transport and resistance to shaking in the wind will all matter. If you can create an attachment method that lets you install the antenna on the mount without putting together lots of small parts, setup, takedown and transport will all be easier and less parts will get lost along the way.

 Wind loading must be considered. A flat panel antenna mounts close to the boom and isn't too much of a sail. A wire mesh reflector or solid dish mounts further away, sags more and catches more wind. Watch for deflection of your mount as you release the weight of the antenna. If it sags very much, the wind is also likely to move it around. Counterweights help a lot if deflection is a problem. You can limit some of the moving around with bungee cords or pre-stress wires/strings. Remember, the higher the gain on the antenna, the more critical the pointing accuracy and stability becomes.