

The 160m Inverted-L Story

Before you start you have to have the right tools ready.

The variable capacitor has 3 segments, each 16-365 pF. Two of its segments are tied together. This gives me the flexibility of having 16-365 pF, 32-730 pF, or 48-1095 pF.

The RigExpert AA-54 is useful for evaluating the parameters of the antenna.



The Spiderbeam RF-Choke shown here is not an official Spiderbeam product, but was made using standard components available in the Spiderbeam Online Shop.

The terminal on the right connects to the internal toroid choke. The terminal on the left is a dummy. This enables you to connect the antenna to the dummy and feed it thru an external capacitor to the choke.

The cable shoes accept a 6mm wire, but also provide a snug fit for a banana plug.

For tuning purposes, two dummy cable shoes are used for attaching the variable capacitor. Later they will be replaced by the fixed capacitor which also uses this type of cable shoe.

The two side lugs are for connecting radials. In this case only one was used.

The finished product:

This box was designed for rapid deployment. All hardware is stainless steel (V2A). Wing nuts are used, thus eliminating the need for a wrench (spanner).

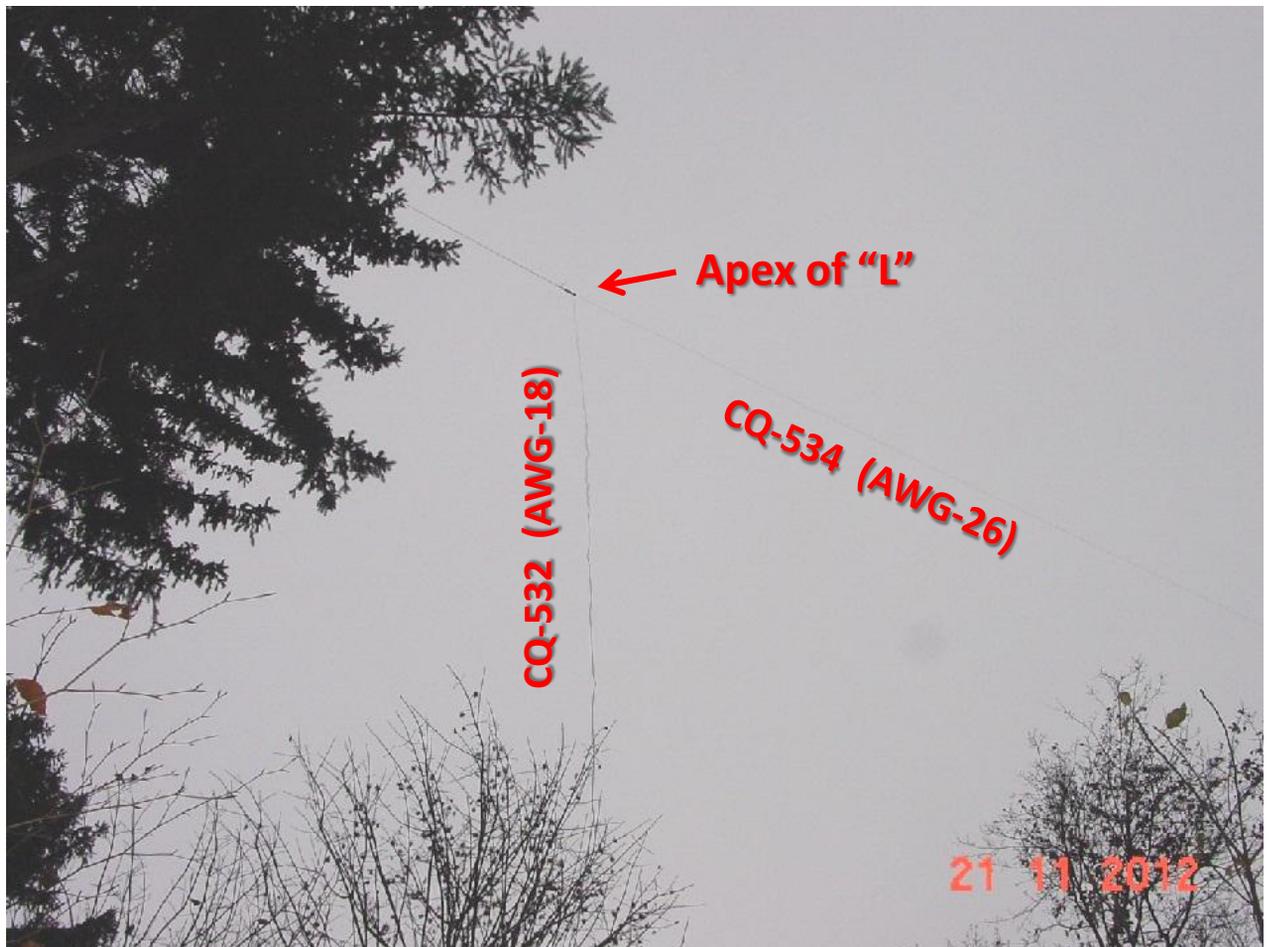
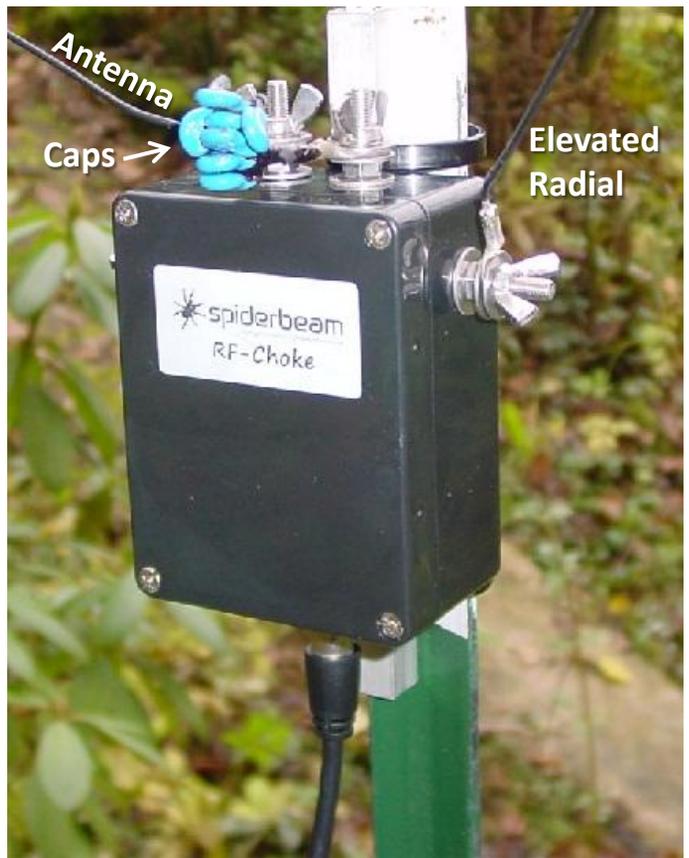
Whenever I use more radials, I simply insert 2 or 4 radials in each cable shoe. If even more are used, you can connect multiple cable shoes to each side.

For this installation, I only used one elevated radial. I only had room in one direction.

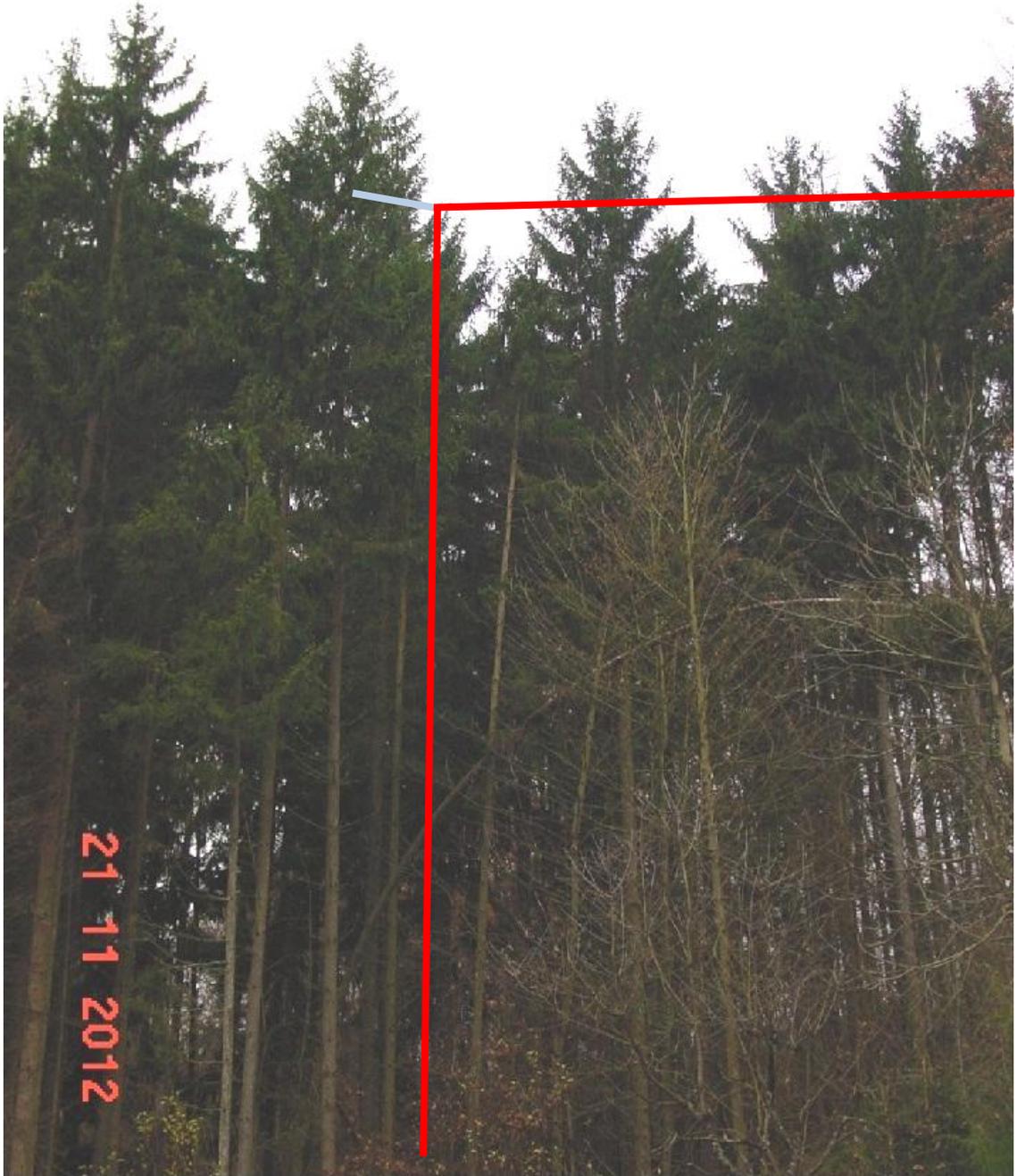
The elevated radial and the vertical segment of the antenna were made using CQ-532 stranded Copperweld wire.

The horizontal segment was made using thin CQ-534 wire, to reduce weight. It is almost invisible from the ground.

100m of AIRCEL7 coax was required for reaching the shack.



A view from the ground with the antenna artificially drawn in; otherwise you cannot see it.



The apex is approximately 17m high. The RF-Choke is about 1.5m off the ground. The elevated radial runs straight into the woods, in the direction your are looking, at a height of between 2 and 3 meters. It zigzags a little.

UP THE HILL



View from below, looking up the hill. The wire is always at least 10m above the ground and clears all trees as it goes up the hill.

Piss-Poor Prior Planning . . .

The wire was erected in the cold, in the rain, together with Hartmut, DJ1AT. I think our brains were not running at the proper temperature.

Unfortunately we cut the wire about 5m too long, thinking we would shorten it later during the tuning process - normally a good thing to do. As it turns out, I spent over 3 hours just fishing the wire out of various limbs and branches. No way I'm gonna take it down again to shorten it. As a result, the SWR is only 1.8:1 at resonance. Normally it should have been under 1.5:1.