

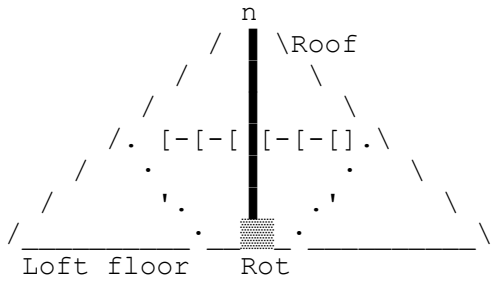
Growing Loft to Roof Aerials

By G8MNY

(New Nov 09)

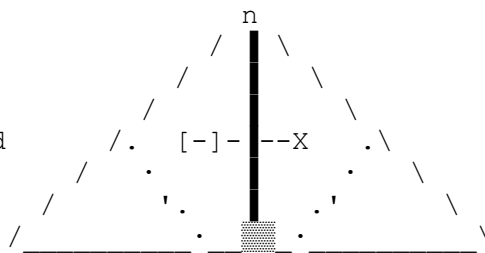
(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

When I started AR in 1977 as a VHF & above ham, I used a loft aerial system that grew & grew.

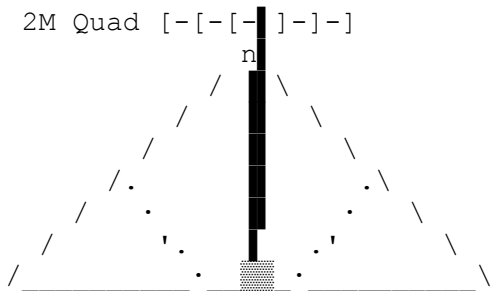


I put a pole loft floor to roof & eventually I found I had enough space to fit a homebrew 6 el 2m quad. The vertical pole with a rotator at the bottom meant lots of experimenting was possible.

For vertical polarisation & working satellites I put a horizontal broom handle on the pole & ganged the 2m quad with 70cm 46 element multibeam.

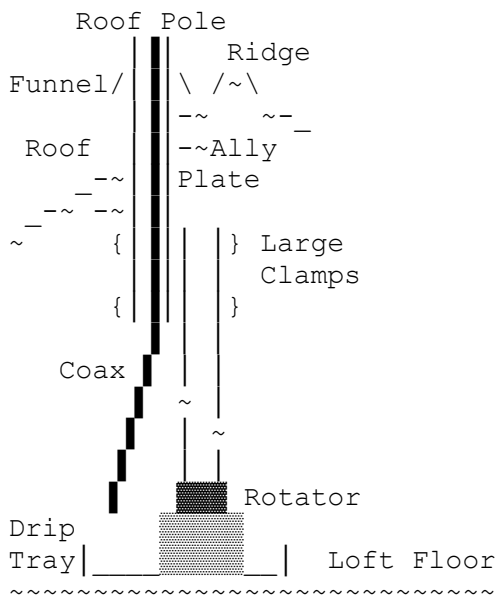


There was quite a bit RF loss through the roof so I decided to grow the pole & pushed it out through the roof.



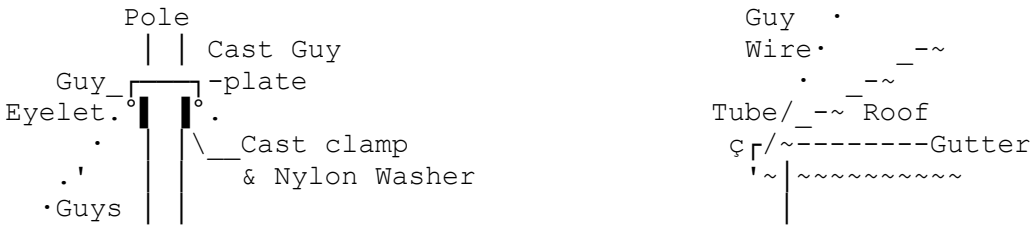
As you see I put the extension 16ft pole alongside with large clamps. The roof hole goes through a sheet of ally with an oval hole in it, so the pole side forces are not taken by the drilled tile hole. The coax down the roof tube is free to do what it needs to rotate. The 2" offset eccentricity is irrelevant on the loft pole & rotator.

For water proofing, I put a large beer funnel on the pole above the hole & also placed the rotator in a large drip tray to catch the leaks.



To my surprise I did not have any complaints from the neighbours or planners with the outside aerial! (would not be true today!)

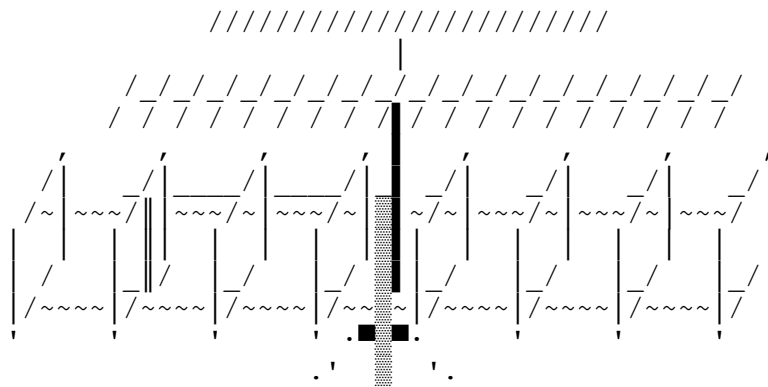
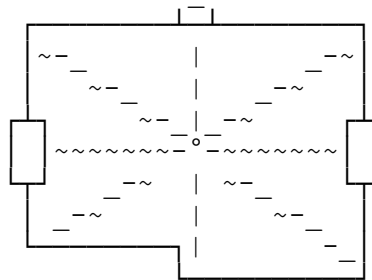
Later I lifted it as high as I dare (moving the funnel down), but I noticed some swaying in windy Wx. So I then designed & added some guys on a top bearing.



These plastic covered steel guy wires are anchored on the 4 corners of the house with a 7mm dia plastic covered flexible thin ally low pressure tube. The wire is threaded through the tube & the tube bent around the masonry to "grab it", this stops any wire chaffing & the wire length can be adjusted a few inches & the ends loosely twisted together to finish off.

Later I found that 4 guys was not enough & the pole folded in a storm.

So I redesigned it to have 8 guys (used chimneys too) & put it up higher with more & larger aerials on it too.



I ended up with a 24el on 23cm for ATV & 19el for 70cm & an 8el 2m homebrew dual boom quad. The 23 & 70cm aerials on stub masts are fed with the large LDF450 coax & that goes down the thin walled 2" 16ft roof pole & it does 2 large turns in the loft space so that the whole lot can easily rotate.

Why don't U send an interesting bul?

73 De John, G8MNY @ GB7CIP