

Build a 10-meter Moxon And Other Bands

w6nbc.com/slides.html

ISES Solar Cycle Sunspot Number Progression

On The Air Magazine





Build a 10-Meter Moxon Antenna

John Portune, W6NBC, and
Jim Bailey, W6OEK

If you have a Technician-class ham license, you have privileges on the 10-meter band. With a basic HF transceiver and this Moxon antenna, you can make contacts around the world. This is a great antenna for taking advantage of the rise of Cycle 25.



The upswing of a solar cycle often offers spectacular worldwide communications on the higher HF bands, especially on 10 meters. Experts conservatively estimate that Cycle 25 will peak in 2025. The sun, however, has been showing early indications of peaking in 2023.

Experienced hams are already enjoying improved propagation on 10 meters and the other top end HF bands as the number of sunspots grows.

Tools and Materials

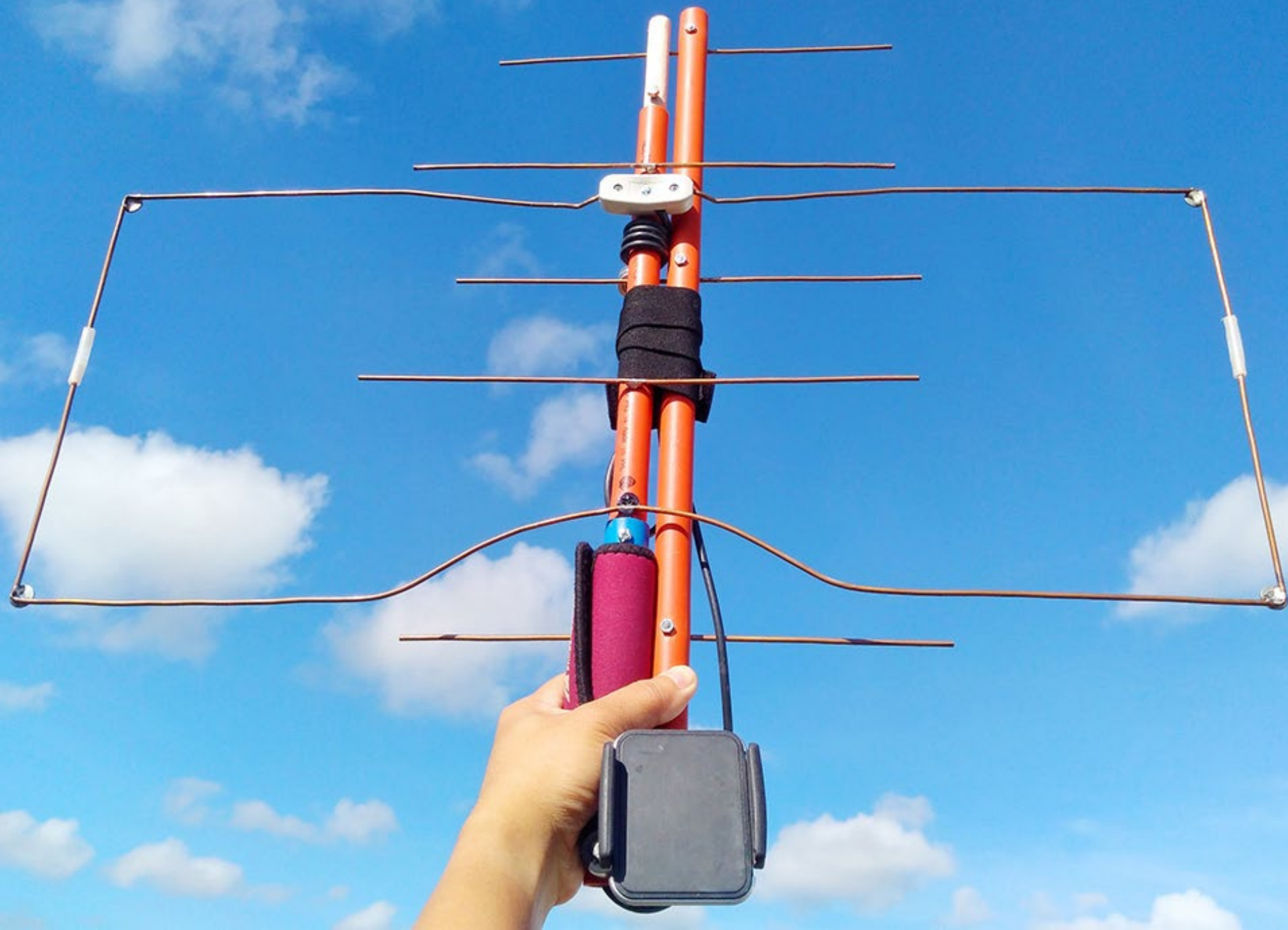
- Hacksaw
- Wire cutter
- Electric drill and bits
- Nut driver (for tightening stainless hose clamps)
- Wrenches
- (4) 48 in. $\frac{3}{4}$ in. pultruded fiberglass tubing
- (4) 48 in. $\frac{1}{2}$ in. pultruded fiberglass tubing
- (4) Small stainless hose clamps, to fit $\frac{1}{2}$ in. fiberglass tubing
- (2) $\frac{7}{8}$ in. OD (0.058 in. wall) aluminum antenna tubing. Alternate: $\frac{3}{4}$ in. EMT

Les A. Moxon G6XN, 1993

"HF Antennas for All Locations"

RSGB ISBN 1-872309-15-1

W2FMI Jerry Sevick (sk 2009)



The UrbanBeam is excellent for use in high density population areas or properties with small lot sizes, where a full-sized Yagi may not be an option. The distinctive shape and small footprint (15.5 sq ft turning radius) of the UrbanBeam helps make neighbors and spouses happier, while still delivering the exceptional results you would expect of a SteppIR Yagi. The UrbanBeam is a high-performance, two element Yagi on 20m-6m and folded dipole on 40-30m. With features such as 180 degree direction change, bi-directional mode and full element retraction for stormy weather. You can enjoy all the features of a SteppIR Yagi while chasing low-sunspot-cycle DX or rag-chewing with your friends!

YAGI URBAN BEAM

GO SMALL

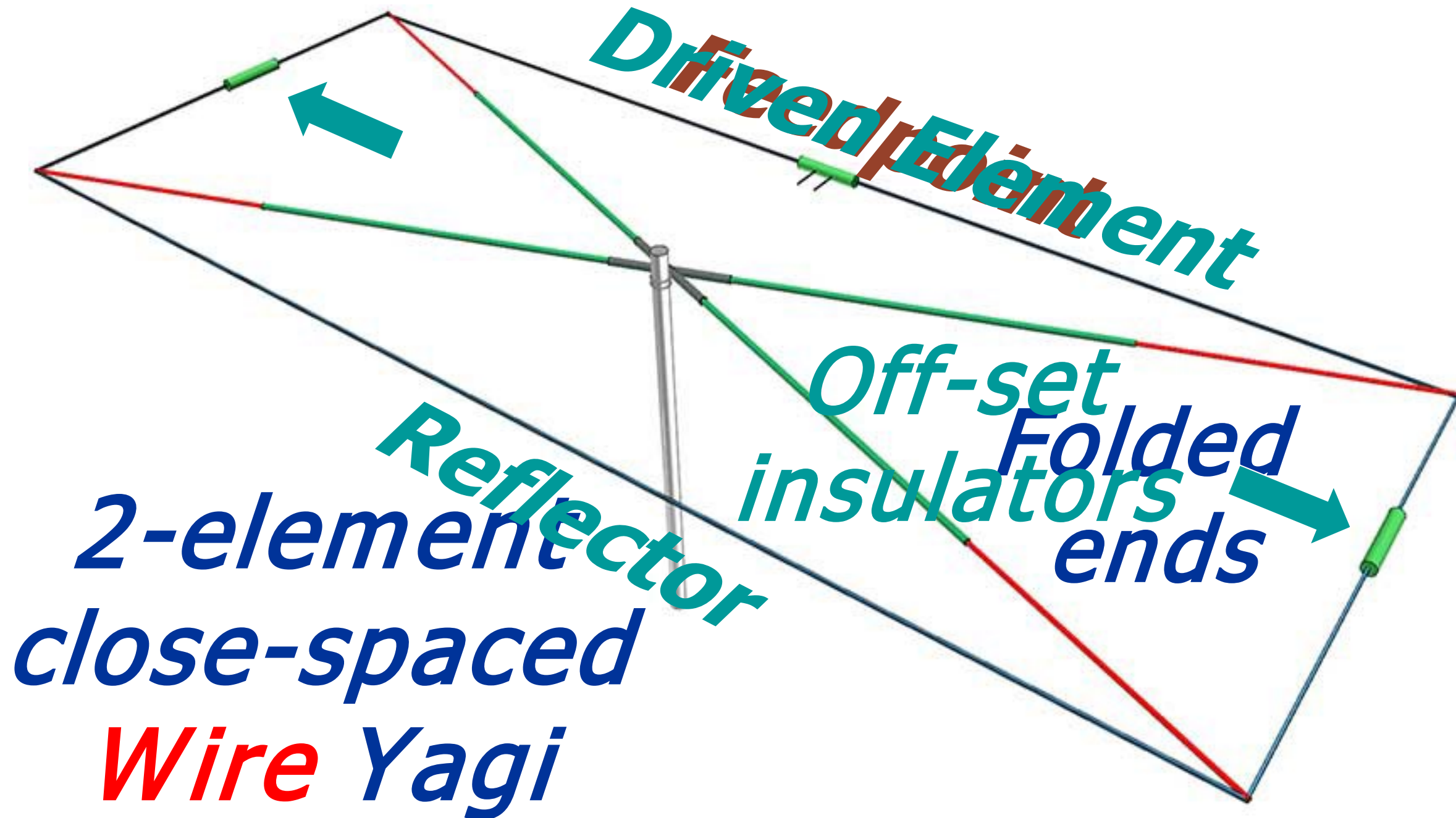


DETAILS & ORDERING:

www.steppir.com

425-453-1910





Driven Element

*Off-set
insulators*

*Folded
ends*

Reflector

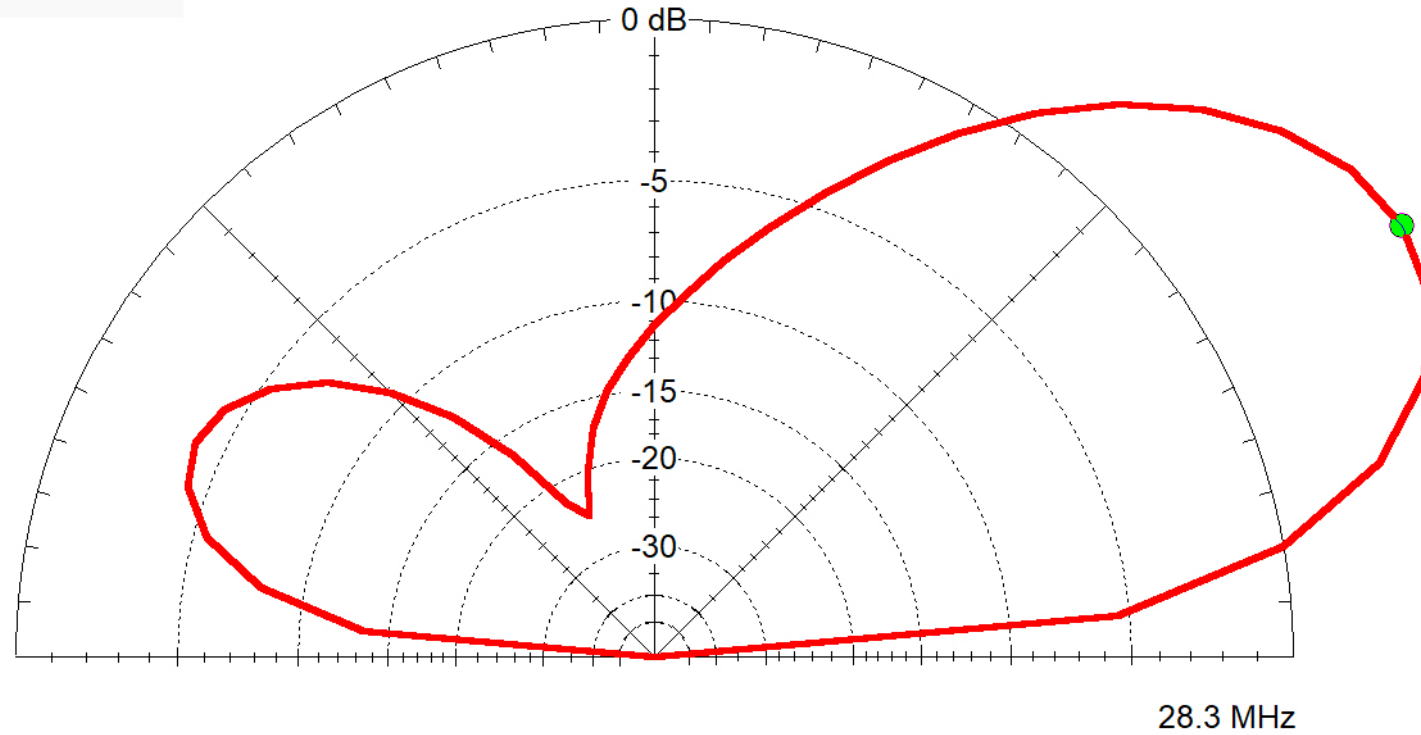
*2-element
close-spaced*

Wire Yagi

10-meter Moxon at 15 ft. ($\lambda/2$)

Total Field

EZNEC Pro/4

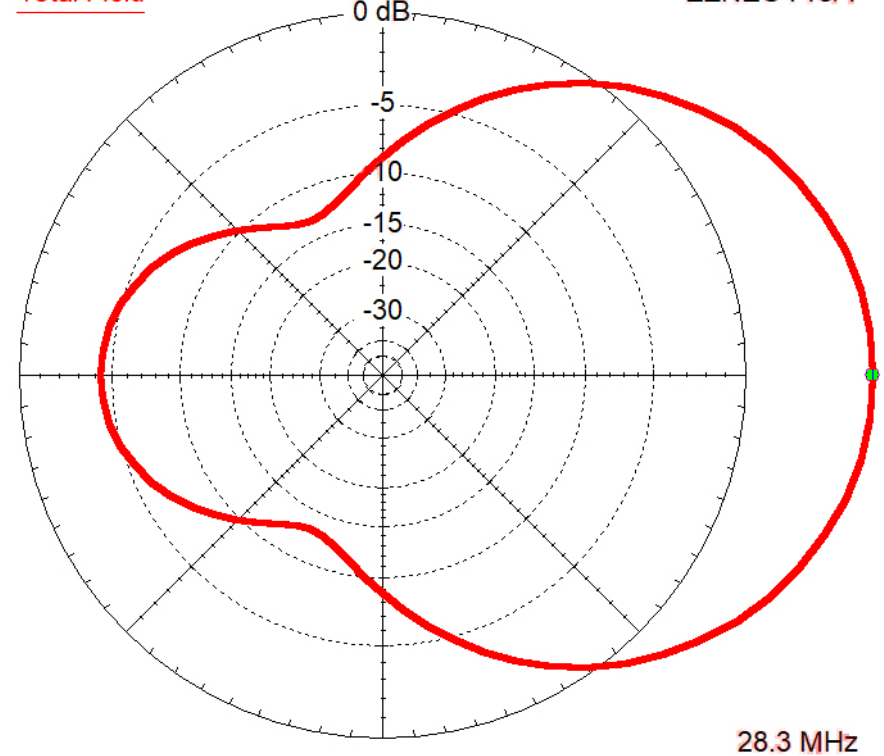


28.3 MHz

Elevation

Total Field

EZNEC Pro/4



28.3 MHz

Azimuth

tippete.net/cgi-bin/moxgen.pl



Moxon Calculator

Frequency in MHz

Wire Diameter

John Simpson, [KG4ZOW](#) [Download source code for this program](#)

Moxon algorithm and diagram are from <http://www.cebik.com/moxon/moxgen.html>

Spider/Hex Beam



FEEDPOINT



$\frac{1}{2}$ & $\frac{3}{4}$ in. x 48 in.
Fiberglass Tubing
4 sets

Hub
Assembly

14 AWG Stranded insulated wire

Adjustable typ.

Hose Clamp Typ.

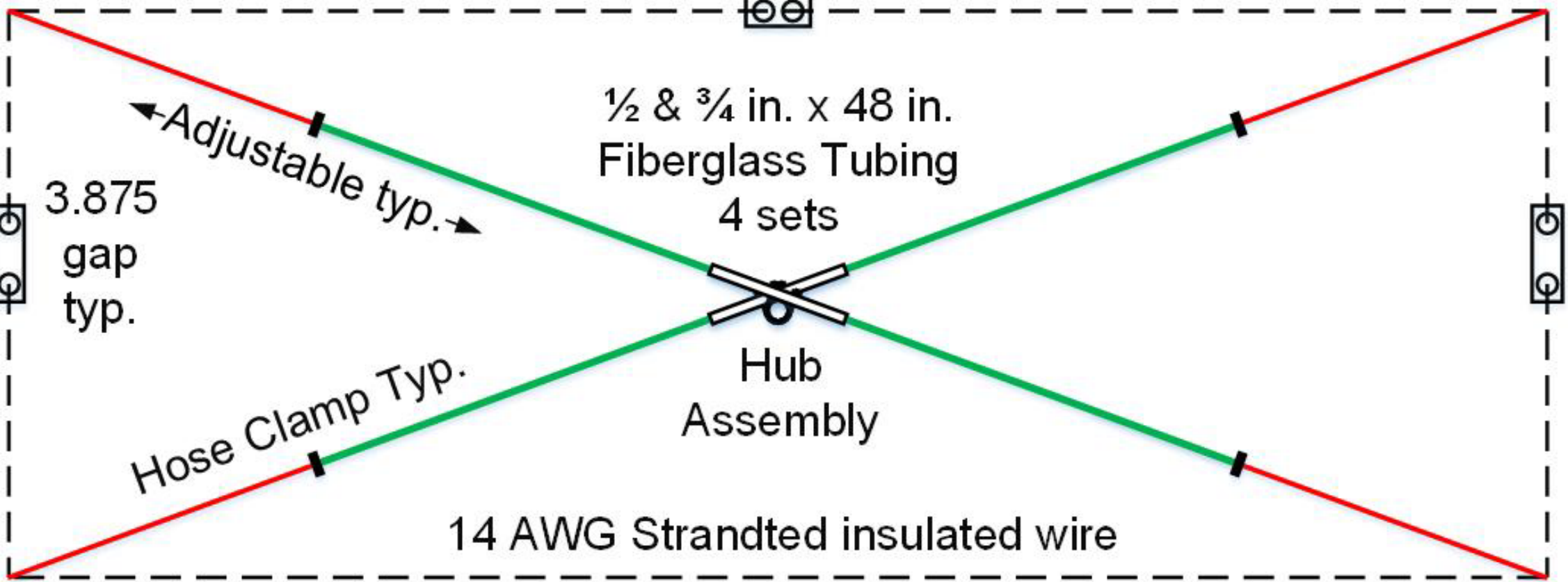
3.875
gap
typ.

143.5

55.625

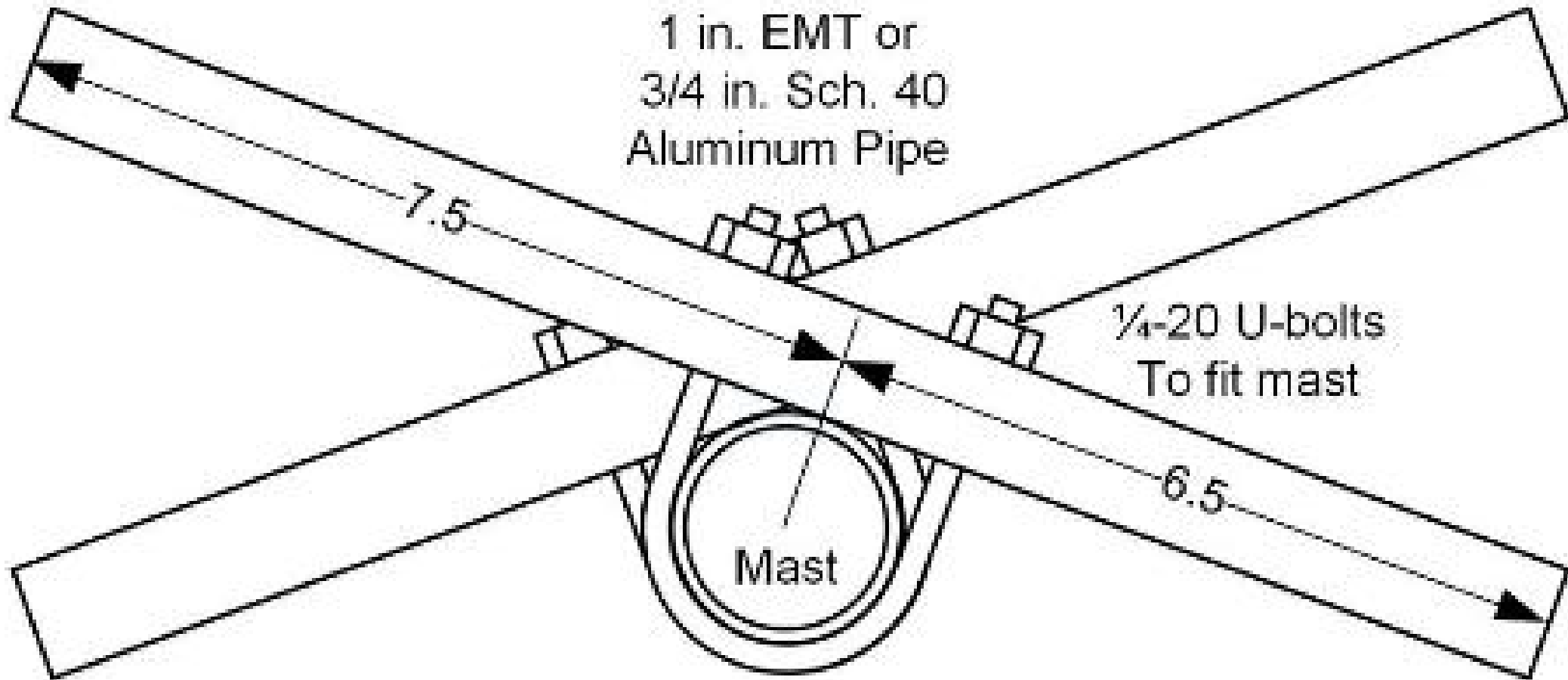
21.5 Typ.

30.25



- **DX Engineering**
- **Max-Gain Systems**
- **Order in 4 ft. lengths – UPS**

Center Hub



Tough: comes right back AI6MC



**Let's
Build One**

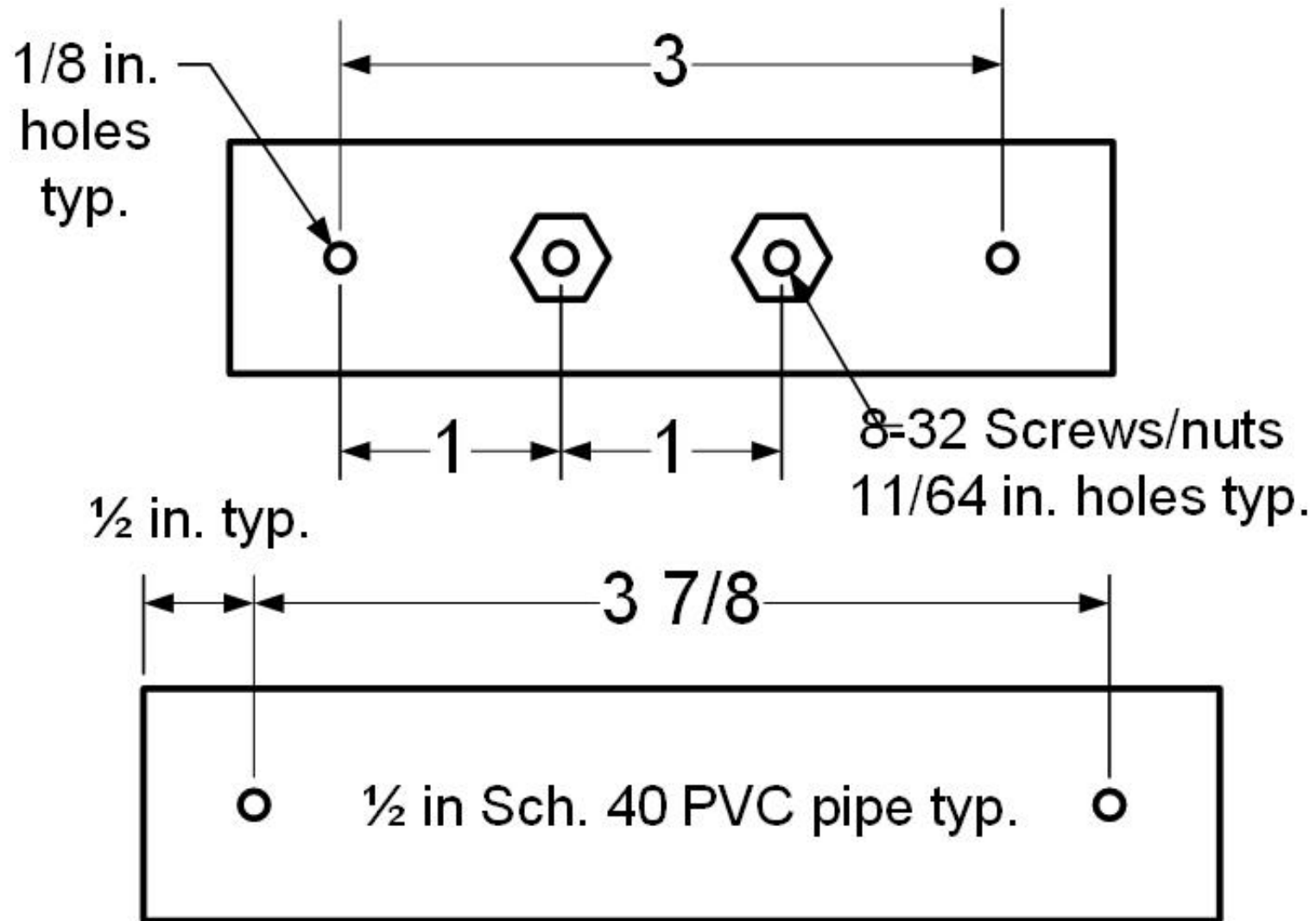
1/2 in. PVC Insulators



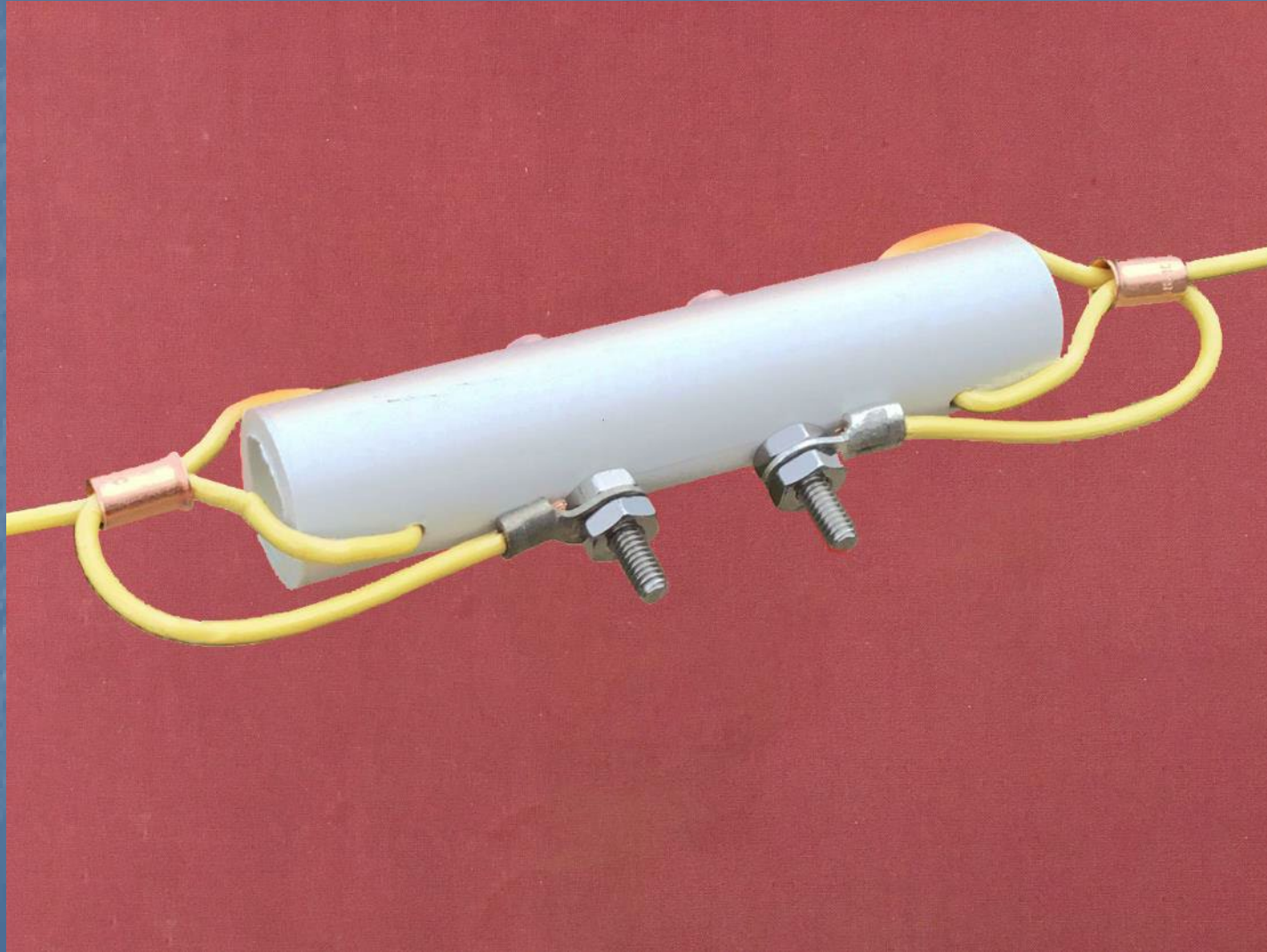
Ends

Feedpoint

Insulators dimensions



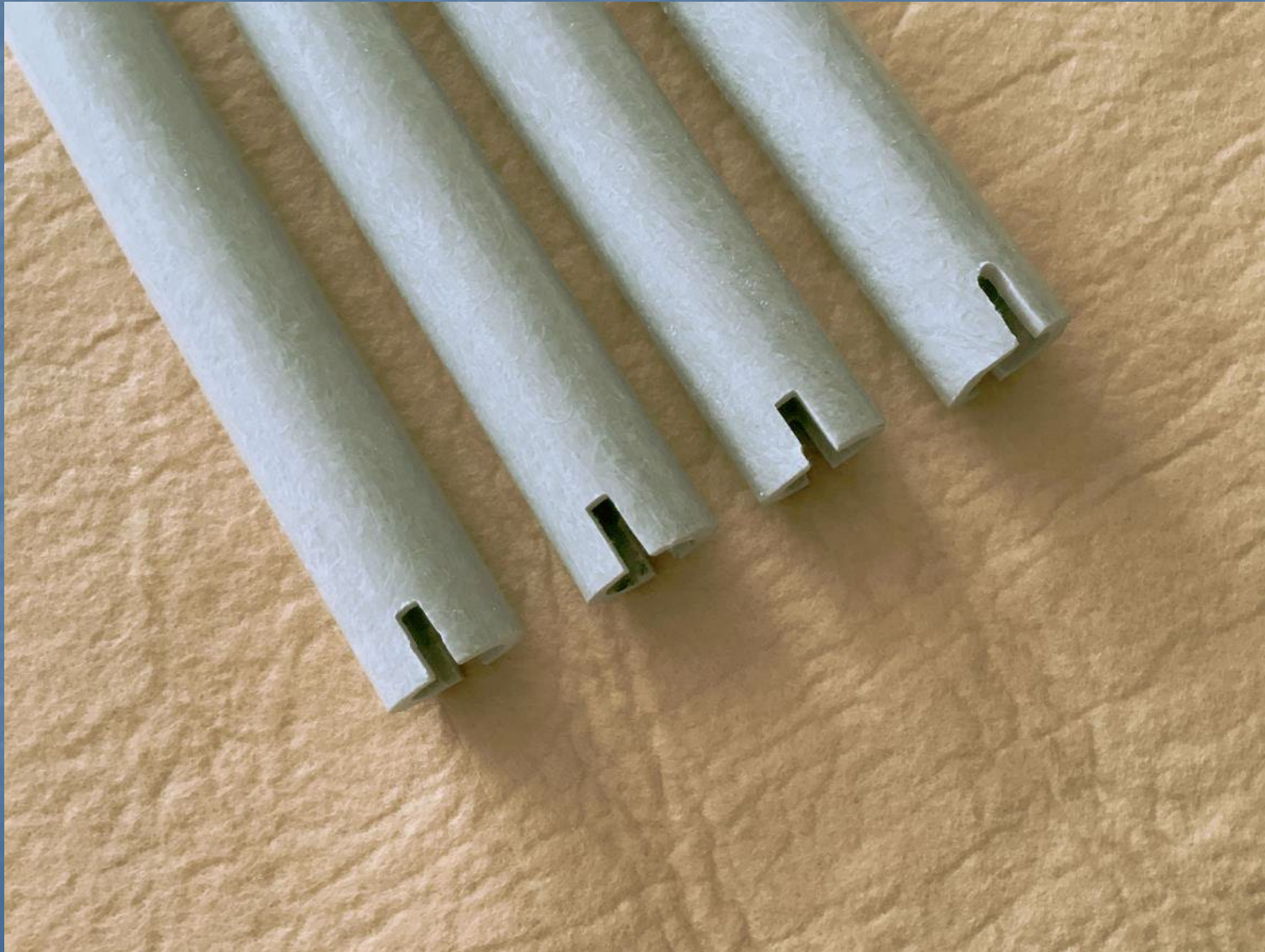
Feedpoint with wires and crimps



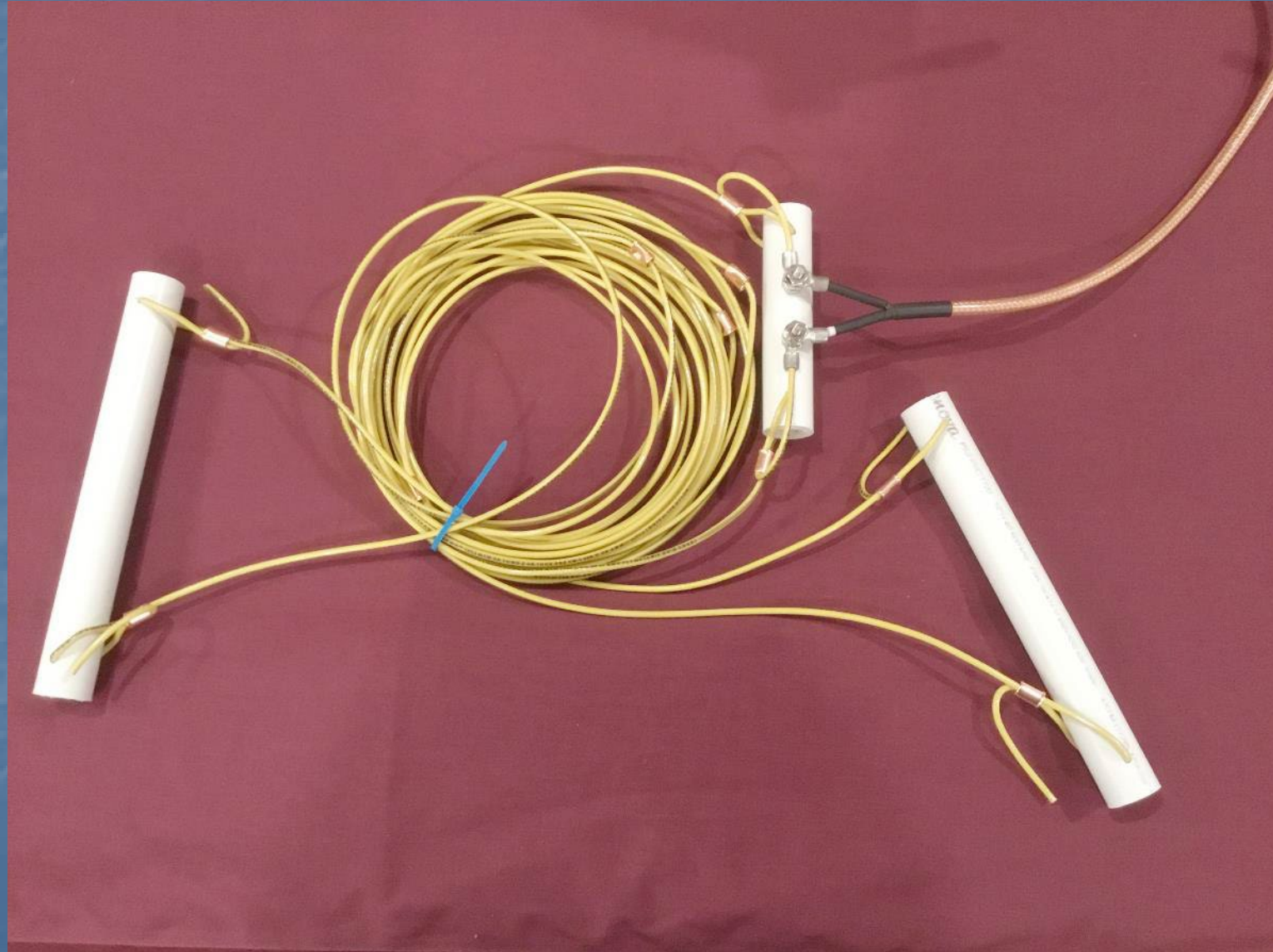
Hub Tubes



Slots in 1/2 in. outer tubes



Assembled antenna

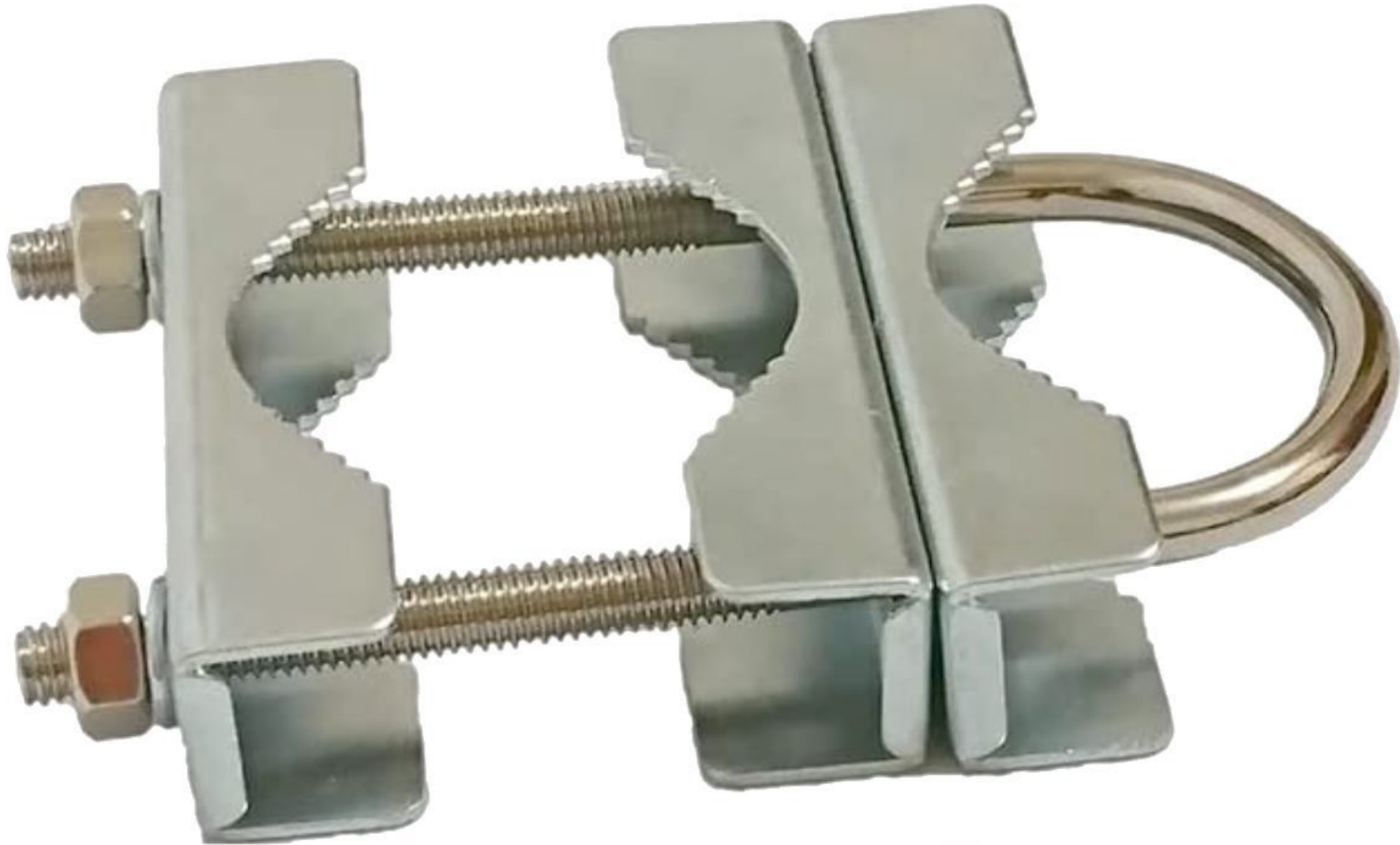


Assemble on temporary mast

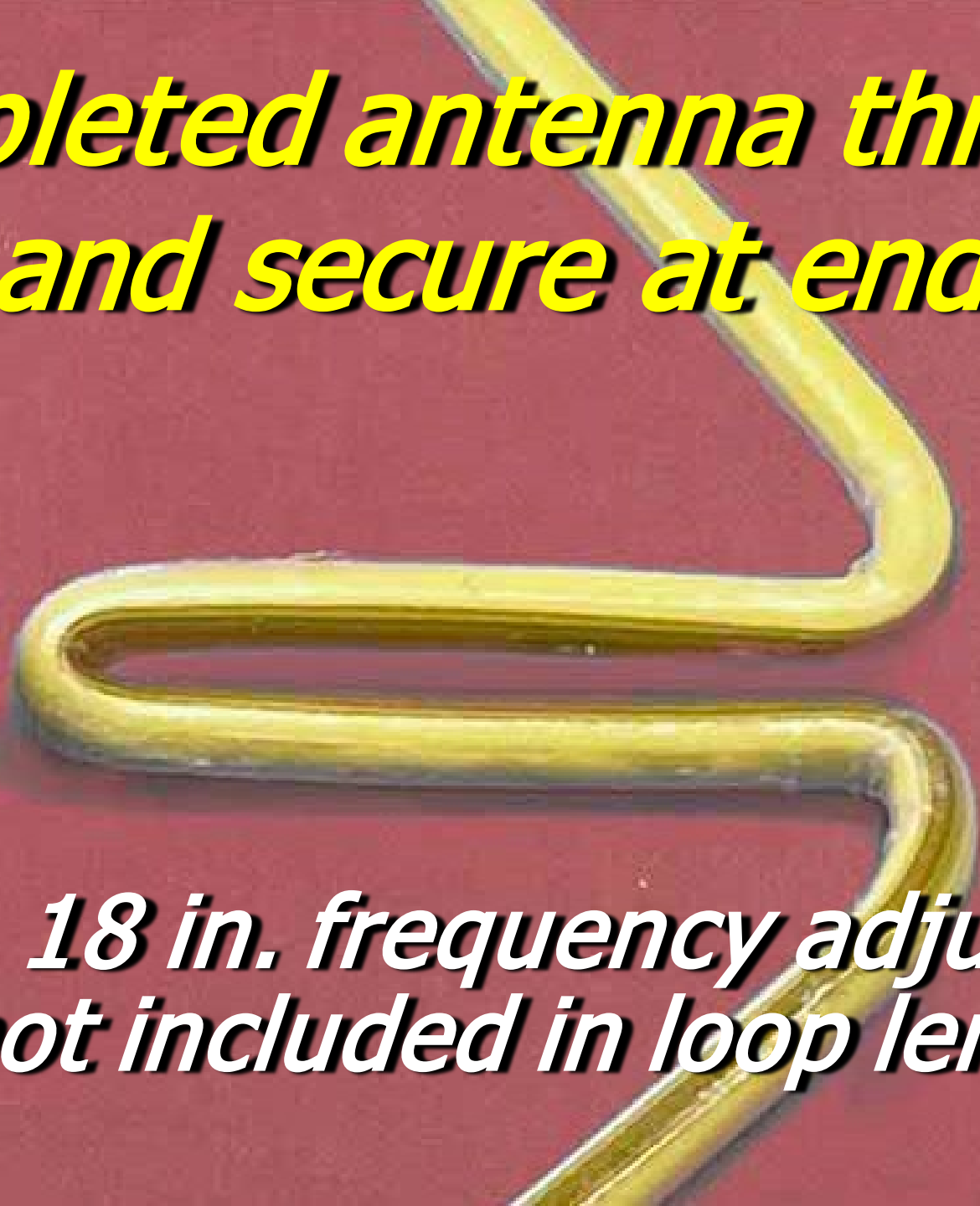


*Short stub can remain
or build on table*

TV Mast Clamp



***String completed antenna thru
spreaders and secure at ends***



***18 in. frequency adjust
not included in loop length***

Tensioning the arms





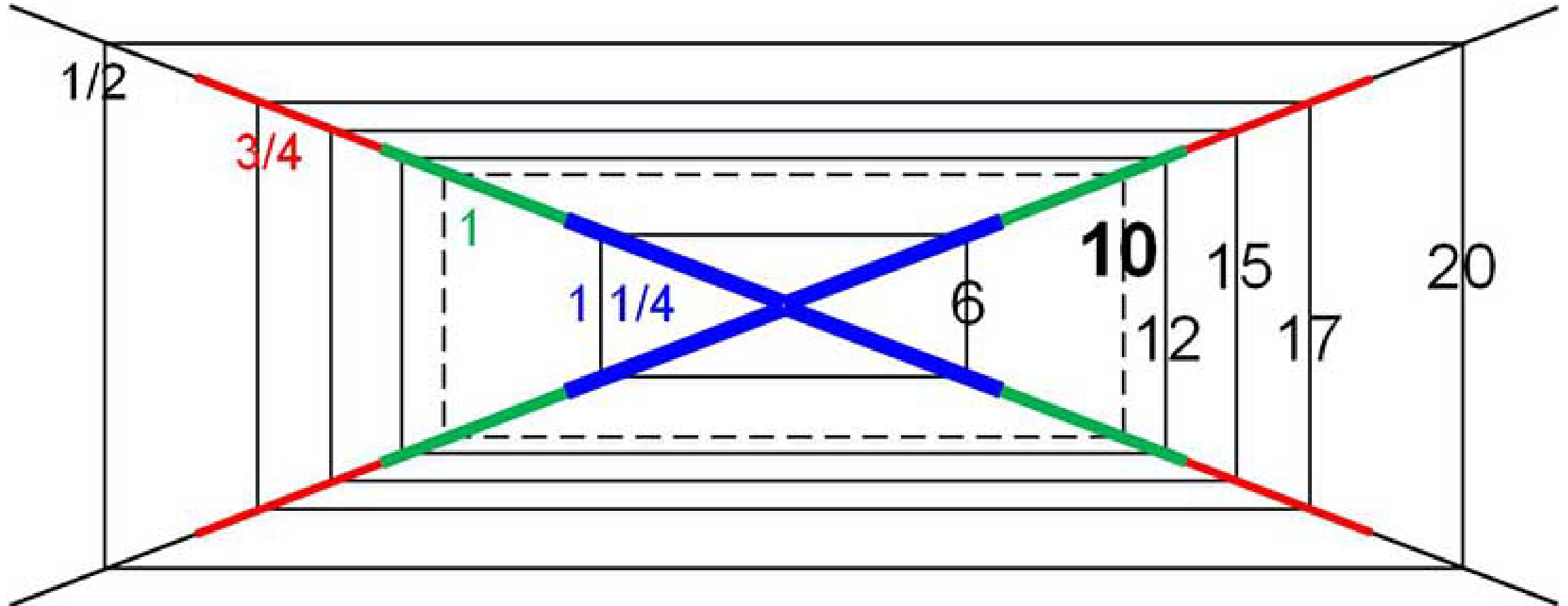
W60EK's Back Yard on Portable Mount



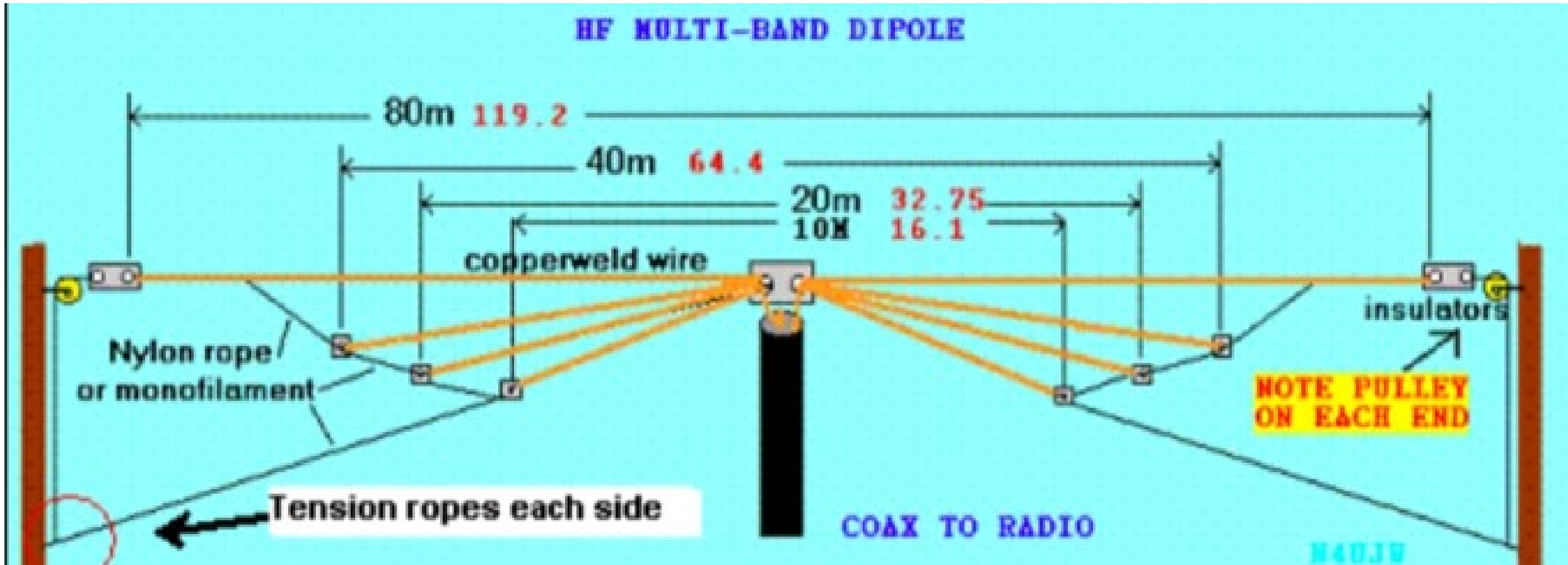
*The same design
For 20, 17, 15, 12*

*Add two new sets
of spreader tubes and
Larger center hub tubes*

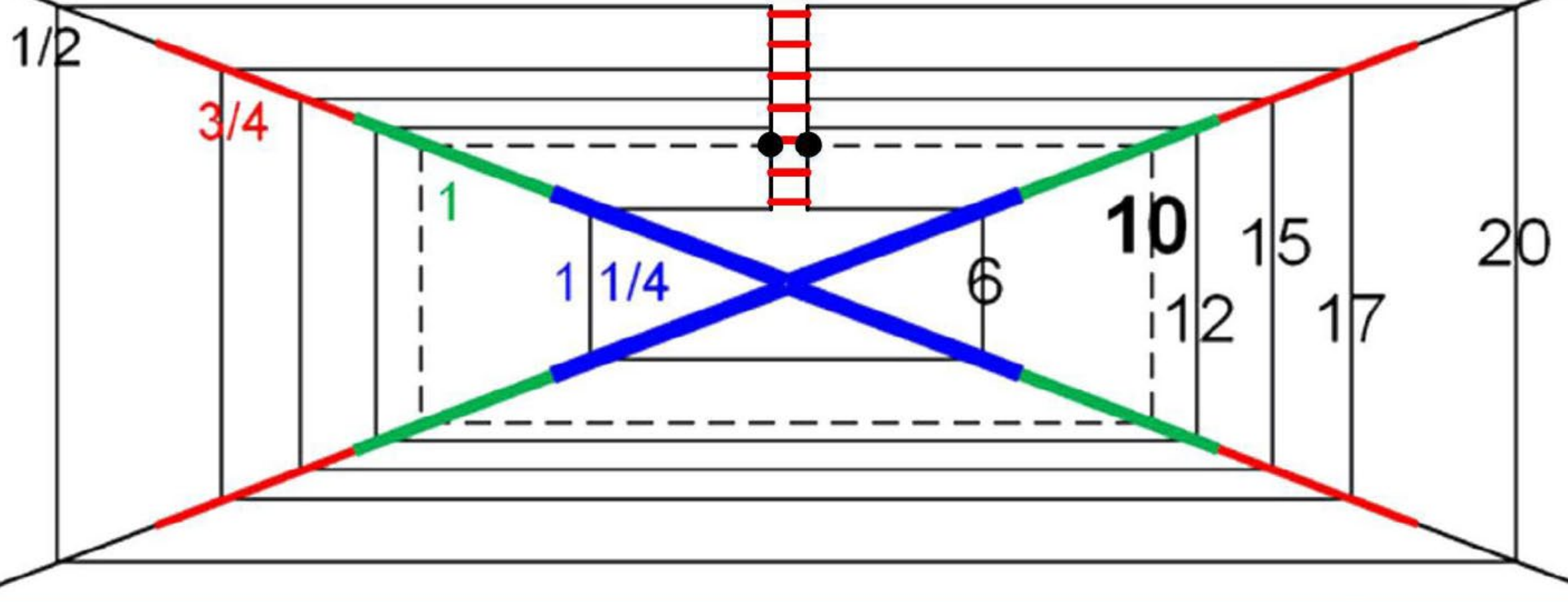
Multiband



Fan Dipole



With 2 Additional Spreader Sets



A photograph of a Dual-Band Moxon antenna installed on a green lawn. The antenna consists of two long, parallel metal rods connected at their ends by a series of thin, diagonal wires, forming a diamond-like shape. A central vertical rod is also present. A black cable with a yellow ring is connected to the central part of the antenna. The background shows a garden with various plants and a white structure.

Dual-Band Moxon



**w6nbcmail@
gmail.com**
w6nbc.com

DØGGY



"That's all Folks!"
w6nbc.com/slides.html

