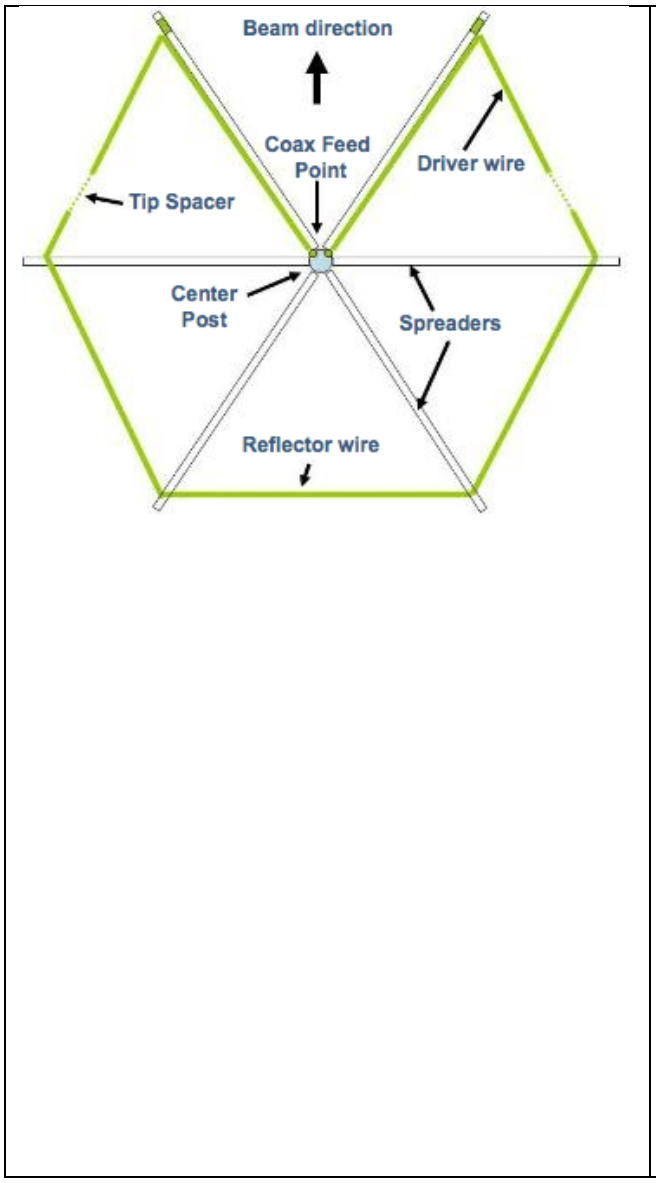
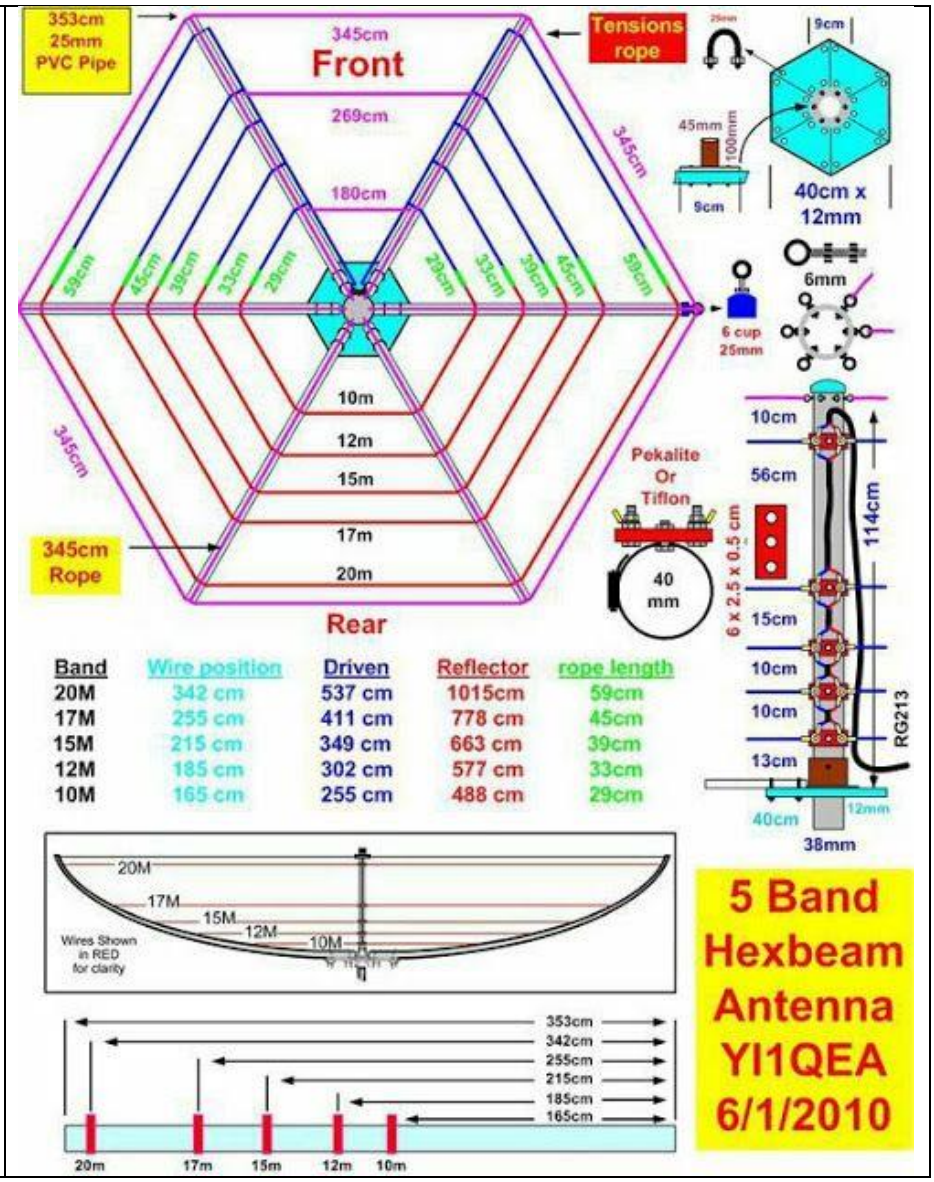
HexBeam Antenna Overview





Dimensions for YI1QEA HB Antenna Converted to Inches and Feet

Dimension	Metric	Inches	Feet
One Arm Width 20m	353 cm	138.8 in	11.58 ft
One Arm Width 10m	163 cm	64.14 in	5.35 ft
Total Width Arm End To Arm End	353 cm x 2 = 706 cm	277.9	23.23 ft
20m Driven (The band I want)	537 cm	211.41 in	17.62 ft
20m Reflector (The band I want)	1012 cm	398.4 in	33.2 ft
17m Driven	411 cm	161 in	13.48 ft
17m Reflector	778 cm	306.2 in	25.51 ft
15m Driven	349 cm	137.40 in	11.45 ft
15m Reflector	663 cm	261.02 in	21.75 ft
12m Driven	302 cm	121.62 in	10.14 ft
12m Reflector	577 cm	227.165 in	18.93 ft
10m Driven (The band I want)	255 cm	11.39 in	8.37 ft
10m Reflector (The band I want)	488 cm	192.126 in	16.01 ft

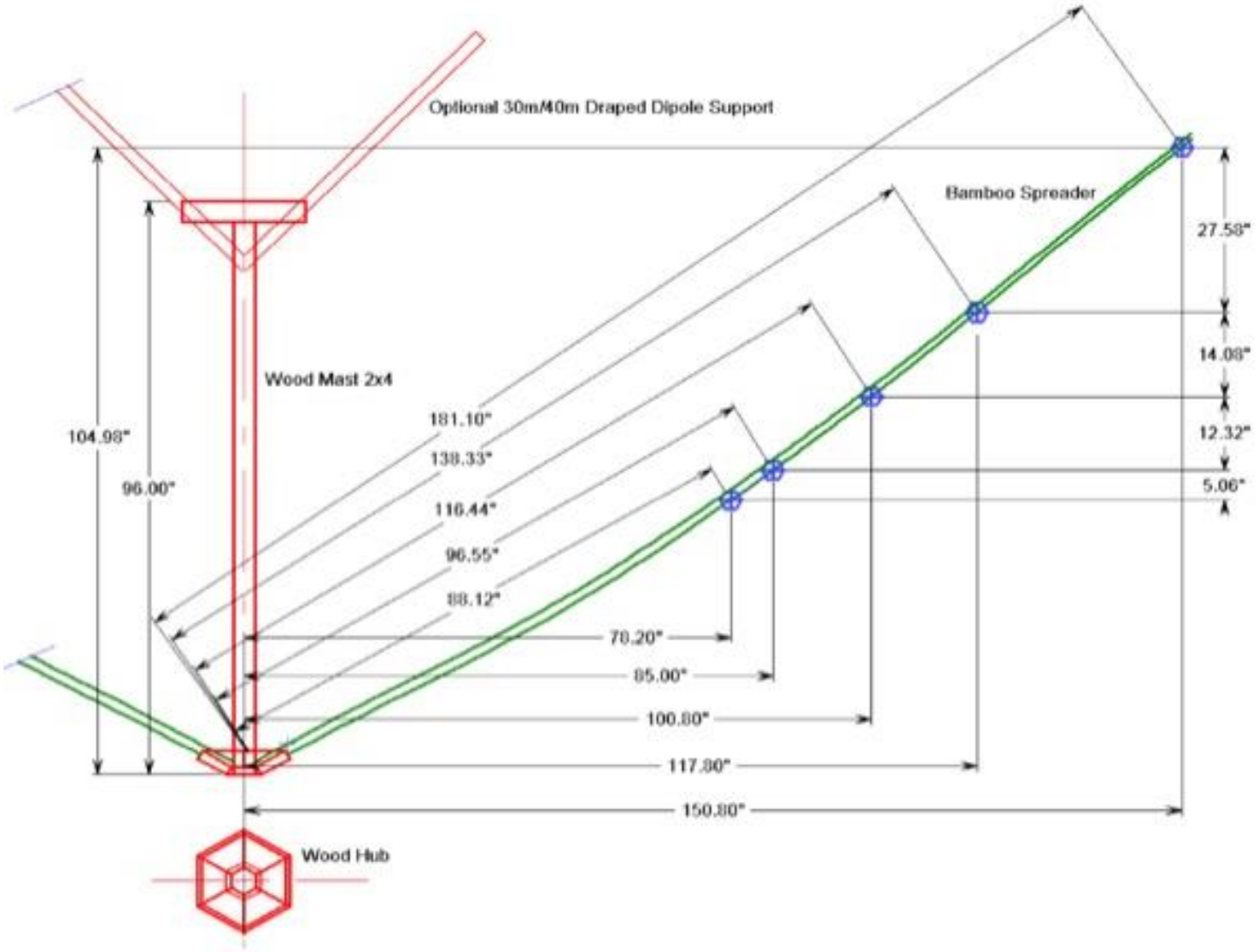
Attributes

- The antenna design resembles a modified Yagi–Uda antenna. It consists of a W-shaped dipole and a reflector. As with the Moxon antenna, the design omits the directors found in a Yagi-Uda.
- Radio amateurs can build the Hexbeam as a multi-band antenna to cover different frequency ranges. Popular combinations cover 20m, 15m and 10m (3 band) and 20m, 17m, 15m, 12m and 10m (5-band) ham radio bands. Hexbeams can also be built for the 40m and 30m bands. The antenna elements for the lowest frequency band are located at the exterior of the antenna.
- When constructing multi-band hexbeams, the vertical spacing of each element is critical, because the elements of a multi-band hexbeam mutually influence each other and if the elements are not parallel, parameters of the antenna may change undesirably.
- Its antenna gain is between 5dBi and 6dBi
- , the forward/reverse attenuation is up to 20 dB.
- Multi frequency for 6 bands, 20m to 17m, 15m,10m, 6m
- Need 1:1 balun
- Can get additional two S units up from typical vertical
- Fairly resistant to high winds
- Usually get more countries and more DX faster
- Very good front gain with excellent front to rear ratio
- One of the most cost effective multiband antennas
- HB reception is like the difference between a contest weekend and a regular weekday
- Works well sitting on the ground, better elevated
- Per Dave: “Performance results of MFJ-1846 Six-band hex-beam antenna. The antenna shows great directionality and ample gain. The SWR doesn't quite cover the 20m, 10m, or 6m bands, but does cover 17m, 15m, and 12m.”

You Tube Videos and Wikipedia Reference

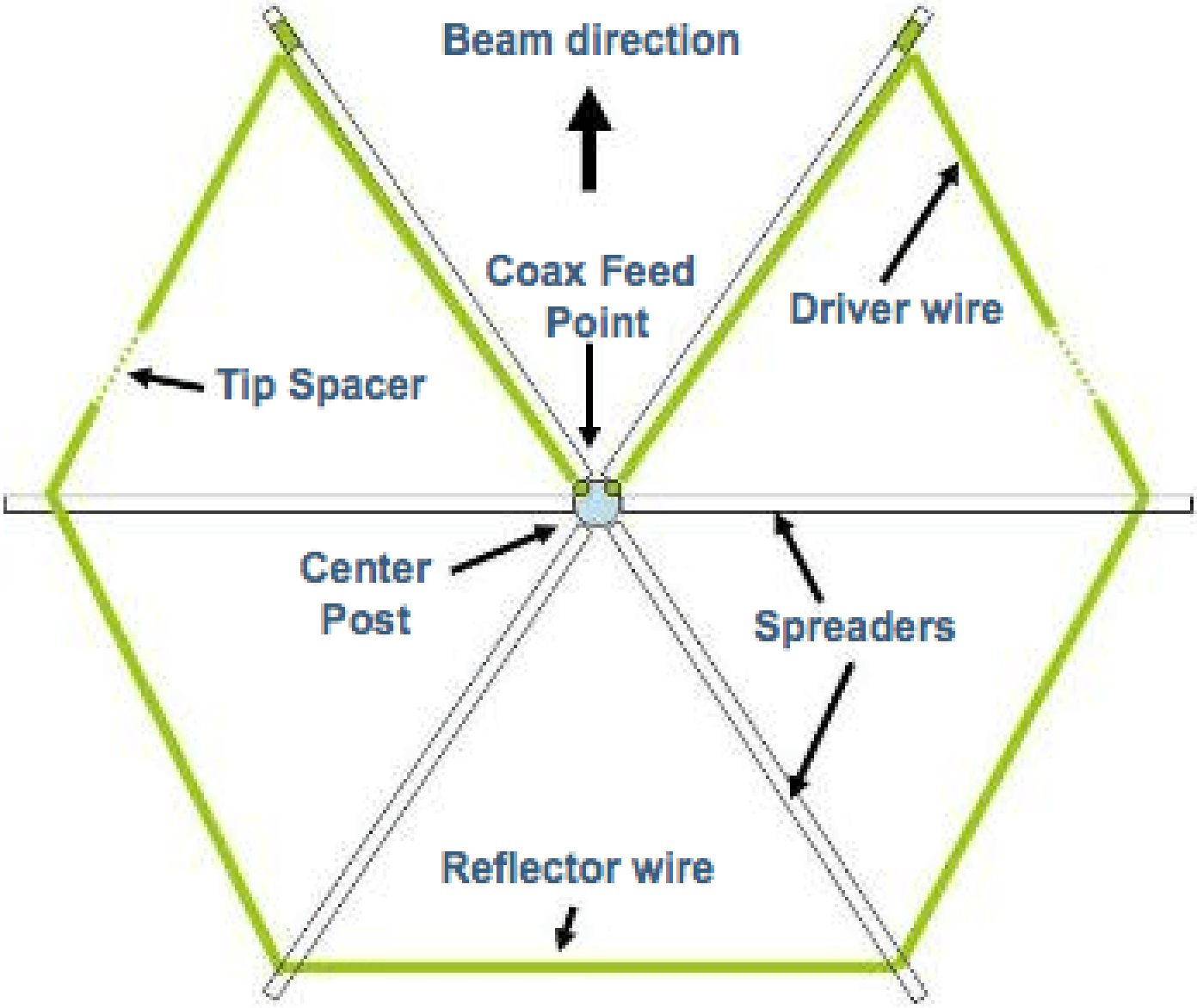
- **Should You Buy a Hexbeam?** https://youtu.be/1QHr79euZUw?si=elTvPIPwlbiY8MfA
- **Dave Casler: Performance Test of MFJ-1846 Six-Band Hex-Beam Antenna (#161).** https://youtu.be/pljKJp350vI?si=P75Vr7gRFioqYEv-
- **Dave Casler: Other Hex Beam Videos: #152, #159, #160**
- **Ham Radio Antenna | The Buddihex by Buddipole, Inc.** https://youtu.be/6C-YdANcTlU?si=noEVHSZ0G_asqBY_
- Many more videos online.
- **Hexbeam. Wikipedia**, **The Free Encyclopedia.** May 1, 2025, 09:26 UTC. Available at: https://en.wikipedia.org/w/index.php?title=Hexbeam&oldid=1288229548. Accessed August 11, 2025.

HEX BEAM DESIGNS



Single Band G3TXQ Broad Band Hexagonal Beam

(Top View)



Overall data on the G3TXQ Broad Band Hexagonal beam by K4KIO

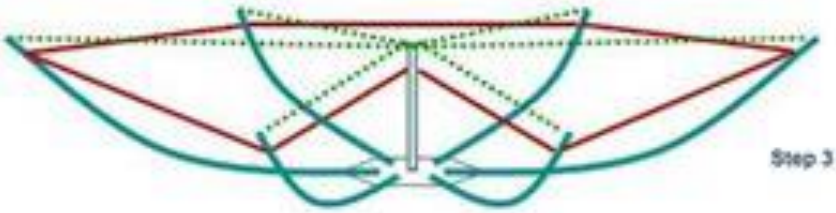
Freq. bands (M)	6, 10, 12,15,17,20
Weight	25 lbs
Diameter	22 ft
Wind Surface Area	5 Sq Ft

HEX BEAM DESIGNS

Step 1 The Base Plate

Step 2 The Spreaders

Step 6 Assembly

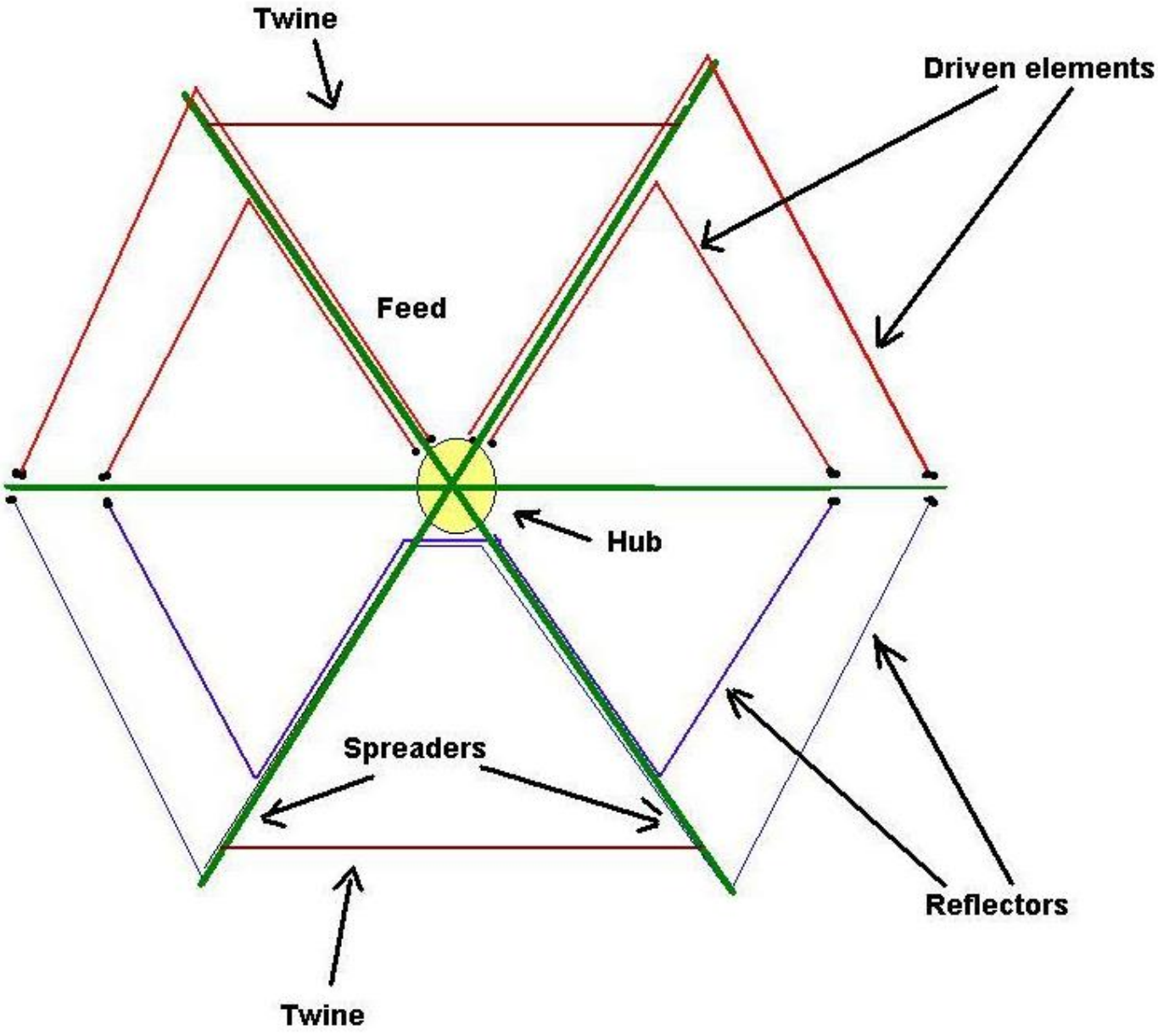


Step 3 The Center post

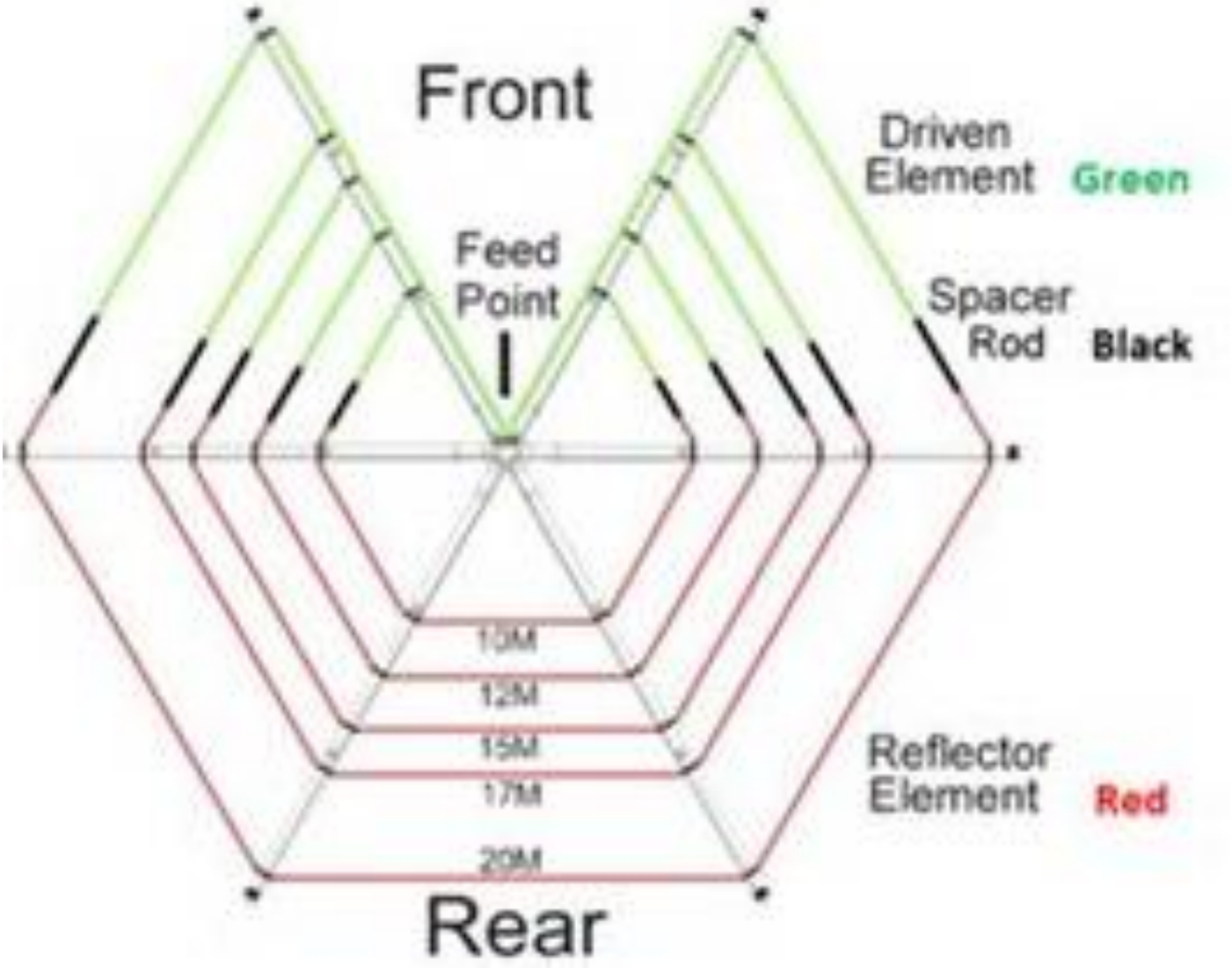
Step 4 The Wire Sets

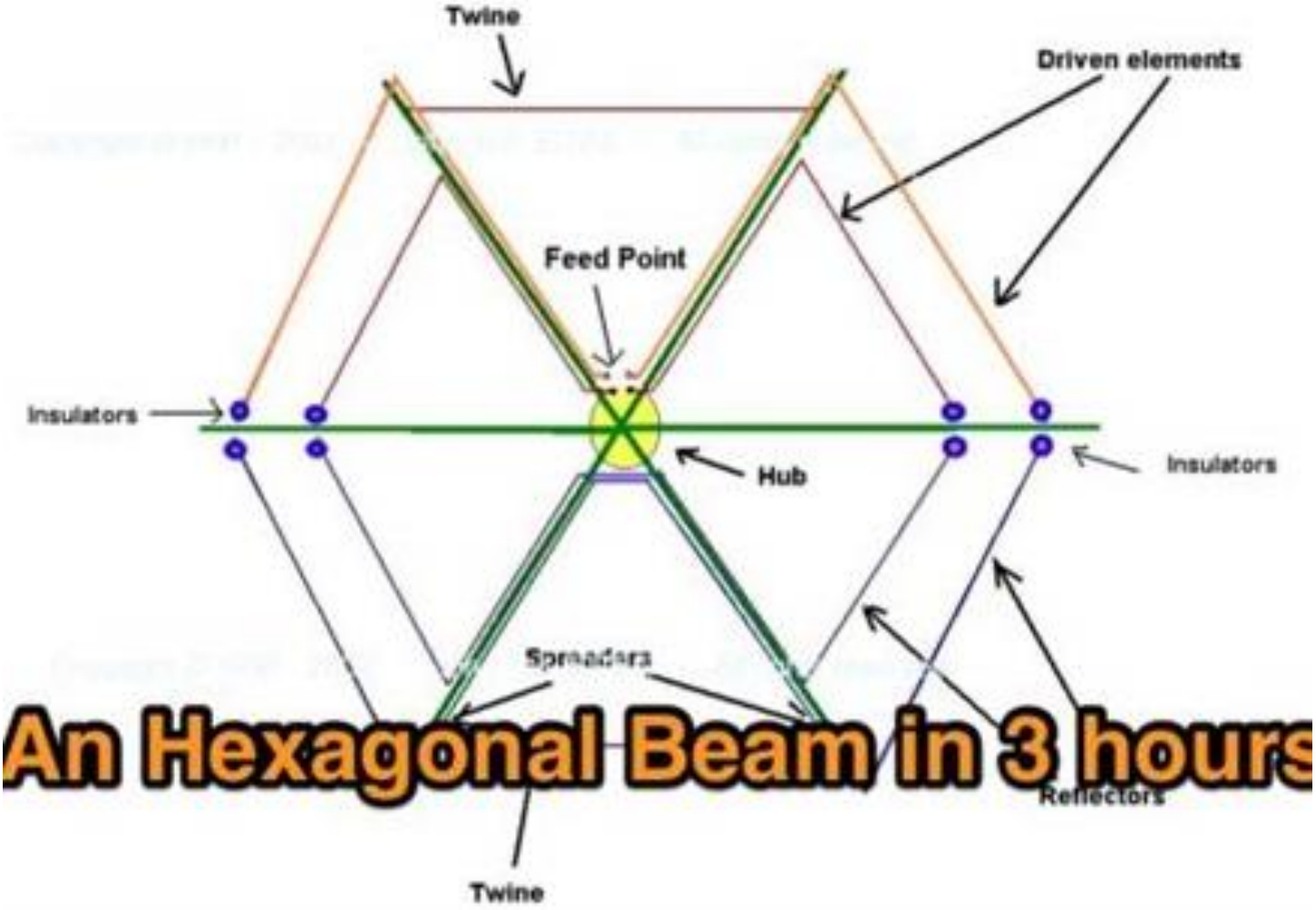
Step 5 The Support

HEX BEAM DESIGNS

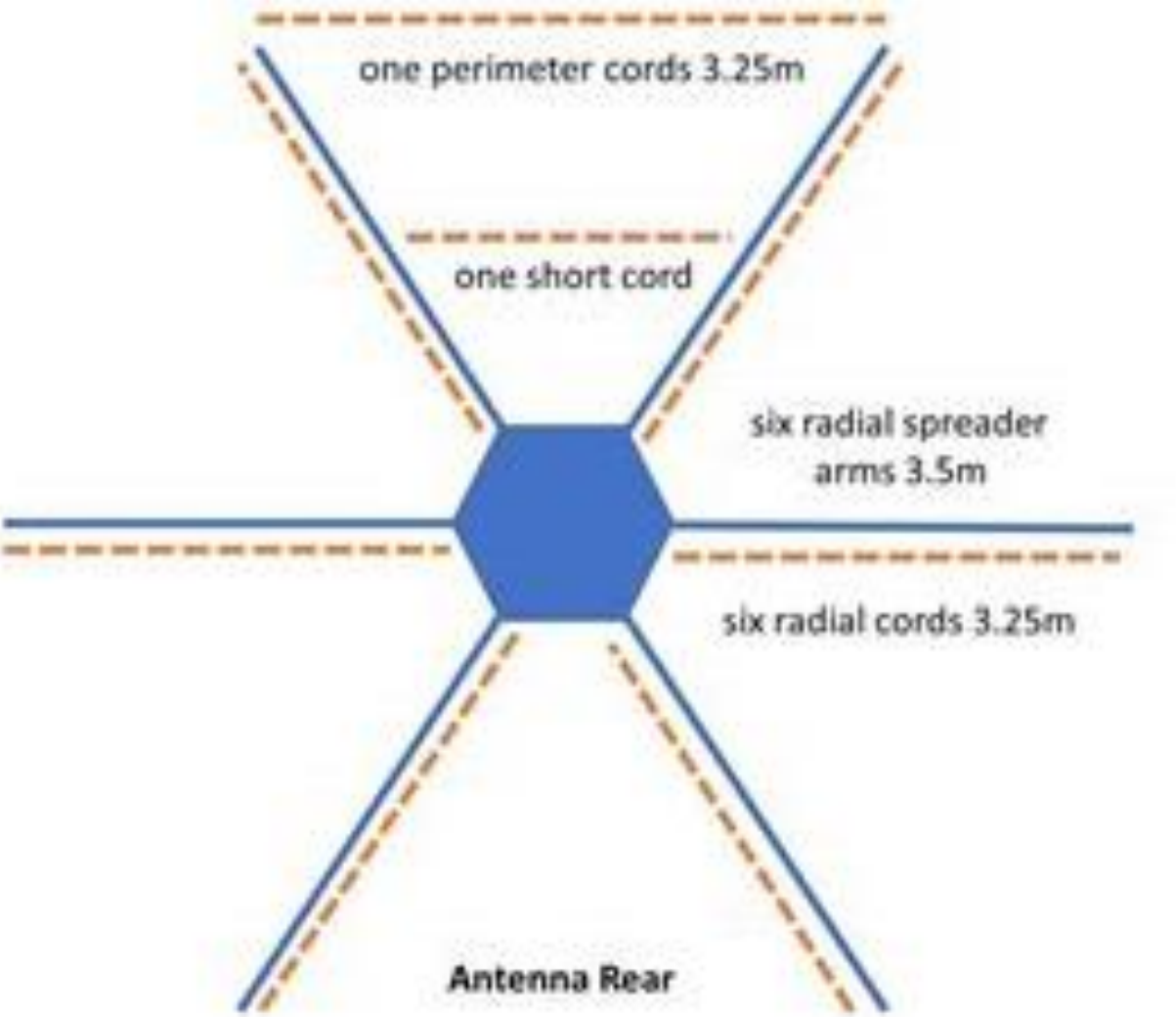


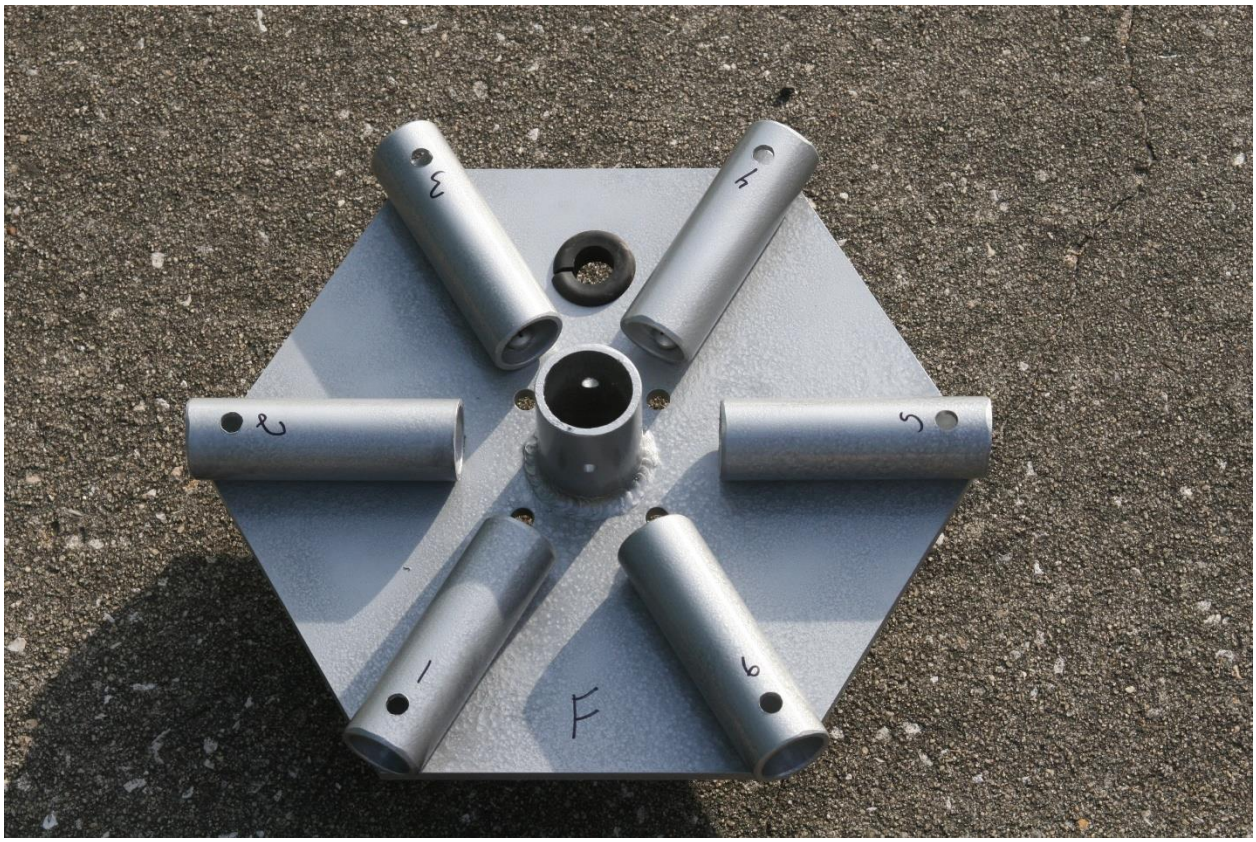
DXE XB-5 Hexx Beam antenna diagram




Twine
Driven elements
Feed Point
Insulators
Hub
Insulators
Spreaders
An Hexagonal Beam in 3 hours
Reflectors
Twine

HEX BEAM DESIGNS




3
4
2
5
1
6
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HEX BEAM DESIGNS