

NSH 7 ELEMENT 2 METER BEAM ANTENNA

SPECIFICATION

Gain	- 11 dB +
F / B ratio	- 25 dB Max
BW	- 1.5 :1 over 2 MHz
VSWR	- 1.0:1 over 300 kHz
I/P	- upto 200 W
Matching	- Gamma
Polarization	- Vertical or Horizontal
Impedance	- 50 ohms

This design is first made during 1995 and evaluated with YO in 1996-97. I had made three prototypes for test and evaluation during that period. Now more than 160 people are using this antenna for getting distant stations and repeaters.

Mount the Antenna on the mast about 7 feet above the ground in a clear surrounding. Set your transceiver to the operating frequency that you operate more. Place the SWR meter between the transceiver and the antenna, then apply low power test transmission. Note the SWR level and slide the gamma tube IN or OUT until you get lowest SWR. Then apply high power transmission and do the same carefully to get the best match. Tighten the gamma - driven element feeding clamp (solid square block). If you use the beam for vertical polarization, you need to use a non-conducting mast to avoid detuning the beam and skewing the radiation pattern. Fix your antenna at 30 feet or above for the best VHF operation. Have a nice DXing.

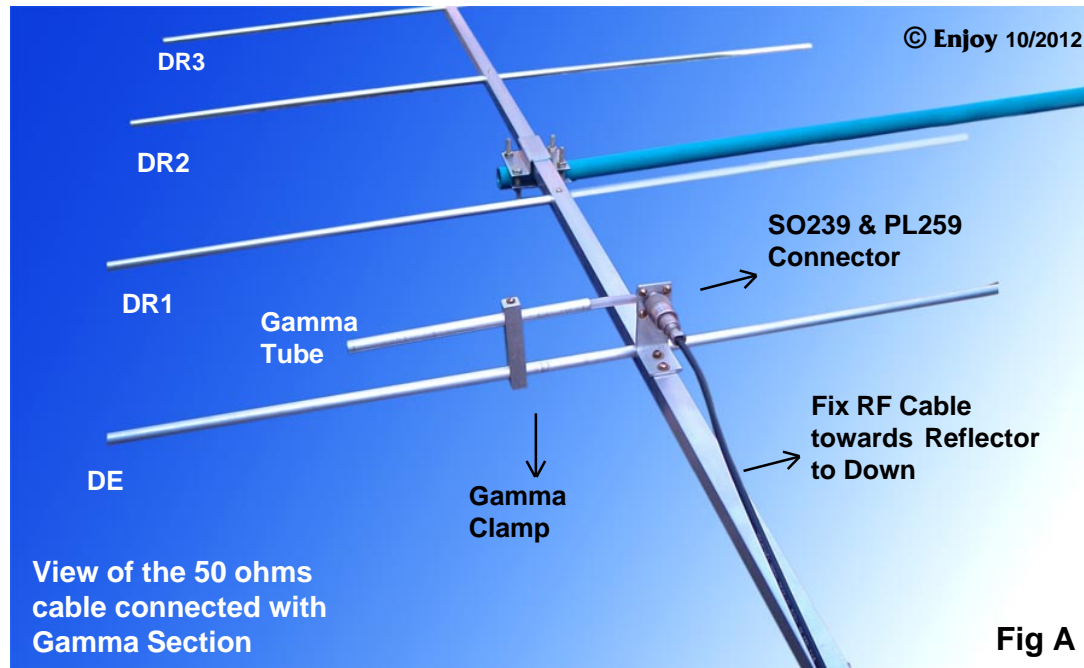


Fig A

73, de VU3NSH

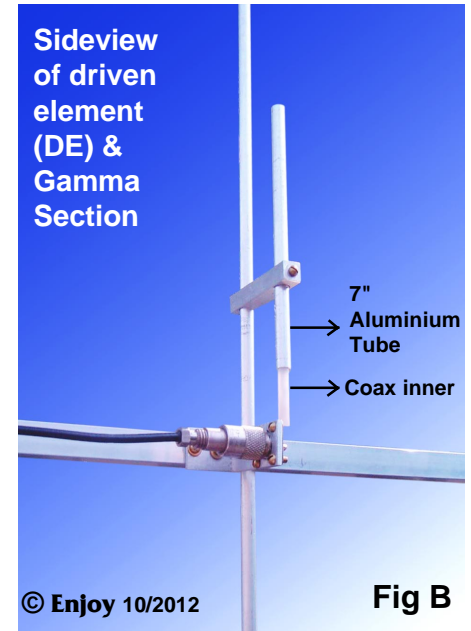


Fig B

→
Sideview of Reflector (R), driven element (DE) & Gamma Section



Fig C

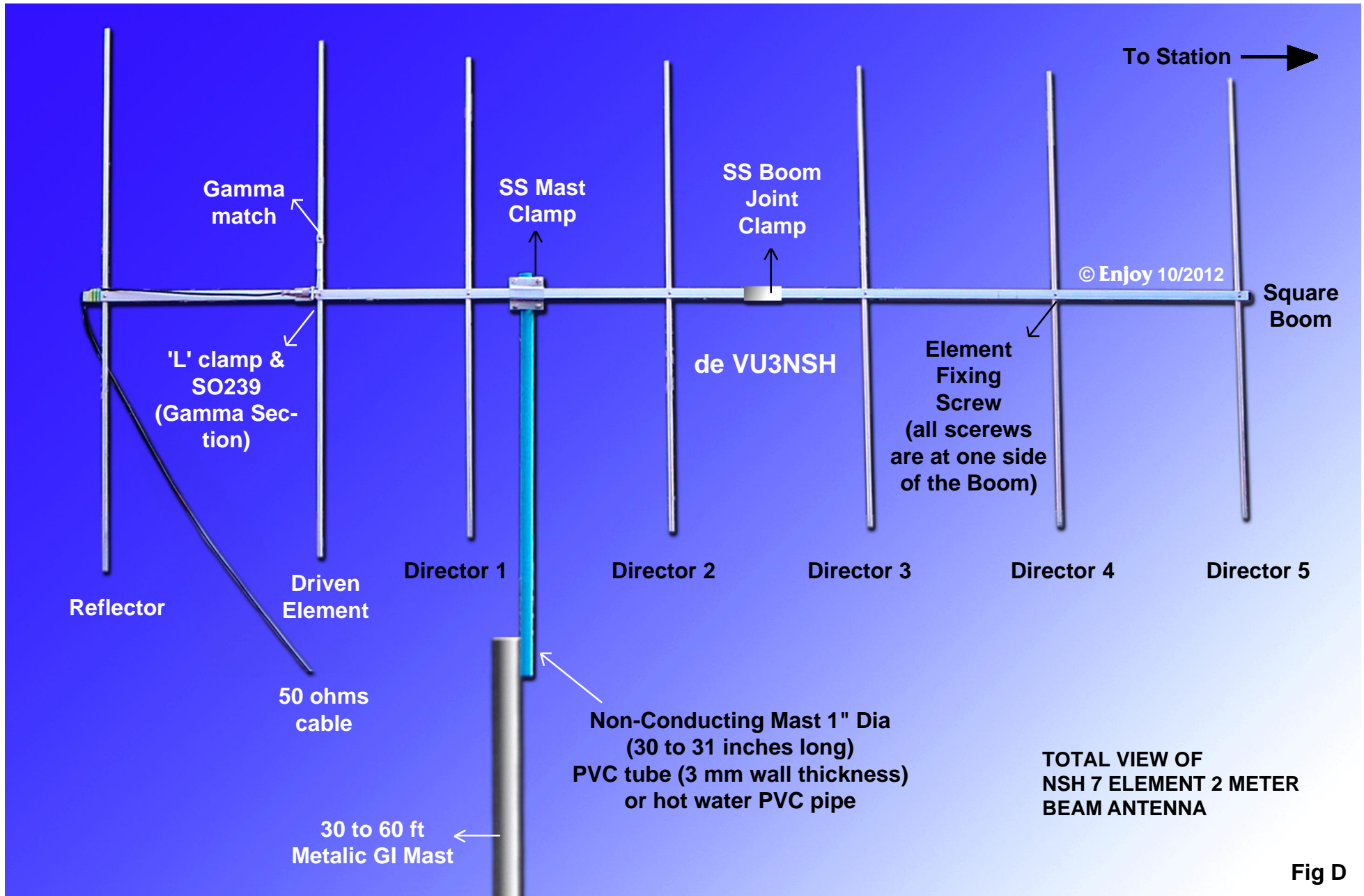


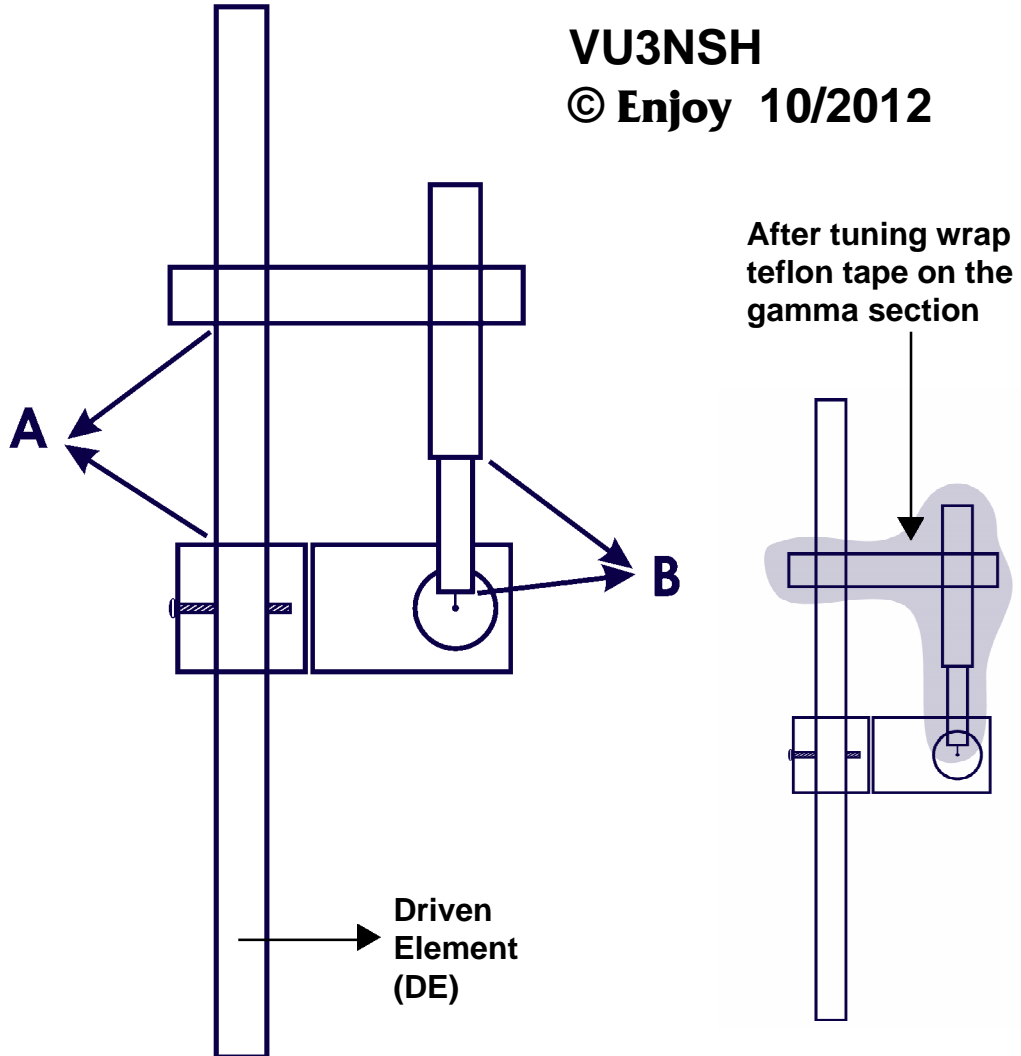
Fig D

VU3NSH
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CAUTION :

All Mounting Screws for elements should be finger tightened initially. Finally, use screw driver to avoid thread damage.

- The boom clamp is half square type and mast clamp is half round type. Fix the mast clamp as shown in fig D.
- The longest element is the reflector, next longest is the driven element and the third longest is the Director 1 and subsequent elements are Director 2, Director 3, etc.
- All elements are mirror polished.



Approximate Measurement of Gamma Position with Techno Cables	A) 7.8 cm	B) 4.24 cm	Type : RG 213	20 mtrs.
	A) 6.9 cm	B) 6.00 cm	Type : RG 58 U	20-25 mtrs.