

# VHF YAGI (BEAM) ANTENNA FOR 2M RIG

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- |              |   |                |                 |   |         |
|--------------|---|----------------|-----------------|---|---------|
| 1. Low SWR   | - | 1 : 1.2        | 5. Gain         | - | 10 dB   |
| 2. Elements  | - | 12             | 6. Power Rating | - | 200W    |
| 3. Matching  | - | Gamma          | 7. Impedence    | - | 50 Ohms |
| 4. Frequency | - | 144 To 146 MHz |                 |   |         |

Yagi Antenna consists of three parts - reflector, dipole and director. It has a gain of 6 dB or more depending upon the number of director's used. Yagi Antenna does not transmit or receive in the direction of the Reflector but only in the direction of the directors it is like a torch light which radiates a Powerful beam of light in one direction.

In this beam (Yagi) antenna Gamma match is used for matching transmission line to antenna at low SWR. Raise the antenna to about 5 ft from the ground level, preferably in a vacant spot. Connect a good SWR meter to the Yagi. In the forward direction while transmitting for the full scale deflection. Now change to the Reverse direction (Reflected) while transmitting slide the stub to get the minimum reading. Now your antenna is SWR matched. The Beam antenna gives 10dB gain and also Power handling capacity up to 200W. Use RG 213/RG8U for Best Results.

"Wishing you, good Dxing with 2M Yagi"

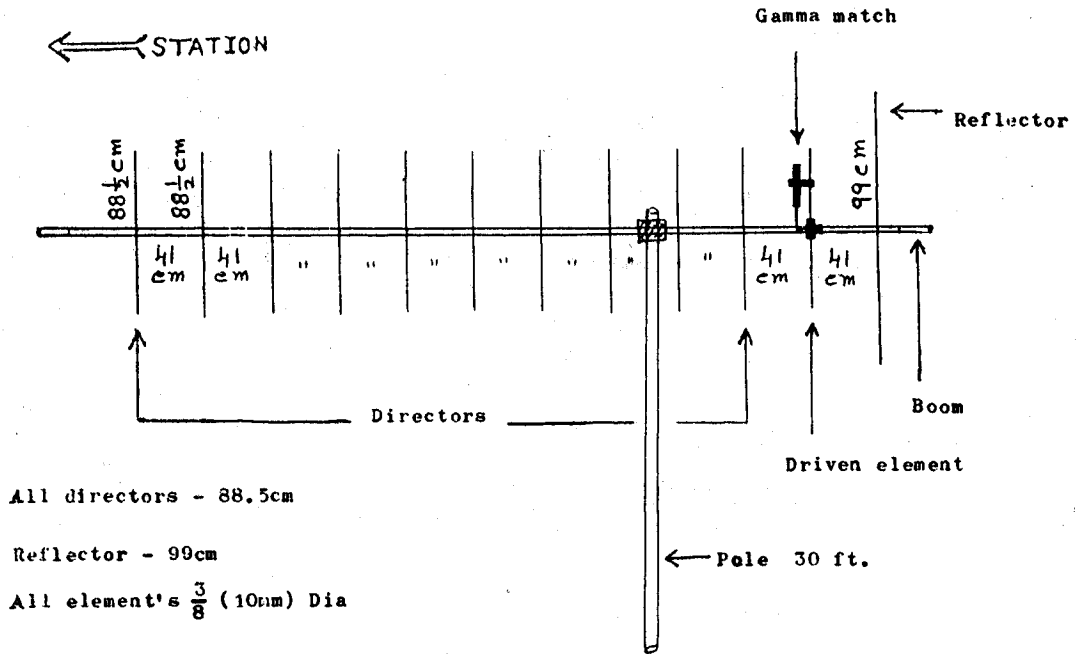
73's

$$\text{SWR} = \frac{F + R}{F - R} \text{ if 'F' = 10 and 'R' = .5, SWR is } \frac{10 + .5}{10 - .5} = \frac{10.5}{9.5} = 1.105 = 1:1$$

F = Forward                      R = Reflected

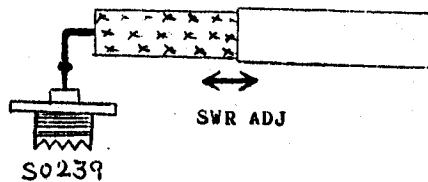
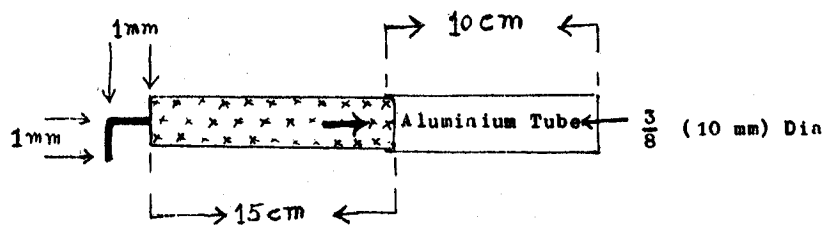
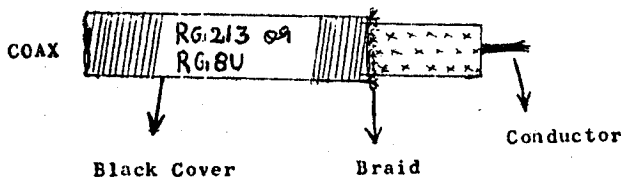
(1)

2M 12 Element Beam



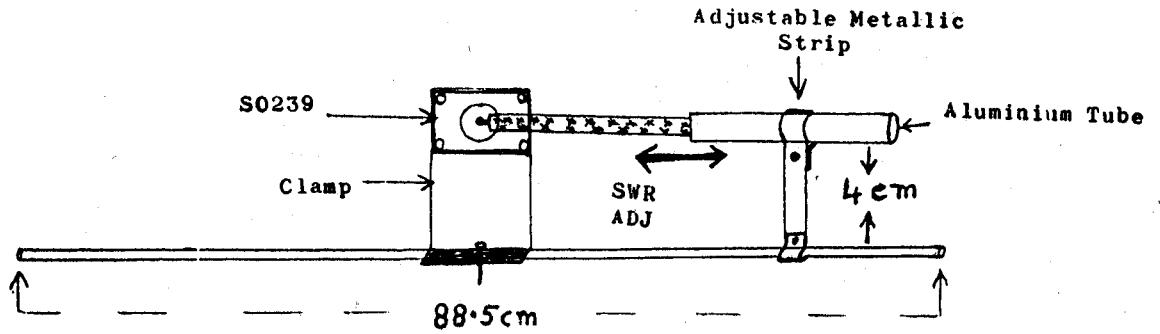
STUB for Gamma Match

(2)



Driven Element & Gamma Match

(3)



Measuring The SWR

(4)

