

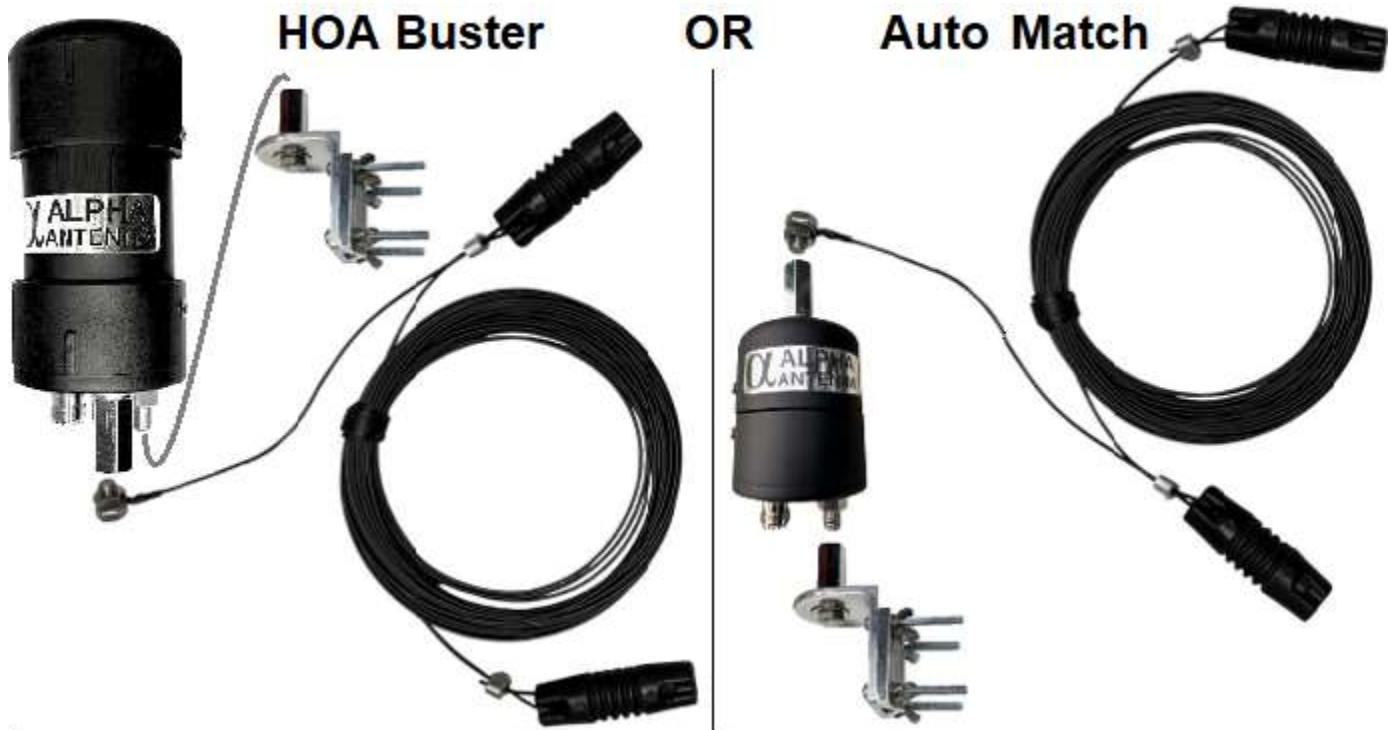
α ALPHA ANTENNA®

Guide – 60-foot End Fed Element, May 3, 2013

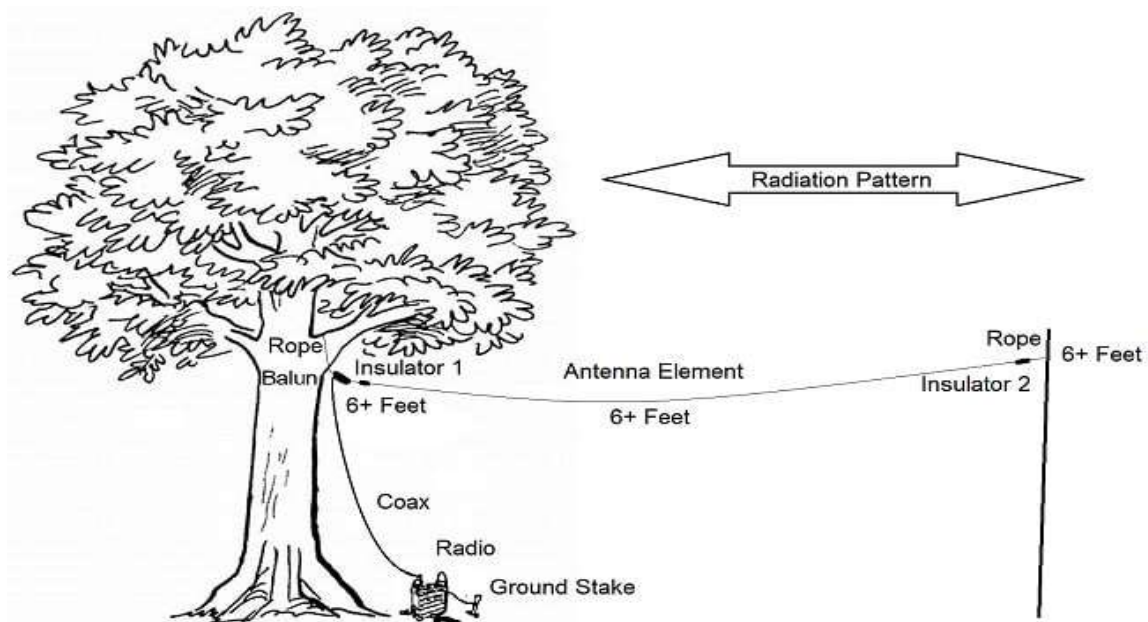
Assembly & Deployment

Pictured here is the 60-foot end fed element with an optional and required Auto Match and Mount from Alpha Antenna.

- With the bolt in the Ring Terminal on the 60-foot end fed element, screw the bolt into the Hex Nut onto an Auto Match. Then screw the Auto Match onto an optional Mount with a 3/8 24 Hex Nut. Last, install the Mount on any mast or deploy it as shown in the **Depiction** below.



Depiction



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Analysis

The 60-foot end fed antenna will achieve the following SWRs with attached to an Alpha Antenna Auto Match:

* An external antenna tuner can be used if your antenna is installed over a poor ground or not placed in a clear area.

60 Foot element	
Band	*SWR (when equipment is connected to a ground)
10 Meters	1.61
12 Meters	2.43
15 Meters	1.75
17 Meters	1.52
20 Meters	2.2
40 Meters	2.67
80 Meters	2.08

Optional Configurations

Sloper Configuration Deployment: As a Sloper configuration will DX into the greyline on 7.0-19MHz in either the morning or evening and evening NVIS propagation on 7.0MHz and lower frequencies, which will both occur in the direction of the slope. Proper deployment places the antenna at an angle that achieves a launch in the desired take off angle to the horizon.

Half Square Configuration Deployment: As a Half Square configuration will provide evening NVIS coverage on 7.0MHz and lower frequencies, daytime NVIS coverage from 14MHz and higher frequencies, and DX from 7.0-19MHz during evening or daytime deployments. Proper deployment places 50% of the length of the antenna across the top and 25% on both legs, where the top is at a height equal to the deployed length of each leg.

Horizontal Configuration Deployment: In a Horizontal configuration will provide evening NVIS coverage on 7.0MHz and lower frequencies, daytime NVIS coverage from 14MHz and higher frequencies, and DX from 7.0-19MHz during evening or daytime deployments. Proper deployment to enhance NVIS places the element lower and with the horizontal configuration, which is parallel to the earth. In practice, to optimize NVIS (Near Vertical Incident Skywave) performance, deploy the antenna horizontally at a height of 1/8 wavelength on any given band for a 0–650 km (0–400 miles) coverage area. Where DX will occur into the greyline from 7.0-19MHz during evening or daytime deployments.

Inverted “V” Configuration Deployment: As an Inverted “V” configuration will provide evening NVIS propagation on 7.0MHz and lower frequencies, daytime NVIS coverage from 14MHz and higher frequencies, and DX into the greyline from 7.0-19MHz during evening or daytime deployments. Proper deployment places 50% of either side of the element on each leg of the V, where there is no less than 120 degrees of separation between the two elements.

Inverted “L” Configuration Deployment: As an Inverted “L” configuration will provide evening NVIS on 7.0MHz and lower frequencies, daytime NVIS coverage from 14MHz and higher frequencies. Proper deployment uses places 1/3 of the element vertically and 2/3 of the element horizontally at the top.

Upright “V” Configuration Deployment: As an End-Fed Inverted “V” configuration will provide evening NVIS propagation on 7.0MHz and lower frequencies, NVIS on 7.0-19MHz during evening or daytime deployments, and DX into the greyline from 7.0-19MHz during evening or daytime deployments. Proper deployment places 50% of either side of the element on each leg of the V, where there is no less than 120 degrees of separation between the two elements.

See Depictions of Optional Configurations at <https://www.alphaantenna.com/endfedconfigurations/>