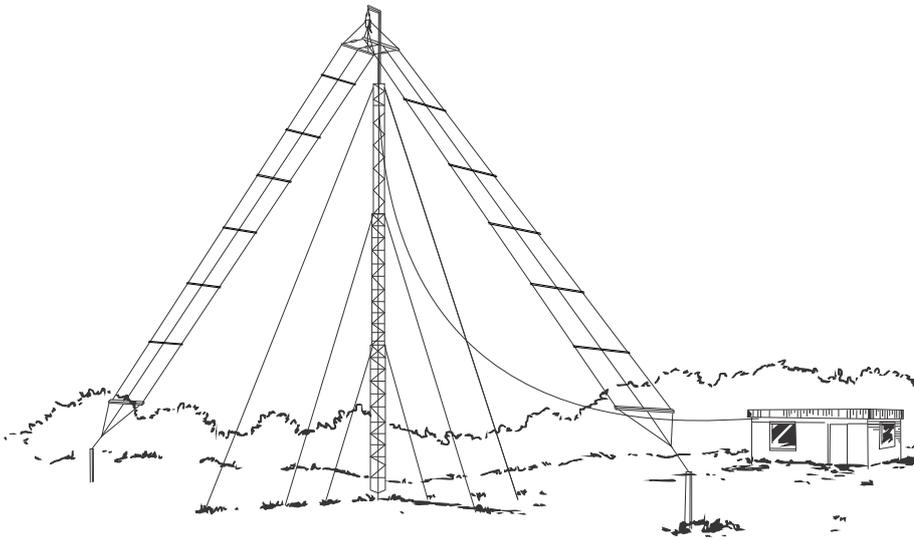
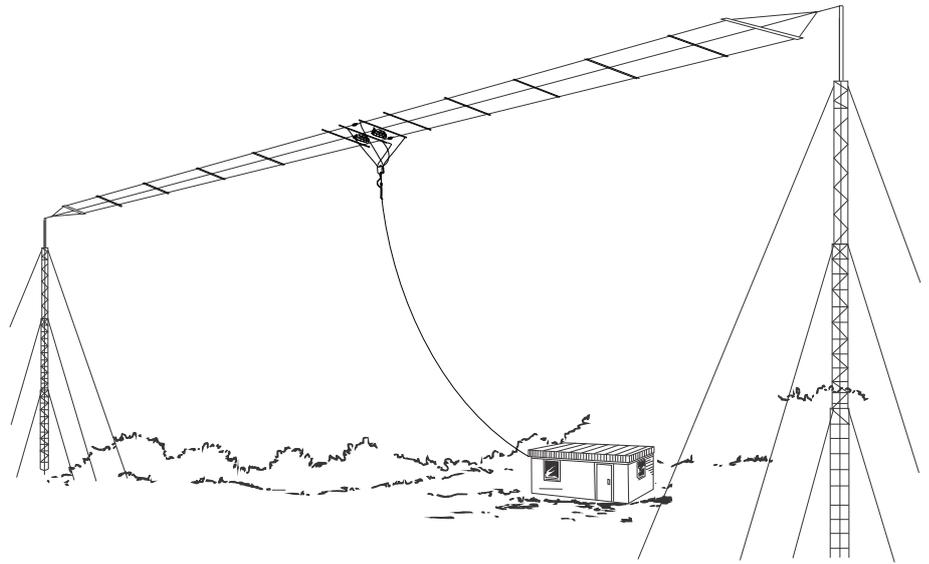


# User Guide

## 912 Multi-wire Broadband Dipole Antenna 1kW

P/N BC91203 (27m) and BC91207 (54m)



P/N BCM91203/6

## Introduction

### PLEASE READ THIS MANUAL IN ITS ENTIRETY BEFORE ATTEMPTING INSTALLATION.

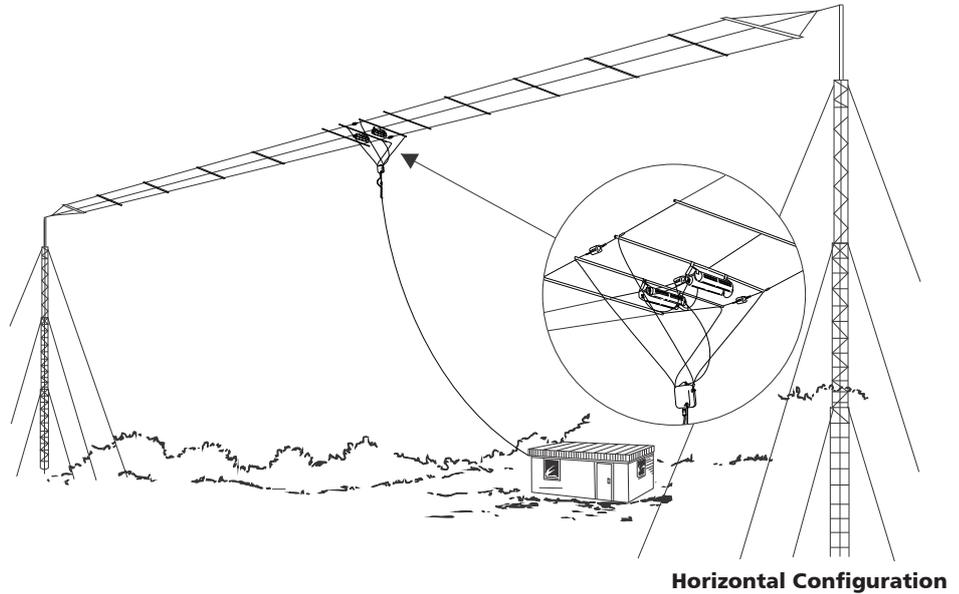
This kit contains the following:

- 1x Antenna Assembly
- 1x balun
- 1x Pigtail strain relief fitting
- 1x coaxial cable
- 1x Inverted V mounting kit (1x yoke, 1x insulated cable)

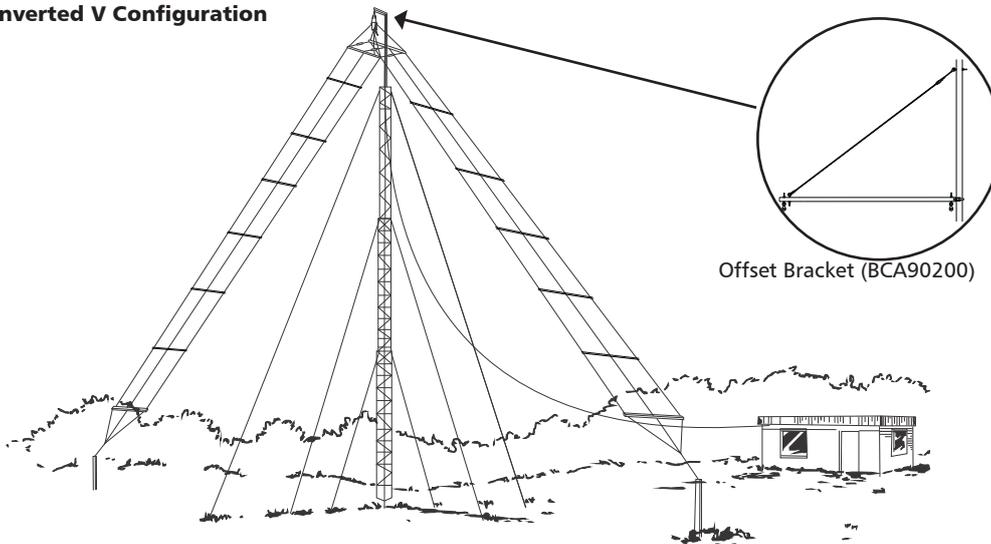
#### Compatible masts

12.7m Lattice Tower (P/N BC90216)

Barrett 912 Multiwire broadbands can be mounted either in a horizontal or inverted 'V' configuration with a 12-15m mast. The minimum distance between the masts is 32 metres for BC91203 (27m antenna) and 60 metres for BC91207 (54m antenna) in horizontal configuration. The Barrett Lattice Mast 12.7m (P/N BC90216) is recommended.



#### Inverted V Configuration



Halyards and pulleys required to hoist and support the antenna are not supplied, however they can be purchased separately from Barrett (P/N BCA91201). It is recommended that the halyards used to support the antenna be either UV stabilised dacron cord or wire rope and that pulleys be of stainless steel construction.

For a 12-15m mast with an antenna in inverted V configuration, rods or stakes should be inserted into the ground at least 9m away from the mast in order to secure the antenna ends. In this configuration the mast must also have an offset or out-rigger bracket, at least 0.8 metres long, to hold the antenna away from the mast. Barrett can supply a offset bracket and pulley system (BCA90200) as well as a winch (BC90217).

As with all antenna installations, ensure the antenna is as far from sources of electrical interference as possible and in a position that makes it impossible for the antenna to come in contact with high voltage overhead mains wiring.

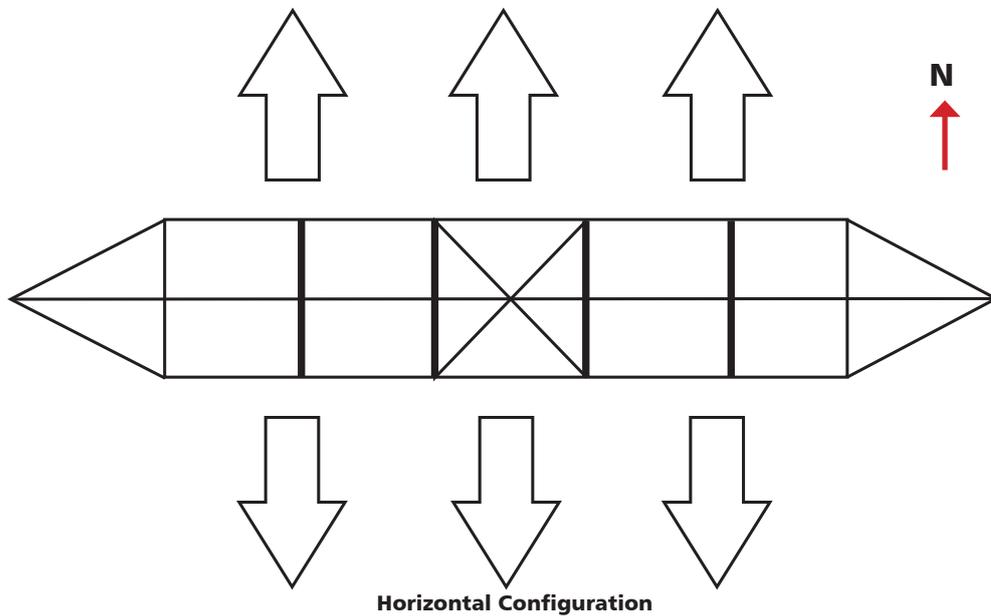
**It is highly recommended that antennas be installed by suitably qualified personnel.**

---

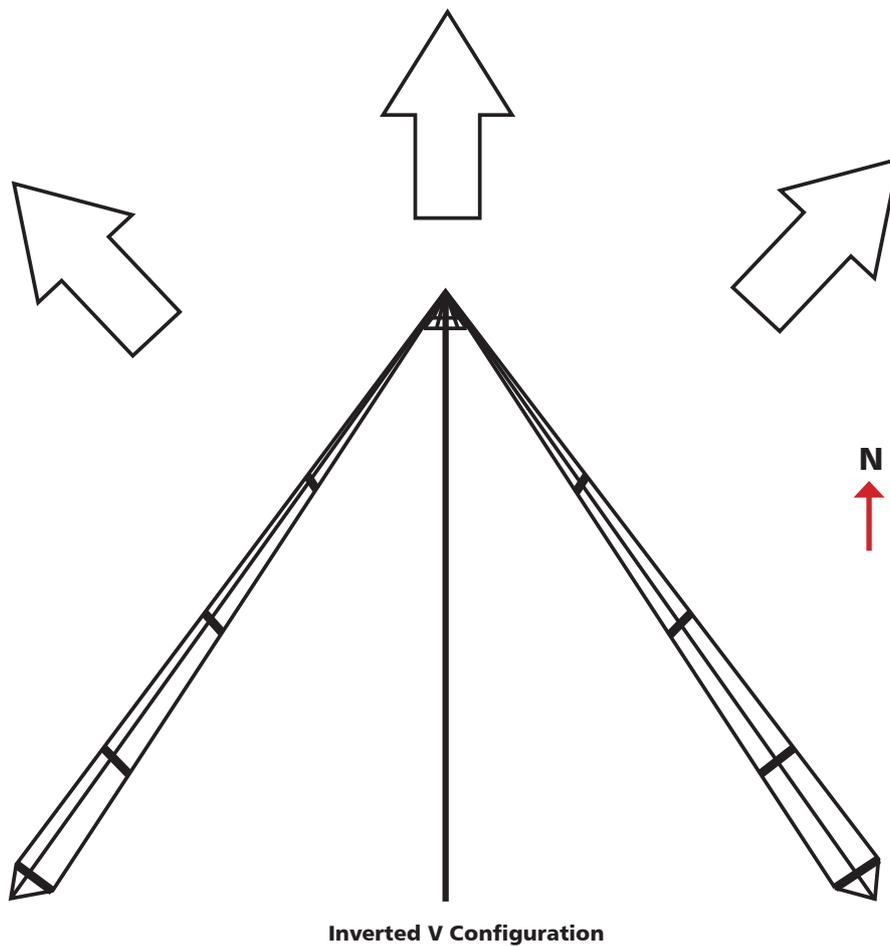
## Antenna Orientation

The orientation of the antenna at the site is vitally important.

In Horizontal configuration, the radiation is broadside to the antenna i.e. if transmissions need to travel in a predominantly North-South direction, the antenna should be set up with the ends pointing East-West.



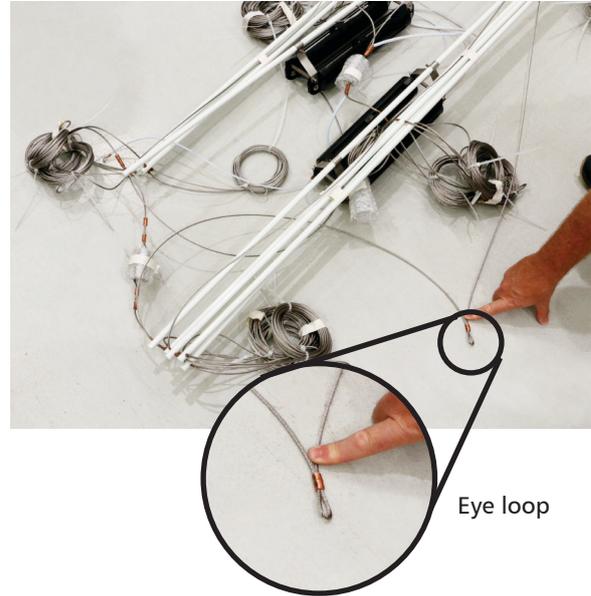
For Inverted V, the antenna becomes more suitable for NVIS, with radiation being directed at high angles, but omnidirectional around the antenna on a horizontal plane.



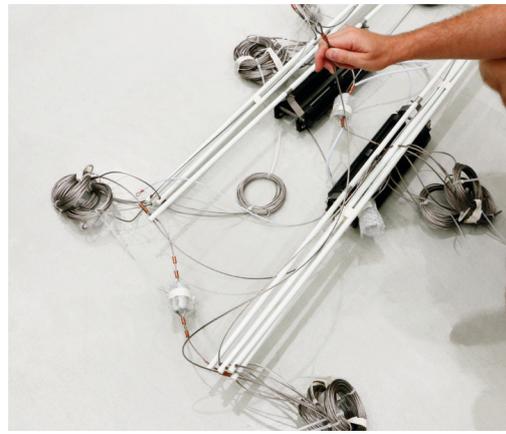
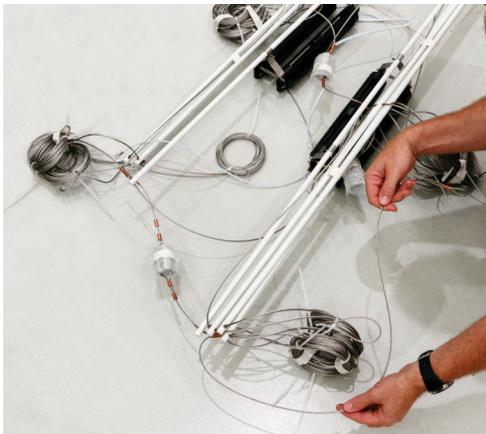
---

## Installation - Inverted V

1. Take the antenna in its box to its installation point, below the hoisting halyard.
2. Carefully remove antenna from box and - with **RESISTOR LOADS FACING DOWN** - lay on ground. Ensure wires do not tangle. **DO NOT REMOVE TAPE OR CABLE TIES.**
3. Remove balun and Inverted V mounting kit from box.
4. Locate the 'drop wires'. These will be under the antenna.
5. Locate the 'eye loop' in the centre of the drop wire and determine to which half of the antenna it is connected.

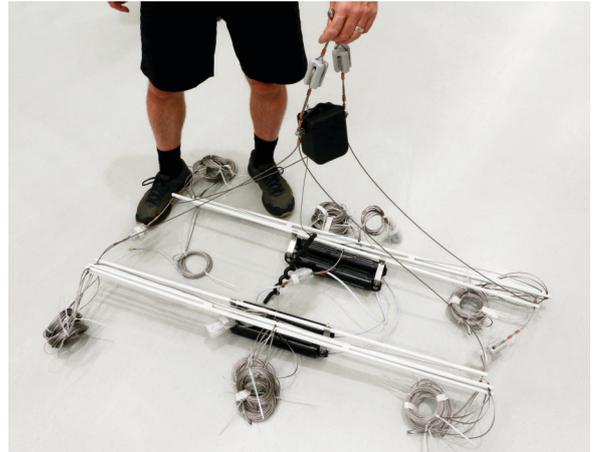
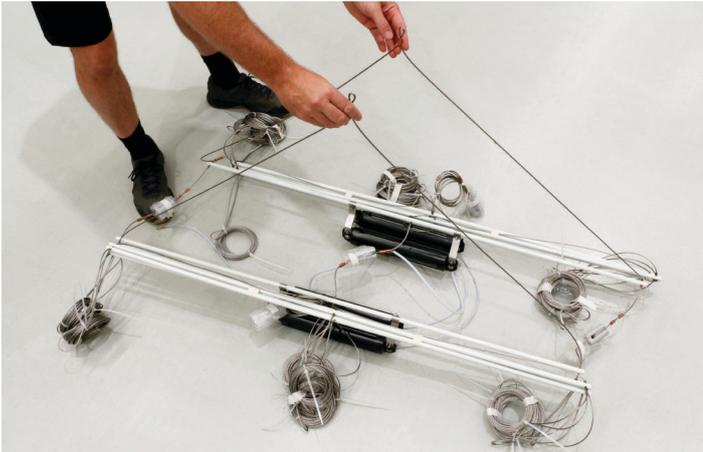


6. Pull the loop along the ground so that it clears the spreader rods and coiled wires and loop the cable over the ends of the antenna until it is vertical.

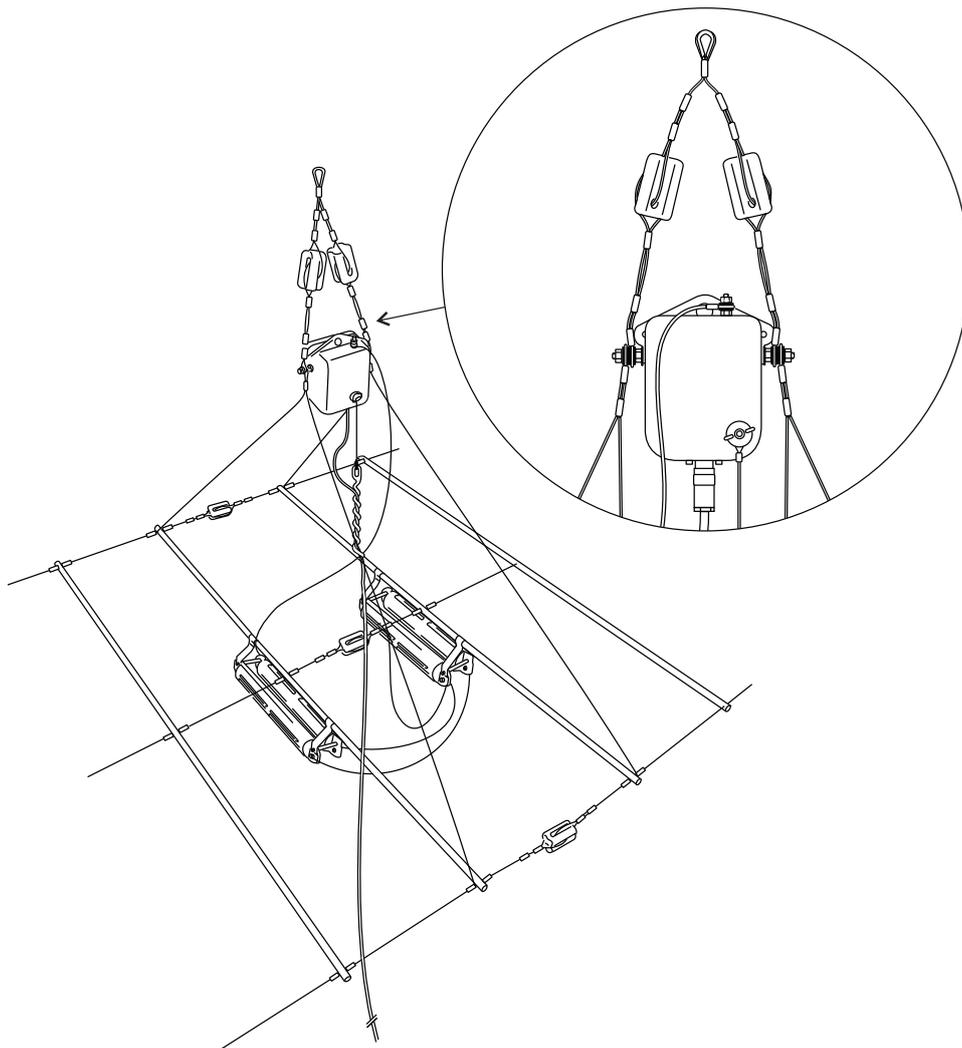


7. Repeat for the other side.

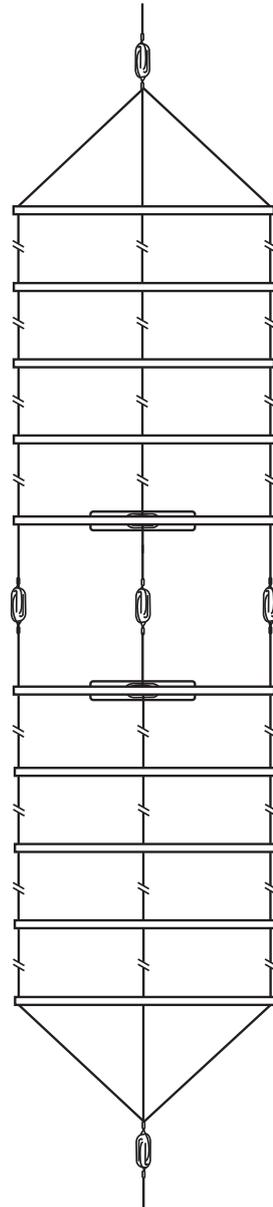
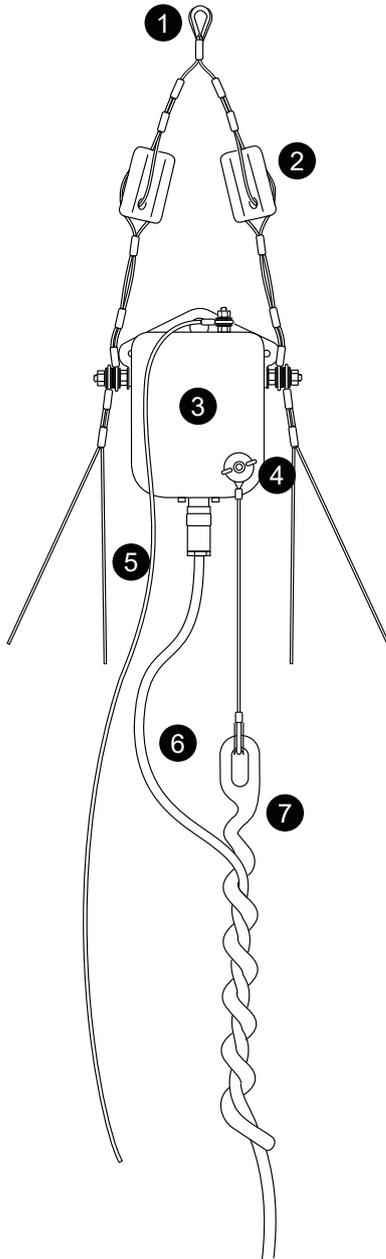
- 
8. Connect the loops of the drop wires to either side of the balun along with the inverted V suspension yoke. Tighten nuts to finger tight only.



9. Attach the suspension halyard to the suspension yoke and slowly raise the balun until the connecting wires have taken some weight.
10. Further tighten the nuts on the balun.
11. Replace the insulated wire (connected to one of the load resistor pairs) with the longer insulated wire from the Inverted V mounting kit and connect it to the top of the balun ensuring that it passes between the vertical cables (see below).



12. Connect the coax cable to the UHF type connector at the bottom of the balun and fit the coax pigtail strain relief fitting (see below left). This is connected to the strain relief connection point.
13. Carefully remove tape and cable ties and extend each section one at a time until extended to full length (see below right). Ensure that tangles are avoided.
14. Carefully hoist antenna to full height.
15. Attach appropriate cord to the insulator at each end of the antenna. Tie these cords to convenient points to secure the antenna in position. These should ideally be tied at a height, or in a safe area, to avert possible contact and risks of minor shocks or burns.

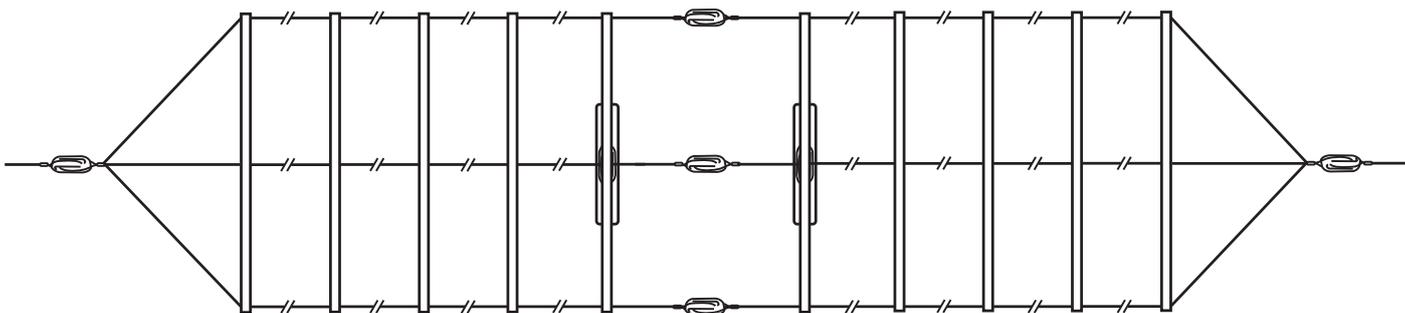
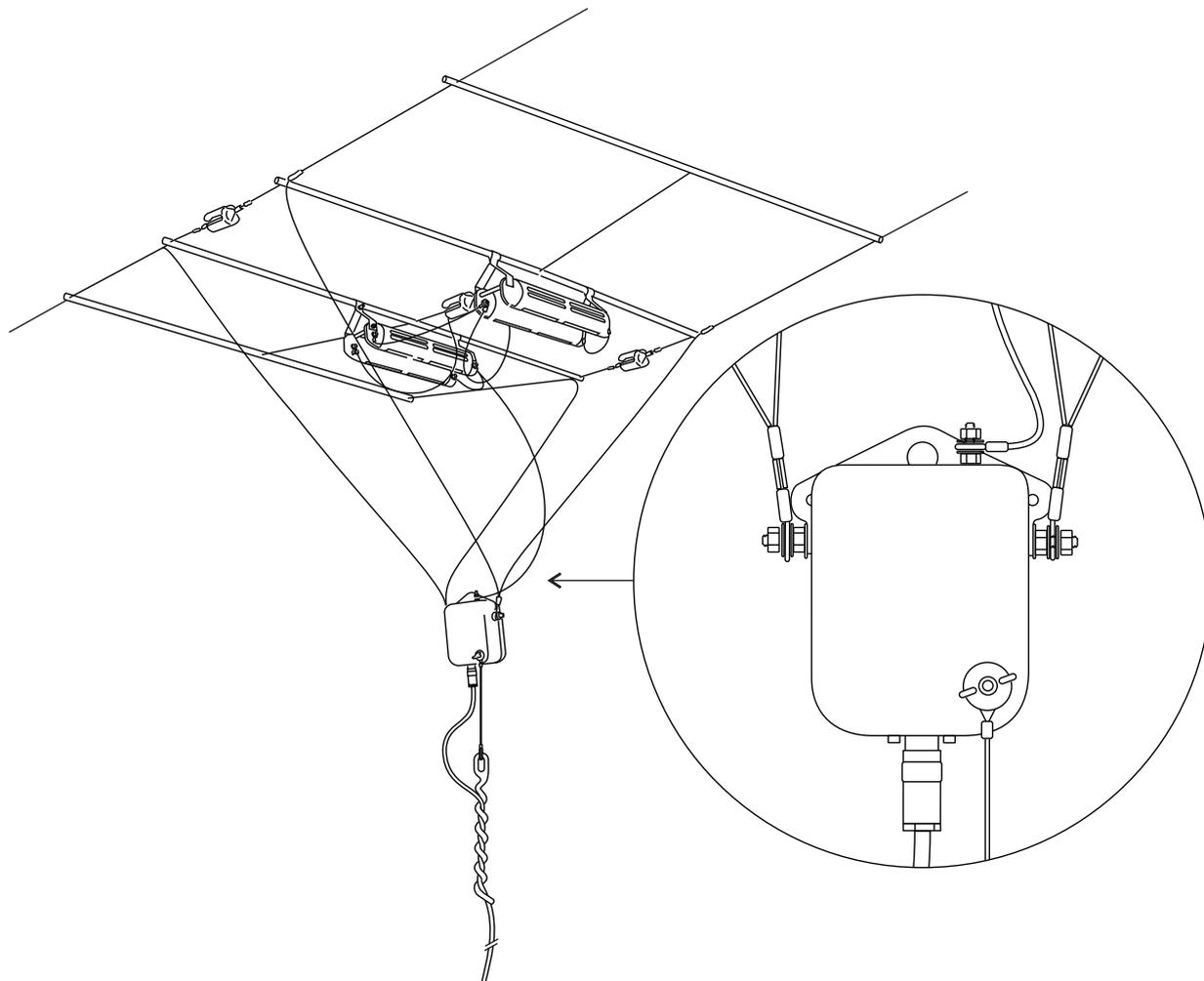


- |          |                                |
|----------|--------------------------------|
| <b>1</b> | Suspension Yoke Eye Loop       |
| <b>2</b> | Suspension Yoke                |
| <b>3</b> | Balun                          |
| <b>4</b> | Strain Relief Connection Point |
| <b>5</b> | Insulated Wire                 |
| <b>6</b> | Coax Cable                     |
| <b>7</b> | Coax Pigtail Fitting           |

---

## Installation - Horizontal Configuration

1. Take the antenna in its box to its installation point, below the hoisting halyard.
2. Carefully remove antenna from box and - with **RESISTOR LOADS FACING DOWN** - lay on ground. Ensure wires do not tangle.
3. Carefully remove tape and cable ties and extend each section one at a time until extended to full length (see below). Ensure that tangles are avoided.
4. Attach ends of antenna to hoisting halyards and hoist until antenna is at a workable height off the ground. Note that the drop wires should be hanging below the hoisted antenna.
5. Attach the drop wire loops to the sides of the balun and the insulated wire (connected to the insulators) to the top of the balun, as shown below.



6. Connect the coaxial cable to the connector on the bottom of the balun and fit with pigtail coax strain relief fitting (see right).
7. Hoist antenna to full height and secure. Note: the antenna will curve downward slightly when suspended.

1	Insulated Wire
2	Balun
3	Strain Relief Connection Point
4	Coax Cable
5	Pigtail Coax Strain Relief Fitting

