

# Xiegu\_VG4\_Manual

## USER MANUAL:

The VG4 antenna is a 4-band Ground Plane type antenna made of aluminum alloy with an anti-oxidizing coating. It is light and solid, easy to install and erect and has good outdoor weather stability. In a normal installation it can resist up to **Category One Hurricane** without needing to be guyed.

### I. Antenna Parameters

Frequency bands: 7/14/21/28MHz (40m/20m/15m/10m)

Antenna height: about **25.6ft** / 7.8m;

Width: About **8.8ft** / 2.7m

Maximum power handling: 1000W PEP (CW 500W, RTTY/Digital modes 300W)

Antenna impedance: 50  $\Omega$

VSWR: < 1.5:1

Antenna bandwidth: 40m: 150kHz / 20m: 450kHz / 15m: 800kHz / 10m: 1000kHz

Rated wind speed: 78mph / 35 m/s


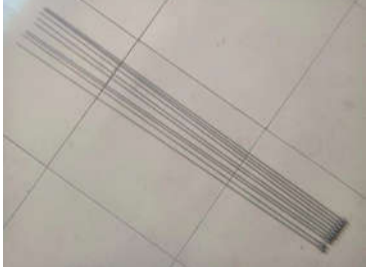



Antenna interface type: SL16-K (SO-239).








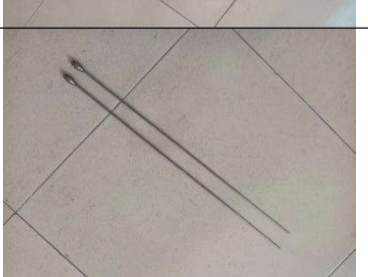
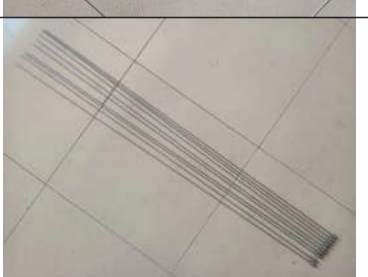

Weight: about 15.4lbs / 7.0kg

Installation height: the distance from the ground to the base of the antenna should be more than 10ft / 3 meters

### II. List of included parts

#### 2.1

Component	Specification	Images	Quantity
Base Support section	450x46x41mm / 1.5x0.15x0.01ft		1
Counterpoise rods	1200mm / 3.9ft		6
NO:1	120x33x30mm / 3.9x0.1x0.01ft		1
NO:2	1200x29.5x26mm / 3.9x0.1x0.08ft		1
NO:3	1200x26x23mm / 3.9x0.08x0.1ft		1











NO:4	10m trap		1
NO:5	245x26x23mm / 0.8x0.08x0.07ft		1
NO:6	15m trap		1
NO:7	245x26x23mm / 1x0.08x0.07ft		1
NO:8	20m trap		1
NO:9	1200x12.8x10.5mm / 3.9x0.04x0.03ft		1
NO:10	1200x10x8mm / 3.9x 0.03x0.03ft		1
20m capacitive loading rods	500mm / 1.6ft		2
40m capacitive loading rods	1200mm / 3.9ft		4
Matching box			1



Main support plate (Butterfly clasp)			2
# 7 Allen key			1
# 10 wrench			1
#13 wrench			1
M4 Allen key			1

\*(NO = antenna section number, numbered from bottom to top)

## 2.2 Accessories Lists

Component	Specification	Images	Quantity
Nuts	M8x1.25		4
Parallel spacer	M8		4
Spring spacer	M8		4
U-bolt	M8 51mm / 2"		2

Hexagon socket bolts	M5x0.8 50mm / 2"		2
Hexagon socket bolts	M5x0.8 55mm / 2.2"		1
Hexagon socket bolts	M5x0.8 40mm / 1.6"		1
Hexagon socket bolts	M5x0.8 10mm / 0.4"		5
Parallel spacer	M5		9
Spring spacer	M5		3
Clamps	8x12mm / 0.3x0.5"		1
Clamps	10x16mm / 0.4x0.6"		1
Clamps	16x25mm / 0.6x1"		5
Clamps	20x32mm / 0.8x1.3"		2

Matching box upper fixings			1
Matching box lower fixings			1

\*The bolts' diameter here means internal diameter.

### III. Installation Instructions

#### 3.1 Notes

The antenna can be installed either on a stable ground supported mast or using a wall mount secured using expansion bolts. The installation clearance above the ground should be greater than 10ft / 3 meters.

The antenna installation environment shall be as clear as possible and away from all major equipment & facilities such as power transmission & transformation equipment, medical equipment and sensitive electronic instruments or equipment. Installation close to public radio & television towers or other high-power radio transmission antenna systems is not advisable.

When mounting on a tall mast or roof please take appropriate measures for lightning protection and grounding.

After the antenna configuration is completed, it is recommended that you apply waterproof and UV- resistant silicone rubber at the antenna feed point, covering the whole connection.

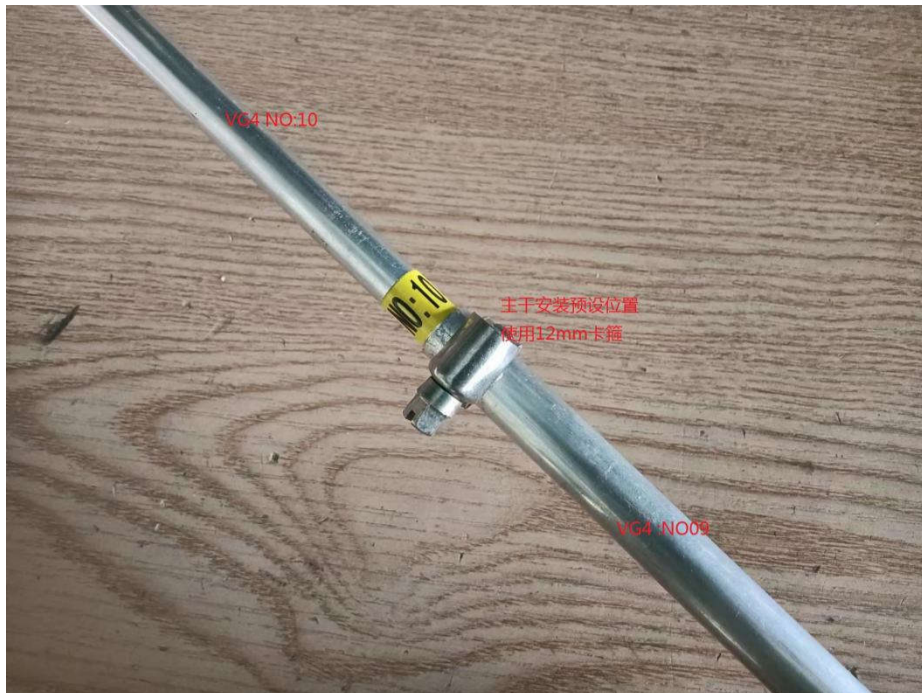
As long as the surrounding environment is safe, it is not required to use any guy ropes.

In extreme weather conditions, it is recommended to take down the antenna in advance of the storm arriving if possible.

### 3.2 Installation Steps

① Insert the NO.2 tube into the NO.1 tube, tighten the Jubilee clip with the supplied wrench. Then, install the other sections from bottom to top in the sequence of the "NO" numbers and tighten the clips, but not fully as you may need to adjust the sections in the configuration process.





② Insert the bottom (NO.1) tube into the base support tube section and ensure the pole mounting for the matching box are on the same side of both tubes, then fix the assembled antenna tubes to the base support tube using the screws (Installation method: put the parallel spacer first, then put the spring spacer, and finally twist the nut.) supplied.



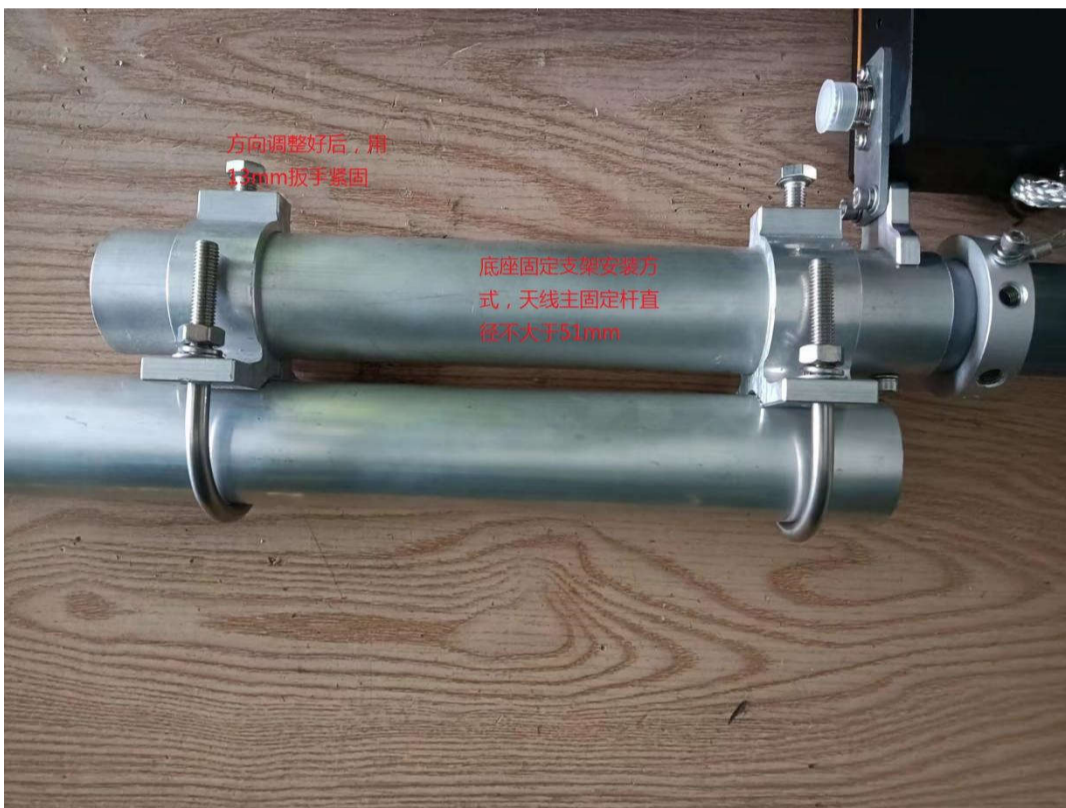
③ Place the matching box on the base support tube and fix it with the supplied screws.



④ Insert the U clamps into the fixing plate. Insert two U clamps on the front side and the remaining two U clamps on the rear side.



⑤ Insert the base support into the U clamps on the front of the plate, and tighten the nuts. The other two U clamps will be tightened once the antenna is on its supporting mount.



⑥ Screw in the two 20m capacity hat rods on section NO:8.



⑦ Screw in the four 40m capacity hat rods on section NO:9.





⑧Screw in the six main counterpoise rods at the bottom of section NO:1.



\*Please make sure that each main rod is connected and fastened down tightly; otherwise the overall strength of the antenna will be affected.

### 3.3 Commissioning Steps

- ① Adjust the position of main sections NO:1-NO:3, by loosening the clips and sliding the sections in or out of each other to adjust the center frequency point in the 10m band.
- ② Adjust the position of NO:5 section to adjust the center frequency point of the antenna on 15m.
- ③ Adjust the position of NO:7 section to adjust the center frequency point of the antenna on 20m.
- ④ Adjust the position of NO:8 - NO:9 sections to set the center frequency point of the antenna on 40m.
- ⑤ Without adjustment the rough center frequency point of each band is as follows:

40m7.05MHZ  
15m21.3MHZ  
20m14.2MHZ  
10m28.5MHZ

- ⑥ Due to the influence of the installation environment these values can change so please adjust it appropriately for your needs as described in the earlier steps.

*The VG4 antenna can be adjusted to any band center frequency that you wish. During the configuration step, adjustment of the higher frequency bands will affect all of the lower frequency band settings. The adjustment of lower frequency bands will not however affect the higher frequency band settings. Therefore, the adjustment sequence is, as shown above, to adjust from the 10m band to the 40m band. Generally speaking, only the 40m frequency band will need adjustment.*

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