

WY 108-3N

VHF Base Station 3 Elements Yagi Antenna 108-137 MHz

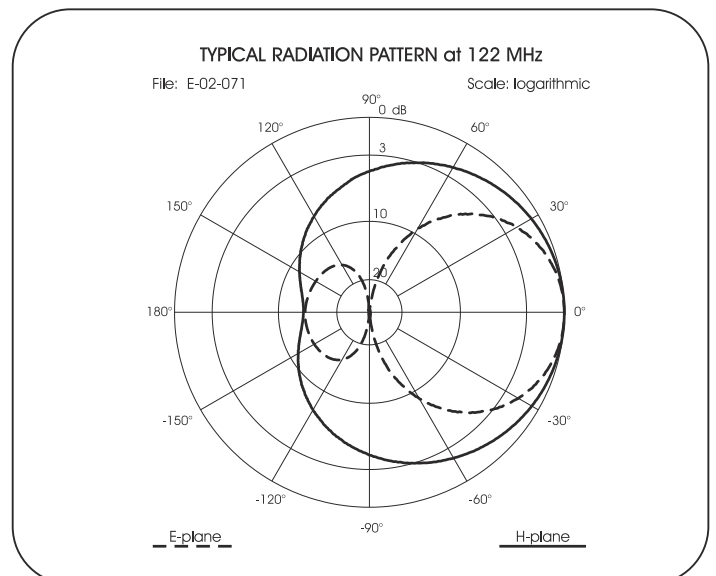
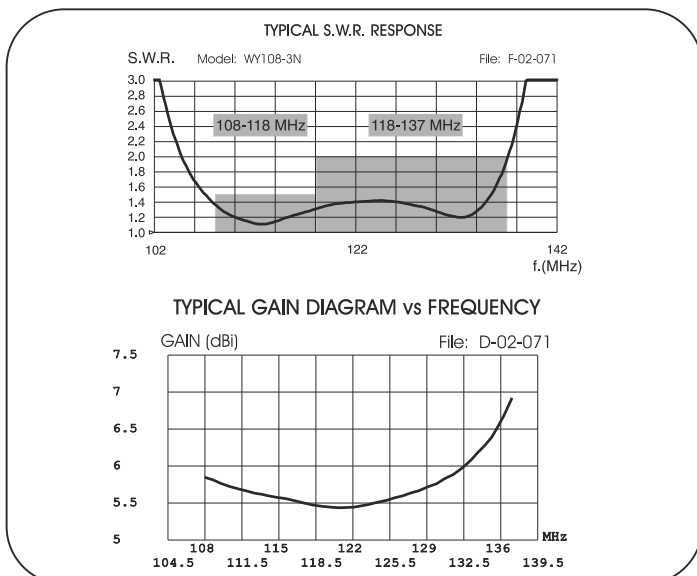
DESCRIPTION: Base station antenna using an innovative feed system conceived and applied to have high symmetrical radiation pattern in both planes (E and H). It's completely computer designed to get high performances and a **wide bandwidth (no tuning is required)**. All aluminium parts are protected by anodized treatment, hardware are of Stainless steel or zinc plated steel, mounting bracket is of extruded aluminium for the best strength. The connector is placed in rear position for an easily access and protected by a black rubber cap suitable for 5÷7mm cables. To increase the antenna gain please install it in vertical stacked array.

This product is Patented.

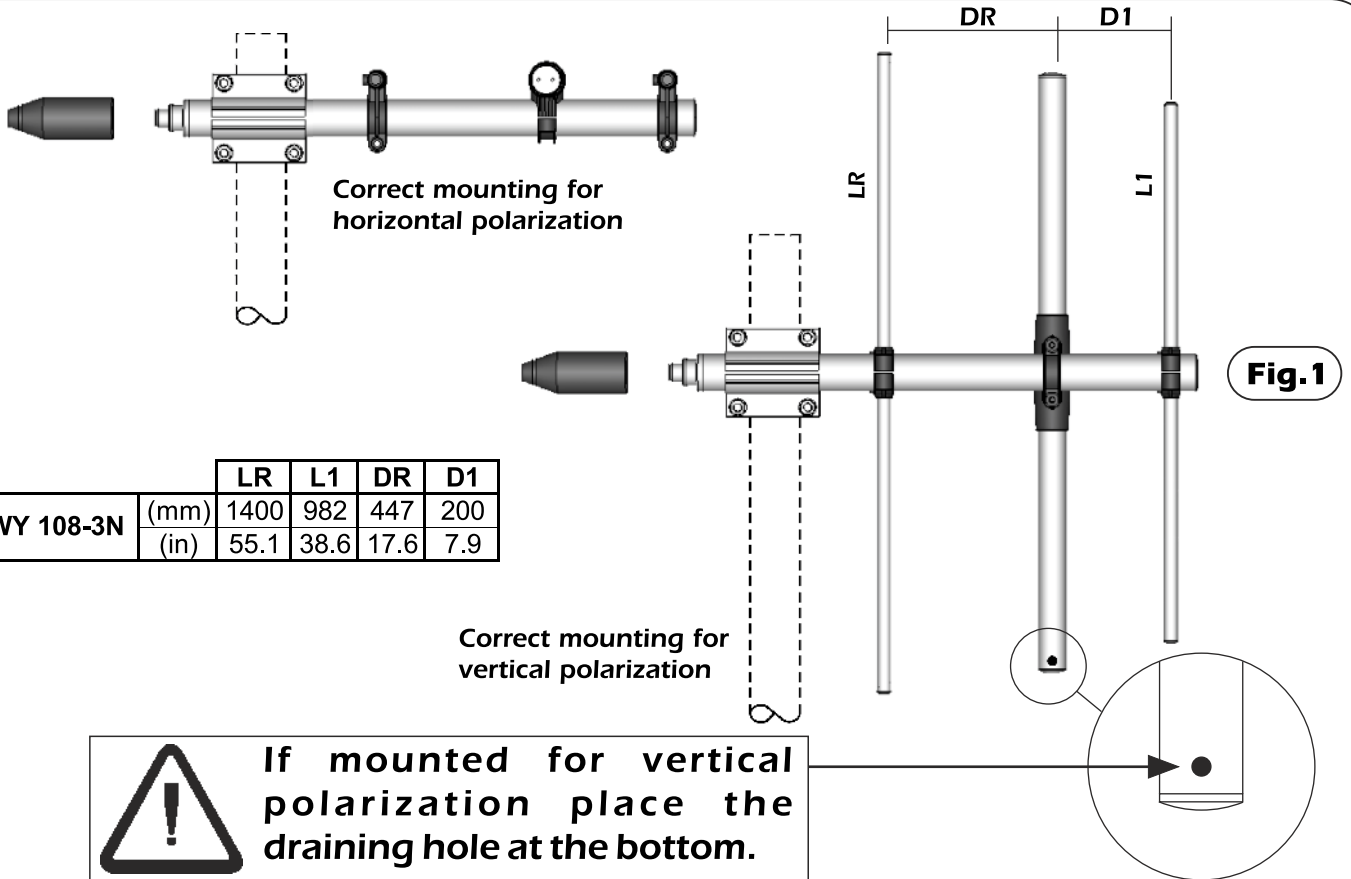


Electrical Data	WY 108-3N
Type	3 elements Yagi
Frequency Range	108 - 118 MHz @ SWR ≤ 1.5 (Radionavigation, ILS, etc) 118 - 137 MHz @ SWR ≤ 2.0 (air - ground communication)
Impedance	50 Ω
Radiation (H-plane) beamwidth @ -3 dB	150° @ mid band
Radiation (E-plane) beamwidth @ -3 dB	70° @ mid band
Front to back ratio	≥ 12 dB
Polarization	Linear Vertical or Horizontal
Gain	4.85 dBd - 7 dBi
Max Power (CW) @ 30°C	200 Watts
Grounding Protection	All metal parts are DC-grounded, the inner conductor shows a DC short
Connector	N-female with rubber protection cap

Mechanical Data	
Materials	Anodized 6063-T5 Aluminium, EPDM rubber, thermoplastic UV stabilized, Chromed Brass
Wind Load @ 150 km/h	114 N
Wind Resistance	160 Km/h; 99 mi/h
Wind Surface	0.090 m ² ; 0.96 ft ²
Dimensions W x H (approx.)	910 x 1400 mm; 3 x 4.5 ft
Turning radius (approx.)	1000 mm; 3.3 ft
Weight (approx.)	1860 gr; 4.1 lb
Operating temperature	-40° C to +60° C
Mounting Mast	∅ 35 - 52 mm; 1.4 - 2.1 in
Boom / Dipole / Element Diameter	∅ 32 mm; 1.25 in / ∅ 24 mm; 0.95 in / ∅ 12 mm; 0.5 in



MOUNTING INSTRUCTIONS



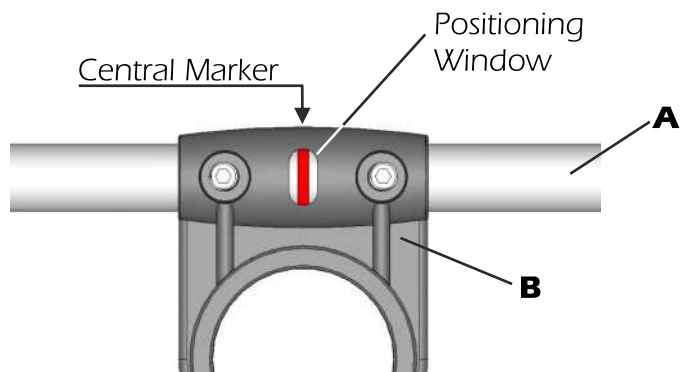
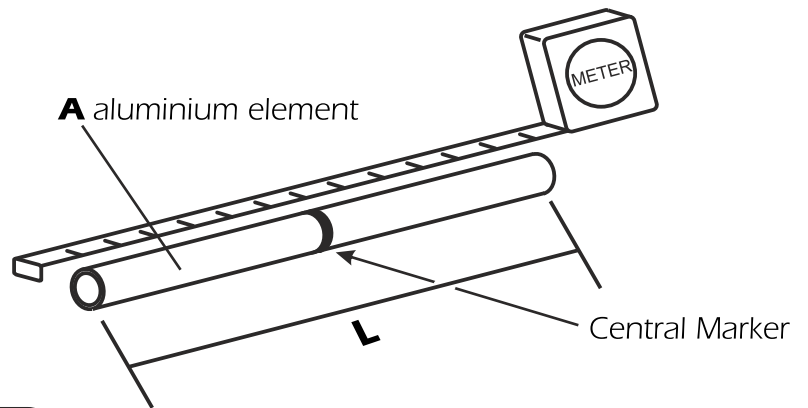
Element Mounting

1) By means of a meter measure the aluminium elements **A** and position them in the plastic support **B** of the boom according to **fig. 1**.

2) Place the reference marker of the aluminium element **A** in the centre of the plastic support **B** (see **fig. 3**) and lock the screws **C** by the supplied key **D** (**fig. 4**). When the screws touch the aluminium tubes you can finally lock them turning for 1.5 turns.

Warning: do not exceed 1.5 turns. The plastic support threads could be damaged.

3) Insert the plastic caps **E** on the aluminium elements **A** (see **fig. 4**)



Part list

Q.ty	Description
1	A) Aluminum tubes
2	C) M5x6 Hexagon socket set screw
1	D) 2.5mm Hexagonal key
2	E) Plastic cap

MOUNTING INSTRUCTIONS

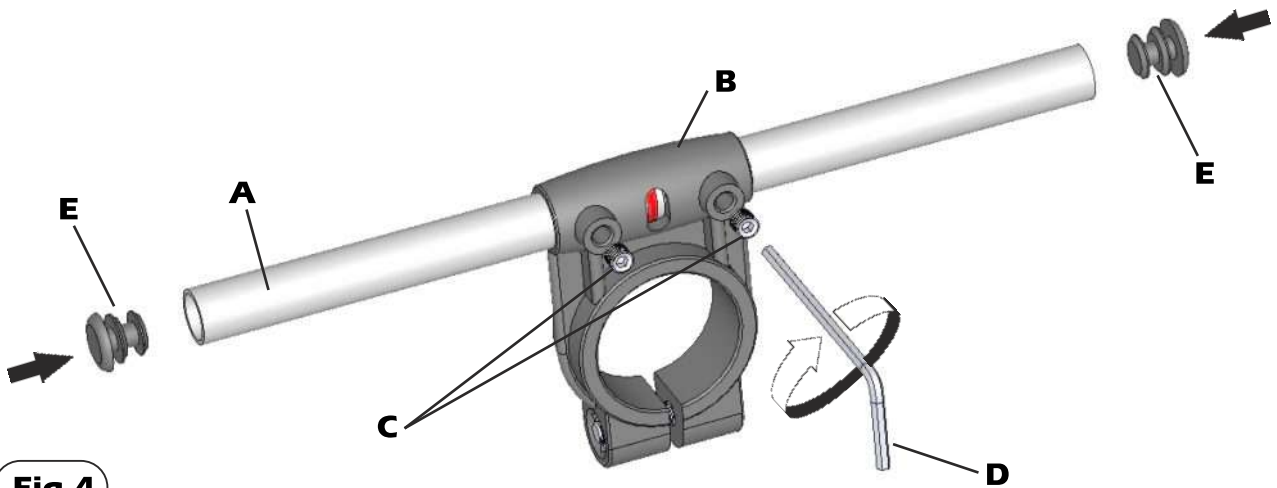


Fig.4

Dipole mounting

- 1) Place the O-ring gasket **F** on the dipole connector **G**. (See **Fig.5**)
 - 2) Insert the antenna's dipole **H** in the dipole connector **G**
 - 3) Fix the antenna's dipole **H** by using the plastic fixing clamp **I** and the screws **J**. Lock the screws to well fix the plastic parts to avoid any gap (see **Fig.6**)
- Remark: the antenna's dipole must be aligned to the elements**

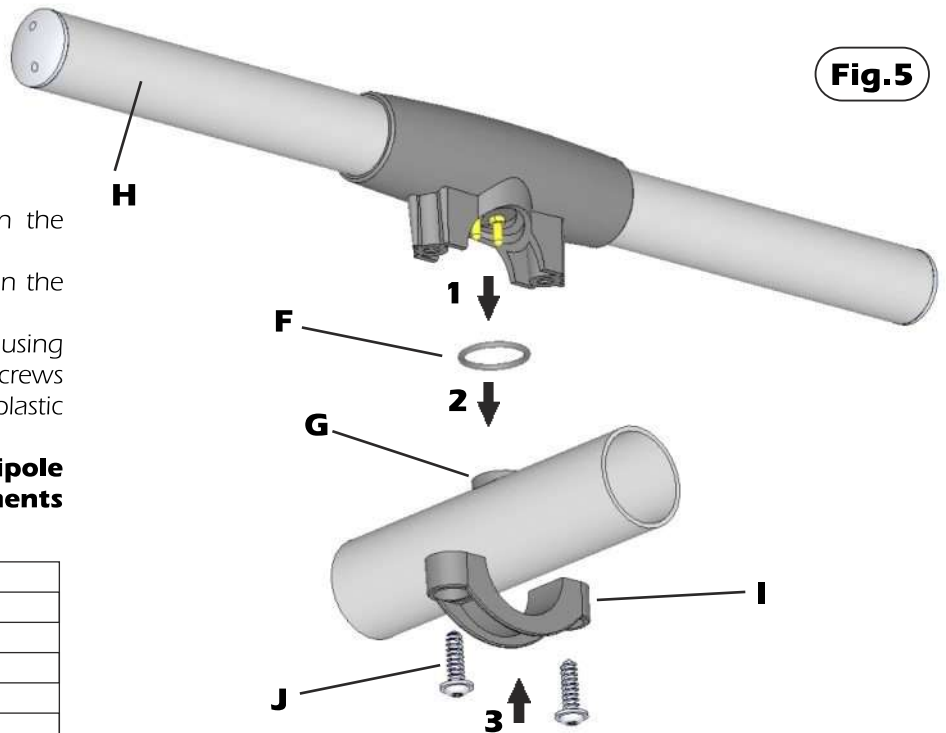


Fig.5

Part list	
Q.ty	Description
1	F) O-ring gasket
1	H) Antenna's dipole
1	I) Plastic fixing clamp
2	J) Tapping Screws for plastic

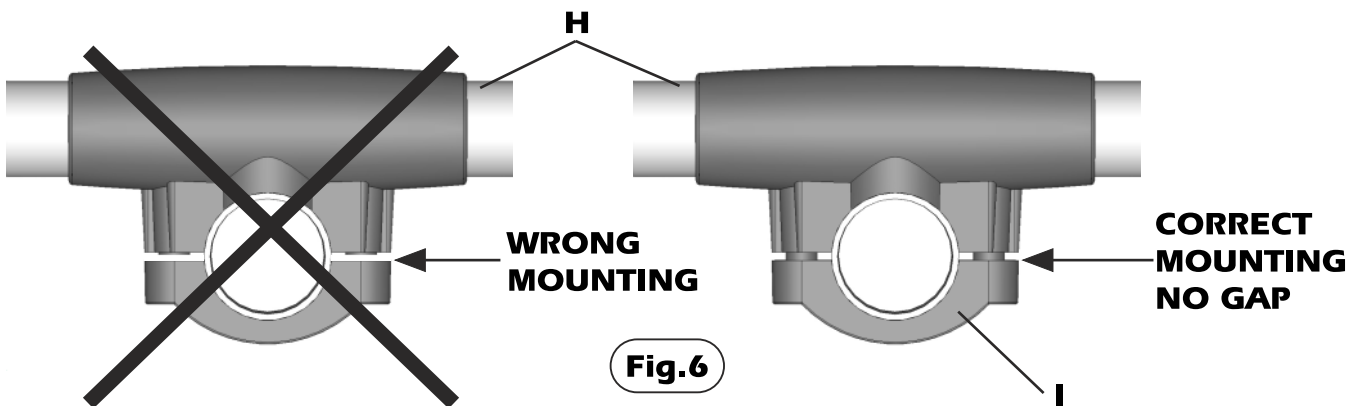
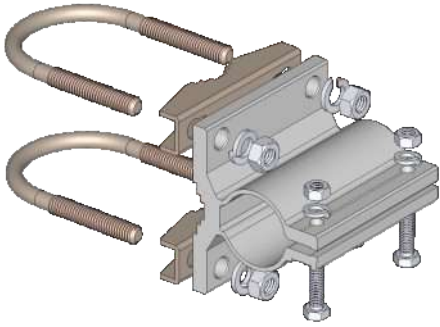


Fig.6

MOUNTING INSTRUCTIONS

Standard Mounting Bracket

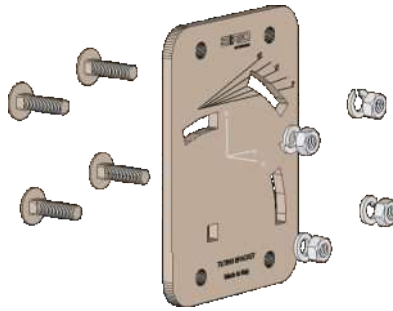


Spare parts: p/n SA197

Materials: extruded aluminum
Hardware: stainless & zinc plated steel
Dimensions : 80 x 76 x 65 mm
Weight: 460 gr

Part list	
Q.ty	Description
1	Extruded aluminium bracket
2	Steel bracket
2	M8x200 U-bolt
4	M8 Grower washer
4	M8 Hexagonal nut
2	M6x20 Hexagonal head screw
2	M6 Grower washer
2	M6 Hexagonal nut

Tilting Bracket*

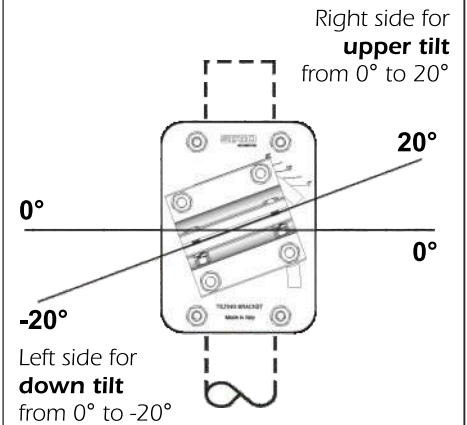


Order p/n: 2519803.00

Materials & Hardware: zinc plated steel
Dimensions: 110 x 150 x 6 mm.
Weight: 800 gr

Part list	
Q.ty	Description
1	10x150x6 Tilting bracket
4	M8x25 Spheric head screw
4	M8 Grower washer
4	M8 Hexagonal nut

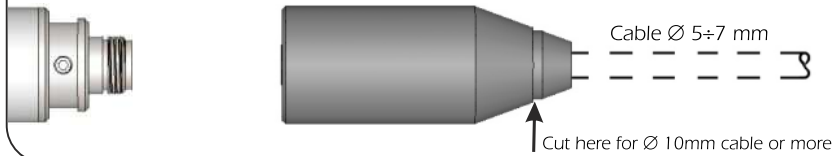
Mounting example



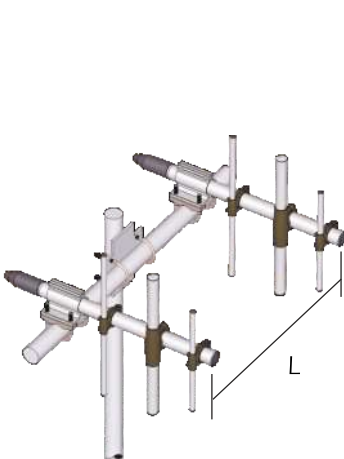
* Optional (not included).

Connector protection cap

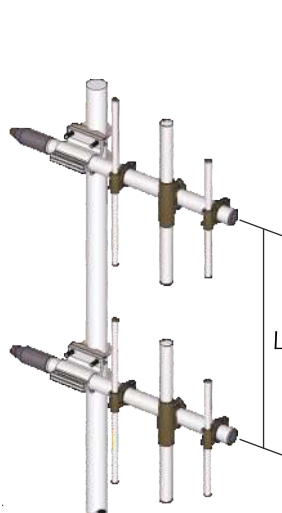
Spare parts: p/n TE06416



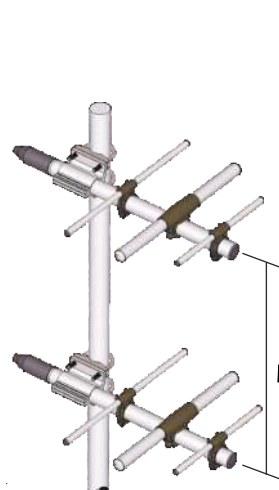
Stacking and Baying distance



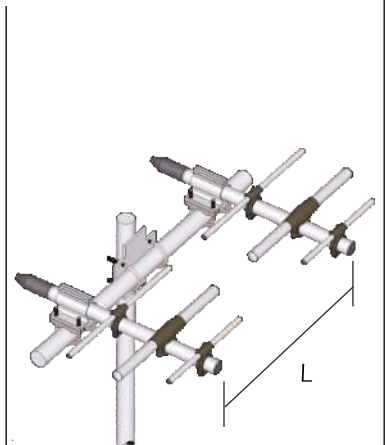
Vertical polarization
(Bayed)
L= 1.4 m; 4.6 ft



Vertical polarization
(Stacked)
L= 2.1 m; 6.9 ft



Horizontal polarization
(Stacked)
L= 1.4 m; 4.6 ft



Horizontal polarization
(Bayed)
L= 2.1 m; 6.9 ft