

MOUNTING INSTRUCTIONS

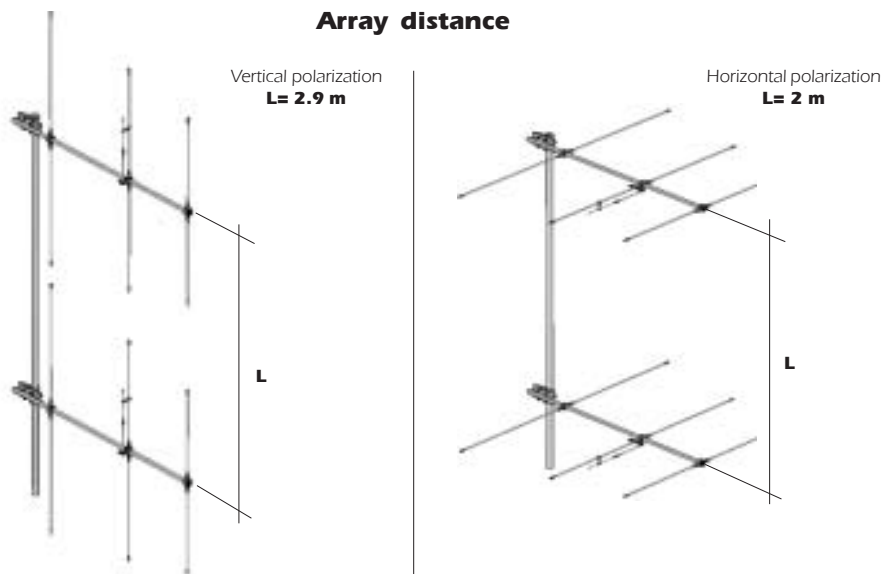
SD/SY Mounting Bracket



SD/SY bracket parts list

Q.ty	Description
1	SD/SY Steel bracket
2	M8x200 U-bolt
4	M8 Hexagonal nut
4	M8 Grower washer
4	M8 Flat Washer
4	M6x125 U-bolt
8	M6 Hexagonal nut
8	M6 Grower washer
8	M6 Flat washer
Materials	Zinc Plated Steel
Weight	865g
Re-order code: SA088	

Array distance



SY78-3

VHF 78-88 MHz Base Station 3 Element Yagi Antenna

DESCRIPTION

Directional 3 elements Yagi antenna for VHF 78-88 MHz with gamma match feed system.

Elements and boom of generous section are completely made of anticorodal aluminum, and the steel bracket is placed in the rear position for the best performance in vertical and horizontal polarization. The elements are fixed to the boom by a strong die-cast metal support to get the maximum strength.

All connections are waterproof and it is supplied with UHF female connector.

All metal parts and hardware are weather resistant.

To improve the antenna gain please install it in stacked or bayed array.

TECHNICAL DATA

Electrical Data

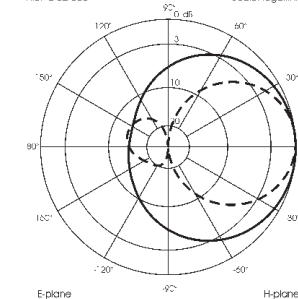
Type	3 elements Yagi
Frequency range	78 - 88 MHz
Impedance	50 Ω Unbalanced
Polarization	Linear Vertical or Horizontal
Radiation (H-plane)	beamwidth @ -3 dB= 130° @ 83 MHz
Radiation (E-plane)	beamwidth @ -3 dB= 70° @ 83 MHz
Max Gain	7 dBi
Front to Back ratio	≥ 15 dB
SWR in bandwidth	≤ 1.5
Max Power	350 Watts [CW] @ 30°C
Feed system	Gamma Match
Connector	UHF-female with rubber protection cap

Mechanical Data

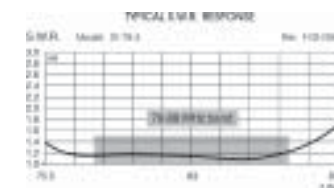
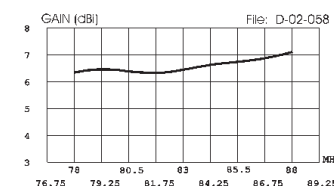
Materials	Aluminum, EPDM rubber, Zamak, Zinc plated Steel, Chromed Brass
Wind load / resistance	190 N at 150 Km/h / 120Km/h
Wind surface	0.154 m ²
Boom/elements diameter	33mm/16mm
Dimensions (approx.)	1600 x 1955 mm
Weight (approx.)	3270 gr
Turning radius	1815 mm
Operating temperature	-40° C to +80° C
Mounting Mast	\varnothing 35-52 mm



TYPICAL RADIATION PATTERN at 83 MHz
File: E-02-058 Scale: logarithmic



TYPICAL GAIN DIAGRAM vs FREQUENCY
File: D-02-058



MOUNTING INSTRUCTIONS

Correct mounting for
horizontal polarization

Pic.1

Correct mounting for
vertical polarization

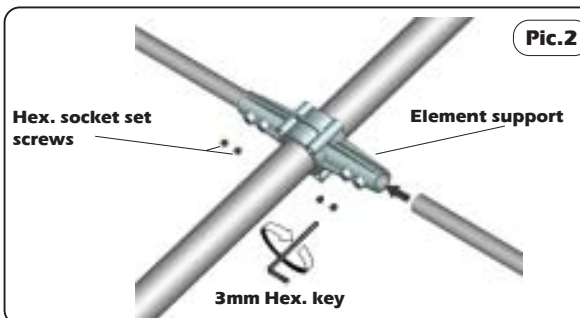
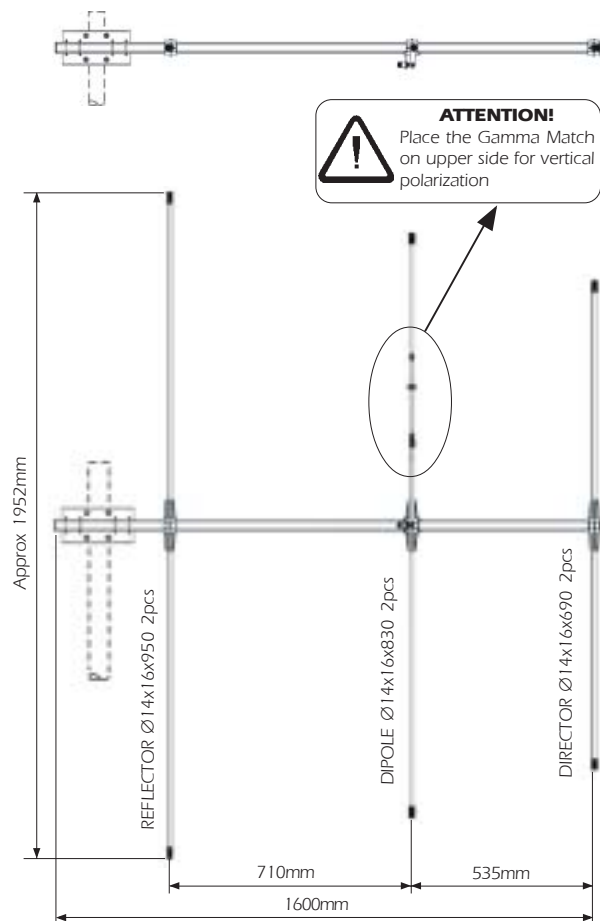
Elements Mounting

Measure the length of the aluminum elements by means of a meter and install them in the element support of the boom according to **Pic.1**. Finally fix the elements with supplied screws and key (see **Pic.2**). Be careful to check that all parts are well locked.

Fixing elements hardware parts list

Q.ty	Description
12	M6x6 Hexagon socket set screws
1	3mm Hexagonal key
6	Ø 16mm PVC caps

Re-order code: SA208



Pic.2

MOUNTING INSTRUCTIONS

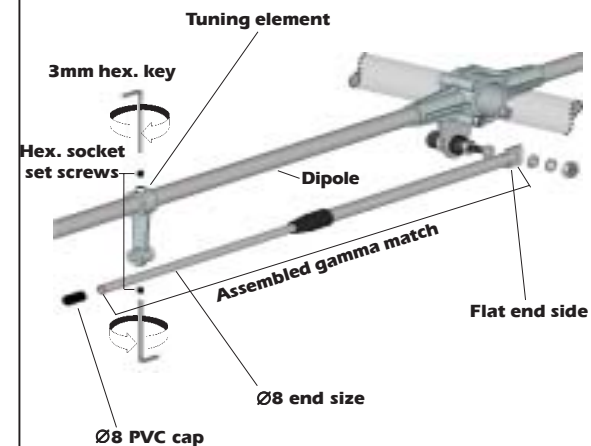
Gamma-match Mounting

1) Fix without locking the flat end of the gamma-match by using the supplied nut and washer according to **pic. 3**
 2) Insert the tuning element on the dipole tube and move it toward the boom. Insert the opposite side (Ø8) of gamma match in the tuning element and fix it at 322mm by means of the enclosed hardware (see **pic. 4**). Mount the PVC caps Ø16mm on the elements.

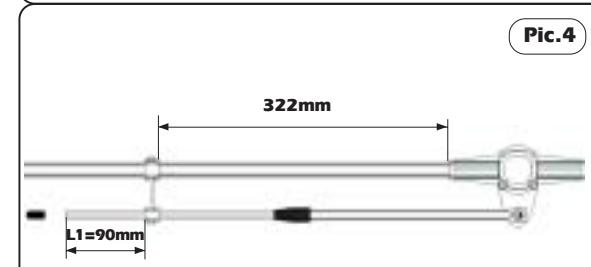
3) Check that the last part of your gamma match (Ø8mm) is correctly positioned at 90mm according to **L1 (pic. 4)** and fix it with hardware.

4) Lock the nut on the flat end of the gamma match and mount the PVC cap (see **pic. 4**)

Gamma Match parts list	
Q.ty	Description
1	Assembled Gamma Match
2	M6x6 Hexagon socket set screws
1	3mm Hexagonal key
1	Ø8 PVC cap
2	M6 Flat washer
1	M6 Grower washer
1	M6 Hexagonal nut
1	Tuning element
Re-order code: SA209	



Pic.3



Pic.4

Cable connection

