

MOUNTING INSTRUCTIONS

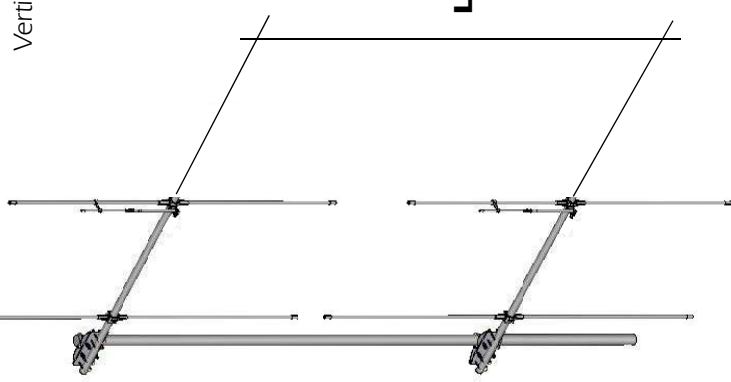
SD/SY Mounting Bracket



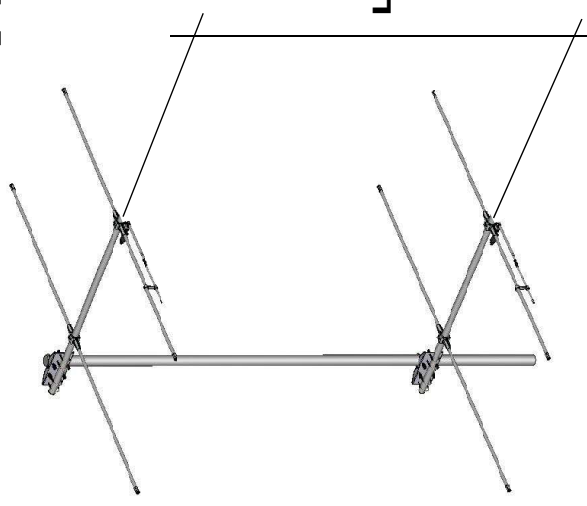
SD/SY bracket parts list	
Qty	Description
1	SD/SY Steel bracket
2	M8x200 U-bolt
4	M8 Hexagonal nut
4	M8 Grower washer
4	M8 Flat Washer
4	M6x125 U-bolt
8	M6 Hexagonal nut
8	M6 Grower washer
8	M6 Flat washer
Materials Zinc Plated Steel	
Weight 865g	
Re-order code: SA088	

Array distance

Vertical polarization
L = 2.9 m

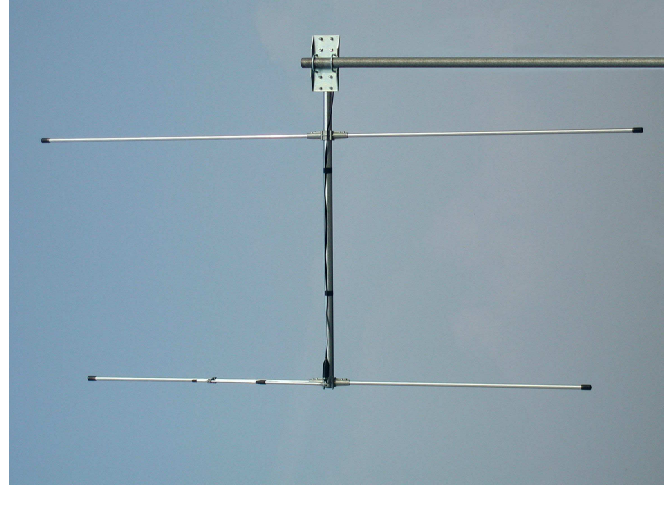


Horizontal polarization
L = 2 m



SY78-2

VHF 78-88 MHz Base Station 2 Element Yagi Antenna



DESCRIPTION

Directional 2 elements Yagi antenna for VHF 78-88 MHz with gamma match feed system.

Elements and boom of generous section are completely made of anticorrosional 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

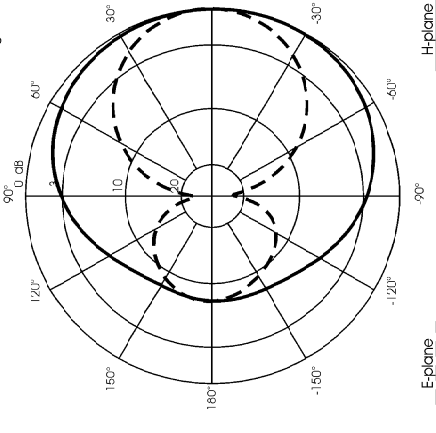
Electrical Data

Type	2 elements Yagi
Frequency range	78 - 88 MHz
Impedance	50 Ω Unbalanced
Polarization	Linear Vertical or Horizontal
Radiation (H-plane)	beamwidth @ -3 dB= 180° @83 MHz
Radiation (E-plane)	beamwidth @ -3 dB= 75° @ 83 MHz
Max Gain	5 dBi
Front to Back ratio	≥ 8 dB
SWR in bandwidth	≤ 1.5
Max Power	350 Watts (CW) @ 30°C
Feed system	Gamma Match
Connector	UHF-female with rubber protection cap

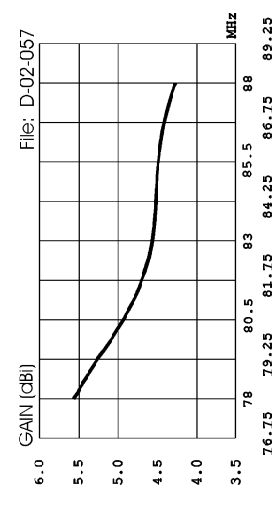
Mechanical Data

Materials	Aluminum, EPDM rubber, Zamak, Zinc plated Steel, Chromed Brass
Wind load / resistance	148 N at 150 Km/h / 140km/h
Wind surface	0.118 m ²
Boom/elements diameter	33mm/16mm
Dimensions (approx.)	1250 x 1895 mm
Weight (approx.)	2610 gr
Turning radius	1490 mm
Operating temperature	-40° C to +80° C
Mounting Mast	Ø 35-52 mm

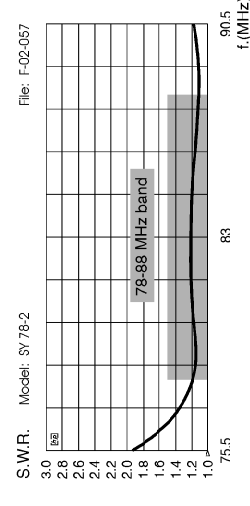
TYPICAL RADIATION PATTERN at 83 MHz
File: E-02-057
Scale: logarithmic



TYPICAL GAIN DIAGRAM vs FREQUENCY
File: D-02-057

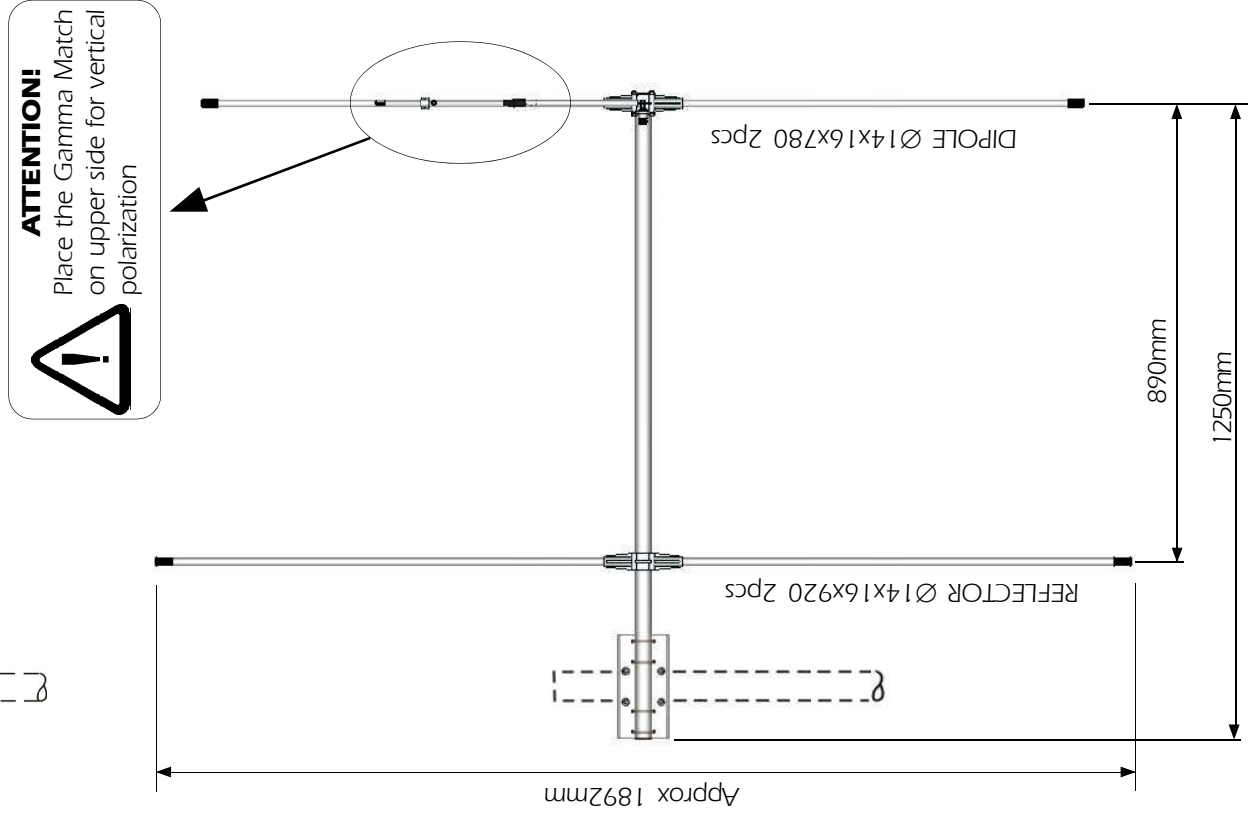


TYPICAL S.W.R. RESPONSE
Model: SY78-2
File: F-02-057



MOUNTING INSTRUCTIONS

Correct mounting for horizontal polarization



Pic.1

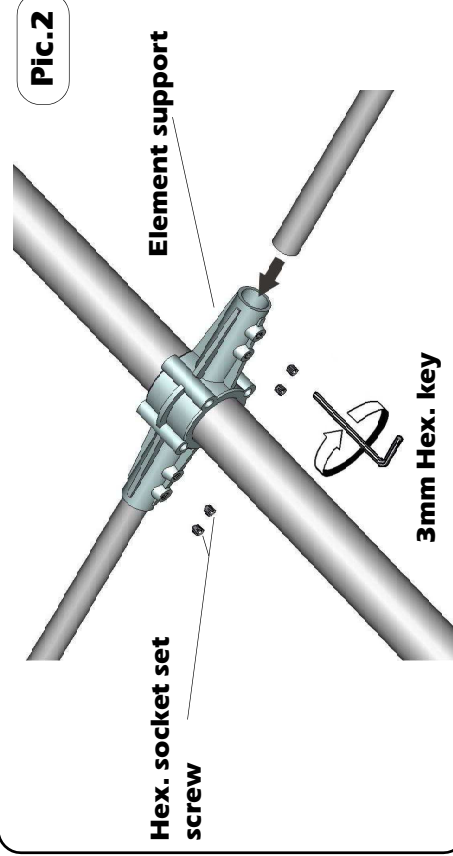
Correct mounting for vertical polarization

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.

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

Re-order code: SA208



Pic.2

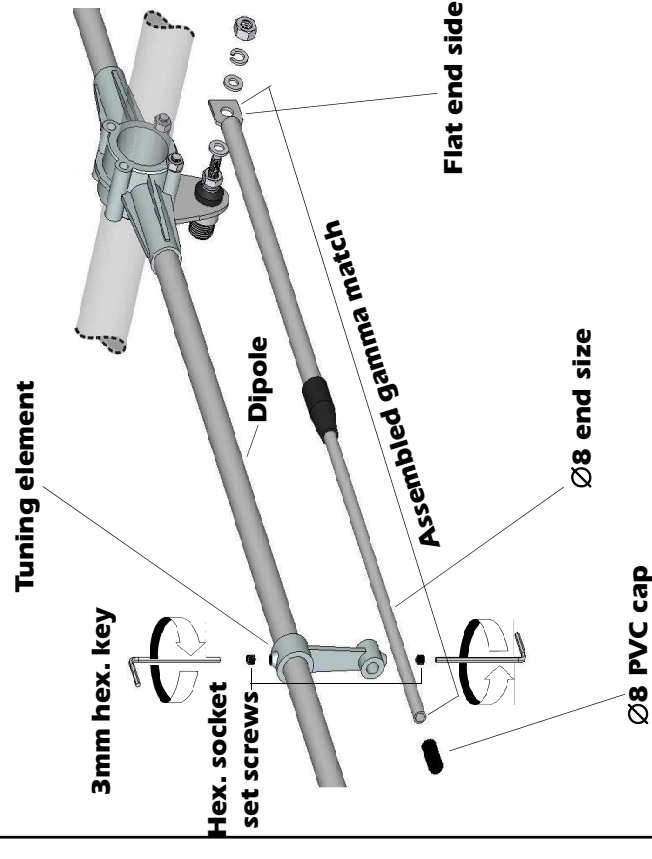
MOUNTING INSTRUCTIONS

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 340mm 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 87mm 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**)

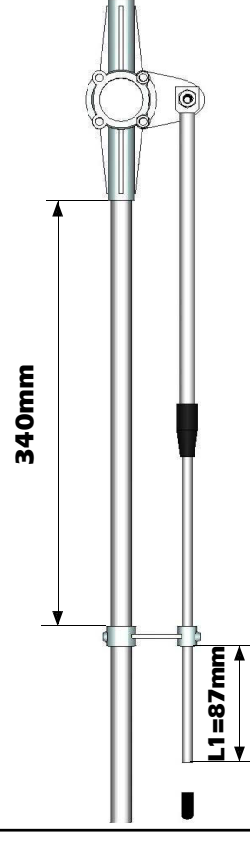
Q.ty	Description
1	Assembled Gamma Match
2	M6x6 Hexagon socket set screws
1	3mm Hexagonal key
1	Ø8 PVC cap
2	M6 Flat washer
1	M6 Grower washer
1	M6 Hexagonal nut
1	Tuning element

Re-order code: SA209



Pic.3

Pic.4



Cable connection

