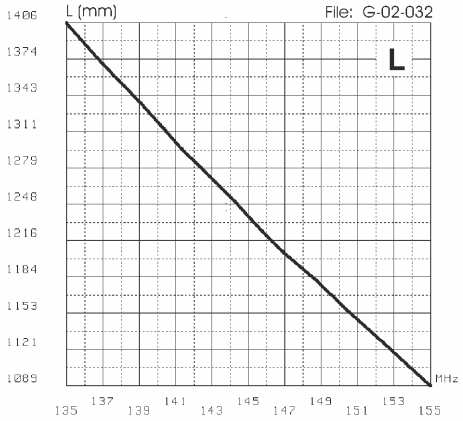
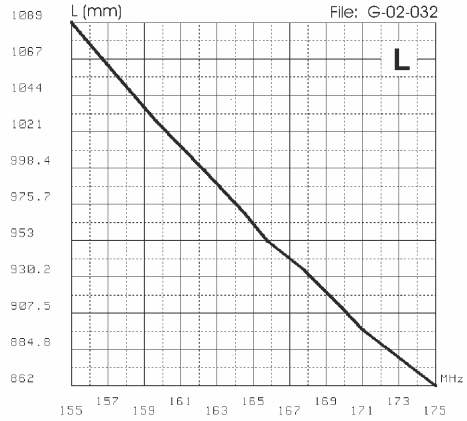
## TYPICAL TUNING DIAGRAMS

TYPICAL TUNING DIAGRAM vs FREQUENCY




TYPICAL TUNING DIAGRAM vs FREQUENCY

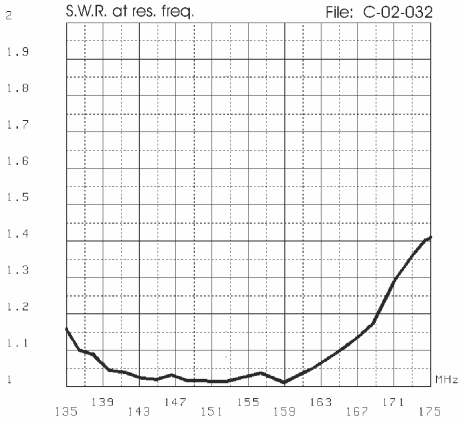



**NOTE:**

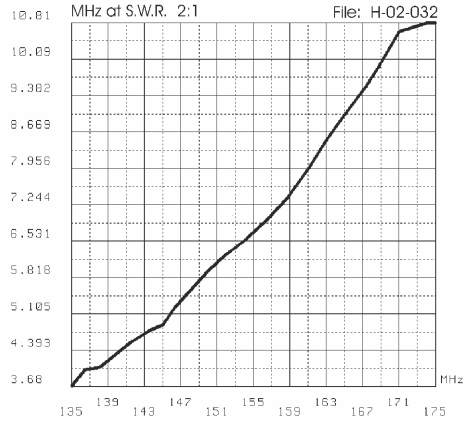
- *Use the curves just as a guide. For fine-tuning please use an SWR-Meter.*

## MATCHING & BANDWIDTH DIAGRAMS

TYPICAL MATCHING DIAGRAM vs FREQUENCY




TYPICAL BANDWIDTH DIAGRAM vs FREQUENCY




SIRIO antenne HI-QUALITY ANTENNAS MADE IN ITALY



# GPF 22 N

## VHF Base Station Antenna 135...175 MHz

# Installation Manual

## DESCRIPTION

2x5/8 λ Ground Plane base station colinear antenna for land and marine service. It works on 135...175 MHz by using the cutting diagram enclosed. The matching coil is DC feeded for a perfect protection from the static discharges. GPF 22-N is made of fiberglass, non-corrosive aluminium, stainless steel and its die-cast strong base assures the maximum robustness and the best performance. Tuning is easy by following the attached directions

## SPECIFICATIONS

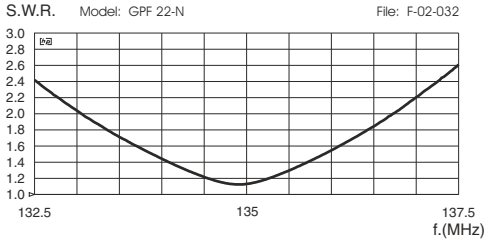
**Electrical Data**

| | |
|---|---|
| Type | : 2 x 5/8 λ Ground Plane Colinear |
| Frequency Range | : 135...175 MHz tunable by cutting |
| Impedance | : 50 Ω |
| Radiation (H-Plane) | : 360° Omnidirectional - HCM code = 000ND00 |
| Radiation (E-Plane) | : Beamwidth @ -3 dB = 35° - HCM code = 018ND30 |
| Radiation Angle deg. | : 0° |
| Polarization | : Linear Vertical |
| Gain | : 3.85 dBd, 6 dBi |
| Bandwidth @ SWR ≤ 2 | : see diagram |
| SWR @ res. freq. | : see diagram |
| Max Power | : 200 Watts |
| Grounding Protection | : All metal parts are DC-grounded, the inner conductor is coupled capacitively |
| Connector | : N-female, Gold Plated central pin |

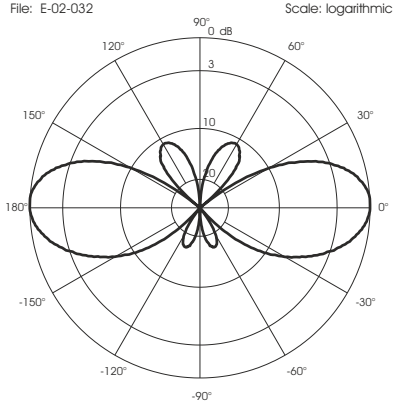
**Mechanical Data**

| | |
|---|---|
| Materials | : Fiberglass, Aluminium, Brass, Stainless steel |
| Wind Load / Resistance | : 95 N @ 150 Km/h / 150 Km/h, 93 mi/h |
| Wind Surface | : 0.08 $m^2$, 0.85 $ft^2$ |
| Height (approx.) | : 3230 mm, 10.6 ft |
| Weight (approx.) | : 1630 gr, 3.6 lb |
| Radial Length (approx.) | : 495 mm, 1.6 ft |
| Mounting Mast | : ∅ 35-60 mm, ∅ 1.4-2.4 in |

TYPICAL S.W.R. RESPONSE




TYPICAL RADIATION PATTERN in E-plane at 145 MHz

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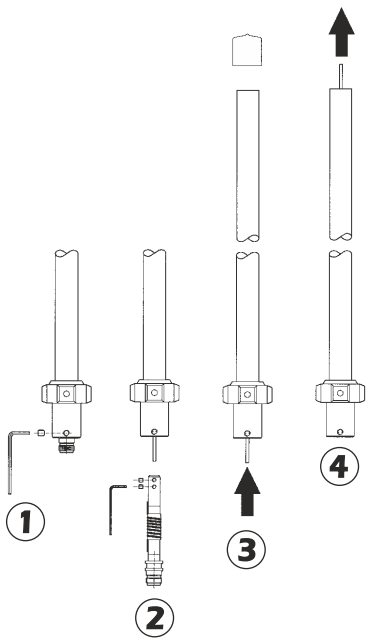
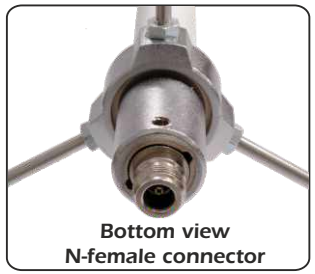
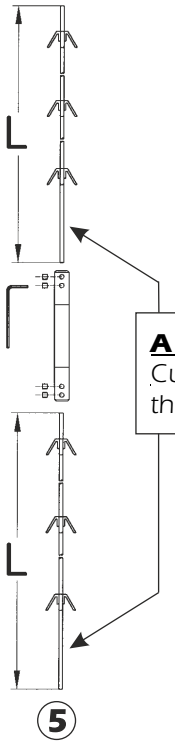
## MOUNTING AND TUNING INSTRUCTIONS

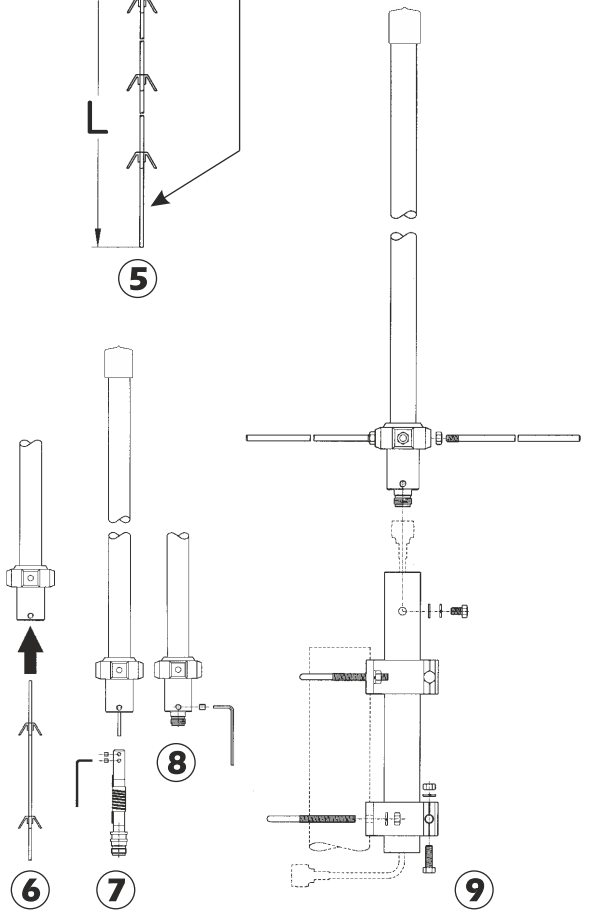


Bottom view
N-female connector




**ATTENTION!!**
Cut the whips on the bottom sides only




**1)** Unlock the hexagonal socket bottom screw using the enclosed key.
**2)** Remove the internal coil.
**3)** Remove the top cap and push the internal whip to the top
**4)** Pull the internal whip and re_ move it.
**5)** Unlock the central coil. Choose the working frequency and cut the whips according to the suitable "Typical tuning diagram".
**NOTE:** Use the curves just as a guide. For fine-tuning please use an SWR-Meter.
**6)** Insert the whip from the bottom
**7)** Mount and lock the coil, assem_ ble the top cap.
**8)** Lock the bottom screw.
**9)** Finally assemble the radials and the side mounting bracket.