## DESCRIPTION

5/8 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 21-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

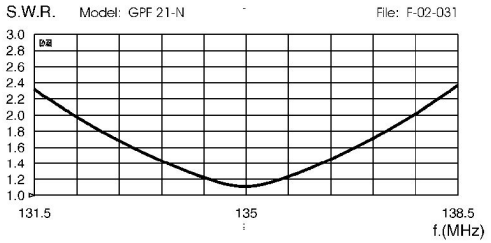
**Electrical Data**

| | |
|---|---|
| Type | : 5/8 λ Ground Plane |
| Frequency Range | : 135...175 MHz tunable by cutting |
| Impedance | : 50 Ω |
| Radiation (H-plane) | : 360° Omnidirectional |
| Radiation (E-plane) | : Beamwidth at -3 dB = 80° |
| Radiation angle deg. | : 28° |
| Polarization | : Linear Vertical |
| Gain | : 1.5 dBd - 3.65 dBi |
| Bandwidth @ SWR ≤ 2 | : see diagram |
| SWR @ res. freq. | : see diagram |
| Max Power | : 200 Watts |
| Grounding Protection | : All metal parts are DC-grounded, inner conductor shows a DC short |
| Connector | : "N"-Female, Gold Plated central pin |

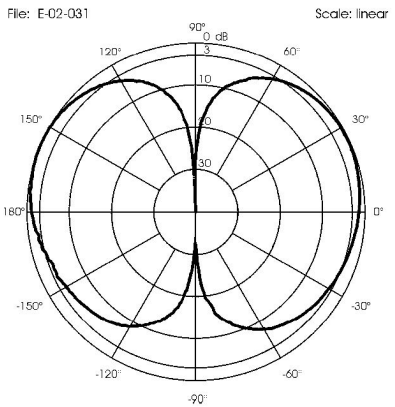
**Mechanical Data**

| | |
|---|---|
| Materials | :Fiberglass, Aluminium, Brass |
| Wind Load / Resistance | : 55 N at 150 Km/h / 200 Km/h |
| Wind Surface | : 0.05 $m^2$ |
| Height (approx.) | : 1730 mm |
| Weight (approx.) | : 1200 gr |
| Radial Length (approx) | : 495 mm |
| Mounting Mast | : Ø 35-54 mm |

TYPICAL S.W.R. RESPONSE




TYPICAL RADIATION PATTERN in E-plane at 145 MHz

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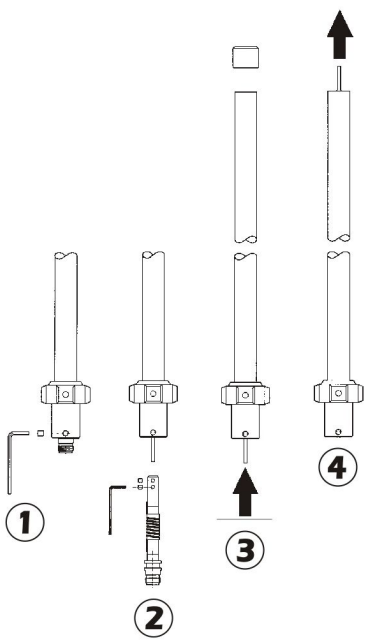
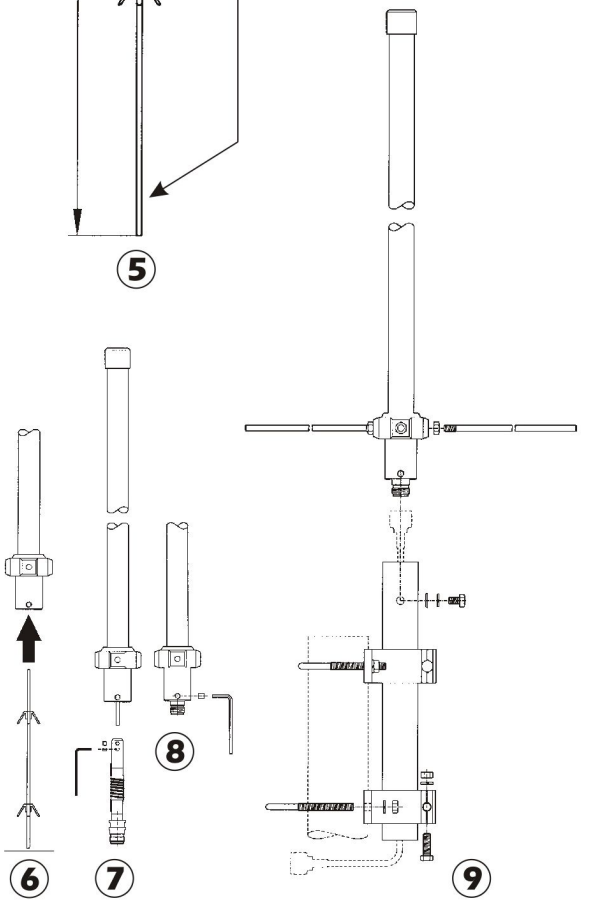
## MOUNTING AND TUNING INSTRUCTIONS



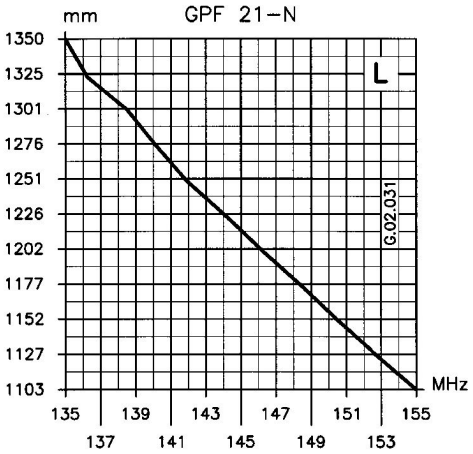

Bottom view
N-female connector

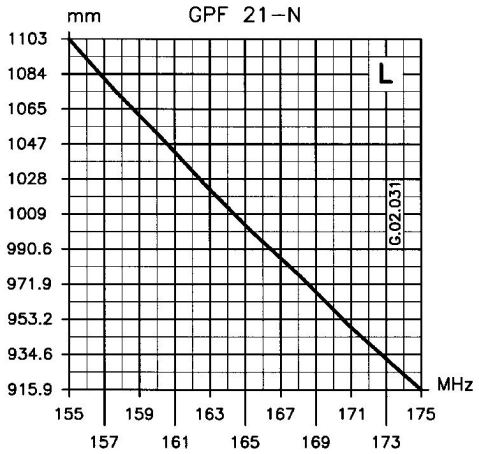
**ATTENTION!!**
Cut the whips on the bottom sides only

**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)** Choose the working frequency and cut the whip 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.



## TYPICAL TUNING DIAGRAMS



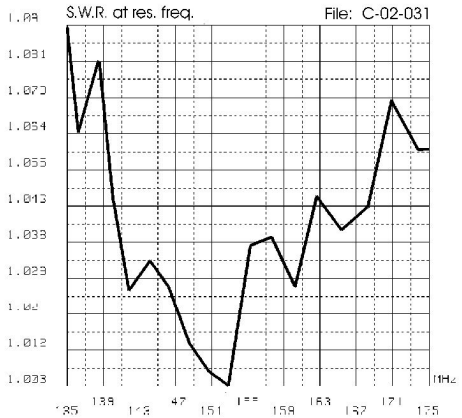




**NOTE:**

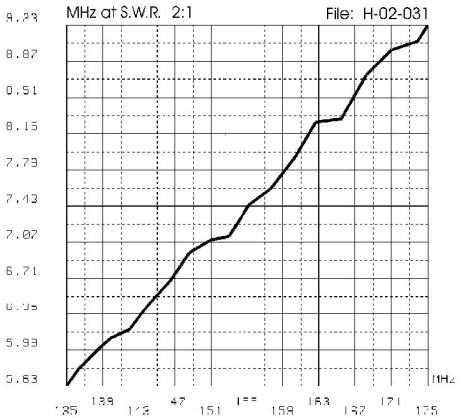
- Use the curves just as a guide. For fine-tuning please use an SWR-Meter.

## MATCHING & BANDWIDTH DIAGRAMS

TYPICAL MATCHING DIAGRAM vs FREQUENCY




TYPICAL BANDWIDTH DIAGRAM vs FREQUENCY

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# GPF 21 N

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

# Installation Manual