

# GPE 27 5/8

# GPS 27 1/2

## 26.4...29 MHz Tunable Base Station Antennas

### DESCRIPTION

Base station antennas tunable from 26.4 to 29 MHz and 10m band. They are made of anti-corodal aluminium tubes and supplied with polythene jointing sleeves to guarantee a perfect waterproofing. Strong and easy to install, they allow very good links.

### SPECIFICATIONS

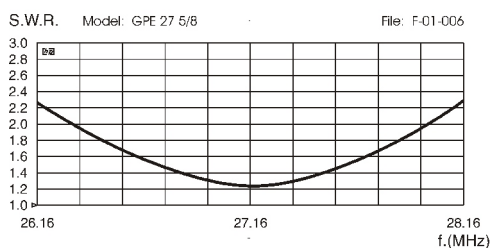
#### Electrical Data

|                          |                   |                            |
|--------------------------|-------------------|----------------------------|
| Type                     | : GPE 27 5/8      | 5/8 $\lambda$ Ground Plane |
|                          | : GPS 27 1/2      | 1/2 $\lambda$              |
| Frequency range          | : 26.4...29.0 MHz | tunable (see table)        |
| Impedance                | : 50 $\Omega$     |                            |
| Radiation (H-plane)      | : 360°            | omnidirectional            |
| Polarization             | : Linear          | Vertical                   |
| Gain                     | : GPE 27 5/8      | 1.2 dBd, 3.35 dBi          |
|                          | : GPS 27 1/2      | 0 dBd, 2.15 dBi            |
| Bandwidth @ SWR $\leq 2$ | : $\geq 1600$ KHz |                            |
| SWR @ res. freq.         | : $\leq 1.3$      |                            |
| Max Power                | : 250 Watts (CW)  | continuous                 |
|                          | : 750 Watts (CW)  | short time                 |
| Feed system/ position    | : Transformer     | DC-ground / base           |
| Connector                | : UHF-female      |                            |

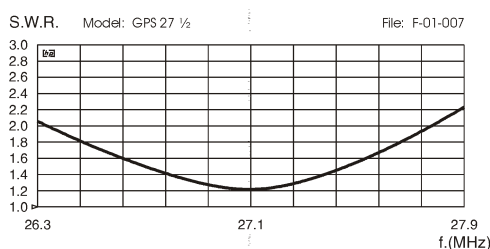
#### Mechanical Data

|                      |                                   |
|----------------------|-----------------------------------|
| Materials            | : Aluminium, Steel, Copper, Nylon |
| Wind Load/Resistance | : 160 N @ 150Km/h / 130 Km/h      |
| Wind surface         | : 0.12 m <sup>2</sup>             |
| Length (approx.)     | : 5950 mm both models             |
| Weight (approx.)     | : GPE 27 5/8 2500 gr              |
|                      | : GPS 27 1/2 2100 gr              |
| Radial lenght        | : 1320 mm (GPE 27 5/8 only)       |
| Mounting Mast        | : Ø 35-42 mm                      |

TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



GPE 27 5/8 Coil



GPS 27 1/2 Coil



GPE 27 5/8

GPS 27 1/2



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## TUNING TABLE

| Freq. (MHz)      | GPE 27 5/8<br>L (mm) | GPS 27 1/2<br>L (mm) |
|------------------|----------------------|----------------------|
| 26.4             | 850                  | 900                  |
| 27.0             | 642                  | 745                  |
| 27.185           | 600                  | 660                  |
| 27.5             | 487                  | 562                  |
| 28.0             | 340                  | 395                  |
| (10 m band) 28.5 | 183                  | 228                  |
| 29.0             | 15                   | 60                   |

### Mounting needed tools:

- n. 1 tape rules (meter)
- n. 1 phillips screwdriver
- n. 1 10 mm open key
- n. 1 19 mm open key

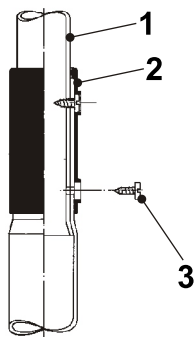
### Additional tools for GPE 27 5/8:

- n.1 flat screwdriver
- n.1 8 mm open key

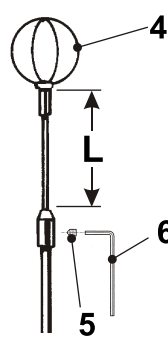
## Parts List

| Pos                                 | Q.ty | Description                                    |
|-------------------------------------|------|--|
| 1                                   | 1    | 5 sections telescopic aluminium whip with coil |
| 2                                   | 4    | plastic jointing sleeves (4 different sizes)   |
| 3                                   | 8    | Ø 3.9x6.5 phillips tapping screws              |
| 4                                   | 1    | top section with cage                          |
| 5                                   | 1    | M4x4 hexagon socket set screw cup point        |
| 6                                   | 1    | 2mm hexagonal key                              |
| 7                                   | 1    | Rubber washer                                  |
| 8                                   | 1    | M16 spring lock washer                         |
| 9                                   | 1    | 19mm hexagonal nut                             |
| 10                                  | 1    | steel bracket                                  |
| 11                                  | 4    | M6 washers                                     |
| 12                                  | 4    | M6 spring lock washers                         |
| 13                                  | 4    | M6 hexagonal nuts                              |
| 14                                  | 2    | M6x160mm U-bolt                                |
| <b>GPE 27 5/8 additional parts:</b> |      |  |
| 15                                  | 3    | Ø 6x8x1320mm aluminium tubes                   |
| 16                                  | 1    | Metal Plate                                    |
| 17                                  | 3    | M5x25 screws                                   |
| 18                                  | 3    | M5 washers                                     |
| 19                                  | 3    | M5 hexagonal nuts                              |
| 20                                  | 3    | PVC cap for Ø 8mm aluminium tube               |

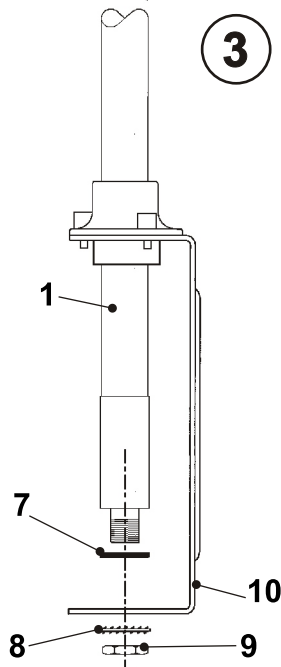
## MOUNTING INSTRUCTIONS



1  
Pull out the sections of telescopic aluminium whip (1), insert the jointing sleeve on the tubes (2) and lock them using the phillips screws (3).



2  
Insert the top section with the cage (4) at L (see tuning table for frequency) and lock it using the screw (5) and 2mm hexagonal key (6).  
**NOTE:** Use the table just as a guide. For fine-tuning please use an SWR-meter

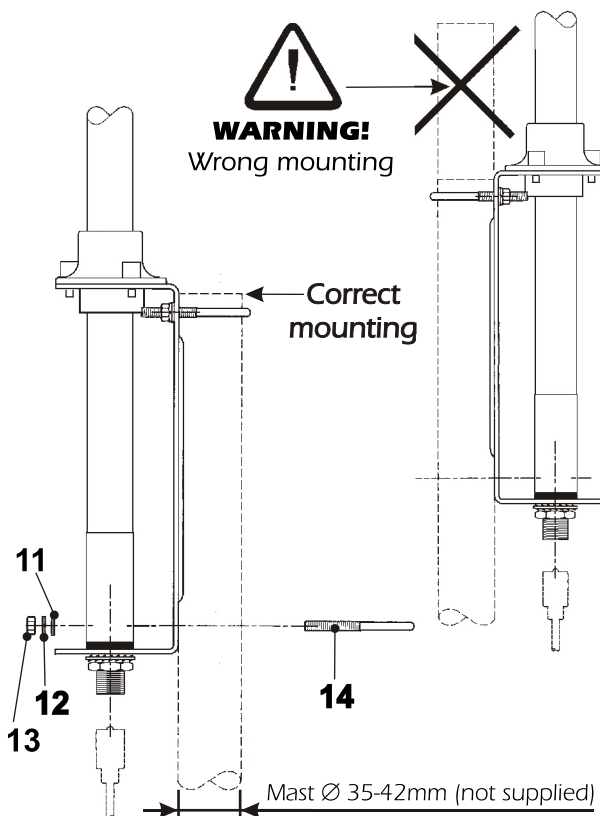


3  
Mount the antenna on the mast using parts (11) (12) (13) (14) in according to the picture.

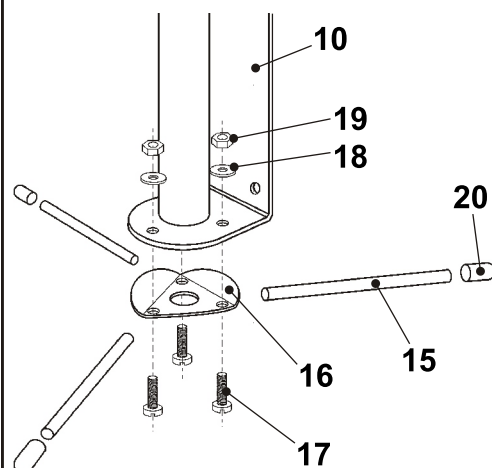
**WARNING!**  
Wrong mounting

Correct mounting

Fit the rubber washer (7) on the bottom of antenna (1). Well lock washer (8) and nut (9) to the steel bracket (10) by using the suitable 19mm key.



### Radials mounting GPE 27 5/8 ONLY



5  
Place the aluminium radials (15) between the steel bracket (10) and the metal plate (16) in according to the picture and lock them by using the supplied screws (17) washer (18) and nut (19). Finally mount the PVC cap (20).



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