

## GPS-C 2R/GSM/FM/...

GPS Antenna with a  $\frac{1}{4} \lambda$  Whip with Shock Spring for the 160 MHz, EGSM and FM Bands

### DESCRIPTION

- External antenna whip mounted on the GPS-Combi mount.
  - Black-chromed, conical stainless steel whip.
  - Easily removable whip for car wash.
- GPS-antenna for fixed installations.
  - Full hemispherical coverage.
  - Built-in high gain, low noise amplifier.
  - Right-Hand Circularly Polarized antenna (RHCP).
  - 5 V supply voltage (3 V respectively 12 V available on request).
  - DC supply via RF-connector.
  - Sturdy, general-purpose  $\frac{1}{4} \lambda$  antenna in professional quality.



### ORDERING DESIGNATIONS

TYPE	PRODUCT NO.
GPS-C 2R/GSM/FM/...	132000063
TRI 2/900-1800-UMTS/FM (optional)	200000792

Can also be supplied factory-cut for the required frequency (between 144 - 175 MHz).

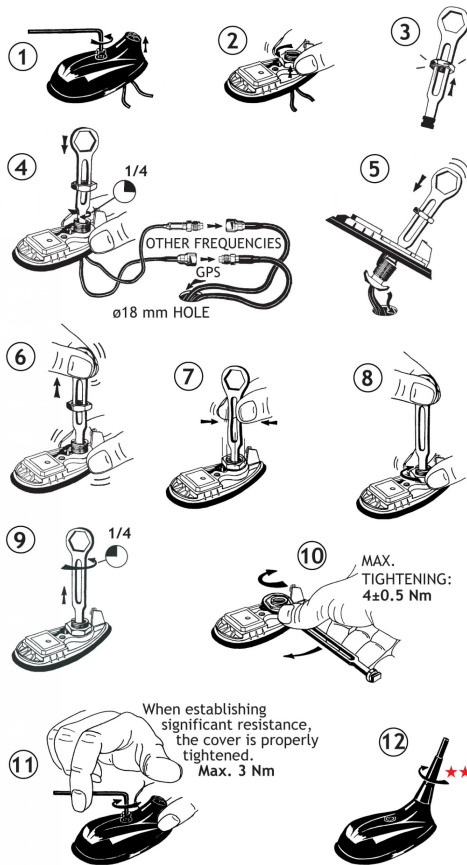
### SPECIFICATIONS FOR WHIP

ELECTRICAL	
MODEL	GPS-C 2R/GSM/FM/...
ANTENNA TYPE	$\frac{1}{4} \lambda$ mobile antenna
FREQUENCY	Tunable by cutting within: 144 – 175 MHz also receives EGSM (880 - 960 MHz) and FM-radio (88 – 108 MHz)
IMPEDANCE	Nom. 50 $\Omega$
POLARIZATION	Vertical
GAIN	Approx. 0 dB (acc. to EIA RS-329-1) for the 160 MHz band
MAX. POWER	25 W
MECHANICAL	
MATERIALS	Whip: Black-chromed, conical stainless steel Black-chromed brass Spring: Black-chromed stainless steel
COLOUR	Black
HEIGHT	Approx. 450 mm (dep. on frequency)
WEIGHT	Approx. 60 g (dep. on frequency)
MOUNTING	On the GPS-Combi mount

### SPECIFICATIONS FOR GPS-COMBI MOUNT

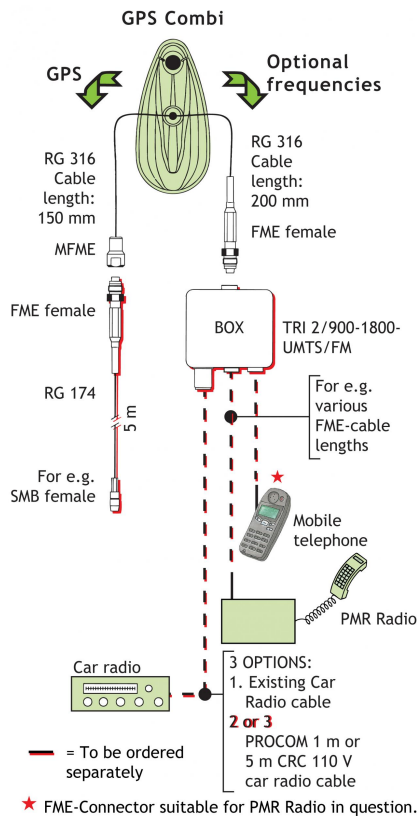
ELECTRICAL GENERAL SPECIFICATIONS	
MODEL	GPS-COMBI MOUNT
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 $\Omega$
POLARISATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	28 dB in axial direction (typ.)
CROSS-POLARISATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 45 dB down @ $\pm 45$ MHz
BUILT-IN AMPLIFIER	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 1 dB (typ.)
P <sub>1dB</sub>	Approx. +7 dBm
SWR (output)	$\leq 2.0$
SUPPLY VOLTAGE	5 $\pm$ 0.5 VDC (3 V resp. 12 V on request)
CURRENT CONSUMPTION	Approx. 25 mA
MECHANICAL (ONLY FOR THE GPS-PART)	
MATERIALS	Cu-nite brass Stainless steel Reinforced thermoplastic
ANTENNA COLOUR	Black
TEMP. RANGE	-35° C $\rightarrow$ +75° C
CONNECTOR	FME (male for GPS) + FME (female for mobile antenna)
RECOMMENDED INSTALL. TORQUE	4 $\pm$ 0.5 Nm
DIMENSIONS (H x L)	Approx. 30 x 89 mm
ROOF THICKNESS	Max. 2.5 mm
WEIGHT	Approx. 114 g
MOUNTING	$\varnothing 18.0$ mm dia. hole for roof thickness up to 2.0 mm $\varnothing 18.5$ mm dia. hole for roof thickness 2.0 - 2.5 mm Tools for mounting included

## MOUNTING INSTRUCTIONS



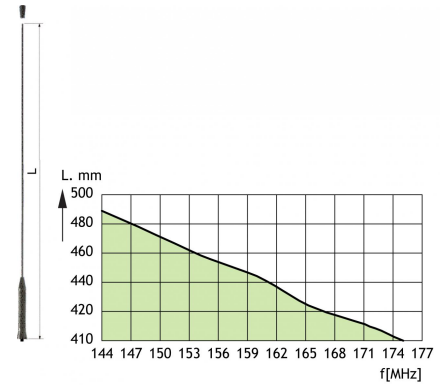
★★ The whip should always be dismantled during car wash.

## CABLE MOUNTING

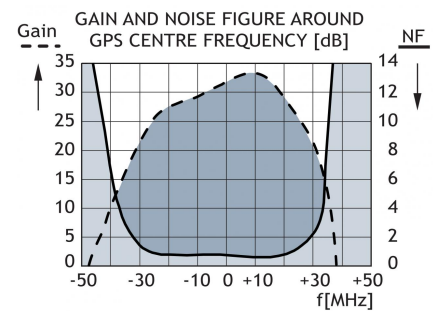
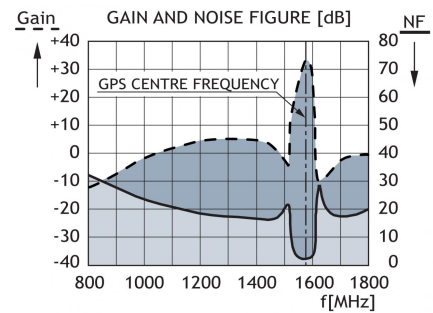


## TUNING

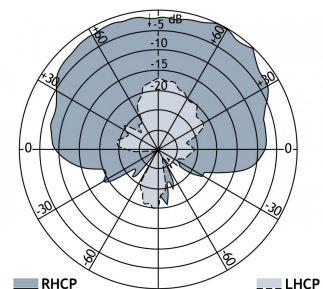
The antenna should always be tuned using an SWR-meter. The cutting diagram below serves as a guide for this procedure.



## TYPICAL RESPONSE CURVES



## VERTICAL RADIATION PATTERN



CE



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