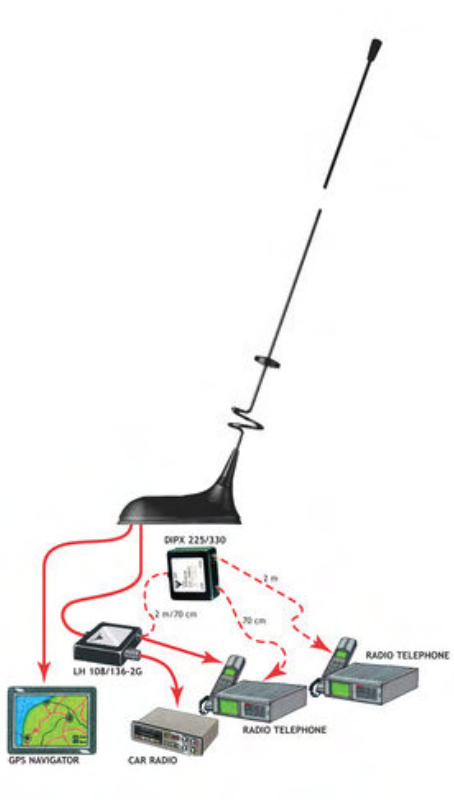
GPS-C MHU 3/FM

GPS Antenna with Whip for the 160 MHz, 450 MHz and FM Bands

DESCRIPTION

- GPS-antenna for fixed installations.
- External antenna whip mounted on the GPS-Combi mount.
- Full hemispherical coverage.
- Built-in high gain, low noise amplifier.
- Right-Hand Circular Polarisation (RHCP).
- 5 V supply voltage (3 V respectively 12 V available on request).
- DC supply via RF-connector.
- Black-chromed, conical stainless steel whip.
- Unity gain for the 160 MHz band and 3 dB gain for the 450 MHz band.



ORDERING DESIGNATIONS
Not every combination of frequency pairs can be delivered.
When ordering, please state frequencies between 140-170 MHz and 400-470 MHz.

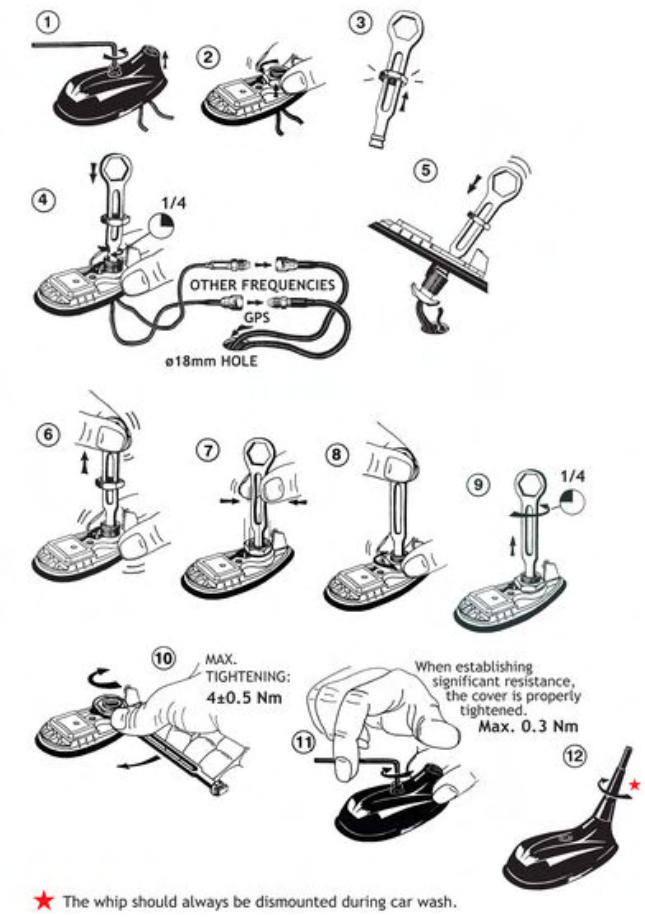
SPECIFICATIONS FOR WHIP

ELECTRICAL	
MODEL	GPS-C MHU 3/FM
ANTENNA TYPE	Tripple-frequency mobile antenna
FREQUENCY	160 MHz: F.res. within: 140-170 MHz 450 MHz: F.res. within: 400-470 MHz FM band: 88-108 MHz
IMPEDANCE	Nom. 50 Ω
POLARISATION	Vertical
GAIN	160 MHz: 0 dB (acc. to EIA RS-329-1) 450 MHz: 3 dB (acc. to EIA RS-329-1)
SWR	≤ 1.5 @ f.res. on both bands
MAX. POWER	25 W
MECHANICAL	
MATERIALS	Black-chromed, concial stainless steel Black-chromed brass
COLOUR	Black
HEIGHT	Approx. 450 mm (dep. on freq.)
WEIGHT	Approx. 60 g (dep. on freq.)
MOUNTING	On the GPS-Combi mount

SPECIFICATIONS FOR GPS-COMBI MOUNT

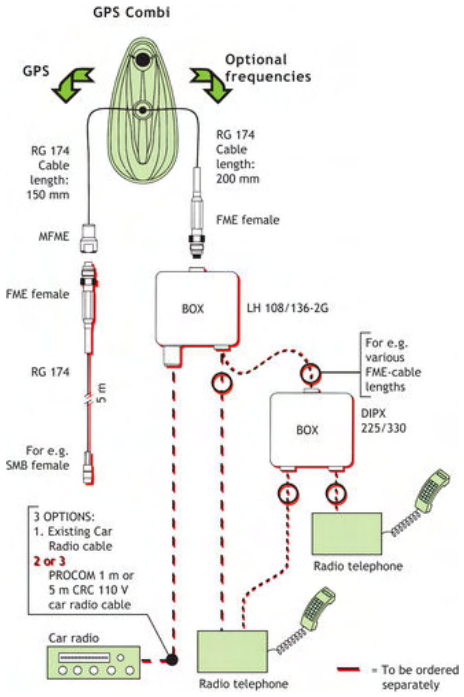
ELECTRICAL General specifications	
MODEL	GPS-COMBI MOUNT
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARISATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	28 dBic in axial direction (typ.)
CROSS-POLARISATION ATT.	> 10 dB (typ.)
BUILT-IN AMPLIFIER	
GAIN	> 30 dB (typ.)
NOISE FIGURE	< 1 dB (typ.)
P 1dB	Approx. +7 dBm
SELECTIVITY	> 45 dB down at ± 45 MHz
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	5 ± 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 →+75° C
CONNECTOR	FME (male for GPS) + FME (female for mobile antenna)
RECOMMENDED INSTALL. TORQUE	4 ± 0.5 Nm
DIMENSIONS(H x L)	Approx. 30 x 89 mm
ROOF THICKNESS	Max. 2.0 mm
WEIGHT	Approx. 114 g
MOUNTING	ø18 mm dia. hole (For roof thickness 2.5 mm mounting hole should be ø18.5 mm dia.) Tools for mounting included

MOUNTING INSTRUCTIONS

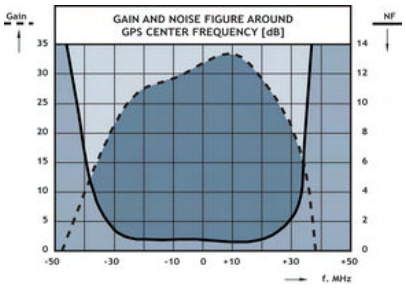


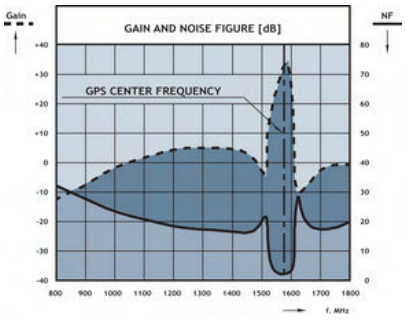
Do not use sealer on rubbergasket or other places.

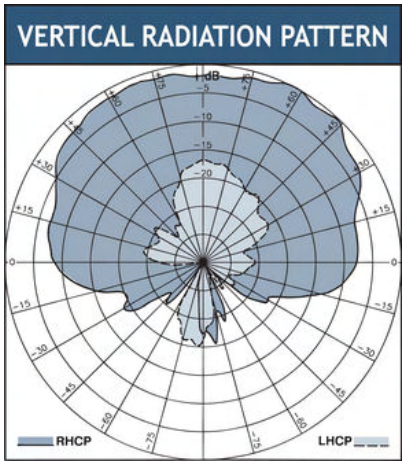
CABLE MOUNTING



TYPICAL RESPONSE CURVE







TUNING INFORMATION

The GPS-C MHU 3/FM cannot be tuned to any pair of frequencies in the two bands. Further, the antenna must be equipped with a different kind of adjustment disc depending on the frequency pair in question. The antenna can be used without adjustment disc, with a small adjustment disc or with a large adjustment disc. All adjustment disc types are supplied with the antenna.

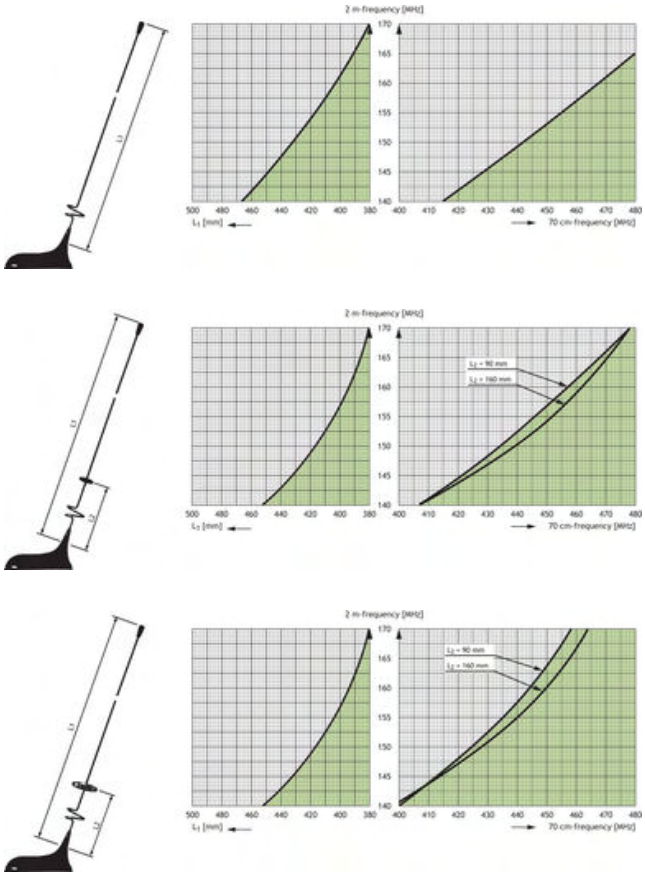
Use the diagrams below as follows:

1. Draw a horizontal line through the point on the vertical axis which corresponds to the 2 m-frequency in question.
2. The drawn horizontal line intersects the shaded area over a certain band of 70 cm-frequencies.

If the 70 cm-frequency to be covered is not included in the shaded area, try another diagram (another adjustment disc type). If the 70 cm-frequency is not covered in any of the diagrams, coverage of the frequency pair in question is not possible using this type of antenna. Please note, however, that taking into account the inherent bandwidth of the antenna (± 2 MHz in the 2 m-band and ± 12 MHz in the 70 cm-band) the combination area may be increased considerably.

For the relevant diagram:

1. Read the total length L1on the left horizontal axis and cut the whip to this length.
2. Locate the 70 cm-frequency in question on the right horizontal axis and read the corresponding length L2 from the curves in the shaded area.



Use an SWR-meter to fine-tune the settings

PROCOM A/S reserve the right to amend specifications without prior notice.

23/04/2009