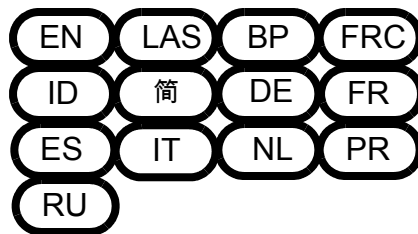




Combination GPS Antenna/Mount

PMAE4030, PMAE4031, PMAE4032, PMAE4033, PMAE4034, PMAE4035, PMAE4036, PMAE4037, PMAE4038, RAD4214, RAD4215, RAD4216, RAD4218, RAD4219, RAD4220, RAD4221, RAD4222, HAE6017, HAE6018, HAE6019, HAE6020, HAE6023, HAE6024, HAE6025, HAE6026



INTRODUCTION

GPS COMBINATION ANTENNA/MOUNT RECOMMENDED INSTALLATION INSTRUCTIONS

The GPS combination antenna/mount includes an active GPS antenna and a mobile antenna mount in a single installation. The mobile antenna interface is a standard M-type interface (1,125"-18 UNEF-2B thread) that has been designed to provide performance at low and high frequencies.

Installation guidelines for the specific mobile antenna used with this mount apply as if used with a standard permanent antenna mount (i.e. if the antenna requires a ground plane on a standard mount, it will require a ground plane under the GPS antenna/mount.) The optimum location for mounting the GPS antenna/mount is a flat, level surface, free of obstruction, offering a clear view of the horizon and above in all directions.

Stud Mount (Typical Installation)

1. Determine the installation location of the GPS antenna/mount, ensuring that the mounting surface is as flat as possible. A 2.54 cm deep by 6.35 cm minimum diameter is required below the mounting surface to allow sufficient clearance for the mounting stud, hardware and cables.
2. Cut or drill holes through the mounting surface (1.27 cm maximum thickness) sized and positioned as shown in figure 1.
3. Clean the mounting surface and the bottom of the GPS antenna/mount. To ensure a long term, water-tight seal, it is recommended that a bead of silicone sealant be applied around both holes.
4. Feed the cables through the large hole and route to the desired location.

5. Position the GPS antenna/mount onto the mounting surface. The mounting stud shall be located in the large hole and the locating tab shall be located in the small hole.
6. On the bottom side of the mounting surface, slide the slotted lock washer and hex nut around the cables and assemble to the mounting stud (discard the crown nut supplied with the unit). Tighten until the gasket on the base of the GPS antenna/mount is compressed to approximately 50 percent of the original thickness. For curved mounting surfaces, gauge compression at crest of curvature.
7. Assemble the mobile antenna to the GPS antenna/mount.

Stud Mount (Blind Installation)

1. Determine GPS antenna/mount assembly installation location. Ensure that the mounting surface is as flat as possible. 2.54 cm minimum is required below the mounting surface to allow for sufficient clearance for the mounting stud and cables.
2. Cut or drill holes through the mounting surface (0.33 cm max thickness) sized and positioned as shown in figure 2.
3. Assemble the crown nut to the mounting stud so that the tines are flush with the bottom surface of the gasket. Adjust the position of the crown nut as described in the table below for various material thicknesses.

Material Thickness	Turn Crown Nut, From Flush Position For Material Thickness Adjustment	Resulting "GAP" See Figure Above
0.81 mm	1 Full Turn Clockwise	-1.57 mm (below flush)
1.6 mm	1/2 Turn Clockwise	-0.81 mm (below flush)
2.39 mm	No adjustment required	0 mm (flush)
3.18 mm	1/2 Turn counter-clockwise	0.81 mm (gap)



STEP 3 IS CRITICAL. THE CROWN NUT MUST BE ADJUSTED ON THE MOUNTING STUD FOR APPLICABLE MOUNTING SURFACE MATERIAL THICKNESS. ONCE THE ANTENNA IS ASSEMBLED THROUGH THE MOUNTING SURFACE IT CANNOT BE REMOVED UNLESS ACCESS TO THE CROWN NUT IS POSSIBLE. TO REMOVE, PRESS THE GPS UNIT TOWARDS THE MOUNTING SURFACE TO COMPRESS THE GASKET; THEN LOOSEN THE CROWN NUT.

4. Clean the mounting surface and the bottom of the GPS antenna/mount assembly. To ensure a long term and water-tight seal, it is recommended that a bead of silicone sealant be applied around both holes.
5. Feed the cables through the large hole and route to the desired location.
6. Position the GPS antenna/mount assembly onto the mounting surface. The mounting stud shall be located in the large hole and the locating tab shall be located in the small hole.
7. Press the GPS antenna/mount assembly towards the mounting surface until the crown nut snaps through the hole and the tines lock on bottom side of the mounting surface. Assemble the mobile antenna to the GPS antenna/mount assembly.

Installing the Whip to the Base

Attached desired antenna to the 1.125 threaded portion on the top of the GPS base. Please refer to figure 3.

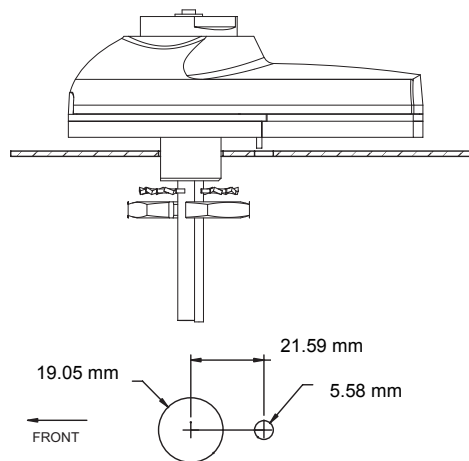


Figure 1. Typical Installation

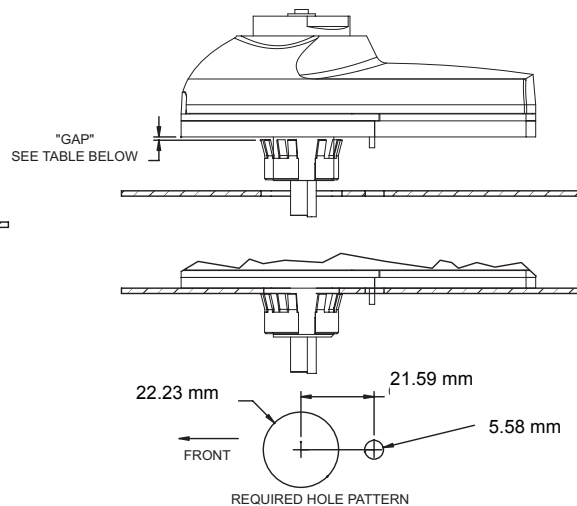


Figure 2. Blind Installation

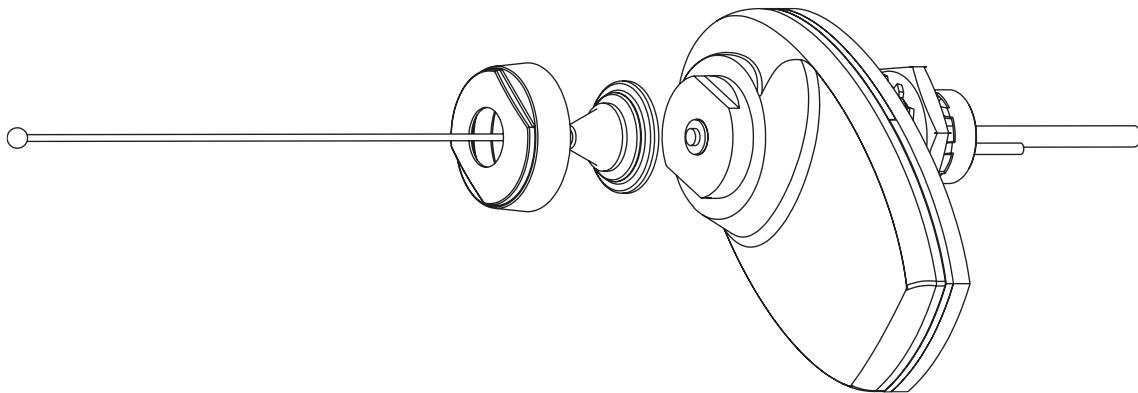


Figure 3. Installing the Whip to the Base

SERVICE AND REPLACEMENT PARTS

The GPS combination antenna/mount is not repairable. Please order a replacement as necessary. The following replacement parts are available for order from your local dealer.

Description	REPLACEMENT KITS		
	Replacement Top Level Kits	GPS Base Replacement Kit	Antenna Replacement Kit
Combo GPS/UHF 403-430 MHz, 1/4 Wave	PMAE4030_	PMAN4004_	PMAE4039_
Combo GPS/UHF 450-470 MHz, 1/4 Wave	PMAE4031_	PMAN4004_	PMAE4041_
Combo GPS/UHF 406-420 MHz, 3.5 dB GN	PMAE4032_	PMAN4004_	PMAE4040_
Combo GPS/UHF 450-470 MHz, 3.5 dB GN	PMAE4033_	PMAN4004_	PMAE4042_
Combo GPS/UHF 450-470 MHz, 5 dB GN	PMAE4034_	PMAN4004_	PMAE4043_
Combo GPS/UHF 403-430 MHz, 1/4 Wave, BNC	PMAE4035_	PMAN4003_	PMAE4039_
Combo GPS/UHF 406-420 MHz, 3.5 dB GN, BNC	PMAE4036_	PMAN4003_	PMAE4040_
Combo GPS/UHF 450-470 MHz, 1/4 Wave, BNC	PMAE4037_	PMAN4003_	PMAE4041_
Combo GPS/UHF 450-470 MHz, 5 dB GN, BNC	PMAE4038_	PMAN4003_	PMAE4043_
Combo GPS/VHF 136-144 MHz, 1/4 Wave, MU	RAD4214_	PMAN4004_	RAD4226_
Combo GPS/VHF 146-150.8 MHz, 1/4 Wave, MU	RAD4215_	PMAN4004_	RAD4225_
Combo GPS/VHF 150.8-162 MHz, 1/4 Wave, MU	RAD4216_	PMAN4004_	RAD4224_
Combo GPS/VHF 162-174 MHz, 1/4 Wave, MU	RAD4217_	PMAN4004_	RAD4223_
Combo GPS/VHF 146-172 MHz, 3.0 dB GN, MU	RAD4218_	PMAN4004_	RAD4227_
Combo GPS/VHF 136-144 MHz, 1/4 Wave, BNC	RAD4219_	PMAN4003_	RAD4226_
Combo GPS/VHF 146-150.8 MHz, 1/4 Wave, BNC	RAD4220_	PMAN4003_	RAD4225_
Combo GPS/VHF 150.8-162 MHz, 1/4 Wave, BNC	RAD4221_	PMAN4003_	RAD4224_
Combo GPS/VHF 162-174 MHz, 1/4 Wave, BNC	RAD4222_	PMAN4003_	RAD4223_
Combo GPS/UHF 403-527 MHz, 2.0 dB BNC	HAE6017_	PMAN4003_	HAE6029_

Description	REPLACEMENT KITS		
	Replacement Top Level Kits	GPS Base Replacement Kit	Antenna Replacement Kit
Combo GPS/UHF 470-527 MHz, 1/4 Wave, BNC	HAE6018_	PMAN4003_	HAE6030_
Combo GPS/UHF 403-527 MHz, 2.0 dB MU	HAE6019_	PMAN4004_	HAE6029_
Combo GPS/UHF 470-527 MHz, 1/4 Wave, MU	HAE6020_	PMAN4004_	HAE6030_
Combo GPS/UHF 494-512 MHz, 3.0 dB BNC	HAE6023_	PMAN4003_	HAE6027_
Combo GPS/UHF 470-494 MHz, 3.0 dB MU	HAE6024_	PMAN4004_	HAE6028_
Combo GPS/UHF 470-494 MHz, 3.0 dB BNC	HAE6025_	PMAN4003_	HAE6028_
Combo GPS/UHF 494-512 MHz, 3.0 dB MU	HAE6026_	PMAN4004_	HAE6027_

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