

# Installation Instructions – SW3-686 FINB Series

SW3-686 - Document Version 1.0

## A. Introduction

The FINB series is a high performance panel mount base suitable for whips from 136-960MHz with an OEM style shark fin appearance.

The FINB is suitable for fitment to standard vehicle panels of up to 4mm (0.16") thickness.



## B. Mounting requirements and selecting location

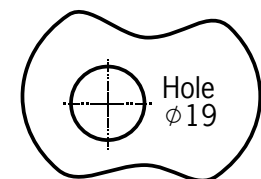
This antenna must be fitted on a conductive ground plane of minimum  $\frac{1}{2}$  wavelength diameter at the lowest frequency of operation; to calculate see below:

$$150 / \text{frequency in MHz} = \frac{1}{2} \text{ wavelength (m)}$$

Examples: 150MHz = 100cm (39.4"); 400MHz = 38cm (15"); 900MHz = 16cms (6.3").

When fitting on a non-metallic panel, a ground plane plate of suitable size should be fabricated and fitted under the mounting panel; the securing washer and nut must make a low resistance electrical contact with this plate ( $< 0.2\Omega$ ). Select a mounting location. Ensure that there is adequate under panel clearance and that there is no double skin panel or cross brace present. Measure to check for central position if applicable.

## C. Prepare and drill hole



Mask panel area around hole position to protect paintwork and headliner. Drill a pilot hole, and then increase to 19mm (3/4"), ensuring that drill/cutter bit does not contact headliner. Clean area around the hole, carefully removing all swarf.

Remove paint and primer from under panel surface to ensure adequate earth contact by washer and nut. Apply some petroleum jelly or paint around the hole to prevent corrosion.

## D. Fitting the antenna

Remove protective backing from underside of antenna, feed coaxial cable through panel. Position the antenna over the hole ensuring correct orientation and stick to panel by applying firm downward pressure. Assemble nut from underside and tighten. Remove blanking cap and screw comms antenna whip securely to mounting stud.

## E. Routing and terminating coaxial cable(s)

Route coaxial cable to equipment, taking care to avoid running adjacent to existing vehicle wiring or fouling any moving vehicle component. The cables must not be routed in front of any airbag device. Fit correct coaxial connector or adapter to cables as required.

**F.****Commission and test****Check comms cable(s):**

- Earth continuity: connector body to vehicle ground should measure  $<0.2\Omega$ ;
- Connector body to centre pin should measure open circuit.
- Carry out VSWR check, should measure  $<2.5:1$  in transmit band (antenna type dependent – refer to antenna datasheet).

**G.****Notices****European Waste Electronic Equipment Directive 2002/96/EC**

Please ensure that your old Waste Electricals and Electronics are recycled do not throw them away into standard waste.

**RF Safety Note**

This antenna should be mounted in such a way that no person is within 20cm (8") of the antenna during use.



**RoHS 2:** EU RoHS compliance is declared per **Directive 2011/65/EU** and its subsequent amendments. Homogeneous materials composing parts that are compliant with this legislation have less than 0.1% by weight each of lead, mercury, hexavalent chromium, PBB, and PBDE, and 0.01% by weight of cadmium. In situations where an exemption applies, the preceding limits, corresponding to the exempted substance(s), may be higher.