



## **General Antenna Installation Guidelines**

### **General Information**

Installations must be made by qualified personnel, and in accordance with Federal Regulations. Refer to FAA Advisory Circular 43.13-2A for General installation guidelines. A copy of the FAA Advisory Circular can be obtained at [www.faa.gov](http://www.faa.gov). Look for Advisory Circulars under the Regulatory/Advisory heading on the FAA home page.

### **General Location**

The location of any antenna system on the aircraft is very important. Antenna locations on aircraft that provide unobstructed line-of-sight views of the transmitted or received signals are preferred. When possible, keep antennas at least 36" from any other antenna. CAUTION: VOR/LOC/GS antennas have specific limitations and instructions. Contact Comant for further information on these types of antennas. On any aircraft, antennas should not be mounted in the proximity of engine exhaust.

### **Mounting Location**

The specific mounting location is very important due to curvatures and uneven surfaces encountered on various aircraft skins. A flat surface is the desired antenna mounting location. Minor aircraft skin curvature can be accommodated with the use of a Comant gasket. DO NOT over torque the mounting screws in an attempt to reduce gaps between the antenna base plate and aircraft mounting surface. If gaps over .020" appear between the base plate and mounting surface, use of a mounting saddle is recommended.

### **Aircraft Skin Surface and Mounting Preparation**

The electrical bonding of the antenna to the aircraft ground is highly important. If this is not done properly, antenna performance characteristics may become distorted and nulls may appear in the antenna radiation pattern. This, in turn, may cause erratic navigational readings or signal drop out. The electrical bonding of the antennas to the aircraft skin is best accomplished by direct metal-to-metal contact of the antenna base to the aircraft skin. To accomplish this, the aircraft paint in the mounting area will need to be removed and the surface alodined to protect aluminum against corrosion. An alternate method for providing electrical bonding is through the mounting screws, which attach to a backing plate inside the aircraft skin. Remove any interior paint in the area where the backing plate is placed to assure a good ground. Coat this area with alodine to minimize corrosion. To test the electrical bonding of the blade to the aircraft, a reading of .003 ohms between the antenna base plate and ground should be achieved.

### **Mechanical Installation**

Typical antenna installations require either an #8-32 or #10-32 stainless steel mounting screw. Length will vary based on each particular installation requirement. REFER TO INSTALLATION DRAWING before drilling holes in aircraft skin to determine proper size.

CAUTION: Comant antennas use various mounting configurations. Some designs require a pan head screw, others a counter sunk screw is required. Personally inspect the mounting area of the antenna you are installing to confirm the proper screw type requirement.

Use of a backing plate is highly recommended. Mounting screws should be secured with stainless steel nuts with flat washers and lock washers, or with flat washers and lock nuts to secure the antenna properly. Sandwich the aircraft skin between the antenna base plate and the internally mounted backing plate. Before securing the antenna to the aircraft be sure that all the cables are connected to the unit and fit through the connector holes, as some connector outside diameters vary in size. Gently tighten the mounting hardware so that uniform stress is placed on each side of the antenna. For #8-32 screws DO NOT exceed 20 in-lbs of torque and for #10-32 screws DO NOT exceed 23 in-lbs of torque. Refer to fastener manufacturer's torque guidelines to confirm that these recommended settings do not exceed the chosen fasteners torque limits. Once the antenna is mounted, any minor gaps between the base plate or gasket and aircraft skin should be filled with RTV silicone adhesive sealant. Double check that a reading of .003 ohms between the antenna base plate and ground has been achieved.

### **Important Warnings !**

Failure to follow Installation Instructions as provided by Comant, and/or supplemental information and guidance provided by the FAA when installing antennas could result in poor systems performance, a void in warranty, and/or damage to the aircraft. Comant is not responsible for improper installations.

### **Warranty**

Cataloged products carry a standard 3 Year Warranty from the date of manufacture. Every Comant product contains a Manufacture Date Code and/or Serial Number that provides production tracing information. This Warranty is void if the product has been altered, abused and/or improperly installed. Warranties cannot be processed without prior approval from Comant's Customer Service Department, which will issue an RMA for the claim. Warranty claims are at the sole discretion of the Comant Customer Service Department. Custom designs may carry their own warranty, or may be subject to other limitations.