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AV-530
VHF Communications Antennas for General Aviation

Frequency Range: 118-137 MHz

Installation Instructions

1.) Metal Skin Aircraft

Determine the desired mounting location on the aircraft. Keep in mind that the antenna should be located at least two feet away from other antennas and reflective surfaces on the airframe (e.g., vertical stabilizer, landing gear, etc.). A good electrical connection must exist between the antenna mounting hardware and the metal frame or skin of the aircraft.

2.) Composite or Wood Aircraft

Determine the desired mounting location using the guidelines discussed above. Create a "ground plane" on the inside of the aircraft skin by preparing (2) 48 inch long light gage copper wires perpendicular to each other and intersecting at their mid point (forming an X). Strip away insulation at this intersection if using insulated wire. Locate this on the inside of the aircraft skin where the antenna will be mounted externally. Run the wires forward, aft and side to side along the inside wall and secure in place. Attach the (X) intersecting point to one of the antenna's mounting bolts, making a good electrical connection. This concept is similar to a communications antenna which you would see at an airport terminal building; a vertical radiator with (4) ground plane "radials" equally spaced around the base.

3.) Using the template provided, drill three mounting holes and one hole for the connector.

Note: Be sure to mount correctly using the front and rear noted on the template.

4.) Mount the antenna by placing the rubber pad provided between the antenna base and aircraft skin and the back-up plate provided inside the aircraft. Insert hardware provided as shown below and tighten all mounting screws securely to provide good electrical contact. Caution: The antenna must be properly grounded by means of the countersunk washers biting through the painted surface under the mounting screw heads.

5.) Using RG-58/U cable or similar 50 ohm coax cable (not supplied), attach a BNC type connector (Delta Electronics #UG-88/U or equal, not supplied) to one end. See connector supplier for appropriate mounting instructions. The other end of the cable must have a connector attached to match the connector on the radio.

6.) Place the cable with the connectors attached between the antenna and the radio. Test the antenna by connecting an In-Line Wattmeter between the transmitter and the antenna. VSWR should be 3.0 to 1.0 or better for satisfactory operation.

