

Johnson Aviation Carbon Cub CC-11 GDL 82 ADSB Installation

This document is to illustrate one method for installation of the Garmin GDL-82 in a Carbon Cub. It is not intended to replace the Garmin installation manual. Please refer to the Garmin [GDL Installation manual](#) for general installation information. For safety, always disconnect the battery before starting electrical work.

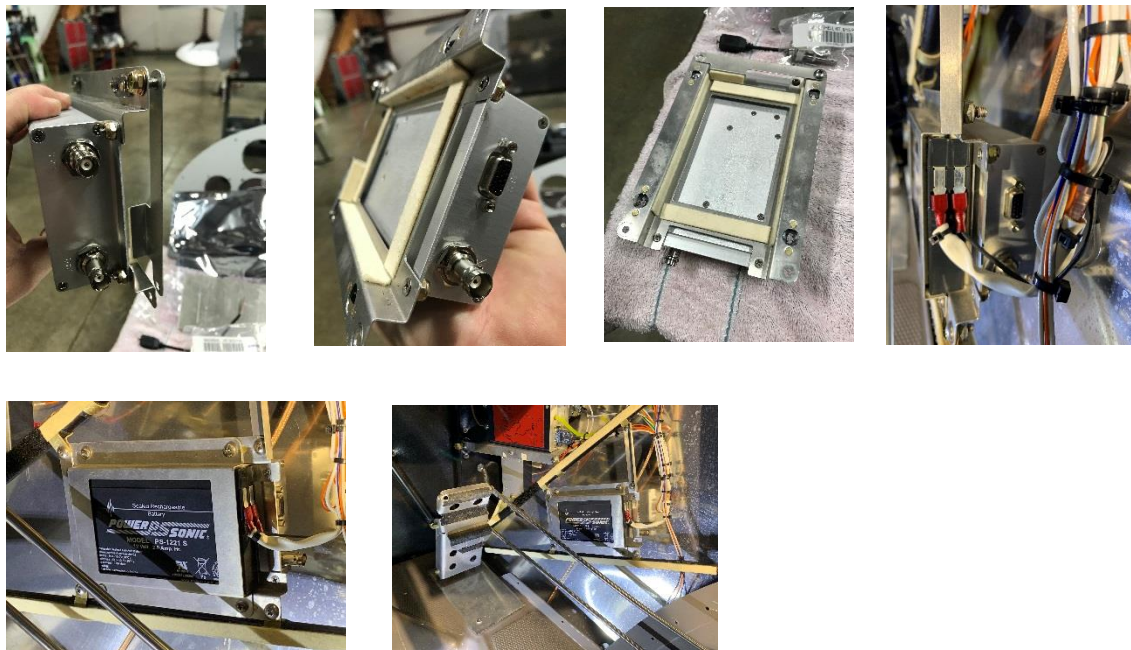
Step 1 – Remove Side Panel

Remove the eight buttons holding the side panel to the structure. The center portion of the button will pull out releasing the expanding clamp. Then remove the side panel as [show in this video](#).



Step 2 – Install GDL 82 on Ignition B/U Battery Frame

Remove the ignition backup battery as [shown is this video](#). Once removed, unbolt the battery support structure from the plane. The GDL 82 will be mounted to the back side of the tray. Once the GDL is mounted to the tray, reinstall the battery support structure. See below pictures for details.



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Step 3 – Install GPS Antenna

Mount the GPS antenna on the top, right hand side of the carbon fiber deck. Fabricate an aluminum backing plate for support and ground plane if needed. Use care not to inhale the carbon fiber dust.



Step 4 – Route GPS and Transponder Coax

Remove the wing root bottom fairing. Route the GPS antenna coax as show in the videos below. Notice the black heat shrink installed for cosmetic purposes near the window (match existing black). The transponder coax is removed from the Transponder antenna and connected to the GDL 82. Install a new section of coax between the GDL 82 and the transponder antenna.

[Video 1](#) [Video 2](#) [Video 3](#) [Video 4](#) [Video 5](#) [Video 6](#)

GPS Antenna to GDL 82 – 116” RG400 with TNC connectors
Transponder to GDL 82 – Use existing coax once disconnected from antenna
GDL 82 to Transponder Antenna – 30” RG400 with BNC connectors



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Step 5 – Connect Power and Ground

The power and ground connections are the most difficult part of the installation. You will need to twist, turn, and bend in ways you can't imagine.

First, the grounding bus is near the firewall in the V of the structure tubes. Depending on radio installation, reaching the bus can be almost impossible without removal of equipment. Instead, look for a grounding wire you can reach easily and tap into that wire.

For power, the GDL can be connected to the Transponder breaker if the combined load does not exceed 80% of the breaker capacity. Again, reaching the breaker is difficult. Instead, I followed the power lines down to the connector in the back of the transponder mounting tray. Once found, I cut and spliced the GDL wire and the power wires together.

Each installation will require a plan on how to provide power and ground. Take time to figure out the method that will work for your installation.

Step 6 Program Unit and Verify Operation

Several Garmin Videos are available for this step. See the following:

[Download Configuration Software](#)

[GDL 82 Install Tool Software](#)

[GDL 82 Install Series Introduction](#)

[GDL 82 Installation](#)

[GDL 82 Software Loading](#)

[GDL 82 System Configuration](#)

[GDL 82 Post Install Checkout](#)