

Cessna 177 Cardinal Installation Example Enhanced Flight Model BM-AIK Airframe Interface Kit for **BatteryMINDER**® Maintenance Charger

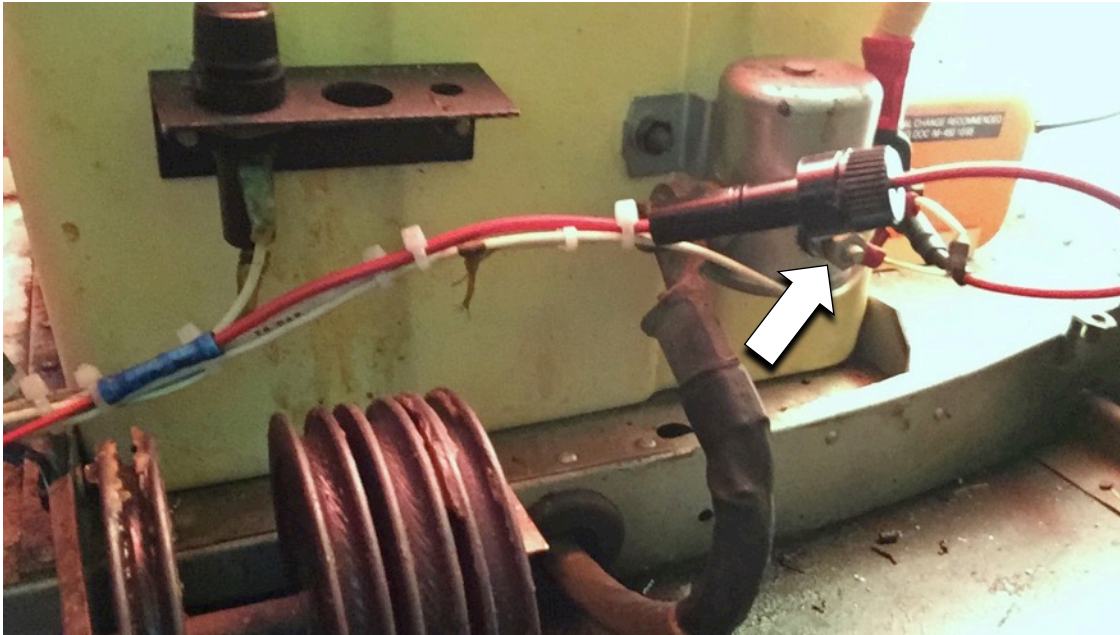
This installation example supplements the instructions for installing the BM-AIK1 or BM-AIK2 charger harness kit. Please read the instructions with the kit completely before referring to this example. The kit instructions call for connecting to the battery relay and an airframe ground, instead of directly to the battery. In the Cessna 177 Cardinal, the battery box and all related electrical power are located behind the aft closeout panel, so access is through the baggage compartment door. The exact configuration of your aircraft may vary from this example and require variations from these instructions.

- 1) Remove the aft interior close out panel for access to battery box and accessory area.
- 2) Remove battery box cover and disconnect battery terminal leads.
- 3) The charger plug (red Anderson SB50) will be positioned and mounted so that it is flush with the face of the aft interior closeout panel. Make an opening in the panel for the plug and allow sufficient clearance for the elastomeric dust cover.



Installation area is behind the aft interior closeout panel. Battery relay is behind the battery box.

- 4) Fabricate a bracket to mount the plug into position as shown above.
- 5) Attach the elastomeric dust cover to the red SB50 plug and position it on the fabricated bracket and mark the two mounting holes for drilling.
- 6) Mount the SB50 plug assembly to the bracket with #6 screws and stop nuts. Use a stack of washers or a 0.20" spacer under the plug to provide adequate clearance for the dust cover.



View of battery relay connection on backside of battery box.

- 7) Assemble the fuse holder and splice in as part of the positive harness. Torch-solder the positive lead to one of the SB50 lugs. Insert lug into the positive side of the plug.
- 8) Use the black wire in the kit for the airframe ground lead. Torch-solder to the remaining lug and insert into the negative side of the plug.
- 9) Use the fiberglass sleeving to protect the harness and secure with nylon ties or cable clamps.
- 10) Route the positive lead from the plug to the positive stud on the battery relay, trim to length, and use small ring terminal to attach.
- 11) Route the negative lead from the plug to an airframe ground, trim to length, and use ring terminal to attach. The bolt holding the clamped capacitor was used for this installation.
- 12) Label or placard the plug or dust cover "MAINTENANCE CHARGER".
- 13) Reattach battery cables and test for proper voltage and polarity at the SB50 plug with aircraft power OFF.
- 14) Attach the adapter harness to the BatteryMINDER. Connect charger to the aircraft plug. Observe correct polarity and battery condition on the BatteryMINDER. Connect charger power cord to AC and verify normal operating indications on the BatteryMINDER.



Finished installation allows easy maintenance charging without removing the aft interior panel.

- 15) Re-install battery box cover and perform functional test of aircraft electrical system.
- 16) Make appropriate entry in airframe maintenance logbook to document installation as minor alteration and return to service.

Installation example courtesy of:
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