

Enhanced Flight Model BM-AIK Airframe Interface Kit for **BatteryMINDER**® Maintenance Charger Installation Example: Piper PA46 Malibu/Mirage/Matrix

The [instructions for the BM-AIK2](#) battery harness kit calls for its positive wire to connect to the battery relay and the negative to an airframe ground. In the piston engine Piper PA46s, the battery relay is not easily accessed, so these instructions suggest accessing the positive battery terminal via the ship's battery bus. Typically, there is an open circuit on this bus and the terminal is easily accessed. This procedure is shown in the following steps:

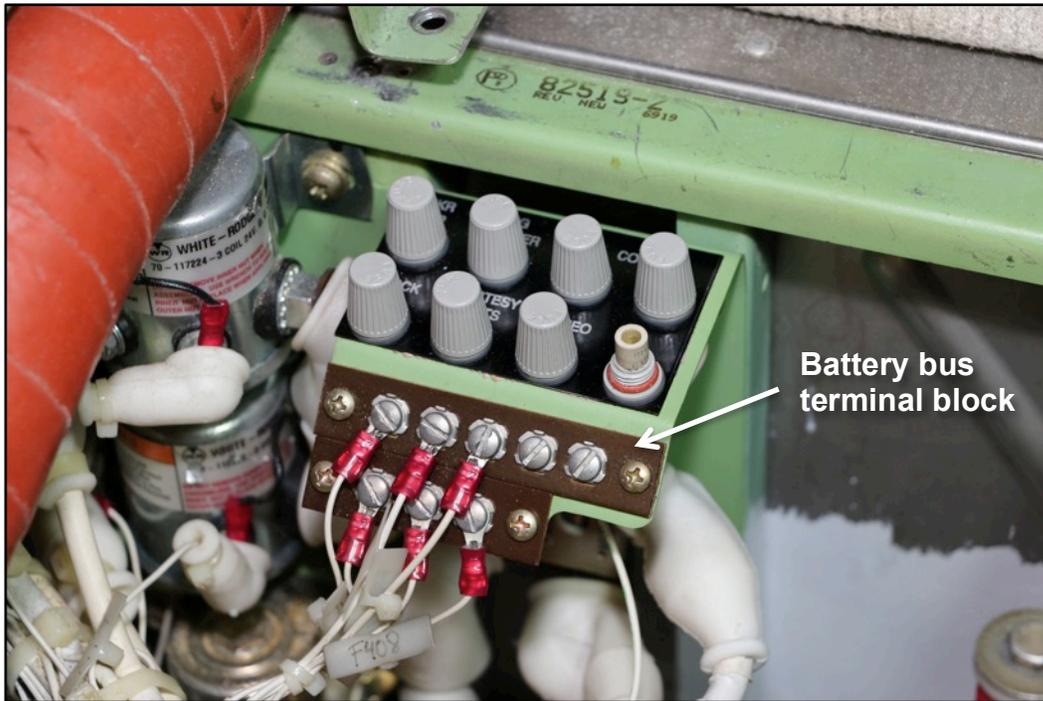
- 1) Battery is in floor of forward baggage compartment. Remove carpet trim strip, roll carpet back, and remove access panel expose battery area.



- 2) Position harness connector end atop the external power receptacle. Work the wires into the battery compartment below, following those for external power. Fuse holder should remain accessible.
- 3) Fabricate right angle bracket to mount the red SB50 connector to top of the external power receptacle. Attach insulating cover onto SB50 connector.



- 4) Route red (positive) wire to the battery bus shown below, securing it to the existing wire bundles.
- 5) Identify an open terminal on battery bus terminal block and use voltmeter to confirm battery voltage. Check open circuit's fuse value to verify 5 – 10A.



- 6) Cut to red wire to length, crimp on ring terminal, and install on the open terminal.
- 7) Label red/positive wire and corresponding fuse holder as shown below.



- 8) Route black wire to an airframe ground. There are two long the structure containing the baggage door latch, near the vent fan/heater assembly. Cut to length, crimp on ring terminal, and install.
- 9) Check continuity and polarity of harness at the SB50 connector with voltmeter.
- 10) Label SB50 connector "MAINTENANCE CHARGER."



- 11) Connect BatteryMINDER to aircraft and check for proper operation.
- 12) Re-install battery compartment cover, carpet, trim, remove tool from latch and close baggage compartment door.
- 13) Perform cockpit electrical system test for normal operation.
- 14) Make appropriate entry in airframe maintenance logbook to document installation and return to service. See example below.



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Airframe

Log REG N463HP MODEL PA-46-350P SERIAL 4636335 HOBBS 1114.0

8-19-13 Installed Enhanced Flight Model BM-AIK/2 wiring kit, 2-wire fused (10A) battery access harness terminated in fwd baggage compartment with Anderson SB50 connector, as a minor alteration. Verified proper polarity and continuity. Verified proper operation of aircraft electrical system. Connected 4A maintenance type charger and verified proper operation.

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