



## SmartGPU™ Battery Maintenance Charger

Our SmartGPUs feature an easy-to-install option for Battery Maintenance Charging. Follow these steps to install the model BMC24 upgrade for the SmartGPU. A helpful video is also available on our website, or scan the QR code.

### Kit Contents

- (A) charging cable
- (B) printed circuit board assembly (PCA)
- (C) battery wiring kit for your aircraft



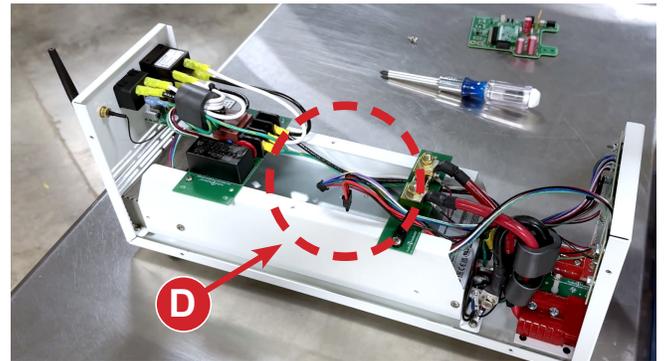
Give the harness kit to your mechanic to install on your aircraft. The kit is eligible to be installed as a minor alteration and approved with a simple airframe maintenance log entry.

### Installation

Tools required: #2 Philips head screwdriver.

Disconnect all input and output cables from the GPU and place it on a clean surface. Remove the 8 screws, that secure the top cover to the GPU chassis and set aside.

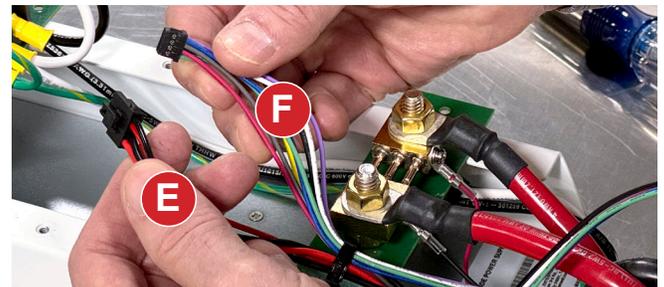
Be careful not to disturb or touch any components or wires outside of the installation area (D).



There are 2 wiring harnesses that connect to the PCA – a 4-conductor POWER harness (E) with larger red and black wires, and an 8-conductor CONTROL harness (F) with smaller, multicolored wires. Each harness is designed so that it can only be plugged into one location and in one orientation.

On the PCA, there are 2 corresponding receptacles for these harness plugs, one marked POWER and the other marked CONTROL.

Hold the PCA in one hand and plug in the red & black power harness onto the mating POWER receptacle on the PCA. The connector will snap and lock into place when fully inserted. A gentle tug will assure that it cannot come loose.



Plug the multicolor 8-pin harness onto the mating CONTROL receptacle. It is also keyed so that it can only be inserted one way.

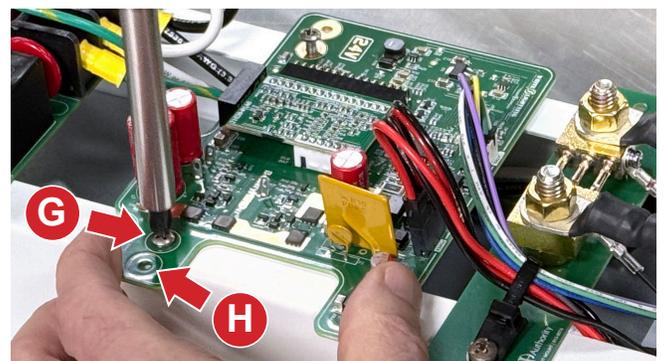
These connections do not require a great deal of force, so if either does not seem to fit easily, stop, look closely, and verify proper orientation before proceeding.

With the harnesses connected, the PCA is ready to fasten to the mounting rails with the hardware provided.

Place the PCA on the mounting rails so that the holes align as shown. Mounting holes for Model S28114 are pictured (G). Note: the S28054 holes match the outer set of PCA screw holes (H). Use the 2 Philips head screws with integral lock-washers to secure it in place. Hand tighten snugly but don't over torque.

Check the connections before finishing the installation:

- Power harness connected
- Control harness connected
- PCA secured to the mounting rails



Slide the cover into place, being careful to avoid any interference with the GPU's internal wiring. Use the 8 black screws previously removed to reattach. Get all 8 screws started before going back and hand tightening them snugly.

## Verify the Installation

Connect the AC line cord to the SmartGPU, and flip the power switch to the ON position. You will see:

- Boot up initialization
- White Lightning logo screen
- Configuration Screen (I)

The Configuration Screen screen displays for about 5 seconds. If the PCA is installed correctly, an additional blue line of text (I) appears at the bottom, acknowledging its availability for charging.

The next screen allows the operator to confirm the terms of use.

A new screen will appear (J) which allows the operator to choose between two operating modes: 28V DC AIRFRAME POWER and 24V DC BATTERY MAINTENANCE. Select 24V DC Battery Maintenance.

Since there is no charging cable attached and no battery detected, you will see an error message **BATTERY NOT CONNECTED** (K). This message is positive confirmation that the BMC24 module is correctly installed and functioning properly.

Your SmartGPU with battery maintenance charger is now ready to use. Once the wiring harness is installed on your aircraft, you can connect the maintenance charger and enjoy automatic, unattended operation.

## Configuration

The SmartGPU also allows you to customize its operation with configuration settings for wireless connectivity, charging profiles, battery information and scheduled charging. If your hangar has Wi-Fi service, you can use the White Lightning mobile app to monitor the operation remotely, check hangar temperature, and adjust charging schedules from anywhere in the world. See the SmartGPU app tutorial to step you through these advanced features.

## Factory Installation

If you prefer, factory installation of the BMC24 option is available through our customer tech services department. To arrange this, contact our factory and obtain a Return Material Authorization number (or RMA). Call 859-233-4599, extension 160.



Model  
BMC24  
Installation  
Video

Your feedback is important to us. Let us know what you think by leaving us a message on our website.



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