

Operating Instructions

BP-8U External Battery Pack



SEI Incorporated
5115 Pegasus Court
Suite Q
Frederick, Md 21704
Phone 301-694-9601
Fax 301-694-9608
Email info@seipower.com
Web <http://www.seipower.com>

19-0050-001 REV B

BP-8U External Battery Pack Operating Instructions

Description The BP-8U is a microprocessor-controlled external battery pack, designed for use with the SEI DP and SEI PowerRack series of compact 48 VDC telecom power supplies. The BP-8U may also be used with legacy Lucent/AT&T 1145 systems.

The BP-8U's microprocessor-based controller monitors charge status and automatically performs a periodic battery test to guarantee the holdover capability of the pack. A Manual Battery Test Switch is also provided. The BP-8U provides LED indicators of the Battery Charge Status and the Battery Test Status.

The BP-8U contains four 12 volt, 8 Amp-hour, sealed lead acid batteries, connected in series to provide a nominal 48 Vdc. The internal battery pack is replaceable. A panel-mounted fuse protects the output.

Technical Specifications

Electrical	Environmental
Nominal Output Voltage: 48 Vdc Maximum Output Current: 10 A Recommended Charge Voltage: 54.0-56.4 Vdc Rated Capacity: 8 Amp-hours @ C/20	Temperature: -20°C to +40°C Humidity: 95% non-condensing Optimum battery life will be achieved if the unit is operated at a temperature of 25°C.
LED Indicators	User Interface
Battery Charge Status: Constant Green – Fully Charged Flashing Green – Charging Constant Red – Power Unit Fault Battery Test Status: Constant Green – Battery Good Fast Flash Red – Wait, Then Test Slow Flash Red – Replace Battery	Manual Battery Test Switch --Push to Test NOTE: The Manual Battery Test switch is disabled when the battery is charging. Also, to prevent unnecessary battery discharge, the Manual Battery Test is disabled for 5 minutes following a Battery Test. In both cases, the <i>Wait, Then Test</i> indication is displayed.
Fuse Replacement	
3AG Fast-Acting 250V, 10A, Littlefuse Part Number 312 010 or Equivalent CAUTION: For continued protection against risk of fire, replace only with the same type and rating of fuse.	

BP-8U External Battery Pack Installation Instructions

The BP-8U External Battery Pack comes standard with 19 inch mounting brackets. Optional 23 inch and 25 inch mounting brackets are also available. All mounting brackets are spaced in conformance with EIA Standard RS-310-B.

Rack Mounting To mount the BP-8U on a rack, place the keyed slots on the top of the mounting brackets over two rack screws. Once the unit is suspended from the upper rack screws, insert rack screws into the bottom holes of the mounting bracket. Tighten all screws.

Wall Mounting The BP-8U may be wall-mounted via a user-supplied, $\frac{3}{4}$ inch plywood backboard or equivalent. Use four #10 screws, tightened to between 30 and 34 inch-pounds, to fasten the BP-8U to the backboard.

Cable Connection Connect one end of the supplied cable to the power unit. Connect the other end of the cable to the BP-8U Battery Pack.

Fuse Installation Place the provided fuse into the fuse holder cap and insert the fuse into the fuse holder, located on the right side of the unit. Secure the fuse holder cap with a quarter turn.

Storage The BP-8U Battery Pack may be stored for periods of up to 6 months without charging. For longer periods of storage, the BP-8U should be connected to a power unit until fully charged at least every six months. ***Warning: To prevent battery discharge, do not install the fuse in the BP-8U until the unit is ready to be connected to system power. Never store the BP-8U with the fuse installed.***

Operational Test The following operational test should be done on each unit immediately after installation. *(SEI Power Units provide a continuous float charge voltage to the battery. This allows the status indicators on the BP-8U to be ON continuously. The Lucent/ATT 1145 Power Unit provides an intermittent float charge voltage of 2 hours ON and 20 hours OFF. While the Lucent/ATT 1145 Power Unit is in CHARGE ON mode the BP-8U status indicators are ON continuously. When the Lucent/ATT 1145 Power Unit is in the CHARGE OFF mode the BP-8U status indicators flash every 5 seconds.)*

1. **Normal Operation:** Verify that the Battery Charge Status LED on the BP-8U Battery Pack is either flashing green (Charging), constant green (Fully Charged), or flashing every 5 seconds. If either of the LEDs are constant red, flashing red or are not lit consult the troubleshooting section below.
2. **Battery Backup Operation:** Make sure that the BP-8U is properly connected to the power unit. Disconnect the AC power cord from the power unit. Verify that both LEDs flash every 5 seconds. The Battery Charge Status LED will indicate a Power Unit Fault. *(Depending on the load and Power Unit it may*

take several minutes before the LEDs change state.) If an SEI Power Unit is being used, verify that the Power Unit's red Alarm LED is lit. If a Lucent/ATT 1145 Power Unit is being used, verify that the Power Unit's Output Power On green LED and On Battery Reserve red LED are lit.

3. **Charging Operation:** Reconnect the Power Unit AC power cord. Verify that the Battery Charge Status LED on the BP-8U Battery Pack is flashing green (Charging). If an SEI Power Unit is being used, verify that the Power Unit's green Normal LED is lit. If a Lucent/ATT 1145 Power Unit is being used, verify that the Power Unit's green Output Power On LED and yellow Charging Battery LED are lit.
4. **Battery Test:** When the battery is fully charged (Battery Charge Status LED constant green), press the Manual Battery Test switch. Wait five seconds then verify that the Battery Test Status LED is green. *(The Manual Battery Test is only available when the Power Unit is charging the battery pack. If the Manual Battery Test switch is pressed when the battery pack is not being charged, but the battery pack voltage is above 49 volts, the Charge and Test status indicators will light for 2 seconds.)*

Troubleshooting

- 1) **Battery Pack LEDs Off:** If the LEDs on the S1145B Battery Pack are not lit or flashing every five seconds perform the following checks:
 - a) Verify that the Power Unit is on. On an SEI S1145R Power Unit, the LED should be solid green. On a Lucent/ATT 1145 Power Unit, the green Output Power On LED should be lit.
 - b) Check the Battery Connection Cable at the Battery Pack connector and the Power Unit Connector.
 - c) Verify that the Battery Pack fuse is installed.
 - d) Verify that the Battery Pack fuse is not blown.
- 2) **Power Unit Fault Indication:** If the Battery Charge Status LED is constant or flashing red, the Power Unit is not charging the Battery Pack at the recommended charging voltage. The Power Unit should be replaced.
- 3) **Replace Battery Indication:** If the Battery Test Status LED is flashing red, the holdover capability of the battery is significantly diminished. The battery should be replaced.