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OPERATOR'S MANUAL
PCCU-100™ Lithium Ion
Power Conversion and Control Unit

TO REDUCE THE RISK OF INJURY, YOU MUST READ THIS OPERATOR'S MANUAL AND COMPLY WITH ALL INSTRUCTIONS AND PROCEDURES DESCRIBED HEREIN.

FAILURE TO DO SO MAY RESULT IN FIRE, PERSONAL INJURY, AND/OR OTHER DAMAGE.

PATENTS AND PATENTS PENDING

7,838,142 • 7,990,102 • 8,025,118 • 8,026,698
8,084,154 • D601,088 • D632,649 • 20100197222
20100248616 and others

GENERAL SAFETY RULES

! WARNING

READ AND UNDERSTAND ALL INSTRUCTIONS

Failure to follow all instructions may result in electrical shock, fire, equipment damage, and/or serious personal injury.

SAVE THESE INSTRUCTIONS

This manual contains important safety and operating information for the Modtech Corp. PCCU-100 24V *Lithium-Ion* battery to 115VAC 60Hz power inverter. Before using the inverter, read this operator's manual. Also, read and observe all information on the labels attached to the inverter.

- 1. CAUTION! TO REDUCE THE RISK OF INJURY AND/OR EQUIPMENT DAMAGE, USE PCCU-100 ONLY WITH MODTECH CORP. EM-100 LITHIUM ION BATTERY PACKS.** The use of other types of batteries or equipment may result in personal injury or equipment damage. Under no circumstances connect the PCCU-100 to power sources or other equipment not specifically and expressly designated for use with this model inverter.
- 2. AVOID DANGEROUS CONDITIONS AND ENVIRONMENTS.** Do not connect a battery pack or operate the PCCU-100 in damp or wet conditions. Avoid using the inverter in direct exposure to rain or snow. Do not use the battery pack or inverter in the presence of explosive gases or flammable materials because sparks will be generated whenever a battery pack is plugged or unplugged from inverters or other equipment.
- 3. USE PCCU-100 IN WELL VENTILATED AREA.** Allow for adequate airflow around inverter and battery pack to avoid overheating.
- 4. AVOID USING OR STORING THE PCCU-100 IN EITHER EXTREME COLD OR EXTREME HOT TEMPERATURES.** The battery pack will shutdown and will not power the inverter under conditions of extreme heat (above 60 °C) or extreme cold (below -20 °C). Performance may be degraded with temperatures outside of the 0 °C to 45 °C recommended operating range.

5. PCCU-100 IS RATED FOR 115 VAC 60 Hz OPERATION. Use the inverter only to power appropriate appliances rated for this power input .

6. PCCU-100 IS RATED TO POWER LOADS OF 50 WATTS CONTINUOUS. Do not connect high power loads (> 50 W) to your inverter.

7. TO REDUCE USE OF ELECTRIC SHOCK always unplug any appliances from the PCCU-100 and remove the battery pack from the inverter before cleaning or maintaining the inverter or any appliance. Use of a Ground Fault Circuit Interrupter between the inverter output and the appliance is recommended to reduce shock hazards.

8. DO NOT DISASSEMBLE. The PCCU-100 contains no user serviceable parts and should not be disassembled under any circumstances. If faulty operation is suspected, return the inverter for inspection and service if required.

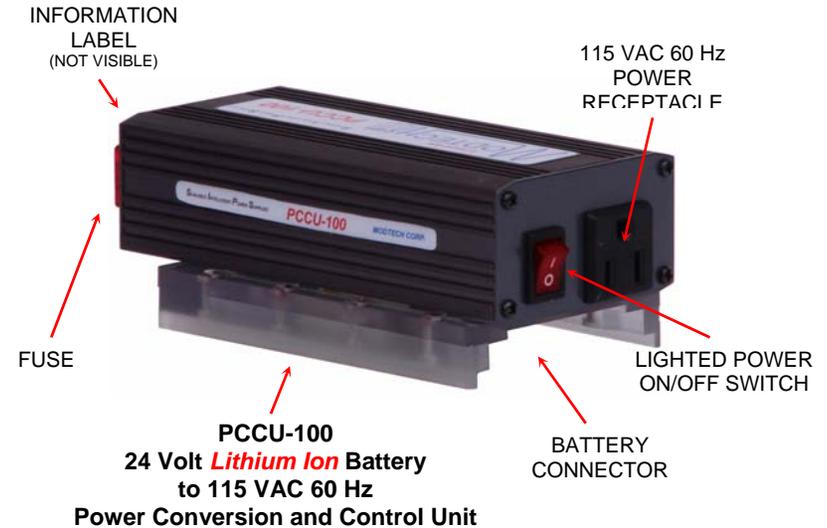
9. NEVER CONNECT THE PCCU-100 TO AC DISTRIBUTION WIRING. Connect the 115 VAC inverter output directly to the appliance to be powered, preferably using a GFCI power cord / module.

10. STORE INVERTER IN A COOL, DRY PLACE. Avoid leaving the inverter in direct sunlight, vehicle cabs, compartments, or unventilated storage buildings during hot summer conditions. Under extreme temperature conditions damage may occur. Avoid allowing inverter to become wet or damp. Allow damp or wet inverter to dry thoroughly before using.

11. TURN PCCU-100 OFF AND REMOVE BATTERY PACK when not in use.

12. REPLACE FUSE ONLY WITH 10A 32V BLADE FUSE.

FUNCTIONAL DESCRIPTION



If a battery pack is too hot or too cold, it will not power the PCCU-100 module. The lighted on/off power switch will illuminate when turned to the on position with a charged battery within temperature limits attached. If the switch does not illuminate, check that the fuse is intact and that the battery does not show an error condition when connected to a CHG-50 charger. If the switch still does not illuminate, the PCCU-100 should be retired from service and sent for inspection and repair if needed.

! WARNING

READ AND SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Failure to follow all instructions may result in electrical shock, fire, equipment damage, and/or serious personal injury.

PCCU-100 INVERTER OPERATION

The PCCU-100 is a *lithium ion* battery to 115 VAC power inverter targeted to power predominately low power electronic appliances. Operation is as follows:

1. The recommended power connection sequence is as follows:

With PCCU-100 power switch in off position, first connect a charged EM-100 battery pack to the PCCU-100. Next, connect the appliance to be powered to the PCCU-100 power receptacle using an appropriate GFCI power cord / module. If the appliance has its own power switch, it should be in the off position as well. Next turn the PCCU-100 power switch to the on position and visualize that it illuminates. Power is now being supplied to the appliance. Finally, turn the appliance power switch to the on position.

2. If appliance operation is intermittent it may be drawing too much power for the PCCU-100. Verify that the appliance is operating properly and that its power level is 50 W or less.

3. Turn off the PCCU-100 power switch before plugging or unplugging appliances or before plugging or unplugging battery packs. Whenever power is not needed, turn off the PCCU-100 power switch for safety and to maximally conserve battery power.

4. An audible tone is provided when battery power is depleted and the PCCU-100 is about to or has shut down. **ALWAYS ASSUME HIGH VOLTAGE IS PRESENT AT THE POWER RECEPTACLE.** Turn off the PCCU-100 before plugging or unplugging appliances or battery packs.

5. External fuse: The PCCU-100 has a fuse protecting against input (battery) over current conditions. The SIPS™ Scalable Intelligent Power Systems components are designed to shutdown electronically in advance of fuses opening. Should the fuse become blown, a damaged unit may be indicated and it is recommended that the PCCU-100 be returned for inspection and repair if needed. In no event should the external fuse be replaced with any fuse other than one identical to the factory supplied type, 10A, 32V blade type fast acting.

MAINTENANCE AND STORAGE

Moisture, extreme heat and extreme cold should be avoided when storing (or using) the PCCU-100. Refrain from exposing the inverter to rain, snow, or moisture of any kind. When storing the inverter, a cool, dry location is best. All appliances should be unplugged from the inverter and the battery pack removed prior to storing.

SPECIFICATIONS

Nominal Input Power	24 VDC, 3 A
External Fuse	10 A, 32 V BLADE TYPE, FAST ACTING
Nominal Output Power	115 VAC, 0.5 A, 60 Hz
Output Waveform	Modified Sine Wave
Recommended Battery Pack	Modtech Corp. EM-100
Minimum Operating Temperature	-20 °C
Maximum Operating Temperature	45 °C
Dimensions	7" x 3-1/4" x 2-1/2" (178 x 83 x 64 mm)
Weight	20 oz. (567 g)

