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## GENERAL USE INFORMATION:

### NEMA Battery Panel:

- The NEMA battery panel has a tri-color LED to indicate status information, as explained in the following table.

| <b>STATUS LIGHT</b>                   | <b>MEANING</b>                                |
|---------------------------------------|---|
| Red to Green to Blue, ~1 second apart | Initialization of panel when first connected. |
| Steady Green, Flashing Blue           | Normal operation; no errors.                  |
| Steady Red, Flashing Blue             | Error condition.                              |
| Solid Blue                            | Panel is providing backup power.              |

- The panel will turn on as soon as a cable is connected, regardless of whether or not it is connected to a controller. To turn the panel completely off, simply disconnect the cable.
- Ensure cables are well-connected. Avoid rapidly connecting/disconnecting the power cables.

### Controller:

- Connection points are clearly labeled on the back of the unit.
- All parts of the system can be configured using the keypad and LCD display, as documented in this guide.

**MAIN STATUS SCREEN:****Description:**

This is the primary status screen.

**On This Display:**

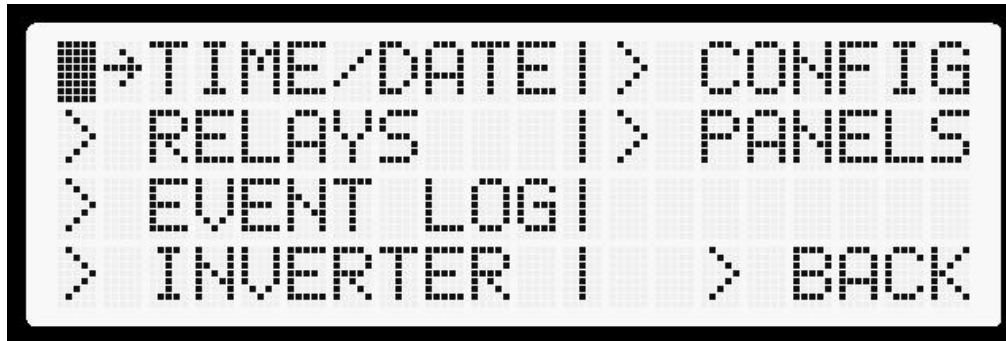
- **AC Voltage In:** The AC voltage going into the UPS and powering the system.
- **Cabinet Load:** The output load of the cabinet in Watts.
- **Backup:** The shown time (HH:MM) represents the available backup time based on the cabinet load. The percentage represents the overall charge state of the batteries.

**Controls:**

- To get to the main system menu, press **Enter**.
- No other controls on this screen.

**Notes:**

- During a power failure (or equivalent), the **AC Voltage In** will be replaced with "POWER FAILED, UPS ON". The AC voltage will be displayed again once power is restored.

**SYSTEM MENU:****Description:**

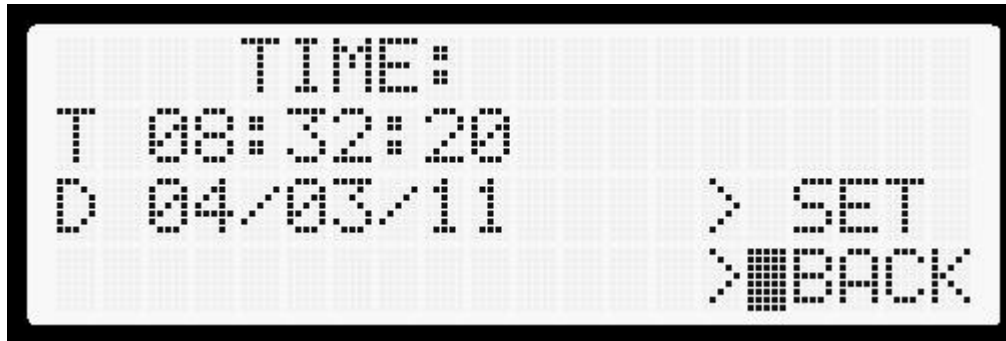
The main system menu. All configuration options can be reached from this point.

**On This Display:**

- **TIME/DATE:** Allows for setting up the date and time of the real-time clock.
- **CONFIG:** Allows for setting up the unit to use high capacity mode.
- **PANELS:** Allows access to the panel detection mode and displays connected panels to verify system configuration.
- **RELAYS:** Brings up the screen for viewing and setting relay triggers.
- **EVENT LOG:** Shows all recorded events of the system, such as a power failure, configuration change, internal error, etc.
- **INVERTER:** Allows for configuring and viewing the brownout thresholds and sensitivity of the power monitor.
- **BACK:** Returns to the Main Screen.

**Controls:**

- Use the direction keys to move the cursor.
- To select an option, move the cursor over the appropriate title and press **ENTER**.

**TIME AND DATE MENU:****Description:**

This is the screen for setting/viewing the time and date of the system. This clock is used for all timestamps on events and time-based relay triggers. This clock uses military time.

**On This Display:**

- **T:** The current system time, displayed as hh:mm:ss
- **D:** The system day, displayed as MM/DD/YY.
- **SET:** Change the date and time of the system.
- **BACK:** Returns to the main system menu.

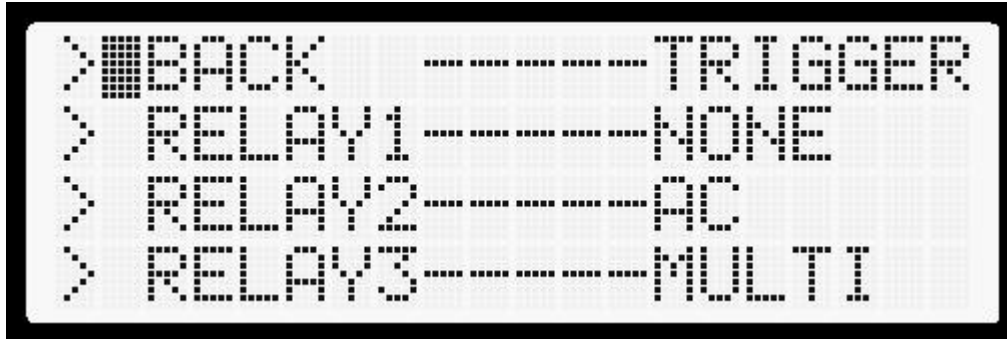
**Controls:**

- To set the time:
  - Move the cursor over **SET**, and press **ENTER**.
  - The cursor will now move into the time area of the screen.
  - Press **UP/DOWN** to change a value. If it reaches a maximum or minimum value, the value will “rollover” (e.g, if **UP** is pressed when the minutes is 59, it will go to 0).
  - Press **LEFT/RIGHT** to select a value, such as hour, min, day, etc.
  - When finished, press **ENTER** to save The changes. The cursor will return to the **BACK** option.

**Notes:**

- The seconds of the system cannot be set.

**RELAY SELECTION AND TRIGGER VIEWING MENU:**



**Description:**

This screen allows one to view all 8 relay settings at a glance and select a relay to configure.

**On This Display:**

- **RELAY(#):** Brings up the settings menu for that relay.
- **TRIGGER:** What the relay is set to trigger on. Values can be:

|                |   |
|----------------|---|
| <b>AC</b>      | Triggers on a power failure.  |
| <b>TEMP</b>    | Triggers on a given temperature.  |
| <b>TIME</b>    | Triggers at a given time each day.  |
| <b>FLASH</b>   | Triggers on a flash condition.  |
| <b>BATTCAP</b> | Triggers when the batteries have reached a certain capacity.                                |
| <b>MULTI</b>   | There are multiple triggers; see relay configuration menu or PC software for full settings. |

- In the above example, Relay1 is not configured to trigger, Relay2 will trigger on a power failure, and Relay3 has multiple triggers.

**Controls:**

- Use the direction keys to select a relay. Press **ENTER** to go to the configuration screen for that relay.
- The screen scrolls, allowing access to all the relays. **BACK** will always be at the very top, and the last relay will always be at the very bottom.

## RELAY SETUP AND SYSTEM DESCRIPTION:

The UPStealth has eight user-configurable relays that can trigger on a power failure, time of day, temperature, flash condition, and at a given battery capacity.

Each relay can be assigned to any of these triggers. Likewise, any relay can have more than one trigger type, in which case the relay will trigger if any of the conditions occur.

When configuring a relay, each trigger is turned on separately for that relay. On factory default, all triggers for all relays are off.

The left side is known as the “**Common Panel**”, and the right side is the “**Trigger Panel**”. These are divided by the vertical dashed line. There is a unique trigger panel for each trigger option.

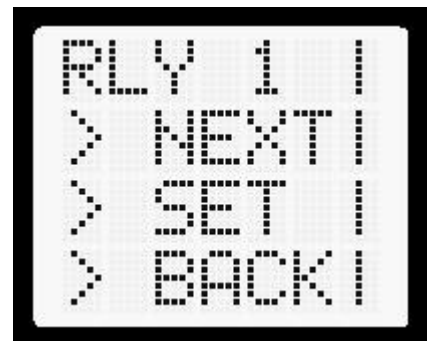
Settings such as temperature bounds and times will be saved even when a trigger is turned off.

The following information is common to all applicable configuration screens.

**Common Panel:** Except when saving, this will be displayed on the left side of the screen.

- **On This Display:**

- **RLY (#):** The relay that is being configured. This will always be present on every relay configuration menu.
- **NEXT:** Moves to the next trigger configuration panel (Such as from AC to TEMP).
- **SET:** Configure the trigger for the relay. This will move the cursor into the trigger panel, allowing for input of configuration options.
- **BACK:** Returns to the relay selection screen.



- **Controls:**

- Select one of the options with the directional arrows; press **ENTER**.

**Save Panel:** This will be displayed over the common panel to confirm the settings before making them active. The common panel will reappear after answering **YES** or **NO**.

- **On This Display:**
  - **NO:** Changes will be discarded.
  - **YES:** Changes will be saved and made active.
- **Controls:**
  - Same as the Common Panel.

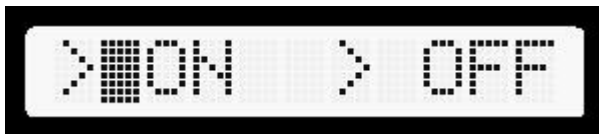


- **Notes:**
  - The settings to be saved will be exactly as shown on the trigger configuration screen, allowing for easy review.

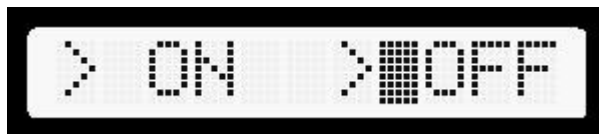
### On/Off:

To easily see what triggers are on, either use the relay selection menu (when there is not a relay set to multiple triggers) or scroll through the trigger panels looking at which box is checked at the bottom of the trigger pane.

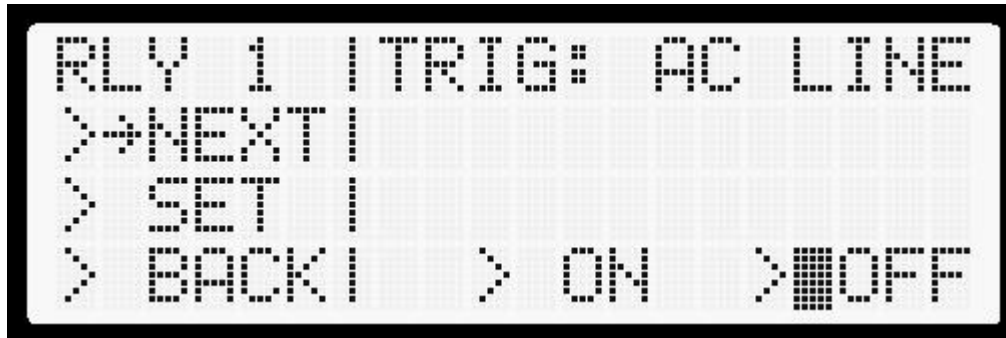
Trigger is **ON** for that relay:



Trigger is **OFF** for that relay:



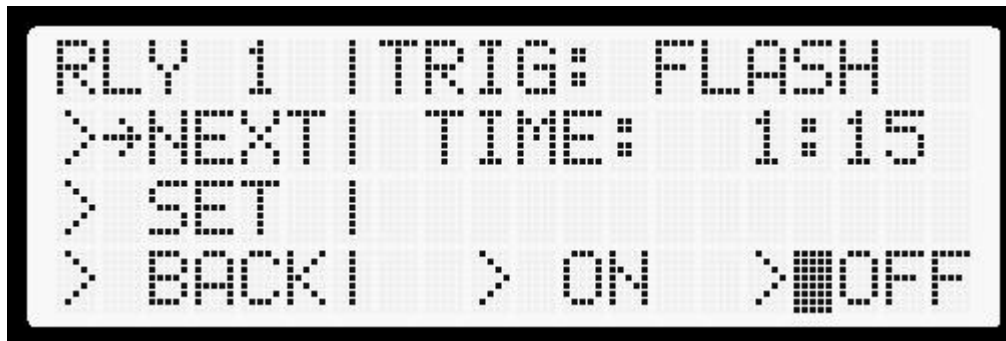


**AC TRIGGER MENU:****To Setup an AC Trigger:**

- Select **NEXT** to get to the AC trigger trigger panel if not already on it.
- Select **SET**. The cursor will now be in the trigger pane.
- Use the directional arrows to select ON or OFF.
- Press **ENTER**. The save menu will appear, and the cursor will move to it.
- Review changes and select **YES**.
- The relay is now configured.

**TEMPERATURE TRIGGER MENU:****To Setup a Temperature Trigger:**

- Select **NEXT** to get to the temperature trigger panel if not already on it.
- Select **SET**. The cursor will now be in the trigger pane.
- Press **LEFT/RIGHT** to move the cursor to the value needing to be changed..
- Press **UP/DOWN** to change the value of a temperature trigger point.
- After entering the bounds, move the cursor to **ON** or **OFF**.
- Press **ENTER**. The save menu will appear and the cursor will move to it.
- Review changes and select **YES**.
- The relay is now configured.

**FLASH TRIGGER MENU:****To Setup a Flash Trigger:**

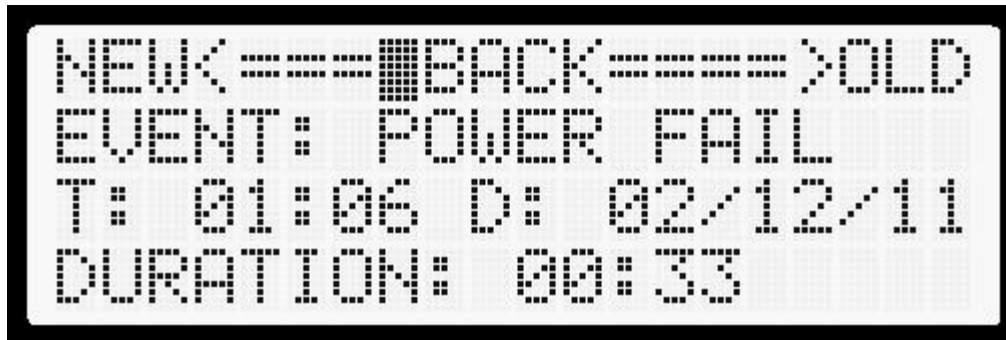
- Select **NEXT** to get to the flash trigger panel if not already on it.
- Select **SET**. The cursor will now be in the trigger pane.
- Press **LEFT/RIGHT** to move the cursor.
- Press **UP/DOWN** to change the flash time. The time changes in increments of 15 minutes.
- After entering the flash time, move the cursor to **ON** or **OFF**.
- Press **ENTER**. The save menu will appear and the cursor will move to it.
- Review changes and select **YES**.
- The relay is now configured.

**TIME TRIGGER MENU:****To Setup a Time Trigger:**

- Select **NEXT** to get to the time trigger menu if not already on it.
- Select **SET**. The cursor will now be in the trigger pane.
- Press **LEFT/RIGHT** to move the cursor to the value needing to be changed. On this screen, the cursor can move between the hours and minutes of the start and end times, as well as the **ON** and **OFF** buttons.
- Press **UP/DOWN** to configure the times. Note that the system uses military time.
- After entering the start and end times, move the cursor to **ON** or **OFF**.
- Press **ENTER**. The save menu will appear and the cursor will move to it.
- Review changes and select **YES**.
- The relay is now configured.

**BATTERY CAPACITY TRIGGER MENU:****To Setup a Battery Capacity Trigger:**

- Select **NEXT** to get to the battery capacity trigger panel if not already on it.
- Select **SET**. The cursor will now be in the trigger pane.
- Press **LEFT/RIGHT** to move the cursor.
- Press **UP/DOWN** to change the capacity trigger point.
- After entering the capacity point, move the cursor to **ON** or **OFF**.
- Press **ENTER**. The save menu will appear and the cursor will move to it.
- Review changes and select **YES**.
- The relay is now configured.

**EVENT LOG:****Description:**

This screen displays the events recorded by the UPS, such as a power failure, configuration change, or other important events.

**On This Display:**

- **EVENT:** The type of event, such as a power failure.
- **T: and D:** The time and date of the event.
- **BACK:** Returns to the main system menu.
- The last line of the screen will display information specific to the type of event. In the pictured example (a power failure), it shows the duration of the event.

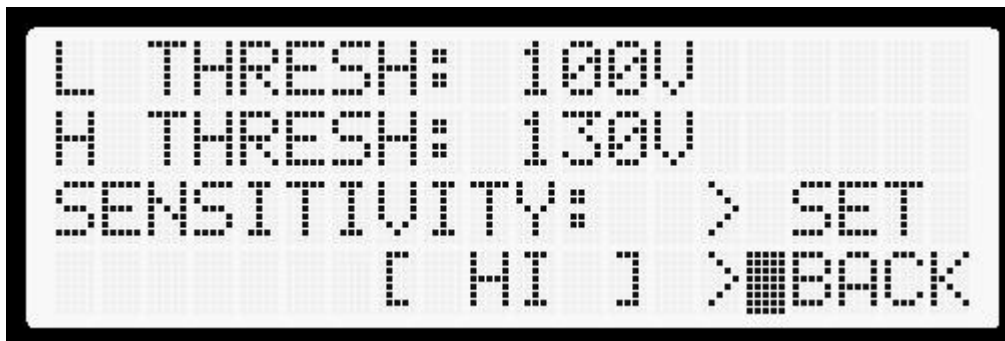
**Controls:**

- Press **LEFT** or **RIGHT** to scroll through the event log.
- To return to the main system menu, press **ENTER**.

**Notes:**

- The event log will show the newest event first. The oldest event will be furthest to the right, and the newest event will be furthest to the left. The arrows on the top of the screen will reflect this.
- If no events have been recorded, the screen will display “No Events”.
- Upon reaching the end of the log, the screen will display “End of Log”.

## THRESHOLDS:



### Description:

This screen allows for the configuration of the AC Power Monitoring thresholds.

### On This Display:

- **L THRESH:** Power Failure voltage (or brownout) threshold.
- **H THRESH:** Upper Power Failure threshold, if concerned about a power surge.
- **SENSITIVITY:** How sensitive the power monitoring system is. This can be one of five values:

|     |   |
|-----|---|
| XHI | Very Sensitive—Faster response, more likely to false trigger on noise |
| HI  | Sensitive   |
| MED | Normal  |
| LOW | Less sensitive  |
| XLO | Very low sensitivity—Slower response, disregards noise.               |

The value it should be set as depends on the level of noise on the AC line in the area and application.

- **SET:** Allows for configuring and viewing the brownout thresholds and sensitivity of the power monitor.
- **BACK:** Returns to the Main Screen.

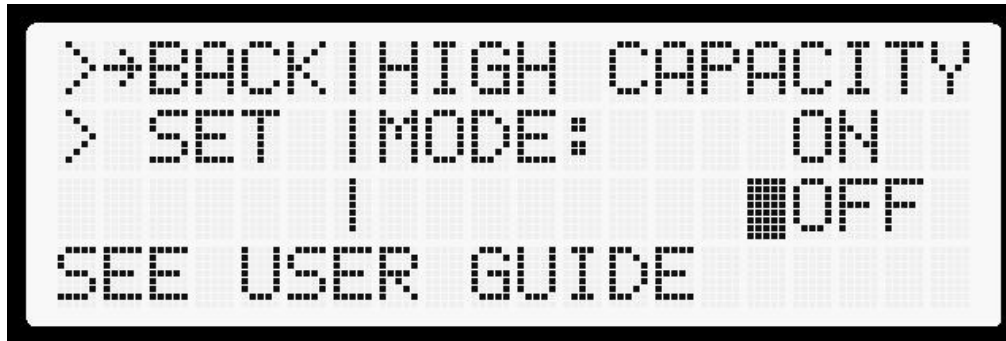
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**Controls:**

- **To set the thresholds and sensitivity:**
  - Select **SET**, and press **ENTER**.
  - The cursor will now be in front of the lower threshold.
  - Press **LEFT/RIGHT** to select the value to change.
  - Press **UP/DOWN** to change the voltages or sensitivity levels.
  - When finished, press **ENTER**.

**Notes:**



**CONFIG (HIGH CAPACITY) MENU:****Description:**

This menu sets up the high capacity mode on the unit. When enabled, this mode will allow the batteries to be discharged below their optimum cutoff point, allowing for a greater available backup time. While high capacity mode does not harm the batteries or the system, the lower cutoff point will decrease the overall longevity of the batteries.

**On This Display:**

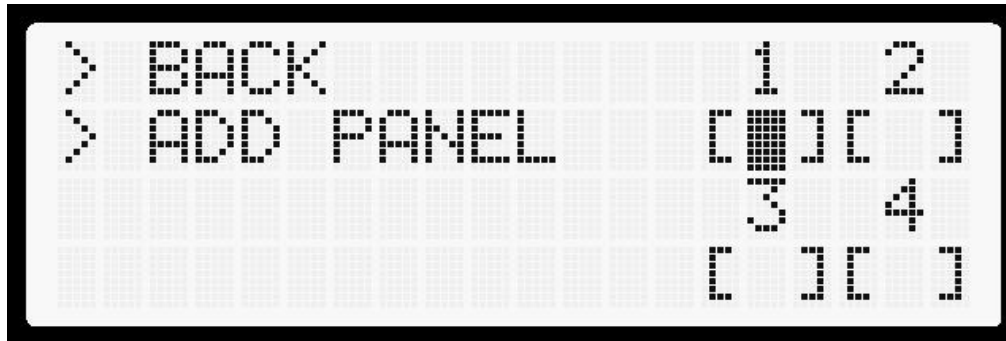
- **HIGH CAPACITY MODE:** The mark indicates if the mode is turned on or off.
- **SET:** Allows the mode to be turned on or off.
- **BACK:** Returns to the main system menu.

**Controls:**

- To set high capacity mode:
  - Move the cursor over **SET**, and press **ENTER**.
  - The cursor will now move into the on/off area of the screen.
  - Press **UP/DOWN** to change the value.
  - When finished, press **ENTER** to save The changes. The cursor will return to the **BACK** option.

**Notes:**

- The user should decide if battery longevity or backup time is most critical in their application. By default, this mode is turned off.

**BATTERY PANEL INFORMATION MENU:****Description:**

This screen tells the controller to look for new panels and displays/verifies the connected panels. A simplified diagram of the battery connectors is shown as viewed from the back of the controller.

**On This Display:**

- **ADD PANEL:** Places the unit into panel detection mode.
- **BACK:** Returns to the main system menu.
- **DIAGRAM:** If the box is marked, the panel in that plug has been connected and initialized by the system.

**Controls:**

- To enter panel detection mode:
  - Move the cursor over **ADD PANEL**, and press **ENTER**.
  - The cursor will now move and the waiting menu will appear.



- Connect panels and wait for the mark(s) to appear in the diagram. Press **ENTER** when finished connecting battery panels. It will not automatically exit detection mode, allowing the user to verify each panel as it is installed.

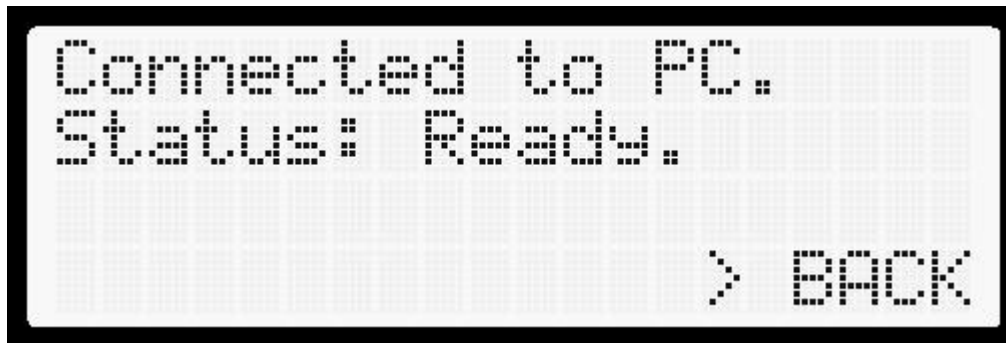
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**Notes:**

- One may connect panels without going into detection mode, but this may cause the controller to incorrectly detect a power failure condition due to the localized inrush into the battery chargers. Should this occur, detection mode should always be used when connecting a new panel. There are no issues with connecting battery panels while the controller is off.
- During the initial connection, the system will take several seconds to run self checks and calculate the status of the batteries. Panel detection will not take long, but it may take up to several minutes for backup times and charge percentages to appear on the main menu, as these values take some time to be measured and analyzed accurately.

**PC-UPS COMMUNICATION:**

Once the PC driver has connected to the UPS, this screen of acknowledgment will be displayed:



Simply press **ENTER** to clear this screen and return to the main status screen. This screen does not have to be displayed for PC communication to work; it only acts as a verification to the user.