

BUILT WITH THE BEAUTY OF METAL

# ULTRALITE 300 Series

Featuring Jaco Power Blade hot-swap power for 24x7 uptime



25-0163 Rev 03

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## 300 Series, Model & Part Numbers

### Laptop Cart Model Numbers

- **310-NP**, Mobile Laptop Cart, Hot Swap Batteries not included
- **310-L408**, Mobile Laptop Cart, includes (2) 204 Wh Hot Swap Battery Packs

### PC Cart Model Numbers

- **320-NP**, Mobile PC/LCD Cart, Hot Swap Batteries not included
- **320-L408**, Mobile PC/LCD Cart, includes (2) 204 Wh Hot Swap Battery Packs

**NOTE: Top Level Carts above do not include the Laptop, PC or LCD.**

#### **51-4218**, Power Blade Charger

**NOTE: Not included with top-level Carts, order at least one per Cart**

The Power Blade Charger can be mounted to the wall or placed on a Table or desk top, whichever fits your workflow. For complete details and instructions, please reference the Power Blade Charger Users Guide that is shipped with each unit. This manual is also available on request.



#### **51-3829**, Power Blade Battery Pack

**NOTE: Top-level Carts 310-L408 & 320-L408 include (2) 51-3829**

The Power Blade Battery Pack is designed to work with JACO 300 Series Mobile Cart Controller and Power Blade Charger.

Operating range 10-14.4 VDC, 16Ah, 204Wh  
Capacity 12.8V, 16Ah, 204Wh



#### **51-3794**, Cart Controller Assembly

**NOTE: Reference only, this is included with all top-level Carts**

The Cart Controller Assembly is located at the rear of the mobile cart and allows for (2) Power Blade Battery Packs to be installed, supplying DC power to the equipment.  
Operating range 10-14.4 VDC, 10 Amp max



## Symbol Information

The following symbols are used within this Users Guide and / or on the JACO product.

| Symbol                                                                            | Meaning                                                             |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  | This symbol indicates that Caution should be taken.                 |
|  | This symbol indicates ATTENTION, consult the accompanying documents |



## Product Labeling

### Hot-Swap Cart

The Mobile Cart is shipped with a P/N & Serial Number label for tracking and service assistance. This label is located on the rear surface of the Top Assembly. The information on this label is needed when contacting JACO Technical Service.



### Power Blade Battery Pack

The JACO Power Blade Battery Pack includes a P/N & Serial Number label for tracking and service assistance. This label is located on the outside surface on the white raised area of the battery. The information on this label is needed when contacting JACO Technical Service.



### Power Blade Charger

The Power Blade Charger is shipped with a P/N & Serial Number label for tracking and service assistance. This label is located on the rear inside surface of the back panel. This information is needed when contacting JACO Service.



For complete details and instructions, please reference the Power Blade Charger Users Guide that is shipped with each unit. This manual is also available on request.

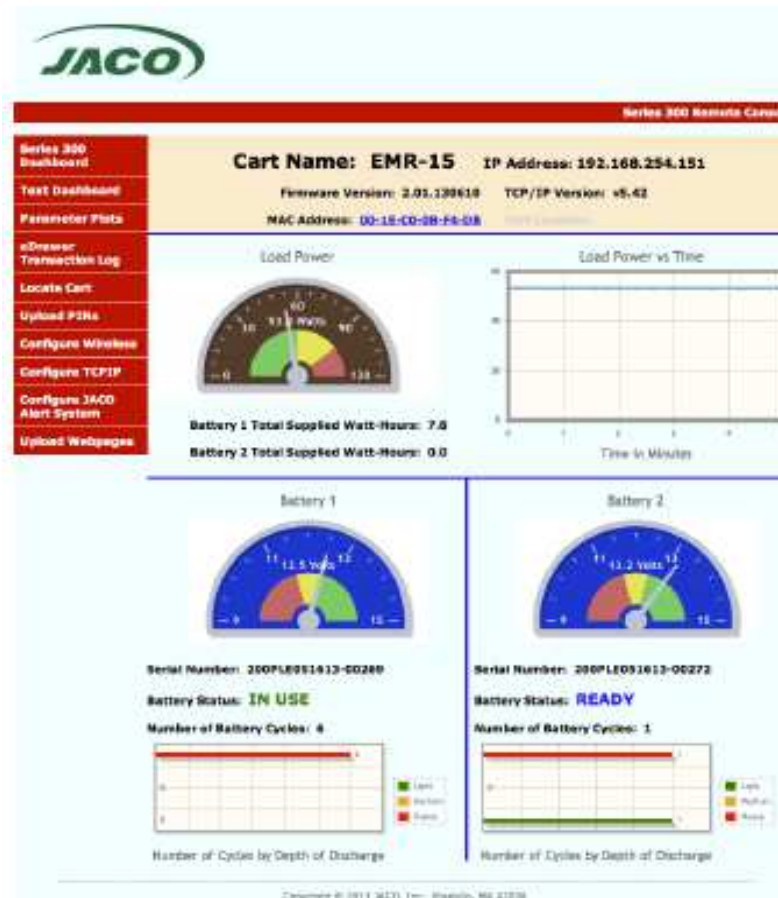
## General Specification

### Mobile Cart

|                                                                          |                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Work Surface Height:</b>                                              | 30" to 46"                                                                                                                                                                                                                                                                    |
| <b>Keyboard Height:</b>                                                  | 25.5" to 41.5"                                                                                                                                                                                                                                                                |
| <b>Work Surface:</b>                                                     | <b>310 Laptop Cart</b> - 20" x 18"<br>(Laptop opening 16.5" x 2.75")<br><b>320 PC Cart</b> - 20" x 16"                                                                                                                                                                        |
| <b>Internal Laptop<br/>or PC Storage:</b>                                | <b>310 Laptop Cart</b> - 16" x 12" x 2.25"<br><b>320 PC Cart</b> - 16" x 12" x 2.6"                                                                                                                                                                                           |
| <b>Casters:</b>                                                          | 4" Single Wheel, Front Locking                                                                                                                                                                                                                                                |
| <b>Wheel Base:</b>                                                       | 16" x 13" x 16"                                                                                                                                                                                                                                                               |
| <b>Cart Weight:</b><br>(without options)                                 | <b>310 Laptop Cart</b> - 86 lbs (includes 2 Power Blade<br>Battery Packs & base counterweight)<br><b>320 PC Cart</b> - 91 lbs (including 2 Power Blade<br>Battery Packs & base counter weight)<br><br>Additional weight may be added based on Cart<br>configuration & options |
| <b>Power Blade Battery:</b>                                              | Included in top levels 310-L408 & 320-L408<br>Can be ordered as line item 51-3829<br>Physical - 7" x 3.5" x 6" and 5 lbs.                                                                                                                                                     |
| <b>Power Blade Charger:</b><br><i>Wall Mount</i><br><i>Free Standing</i> | Must order as line item 51-4218<br>Physical - 17.25" x 8.0" x 4.0" and 6 lbs.<br>Physical - 17.25" x 8.7" x 6.8" and 7 lbs.                                                                                                                                                   |

## Power Monitoring & Control, Wi-Fi Connection

The JACO 300 Series Power Blade status, parameters and configuration files are fully accessible via the Cart's built-in HTML web server. Web pages are viewed via standard internet browsers on a PC, tablet or Smartphone and the Cart is built to standalone so no software needs to be installed on the Cart's computer eliminating "software clash" and possible security issues.



For complete details on how to set-up, access and use the Power Monitoring & Control wireless reporting features, reference our technical guide, *JACO 300 Series Power Monitoring & Control* which is available through your JACO contact.

## Safety Recommendations and Warnings



**WARNING:** As with any mobile cart, caution must be taken when pushing the cart through elevator doorways and over thresholds. It is recommended that you lower the work surface to waist high and position the cart so that only one wheel contacts the threshold at a time. This will help keep the momentum of the cart moving forward and provide a safe transition.



**WARNING:** If your JACO Mobile Cart has a Drawer System option, limit weight per drawer to 2 lbs max, close drawers when moving and do not transport at more than a 5-degree slope.



**WARNING:** Your JACO Hot-Swap Battery System is designed to operate as a system. Use only JACO Power Blade Battery Packs, part number 51-3829 with the Cart Controller and Power Blade Charger Assemblies. Use of any non-approved Battery Pack, Controller or Charger may result in damage and un-safe conditions.



**WARNING:** It is unlikely that you will experience any electromagnetic interference when using your Series 300 Cart Controller or Power Blade Charger however if you notice any interruption or interference issues when using certain computers or peripherals, notify your IT department before contacting JACO Service department.



**WARNING:** The JACO Power Blade Battery Pack contains lithium battery cells and as with all batteries, have specific shipping restrictions that must be addressed. Please contact JACO Customer Service for assistance before shipping any JACO product. *It is the Shippers responsibility to follow all Federal & State regulations when shipping lithium batteries.*



**WARNING:** Do not open or dismantle the JACO Power Blade Battery Pack or Power Blade Charger, note that there are no serviceable parts. This equipment must be serviced by trained personnel.

### ***Additional Power Blade Battery Pack and Power Blade Charger important information:***

- \* Use Power Blade Battery Pack & Power Blade Charger in the applications intended.
- \* Unplug the Power Blade Charger from AC power to clean or if it is not working properly.
- \* Do not short-circuit the Power Blade assemblies
- \* Do not expose the Power Blade assemblies to heat or fire and avoid storage in direct sunlight
- \* Do not subject Power Blade assemblies to mechanical shock
- \* In the event of battery leakage, do not allow the liquid to come in contact with the skin or eyes, if contact has been made, wash the affected area with water, seek medical advice.
- \* Always keep Power Blade Battery Packs & Power Blade Chargers clean and dry.
- \* Observe the plus (+) and minus (-) markings on the Power Blade and equipment.
- \* For disposing or recycling Power Blades, all Federal & State regulations must be followed.
- \* Always refer to this manual for instructions, warnings and proper use.
- \* If your Power Blade Battery Packs will not be used for several months or longer, it is recommended that you remove them from the Cart Controller and charge them to full level before removing from the Power Blade Charger and storing in a cool dry location.
- \* Retain this Users Guide and all original literature for future reference.



***NOTE: Material Safety Data Sheets (MSDS) are available as needed, contact JACO Support for more information.***

## Proper Operation, Care & Maintenance



Before any maintenance or cleaning, disconnect the Power Blade Charger from the AC wall outlet.

JACO products are designed and manufactured to provide years of operation. Take care to use the product as intended and keep clean for best overall performance.

Most of the surfaces of your JACO product are finished using a durable, antimicrobial powder coat finish. It is recommended that the surface areas that are in contact with day to day use be cleaned regularly. Always review the cleaning products that are being used and verify that it is safe to use on the powder coat finish. In general, a solution or wipe that is no more than 10% bleach, such as most germicidal wipes used in hospitals, will be acceptable but it is recommended that you consult with JACO Customer Service if you are not sure it is safe to use.

Your JACO Mobile Cart does not require any scheduled maintenance however it is good practice to clean the casters and check that the Cart height adjustment is operating correctly at least once a year. Please contact JACO Customer Service as needed for more information in maintaining your JACO Mobile Carts.

It is recommended that the Power Blade Charger be located in a clean environment free of liquids, dirt and dust and a max room temperature of 77 deg (25 C). The Power Blade Charger should be reviewed weekly for proper care and cleaning. The bays should be used only for the charging of the JACO Power Blade Battery Packs, any other use may cause damage and will void the warranty.

When cleaning the outside of the Cart Controller, Power Blade Battery Pack or Power Blade Charger, a dry cloth will be effective for removing dust or light dirt. If needed, a standard hospital grade germicidal wipe can be used. It is recommended that the wipe contain no more than 10% bleach to prevent possible damage to the powder coat metal surfaces.



Inspect the inside bays of the Cart Controller and Power Blade Charger as needed or weekly, remove the Power Blade Battery Packs to inspect the connections. Remove material that may have accidentally dropped into the Power Blade Charger or Cart Controller.

There should be no reason to clean the inside bay area but if required, make sure the Power Blade Charger unit is unplugged and a damp (not saturated), less than 10% bleach wipe is used, allow ample drying time.

If the inside connectors pins do become dirty, do not insert any objects into the contacts. Use compressed air to blow out the build-up ensuring proper contact and operation.

For more information concerning best cleaning practices, contact our support team at [www.jacoinc.com/support](http://www.jacoinc.com/support), email at [support@jacoinc.com](mailto:support@jacoinc.com) or call 877-803-0101.





## Basic Mobile Cart Integration & Operation

### Unpacking & Assembly:

Your JACO Mobile Cart may be delivered stacked with one container on top of another. Please use caution when removing the top Cart for unpacking. This is a two person lift and the top Cart must be placed on the ground before unpacking. Once unpacked, there will be minimal assembly required depending on the Mobile Cart model and options you have ordered. Due to the shipping container, the LCD and Stand (for LCD Carts) and the optional Scanner Mounts, are not able to be attached at our factory.

### Changing the Height Position:

Your JACO Mobile Cart is height adjustable for proper ergonomics when used in a standing or sitting position. To change the height simply squeeze the handle located at the right side of the cart (as shown below). While holding the handle tight, the cart height can be changed by pushing downward or pulling upward with both hands on the cart top surface. Release the lever when the cart is in the desired position.



### Installing your computer or laptop:

To install your PC or Laptop, unlock both key-locks at the rear of the top assembly as shown in the photo below. Both locks must be opened before the top work surface can be pulled forward and removed from the Cart. Once the work surface is removed, the open bay area (shown below) is available for installing your computer or laptop. Route all cables needed for proper operation before installing the work surface and locking in place for security. If using a laptop computer, simply open and allow the display to protrude through the opening in the work surface.



## Installing Stand and LCD Monitor:

To attach the monitor stand to the Cart you will need a 3/8 nut driver to tighten the 4 nuts. Place the monitor stand so that the 4 threaded studs drop into the 4 holes on the mounting plate that is attached to the rear handle of the Cart. Use the nut driver to install and tighten all 4 nuts. Make sure all 4 nuts are tight before moving on.



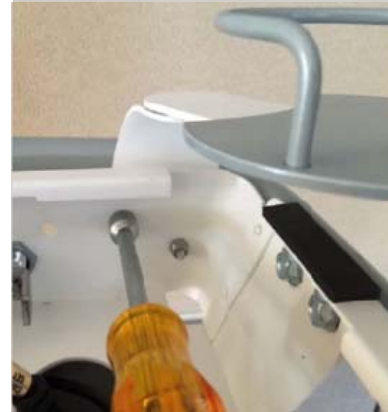
After the monitor stand is installed on the Cart, attach the LCD to the stand. A Phillips Head or (if added security is needed for the LCD) Torx Head driver is needed to attach the LCD to the VESA Stand, 4 places. Both Phillips and Torx screws are provided. It is recommended that one person hold the LCD while a 2nd person inserts the hardware. Make sure all 4 screws are installed and tightened properly.



With the monitor and stand installed on the Cart, the LCD power and signal cables can be installed. Route both cables down through the cable management area of the stand as shown to the left. Pull the cables into the Top Assembly and attach to the PC or laptop computer that will be installed later.

### Installing Scanner Mounts:

If you have ordered a Scanner Holder option, you may need to install this as well. Remove the top work surface by unlocking the 2 key locks at the rear Top Assembly and pulling the work surface forward. The scanner mount will attach using 2 nuts as shown. Use an 11/32 nut driver to tighten.



### Installing Keyboard and Mouse onto the Cart:

When ordering your JACO Cart you have the option of including an integrated mouse and keyboard. If you are adding your own mouse and keyboard, they can be integrated as follows. It is most important that the wires are routed out of the way of the sliding keyboard tray. With each JACO Mobile Cart we include an accessory pack that provides ty-wraps and Velcro pads along with other helpful items for proper cable management. Use the Velcro pads to fasten the keyboard to the keyboard tray and use the ty-wraps to secure the cables.



### Optional JACO Patented Trac™ Wheel Steering:

The optional Trac Wheel is designed to add true steering to the JACO Mobile Cart. With 4 swivel casters, keeping the Mobile Cart moving in one direction may be challenging as the momentum of the Cart will want to continue in the direction of motion. The Trac option can be engaged by stepping down on the green post at the bottom front of the Cart. This activates a traction wheel that will give you control over the direction of the Cart. To disengage Trac, step down on the black post.



### Keyboard Light:

The front touch pad numbers are used if an optional locking Drawer system is included but it also offers a Keyboard Light. Press the light bulb icon button located on the far right and the keyboard light will turn on. Press again and the light will go off. There is a time-out so after approximately 20 minutes, the light will automatically turn off. The light can be turned back on immediately if needed.



Touch Pad Access, Front of Mobile Cart

### Optional Locking Drawer Operation:

The default combination for the optional Touch Pad e-locking Drawer system is 4, 1, 2, 3, then press the Unlock Button. This combination can be changed as needed and offers up to 64 unique 4-digit access codes. To change the pass code, press the numbers 3, 1, 2 then the unlock button, you will hear a "beep" indicating that a new 4-digit code can be entered. If you enter an unacceptable code, such as 1, 1, 1, 1, you will hear a "buzz" noise indicating the code is not changed. When entering an acceptable new code, you will hear two short "beeps" indicating that the code is now changed.

If for some reason the electronic pass code system were to fail, there is a rescue key lock located at the back of the drawer system as shown below. Insert, turn and hold key in the unlocked position to allow the drawers to be opened when by-passing the electronic drawer lock system. The by-pass key is not the same key used to access the Top Assembly.



Rescue key access on back of drawer/cabinet assembly

**NOTE:** See page 6 of this manual for important safety information regarding the drawer option.

## Power Blade Battery Pack & Cart Controller

To insert the Power Blade Battery Pack into the Cart Controller, simply hold by the integrated handle and insert into the Cart Controller using the top and bottom guides for alignment. As you push the Power Blade Battery Pack into position, you will hear a "click" as the connectors engage. To remove, push down and hold the horizontal handle located at the rear of the Cart Controller, and pull the Power Blade Battery Pack out.

Note that when two Power Blade Battery Packs are installed in the Controller, you will notice that one rear facing status LED will blink every 6 seconds. This is normal and used as an indicator as to which Power Blade Battery Pack is providing power. If two charged Power Blade Battery Packs are installed, power will switch instantly from one to the other when one Power Blade Battery Pack is removed.



### **LED Charge Capacity Status:**

The Power Blade Battery Pack ports on the Mobile Cart are labeled as Battery 1 and Battery 2. Each port has two LED indicators that show approximately how much battery charge is remaining. The LED indicators are located at the front and rear of the Cart. This simple LED readout reports approximate battery charge as follows...

- \* 100% to 21% Charge on Battery Pack - Solid **Green** LED
- \* 20% to 11% Charge on Battery Pack - Solid **Amber** LED
- \* 10% to 1% Charge on Battery Pack - **Blinking RED** LED
- \* No Charge Remaining - Solid **RED** LED

**NOTE:** If both Power Blade Battery Packs show **RED** (fully drained), the Cart will "beep" as a warning. This will continue for several minutes. Replace at least one with a charged Power Blade Battery Pack within this warning period to prevent the on-board computer & monitor from shutting down.



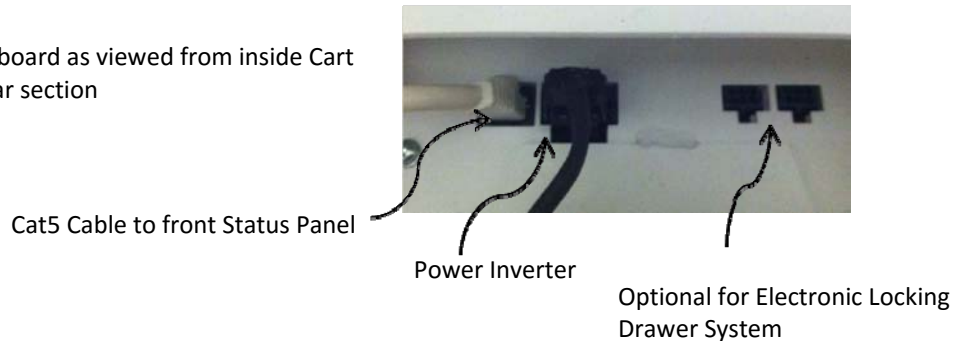
Front LED Charge Capacity Indicators



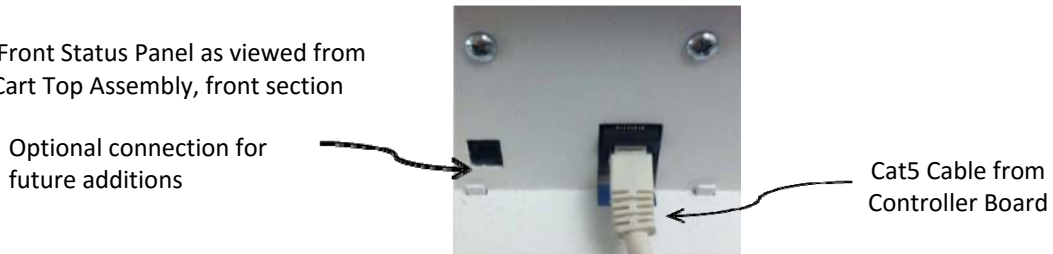
Rear LED Charge Capacity Indicators

**Input/output Connections, use only for stated connection:**

**NOTE:** Controller board as viewed from inside Cart Top Assembly, rear section



**NOTE:** Front Status Panel as viewed from inside Cart Top Assembly, front section



**Estimated run-time per Power Blade Battery Pack:**

The JACO 300 Series Hot-Swap Power Blade Battery Packs are designed to be a safe and reliable solution for health care applications. As with any battery system, the amount of time that the battery will power the equipment is dependent on the device (PC, Laptop, LCD Monitor...) power demand. To help reduce power demand and increase the Power Blade Battery Pack runtime, we suggest that you set the monitor to enter sleep mode after 5 minutes of idle time.

The following are estimated runtimes per JACO Power Blade Battery Pack, your results may vary.

| Watts | Hours | Minutes |
|-------|-------|---------|
| 40    | 3     | 40      |
| 45    | 3     | 25      |
| 50    | 3     | 5       |
| 55    | 2     | 45      |
| 60    | 2     | 35      |
| 65    | 2     | 12      |
| 70    | 2     | 0       |
| 75    | 1     | 55      |
| 80    | 1     | 51      |
| 90    | 1     | 42      |
| 100   | 1     | 30      |

**NOTE:** Listed are the estimated runtimes for a single JACO Power Blade Battery Pack.

## Power Blade Charger

The Power Blade Charger can be placed on a tabletop or installed on the wall for convenient point of use access. With either installation, the Power Blade Charger MUST be positioned vertically, with the Power Blade Battery Packs entering from the top and will not function if positioned in any other direction. For complete details and instructions, please reference the Power Blade Charger Users Guide that is shipped with each unit. This manual is also available on request.

## Agency Certification

### ***51-4218, Power Blade Charger***

Safety - IEC 60601, 3rd Edition (60601-1:2005 A1:2012)  
IEC 60601-1  
EN/ISO 14971

EMI / EMC (60601-1:2005 A1:2012)  
IEC 60601-1-2  
Means of isolation provided by on-board power supply.

### ***51-3829, Power Blade Battery Pack Assembly***

IATA - UNDOT 38.3 International Air Transport Association

IEC 62133 - Safety Requirement for Cells Containing Alkaline Electrolytes

UL 2054 - UL Certification for Primary and Secondary Batteries

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JACO INC. 140 CONSTITUTION BLVD, FRANKLIN MA, USA

## Troubleshooting

### 1) *My Hot Swap Cart has no power, however Cart battery status LEDs in both the front and back of the cart are working.*

Check the inverter for the green light next to the AC outlet on the inverter.

Check all cable connections to and from the Inverter, ensure they are secure.

Remove the batteries from the Cart Carrier, replace with 2 fully charged batteries.

If there is power, the previous batteries need to be charged.

If there is still no power to the computer & LCD, contact JACO for replacement authorization or additional troubleshooting direction.

### 2) *The computer and LCD or laptop is integrated and working without issue however the Mobile Cart battery status LEDs are not working in both the front AND back of cart.*

Remove and reinstall the same Power Blade Battery Packs that are currently in the Cart, if the LED's still do not light, replace the batteries with 2 fully charged batteries.

If the status LED's, are still not showing, you will need to reset the controller unit.

To reset, insert a paper clip into the reset port at the back of the Cart as shown. Once paper clip is inserted and the internal button depressed, the unit will beep signifying a system reset. Remove the paper clip and watch for the status LED's to function.

If the status LEDs are still not functioning, contact JACO for replacement authorization or additional troubleshooting direction.



### 3) *The Mobile Cart front battery status LEDs are not working however the back status LEDs are working correctly.*

Remove and reinstall the same Power Blade Battery Packs that are currently in the Cart, if the LED's still do not light, replace the batteries with 2 fully charged batteries.

If the front LEDs are still not functioning, check that the input/output cable connection, as shown in Section 6 of this guide, are connected correctly and seated properly.

If the front status LEDs are still not functioning, contact JACO for replacement authorization or additional troubleshooting direction.