

Notice on 1st Steps and Battery Storage of Circadian Batteries

First Steps: Please

- ✓ Charge the Batteries to full with the Chargers supplied or the On-Cart Power supply
- ✓ Check that everything agreed has been delivered and is undamaged
- ✓ Ensure that the Voltage output is set correctly before plugging in appliances.
- ✓ Download the relevant manuals from our website www.DCP4c.com/Downloads
- ✓ Ensure that key staff are given a basic training on how to use the system, instructed to treat Lithium Ion batteries with care and report any incidents of undue heat, smoke or flames.
- ✓ Take note of the On-Shelf and On-Cart storage limits of the batteries.

Storage, before Use, long term, on Cart or before/after test/demo

		C80	C160	C200
On Delivery	Deactivated at 30%	6 Months	6 Months	6 months
Charged to full	Deactivated at 100%	12 Months	12 Months	12 Months
Activated	30% full	2 Months	2 Months	2 Months
Charged to full	Activated at 100%	3 Months	3 Months	3 Months
On Cart C-Mount	Battery empty *	2 Months	2 Months	2 Months
On Charger (no power)	Battery empty*	2 Months	2 Months	2 Months



*** An empty battery left on a cart will quickly use its remaining capacity. At that point it will go into a protective sleep mode. LEDs will shut down. It will not restart unless Toggled. (Put on charger or on C-Mount with active Power supply. If not toggled within the 2-month period, the battery will shut down permanently in order to ensure safety. The 2-month period is an indication and not absolute, Age, cycles and ambient temperature can shorten this period**

Deactivated: Battery Shipping and Storage mode. LEDs do not function, no output. Battery will only work after activation. That is when battery is placed on a Circadian Charger or on the C-Mount attached to a Hot Swap and plugged in Power supply (toggled).

30% charge: Shipping regulations require that Li-Ion batteries are not transported full, they need to be below 30% of their capacity.

Activated: Battery will function. If button is pressed LEDs will light up. Management and safety Electronics are active, representing a load that slowly empties the battery.

How to deactivate? Press down battery button Until all LEDs start to flash on & off. Then release. If button is pressed again, no LEDs will light up.

Why is On-Cart storage a problem? Because the active Hot Swap electronics and LCD etc. are all live using power. A battery discharges rapidly and if left, then deep discharges.

Why is Deep Discharge a problem? When a battery is emptied, the Voltage level is low; there is some remaining capacity used for Safety & Recovery. The Voltage will slowly drop until it will reach such a low level that the Li-Ion chemistry starts to form internal metallic deposits. These are reactive to heat and may damage the internal separator, causing potential short circuit. When charged this is potentially hazardous. Therefore, Battery management electronics is required and obligated to shut down the cell pack permanently.

Long term Storage Instruction: Charge battery to 100% full. Deactivate. Leave in box in cool area with no direct sun light exposure. Activate and check the battery, recharge and re-deactivate every 6 months.

Accuracy of figures: The Day figures are calculations referring to a new battery. As batteries age at different rates, the imbalance and internal resistance increases, potentially reducing these figures.

Warranty waiver: Batteries that are deep discharged and shut down are permanently damaged and not covered by the manufacturer's warranty!