




Streamline
Your Battery
Room



PACKAGE COMPARISON

CHARGE CYCLE ANALYTICS	 BASIC	 DELUXE	 PREMIUM
Number of Chargers	50	100	200
Number of Battery Pools	1	9	9
Compatible with All Conventional Chargers	✓	✓	✓
Blue *Pick light* to Indicate Correct Battery	✓	✓	✓
Universal Voltage Sentinel	✓	✓	✓
Daisy Chain Wiring with Cable Included	✓	✓	✓
Built in Touch Screen		✓	✓
Built in Shouter		✓	✓
7 Days On-site Data		✓	✓
Built in Configuration Wizard		✓	✓
Optional Web-Based Reporting		✓	✓
Optional 3G Modem for Web Connectivity		✓	✓
Built in UPS			✓
Optional Wireless Display			✓
Optional Remote Shouter			✓
Optional Scrolling Displays			✓

FEATURE LIST

Number of Chargers: Number of chargers in your facility.

Number of Battery Pools: Number of different battery/truck types in your facility. If you have two smaller pools, you may want to use two CCA Basic systems instead of one Premium or Deluxe system.

Compatible with All Chargers: Works with all High Frequency, SCR and Ferro Resonant chargers in a conventional, battery change application.

Blue "Pick light" to Indicate Correct Battery: Bright, easy to see blue light tells you which charger to go to for the fully charged and most cooled down battery.

Universal Voltage Sentinel: Works from 12 to 80 Volts DC.

Daisy Chain Wiring with Cable Included: Simple installation means only 15 minutes of installation time per charger.

Built-In Touch Screen: Color display shows next available battery for multiple pools and displays status & history information. It enables easy system installation and access to system settings.

Built-In Shouter: The Shouter alerts the operator, with a loud alarm, when the wrong battery has been selected.

7 Days of On-Site Data: Summary statistics on good & bad battery selections and a graph of battery availability for the past seven days are on the touch screen display.

Built-In Configuration Wizard: Used to easily set up and reconfigure the system, the Configuration Wizard is accessed through the touch screen display. No separate computer needed.

Optional Web-Based Reporting: Allows connection to CCA Web Service for up to five years of management reporting.

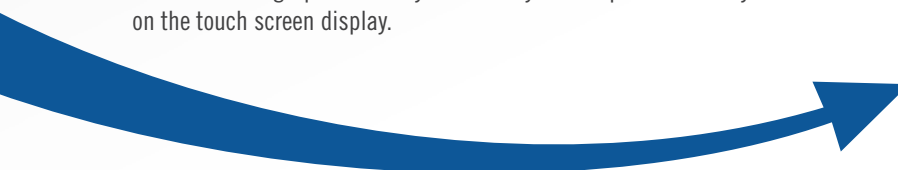
Optional Cellular Modem for Web Connectivity: Transmit data from the Controller to the CCA Web Service via the cell phone network rather than LAN based connection.

Built-in UPS: Uninterruptible power supply protects against power outages and power spikes.

Optional Wireless Display: Makes battery selection information conveniently available on a battery changer. The bright touch screen display wirelessly communicates with the Controller to tell the operator which fully charged battery to take.

Optional Remote Shouter: Additional Shouter can be remotely mounted away from Controller for larger battery rooms.

Optional Scrolling Displays: Bright scrolling LED sign tells operators which battery is to be selected next. One display required per battery pool.



Battery Rotation

While the process of CCA is simple, the processing of the information is highly advanced. The “Cycle” in Charge Cycle Analytics utilizes Battery Rotation, Right Sizing, and Data Management.

Right Sizing

Data Management

Proper rotation can increase battery run times by up to 30 minutes, reduce the number of changes by 20%, and extend the overall life of your battery by 6 months. Overheating is the number one killer in battery life. CCA helps you to maintain proper battery cool down by determining which battery has had the longest cooling time since charging.

HERE'S HOW CCA WORKS

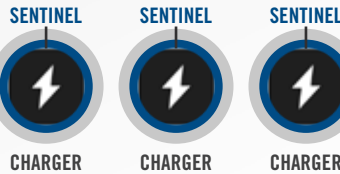
1 The **Sentinel** monitors the charge condition of each battery and can be mounted on any type of conventional or high frequency charger.

2 The **Controller** ensures proper rotation by taking data from the Sentinel and informing the operator of the appropriate sequence of available batteries.

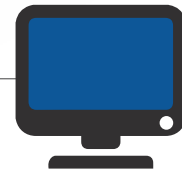
3 The **Scrolling Display**, a multi-color LED sign – or the **Wireless Display**, a changer-mounted, touch-screen device – tells operators which battery is to be selected next.

TAKE BATTERY 3

TAKE BATTERY 3



4 The **Shouter** alerts operator when the wrong battery has been selected.



5 **Real-Time Monitor** software enables manager to continuously monitor battery selection activities.

INCREASE YOUR ROI WITH CHARGE CYCLE ANALYTICS

Too many batteries wastes capital. You can streamline your battery room by quantifying exactly how many batteries your operation really needs and by removing wasteful, inefficient batteries from your pool. CCA takes the guesswork out of your decision making. Valuable reports are available to managers instantly on the web.

Reduce battery changes, move more pallets, and increase productivity. Change batteries faster, less frequently and increase their life. Solve your problems in the battery room before they even begin with MTC's Charge Cycle Analytics!



The CCA Sentinel monitors the charge condition of each battery and can be mounted on any type of conventional or high frequency charger. One Sentinel per battery, and it works on all levels of CCA, making upgrades a breeze.



With Charge Cycle Analytics, battery room managers can continuously monitor battery selection activities. CCA provides information in an easy-to-understand manner, signaling the manager when one of five alert conditions is triggered:

1. Battery availability low – no charged batteries (or any number a manager chooses) are available.
2. Mispick – an operator chooses the wrong battery or the battery picked is still charging.
3. Short charge duration – a battery takes less than three hours (or any duration a manager chooses) to charge. This may indicate a low capacity battery or that an operator is returning a battery for recharging too soon.
4. Charger no start – a charger does not turn on when a battery is connected – sometimes due to an over-discharged battery.
5. Cool down time – a battery is picked before a pre-selected length of cool down time, potentially reducing the life of the battery.



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