

## Frequently asked questions

**Question:** Why is *QuickTest™* superior to internal resistance check, a feature that is offered on other battery testers?

**Answer:** A battery cannot be diagnosed on resistance alone. Healthy and weak batteries often provide similar resistance readings.

**Question:** How does *QuickTest™* differ from other technologies?

**Answer:** *QuickTest™* uses inference algorithm to fuse data from 6 battery variables, which are: capacity, internal resistance, self-discharge, charge acceptance, discharge capabilities and mobility of electrolyte. The data is combined with the trend-learning algorithm to provide an accurate state-of-health (SoH) reading in percentage figure.

**Question:** You say that *QuickTest™* identifies bad batteries by reading the SoH. What does SoH mean?

**Answer:** SoH reveals the overall battery conditions based on the 6 variables mentioned above.

**Question:** When should a battery be replaced?

**Answer:** The acceptable threshold is 80% SoH. Replace a pack if below 80%.

**Question:** What can I do to make batteries last longer?

**Answer:** Nickel-based batteries can be restored with Exercise and Recondition cycles. Cycling does not refurbish weak lithium-based batteries.

**Question:** What do I need to set up a system?

**Answer:** The Cadex C7200 serves storefronts; the C7400 assists larger users. Custom Battery Adapters are used for common batteries or when trained staff are not available. The FlexArm™ accommodates less common packs. BatteryShop™ software simplifies operation and stores test results.

## The Company

Founded in 1980, Cadex combines engineering strength with innovative design and dedication to quality. Cadex is ISO9001 certified and the products are sold in over 100 countries.

## World Leader

Cadex Electronics is a world leader in the design and manufacture of advanced battery chargers, analyzers, battery maintenance software and specialty battery packs. Our award-winning products have gained global acceptance in wireless communications, mobile computing, medical and defense industries.

## Customer Satisfaction

Whether you purchase a Cadex model off-the-shelf, a modified version for special applications or a custom OEM unit, you are assured of advanced design, superior quality and competitive pricing. Cadex has 20 years of experience in engineering and manufacturing.



Cadex is located on the banks of the scenic Fraser River near Vancouver, Canada.

Represented by



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# Test a Battery in three minutes



**Cadex C7400**  
battery analyzer  
with *QuickTest™*

*Patent pending*

Cadex Electronics has developed a method to measure the state-of-health (SoH) of a battery in 3 minutes. *QuickTest™* services batteries for cell phones, two-way radios, laptops, scanners, medical equipment, video cameras and more.

*QuickTest™* is built into the Cadex C7200 and C7400 battery analyzers and services lithium-ion, nickel-metal-hydride, nickel-cadmium and lead-acid batteries. The analyzers are user-programmable and also perform prime, recondition, fast-charge, life-test and boost functions.





## The million dollar problem

Batteries are blamed for most problems on portable electronic equipment. To make the customer happy, the battery is replaced – without testing.

More than 80% of returned batteries can be restored with proper equipment. *QuickTest™* checks the battery while the customer waits. *Boost* re-energizes packs that have failed due to excessive low discharge

## Who should use *QuickTest™*?

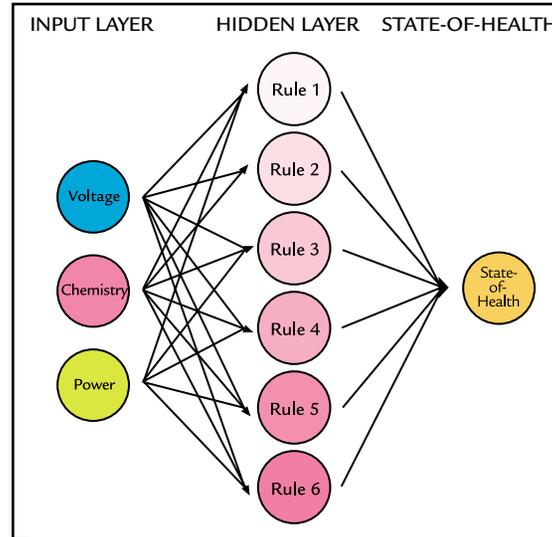
**Warranty Returns** *QuickTest™* examines batteries returned under warranty. Only batteries with genuine faults are replaced.

**Public Safety** *QuickTest™* checks the battery before engaging in a critical mission. Marginal batteries are identified and removed from the fleet.

**Rental** *QuickTest™* verifies the battery performance before release to the customer. Short test times are of the essence.

## How does it work?

The *Cadex QuickTest™* works on patent-pending inference technology. Multiple variables are fed to the micro controller, ‘fuzzified’ and processed through parallel logic. The information is averaged and weighted according to the battery application. The figure below illustrates the general structure of such a network:



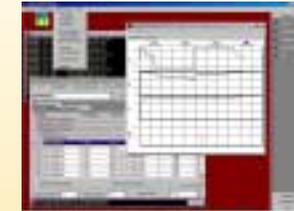
*QuickTest™* uses battery specific matrices that are obtained with the analyzer’s trend learning process. The ability to learn allows adapting to new batteries in the field.

The matrices are stored in the Cadex Battery Adapters, which automatically configure the analyzer to the correct battery setting. Battery Adapters commonly include the *QuickTest™* matrix at time of purchase. If missing, the matrix can be added by scanning batteries on the analyzer’s *Learn* program.

The codes can be copied to other adapters, erased and re-entered. The required charge level to perform *QuickTest™* is 20-90%. If outside this range, the analyzer automatically applies a brief charge or discharge.

## Battery testing made simple

Keeping track of batteries can be difficult, especially when encountering continuously changing battery types. Cadex BatteryShop™ software can help.



BatteryShop™ provides a simple, yet powerful PC interface to control and monitor the Cadex C7000 Series battery analyzers. The software includes a database of over 2000 batteries.

You can extend the library by adding your own models or download the most current list from [www.cadex.com](http://www.cadex.com)

Clicking the mouse on the selected battery or swiping the bar code sets the analyzer to the correct service parameters. Test results can be sent to a central location for evaluation. Enabling access to vital test information allows manufacturers to correct recurring battery problems quickly and effectively.



**Custom Battery Adapters** for common batteries

Common batteries are best serviced on custom Cadex Battery Adapters. The Cadex *FlexArm™* serves all others. Two contact probes mounted on flexible arms provide connection to the battery terminals. Magnetic guides keep the battery in position.



**FlexArm™** adjusts to handle a variety of batteries