



# Celltron Advanced<sup>™</sup>

## Stationary Battery String Analyzer

The Celltron Advanced<sup>™</sup> is the ultimate tool for stationary battery management. Research proven technology and field-tested design make it a must for critical power maintenance.

### **Benefits**:

- Quick, simple, safe & accurate operation
- High ampere-hour testing capability
- 16 internal memory registers capable of storing 480 consecutive test results and overall string statistics
- Enhanced backlit display and screen resolution
- Voltage logging only option
- Quick reset option for erroneous test entries
- Measures individual cell and overall string health and voltage
- Menu driven test sequence
- Consistent, repeatable on-line testing without discharge to batteries

## Accessories Available:

- Infrared Printer\*
- Infrared PC Data Receiver & Software
- Infrared Temperature Sensor\*
- Protective Carrying Case\*
- Both Clamp and Probe Cables\*
- \* Included with standard CTA-4000 Kit

- Tests 2-volt through 12-volt batteries
  on-line or off-line
- Provides advanced warning of potential battery failures
- Test each cell in under 10 seconds and entire string of batteries in just minutes
- Helps prioritize battery replacements for more cost-effective system management
- Tests both battery cell and intercell strap integrity
- No external power source needed
- Portable IR wireless printing and data transfer to PC laptop
- User definable battery reference number storage and fault thresholds
- Custom Interfaces available
- Amp Test Connector
- Protective boot
- Extended life battery pack



# Celltron Advanced<sup>™</sup>

Model Number: CTA-4000 (Kit); CTA-2000 (Tester Only)

**Applications:** Tests individual lead acid cells or monoblocs (up to 12 Volts) in any common configuration

Voltage: 1.0 - 15.0 Volts DC

Conductance: 100 - 19,990 Siemens

Test Data Storage: Up to 480 consecutive test results can be stored internally

Accuracy: + 2% across test range

Voltmeter Resolution: 10 mV DC

#### User Programmable Functions:

- Preset values for over 200 battery types
- · Low voltage alarm setting
- · Low conductance warning
- Low conductance failure
- Day/date/time formats (USA/international)
- Test mode (push button/auto start)

#### Calibration:

Auto-calibration prior to every test, no future calibration required

#### Connectorized Test Cable Options:

- Dual contact clamps
- Dual contact probes
- · Custom cables by quotation

#### **Power Requirements:**

One 9V high capacity/heavy duty lithium battery or rechargeable battery pack accessory

#### **Environmental Operating Range:**

0 to +40°C, 95% relative humidity, non-condensing

#### Storage Temperature:

-20 to 82°C

#### **Over Voltage Protection:**

- · Fused protection to 16 volts DC
- · Reverse polarity protected

Housing Material: Acid resistant ABS plastic

Tester Dimensions: 9" x 4" x 2.5" 230 mm x 102 mm x 65 mm

Case Dimensions: 19" x 15.5" x 5" 750 mm x 610 mm x 200 mm

Tester Weight: 1 lb / 500 gm

#### CTA-4000 Test Kit Shipping Weight: 9.5 lb / 4 kg

#### **Special Features:**

- · Impact resistance tested · Connection interfaces tested for durability and endurance
- No-Ox grease petroleum product resistance



Improved menu navigation



16 string storage capability

# Conductance Technology

Conductance describes the ability of a battery to conduct current. It is a measurement of the plate surface available in a battery for chemical reaction, which determines how much power the battery can supply. High relative conductance is a reliable indication of a healthy battery, while conductance declines as the battery deteriorates.

Years of laboratory and field test data have determined that battery conductance is an indicator of battery state-ofhealth showing a linear correlation to a battery's timed-discharge capacity test result. If conductance can be measured, discharge capacity can be predicted, giving a reliable predictor of battery end-of-life.

Other testing alternatives like voltage and specific gravity testing are not predictive. Timed discharge testing is very time-consuming and expensive, and impedance testing does not correlate directly and linearly with discharge capacity. Thus, conductance testing is a very effective and economical battery management tool.

# Conductance Technology Industry Approvals and **Recommendations:**

- IEEE Standards 1188 and 484
- EPRI (Electrical Power Research Group)
- Guide for Testing Stationary Batteries International Telecommunications **Energy Conference**
- Bellcore T1Y1
- Presentation for American National Standards Institute
- International Lead Zinc Research Organization
- Battery Council International

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