



SOC White Paper



The SOC TESTER

SOC140 Tests up to 140 AHRS - SOC255 Tests up to 255 AHRS



Proven Proven Industry Leading Results

Proven In The Field, Proven In The Lab And Backed By End User Testimony



Easy To Use Allowing For Rapid Deployment

Lightning Fast Learning Curve Enables Companies With A Rapidly Deployed Solution



Lasting Solution For Years Even Decades

A Smart Solution That Will Keep Producing For Years Or Even Decades To Come



Portable Enables Fast In The Field Deployment

Unlike Stationary Solutions The SOC Is Mobile And Can Travel To Different Testing Sites



Accurate THE Industry Setting Standard

While Others Make Promises, The SOC Delivers Proven Results You Can Count On, Period



Reliable Tough Ruggedized Construction

Tough Ruggedized Construction Ensures Years Of Future Service And End User Benefit



Trusted Trusted By Industry Leaders

Industry Leaders, Scientists And End Users Alike Utilize And Trust The SOC



Quick Quick Results For On The Spot Decisions

No More Need To Analyze Data The SOC Does It For You And Allows For On The Job Decisions By Technicians Instead Of In The Office Analysis By Managers



NFPA NFPA Load Device Compliant

The Industry Standard For The Largest Testing Companies In The World. Fire Alarm, Security And UPS Battery Testing Industry Leaders Choose And Trust The SOC Battery Tester For Portable, Fast, Accurate Battery Analysis Allowing For On The Spot And In The Field Decisions You Can Count On.

“No Other Battery Testing Device On The Planet Can Match The Combined Speed, Accuracy, Reliability And Overall Value Of The SOC”

See and actually "hear" more [battery tester industry expert reviews](#) right now



Both The SOC140 And The SOC255 Battery tester Test 6 Volt And 12 Volt Lead Acid Batteries, SLA, VRLA, GEL, AGM And More... Custom voltage ranges available/Custom AHR ranges also available upon request...

Have a question about a specific battery type? Call [1.800.978.8058](tel:18009788058) right now, or [email your battery tester question](#), and...

Get Your Question Answered Right Now

The SOC Is Simple To Operate, Enables Quick Decisions And Provides Ultimate Reliability.

In just *43 seconds*, the **SOC**TESTER™ battery analyzer will beep, bright LED lighting will illuminate your results and the "State of Charge" display will indicate the battery's true and total condition. Want to see how easy it is? Watch the soc [battery tester demo](#)

“The Only Battery tester That Allows The User To Acquire Acquire A (VRLA) Battery's True State Of Charge (TSOC) in less than a minute”

See and actually "hear" more [battery tester industry expert reviews](#) right now

The SOCTESTER™ Series is exclusively offered by USEICORP



This sophisticated equipment allows the operator to exercise and explore the battery's internal profile, measure the battery's state of performance, and verify the battery's ampere-hour (AHR) rating.

The information that the **SOCTESTER™** provides in 43 seconds has shown to be as reliable as the information provided by a standard 20 hour battery discharge test. Compliance and maintenance testing through full discharge reduces the life of the battery under test.

The possibility of battery damage occurring in the full discharge / recharge process is proven. Testing with the **SOCTESTER™** allows the user to remain within compliance guidelines for alternative load, eliminates the possibility of detrimental effects of full discharge / recharge to the battery under test, speeds up the testing cycle reducing time spent testing backup systems, and thus reduces labor costs while providing superior performance results.

This makes the **SOCTESTER™** perfect for testing batteries **anywhere they are found**, in inventory or in the field. The **SOCTESTER™** is also ideal for battery matching, wherever batteries are used in series. This allows you to **optimize reliability, minimize down time, and maintain efficiency** in system operations by verifying your batteries ability to perform at any given time.

“The SOC Battery Analyzer Actually Works ...Nothing Else Even Comes Close To Touching It”

See and actually "hear" more [battery tester industry expert reviews](#) right now

THE SOCTESTER™

Sealed Lead-acid (calcium) Battery Analyzers
INDUSTRY STANDARD

SOC140/255 BATTERY ANALYZER STANDARD FEATURES	APPLICATIONS
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Ability to verify a battery's stored energy capacity <input checked="" type="checkbox"/> 43 second automatic test cycle <input checked="" type="checkbox"/> Automatic post-test shutoff eliminates extra drain on tested and internal batteries <input checked="" type="checkbox"/> Self-contained battery power unit <input checked="" type="checkbox"/> Completely portable <input checked="" type="checkbox"/> Internal rechargeable battery tests in excess of 450 batteries per charge <input checked="" type="checkbox"/> Exclusive patented testing method that allows the operator to exercise and explore the battery's internal profile <input checked="" type="checkbox"/> Reverse Polarity protected <input checked="" type="checkbox"/> Self-contained operating instructions <input checked="" type="checkbox"/> Fail safe operation <input checked="" type="checkbox"/> Measure the battery's State-of-Charge (SOC) and display, in percentages, overall charge capacity <input checked="" type="checkbox"/> State-of-Charge is displayed up to 5% resolution <input checked="" type="checkbox"/> Internal battery low warning light <input checked="" type="checkbox"/> Internal factory calibration 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Emergency lighting systems <input checked="" type="checkbox"/> Propulsion Batteries <input checked="" type="checkbox"/> Communication Batteries <input checked="" type="checkbox"/> Fire alarm systems <input checked="" type="checkbox"/> Integrated security systems <input checked="" type="checkbox"/> Communication systems <input checked="" type="checkbox"/> To verify State-of-Charge of new and stock batteries <input checked="" type="checkbox"/> To verify emergency system minimum operating times <input checked="" type="checkbox"/> To verify capability of operating backup systems <input checked="" type="checkbox"/> Optimized Performance via Battery Matching <input checked="" type="checkbox"/> Propulsion systems <input checked="" type="checkbox"/> UPS uninterruptible power systems <input checked="" type="checkbox"/> Airborne applications <input checked="" type="checkbox"/> Wherever batteries are utilized



- Durably construction
- Temperature control
- Adjustable to compensate for battery-temperature
- Constructed for heavy-duty field use

■ Allows technician to quickly determine condition of battery to produce its rated power

SOCTESTER™ battery analyzers were developed as fast and accurate field test instruments with the capability of determining the ability of sealed lead-acid (calcium) batteries to perform for specific periods of time. The measurement developed determines the "True-State-of-Charge" (**TSOC**), by examining the battery's internal profile characteristics.

SOC140 BATTERY ANALYZER SPECIFICATIONS	
VOLTAGE RANGE	6V, 12V, custom upon request
BATTERY RATING	Model SOC140 ->3 - 140 Ampere Hour @ 20 HOUR RATE Model SOC255 ->up to 255 Ampere Hour @ 20 HOUR RATE custom upon request @ 20 HOUR RATE
BATTERY TYPE	Sealed Lead-Acid
TEST CYCLE TIME	43 seconds
CABLE SET	6 FT replaceable
RESOLUTION	5%
SIZE	14.875" x 12.125" x 6.875" (37.78cm x 30.79cm x 17.46cm)
WEIGHT	Model SOC140 22 lbs Model SOC255 26 lbs
INTEGRATED AUTO-PURGE SYSTEM	Available Completely watertight and airtight. With integrated Auto-Purge System. Our Pressure Release Purge Valve guarantees a perfect seal by incorporating its own O-Ring under one of the latches. You will never forget to set the valve since it automatically activates when closing the case. Pressure is released as you open the latch.
DURABILITY	CRUSH RESISTANCE manufactured to exceed crush resistance MIL STDs of 400 Lbs stacking
<small>Specifications subject to change without notice. Every SOCTESTER™ battery analyzer is delivered with factory calibration for sealed lead-acid (calcium) batteries with nominal resistance. Recommended calibration every year for optimal performance and accuracy. All SOCTESTER™ battery analyzers come with 6ft. test cables, Internal battery, AC Wall plug power unit, Factory calibration and a full 90 day warranty</small> <p style="text-align: center;">Patented</p>	

SOCTESTER™ battery analyzers were developed to quickly and accurately determine the ability of vent regulated lead acid (VRLA) batteries to perform for specific periods of time, whether in inventory or in the field. SOCTESTER™ battery analyzers scan the infrastructure of the battery and exercise it to measure its ampere hour capacity, its ability to supply relatively large currents, and whether it is fully charged. SOCTESTER™ then determines the battery's energy profile, quickly computes the battery's characteristics, and displays the battery's True SOC (State of Charge). **All in just 43 seconds.**

Typically, systems operate at a rate lower than that of their weakest battery. Matching batteries by state of performance, manufacturer, and date manufacture assures optimum performance. The SOCTESTER™ makes this process affordable and reliable. More detailed information on battery matching can be found in the [USEI Battery Tester Education Center](#) or visually depicted on the SOCTESTER™ [Battery Tester Demo Movie](#).

SOC TESTER BATTERY ANALYZERS



SOC testers are fast and accurate field test instruments used to determine the state-of-charge (battery capacity) of sealed lead-acid batteries housed in equipment or stored as inventory. These patented instruments have been modified with the latest technology to accommodate the newer, more sophisticated batteries entering the market.

While the SOC testers are not the first battery testers on the market, they are the only ones using an exclusive testing method that allows the operator to exercise and explore the battery's internal profile - in less than 43 seconds - measuring the state-of-charge (SOC) and full rated capacity of the battery. Because of this short, accurate testing period, SOC battery testers will assist an organization in reducing costs, thus increasing profit while providing ultimate reliability and safety for employees, customers and consumers alike. Companies often overlook revenue lost due to a misunderstanding in the importance of battery maintenance. **98% of all ups systems failures are the result of faulty batteries and operator error.** Reductions in diagnostic test times, simplified operation, better inventory management and finding field faults with equipment already in service are just some of the ways SOC testers capture these lost revenues, thus ensuring a short pay-back period on the cost of the instrument.



The expanded use of sealed lead-acid batteries in equipment such as fire/security alarms, emergency lighting and integrated security systems has given rise to the need for more accurate and faster testing methods in order to meet the regulations set up by federal, state and local government agencies regarding duration of power, storage, and transportation, such as the NFPA and other regulatory commissions. SOC testers are designed to assist users in meeting these regulations, without the burden of increased maintenance costs or service call times.

A battery's deterioration may be altered by many factors, but the most common causes of diminished stored energy capacity is self discharge and improper battery charging methods. Typically, self discharge is a phenomenon where the rate increases with temperature. Even a battery on float charge for long periods of time often deteriorates below its ability to work at full capacity. It is essential, therefore, to periodically test batteries to determine their SOC, thus assuring required performance characteristics are intact.

Newer type batteries require more sophisticated re-charging technology, which unless clearly understood during the product development process can result in poor operational performance of the equipment being powered. This is significantly evident in the emergency and security equipment entering the market today. Improper re-charging contributes to battery failure, but misunderstanding of the handling of batteries contributes equally in battery failure rates. Even the best battery made will not work properly if it is not treated correctly.

SOC testers assure the user that the battery has been tested to provide sufficient energy in emergency conditions. These portable battery testers are ideal for all applications including field diagnostic, regulatory compliance testing, maintenance or installation and stored battery inventory management. The SOC testers are perfectly suited for both on-site and laboratory needs and are available in their own ruggedized carrying case with the ability to test in excess of 450 batteries per internal battery charge. The SOC140 will test 6 and 12 volt 3-140 ampere hour batteries using a 43 second test cycle furnishing an evaluation of the battery's condition, while the SOC 255 will test up to 255 AHRs at 6 and 12 volts. Custom voltage and AHR settings may also be available upon request. Contact Battery tester support via email with your questions, or call 1.800.978.8058 and get a solution right now.



We have been absolutely thrilled with the response from SOC customers, now you can hear what we hear->

Hear What We Hear About The SOC -> [Battery Tester](#)



Get a quote right now by calling 1.800.978.8058 or [request a quote](#) right now online.

Have a question? Call 1.800.978.8058 right now, We're here to help you.

