

Battery Management Solutions



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How to Order



- Online at www.pulsetech.net
- Phone us at 800-580-7554 (Toll free in US & Canada) or 817-329-6099 (Local & International)
- Email us at ppc@pulsetech.net
- Fax POs to 817-329-5914



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The Proven Solution in Recovering Batteries



Battery Sulfation

Battery sulfation is a wasting disease that kills 80% of batteries worldwide. PulseTech's patented Pulse Technology cures the sulfation problem. It is the ultimate solution for removing sulfate crystals from lead-acid battery plates.

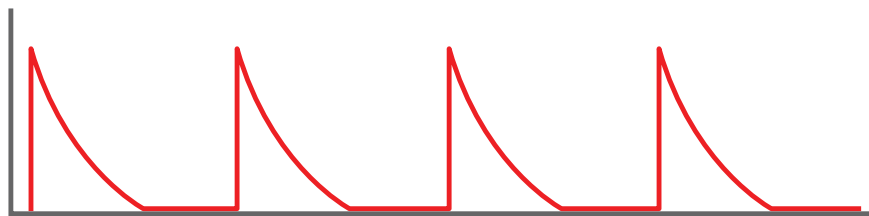
There is enough reactive material in the battery to keep it working for many years. However, over time sulfates build up until battery efficiency is reduced, preventing the battery from accepting and releasing energy, dramatically shortening the battery life until it dies. Pulse Technology removes and prevents the sulfate crystals, allowing room for the energy exchange to continue.

Extend the Life of Your Battery Up To Five Times

Through years of product development and independent scientific evaluation, it has been proven that if used routinely, Pulse Technology can extend battery life cycles up to five times. This reduces overall costs and environmental waste. Pulse Technology uniquely positions PulseTech's line-up of battery maintenance products and no other known battery charging/maintenance system offers these specific restorative maintenance characteristics.

How it Works

Pulse Technology is delivered to the battery through a circuit which is independent of the charging circuit. This patented, high-frequency pulse waveform is of a specific amplitude and frequency that is precisely controlled by microprocessors. It rises rapidly in less than one microsecond to its maximum amplitude and gradually returns to zero. There is no abrupt stop and no battery drain. This waveform occurs 25,000 times a second and has been PROVEN through university and military studies to remove sulfation from the battery plates and return the lead sulfate back to the electrolyte solution.



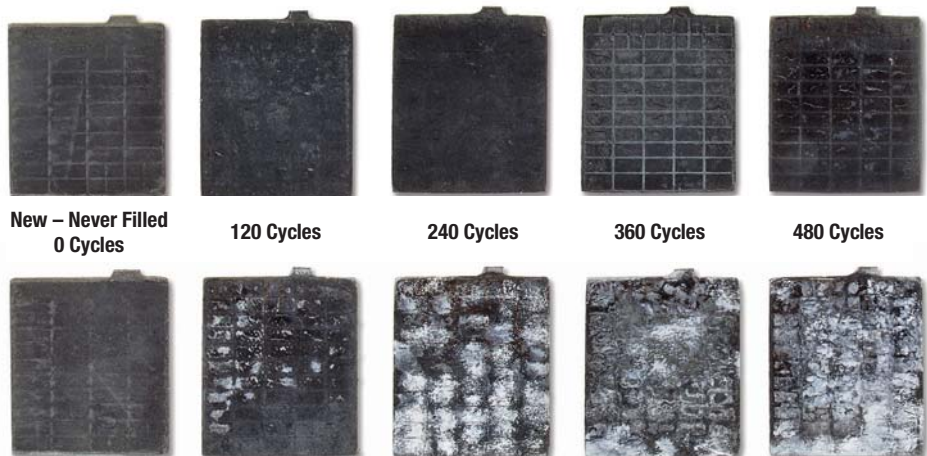
Pulse Technology Waveform

Visual Proof that Pulse Technology Works

The photos opposite are from an independent study comparing Pulse Technology to conventional battery charging. The photos show actual battery plates after various charge and discharge cycles, which reveal the benefits of charging with Pulse Technology versus charging with a conventional charger. The top row shows plates from actual batteries charged using PulseTech's patented Pulse Technology. The bottom row shows plates from batteries charged with a competitor's conventional charger. Note the development of lead-sulfate on the conventionally charged plates in the bottom row.

Even after hundreds of cycles, the batteries charged using Pulse Technology have no sulfate accumulation, ensuring the batteries will still perform at maximum peak capacity.

12-Volt Lead-Acid Batteries Charged with PulseTech Charger



New – Never Filled
0 Cycles

120 Cycles

240 Cycles

360 Cycles

480 Cycles

12-Volt Lead-Acid Batteries Charged with Typical Charger

SC-12, SC-6 and SC-2

Xtreme 12-, 6- and 2-Station 12V Battery Recovery Chargers



12V

- Recover batteries previously thought dead
- Use on all 12V AGM, VRLA, gel and flooded cell batteries
- Extend battery life by up to five times

The SC-12, SC-6 and SC-2 are 12-Volt, 6 amp per channel recovery charging units that use universal electrical input and can operate anywhere in the world. These units recover heavily discharged and sulfated 12-Volt batteries previously thought dead.

These recovery chargers can be connected to any type or size of 12-Volt lead acid battery including VRLA, AGM, gel and flooded cell. Each of the multiple charging channels operates in isolation from the others, allowing any combination or type of 12-Volt battery to be charged, saving both time and money.

Each independent charging channel profiles the condition of an individual battery and then automatically cycles through a recovery charge process that applies the correct charge (variable up to 6A) and our optimized high frequency, patented Pulse Technology waveform to each battery. Pulse Technology both prevents and removes sulfate deposits on the battery plates, increasing the battery's ability to accept, retain and release energy, enabling batteries to last up to five times longer.

These recovery chargers are safe plus easy to use and understand. They are reverse polarity protected with spark free operation. To use, simply hook up the batteries, flip the switch and walk away. There are no additional switches or dials to set and no possibility of ever over-charging the batteries. This gives peace of mind and minimizes time spent monitoring batteries. Five LED indicators show the status of each battery: battery disconnected, bad battery, recovery charge, pulse charge and charge complete.

SC-12 Xtreme 12-Station HD Recovery Charger

The SC-12 is a 12-station charging unit that can recover and charge as many as twelve 12V batteries at a time. It's housed in a rugged HPX plastic cabinet with wheels for maximum portability. One year limited warranty.

746X810 SC-12 Xtreme 12-Station HD Recovery Charger \$3500.00



NEW!

12V



12V



NEW!



SC-2 Xtreme 2-Station HD Recovery Charger

The SC-2 recovers, charges and desulfates as many as two 12-Volt lead-acid batteries. This compact recovery charger gives smaller commercial enterprises the ability to recover their own batteries instead of replacing them. One-year limited warranty.

746X814 SC-2 Xtreme 2-Station HD Recovery Charger \$895.00

Specifications	
Input Voltage: 110-240 VAC	Dimensions: 14.5" x 11.75" x 6.25" (SC-2)
Min. Voltage for Startup: 4 Volts	Weight: 57 lbs. (SC-12), 35 lbs. (SC-6), 10 lbs. (SC-2)
Output Current: 6 Amps per channel	Enclosure: Black HPX Plastic
Output Voltage, Bulk Charge: 14.8 Volts	Battery Cable Length: 96" (14 AWG from box to battery clamps)
Dimensions: 24.6" x 19.7" x 8.6" (SC-12)	
Dimensions: 20.5" x 17.2" x 9.1" (SC-6)	

SC-6 Xtreme 6-Station HD Recovery Charger

The SC-6 is a 6-station charging unit that can recover and charge as many as six 12V batteries at a time. It's housed in a compact and portable 20.5" x 17.2" x 9.1" sturdy HPX plastic case, allowing it to go wherever the batteries are stored. One year limited warranty.

746X816 SC-6 Xtreme 6-Station HD Recovery Charger \$1975.00

12-Station Bench Top 12V Battery Recovery Charger

NEW!

- Recover and charge up to twelve 12V batteries
- Use on all 12V AGM, VRLA, gel and flooded cell batteries
- Extend battery life by up to five times
- Evaluate and charge each battery individually

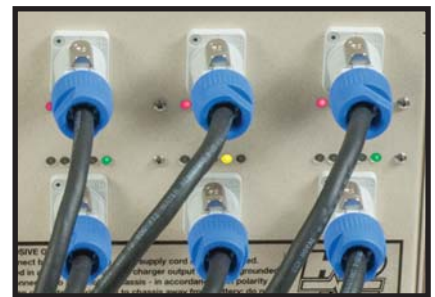
The 12-Station Bench Top Battery Recovery Charger is a 6 amp per channel, 12-Volt charging unit that uses universal electrical input. Any type of 12-Volt lead-acid battery can be recovered and charged, including flooded cell, gel, VRLA and AGM, regardless of battery brand or capacity. Each of the 12 charge stations operate in isolation from the others. This allows any type and size of 12-Volt lead-acid battery to be recovered and charged on an individual basis regardless of the type of the other batteries connected.

As the name suggests, this versatile battery charger is compact in size, weighing only 46 pounds.

Smart technology allows one-switch operation making this unit easy to un-



derstand and use. Simply connect the 8' 14-gauge flexible battery leads with clips and walk away. The Bench Top Recovery Charger senses the condition of each individual battery and provides the appropriate charge without the risk of overheating or overcharging no matter how long the unit is connected.



During the recovery charge cycle our optimized high frequency, patented Pulse Technology waveform is applied to each battery to remove and prevent the build-up of damaging lead sulfate deposits on the battery plates. This allows each battery to accept, store and release maximum power when needed. This process also extends battery life up to five times. After the batteries are fully charged the recovery charger moves to a float charge so the batteries stay in peak condition indefinitely.

Each of the 12 charge stations has five LED indicator lights which show the status of the battery being charged. These indicators instantly show whether the battery is disconnected, the battery is bad, when a recover or pulse charge is in process and when the charge is complete. One year limited warranty.

Specifications

Input Electrical:		Mechanical/Physical Characteristics:	
Input Voltage	100-250 V ac	Enclosure Dim.	11.65" x 15" x 16.7"
Input Current	15 - 7.5 Amps	Enclosure Type	Sand Steel Enclosure
Output Electrical:		Leads	8' - 14 AWG
Maximum Charging	14.9V at 6A/channel	Weight	46.5 lbs.

LED INDICATORS

- 1 Red Battery Disconn.
- 2 Red Bad Battery
- 1 Yellow Recovery Charge
- 2 Yellow Pulse Charge
- Green Charge Complete

746X850 HD-BT12 12-Station Bench Top 12V Pallet Charger \$3947.50

XCR

Xtreme 16A 12V Battery Recovery Charger and Desulfator

12V

- Recovers heavily discharged and sulfated batteries
- Works on all 12V AGM, VRLA, gel and flooded cell batteries
- Ideal for larger 12V batteries including group 31, 4-D and 8-D
- Removes and prevents sulfate buildup on the battery plates
- Don't throw dead batteries away, recover them

The XCR is a 16-Amp shop recovery charger built to recover any type of 12-Volt lead-acid battery (VRLA, AGM, gel and flooded cell) anywhere in the world. It is ideal for larger 12-Volt batteries including those in groups 31, 4-D and 8-D. The XCR is housed in a self-enclosed, convenient, water-resistant heavy-duty case for easy storage and portability allowing batteries to be charged both in and out of the vehicle or piece of equipment.

When servicing vehicles or equipment with 12-Volt batteries, this state-of-the-art Recovery Charger allows heavily discharged and sulfated batteries previously thought dead or useless to be recovered. With its higher output capacity the XCR is used extensively in businesses using larger batteries that need to be recovered and quickly put back into service. Its unique design allows the XCR to be operated both in the shop on batteries that have been removed from equipment and on batteries still installed in equipment, reducing man hours.

The XCR applies PulseTech's optimized high frequency, patented Pulse Technology waveform to each battery. Pulse Technology both prevents and removes sulfation buildup which occurs as lead sulfates form on the battery plates during normal charge/discharge cycles. These deposits can reduce the battery's ability to accept and keep a charge. Pulse Technology breaks down the deposits, improving battery performance and extending battery life.

Prior to charging, the red TEST LED will light while the charger tests the battery and separate red LEDs will indicate whether the battery is bad and not recoverable.

During the bulk and saturation charging process, the microprocessor controlled circuitry provides all the charge the battery will accept regardless of the Amp-hour capacity or rated cold cranking Amps. The XCR will charge to the battery's optimum level by constantly monitoring the battery and adjusting the charging current accordingly. LEDs show the battery's state of charge at 25%, 50%, 75% and 100%. When the charge is complete as indicated by the 100% green LED, the XCR provides a float charge to maintain the battery at 100%. During the pulse mode, green pulsing LEDs will flash in sequence.



The XCR-20 is housed in a convenient, portable, heavy-duty case.

LEDs allow users to understand what is happening to the battery during the recovery and charging process with minimal operator training. The XCR also features over temperature protection and output current limit protection so that during the battery charging process monitoring isn't necessary. One-year limited warranty.

100X500 XCR Xtreme Recovery Charger and Desulfator \$739.95



The XCR is also used in the recovery portion of PulseTech's Battery Management Program. See pages 8 and 9 for more information.

Specifications

Input Voltage: 110-240 VAC
Min. Voltage for Startup: 4 Volts
Output Current: 16 A DC
Output Voltage, Bulk Charge: 14.9 Volts
Dimensions: 14.2" x 11.4" x 6.5"
Enclosure: Black HPX Plastic
Battery Cable Length: 6'

LED INDICATORS

Status	Battery
● On	● 100%
● Pulsing	● 75%
● Pulsing	● 50%
● Pulsing	● 25%
● Charging	● Test
	● No Connection
	● Bad Battery

777P-PT 6V/12V Digital Tester/Printer



Specifications

Operation Range: 40 to 2000 CCA (SAE)
Voltmeter Range: 1.5V to 30V
Dimensions: 9.9" x 5.1" x 2.5"
Weight: 2.15 lbs

The 777P-PT safely and easily tests both 6-Volt and 12-Volt lead-acid batteries (VRLA, AGM and flooded cell) as well as 12-Volt and 24-Volt charging systems to include cranking voltage, idle output voltage, diode ripple test and output under load. It displays both battery voltage and cranking amp capacity and has a built-in printer, making it an essential tool for diagnosing battery condition and record keeping. Using the 777-PT gives technicians a clear course of action to head off or resolve battery and charging system issues before they cause a failure.

Extended leads make testing easy from anyplace under the hood and a backlit display allows testing in low light. The 777P-PT has ten different language options and can use multiple standards: SAE (CCA), DIN, EN, IEC, JIS.

741X777 777P-PT Digital Battery Tester/Printer \$450.00

390PT 6V and 12V Battery Tester



Specifications

Operation Range: 40 to 2000 CCA (SAE)
Voltmeter Range: 1.5V to 30V
Dimensions: 7.8" x 4.5" x 2.1"
Weight: 1.4 lbs

The 390PT allows users to quickly, safely and accurately test 6-Volt and 12-Volt lead-acid batteries (VRLA, AGM and flooded cell) in or out of the vehicle as well as 12-Volt and 24-Volt charging systems for proper operation. Combined single load, dynamic resistance technology and algorithms display battery voltage and cranking amp in easy to understand results in seconds. A handy "QUICK START" instruction guide is printed on the back of the tester. Use the 390PT to find battery and system issues before they become a problem.

741X390 390PT 6V and 12V Battery Tester \$255.00

490PT+ 12V Digital Tester & Printer



The 490PT+ Digital Battery Analyzer is ideal for use in both maintenance shops and in the field. It allows users to quickly and accurately analyze 12-Volt lead-acid batteries and 12-Volt electrical systems.

From the menu key pad select system or battery test and the battery type from among VRLA, AGM and flooded cell. The testing algorithms' results appear on the adjustable brightness LCD display in a matter of seconds. Test results include battery voltage, cold cranking amps (between 40-2000 CCA), condition of the battery (GOOD & PASS, GOOD & CHARGE, CHARGE & RETEST), state of health and state of charge. Built-in printer allows battery inventory records to be maintained.

Specifications

Operation Range: 40 to 2000 CCA (SAE)
Voltmeter Range: 1.5V to 30V
Dimensions: 7.7" x 4.5" x 2.0"
Weight: 1.7 lbs

741X491 490PT+ Digital Battery Tester/Printer \$535.00

Battery Tester Selection Guide

	777P-PT	490PT+	390PT	XC-822-TEST
Test 6V Batteries	✓		✓	
Test 12V Batteries	✓	✓	✓	✓
Test 12V Charging Systems	✓	✓	✓	
Test 24V Charging Systems	✓		✓	
Built-in Printer	✓	✓		
Molded Carrying Case	✓	✓		

XC-822-TEST Battery & Alternator Tester

The pocket-sized Xtreme Charge XC-822-TEST Quick Battery and Alternator Voltage Tester instantly shows an indication of a 12-Volt lead-acid battery's state of charge at 100%, 75%, 50% or 25%. It also provides a quick GOOD or BAD alternator test result. Its dual design allows users to insert the test probes directly into the standard quick disconnect connection without touching the battery posts or to remove the probes and touch the battery terminals directly.



Specifications

Dimensions: 4.75" x 1" x 0.6"
Weight: 1.5 oz.



100X822 XC-822-TEST Battery and Alternator Tester \$12.95

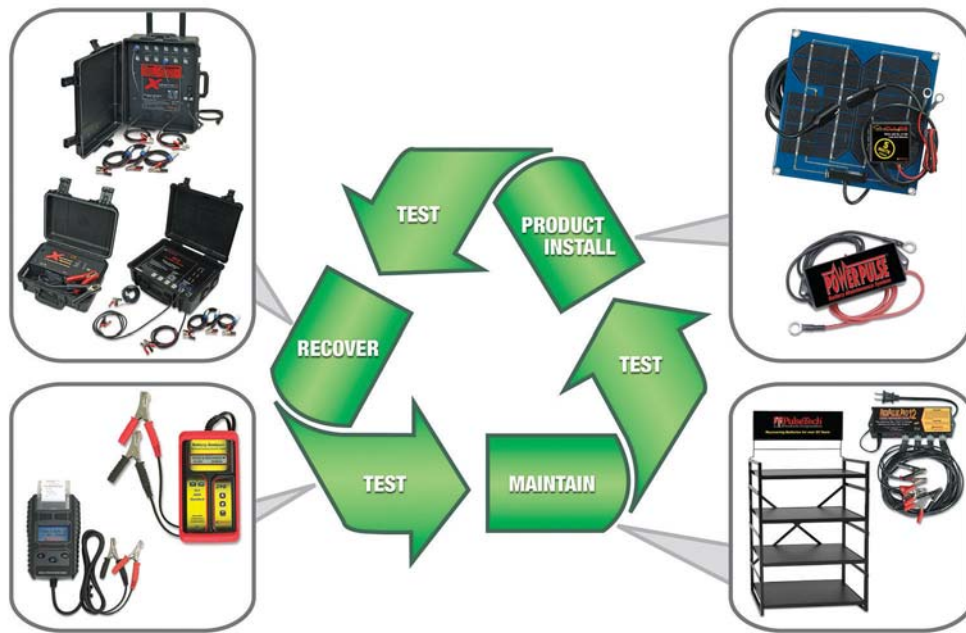
Battery Management Program (BMP)

Batteries That Are Recovered, Not Just Charged

- Extends battery life by up to five times
- Extends alternator and starter life
- Eliminates jumpstarts
- Reduces the number of maintenance man hours
- Recovers 70% of spent batteries
- Reduces the number of new batteries purchased
- Reduces vehicle downtime
- Increases battery efficiency and power

PulseTech's Battery Management Program helps companies achieve immediate cost savings and supports corporate wide sustainability goals. Batteries perform better and have an increased ability to accept, store and release energy. This allows them to maintain their state of charge much lon-

ger and accept recharge more readily, dramatically extending battery life by as much as five times. Up to 70% of dead batteries are recovered reducing the number of new batteries needing to be purchased. Typically, this Battery Management Program pays for itself within 3 months.



It's as easy as 1, 2, 3!

Step 1: **TEST** and **RECOVER**

Test with a **777P-PT** or **390PT Tester**. Understand the state of your batteries with a detailed snapshot of their condition before you recover them. Then recover with an **SC-12**, **SC-6**, **SC-2** or **XCR Recovery Charger**. 70% of 'dead' batteries can be returned to better than new condition. Recovering only 20 batteries pays for a complete package of BMP equipment.

Step 2: **TEST** and **MAINTAIN**



Test with a **777P-PT** or **390PT Tester**. Ensure batteries are ready to go back into stock. Then maintain in shop with a **PRO-12-RP Maintenance System**. Maintain new and restored batteries in peak condition until they are needed.

Step 3: **TEST** and **INSTALL**

Test with a **777P-PT** or **390PT Tester**. Ensure batteries are in peak condition before installing. Install on vehicles with an **SP-5 Solar Panel** and/or **PowerPulse Maintenance System**. Prevent problems and extend battery life up to five times by installing desulfators on vehicles during routine maintenance.



Don't replace batteries, recover them.

Complete BMP Packages Consist of →	TEST: 777P-PT or 390PT	In Shop
	RECOVER: SC-12 and/or SC-6 and/or SC2 and/or XCR	
	MAINTAIN IN SHOP: Battery Rack and PRO-12	
	INSTALL ON VEHICLES: SP5 or PowerPulse	

TEST	777-PT 6V/12V/Digital Tester/Printer (Page 7)	 <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">6V</div> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">12V</div> </div>	390-PT 6V/12V/ Battery Tester (Page 7)	 <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">6V</div> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">12V</div> </div>
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RECOVER	SC-12 12-Station (Page 4)	 <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; margin-top: 5px;">12V</div>	SC-6 6-Station (Page 4)	 <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; margin-top: 5px;">12V</div>	SC-2 2-Station (Page 4)	 <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; margin-top: 5px;">12V</div>	XCR 16A 12V Battery Tester Recovery Charger/Desulfator (Page 6)	 <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; margin-top: 5px;">12V</div>
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MAINTAIN in shop	PRO-12-RP 12-Station Battery Maintenance System (Page 10)	 <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; margin-top: 5px;">12V</div>	B-RACK-1 Battery Rack (Page 10)	
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INSTALL on vehicles	SP-5 5-Watt 12V Solar Battery Charger Maintainer (Page 12)	 <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; margin-top: 5px;">12V</div>	PowerPulse Maintenance Systems for 12/24/36/48V batteries (Page 11)	 <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">12V</div> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">24V</div> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">36V</div> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">48V</div> </div>
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PRO-12-RP

12-Station Battery Maintenance System

- Maintains up to 12 batteries in factory-fresh condition
- Works with all 12V batteries (AGM, VRLA, gel and flooded cell)
- Pulse Technology reduces and prevents sulfation buildup
- Maintains any combination of battery types/brands

The 12-Station Battery Maintenance System preserves as many as twelve new and restored 12-Volt batteries at peak charge levels by keeping the plates in like-new condition during storage. A continuous cycle of low amp charging rotates through the twelve channels offsetting the normal discharge rate. At the same time, our optimized high frequency, patented Pulse Technology waveform reduces the size and number of lead sulfate deposits so that your stored batteries will stay 'factory fresh' while waiting to be sold or installed.

All batteries, even new ones, are subject to a naturally occurring build-up of lead sulfate deposits that reduce the battery's ability to accept, store and release energy. Batteries frequently spend months in transit and warehouses before being used. By then, they may have discharged as much as 50% unless maintained during storage.

The PRO-12-RP is easy to use. Simply connect from one to twelve 12-Volt batteries from a single AC outlet safely with no sparking between the leads. Each of the PRO-12-RPs charging stations operate in isolation from each other, allowing any combination of battery types and brands to be charged including VRLA, AGM, gel and flooded cell. LEDs located on the top of the unit show the condition of each battery. Two-year limited warranty.

LED Indicators

Located on the top of the unit, the LEDs show the condition of each battery.



- RED** - Battery is low
- YELLOW** - Battery is marginal
- GREEN** - Battery is ready for issue
- Audible Alarm indicates improper connection**

Note: LEDs cycle to show the status of each battery at a time. All LEDs will not be on at the same time, as shown.

B-RACK-1 Battery Rack

The B-RACK-1 battery rack stores batteries while connected to the PRO-12-RP. It is perfect for storing up to 36 batteries safely while they are maintained with the PRO-12-RP 12-Station Battery Maintenance System. The PRO-12-RP can be attached directly onto the battery rack with screws or adhesive tape (not included) for ease of use.

The battery rack is very strong with an 1800 lb. capacity rating. It's constructed of durable tubular black, powder coated steel and consists of four shelves constructed of black, tempered hardboard. The size is 48"H x 34.75"W x 22.5"D with a 26.25" header on top and PulseTech Products signage.

Both the PRO-12-RP and Battery Rack are used in the recovery portion of PulseTech's Battery Management Program. See pages 8 and 9 for more information.



- 746X915 PRO-12 -RP 12 Station Battery Maintenance System \$179.95**
- 735X243 PRO-12 -CLIPS 3-Cable Lead Replacement Set \$24.95**

Specifications

Input Voltage: 110-240 VAC, 50-60 Hz	Reverse Polarity Protected: Yes
No. of Outputs: 12	Box-to-Clamps Wire Length: 75"
Max Charge DC Voltage: 14.7 V	Dimensions: 7.25"L x 2.35"W x 1"H
Max Charging DC Current: 750 mA	Weight: 2 lbs.



- 715X100 B-RACK-1 Battery Rack \$350.00**

Maintenance Systems for 12/24/36/48 Volt Batteries

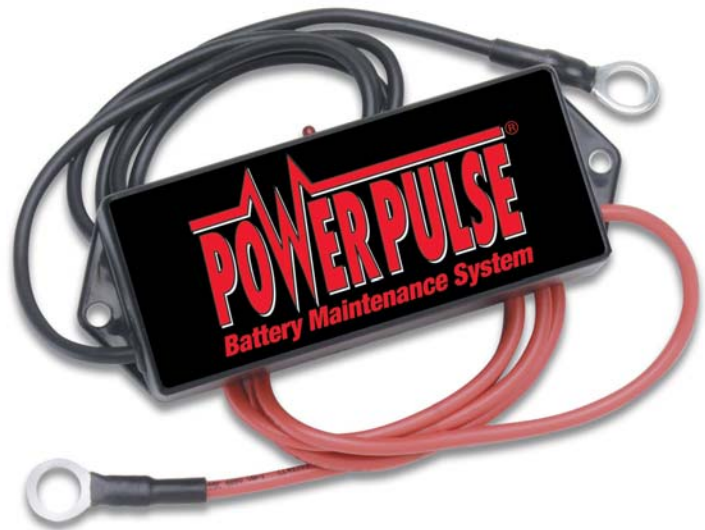
- Ensures peak battery performance
- Extends battery life up to five times
- Pulse Technology reduces and prevents sulfation buildup
- Maximizes performance of frequently charged batteries

PowerPulse, a performance enhancing device, ensures maximum battery performance in frequently used vehicles or pieces of equipment. It does this by generating an intermittent, optimized high frequency pulse waveform that reduces existing sulfate deposits and keeps them from building up again.

The PowerPulse is not a charger. Charging alone doesn't eliminate the main cause of battery failure — energy robbing lead sulfate deposits on battery plates. The Pulse Technology within the PowerPulse reduces and prevents these naturally occurring sulfate deposits. Pulse Technology enables batteries to perform in peak condition and extends battery life by up to five times.

Use this small, weather proof product to supplement your existing charging system. It can be powered in two different ways. When the battery is being charged either by an onboard charger or a separate charging system, it will use the charging current as a power source. The rest of the time PowerPulse uses a small portion of the battery's own energy to power itself. It works 24-hours a day without an electrical outlet. Accordingly, it should only be used on vehicles and equipment that are regularly used and frequently charged.

The PowerPulse Maintenance System was selected as a Top 50 Product by Automotive Engineering magazine. It's available in 12-, 24-, 36-, and 48-Volt models that can be used on all lead-acid batteries including VRLA, AGM, gel and flooded cell batteries. The PowerPulse works with single batteries, batteries in parallel and batteries in series. Five-year limited warranty.

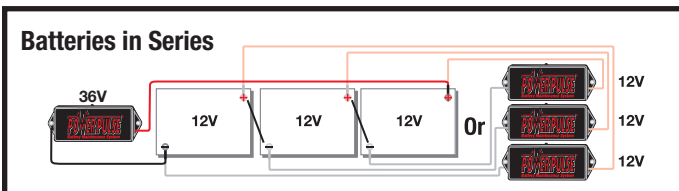


- 735X012 PP-12-L PowerPulse 12V Battery Maint. System \$45.00**
- 735X024 PP-24-L PowerPulse 24V Battery Maint. System \$52.00**
- 735X036 PP-36-L PowerPulse 36V Battery Maint. System \$60.00**
- 735X048 PP-48-L PowerPulse 48V Battery Maint. System \$73.00**

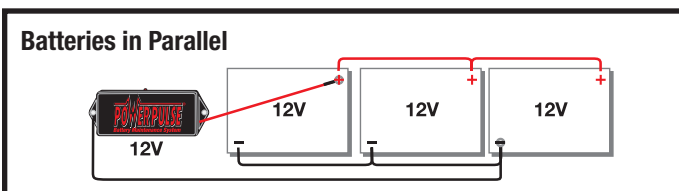
PowerPulse Configuration			
Model No.	Single Battery	Batteries in Parallel	Batteries in Series
PP-12-L	12-Volt	Up to Three 12-Volt	Two 6-Volt
PP-24-L	24-Volt	Each 24V Battery Bank	Two 12V or Four 6V
PP-36-L	36-Volt	Each 36V Battery Bank	Three 12V or Six 6V
PP-48-L	48-Volt	Each 48V Battery Bank	Four 12V or Eight 6V

The PowerPulse is used in the maintenance section of PulseTech's Battery Management Program. See pages 8 and 9.

Specifications (All models)	
Dimensions: 4" x 1.75" x 1"	Wire Length: 3'
Shipping Weight: 0.5 lbs.	



One PP-36-L can be used to maintain three 12V batteries in series or a PP-12-L can be connected to each 12V battery.



One PP-12-L can be used to maintain three 12V batteries in parallel or a PP-12-L can be connected to each 12V battery.



Solar Technology

SolarPulse® Family of Products

- Panels are 30% smaller per watt and twice as efficient
- Eliminates jumpstarts, battery charging and replacement
- Patented Pulse Technology removes and prevents sulfates
- Extends battery life by up to five times
- Works on all 12V lead-acid batteries
- Virtually indestructible

Our solar panels prevent the normal loss of battery power on vehicles stored outside and apply our optimized high frequency, patented Pulse Technology waveform to each battery. Pulse Technology prevents and removes sulfate deposits on the battery plates, increasing the battery's ability to accept, retain and release energy, enabling batteries to last up to five times longer.

With SolarPulse, the needed power is supplied in a sturdier, smaller sized panel allowing for the most installation options. SolarPulse's higher efficiency,

higher quality crystalline silicon cells pack more power per square inch than standard amorphous "thin film" solar cells and they have a longer life.

Instead of a breakable glass coating, SolarPulse's solar panels are protected with a clear, polyurethane plastic coating mounted on a laminated aluminum substrate to make them virtually indestructible and impervious to weather, aging and damage from harsh environments. Our solar panels work on all 12V lead-acid batteries including VRLA, AGM, gel and flooded cell.



12V

ERV 6-Watt 12-Volt Solar Battery Charger Maintainer

The 6-Watt ERV 12-Volt Solar Battery Maintainer provides a full 6-Watts of power in a longer, narrow profile. The 16" x 4.93" x 0.125" solar panel is designed to be installed easily on the light bar of emergency and law enforcement vehicles. Use it to offset the higher parasitic load these types of vehicles produce, replacing the power lost from electrical accessories that occurs even when the ignition is switched off. Five-year limited warranty. Supplied with unterminated wires for easy installation without connector removal.

735X613 ERV 12V Solar Charger Maintainer \$179.95

ERV Specifications

Output Current: 400 mA
Input Current: Solar Powered
Solar Panel Dimensions: 16" x 4.93" x 1.25"
Circuit Box Dimensions: 3.25" x 2.25" x 1.5"
Box to Lug Wire Length: 3'
Box to Panel Wire Length: 17'

SP-5 5-Watt 12-Volt Solar Battery Charger Maintainer

The SP-5 5-Watt 12-Volt Solar Battery Charger Maintainer provides 5-Watts of power in a compact, durable 8.75" x 8.75" x 0.125" solar panel. Its size and eyelet holes allow for multiple installation options. The SP-5 replaces parasitic power loss and extends battery life. Five-year limited warranty. Unit is used in the PulseTech's Battery Management Program. See pages 8 & 9 for more information.

735X305 SP-5 5-Watt 12V Solar Battery Charger Maintainer \$159.95

SP-5 Specifications

Output Current: 350 mA
Input Current: Solar Powered
Solar Panel Dimensions: 16" x 4.93" x 1.25"
Circuit Box Dimensions: 3.25" x 2.25" x 1.5"
Box to Lug Wire Length: 3'
Box to Panel Wire Length: 14'

12V



12V

SP-2 2-Watt 12V Solar Battery Charger Maintainer

The SP-2 2-Watt 12-Volt Solar Battery Charger Maintainer provides a full 2-Watts of power in a small, durable 4.75" x 8.56" x 0.125" solar panel. Like the SP-5, the SP-2 maintains 12-Volt batteries in vehicles and equipment stored outside and reverses the negative effects of damaging sulfate crystals on the battery plates. Eyelet holes for easy installation. Five-year limited warranty.

735X302 SP-2 2-Watt 12V Solar Battery Charger Maintainer \$89.95

SP-2 Specifications

Output Current: 250 mA
Input Current: Solar Powered
Solar Panel Dimensions: 4.75" x 8.56" x .125"
Circuit Box Dimensions: 3.25" x 2.25" x 1.5"
Box to Lug Wire Length: 3'
Box to Panel Wire Length: 17'

Solar Technology

Maximum Battery Performance on Vehicles Kept Outdoors

SP-25 12-Volt Solar Charger Maintainer, 25 Watt

The SP-25 12-Volt Solar Charger Maintainer provides a full 25-Watts of power in a compact, durable 17.75" x 21.25" x 0.125" solar panel. Rated at 1.6 Amps, the SP-25 charges, maintains and desulfates individual 12V batteries as well as two to four 12V batteries connected in parallel, making it ideal for heavy duty applications. It's engineered to replace the power loss from electrical accessories that occurs even when the ignition is turned off. Pulse Technology reverses the damaging effects of sulfate crystals extending battery life by up to five times. LED lights indicate when the SP-25 is on, in charge or pulse mode, has reverse polarity or no connection - making it easy to understand and use. Five-year limited warranty.

735X325 SP-25 12V Solar Charger Maintainer \$695.00

SP-25 Specifications

Input Electrical: Solar Powered
Output Current: 1.6 Amps
Output Voltage, Max: 14.8 Volts
Solar Panel Dimensions: 17.75" x 21.25" x .125"
Circuit Box Dimensions: 5.25" x 2.5" x 1.3"
Box to Lug Wire Length: 32"
Box to Panel Wire Length: 25'



SP-24-6 24-Volt Battery Solar Charger Maintainer

The SP-24-6 charges, maintains and desulfates 24-Volt lead-acid batteries and charging systems used daily or left in long-term outdoor storage, allowing batteries to start on demand.

This sturdy 6.3-Watt, 9" x 11" x 0.125" solar panel provides power to charge the battery system and supplies energy to the optimized Pulse Technology circuit to reverse the buildup of lead sulfate crystals on the battery plates in a non-harmful way. This allows the battery to accept, store and release maximum power all the time.

LED lights indicate when the battery is fully charged, being charged, being pulsed, not connected or the unit isn't operating due to insufficient solar output. One-year limited warranty.

735X406 SP-24-6 24V Battery Solar Charger Maintainer \$325.00

SP-24-6 Specifications

Max Charging DC Voltage: 30 V dc
Dimensions: 9" x 11" x .125"
Panel to Connector Cable Length: 1'
Lug Cable Length: 2'
Clamp Cable Length: 2'



24V

24VPSC 24-Volt Solar Battery Charger Desulfator

The 24VPSC is a 6.3-Watt Solar Battery Charger that charges, desulfates and maintains 24-Volt lead-acid battery systems in series parallel on vehicles used regularly or stored for extended periods outside.

This solar panel is designed for harsh conditions and measures only 9" x 11" x 0.125". It comes with 25 feet of wiring allowing for multiple installation options. Safe, reliable and weatherproof, this unit eliminates dead batteries by keeping them in like-new condition all the time. One-Year Limited Warranty.

24VPSC Specifications

Max Charging DC Voltage: 30 V dc
Dimensions: 9" x 11" x .125"
Panel to Box Cable Length: 25'
Lug Cable Length: 4'

735X640 24VPSC 24V Battery Charger Desulfator \$299.00



Xtreme Charge Battery Chargers

Extend Battery Life up to Five Times

- Charges and maintains any 12V lead-acid battery
- No danger of overheating or overcharging

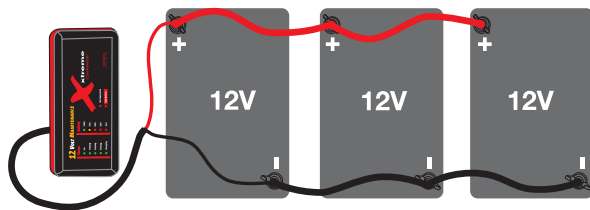
The fuse-protected, spark-proof Xtreme Charge battery maintenance chargers automatically evaluate, charge and desulfate any type of 12-Volt lead-acid battery including VRLA, AGM, gel and flooded cell so you don't have to be a battery expert to use them. Unlike other smart chargers on the market, there's no need to select the battery type or the proper charge rate to avoid the risk of unsafe or improper charging.

There's no guess work because proprietary algorithms combined with micro-processor controlled technology measure the battery's voltage and current to automatically determine and deliver the precise charge rate based on the size and condition of the battery, both initially and continuously throughout



Specifications

Input Voltage: 100-250 V ac	Weight: 1.53 lbs.
Output Voltage, Bulk Charge: 14.8 V dc	Main Battery Cable Length: 6'
Dimensions: 7.9" x 3.5" x 2.2"	Lug/Clamp Cable Length: 2'



XC-PARALLEL Xtreme Charge Parallel 12V Battery Charger

The XC-PARALLEL evaluates, desulfates and charges two or more 12V batteries connected in parallel. Not suitable for a single battery. Five-year warranty.

- 100X013 XC-PARALLEL Xtreme Charge Parallel Charger \$119.95**
- 100X810 XC-BKT Semi-Permanent Full Enclosure Wall Bracket \$34.95**

Specifications

Input Voltage: 100-250 V ac	Weight: 1.53 lbs.
Output Current: 2.5 A dc Max, per output	Power Cord Length: 6'
Dimensions: 7.9" x 3.5" x 2.2"	

- Fully-automatic microprocessor controlled technology
- Patented Pulse Technology removes and prevents sulfates

the five-stage charge process. The status light column shows when the unit power is on, pulsing and charging. The battery light column indicates the percentage of the battery's state of charge - 25%, 50%, 75% or 100%.

They are more than just battery chargers. During the maintenance cycle, PulseTech's patented optimized frequency pulsing constantly works to minimize and reduce naturally occurring battery sulfation - the main cause of battery failures. By reducing the size and number of lead sulfate deposits on the battery plates that negatively affect the battery's ability to accept, store and release energy, the battery will charge deeper, maintain greater reserve capacity and last longer - up to five times longer.

XC100-P Xtreme Charge 12V Battery Charger and Desulfator

The XC100-P can be used either in the shop or while the battery is still installed, reducing man hours required to pull and then reinstall the battery. Easy to use. Five-year limited warranty.

- 100X010 XC100-P Xtreme Charge 12V Battery Charger \$99.95**
- 100X830 XC-LUGS Lugs with Two-Foot Leads \$6.75**
- 100X827 XC-CLIPS Clips with Two-Foot Leads \$6.75**



X2 Xtreme Charge 2-Station Battery Charger and Maintainer

The fuse-protected, spark-proof X2 allows two 12-Volt batteries to be independently conditioned, pulsed, desulfated, charged and maintained from 1 AC outlet with no danger of overcharging. The X2 can also be used on 24-Volt systems composed of 12-Volt batteries connected in series which are used in many larger commercial vehicles. Five-year limited warranty.

- 100X200 X2 Xtreme Charge Two-Station Battery Charger \$199.95**

Specifications

Output Current: 2.5 A dc Max, per station	Weight: 2.73 lbs.
Input Voltage: 100-250 V ac	Main Battery Cable Length: 6'
Dimensions: 7.9" x 6.3" x 2.4"	Lug/Clamp Cable Length: 2'

Quadlink

4-Channel Battery Charger Multiplier

- Turn one maintenance charger into four
- Compatible with any 6V and 12V battery charger
- Charge 6V or 12V batteries in 24V, 26V or 48V series configurations

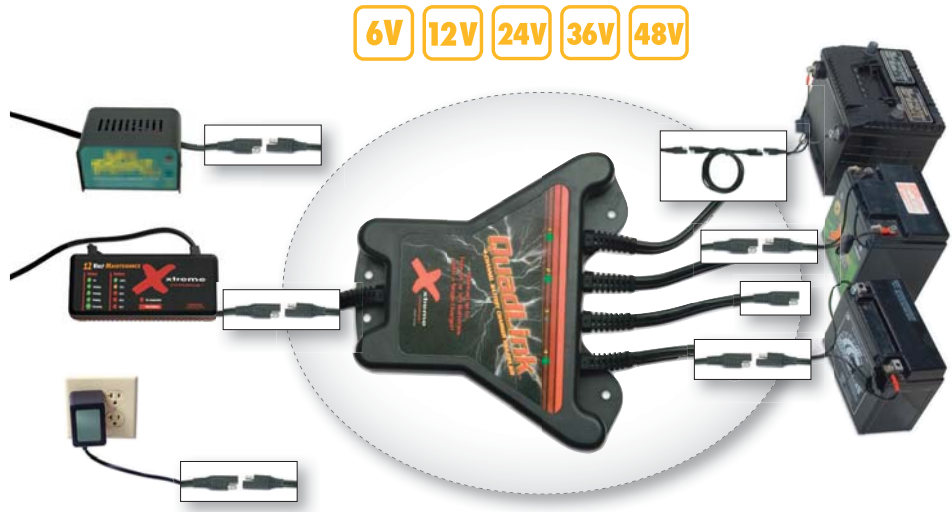
The QuadLink turns any brand of 6V or 12V charger into a four-station series charger. It automatically splits and distributes 10-minute charge segments sequentially from battery to battery. LEDs indicate connection and charging status. Cycle rotation continues indefinitely.

The QuadLink is also able to maintain batteries in 24V, 36V and 48V series connected configurations at a maximum level. Maintaining independent segments allow batteries wired in series to be charged in place without having to remove them from vehicles or equipment, saving time and manpower. Five-year limited warranty.

100X004 QuadLink 4-Channel Charger Multiplier \$99.95

100X825 25' Xtreme Charge Lead Extension \$14.95

100X805 5' Xtreme Charge Lead Extension \$8.00



Specifications

Input Voltage: 4 VDC to 18 VDC

Input Current: 8 Amps Maximum

Output Current: 8 Amps Maximum

Output Voltage, Bulk Charge:

Dependent on Connected Battery Charger

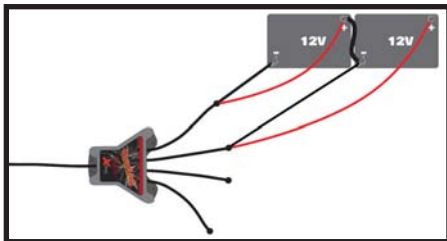
Power Cord Length: 6'

Main Battery Cable Length: 6'

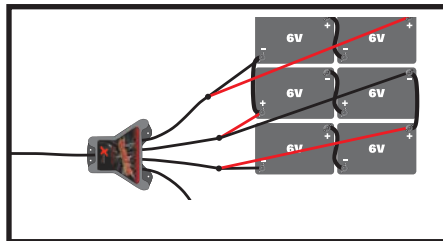
Lug/Clamp Cable Length: 2'

Note: Additional 5' and 25' cable extensions available separately

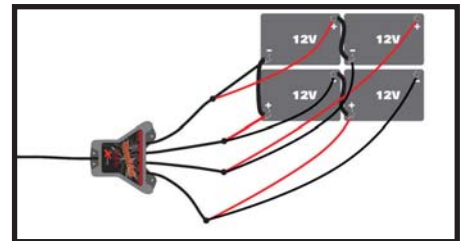
Batteries in Series Connected Configurations



24-Volt Series



36-Volt Series



48-Volt Series

QuadLink Battery Maintenance Kits

NEW!



100X005 4-Station Quadlink Kit \$199.00

12V 24V 36V 48V

Extend the power of the XC100-P and X2 with QuadLink battery maintenance kits. Both chargers extend battery life and performance with patented Pulse Technology which removes naturally occurring sulfation crystals that build up on battery plates. No other chargers on the market feature this technology.



100X206 8-Station Quadlink Kit \$399.95

Battery Shop Recovery Chargers



Battery Maintainers



Battery Maintenance Chargers



Solar Maintenance Chargers



Battery Testers



World Leaders in Battery Maintenance

www.pulsetech.net

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