CONTROL PANEL

START/STOP BUTTON

Press to immediately begin charging your properly connected battery. If the button is not pressed, charging should begin in ten minutes.

LED INDICATORS

POWER (green) LED:

The charger is connected to an AC outlet.

% LEDs

Act as a gauge to indicate the following:

- Charging – The three leftmost LEDs light, indicating the percentage of the battery's charge.
- Maintaining – The rightmost LED will light, indicating the battery is fully charged and is being maintained.
- Boost – The three leftmost LEDs light, indicating the percentage of the battery's charge. Boost is not intended to fully charge the battery.
- Engine Start – The four LEDs light in sequence, indicating the unit is ready for Engine Start.
- Engine Start cool-down – The four LEDs turn off, and the LED will blink.

CLAMPS REVERSED (red) LED flashing: The connections are reversed.

BAD BATTERY (red) LED lit: The charger has detected a problem with the battery. See Troubleshooting for more information.

NOTE: See Operating Instructions for a complete description of the charger modes

RATE SELECTION BUTTON

Use this button to select one of the following:

6<>2A CHARGE/MAINTAIN –

For charging small and large batteries. Not recommended for industrial applications. The charger will automatically adjust the charging current, based on battery size, in order to charge the battery completely, efficiently and safely.

20A BOOST –

For quickly adding energy to a severely discharged or large capacity battery prior to ENGINE START. The unit will automatically switch to 6A<>2A CHARGE after the 20A BOOST operation has completed.

 **100A ENGINE START –**

Provides additional amps for cranking an engine with a weak or run-down battery. Always use in combination with a battery.

 **BATTERY TYPE BUTTON**

Use this button to select the battery type

 – Used in cars, trucks and motorcycles, these batteries have vent caps and are often marked “low maintenance” or “maintenance-free”. This type of battery is designed to deliver quick bursts of energy (such as starting engines) and has a greater plate count. The plates are thinner and have somewhat different material composition. Regular batteries should not be used for deep-cycle applications

 – The Absorbed Glass Mat construction allows the electrolyte to be suspended in close proximity with the plate’s active material. In theory, this enhances both the discharge and recharge efficiency. The AGM batteries are a variant of Sealed VRLA (valve regulated lead-acid) batteries. Popular uses include highperformance engine starting, power sports, deep-cycle, solar and storage batteries.

 – The electrolyte in a GEL cell has a silica additive that causes it to set up or stiffen. The recharge voltages on this type of cell are lower than those for other styles of lead-acid battery. This is probably the most sensitive cell in terms of adverse reactions to overvoltage charging. Gel batteries are best used in VERY DEEP cycle application and may last a bit longer in hot weather applications. If the wrong battery charger is used on a gel cell battery, poor performance and premature failure will result.

OPERATING INSTRUCTIONS

WARNING: A spark near the battery may cause an explosion.

CHARGING A BATTERY N THE VEHICLE

1. Turn off all the vehicle’s accessories.
2. Keep the hood open.
3. Clean the battery terminals.
4. Place the charger on a dry, nonflammable surface.
5. Lay the AC/DC cables away from any fan blades, belts, pulleys and other moving parts.

6. Connect the battery, following the precautions listed in sections 6 and 7.
7. Connect the charger to a live grounded 120V AC outlet.
8. Select the battery type and charge rate.
9. Press the Start/Stop button to begin charging immediately. If the button is not pressed, charging will begin within ten minutes. It will finish automatically.
10. When charging is complete, disconnect the charger from the AC power, remove the clamps from the vehicle's chassis, and then remove the clamp from the battery terminal.

CHARGING A BATTERY OUTSIDE OF THE VEHICLE

1. Place battery in a well-ventilated area.
2. Clean the battery terminals.
3. Connect the battery, following the precautions listed in sections 6 and 7.
4. Connect the charger to a live grounded 120V AC outlet.
5. Select the battery type and charge rate.
6. Press the Start/Stop button to begin charging immediately. If the button is not pressed, charging will begin within ten minutes. It will finish automatically.
7. When charging is complete, disconnect the charger from the AC power, disconnect the negative clamp, and finally the positive clamp.
8. A marine (boat) battery must be removed and charged on shore.

NOTE: This charger is equipped with an auto-start feature. Current will not be supplied to the battery clamps until a battery is properly connected. The clamps will not spark if touched together.

AUTOMATIC CHARGING

When an Automatic Charge is performed, the charger switches to the maintain mode automatically after the battery is charged.

BATTERY CHARGING TIMES

APPLICATION	BATTERY SIZE	CHARGING TIME (Hours) 6A	10A	20A	30A
POWERSPORTS	6Ah ▲ 32Ah	2 ↓ 5	1.5 ↓ 4	.5 ↓ 1.5	.5 ↓ 1
AUTOMOTIVE	300 CCA ▲ 1000 CCA	4 ↓ 10	3 ↓ 7	1.5 ↓ 3.5	1.5 ↓ 3
MARINE	50Ah ▲ 105Ah	5 ↓ 11	3.5 ↓ 8	1.5 ↓ 4	1 ↓ 3

Times are based on a 50% discharged battery and may change, depending on age and condition of battery.

ABORTED CHARGE

If charging cannot be completed normally, charging will abort. When charging aborts, the charger's output is shut off and the Bad Battery  (red) LED willl light. Do not continue attempting to charge this battery. Have it checked or replaced.

DESULFATION MODE

While desulfation is in progress, the  and Bad Battery LEDs will be lit. Desulfation could take 8 to 10 hours. If desulfation fails, charging will abort and the Bad Battery  (red) LED will remain lit.

COMPLETION OF CHARGE

Charge completion is indicated by the rightmost  ED (representing a 100% charged battery).When lit, the charger has switched to the maintain mode of operation.

MAINTAIN MODE (FLOAT MODE MONITORING)

When the rightmost  LED is lit, the charger has started maintain mode. In this mode, the charger keeps the battery fully charged by delivering a small current when necessary. If the charger has to provide its maximum maintain current for a continuous 12 hour period, it will go into

abort mode (see Aborted Charge section). This is usually caused by a drain on the battery or the battery could be bad.

MAINTAINING A BATTERY

The SC1341 charges and maintains 12-volt batteries, keeping them at full charge.

NOTE: The maintain mode technology allows you to safely charge and maintain a healthy battery for extended periods of time. However, problems with the battery, electrical problems in the vehicle, improper connections or other unanticipated conditions could cause excessive current draws. As such, occasionally monitoring your battery and the charging process is required.

 USING THE ENGINE START FEATURE

Your battery charger can be used to jump start your car if the battery is low. Follow all safety instructions and precautions for charging your battery. Wear complete eye protection and protective clothing.

WARNING:

Using the ENGINE START feature WITHOUT a battery installed in the vehicle could cause damage to the vehicle's electrical system.

NOTE:

If you have charged the battery and it still will not start your car, do not use the Engine Start feature, or it could damage the vehicle's electrical system. Have the battery checked.

1. With the charger unplugged from the AC outlet, connect the charger to the battery following the instructions given in Charging a Battery in the Vehicle.
2. Connect the charger to a live grounded 120V AC outlet.
3. With the charger plugged in and connected to the battery and chassis, press the  Rate Selection button until the  Engine Start LED is lit.
4. Press the START/STOP button to begin Engine Start. Engine Start will not begin without pressing the START/ STOP button.
5. Wait 2 minutes before cranking the engine.
6. Crank the engine until it starts or 3 seconds pass. If the engine does not start, wait 3 minutes before cranking again. This allows the charger and battery to cool down. The  Engine Start LED will blink during the 3 minute cool-down.

NOTE: During extremely cold weather, or if the battery is under 2 volts, charge the battery for 5 minutes before cranking the engine.

7. If the engine fails to start, charge the battery for 5 more minutes before attempting to crank the engine again.

8. After the engine starts, unplug the AC power cord before disconnecting the battery clamps from the vehicle.

9. Clean and store the charger in a dry location.

NOTE:

If the engine does turn over but never starts, there is not a problem with the starting system; there is a problem somewhere else with the vehicle. STOP cranking the engine until the other problem has been diagnosed and corrected.

ENGINE STARTING NOTES

During the starting sequence listed above, the charger is set to one of three states:

- Wait for cranking – The charger waits until the engine is actually being cranked before delivering the amps for Engine Start.
- Cranking – When cranking is detected, the charger will automatically deliver up to its maximum output as required by the starting system for up to 3 seconds or until the engine cranking stops.
- Cool Down – After cranking, the charger enters a mandatory 3 minute (180 second) cool down state. This is indicated by the blinking  Engine Start LED. After three minutes, the  LEDs will light in sequence and the Engine Start LED will be lit.

MAINTENANCE AND CARE

A minimal amount of care can keep your battery charger working properly for years.

- Clean the clamps each time you are finished charging. Wipe off any battery fluid that may have come in contact with the clamps to prevent corrosion.
- Occasionally cleaning the case of the charger with a soft cloth will keep the finish shiny and help prevent corrosion.
- Coil the input and output cords neatly when storing the charger. This will help prevent accidental damage to the cords and charger.
- Store the charger unplugged from the AC power outlet in an upright position.
- Store inside, in a cool, dry place. Do not store the clamps clipped together, clipped to the handle, on or around metal, or clipped to the cables.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Battery clamps do not spark when touched together	The START/STOP button has not been pressed.	Press the START/STOP button
The charger will not turn on when properly connected.	AC outlet is dead. Poor electrical connection. Battery is defective	Check for open fuse or circuit breaker supplying AC outlet. Check power cord and extension cord for loose fitting plug. Have battery checked
The battery is properly connected, but the  LEDs never lit.	The battery voltage is low.	Press the START/STOP button to start charging.
The  and  LEDs are lit.	The battery is sulfated.	The charger is in desulfation mode. Continue charging for several hours. If not successful, have the battery checked.
The  Bad Battery LED is lit.	The battery voltage is still below 10V after 2 hours of charging. (or) In maintain mode, the output current is more than 1.5A for 12 hours. Desulfation was unsuccessful. The battery voltage drops to below 12.2V in Maintain Mode.	The battery may be defective. Make sure there are no loads on the battery. If there are, remove them. If there are none, have the battery checked or replaced. The battery may be defective. Have battery checked or replaced. The battery won’t hold a charge. May be caused by a drain on the battery or the battery could be bad. Make sure there are no loads on the battery. If there are remove them. If there are none, have t

Short or no start cycle when cranking engine.	Drawing more than the Engine Start Rate. Failure to wait 3 minutes (180 seconds) between cranks. Clamps are not making a good connection. AC cord and/or extension cord is loose. No power at receptacle. The charger may be overheated. Battery may be severely discharged.	Crank time varies with the amount of current drawn. If cranking draws more than the Engine Start Rate, crank time may be less than 3 seconds. Wait 3 minutes of rest time before the next crank, to allow the battery and charger to cool down. Check for poor connection at battery and frame. Check power cord and extension cord for loose fitting plug. Check for open fuse or circuit breaker supplying AC outlet. The thermal protector may have tripped and needs a little longer to close. Make sure the charger vents are not blocked. Wait and try again. On a severely discharged battery, use the  20A Boost setting for few minutes, to help assist in cranking.

SPECIFICATIONS

UL

Input..... 120V AC @ 60Hz, 6A continuous/19.5A intermittent

Output ..... 12V DC, 2<>6A (180 sec. on @ 2A, 120 sec. on @ 6A) 20<>10A (60 sec. on @ 20A, 90 sec. on @ 10A) 100A intermittent (5 seconds maximum on, 180 seconds minimum off)

cUL

Input..... 120V AC @ 60Hz, 6A continuous/19.5A intermittent

Output ..... 12V DC, 2<>6A (180 sec. on @ 2A, 120 sec. on @ 6A) 20<>10A (60 sec. on @ 20A, 90 sec. on @ 10A) 90A intermittent (5 seconds maximum on, 180 seconds minimum off)

Warning

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.
