

Stay In Charge Of Your Battery Power With All-In-Charge

For all product, installation, or service questions, please
contact us at:

Contact Us

Email: info@allincharge.com

Web: www.allincharge.com

Service Disabled Veteran Owned Small Business

DUNS #: 089368315

CAGE Code: 55PC1

NAICS Code: 335999



All-In-Charge, LLC

Email: info@allincharge.com

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All-In-Charge Smart Box

Owner's Manual &
Installation Guide

For Smart Box Models:

12/24V



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All-In-Charge Products



All-In-Charge 12/24V Standard & Stay'N'Charge Smart Boxes

Charge up to two 12-volt auxiliary batteries.



All-In-Charge 12/24/36V Standard & Stay'N'Charge Smart Boxes

Charge up to three 12-volt batteries.



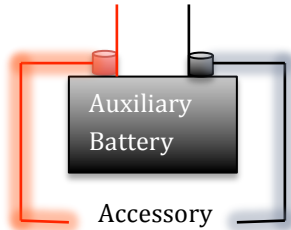
All-In-Charge Tow-In-Charge & Stow-In-Charge Systems

Charge any 12-volt battery from an alternating (car/vehicle) battery in parallel. **Combine with any All-In-Charge Smart Box for optimum charging performance.**

Accessory Wiring Maps

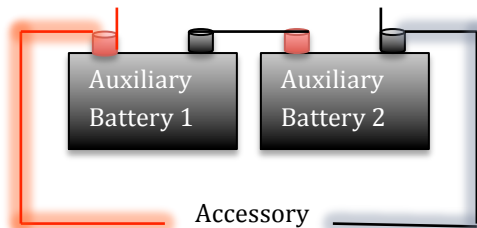
Tow-In-Charge or 12/24 Smart Box

Wires in from Tow-In-Charge or Smart Box



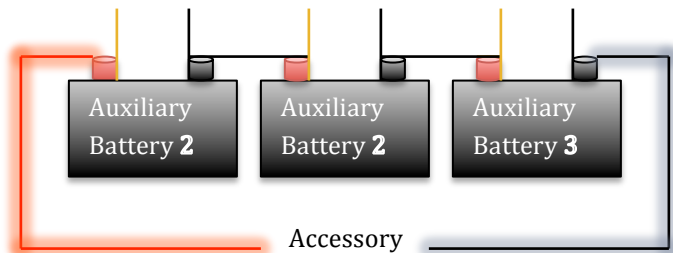
12/24V Smart Box

Wires in from Smart Box



24/36V Smart Box

Wires in from Smart Box



Important Notice

Please read all safety, operating and installation instructions before installing.

Personal Safety Precautions

- Someone should be within the range of your voice or close enough to come to your aid when working near a lead acid battery.
- Have plenty of water and soap nearby in case battery acid comes in contact with skin, clothes or eyes.
- Wear complete eye protection and clothing protection. Avoid touching eyes while working with a battery.
- If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters the eye(s) flood eye(s) with running cold water for at least 10 minutes and get medical attention immediately.
- Never smoke or allow a spark or a flame in the vicinity of a battery or engine.
- Be extra cautious to reduce risk of dropping a metal tool onto a battery. It may spark or short-circuit the battery or other electrical parts that may cause explosion.
- Remove all personal metal items such as rings, bracelets, necklaces, watches, and jewelry when working near a battery. A battery can produce a short circuit high enough to weld a ring or any metal, causing serious burns.
- Never charge a frozen battery.

General Overview

- All-In-Charge Smart Box charging systems offer the ability to charge 12-volt batteries while driving, helping increase your accessory use when you arrive at your destination.
- All-In-Charge Smart Box systems work by using power already generated (reusable energy), helping save on the costs of electricity used by AC chargers, and gas for gas-powered generators.
- All-In-Charge Smart Box systems are available in 3 models and can be used in 12, 24, or 36-volt applications.
- All-In-Charge Smart Box systems provide easy to view LED indicators, which let you know if your batteries are “OK” or in “Fault”.
- Patented All-In-Charge technology helps prevent damage to batteries caused by heat generation.
- All-In-Charge Smart Box systems are prewired for easy installation and are waterproof for fresh and salt-water applications.
- All-In-Charge Smart Box systems work in tandem with AC chargers, helping maintain the charging of your batteries while you are on the road or water.

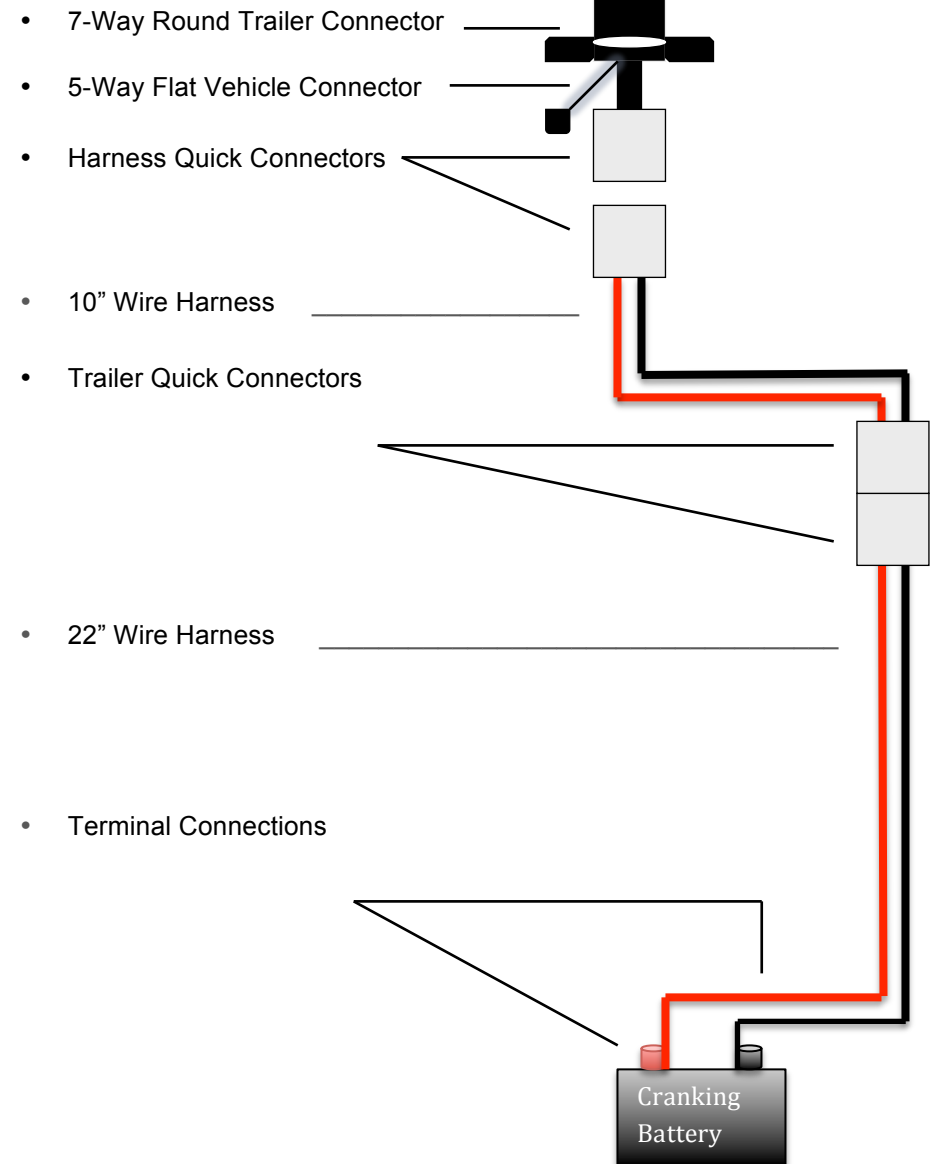
AC Charger Compatibility

All-In-Charge Smart Boxes are protected from AC chargers by automatically going into FAULT mode when the AC charger is running and hooked up to the same batteries as the input and output of the Smart Box. A fault condition exists when the battery voltage is higher than input voltage. Charging is not possible when this condition exists. Therefore, the Smart Box will protect itself and connected batteries from damage from AC chargers when in fault mode.

Warranty

All-In-Charge products come with a 90-day money back guarantee & 3 year limited warranty. To obtain warranty service or repair, the charger and proof of original purchase must be sent to our All-In-Charge service center. For our current service center address and warranty service inquiries, please message us at info@allincharge.com. Any charges incurred for transportation/shipping/freight is the sole and exclusive responsibility of the purchaser unless approved otherwise. Visit www.allincharge.com for more details.

Tow-In-Charge Reference Diagram



Tow-In-Charge Installation

Note: All-In-Charge LLC is not responsible for any damage that may occur from improper installation.

For your local All-In-Charge installer, please visit our website at www.allincharge.com.

Install All-In-Charge Tow-In-Charge only per manufacturer installation instructions.

Connection Precautions

- a.) All-In-Charge Tow-In-Charge systems will only charge 12-volt batteries. Do not connect the output of the charger to any other voltage or type of battery.
- b.) Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.

Tow-In-Charge Wiring Installation

- a.) Run your Tow-In-Charge wiring to its battery's destination to see how much length you will need before securing quick connectors to an easy accessible area
- b.) (Optional) Once you have adequate wire length to connect your wires easily to your battery, secure your Trailer Quick Connectors to an easily accessible area by using a 1/8" drill bit to drill pilot holes in the mounting locations. Add silicon sealer in each of the mounting locations to waterproof the screw holes. Position your Trailer Quick Connectors over the mounting holes and secure with a power screwdriver by installing marine grade or stainless steel screws (mounting screws not included).
- c.) Connect red wire from the Tow-In-Charge to positive terminal on "alternating (cranking)" battery.
- d.) Connect black wire from the Tow-In-Charge to negative terminal on "alternating (cranking)" battery.

Note: A standard 7-way round trailer connector (flat pin) input has the ability to offer a battery feed when your vehicle's key is in the run position. If you have no charge coming from your Tow-In-Charge system when plugged in, contact your local vehicle dealership for an appointment to properly activate this feature.

General Operation

Properly installed, your All-In-Charge Smart Box will charge your auxiliary 12-volt batteries no higher than the voltage stemming from your alternating battery, reducing the chance of overcharge on your batteries or heat generation that may cause damage to other surrounding equipment. When your main (cranking) 12-volt battery is alternating power, your Smart Box will automatically focus charge on your lowest charged battery first. Once batteries are leveled out in charge, your Smart Box will automatically switch to charge both at the same time.

Smart Box LED Status Indicators

NORMAL CHARGING: When two "normal" batteries are being charged, the battery with the lower voltage is always charged first when the charger is first connected. Furthermore, to help balance the charge between the two batteries, the battery with the lower voltage is always charged for 2.3 minutes and the other battery for 1.7 minutes. Once a charging cycle has begun, it cannot be terminated. However, the charging current can be interrupted by a fault or thermal shutdown condition. ("Normal" batteries have a voltage of at least 10.0 volts.)

SURFACE CHARGE: For "questionable" batteries with voltages in the range of 6.0 to 9.9 volts, the charging time is limited to 0.5 minutes followed by a minimum delay of 1.5 minutes before charging again.

12V INPUT LED: This indicator is steady on when the input is at least 13.0 volts. The input voltage is checked between charging cycles. The input indicator flashes if a thermal shutdown condition exists. Batteries cannot be charged if the input voltage is less than 13.0 volts.

Bat 1&2 "OK" LEDs: The OK indicator is steady on when the battery voltage is at least 6.0 volts and no fault condition. It blinks off every two seconds during normal charging cycle and flashes rapidly during a 0.5-minute surface charge cycle. The indicator is off if the battery voltage is below 6.0 volts. Batteries cannot be charged if their voltage is less than 6.0 volts.

BAT 1&2 "FAULT" LEDs: The FAULT indicator is steady on for a fault condition. A fault condition exists when the battery voltage is higher than input voltage. Charging is not possible when this condition exists. **Note** that FAULT indicators will remain steady on when AC chargers are running while hooked up to the same batteries as the input and output of the Smart Box.

12/24V Smart Box Installation

Install All-In-Charge Smart Box only per manufacturer installation instructions.

All-In-Charge products should not void any warranties on batteries, motors, or any other equipment. Please contact us with any questions or concerns.

Mounting & Safety

- a.) Locate Smart Box as far away from battery as the dc cables permit.
- b.) Do not place Smart Box above battery being charged as gases from battery may corrode and damage charger.
- c.) Do not mount your Smart Box below the waterline of a boat or directly adjacent to fuel tanks.
- f.) Make sure that the surface you will be mounting your Smart Box to is adequate in strength and thickness to hold your Smart Box in place with the mounting screws you have selected. Do not install your Smart Box on carpeted, upholstered, vinyl, or varnished areas.
- g.) Allow at least 8 inches around the perimeter of your Smart Box mounting location. Be sure to place your Smart Box in an accessible area where all indicators are viewable. Pick a mounting location where all battery cables can reach alternating (cranking) & auxiliary batteries.
- h.) Using a 1/8" drill bit, drill pilot holes in the (2) mounting locations. Add silicon sealer in each of the mounting locations to waterproof the screw holes. Position your Smart Box over the mounting holes and secure with a power screwdriver by installing 2 marine grade or stainless steel screws (mounting screws not included).

Connection Precautions

- a.) All-In-Charge Smart Box systems will only charge 12-volt batteries. Do not connect the output of the charger to any other voltage or type of battery.
- b.) Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.

12/24V Smart Box Wiring Installation

- a.) Connect red wire from **top** of Smart Box to positive terminal on “alternating (cranking)” battery.
- b.) Connect black wire from **top** of Smart Box to negative terminal on “alternating (cranking)” battery.
- c.) Connect red wire from **bottom** of Smart Box to positive terminal on “auxiliary” battery 1.
- d.) Connect black wire from **bottom** of Smart Box to negative terminal on “auxiliary” battery 2.
- e.) Connect white wire from **bottom** of Smart Box to negative terminal on “auxiliary” battery 1.
- f.) Connect jumper wire (not included) to negative terminal on “auxiliary” battery 1 and the positive terminal on “auxiliary” battery 2.

Caution: Do not attempt to connect more than one jumper, positive to negative, between the same batteries.

12/24V Smart Box Wiring Map

