

## **IMPORTANT - READ BEFORE INSTALLING**

### **Recommended Test Procedure For The *PriorityStart!***

1. Follow instructions in owner's manual to install. *PriorityStart!* must be installed on a fully charged battery, preferably on a NEW fully-charged battery.  
A battery drained to a "dead" condition once has already lost half its service life.
2. Use a Voltmeter to test. With ignition key out of ignition, turn headlights on and let lights or running-lights (on marine unit) take voltage down to disconnect threshold of 11.7 volts.  
**(DO NOT use other accessories that could mimic "engine run" to "quick" discharge battery [see NOTE below] like power-supplies, engine fans, battery chargers, AC equipment, etc.)**
3. Once battery voltage drops below 11.7 volts (23.6 volts on 24-volt unit), the unit will automatically disconnect in about one minute (4.5 minutes on Mobility unit).
4. After the unit disconnects, wait one full minute before attempting to reconnect.
5. To reconnect:
  - (a) operate headlight switch or running lights (on marine unit) or
  - (b) step on the brake pedal or
  - (c) try switching on **any** other electrical device or
  - (d) see section ***PriorityStart!* will not reconnect**

Any load transient of 0.2mv (millivolts) will trigger *PriorityStart!* to reconnect automatically. The new Power-LED (On/Off indicator) will turn GREEN when *PriorityStart!* is connected.

**NOTE** *PriorityStart!* is designed to provide battery protection when engine is NOT running (ignition switch in off position). As a safety feature, by sensing electrical "noise" (30 millivolts) created by fuel injectors, fuel pumps, fan motors, etc., it will NOT disconnect the vehicle. Thus if a vehicle alternator or alternator-belt fails, the "engine run" circuitry recognizes the condition and prevents disconnection at the 11.7 volt threshold, allowing the vehicle to continue on the reserve capacity of the battery.

**Also note:** according to The Battery Council International, "even when the engine is running, if the battery voltage drops below 9 volts, the engine is at risk of stalling\*". This condition has nothing to do with the proper operation of *PriorityStart!* and is created by too-heavy a drain on the operating battery/alternator or a marginal battery. See additional information in the FAQ and Troubleshooting Guide sections of our website.

**If *PriorityStart!* is to be used on a parallel dual-battery application, call the factory for installation instructions 509-467-4203.**

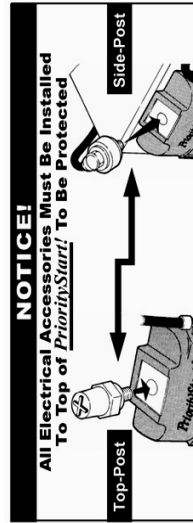
*PriorityStart!* now has a Power-LED indicator. Any load that takes battery voltage to 11.7 volts (23.6 volts on 24-volt unit) when the key is off will be automatically disconnected and the LED will turn RED. To reconnect, read point (5) above. *PriorityStart!* has an improved computer microprocessor, a stronger-designed gear system and a new surge-protection circuit to prevent electrical spikes from potentially damaging the vehicle's electrical system.

**PriorityStart! cannot monitor** what is not attached to it.

\* Battery Council International (BCI); [www.batterycouncil.org](http://www.batterycouncil.org)

### ***PriorityStart!* Stops Dead Batteries!**

The below illustration shows how electrical accessories **must** be installed.



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## **Installation Questions**

**VERY IMPORTANT: Make sure you have completed the provided "testing procedures"**

- **There is a noise coming from the *PriorityStart!* Is this normal?** YES

The *PriorityStart!* is an electromechanical system. Inside is an innovative microprocessor and a ten-gear drive system with a by-directional motor that operates the gears. The unit is basically an automatic voltage disconnect/reconnect switch that constantly monitors battery voltage when the key is off.

- **The *PriorityStart!* did not disconnect while following Testing Procedures**

Circuits within the *PriorityStart!* could be recognizing a condition being created by an after-market electrical accessory. There is a special "engine run" circuit (a safety feature) inside the system that keeps the *PriorityStart!* from disconnecting a battery on a running vehicle. It will NOT disconnect the battery when the engine is running even though the battery voltage-level drops below the factory-set safe threshold of 11.7 volts (23.6 volts on the 24-volt unit). When testing the unit, use **only** the headlights to draw-down the battery. (High beams optional).

- **The *PriorityStart!* will not reconnect**

The *PriorityStart!* must have a direct load-draw (or change) in order to reconnect. In some vehicles, turning the key in the ignition is not enough for the unit to reconnect. The unit requires at least a 0.2mv (millivolt) electrical load-change in order to reconnect. A decal included with the unit has instructions on either pushing your foot on the brake pedal or operating the headlight switch (running lights on Marine *PriorityStart!*).

Sometimes, an electrical relay or other component wiring may prevent the headlights, running lights or brake-pedal from providing a "direct load draw" - thus not reconnecting the *PriorityStart!* unit. If these devices do not reconnect the unit, there are other options. You may try the power seats (driver and/or passenger seat), spotlights, cigarette lighter, or **any other electrical device wired directly to the *PriorityStart!*** If, despite all attempts, you still cannot find any electrical accessory on your vehicle that will automatically reconnect the unit, the *PriorityStart!* has an optional override feature integrated into the microprocessor that provides a "reset" capability by removing "momentarily" the ground wire, and reconnecting it will trigger a reconnection or an ON-(OFF) momentary, 1.5A switch could be wired between the ground wire and negative cable as a redundant means of reconnection under the dash. More information is located at [www.prioritystart.com](http://www.prioritystart.com) under "Helpful Links"; otherwise, call 509-467-4203.

## **Additional Questions**

- **Is the *PriorityStart!* meant to protect batteries on vehicles in long-term storage?**

No. We recommend that the vehicle be started every 60 - 90 days and run for at least 15 minutes. A battery can still discharge on its own if it is left for long periods of time. The *PriorityStart!* will still disconnect at the appropriate threshold - even in this situation - but the battery voltage can continue to drop on it's own leaving too little power to start the engine.

- **What if I have continuous high-ampereage accessories installed?**

The *PriorityStart!* is not meant to be used with high-amp-drawing accessories running continuously for an extended period of time (e.g. a lift-gate or a winch). They should be wired directly to the battery following the least path of resistance. Most accessories, however, can be wired directly to the unit (see **NOTICE** on front). If you have any questions on compatibility with specific accessories, please call 509-467-4203.

All information above and much more can be found on our online troubleshooting guide at [http://www.prioritystart.com/ps\\_troubleshootingguide.html](http://www.prioritystart.com/ps_troubleshootingguide.html)