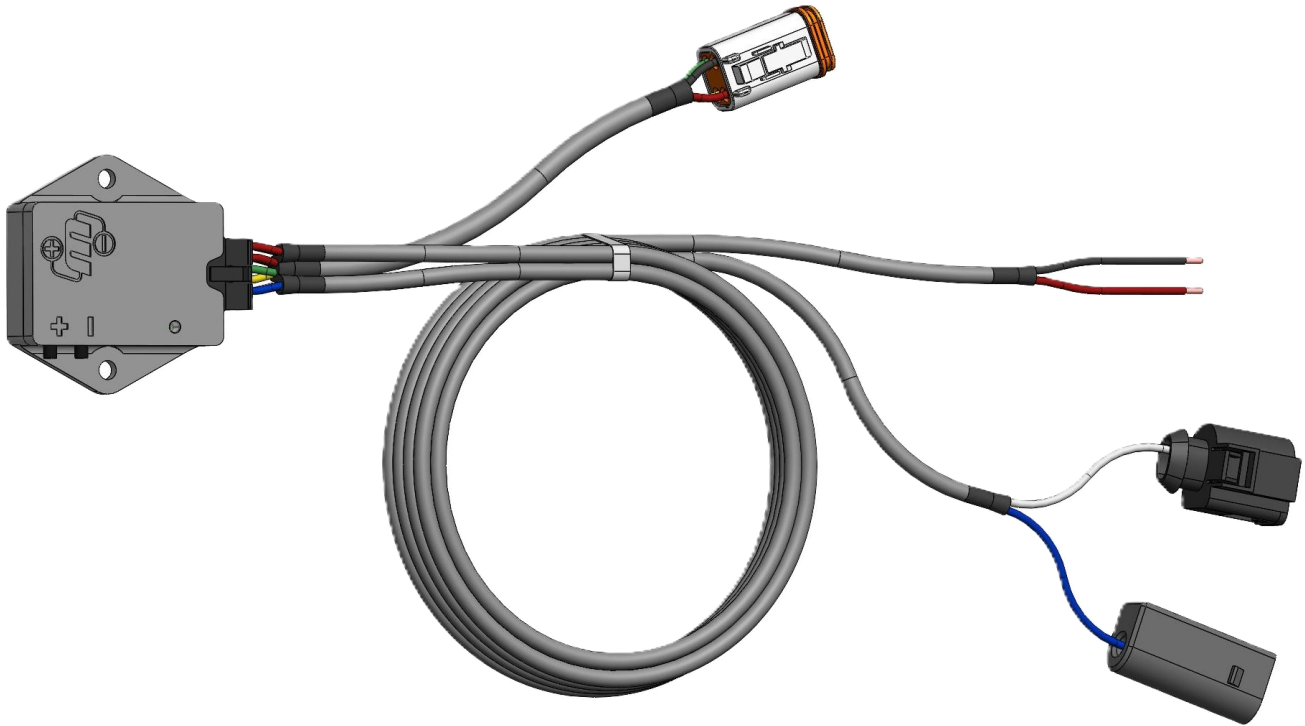


ChargeCommand IQ™ Alternator Tuning Module



Introduction:

ChargeCommand IQ™ connects between the vehicle's alternator harness and the alternator. It lets you set the alternator's charging voltage and removes the factory amperage limits that can keep a high output alternator from delivering its full output.

It works with both OEM and Mechman alternators. The factory battery warning light and OE voltage gauge continue to work normally.

Read these instructions completely before starting the installation.

If you are experiencing problems upon installation:
DO NOT RETURN THIS PRODUCT!

Most installation problems can be easily solved.

First contact technical support at:

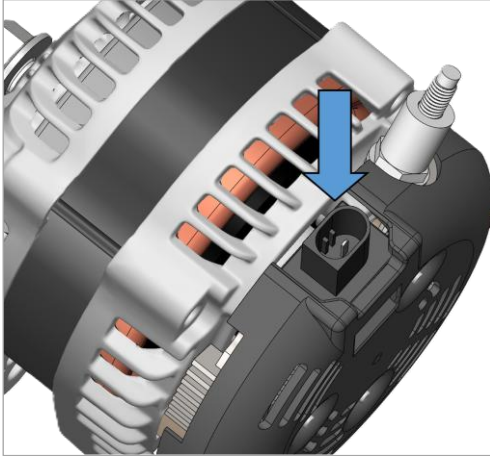
contact@mechman.com

1 (888) MECHMAN or 865-522-6166

Identify Your Plug Style:

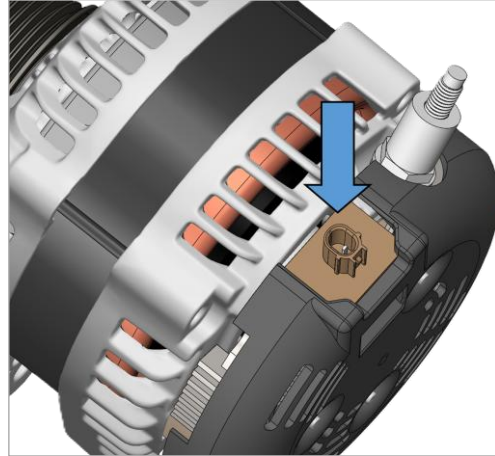
ChargeCommand IQ™ is designed for LIN bus regulated alternators and works ONLY with the two alternator plug styles shown below. LIN bus regulators use a plug with a single terminal. It is the customer's responsibility to confirm the correct style before ordering.

The images show the plug on the alternator itself. Unplug the vehicle connector from the factory alternator and compare its plug to the images to confirm compatibility and which style you have. Then make sure your ChargeCommand IQ™ harness is the matching version.



D Shape Plug

The connector shroud is shaped like the letter D: rounded on one side and flat on the other. Used on select Audi™, BMW™, Dodge™, Ford™, Hyundai™, Jeep™, Kia™, Lexus™, Lincoln™, Ram™, Toyota™, and Volkswagen™ applications.



Honda™ Style Plug

Small oval shaped plug. Used on select Acura™ and Honda™ applications.

Sample images shown. Actual alternator may vary.

- **If your alternator plug does not match either style, ChargeCommand IQ™ is not compatible with your vehicle. DO NOT install it.**
- **Questions? Email contact@mechman.com with your vehicle's year, make, model, and a clear photo of the alternator plug with the connector removed.**

Important Notes:

- Installation must be done with the key OFF and the engine OFF.
- The engine must NOT be started until the Learn process is complete (see Setup).
- The red power lead must be connected to an ignition switched 12V source and protected with a 5A fuse. A fuse is not included.
- **Do NOT** connect the red power lead to a TCM, ECM/PCM, airbag/SRS, or ABS circuit.
- Do not connect anything to the Accessory Port.
- The alternator leads and the power/ground leads are 6 ft long. If extending the harness, refer to an appropriate wire sizing and voltage drop chart to ensure the correct wire gauge is used for the increased length.

CAUTION: BATTERY CHARGING VOLTAGE

Check with your battery manufacturer for the correct charging voltage before adjusting the set point. Setting the charging voltage above or below what the battery manufacturer specifies can damage the battery, shorten its life, and cause charging system problems.

Included Components:

Component	Qty
ChargeCommand IQ™ Module	1x
ChargeCommand IQ™ Wiring Harness (D Shape or Honda™ Style)	1x

Included Hardware:

Hardware	Qty
10-32 x 5/8" Button Head Bolt	2x
10-32 Nylon Lock Nut	2x
Cable Ties	8x

Required (Not Included):

- 5A fuse with inline fuse holder, or a fuse tap with a 5A fuse
- Terminals for the red power lead and black ground lead

Required Tools:

- Wire strippers and crimpers
- Digital multimeter
- Drill with a #7 or 13/64" bit (see Drill Template)
- Basic hand tools for mounting the module

Harness Connections:

Harness Connection	Connects To
Module 12-pin connector	ChargeCommand IQ™ module
Female alternator plug	Alternator
Male alternator plug	Vehicle's alternator harness plug (the plug that was removed from the alternator)
Red lead	Ignition switched 12V, through a 5A fuse
Black lead	Ground
4-pin Deutsch connector (Accessory Port)	DO NOT CONNECT Leave unplugged and secure it (see Step 6)

Module Overview:



- **+ Button:** Raises the voltage set point.
- **- Button:** Lowers the voltage set point.
- **Both Buttons:** Used for Learn and Forget (see Setup).
- **Status LED:** Shows the module status and any faults (see LED Reference).

Installation Instructions:

Step 1: Disconnect the Battery

- Turn the key OFF and disconnect the negative battery cable.

Step 2: Mount the Module

- Choose a location away from exhaust heat, moving parts, belts, and direct water spray.
- Make sure the + and - buttons and the LED can be reached and seen after installation.
- Make sure the harness can reach the alternator and your ignition and ground sources.
- Use the Drill Template on the last page to mark and drill the holes, then secure the module with the included 10-32 button head bolts and nylon lock nuts.

Step 3: Connect the Harness to the Module

- Plug the harness module connector into the ChargeCommand IQ™ module until it locks.

Step 4: Connect the Alternator Plugs

- Unplug the vehicle's alternator harness plug from the alternator.
- Plug the female harness plug into the alternator.
- Plug the vehicle's alternator harness plug into the male harness plug.
- Make sure both connections are fully seated and locked.

Step 5: Connect Power and Ground

- Connect the red lead to an ignition switched 12V source. A fuse tap in the vehicle fuse box works well.
- The red lead must be protected with a 5A fuse.
- Use a multimeter to confirm the source has 12V with the key ON and 0V with the key OFF.
- **Do NOT use a TCM, ECM/PCM, airbag/SRS, or ABS circuit for the red lead.**
- Connect the black lead to a good ground.

Step 6: Secure the Accessory Port and Route the Harness

- Leave the 4-pin Deutsch connector (Accessory Port) unplugged. Do not connect anything to it.
- Secure the Accessory Port with an included cable tie so it cannot rub, hang loose, or collect water and debris.
- Route the harness away from heat, sharp edges, belts, and moving parts and secure it with the included cable ties.

Step 7: Reconnect the Battery

- Reconnect the negative battery cable. Do not start the engine yet.

Setup (Learn):

Learn lets the module detect the connected alternator and the vehicle's engine computer (ECM). Learn must be completed before the engine is started.

- **Key ON, engine OFF. Do NOT start the engine until Learn is complete.**

Step 1: Turn the Key ON

- Turn the key ON without starting the engine.
- The LED should slowly breathe green. This means the module is powered and ready to learn.

Step 2: Start Learn

- Press and hold BOTH the + and – buttons for about 3 seconds to start Learn.
- **Do not hold the buttons for 10 seconds. That starts Forget, which clears the learned setup.**
- The LED blinks green quickly while Learn is in progress.

Step 3: Confirm Learn is Complete

- Learn is complete when the LED is steady green.
- If the LED is steady green with a brief red flick every couple of seconds, the alternator is set up but the ECM has not been confirmed yet. This clears on its own once the ECM is communicating.
- If the LED blinks red 4 times, pauses, and repeats, Learn failed. Turn the key OFF, check all connections, and repeat Setup.

Step 4: Start the Engine

- Once the LED is steady green, the engine can be started.
- The default voltage set point is 14.5V.

Adjusting the Charging Voltage:

CAUTION: Check with your battery manufacturer for the correct charging voltage. Failure to do so can damage the battery and cause charging system problems.

- Start the engine. The LED must be steady green. The buttons do nothing in any other mode.
- Press + once to raise the set point by 0.1V.
- Press – once to lower the set point by 0.1V.
- Each press is one 0.1V step. The change takes effect when the button is released, and a brief red flick on the LED confirms the press.
- The adjustable range is 10.6V to 16.0V.
- The module has no display. With the engine running, use a multimeter at the battery terminals to confirm the charging voltage after each adjustment.
- The set point is retained when the key is turned OFF.

Example: From the 14.5V default, pressing + three times sets 14.8V. Pressing – five times sets 14.0V.

Forget (Reset):

Forget clears the learned setup so the module can be set up from scratch.

- Press and hold BOTH the + and – buttons for about 10 seconds.
- The LED turns steady red while Forget is in progress. Keep holding.
- Release the buttons to confirm.
- After Forget, repeat the Setup (Learn) process before starting the engine.

LED Reference:

For the red fault patterns, count the blinks between the pauses.

LED Pattern	Meaning
Green, steady	Running normally. Alternator and ECM are both set up.
Green, slowly breathing in and out	Powered but not set up yet. Ready to learn.
Green, fast blinking	Learn in progress.
Green steady, brief red flick every couple of seconds	Alternator is set up, ECM not yet confirmed. Clears on its own once the ECM is communicating (for example, after the key is turned ON).
Single brief red flick on green	A button press was registered.
Red, 1 blink, pause, repeat	Fault: the alternator is not responding.
Red, 2 blinks, pause, repeat	Fault: no messages from the ECM.
Red, 3 blinks, pause, repeat	Fault: neither the alternator nor the ECM is responding.
Red, 4 blinks, pause, repeat (about 10 seconds)	The last Learn attempt failed. Check the connections and try again.
Red, steady	Forget in progress. Keep holding, release when done.

Troubleshooting:

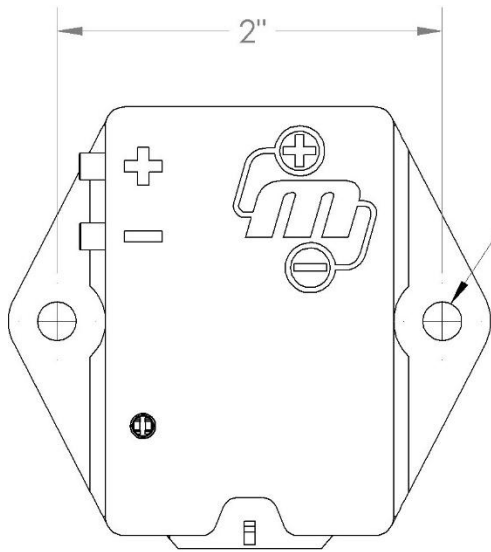
Symptom	Check
No LED	• Check the 5A fuse. • Confirm 12V on the red lead with the key ON. • Check the ground connection. • Confirm the harness is fully plugged into the module.
Red, 1 blink	• Check that the female harness plug is fully seated and locked on the alternator. • Confirm the harness plug style matches your alternator.
Red, 2 blinks	• Confirm the key is ON. • Check that the vehicle's alternator harness plug is fully seated and locked in the male harness plug.
Red, 3 blinks	• Check all of the above: alternator plug, vehicle plug, module connector, power, and ground.
Red, 4 blinks	• Turn the key OFF, check all connections, then repeat Setup (Learn).
Buttons do nothing	• Voltage can only be adjusted while the LED is steady green with the engine running.

Drill Template:

CHECK THE PRINT SCALE BEFORE DRILLING

Print this page at 100% (Actual Size). Do not use Fit to Page or any other scaling.

Before drilling, measure the 2" dimension at the top of the template. If it does not measure exactly 2", the template did not print to scale. Do not use it.



Use #10-32 bolts to secure the module

- Thru Hole - #7 or 13/64" Drill Bit
- Tapped Hole - #21 or 5/32" Drill Bit & 10-32 Tap

Scale 1:1