

EV Source - IOTA DC/DC Two-Stage Setup

Setting up the IOTA power converters to operate as a two-stage charger is very simple. Setting up the device for two-stage operation floats the accessory battery at about 13.6V when idle, and about 14.2V when the vehicle is on. The setup only requires the addition of a single relay. EV Source item number [101-0332017302](#), Bosch Micro Relay with Internal Suppression Resistor, is recommended since it has voltage spike protection for the component driving the relay.

The coil of the relay should be energized when the ignition is turned on. Determine a suitable voltage source supply that turns on with the ignition. In most cases, the wire coming from the ignition switch can be used.

The contacts of the coil are connected to the green wires of the quick-charge plug included with the unit. **Modification will have to be made to the quick-charge plug.** Follow these general steps to make the modification:

1. Clip the green wire on the plug which comes looped around (from the plug, looping back around to the plug).
2. One of the two green wires will connect to one contact of the relay used, and the other green wire to the other contact of the relay. Normally, when the factory quick-charge plug is inserted into the IOTA, the green wire shorts out a connection internal in the IOTA. When the green wire is cut, the relay actuates this shorting out feature to raise the charging voltage.

Insert the modified quick-charge plug into the receptacle on the IOTA unit. If using the suggested relay, the following connections should be made (other relays will be similar, and could use the same terminal numbers):

Pin 1: to ignition source

Pin 2: to chassis ground

Pin 3: either wire protruding from the IOTA quick-charge plug

Pin 5: other wire protruding from the IOTA quick-charge plug

Verify that the relay turns on when the ignition is turned on, and that the output of the IOTA raises from about 13.6V to 14.2V.

IMPORTANT DISCLOSURES

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