



## ROADSTER-18 INSTRUCTIONS UNIVERSAL WIRING KIT INSTALLATION

### 1. IMPORTANT – READ ALL INSTRUCTIONS BEFORE YOU BEGIN

The electrical system is a critical component affecting both the operation and safety of your vehicle. It is important to have the proper tools and equipment to install your wiring kit, but it is equally important that you have knowledge and experience with automotive electrical systems. You should be familiar with voltage, current, and resistance, and how to use a volt/ohm meter and clamp-on current meter to measure these basic parameters. If you do not feel you have the necessary tools, knowledge, and experience, Coach Controls strongly recommends that you get professional assistance with your wiring project.

### SPECIAL TOOLS REQUIRED



**Open Barrel Crimp Tool**



**Proper Open Barrel Crimp**



**Proper Closed Barrel Crimp**



**Closed Barrel Crimp Tool**

Proper wire terminations are essential for the safety, operation, and long term durability of your vehicle's electrical system. To install this wire kit you will need a heat gun and quality crimp tools. The open barrel crimp tool(s) have dies for crimping both the conductor wings as well as the insulation wings of the Delphi Packard open barrel terminals. It is important to lightly crimp the insulation wings of these terminals in order to help support the wire and prevent bending and breakage of the conductor.

A closed barrel crimp tool such as the one shown should be used to crimp the non-insulated closed barrel terminals provided in this kit. Note that the wire insulation butts up firmly against the terminal and that the crimp tool creates a dimple in the terminal, securing the conductor without breaking any strands. Use

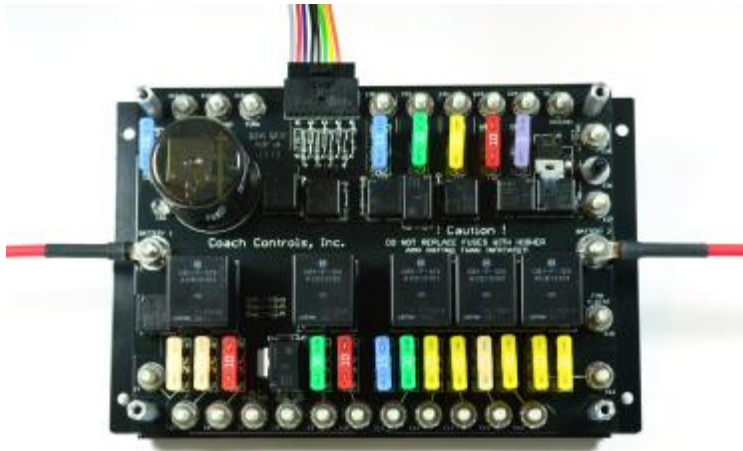
a heat gun and a piece of heat shrinkable sleeving included in the kit to insulate each crimped closed barrel terminal. Once the sleeving is heated and shrunk it should be tight around the terminal and the wire insulation. In this way the sleeving acts not only as an insulator but also as a strain relief to minimize bending of the conductor at the crimped connection.

## 2. MOUNTING AND GROUNDING

MAKE SURE THE BATTERY IS DISCONNECTED BEFORE PROCEEDING. The Power Center, 100 amp fuse holders, steering column, battery, lights, HVAC, and all other electrical equipment should be mounted before you begin installing the wiring. The Power Center must be mounted in a dry location, usually under the dash. It is normal for relays to get a little warm during continuous use so the Power Center should be mounted where air can circulate around the unit. The 100 amp MIDI fuse holders can be mounted under the hood or to the chassis, but must be at least 6" away from exhaust.

Connect the negative side of the battery to the engine block if possible as well as to the chassis using battery cable (not supplied) and at least 3/8" bolts and tooth washers. If grounding the battery to the engine block is not practical, connect both the battery and engine to the chassis with battery cable, bolts, and tooth washers. Metal must be clean, free from rust and paint where the connection is made. If the body of your vehicle is metal, it too must be grounded to the chassis using at least 8 awg wire and 1/4" bolts and tooth washers. If you have a fiberglass body, mount one or more ground studs and terminal blocks inside the cabin for convenient ground points. Use at least 8 awg wire to connect all your ground points to clean steel chassis.

Two 100 amp MIDI fuse holders and fuses are included with this kit. One of the 100 amp fuses protects the wires connecting the battery and alternator, the other protects the Power Center. **TWO SEPARATE 10 AWG WIRES SUPPLY BATTERY POWER TO THE POWER CENTER. BE SURE TO CONNECT ONE FROM EACH SIDE OF THE POWER CENTER TO THE 100 AMP FUSE AS SHOWN IN THE WIRING DIAGRAM.**



**Multi-conductor Cable and Dual 10 awg Power Leads Installed**



**Detail of Daytime Running Light (DRL) Jumper and Proper Power Lead Connection**

Daytime Running Lights (DRL) are recommended for additional safety but they can be disabled by cutting the jumper on the Power Center as shown above. Refer to the wiring diagram supplied with this kit as well as the wiring information supplied with all your various accessories and route all wires, including grounds, before making any final connections. Plug the multi-conductor Power Center Cable into the receptacle located at the top of the Power Center. Route the leads to the Ignition, Headlight, Dimmer, Horn, and High Speed Heater Fan switches as indicated. Use rubber grommets whenever wires pass through metal openings and don't allow wires to touch sharp corners. Heater/Ventilator/Air Conditioner (HVAC) systems can be complicated so pay special attention to the manufacturers instructions and note that the Power Center includes relays for the HVAC unit and blower motor (high speed) as recommended by leading manufacturers. Several detailed diagrams can be downloaded and printed from our website for connecting a headlight switch and other equipment.

Dress your harness by starting in the middle and working your way toward the ends of cable bundles, keeping wires parallel for a neat appearance. Dress the wires to each accessory working from the cable bundle, making sure to leave some slack (service loop) when you make the final terminations.

### 3. TESTING

Once you have completed installation of your wire kit, make sure the ignition switch and all accessories are turned OFF and the battery is disconnected.

Using a higher amp rated fuse than indicated can cause serious, irreparable damage. IF YOU BLOW A FUSE ALWAYS REPLACE THE FUSE WITH THE SAME AMP RATING.

- 3.1 Use an ohm meter to check for shorts between the positive and negative battery terminals. Resistance should be greater than 100 ohms. A reading of less than 100 ohms indicates a possible serious short or wiring error that must be investigated and corrected before proceeding. Otherwise, connect your battery to begin testing the system.
  - 3.2 Check circuits that do not require the ignition key.
    - 3.2.1 Verify the brake lights illuminate when the brake pedal is depressed.
    - 3.2.2 Turn on the parking lights (headlight switch). Verify taillights and front parking lights are on.
    - 3.2.3 Turn the headlight switch ON and verify low and high beams operate with the dimmer switch.
    - 3.2.4 Turn emergency flasher (hazard lights) on and verify all four front and rear turn signals flash.
    - 3.2.5 Verify the horn sounds when the horn button is depressed.
    - 3.2.6 Verify the dome light is illuminated when a door is opened and is off when all doors are closed.
  - 3.3 Turn the ignition switch to the Accessory position.
    - 3.3.1 Verify the wipers and radio operate. Accessory power should also be available at the power point receptacle (if equipped).
    - 3.3.2 Verify the heater blower motor operates at all speeds.
    - 3.3.3 Verify the above accessories do not operate when the ignition key is turned off.
  - 3.4 Turn the ignition switch to the Ignition position but do not start the vehicle. The LED indicator near the Flasher should illuminate.
    - 3.4.1 The electric fuel pump and electric choke should operate (if equipped).
    - 3.4.2 Verify the left and right turn signals operate.
    - 3.4.3 Verify the Daytime Running Lights are ON (if enabled by installed jumper) with the headlight switch turned OFF. The high beams should not operate using the dimmer switch with the headlight switch OFF.
    - 3.4.4 The electric radiator cooling fan (if equipped) can be tested by jumpering the fan thermostat switch or connecting a temporary jumper from Power Center stud terminal labeled FAN T-STAT to the GROUND stud terminal.
  - 3.5 CAUTION: Make sure the engine and transmission are properly filled with all required fluids and the engine is ready to run. Engage the parking brake and make sure the transmission is in Park or Neutral.
    - 3.5.1 Apply the brakes. Be ready to disconnect the battery in the event the starter solenoid should stick when activated. This is commonly caused by a defective starter or starter solenoid, or an improperly rebuilt starter.
    - 3.5.2 Without starting the engine, very briefly turn the ignition switch or press the start button to “bump” the starter a couple of times to verify the starter motor engages and disengages.
    - 3.5.3 Now start the engine and allow it to warm up.
    - 3.5.4 Verify gauges are working properly and adjust the radiator fan thermostat (if equipped) to turn on the cooling fan at the desired engine temperature.
  - 3.6 Turn off the Ignition switch and all accessories. Verify the engine stops. Disconnect the battery.
  - 3.7 Install the Power Center cover with 4 thumb screws.
  - 3.8 Reconnect the battery.
- Congratulations! Enjoy your ride!

### 4. TECHNICAL SUPPORT

Free 24/7 tech support is provided online at: [www.coachcontrols.com](http://www.coachcontrols.com)  
or call 423-790-7905 M-F, 9am-5pm eastern.

## 5. WARRANTY

We at Coach Controls, Inc. warrant to the original purchaser the products manufactured by us to be free from defects in material and workmanship under normal use and service, for which it was intended, but only if it has been properly installed and operated. We offer a Lifetime Warranty to the original purchaser on the Power Center and all other parts and accessories that we manufacture. For all other parts and accessories the warranty period is One Year from date of purchase. Our obligation under this warranty shall be limited to the repair or replacement of any product or products which may thus prove defective under normal use and service, for which it was intended, and which our examination shall disclose to our satisfaction to be thus defective. Any defect affecting operation of the unit will be repaired or replaced at no charge. You will be billed only for shipping. **Damage caused by improper circuit fusing or replacement of original fuse(s) with a higher amp rated fuse(s) is NOT covered.**

Before returning any product, a Return Material Authorization (RMA) number must be obtained from Coach Controls, Inc. and conspicuously printed on the outside of the box. Any item(s) returned without an RMA will not be accepted.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART, AND WE NEITHER ASSUME, NOR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR US, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT. THIS WARRANTY SHALL NOT APPLY TO THIS PRODUCT OR ANY PART THEREOF WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE, OR MISUSE. WE MAKE NO WARRANTY WHATSOEVER IN RESPECT TO ACCESSORIES OR PARTS NOT SUPPLIED BY US. THE TERM "ORIGINAL PURCHASER" AS USED IN THIS WARRANTY, SHALL BE DEEMED TO MEAN THAT PERSON OR ENTITY WHO ORIGINALLY PURCHASED THE PRODUCT. THIS WARRANTY SHALL APPLY ONLY WITHIN THE BOUNDARIES OF THE CONTINENTAL UNITED STATES.

Original Purchaser must notify Coach Controls, Inc. of a breach of warranty within thirty (30) days after discovery thereof, but not later than the guarantee period; otherwise, such claims shall be deemed waived. No allowance will be granted for any repairs or alterations made by the Original Purchaser without Coach Controls, Inc.'s prior written consent. No person, firm, or corporation is authorized to assume for us any other liability in connection with the sale of these goods.

This warranty shall not apply to any Coach Controls, Inc. product, or part thereof, which has been repaired or altered, without Coach Controls, Inc.'s written consent, outside Coach Controls, Inc.'s manufacturing facility, or altered in any way so as, in the judgment of Coach Controls, Inc. to affect adversely the stability or reliability of the Coach Controls, Inc.'s product, or has been subject to misuse, negligence, or accident, or has not been operated in accordance with Coach Controls, Inc.'s printed instructions, or has been operated under conditions more severe than, or otherwise exceeding, normal use for such product.

Coach Controls, Inc. shall not be liable for any injury, whether to person or property, or for any damages, whether direct, indirect, consequential, or special, or any other damage resulting from the use, or misuse, of this product. Any injury or damage so incurred will be limited to the original purchase price of the product.

### **MISSING ITEMS POLICY**

Every Coach Controls kit is precisely inspected and weighed in accordance with a packing list prior to shipment to ensure all components are included. It is the customer's responsibility to immediately inspect and verify package contents upon receipt. Coach Controls can only be responsible for items missing from shipments directly from our facility to the purchaser. Missing item claims must be submitted within 30 days of purchase, and Coach Controls reserves the right to challenge such claims through review of its inspection and shipping records.

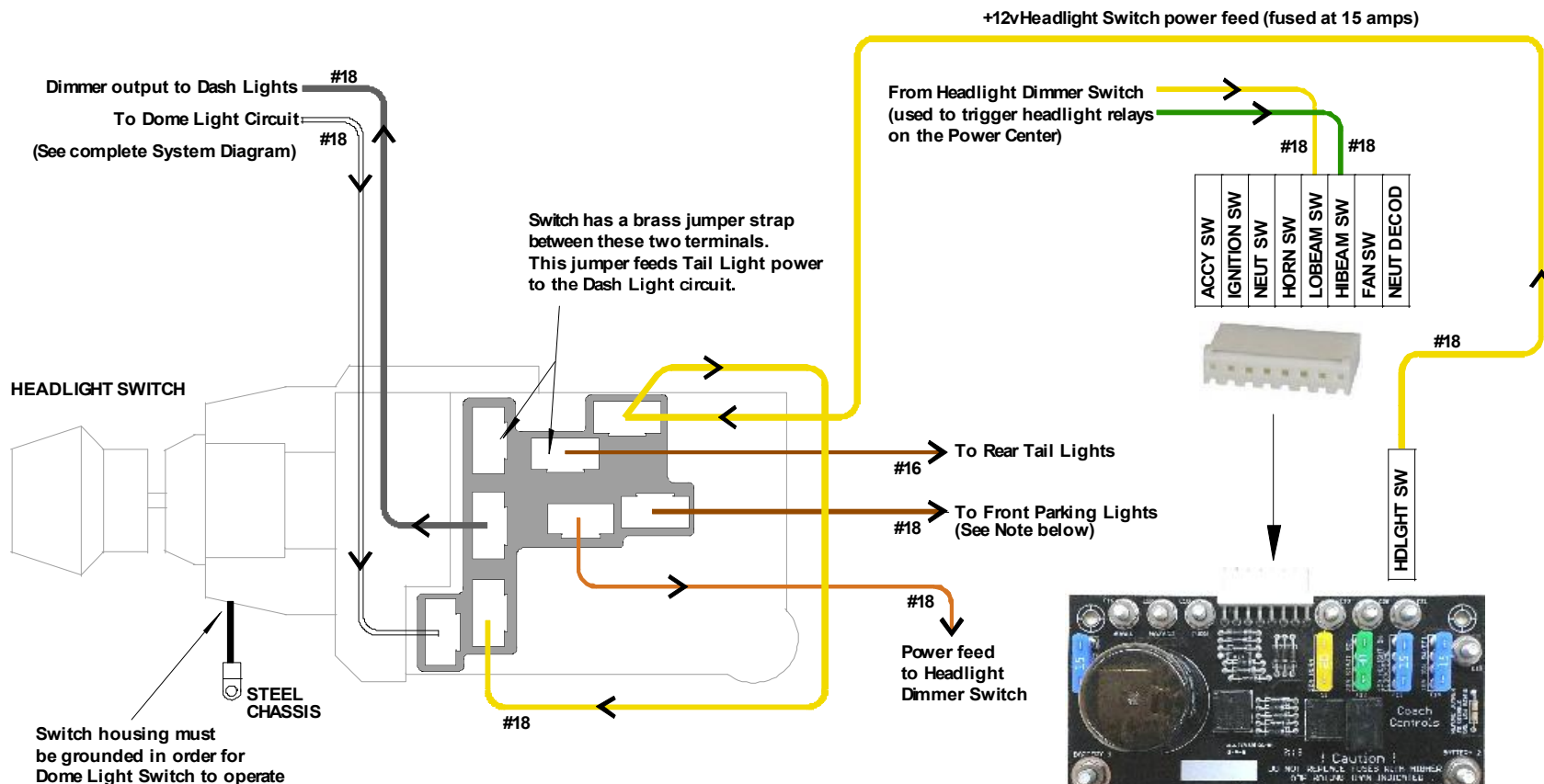


# GM Headlight Switch Connections

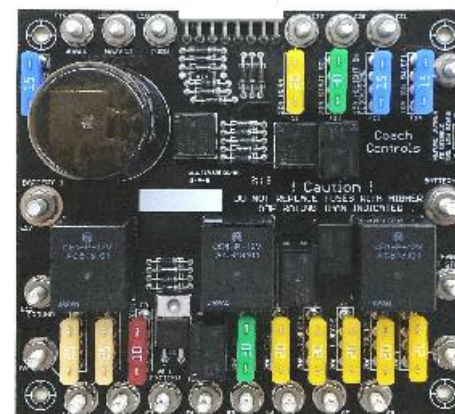
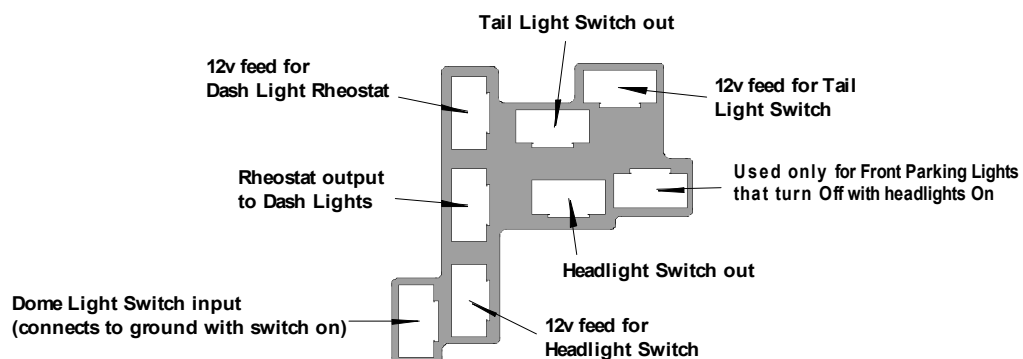
## Details for Front Parking Lights that turn Off with Headlights On

(\*\* This diagram applies to Roadster-18B and Coupe-23B Kits only \*\*)

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### TERMINAL IDENTIFICATION



ROADSTER-18B POWER CENTER



**NOTE:** If you use the Front Parking Light output of the Headlight Switch, the front parking lights will turn OFF when the headlights are turned ON. If you want the front parking lights to remain ON with headlights, connection will be different, see separate diagram.



# Utilizing Power Center Relays for Heater A/C Unit with 3 Speed Blower Motor

(This diagram applies to all Kits, Coupe Power Center shown)

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