Brake & Run Kit Installation Instructions

for

Model A Fords & Other Antique Vehicles

Logo Lites ™

Lifetime Technical Support
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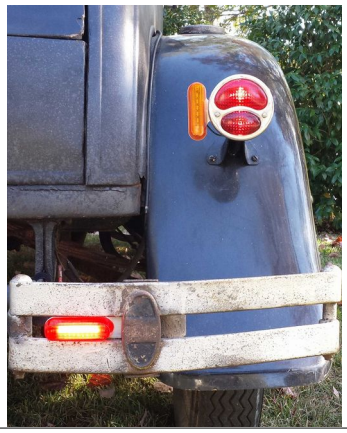
Manual 100-0003B

Thank you for purchasing a Logo Lites® Brake & Run Kit!

Brake & Run Overview

- Works with 6V and 12V automotive electrical systems.
- Automatically works with Positive and Negative chassis ground polarities without wiring changes.
- Tail (parking/running/marker/cowl) light function.
- Brake light function, for additional visibility*.
- Requires no permanent modifications to your vehicle.
- Will not discharge your vehicle battery when not in use (less than 0.000005 Amp current draw when off).
- Pulls less than 1 Amp when signaling for low generator strain.
- Control box has thermal and overload safeties.
- Complete kit for Model A Fords and can be used on other antique vehicles.



* Brake & Run is used in addition to your vehicle's brake lights for extra visibility and are not intended as replacements for factory lighting.

Safety Information

- Read the instructions completely before starting the installation.
- Never attempt automobile wiring without first disconnecting the battery.
- Ensure you know where wiring, fuel, brake, and other critical systems are located in the vehicle.
- When using power tools such as a drill, be sure to use the proper safety equipment (eye protection, etc.). Always follow manufacturer's recommendations when using power and hand tools.
- **The installation discussed is for reference only and does not indicate that any particular configuration will be safe for all vehicles. A safe and secure installation is solely the responsibility of the installer!!**

Tools & Supplies Needed

Logo Lites Brake & Run installs with simple hand tools found in the average home mechanic's toolbox. Required tools are different for every installation, but a wire crimp tool is required unless you plan to solder your connectors. Some installations will need a drill and 9/64" drill bit. It may be helpful to have tie wraps to suspend wires for a complete installation. A multimeter is helpful to locate power and chassis connections, and to troubleshoot any connection issues.

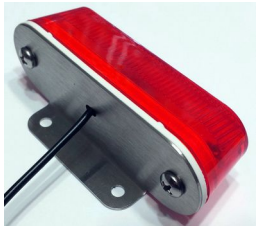
Note – This kit is complete for Model A Fords and many other antique vehicles, but you may need to purchase additional electrical connectors for your vehicle's power and chassis needs. Your local auto parts store should have taps, splices, ring terminals, or other electrical connectors if you need them.

Operation

Once installed into a properly wired vehicle, Brake & Run operates automatically. When the vehicle running lights (headlights, high beams, parking, cowl lights) are turned on, Brake & Run glows as a tail light function. Pressing the brake pedal causes Brake & Run to emit a bright light. The extra light helps to add visibility to the rear of the vehicle when driving in the rain, at night, or any time. Also, LED lights illuminate more quickly than conventional bulbs which may decrease the reaction time of the vehicle following you.

The controller works on 6 or 12 Volt vehicles with positive or negative ground. The controller "senses" the polarity and voltage, so there is no wiring to reverse or switches to flip.

The Brake & Run control box connects to any of the Red Logo Lites Type 23 Signal Lights. The most popular design is the Model A bumper bracket signal which mounts between the bumpers under the bumper clamps. Universal mounts are also available which mount to custom brackets or to holes drilled in the vehicle. The controller cannot drive conventional bulbs.



Prepare the Controller Connector

Before proceeding to the instructions below, unscrew the six screws in the ***Controller Connector*** several turns counter clockwise so that there is enough room for stripped wires to be inserted into the small clamps. The ***Controller Connector*** color may vary from the one pictured to the right. Do NOT insert the ***Controller Connector*** into the controller at this time.

Installation

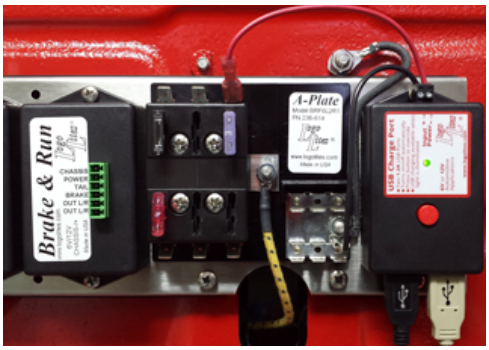
Brake & Run mounts directly to your vehicle or onto an A-Plate™, if available for your vehicle. Instructions for both Conventional and A-Plate installations are available below.

Tip – A wire that is too exact in length is difficult to connect. A wire that has too much slack looks sloppy and is easily caught in tools and other equipment. When cutting power wires, pull the wire tight between the two points the wire must span, and then add 1" to the length of the wire before cutting. Adjust this 1" general guideline for your needs using your own best judgment. Remember, it is easy to trim a wire shorter, but not so easy to make it longer.

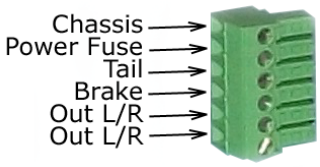
Step 1 – Attach Controller

Installation on a Logo Lites A-Plate™:

- ☐ **Disconnect vehicle battery.**
- ☐ If the A-Plate is installed, remove the A-Plate from the vehicle.
- ☐ Use two #8-32 screws and nuts to mount Brake & Run to an available location on your A-Plate with the ***Controller Connector*** label words right side up.
- ☐ Choose an available fuse terminal for Brake & Run.
- ☐ Cut red wire to length to reach from fuse terminal to the ***Controller Connector***.
- ☐ Cut black wire to length to reach from the chassis terminals of the fuse block to the ***Controller Connector***.



- ☐ Strip 1/4" of insulation off of both ends of the red and black wires.
- ☐ Crimp non-insulated 1/4" female quick disconnect terminal onto black wire.
- ☐ Crimp insulated 1/4" female quick disconnect terminal onto red wire.
- ☐ Fully insert ***Controller Connector*** into Brake & Run controller.
- ☐ The Brake & Run label shows which wires go in which connector holes. Insert the stripped end of black wire into the CHASSIS (top) hole of the ***Controller Connector*** and tighten the screw to hold the wire snugly.



- ☐ Repeat for the red wire into the POWER (second) hole of the ***Controller Connector***.
- ☐ Push uninsulated 1/4" quick disconnect terminal of black wire onto unused male chassis terminal on fuse block.
- ☐ Push red 1/4" quick disconnect terminal of red wire onto the available fuse terminal you chose earlier.
- ☐ Insert 1 Amp ATO fuse into the fuse slot for the terminal you chose earlier.

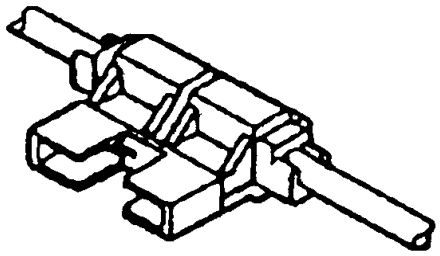
- ☐ Install A-Plate into your vehicle.
- ☐ Connect harnesses to other devices mounted to A-Plate if equipped.
- ☐ Double check that installed wires are connected safely and correctly.

Proceed to Step 2 – Attach Signal Lights.

Conventional Installation (without a Logo Lites A-Plate™):

- ☐ **Disconnect vehicle battery.**
- ☐ Choose a location to mount the Brake & Run control box. The location should be in a dry area in the interior of your vehicle. Be sure that the way you mount your Brake & Run control box does not interfere with or damage your vehicle's fuel, electrical, or safety systems. Brake & Run mounts with two #8 self threading screws (provided). Depending on your application, you might be able to use adhesive backed hook and loop tape to mount your Brake & Run control box (not provided).
- ☐ Choose an available power source for Brake & Run. The power source should be an "always on" type that has voltage even when the vehicle engine is switched off. Antique cars may have a stud or screw available to connect to with a ring terminal. Some fuse panels have a quick connect terminal labeled BAT for this purpose. *We will call the connector you choose for this purpose the* ***"Power Connector."***
- ☐ Choose an electrical connection location for the chassis wire. The chassis connection should be to a metal, wire, dash, frame, or body location that electrically connects back to the battery. A common chassis ground point may be available under the dash, or an existing screw may provide a chassis connection. Another option is to drill a hole and use an included #8 self tapping screw to provide the chassis connection. *We will call the connector you choose for this purpose the* ***"Chassis Connector."***
- ☐ Drill any needed holes to mount the Brake & Run control box. If mounting with the included #8 self tapping screws, the holes should be 9/64" in diameter.
- ☐ If necessary, drill a hole to connect the ***Chassis Connector***.
- ☐ Mount the Brake & Run controller using the hex key and #8 self tapping screws or other method of your choice.
- ☐ Cut black wire to length to reach from the ***Chassis Connector*** location you chose to the ***Controller Connector***.
- ☐ Cut red wire to length to reach from the ***Power Connector*** location you chose to the ***Controller Connector***.
- ☐ Choose a location for the fuse holder. It may be installed anywhere in the red wire but should be located as close to the ***Power Connector*** as possible (6" or less).
- ☐ Cut red wire into two pieces where you want to install the fuse holder.
- ☐ Crimp both pieces of red wire into the fuse holder, one on each side.

Installation on vehicles without an A-Plate™ requires the use of the included fuse holder. To install it, put the fuse holder in your hand with the two metal pieces at the top and facing you. The fuse holder is an insulation displacement type, which means you should not cut the installation off of the wire before you crimp the fuse holder to the wire. The wires go into the fuse holder at the bottom, through the holes from the left and from the right. Push one wire into the right side until it hits the middle stop. It may help to twist the wire to get it to go into the hole. Then take the piece on the top right (with the metal in it) and fold it toward the wire until it contacts the wire. Use pliers to squeeze it down until the latch catches. Repeat this for the wire on the other side. This creates an inline fuse holder.



- ☐ Strip 1/4" of insulation off of both ends of the red and black wires.
- ☐ Crimp the ***Chassis Connector*** onto the black wire. Your ***Chassis Connector*** may be a non-insulated #8 ring terminal, female quick disconnect terminal, or other connector you chose for your chassis ground connection earlier.
- ☐ Connect the ***Chassis Connector*** to the vehicle chassis ground point chosen earlier. If you use the #8 non-insulated ring terminal, insert the #8 screw through the #8 tooth washer and the ring terminal, and screw it into the hole you drilled earlier using the hex key.

- ☐ Crimp insulated #10 ring terminal, insulated female quick disconnect terminal, or other connector you chose for your ***Power Connector*** onto the red wire near the fuse holder.
- ☐ Connect the ***Power Connector*** to the terminal, stud, screw, or other power source.
- ☐ Fully insert ***Controller Connector*** into Brake & Run controller.
- ☐ Run the wires from the ***Chassis Connector*** and the ***Power Connector*** to the ***Controller Connector***. Trim the wire and re-strip at the ***Controller Connector*** end if necessary.
- ☐ The Brake & Run label shows which wires go in which connector holes. Insert the stripped end of black wire into the CHASSIS (top) hole of the ***Controller Connector*** and tighten the screw to hold the wire snugly.
- ☐ Repeat for the red wire into the POWER (second) hole of the ***Controller Connector***.
- ☐ Double check that all wires are connected safely and correctly.

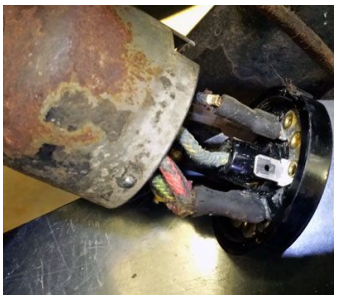
Tip – Use tie wraps or other means to support the wires to prevent them from damage or interference with vehicle moving parts or systems.

- ☐ Insert 1 Amp ATO fuse into the fuse holder.

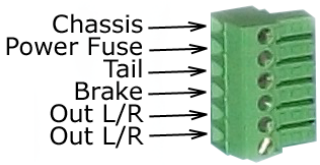
Step 2 – Attach Signal Lights

- ☐ Attach two signal lights to the rear of the vehicle by following the separate instruction manual for the kind of Logo Lites Type 23 Signal Lights you are installing.
- ☐ If you have not already done so, crimp a male bullet connector onto the signal light wire. It is okay to leave the wires hanging in an unfinished manner for now.

Step 3 – Connect to Vehicle Tail Light Signals



- ☐ Trace the wiring and find a suitable location to get a tail light signal. Ideally, the best place to connect is directly to a headlight switch terminal that provides a voltage signal when the lights are turned on. Check any possible terminals with a multimeter to ensure they are "hot" when the headlights are on, and "cold" when the lights are off. On a Model A Ford, open the headlight switch housing and look for a non-insulated 1/4" male quick disconnect terminal. If one is available, you can probably use that terminal for your tail light signal.
- ☐ Using the ring, splice, or quick disconnect terminal that is appropriate for your vehicle, connect a wire to the tail light signal source.
- ☐ Working from the connection you just made to the Brake & Run controller, suspend wire from vehicle frame or existing harness securely with black tie wraps, a few layers of black tape, or your own preferred method, removing the slack as you go. Trim the wire at the ***Controller Connector*** end as necessary.



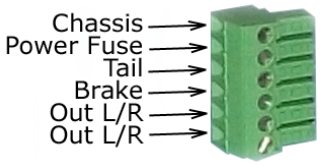
- ☐ Strip 1/4" of insulation off of the tail light signal wire you just ran.
- ☐ Insert the stripped end of the tail light signal wire into the TAIL (3rd) hole of the ***Controller Connector*** and tighten the screw to hold the wire snugly.

Step 4 – Connect to Vehicle Brake Light Signals

- ☐ Trace the wiring and find a suitable location to get a brake light signal. Ideally, the best place to connect is directly to a brake light switch terminal that provides a voltage signal when the brake pedal is pressed. Check any possible terminals with a multimeter to ensure they are "hot" when the brakes are on, and "cold" when the brakes are off. On a Model A Ford, the easiest place to connect to the brake lights is at the stop light switch. On '28-'29 style cars, the stoplight switch is located on the driver's side of the transmission. On '30-'31 style cars, the stoplight switch is located behind the rear end of the pedal to cross shaft rod.

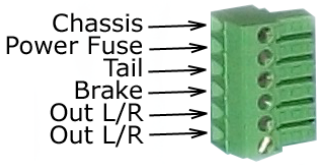
The pedal to cross shaft rod is the adjustable rod that goes from the brake pedal to the cross shaft. The brake light switch has two terminals. The rear terminal is normally the one that provides the switched signal you need.

- ☐ Using the ring, splice, or quick disconnect terminal that is appropriate for your vehicle, connect a wire to the brake light signal source. On a Model A Ford, use the red #8 hook terminal to connect to the stop light switch.
- ☐ From the connection you just made, working your way to the Brake & Run controller, suspend wire from vehicle frame or existing harness. Secure it with black tie wraps, a few layers of black tape, or your own preferred method, removing the slack as you go. Trim the wire at the ***Controller Connector*** end as necessary.
- ☐ Strip 1/4" of insulation off of the brake light signal wire you just ran.
- ☐ Insert the stripped end of the brake light signal wire into the BRAKE (4th) hole of the ***Controller Connector*** and tighten the screw to hold the wire snugly.



Step 5 – Connect Signal Wires

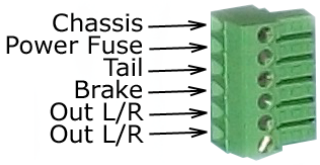
- ☐ Run a separate wire from ***Controller Connector*** out to the male bullet of each Logo Lites signal light. Remember to leave enough extra wire at ***Controller Connector*** end so it can be connected to the controller when you are finished. On a Model A Ford, run the wires behind the cowl panel. Look closely for a hole where the floor, cowl, and firewall meet. This is where the harness for cowl light equipped cars transitions from the frame into the passenger compartment. It is a perfect place for the two signal light wires to exit the interior of the vehicle. An alternate method is to run the wires through the steering column grommet.
- ☐ Near the rear corners of the car, crimp a female bullet connector to the wire you just ran.
- ☐ Insert turn signal male bullet into female bullet to connect turn signal to wire.
- ☐ Working from signal light back to controller, suspend wire from vehicle frame or existing harness. Secure with black tie wraps, a few layers of black tape, or your own preferred method, removing the slack as you go. Trim wire at ***Controller Connector*** end as necessary.
- ☐ Strip 1/4" of insulation off of both black signal wires.
- ☐ Insert the two signal light wires into the two bottom holes as shown in the picture to the right, and tighten screws. Left and right not important. One signal light wire goes into each hole.
- ☐ Make sure ***Controller Connector*** plug is still fully seated into controller jack.
- ☐ Replace any panels you removed earlier for access.
- ☐ Re-connect vehicle battery.



Troubleshooting

If the fuse is blown, e-mail or call Tech Support (see front of manual) *before* installing a replacement fuse. In this case, a blown fuse indicates a problem with the vehicle's electrical system. If the fuse is not blown, but the Logo Lites do not work as expected, here are some steps to help troubleshoot the unit.

If signals do not work with lights on and brakes depressed:



- Make sure battery is charged and connected.
- Make sure ***Controller Connector*** plug is fully inserted into controller jack.
- Make sure chassis and power fuse screws are tight on the controller plug.
- Use a multimeter and touch the probes to the chassis and power fuse screws on the controller plug and make sure there is voltage to the unit.
- Make sure the 1 Amp fuse is installed and not blown.
- Check if there is power available to the fuse by touching the probes to the ***Power Connector*** and the ***Chassis Connector*** and fix as necessary.

If one signal works, but one does not:

- The power wiring to the controller is good! This means the problem is either in the wire going to the nonfunctional signal, or in the chassis-return from the signal. Remember: *electrical circuits have two wires. The black wire going to the signal light is one, and the chassis is the other*.
- Make sure the wire is fully inserted and the screw is tight in the ***Controller Connector***.
- Make sure the wires are securely crimped in both the female and male bullet connectors.
- Make sure the male is fully inserted into the female bullet.
- Make sure there is not a break in the wire between the ***Controller Connector*** and the turn signal light.
- Turn on lights (tail light function). Strip both ends of a long scrap piece of electrical wire. Touch one end of the wire to the stainless steel bracket of the non-working light, and other end to a working light's stainless steel bracket, the ***Chassis Connector***, or the battery's chassis terminal. If the light now works, the problem is with the chassis connection to the signal light that did not work. Both paint and corrosion will prevent the turn signal from making electrical contact to the bumper bracket. Create a bright metal connection for the chassis connection.
- Swap the wire with another light on the ***Controller Connector***. If light still does not come on, the wire going to the light is shorted to the chassis, there is a poor connection in the bullet connector, or the turn signal assembly has a poor connection to the chassis. If the other light that previously did work now does not work in the same position as the first light that did not work, you either have a bad ***Controller Connector*** or a bad controller. Contact Technical Support for help.

If tail light function works, but brake light function does not:

- The problem is with the wire providing the brake light signal from the brake light switch. Use a multimeter and touch the probes to the Chassis and Brake screws on the controller plug and make sure there is voltage to the unit.
- Make sure the Brake wire is fully inserted and the screw is tight in the ***Controller Connector***.
- Make sure the wire is securely crimped to its connector at the brake light switch.
- Make sure the connector is secure and making contact with the brake light switch signal.

If brake light function works, but tail light function does not:

- The problem is with the wire providing the tail light signal from the headlight switch. Use a multimeter and touch the probes to the Chassis and Tail screws on the controller plug and make sure there is voltage to the unit.
- Make sure the Tail wire is fully inserted and the screw is tight in the ***Controller Connector***.
- Make sure the wire is securely crimped to its connector at the headlight switch.
- Make sure the connector is secure and making contact with the headlight switch signal.

Parts List

Quantity	Description	Quantity	Description
1	Controller	40’	Black wire
1	Male 6 pin plug-in connector	5’	Red wire
3	Screw #8 x ½” self tapping	1	#8 hook red insulated terminal
1	Tooth washer #8	1	Female quick disconnect non-insulated terminal
1	#10 ring insulated terminal	2	Female quick disconnect red insulated terminal
1	#8 ring non-insulated terminal	2	Female bullet connectors
1	Logo Lites screwdriver	1	Blade fuse holder
1	Hex key (wrench)	2	1 Amp ATO fuse

Warranty

Creative Connections, Inc. (hereinafter “CCI”) warrants to the Purchaser of this unit that this unit will be free of defects in workmanship and materials for a period of one (1) year from the date of purchase. “Defects” as used herein, refer only to those imperfections which impair the utility of the product. Defective units reported or returned to CCI within one (1) year from date of purchase will be exchanged or repaired without charge at the option of CCI.

This warranty is limited to the repair or exchange of the product and does not cover and CCI will not pay nor provide any other benefit or service including labor or materials which may be necessary to remove or replace a defective unit. CCI shall not be liable for any injury, loss or damage, direct or consequential, arising out of the use or failure of this product. It is the user’s responsibility to determine the suitability of this product for its intended use. User assumes any and all risk or liability in connection with the installation and use of this product. This warranty does not apply to any defects resulting from abuse, negligence, intentional damage, modification, improper installation, unreasonable use, exposure to elements, or over-tightening of fasteners.

Defective units should be reported directly to CCI and not to your retailer. Contact CCI by telephone or write to the address shown in this manual. Identify the Logo Lites product purchased, the date and location of purchase, and the nature of the alleged defect. Do not ship your product back to CCI unless and until specifically directed to do so. Shipping instructions will be provided to you at the appropriate time. Shipping to CCI is the responsibility of the purchaser. All defective products returned must be accompanied by proof of purchase.

This warranty is not transferable and applies only to products sold within the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, territories of the United States, and Canada.

This limited warranty is in lieu of all other express warranties. CCI shall not be liable to any special, incidental or consequential damages. Any implied warranty of fitness for a particular purpose, merchantability or otherwise, applicable to this product, shall be limited in duration to the duration of this limited warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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