Logo Lites®

Third Brake Light Installation Guide
Vintage Removable Series

Consumer Hot Line: 888-471-LOGO
770-476-7322 In Atlanta, GA
http://www.logolites.com

P/N: 100-0007/B

Creative Connections, Inc.
3407 Hwy. 120
Duluth, GA 30096, USA

CCI 1986

Table Of Contents

INTRODUCTION

Thank you for purchasing a Logo Lites® LED Third Brake Light Kit. Your third brake light kit was built to high quality standards to provide you with years of reliable service. This manual should serve as a guide for installing a third brake light kit on your vehicle. Although this guide is thorough, each installation is different, so it cannot cover all applications. You can install the turn signal kit yourself IF:

1. you have the right tools,
2. you have a reasonable mechanical and electrical aptitude or experience,
3. you have the knowledge or diagrams of where wiring, fuel lines, etc. are located in the vehicle,
4. and you read and follow the instructions very carefully.

SAFETY INFORMATION

- Read the instructions completely before starting the installation of your third brake light kit.
- Never attempt automobile wiring without first disconnecting the battery from the chassis.
- 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 NEEDED

- Common wrenches and screwdrivers
- Wire crimp tool
- Wire cutter
- Wire stripper

OVERVIEW

This kit provides all the necessary parts to install a Logo Lites ® LED Third Brake Light Kit on your antique car or truck. Vintage Removable Series Logo Lites LED Third Brake Lights mount to the back window with two suction cups. The wires connect to the brake light power wire and the chassis. The third brake light works on 6 or 12 Volt cars with positive or negative ground.

HARDWARE COMPONENTS

Qty	Item	Qty	Item	Qty	Item
1	LED Third Brake Light	2	Suction Cups	1	ABS Pointer
15’	Red & Black Wire	2	Brass Nuts	1	ABS Inclinometer
1	Fuse Holder	1	Red Quick Disconnect	1	ABS Bottom Blinder
1	1 Amp Fuse	2	#8 Studs	2	ABS Side Blinders
1	#8 Ring Terminal	10	#8 Self Tapping Screws	2	ABS Binding Channels
1	Large Ring Terminal	5	#8 Machine Screws	2	ABS Window Mounts
1	Hex Driver	5	#8 Machine Nuts	1	Manual
2	Suspension Arms	1	#8 Tooth Washer		
2	Side Mounts	1	Blue T-Tap		

INSTALLATION

STEP 1: ASSEMBLE THE INCLINOMETER

To begin the installation, you must assemble a tool that is provided in the kit called an inclinometer. This tool measures angles and it is used here to determine the angle of your back window. Locate the inclinometer and the pointer in the plastic parts kit.. Place the pointer on the front of the inclinometer. Insert a #8 machine screw through the hole in the top and secure them with a #8 machine nut on the back. Leave the screw a little loose so that the pointer can rotate freely. When assembled, they should look like Figure 1. To measure an angle, hold the top or bottom of the inclinometer against what you are measuring.

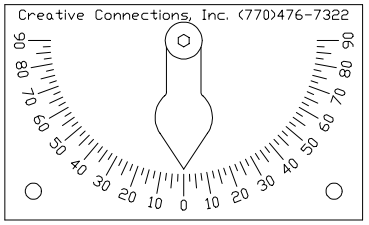

Figure 1 - Inclinometer

STEP 2: LEVEL THE CAR

The next step is to level the car. The car must be level from front to back as a minimum. The bottom of the doorjamb, under the door, is usually parallel to the axis of the car. Use this area (shown by the arrow in Figure 2) to check for level with the inclinometer. Once level, unless you have a modified vehicle, the inclinometer will point at 0°.

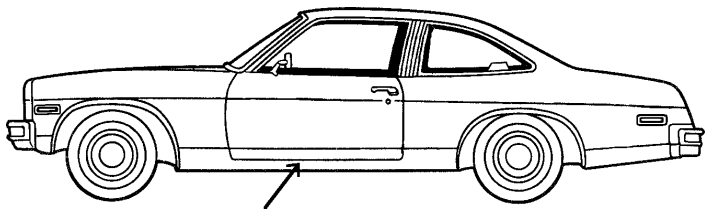

Figure 2 - Bottom of Door Jamb

Special Information about Modified Vehicles

If your car has been modified with larger tires in the back than in the front, air shocks, lowered front end, etc. then you should drive the vehicle onto a level surface. The bottom of the doorjamb shown in Figure 2 will **not** be level on a car that is modified in this way.

STEP 3: MEASURE THE REAR WINDOW ANGLE

You must measure the rear window angle where you will be mounting the light. Do this by holding the top of the inclinometer against the inside of the window in the selected location. **If your car is a hatch-back, it must be in the closed position**. If you cannot reach the position to measure it, or it is difficult to read the inclinometer, you can place the bottom of the inclinometer on the outside of the glass in the correct location and measure the angle. Write down the angle here _____ for reference later.

Inclinometer Hints:

- If the numbers are hard to read on the face of the inclinometer, rub a piece of white chalk against the face. Wipe the chalk off the face leaving the chalk in the numbers. This will "highlight" the numbers.
- When measuring angles with the inclinometer, tilt the top of the face toward you a little to make the pointer move easier. Tap gently on the face of the inclinometer to make measurements that are more accurate. If it still does not move easily, loosen the nut a little.

STEP 4: CUT THE BLINDERS

Use the angle you wrote down in Step 3 above, and the information shown in Table 1, below, to locate the proper position to cut. If the chart says "Don't use blinder" for your vehicle, you do not have to use the blinders and you can skip to Step 7. For all other vehicles, follow the instructions below on how to cut the blinders in the correct grooves.

Table 1 - Blinder Cut Guide

Inclinometer Reading Between	Cut Groove Between Numbers:
13-21°	No cut
22-29°	8&9
30-37°	8&7
38-45°	7&6
46-53°	6&5
54-61°	5&4
62-69°	4&3
70-77°	3&2
78-85°	2&1
85-90°	Don't use blinder

Side Blinders

Be careful when cutting the blinders! On the side with the grooves, locate the two numbers in the large groove at the bottom. You will have to cut the blinders in the small groove located between these two numbers. It is usually easiest to turn the blinder so that the numbers are read upside down and then pull the blade, away from your other hand and your body as shown in Figure 3. Be sure to keep your fingers away from where you are cutting! If you rush, the blade may jump out of the small groove and can cut you. Use many strokes rather than high pressure. For best results, it may take 20 to 30 light strokes of the blade to cut all the way through the blinder.

Bottom Blinder

Repeat the same procedure as the side blinders for the bottom blinder. Again, cut the blinder between the numbers shown in the chart. More time and care should be taken cutting the bottom blinder because it is more visible once mounted in the car. If your blade jumps out of the groove when you are cutting the bottom blinder, a scar may be left on the visible surface.

Blinder Tip:

- If you use too much force while cutting or you break the blinders, there will be a white area on the cut or broken edge. This can be polished with a wet #400 sandpaper to return most of the black appearance.

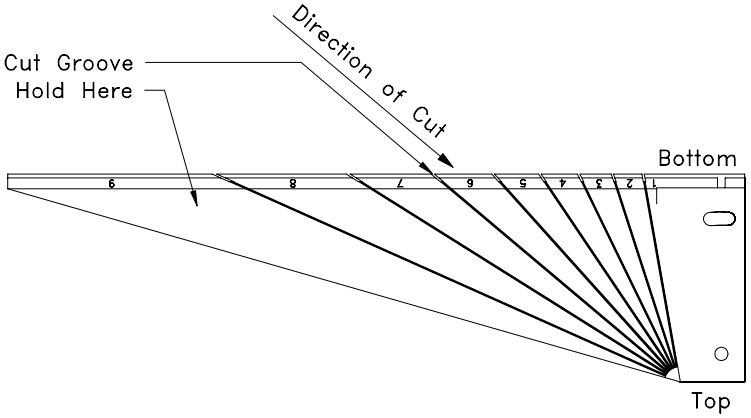

Figure 3 - Side Blinder Cut Example

STEP 6: ASSEMBLE THE BLINDERS

The bottom blinder should loosely lock into the side blinders. Now take the binding channels, and slip them over the joint between the bottom and side blinders. If you cut the blinders, then the binding channels will be too long. Slide the binding channels all of the way to the end of the track. Make sure that the lock at the back of the bottom blinder is engaged into the side blinders. Using a single edge safety razor blade or similar cutting device, mark the binding channel where it protrudes from the blinders. Remove the binding channel and carefully cut it at the mark you just made with a safety razor blade or a pair of scissors. Now reverse the binding channel and re-assemble it with the blinders (reverse it so that the cut end goes on first - this will hide the cut against the lock/stop).

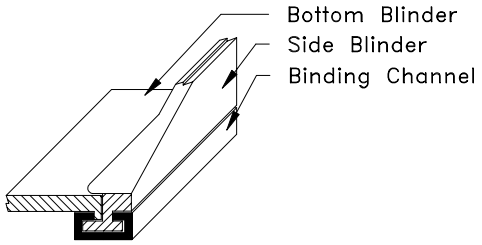

Figure 4 - Assembled Blinders

STEP 7 ASSEMBLE THIRD BRAKE LIGHT

1. Look at the third brake light and be sure the red lens housing is flush or recessed into the case. If not, place the unit face down on a flat surface and press gently on the back of the case, until the case and lens housing are flush.
2. Thread four #8 self-tapping screws into the four side holes in the case using the hex driver (see Figure 5). Under the surface, the holes are much larger, and should thread easily once the screws are started. Once the screws have started, thread them down approximately three turns.
3. Remove the screws from the case. The holes are now threaded and will make later assembly easier. Carefully remove any flashing that may be sticking up from the case.

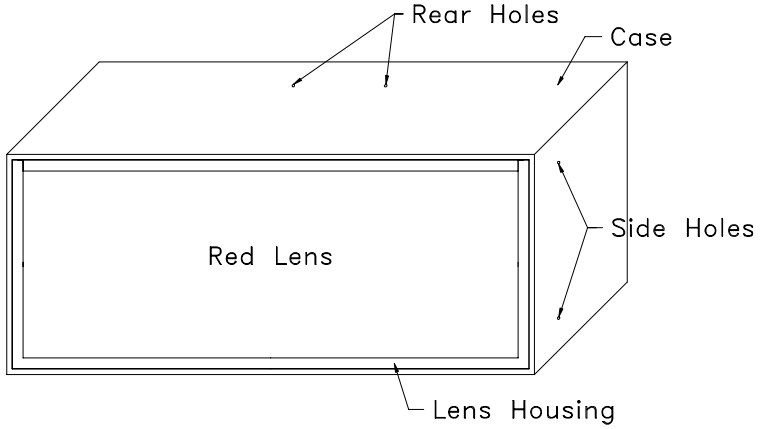

Figure 5 - Hole Locations

4. Using a #8 machine screw and a #8 machine nut, loosely assemble a suspension arm to a window mount (as shown in Figure 6). Repeat for the second suspension arm and window mount.
5. Using a #8 machine screw and a #8 machine nut, loosely assemble the other end of the suspension arm to a side mount. Make sure that the "foot" of the window mount is pointed away from the side mount, as shown in Figure 7. Repeat for the second arm and side mount.

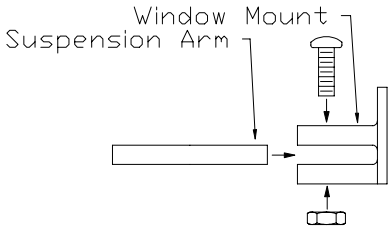

Figure 6 - Suspension Arm & Window Mount

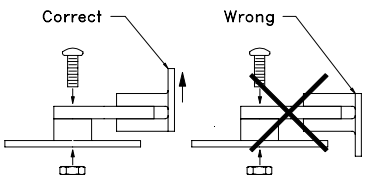

Figure 7 - Assemble Arm to Side Mount

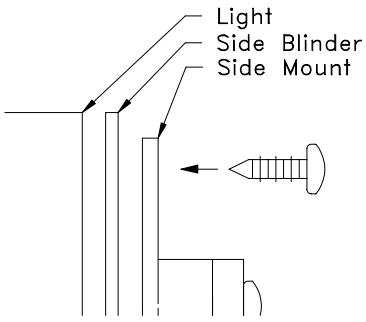

Figure 8 - Attach Blinders and Side Mounts

Figure 9 - Suspension Assembly

6. Thread the brass nuts onto the two provided studs. Then thread each stud *through the window mount* and into the back of each suction cup. Only tighten the nut and stud assembly just until the suction cup is no longer able to spin. Each completed assembly should look like Figure 9.
7. Attach the side mounts to the case with four #8 self-tapping screws as shown in Figure 8 (if blinders are not used, attach Side Mount directly to Light) . Notice how on the window mounts there is a "U" shaped groove in them to give the suction cup angle greater flexibility. When you attach the side mounts to the case, make sure that these "U" shaped groves faces downward. The completed assembly should look similar to Figure 10.

Figure 10 - Completed Assembly

STEP 8: MOUNT THE THIRD BRAKE LIGHT

Set the Angle

If you are using the blinders, you have to set the angle of the box to the blinders. Tighten the four screws that are attaching the blinder to the case until a slight amount of pressure is required to adjust the blinder angle. Lay the loosely assembled unit down, on its face, on a level table or work bench (you can use the inclinometer to make sure the table is level). Use the side of the inclinometer to set the angle to the angle you measured in "Step 3: Measure the Rear Window Angle." Tighten the angle adjusting screw and then the pivot screw on each side of the case so they are tight to each other and do not easily change angles.

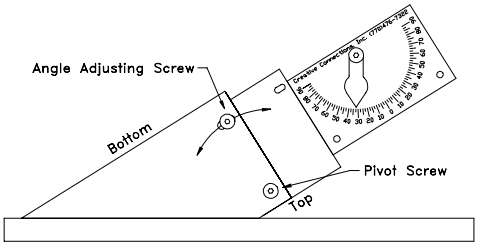

Figure 11 - Set Blinder Angle

Lay the third brake light on its face as shown in Figure 12. Tighten the two pivot screws on each side so that the suction cups are flat to the workbench. Now the third brake light is prepared to be attached to the window. Wet the suction cups and press them firmly to the back window of your vehicle. Make sure the light is centered in the window from left to right for maximum visibility. For best driver visibility, the third brake light usually works best at the bottom of the window. If you are using blinders, then the blinders should make contact with the back window. If you have a vertical back window and you are not using blinders, then the face of the brake light should make contact with the window. Some minor tweaking of the two pivot screws on each side of the case may be needed to ensure full suction cup compression and contact of the face or the blinders to the window.

Figure 12 - Set Blinder Angle

STEP 9: ROUTE THE WIRES

Remember, all vehicles are different. The information given on mounting are guidelines only. You really must take time and determine the best method for routing your wires in your vehicle.

Connect the 15' red and black wire to your third brake light. Snap the quick disconnect connector together all the way. This connector is keyed, so if it will not go together, try it the other way.

At the third brake light, make sure you leave yourself a little slack in the wire so that you can tuck away and hide the wire when the brake light is removed from the car. Although routing the wires can usually be done without drilling any holes, if you do decide to drill a hole, **make sure that there are no wires, fuel lines, glass, or brake lines where you are making the holes**.
The easiest way to connect the third brake to power is to tap into the brake light wiring harness, usually near the brake lights. However, it may be easier in many vehicles to connect to the harness running to the brake lights

inside the passenger compartment. Many coupes and sedans have easy access to the harness under the package tray, above the driver's side wheel well.

STEP 10: MAKE THE ELECTRICAL CONNECTIONS

Determine Your Chassis Polarity

It is very important to determine if your vehicle is positive or negative chassis. Start by looking at your car's battery. There are two battery cables. One is connected from the battery to the starter. The other cable is connected from the battery to the chassis (frame) of the vehicle. The cable that connected to the chassis from the battery will indicate which polarity your chassis is. Look at the battery where the cable from the chassis connects. If there is a + marked on the battery, you have a **positive** chassis. If there is a – on that connection of the battery, you have a **negative** chassis. Once you have determined your chassis polarity, follow the appropriate instructions below. **CAUTION! -- Before proceeding any further, disconnect the side of the battery that connects to the chassis.**

General Connection Information

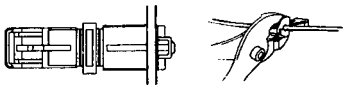

Figure 13 - T-Tap Connector

You will be splitting the two wires apart at the end connecting to the vehicle's harness. One will connect to the chassis and the other will connect to the wire providing power to the brake lights. The chassis connection can be made either by putting the provided large ring terminal under the head of a bolt that threads into a grounded metal member of the vehicle, or by drilling a 9/64" hole in the chassis and screwing a #8 self tapping screw, through the #8 star washer, and the #8 ring terminal.

Determine where you are going to make your chassis and brake light wire connection. Cut the wire to a length that will allow both the chassis connection and the connection to the brake light wire. We suggest that you leave an extra inch or two of wire in length to make it easy to assemble. Cut the pair of wires apart approximately 1/4", then take one wire in each hand and slowly split the wires apart (like peeling a banana) until you have approximately 12" of the two wires split apart (you can split more if needed).

Negative Chassis Electrical Connection

Red Wire: Strip 0.250" - 0.375" (1/4" to 3/8") of insulation off the end of the red wire. Twist the conductor strands together. Insert the twisted conductors into the supplied red female quick connect terminal until it stops. Where the wire goes into the crimp connector, the wire goes through a large barrel and then a small barrel. Using a crimping tool, crimp the wire in place in the small barrel. Next, crimp the outer most barrel (the large barrel) for mechanical strength.

Black Wire: Strip 0.250" - 0.375" (1/4" to 3/8") of insulation off the end of the black wire. Twist the conductor strands together. Insert the twisted conductors into either the #8 or the 5/16" ring terminal until it stops. Using a crimping tool, crimp the wire in place in the barrel. Connect the ring terminal to the chassis by putting the 5/16" ring terminal under an existing bolt, or by screwing a #8 self tapping screw into a 9/64" hole in the chassis.

Positive Chassis Electrical Connection

Black Wire: Strip 0.250" - 0.375" (1/4" to 3/8") of insulation off the end of the black wire. Twist the conductor strands together. Insert the twisted conductors into the supplied red female quick connect terminal until it stops. Where the wire goes into the crimp connector, the wire goes through a large barrel and then a small barrel. Using a crimping tool, crimp the wire in place in the small barrel. Next, crimp the outer most barrel (the large barrel) for mechanical strength.

Red Wire: Strip 0.250" - 0.375" (1/4" to 3/8") of insulation off the end of the red wire. Twist the conductor strands together. Insert the twisted conductors into either the #8 or the 5/16" ring terminal until it stops. Using a crimping tool, crimp the wire in place in the barrel. Connect the ring terminal to the chassis by putting the 5/16" ring terminal under an existing bolt, or by screwing a #8 self tapping screw into a 9/64" hole in the chassis.

Assemble Power Connection

To connect the power wire, snap the included blue t-tap around the vehicle's brake light wire where you want to get the power. To do this, place the wire in the open channel as shown in Figure 13. Fold the connector body until the metal element contacts the wire, and crimp the connector closed with a pair of pliers. Push one end of the white fuse holder into the female slot of the t-tap. Push the red female quick disconnect onto the opposite end of the white fuse holder. Insert the fuse into the fuse holder. Re-connect the vehicle's battery.

REMOVING THIRD BRAKE LIGHT

To remove your Logo Lites LED Third Brake Light, disconnect the connector near the brake light by releasing the latch and pulling the two connectors apart. Pull lightly on the tabs on the two suction cups to remove the vacuum and release the third brake light.

TROUBLE SHOOTING

Cause	Test	Solution
Disconnected or dead battery	Check if head lights work	Connect battery, clean terminals, or charge
Bad brake light switch or vehicle fuse	Check if regular brake lights work	Check fuse or replace brake light switch
Incorrect wiring	Check against instructions in Step 10	Re-wire as stated in Step 10
Blown third brake light fuse	Remove fuse and test	Check wire for abrasions or short to chassis. Replace fuse. **Unit can safely use 1, 2, or 3 Amp fuse.**
Bad chassis connection	Run wire from battery's chassis connection to third brake light chassis connection	Clean chassis connection/relocate chassis connection
Bad connections	Check all connections from vehicle wiring to third brake light	Fix or clean bad connections
Open connector	Check the quick disconnect connector near the third brake light	Ensure the connector is pushed all the way together to make contact

If you have confirmed that none of the above are causing the third brake light not to illuminate, call the Consumer Hot Line shown on the front of this manual.

REPLACEMENT PARTS GUIDE

P.N.	NAME	DESCRIPTION	PRICE
236-508	Fuse	2 each, ATO 1 amp blade fuses	1.95

Prices are in U.S. Dollars, are subject to change, and do not include shipping or handling charges. To order, call your Logo Lites dealer, or call the Consumer Hot Line shown on the front of this manual.

LIMITED 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 through the Consumer Hot Line through the telephone number shown on the front of this manual or write to the address shown on the front of the 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. 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.