



Quick Start Guide: SL-3

Thank you for purchasing this SL-3 Strobe Light Circuit Kit by AARON HEINE Electronics. We take pride in the products we create and hope you enjoy them. Please take some time to read through this instruction manual for warnings, tips and tricks for installation.

The SL-3 is a lighting circuit that emulates the dual out of sync strobe lights that were factory installed on the Amtrak GE Dash 8-32BWH built in the early 1990's. The SL-3 has a few different parts included in the kit and we have designed everything to keep the installation as simple as possible. Yes, there are some small parts in the bag, but our intention is to bring your model to life!

Important!

The SL-3 is designed to be connected to your DCC (digital) decoder **ONLY** and can take a max voltage input of 14 volts DC. Anything other than these two restrictions will damage the circuit. There are no liabilities for any damages accumulated for improper installation, tampering with the circuit board, or removing the heat shrink. **This will void any returns if the product fails to operate or damages personal equipment.**

Required tools and materials NOT included in this kit

- Hobby knife
- File or sandpaper
- Drill bit #76 (0.508 mm)
- Soldering iron with solder and flux
- Cyanoacrylate (CA) glue
- Vinyl electrical tape
- Micro Kristal Klear from Microscale Industries

The SL-3 kit includes a variety of detail parts for you to customize your model. Not all parts will be used, so be sure to reference prototype photos to accurately place the appropriate details.

Two different styles of strobe light housings are included, giving you two different options depending on the version of the model you're building. The first style has the anti-glare shades on the bottom half just below the lens, while the other style has it removed. Both strobe light housings are compatible with the Atlas Dash 8-32BWH in HO scale, they have been designed to fit these models specifically. However, it might be possible to fit them on other models with some modification. Any unused parts can be saved for future projects—perfect for your junk parts drawer!

A) Choosing and preparing the brackets and strobe light bases

Determine which strobe light housings you want to use that best fit your model. Carefully remove them from the support tree and clean off any excess material or flashing using a sharp hobby knife and a file. Position the strobe light housing on the cab face next to the number board. There is a small "lip" that will fit over the side of the face of the number board housing. The back of the strobe light housing should sit flush on the cab face as well. Clean up any flashing, then continue with the fitment and gluing steps.

Fitment/Gluing

Apply a small drop of CA glue to cab face and to the side of the number board housing where the strobe light housing will be placed. Then, carefully place the strobe light housing onto the cab where glue was just applied (Fig. 1). Be sure to clean up any CA glue with a cotton swab/paper towel if need be. **Important:** There is a small hole in the center of the strobe light cavity where the LED will be placed and serves as a wire channel for the LED wires—be careful not to get any glue inside this hole. If too much glue oozes into the LED cavity, it will be difficult to insert the led in the next steps. **I recommend using a thick/gel style CA glue for this step; a little goes a long way.** Once completed, repeat the process for the other side of the cab.

B) LED Installation

Once the strobe light bases have been installed, glued, and painted, you're ready to install the LED and strobe light lenses. (Fig. 2)

Begin by taking a #76 (0.508 mm) drill bit and carefully drill into the center of the LED cavity (where the small hole is located) in the strobe light housing. You will need to drill through to the inside of the cab; this will act as a wireway for the LED wires. Then, feed the LED wires through the hole in the center of the housing. The LED should seat neatly into the recessed cavity inside the housing, which is slightly larger than the LED itself. To secure it, I recommend using a small drop of *Micro Kristal Klear* from Microscale Industries. Apply the glue to the bottom of the LED where the wires exit, then gently pull the wires from inside the cab to prevent any tangling.

Use a piece of masking tape to temporarily hold the wires against the inside of the cab—this will keep the LED in place while the glue sets. Make sure the LED is seated correctly in the cavity (Fig. 3), and wipe away any excess glue that may seep out during installation.

Once the glue is dry, use *Micro Kristal Klear* again to apply a small amount on top of the LED inside the housing, then carefully place the strobe light lens on top. Allow the glue to fully cure before handling.

Tip: I personally recommend waiting to install the strobe light lenses until the final stages of this installation process.

C) Electrical Connection

The SL-3 PCB is fully assembled and ready for you to make your LED connections to the solder pads on the board. The solder pads on the PCB are labeled 1, 2, and C. The LED wires are colored red (+) and green (-). Solder the red wire from the first LED to pad 1, and the red wire from the second LED to pad 2. Then, solder the green wires from both LEDs to pad C.

The SL-3 requires a minimum of 9 volts DC for operation, so connect it to the 12-volt common wire on the decoder. If your decoder has limiting resistors for LEDs or incandescent bulbs, bypass them to ensure the SL-3 receives the proper voltage.

The SL-3 features two black wires for connection, with no need to worry about polarity. Simply connect one wire to the common and the other to the function or AUX wire/pad. You have two main options for connections:

Option 1: Solder one black wire to the blue common (+) wire of the decoder's pigtail, and the other to your chosen AUX function (-) wire (e.g., green or violet).

Option 2: Solder one black wire to the common (+) solder pad on the decoder or daughter board, and the other to your selected AUX function (-) solder pad (e.g., AUX 1 or AUX 2).

Make sure to cover all soldered connections with heat shrink or electrical tape to prevent electrical shorts. After soldering, test the SL-3 to ensure you can toggle the strobe lights on and off by programming the decoder's function output to 'ON/OFF.' Avoid programming the output to 'Beacon' or 'Strobe Light' as they can cause erratic operation.

Troubleshooting

After installation and the LED's do not turn on, please read through part A, B and C of the installation process. Re-check all of the wiring connections and make sure they are connected properly and fully isolated to prevent electrical shorts. If that does not work, test the SL-3 with a 9-volt battery by taking either of the black wires and connecting them to the battery terminals to complete the circuit. If the SL-3 still does not operate during this test, please contact us so we can further assist you.

Need further assistance or have questions or comments?

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