

AILD-1

Automotive Instrumentation Lighting Dimmer

Microcontroller Replacement Guide

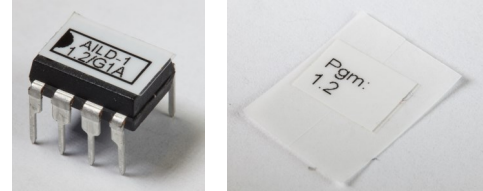


Introduction

You have been provided with a replacement, preprogrammed microcontroller IC (integrated circuit) for the AILD-1 for one or more of the following reasons:

- updated firmware (“program”);
- updated configuration;
- failure of the microcontroller.

The microcontroller is labeled with the firmware (“program”) version and configuration ID. Separate label(s) might have been provided for updating the large product build information label on the outside of the AILD-1 enclosure.



Upon completion of this procedure, please send us an e-mail message with the information requested in Step 11 so we can update our records.

Tools Needed

You will need:

- a small flat head screwdriver (for prying) or a DIP IC extraction tool; and
- a #1 Phillips screwdriver.

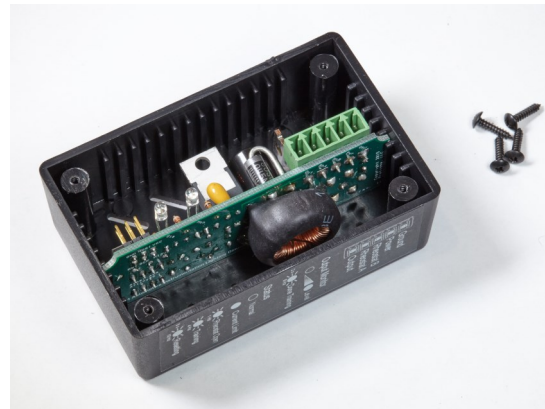
Questions?

E-mail

customer-service@protizmo.com

Replacement Procedure

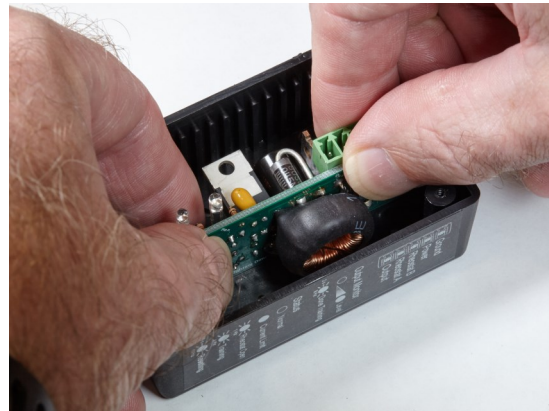
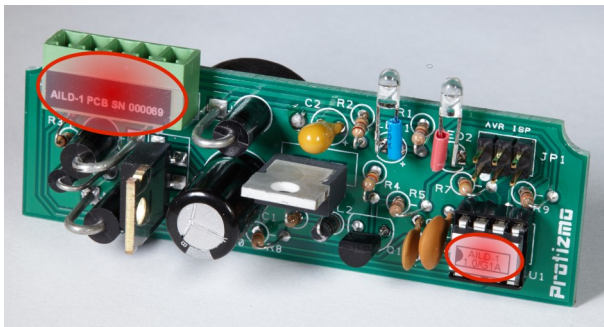
1. If the AILD-1 is currently installed, unplug it (at the green connector) and move it to a location where you can work on it.
2. Using a #1 Phillips screwdriver, remove the four screws that fasten the lid of the enclosure to the body of the enclosure. Remove the lid and set it aside.



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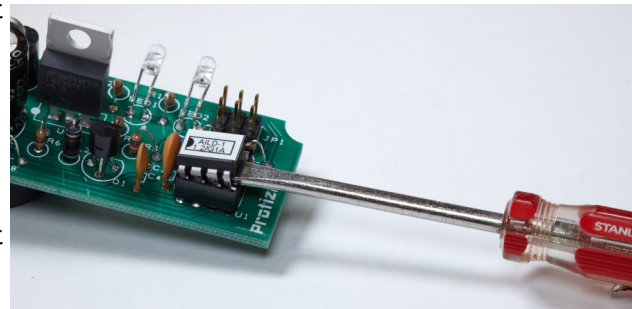
- Lift the PCB (printed circuit board) out of the enclosure. It fits into a slot in the enclosure and can be removed by lifting it straight up. The PCB may be loose or tight due to manufacturing tolerances.

Important! There are two safe places to put your fingers on the component side of the PCB: the green connector and the 8-pin IC; these components are very strong and very securely fastened to the PCB. These two components and the safe spaces where you can apply pressure are highlighted in red ovals in the photo below. *If you apply pressure to any other component, you may bend it, break it, or detach it (physically and/or electrically) from the PCB.*



- Using a small flat head screwdriver (or DIP IC extraction tool), insert the screwdriver between the 8-pin microcontroller IC and its socket and pry out the IC. Try to avoid bending the pins.

- Insert the replacement microcontroller IC into the socket. Be very careful to orient the IC as shown in the photos (black “notch” on the label needs to be oriented with the notched end of the IC socket) and avoid bending the pins.



- Slide the PCB back into the enclosure. Note that it should be oriented as it was before, with the solder side of the PCB nearest the “black label” side of the enclosure, and the component side of the PCB nearest the “white label” side of the enclosure. It must also be in the correct slot, and parallel to the long sides of the enclosure, or the lid will not fit.

- Place the enclosure lid over the enclosure body. make sure it is properly aligned with the LEDs and green connector as you lower it into position, and make sure the LEDs penetrate the holes in the lid rather than bending out of the way. Refasten the enclosure lid using the four Phillips screws. Perfectionists can torque screws to 0.15 N·m.

- Apply any label(s) provided to update the build information on the AILD-1. A small flat head screwdriver can be used under the corner of a label to lay it down in a controlled fashion.



- If the AILD-1 was removed from service in step 1, reinstall it.

- If you trained the AILD-1 with a rheostat profile, you will need to repeat that procedure (the profile is stored in EEPROM in the microcontroller).

- Please send an e-mail to customer-service@protizmo.com indicating that you have replaced the microcontroller in an AILD-1 unit and provide the following information from the (possibly updated) build information label: SN, PCB, Pgm, Cfg, and DOM. This will allow us to maintain up-to-date information about AILD-1s in use. You may also provide your contact information if you want to be informed of any future AILD-1 issues.

- [optional] If it's likely undamaged, you can return the old microcontroller IC to: Protizmo, LLC; 5018 Arapahoe Street; Shawnee, KS 66226-2809. In most cases, it can be reprogrammed and reused.