

INFINITYBOX™ inLIGHTEN LED Controller Module Manual

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Overview

The INFINITYBOX™ inLIGHTEN LED Controller is an expansion module to the INFINITYBOX Intelligent Multiplex System that gives vehicle fabricators an easy way to add LED lighting control to their vehicles. From accent lighting to soothing ambient effects to high-energy pulsing atmospheres, inLIGHTEN gets you the control that you need. Your customers can get the professional board room look, that intimate environment for two or the party on wheels that they want, all from one module.

Just like the rest of the INFINITYBOX system, inLIGHTEN is designed for the toughest and harshest vehicle use. You can use it in a broad range of vehicles including limousines, executive vans, coaches and party busses.

inLIGHTEN is designed for control of Light Emitting Diodes (LEDs). These can be discrete lights or strips of lights. You can control lights with individual colors or use inLIGHTEN to control RGB LEDs for a broad range of dimming, color and pattern effects. Following the multiplexed nature of INFINITYBOX, you place inLIGHTEN modules in your vehicle where you need them and connect them into the INFINITYBOX CAN network. Commands are sent from the MASTERCELL to inLIGHTEN to activate the lighting patterns. This gets you a very flexible system that is easy to expand and uses less wire than other solutions on the market. Plus you have complete flexibility in the types of inputs that you can use to control your LED lighting including a broad array of switches, radio interfaces, touch screens and mobile devices.

Module Details

- Plug & Play module that connects into an Infinitybox system to drive LED lighting for vehicle. (Older system configurations may have to be updated to communicate with inLIGHTEN.)
- Compact module with integrated mounting tabs for easy installation.
- Applications include accent and mood lighting in limousines, party busses, hot rods and more.
- 6 output channels can be used independently or in 2 sets of 3 channels.
- 16 preset lighting patterns are standard in the module for everything for accent lighting to ambient effects to creating a dance club in the vehicle.
- Patterns can be easily controlled from switches on an MASTERCELL or through inTOUCH NET.

Technical Specifications:

- Dimensions: 5" X 2" X 1"
- Number of output channels: 6 grouped in 2 sets of 3 channels for RGB control
- Maximum current draw per channel: 1.0-amp.
- Operating voltage: 11.0 to 14.8-volts.
- Nominal LED output control voltage: 12-volts.
- LED channels are low-side switched through MOSFETS for high-efficiency switching. All operating frequencies in the system are chosen to minimize noise impact on audio and video systems in the vehicle.

NOTE: Do not exceed the maximum specified current draw on inLIGHTEN output channels.

Kit Includes

- 1- INFINITYBOX™ inLIGHTEN LED Controller Module
- 1- Power & Ground Harness with Fuse Holder
- 1- inLIGHTEN Output Harness
- 1- Modular CAN Jumper Harnesses
- 6- 22-AWG Butt Splice Terminals
- 6- Pieces of Heat Shrink Tubing
- 1- Instruction Manual

Installation Steps

Connect Power & Ground Harness to inLIGHTEN Module

- 1) Remove the positive terminal from your battery or batteries before installing any electrical components.
- 2) Connect the Red 22-AWG wire in the harness with the rectangular 4-position connector to a constant battery feed. Splice the included Mini™ fuse holder in series with this wire, keeping the fuse holder as close to the battery as possible. A good place to pick up this feed is the Mega™ fuse holder included with your Infinitybox 10 or 20-Circuit kit.
- 3) Connect the Black 22-AWG wire in the harness with the rectangular 4-position connector to chassis ground. Make sure that you have a good metal-to-metal connection to ground.

Connect the inLIGHTEN module to the INFINITYBOX CAN network.

- 1) Pick a convenient place in the CAN cable to splice into for inLIGHTEN.
- 2) Remove the convolute looming from the area where you will make the splice.
- 3) Cut and strip the 6 wires in the inLIGHTEN CAN jumper harness to the right length to splice into your existing CAN harness.
- 4) Locate the pair of blue* 22-AWG wires in the CAN harness. Pick one of the blue wires and cut it. Both of the blue wires are electrically the same so you may choose either blue wire.
- 5) Strip back the insulation on both sides of the cut blue 22-AWG wire.
- 6) Slip one piece of heat-shrink tubing on each end of the cut blue 22-AWG wire in the existing CAN harness.
- 7) Crimp one end of the included butt-splice terminals to each of the cut ends in the existing CAN harness.
- 8) Crimp the other ends of the butt-splice terminals to the blue wires in the inLIGHTEN CAN jumper harness. These wires are electrically the same so it does not matter which of the blue wires connect to the blue wires in your existing CAN harness.
- 9) Locate the pair of green* 22-AWG wires in the CAN harness. Pick one of the green wires and cut it. Both of the green wires are electrically the same so you may choose either green wire.
- 10) Strip back the insulation on both sides of the cut green 22-AWG wire.
- 11) Slip one piece of heat-shrink tubing on each end of the cut green 22-AWG wire in the existing CAN harness.
- 12) Crimp one end of the included butt-splice terminals to each of the cut ends in the existing CAN harness.
- 13) Crimp the other ends of the butt-splice terminals to the green wires in the inLIGHTEN CAN jumper harness. These wires are electrically the same so it does not matter which of the green wires connect to the green wires in your existing CAN harness.
- 14) Locate the black* 22-AWG wire in the CAN harness.

- 15) Strip back the insulation on both sides of the cut black 22-AWG wire.
- 16) Slip one piece of heat-shrink tubing on each end of the cut black 22-AWG wire in the existing CAN harness.
- 17) Crimp one end of the included butt-splice terminals to each of the cut ends in the existing CAN harness.
- 18) Crimp the other ends of the butt-splice terminals to the black wires in the inLIGHTEN CAN jumper harness. These wires are electrically the same so it does not matter which of the black wires connect to the black wires in your existing CAN harness.
- 19) Slide the pieces of heat-shrink tubing over the butt-splices in the harness.
- 20) Use a heat-gun to shrink the tubing over the splices.
- 21) Re-loom the CAN cable.
- 22) Plug the 3-position rectangular connector into either of the sockets labeled CAN on the inLIGHTEN module.

* Note: Some generations of CAN cable may have different wire colors. Please contact INFINITYBOX technical support if your wire colors do not match the ones described above.

Connect the inLIGHTEN LED module to Tri-Color LED Tape.

- 1) inLIGHTEN is designed to ground switch the cathode side of a light emitting diode. It has 6 channels, split into two sets of the three primary colors: Red, Blue & Green. Before progressing with your install, make sure that your LED tape is designed to have the anodes powered from a single positive battery feed and have the grounds switched.
- 2) Set the number on the rotary dial on the rear of inLIGHTEN to the address specified on your INFINITYBOX Configuration Sheet.
- 3) Connect the Pink 22-AWG wire with the Red tracer on the inLIGHTEN output harness to the anode side of your LEDs. This is typically labeled as B+.
- 4) Connect the Red, Green and Blue channels to the wires on the inLIGHTEN output harness. Follow the instructions that came with your LED tapes for details on how to connect the wires. Use the wire colors in Table 1 as a guide.

Table 1: Wire Color Definitions for inLIGHTEN Output Harness

Wire Color	Description
Pink/Red	Fused Power from inLIGHTEN to LEDs
White/Red	Bank 1- Red Channel
White/Green	Bank 2- Green Channel
White Blue	Bank 3- Blue Channel
Yellow/Red	Bank 2- Red Channel
Yellow/Green	Bank 2- Green Channel
Yellow/Blue	Bank 2- Blue Channel

Powering Up the System

- 1) Reconnect the battery to the system.
- 2) inLIGHTEN will flash a test pattern on the different channels of the LED's to indicate that it is connected properly.
- 3) Check to see if the INFINITYBOX inLIGHTEN module is in system inventory.
 - a. Press the "HOME" button
 - b. Press the "SCROLL DOWN" button
 - c. inLIGHTEN is installed correctly if you see "AX RGB-6 Ch" in the system inventory. The X after CELL A corresponds to the address set on inLIGHTEN.

Operating inLIGHTEN

Your inLIGHTEN module will ship with a configuration sheet specific to your application. It will define the MASTERCELL inputs or the inTOUCH NET buttons that control the different patterns on the module. Contact INFINITYBOX technical support with questions.

Warranty Information

Warranty for INFINITYBOX™ Intelligent Multiplex System™

Infinitybox, LLC (“Infinitybox”) warrants against any defects in materials and workmanship to the Product’s INFINITYBOX™ modules, wiring harnesses and accessory modules for a period of one (1) year from the first date of purchase. Subject to the terms of this warranty described below, Infinitybox will replace any such defective Product that is returned to Infinitybox within the one (1) year period from initial purchase. Replacement of any defective part or Product will not extend the applicable warranty period.

The warranty does not apply to: (i) any Product that is not installed in compliance with the applicable Product documentation; (ii) any defect in, or failure of, the Product resulting from an accident, shock, negligence, water immersion or misuse; (iii) any Product that has been modified, adjusted, repaired, or disassembled by any party other than Infinitybox; or (iv) any defect other than in materials and workmanship.

This warranty covers only the original purchaser of Product purchased from an Infinitybox authorized dealer in the United States. In order to receive warranty service, purchaser must provide Infinitybox with a copy of the receipt stating the dealer name, product purchased and date of purchase. Products found to be defective during the warranty period will be replaced (with a product deemed to be equivalent or better) at the discretion of Infinitybox.

Infinitybox’s sole liability for any defective Product is limited solely to the replacement of Product pursuant to this warranty. Infinitybox reserves the right to replace any repairable parts with new or refurbished parts.

INFINITYBOX DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, SUCH AS WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. IN NO EVENT SHALL INFINITYBOX BE LIABLE FOR ANY PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LIABILITY FOR LOSS OF USE, LOSS OF PROFITS, LOSS OF PRODUCT OR BUSINESS INTERRUPTION HOWEVER THE SAME MAY BE CAUSED, INCLUDING NEGLIGENCE.

Contact Information

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