Signal Window

INTRODUCTION

Leiston Residential Powerline Carrier Components are designed to provide the best possible signal integrity and noise immunity possible. However, in some environments intense electrical noise can cause interference with the signal. Leiston has developed hardware and techniques for overcoming this interference. The following sections detail some of the components and procedures used to eliminate noise.

LEVITON’S DHC DEVICES FEATURE INTELLISENS,E, THE RIGHT TYPE OF AUTOMATIC GAIN CONTROL (AGC)

Leiston DHC devices use Intelligence, a special gated AGC approach, to help eliminate noise problems. This circuit feature is ideal for powerline carrier systems, which are prone to noise because it is only operated during the Signal Window when receivers listen for command signals. Noise signals in the signal window are never registered in the system. In addition, the receiver has a built-in signal filter to eliminate noise signals during other portions of the AC power cycle. Therefore, Leiston’s Intelligence gated AGC will desensitize a receiver to noise signals with only a minimal reduction in command signal sensitivity. The result: Problems caused by noise interference are dramatically reduced without affecting overall system performance.

It is the responsibility of the installer to test for signal strength and the presence of noise using a test transmitter. There are also test equipment, Cat. Nos. 6385 (Signal Test Transmitter) and 6387 (Signal Strength Indicator), and to control signal coupling and noise reduction equipment according to the guidelines provided in the Decora Home Controls (DHC) Technical Manual and the DHC Troubleshooting Guide.

Leiston specifies any warranty performance, stated or implied, that electrical noise interference exists at the time of installation or in addition by the addition of noise-producing devices or equipment, or where these components have been installed for non-residential use. DHC Components are for residential use only. Installation for any other purpose voids any warranty, stated or implied.

APPLICATIONS

DHC devices will not control lighting that is used with electronic-low-voltage and high-voltage power supply transformers, or high-pressure discharge lamps (HID lighting). This includes sodium-vapor, mercury vapor, metal halide, and high-pressure sodium lamps.

Leiston warrants its own consumer purchaser and not for the benefit of any other that this product at the time of its sale by Leviton is free of defects in material and workmanship. This warranty is void if the product is installed to be selected at the time of installation. The desired address is set by depressing and holding the recessed button until the ON/OFF LED flashes. The code is then learned from any transmitted word on the wire and stored in the DHC command. The module is equipped with six-inch leads and installs in a standard wall box. It is suitable for incandescent and magneto low-voltage lighting loads.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B Digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving Antenna.
• Increase the separation between the equipment and the receiver.
• Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

INSTALLATION INSTRUCTIONS

WARNING: TO BE INSTALLED AND/OR USED IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES AND REGULATIONS.

WARNING: IF YOU ARE NOT SURE ABOUT ANY PART OF THESE INSTRUCTIONS, CONSULT A QUALIFIED ELECTRICIAN.

WARNING: TO REDUCE THE RISK OF OVERHEATING AND POSSIBLE DAMAGE TO OTHER EQUIPMENT, DO NOT INSTALL TO CONTROL A RELUCTOR MOTOR-OPERATED APPLIANCE, FLUORESCENT LIGHTING FIXTURE, OR A TRANSFORMER-SUPPLIED APPLIANCE, OTHER THAN APPROPRIATE LOW-VOLTAGE SLIGHTING.

CAUTION (for Incandescent Only): USE WITH INCANDESCENT OR 120V HALOGEN FIXTURES ONLY.

1. USE WITH MAGNETIC LOW-VOLTAGE TRANSFORMERS, INCANDESCENT OR 120V MAGNETIC LOW-VOLTAGE HALOGEN FIXTURES ONLY. USE LEVITON RESIDENTIAL POWERLINE CARRIER COMPONENTS, NOT LINE-CONTROLLED ELECTRONIC (SOLID STATE) LOW-VOLTAGE TRANSFORMERS.

2. USE OF A MAGNETIC LOW-VOLTAGE CIRCUIT IS OPERATED AT A DIM LEVEL, WITH ALL LAMPS INOPERATIVE, EXCESS CURRENT MAY FLOW THROUGH THE TRANSFORMER. TO AVOID POSSIBLE TRANSFORMER FAILURE DUE TO OVERHEATING, USE A TRANSFORMER THAT INCORPORATES THERMAL PROTECTION OR Fuse AT THE PRIMARY WINDINGS.

Other CAUTIONS and NOTES:

1. DISCONNECT POWER WHEN SERVICING FIXTURE OR CHANGING BULBS.
2. USE THIS DEVICE ONLY WITH COPPER OR COPPER CLAD WIRE. WITH ALUMINUM WIRE USE ONLY DEVICES MARKED CAFLR.
3. SAVE THIS INSTRUCTION SHEET. IT CONTAINS IMPORTANT TECHNICAL DATA ALONG WITH TESTING AND TROUBLESHOOTING INFORMATION THAT WILL BE USEFUL AFTER INSTALLATION IS COMPLETE.

MULTI-GANG INSTALLATION

When ganging dimmers, the side axes of the mounting strap must be removed. Use pliers to carefully bend side sections back forth and hook them back up (see Figure 1). The side sections are paddle-like, so removing them requires a dealing of the dimmer’s capacity (see chart).

MAGNETIC LOW-VOLTAGE Wattage (For Magnetic Low-Voltage ONLY):

Low-voltage dimmers are rated in Volt-Amps (VA). The maximum bulb wattage is determined by the efficiency of the transformer in the low-voltage circuit. Testing consumer efficiencies will vary depending on the manufacturer; consider 75% efficient as average. Use the chart to determine the maximum bulb wattage for typical transformer efficiency ratings.

TO INSTALL:

1. WARNING: TO AVOID FIRE, SHOCK, OR DEATH, TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS BEFORE INSTALLING THIS PRODUCT.
2. Remove existing switchplate and switch or dimmer, if applicable.
3. Remove 5/8" (1.6 cm) of insulation from each circuit conductor.
4. For multi-circuit applications, Cat. Nos. HCM0, HCM0M and HCM10 can be wired to a Neutral or Non-Neutral service. It is recommended that a minimum Neutral be used or the system be modified.

5. Mount each circuit per the appropriate Wiring Diagram following:

 WARNING: CONNECT A MAGNETIC LOW-VOLTAGE TRANSFORMER TO THE PRIMARY (HIGH-VOLTAGE) TERMINAL OF A MAGNETIC LOW-VOLTAGE TRANSFORMER AND A NEUTRAL WIRE MUST BE USED. Twist strands of each lead tightly and, with circuit conductors, push firmly into appropriate non-residential wire connector. Screw connectors on conductors making sure no bare conductor is exposed behind the wire connectors. Secure each electrical connection tightly.

6. Mount device “TOP-up” to wall box with screws provided. Restore power at circuit breaker or fuse.

WARNING: USE WITH MAGNETIC LOW-VOLTAGE TRANSFORMERS, INCANDESCENT OR 120V MAGNETIC LOW-VOLTAGE HALOGEN FIXTURES ONLY.

WARNING: IF YOU ARE NOT SURE ABOUT ANY PART OF THESE INSTRUCTIONS, CONSULT A QUALIFIED ELECTRICIAN.

1. USE WITH MAGNETIC LOW-VOLTAGE TRANSFORMERS, INCANDESCENT OR 120V MAGNETIC LOW-VOLTAGE HALOGEN FIXTURES ONLY. USE LEVITON RESIDENTIAL POWERLINE CARRIER COMPONENTS, NOT LINE-CONTROLLED ELECTRONIC (SOLID STATE) LOW-VOLTAGE TRANSFORMERS.

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FOR USE with Cat. No. HCCxx Transmitters and Scene Controllers

INSTALLATION INSTRUCTIONS

Figure 1 – Switch Plate Removal

Figure 2 – Dimmer Functions

Push in 2 Locations (see arrows)

 Główny Produkty

Universal Dimmer (Single Pole or 3 Way)

Rated: 120VAC, 60Hz

Cat. No. HCM06-1 (Lighted)

Cat. No. HCM06-1S

Incansecent: 600W max., 60W min.

Magnetic: 600VA max., 60VA min.

Cat. No. HCM10-1 (Lighted)

Cat. No. HCM10-1S

Incansecent: 1000W max., 60W min.

Magnetic: 1000VA max., 60VA min.

For use w/ Cat. No. HCCxx

For use w/ Cat. No. HCM

(For Magnetic Low-Voltage Only):

USE WITH INCANDESCENT OR 120V HALOGEN FIXTURES ONLY.

(For Incandescent Only):

USE WITH INCANDESCENT OR 120V HALOGEN FIXTURES ONLY.

Lista dózów 5 lat

5 Latowy Garantji

5 Year Warranty and Exclusions

Leiston warrants to the original consumer purchaser and not for the benefit of any other that this product at the time of its sale by Leviton is free of defects in material and workmanship. This warranty is void if the product is installed improperly or in an improper environment, overloaded, abused, disabled, altered in any manner, or is not used under normal operating conditions or not in accordance with any instruction labels. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranties are required by the applicable law, they are limited in time to five years. Leviton is not liable for incidental, indirect, special or consequential damages, including without limitation damage to any computer equipment or loss of use of any equipment, loss sales or profits or delay or failure to perform this warranty obligation. The remedies provided in this warranty are exclusive and are in lieu of all other remedies under this warranty, whether based on contract, tort or otherwise.

For Technical Assistance Call: 1-800-525-0505 (US Only)

www.leviton.com

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MINIMUM BRIGHTNESS ADJUSTMENT

1. Remove switchplate, if applicable.
2. If a switch is OFF when power is restored, turn control ON by tapping the upper-half of the rocker.
3. Using a small pointed object (i.e., small screwdriver), depress switch on side of dimmer [refer to Figure 2]. Using the rocker, adjust the brightness until light reaches lowest desired level (must be less than 1/3 full range). Release rocker. Release adjustment lever and minimum brightness is set.

NOTE: You cannot turn OFF power to the light completely with the adjustment lever. Once the minimum brightness level has been set, the unit automatically sets the display to indicate relative brightness as equally distributed levels, to the maximum level of full brightness, which will vary according to bulb type and manufacturer.
4. When satisfied with the brightness level that you have selected, attach switchplate. Adjustment is complete.

COLOR CONVERSION PROCEDURE

The color of Cat. Nos. HCM60 and HCM10 can be changed to suit your interior design requirements. Simply obtain a color conversion kit of the appropriate color from your Leviton distributor or use the one provided, and proceed as follows:
1. The switch plate has snaps on its sides. Place the tip of a small-bladed screwdriver under a snap and gently pry off the switch plate [refer to Figure 1].
2. Take the new switch plate and position it properly to the strap. Notice that the switch plate has a cut-out for the air-gap switch lever. With the switch plate properly positioned, gently press it into place until it seats properly with a click. The color conversion is complete.

TO OPERATE

ON: Tap the upper half of the rocker. The lights will brighten to the last set light level.
OFF: Tap the lower half of the rocker. The lights will dim to OFF.
BRIGHTEN: Press and hold the upper half of the rocker to the desired light level.
FULL BRIGHT: Tap the upper half of the rocker twice quickly. The lights will turn ON FULL BRIGHT. The previous light level will remain in memory upon next ON operation [see above].
DIM: Press and hold the lower half of the rocker to the desired level.
BRIGHTNESS LEVEL DISPLAY [HCM60 and HCM10 Only]: Indicates the level of brightness when the lights are ON. Indicates the previous level of brightness when the lights are OFF [refer to Figure 1].

NOTE: To alert you that there is power to the dimmer when the load is OFF, the AC Indicator Light remains ON. To alert you that the load is ON, the AC Indicator Light remains OFF.

NOTE: If lights are OFF, regardless if you tap or press and hold the upper half of the rocker, the lights will go to last set light level.

NOTE: If a power interruption should occur while the device is ON, the light load will return to its previous light level when power is restored.

TESTING PROCEDURE

With Cat. Nos. HCM60 and HCM10 properly wired and powered-up, tap the switch plate several times to ensure that the module is turning to load ON and OFF in response to manual control. To check for proper local dimming, keep switch plate pressed down to confirm that load is dimming. Leave the switch in the ON position. Next, use a Cat. No. 6300, Leviton Table Top Controller, or any other controller, to check for proper module operation as follows:

NOTE: If a power interruption should occur while the device is on, the light load will return to its previous state when power is restored.
1. Transmit an OFF command to the module. It should respond by turning its assigned Load OFF.
2. Transmit an ALL LIGHTS ON command to this module from an appropriately coded controller. It should respond by turning its assigned Load ON.
3. Transmit DIM and BRIGHTEN commands. Lighting controlled should respond accordingly.
4. Transmit an ALL OFF command from an appropriately coded controller. It should respond by turning its assigned Load OFF.

PERFECT PERFORMANCE CHECKLIST

If Cat. Nos. HCM60 and HCM10 appear to be functioning improperly, proceed with the following steps:
1. Confirm that the device is wired exactly as shown in the WIRING DIAGRAM.
2. Confirm that the module is being supplied from a 120V, 60Hz AC source ONLY.
3. Confirm that the load being controlled is in proper working order. Local switch, ON (check for burned-out bulbs).

NOTE: If the module still does not operate properly after following steps 1-4, the fault may not lie with the module. Proceed with steps 5 and 6.
4. Check for the adequate command signal for Cat. No. HCM60 and HCM10 locations as follows:
   a. If Cat. No. 6385 Signal Test Transmitter is in a receptacle on the same circuit as the controller:
      b. Using the Cat. No. 6385 Signal Strength Indicator at the HCM60 or HCM10 location, check the command signal amplitude. Signal strength must be 100mV minimum. If there is less than 100mV of signal present, it may be necessary to couple both legs of the 120/240v power service at the entrance panel using Cat. No. 6295 Signal Bridge.
   c. If the YELLOW ERROR CONDITION indicator is lit, there is electrical "noise" present on the AC line which is interfering with proper module operation. The source of the noise must be identified and either filtered out or eliminated [refer to Technical Manual].

COLOR CONVERSION PROCEDURE

NOTE: Be sure to position the dimmer according to the appropriate location, check the command signal amplitude. Signal strength must be 100mV minimum. If there is less than 100mV of signal present, it may be necessary to couple both legs of the 120/240v power service at the entrance panel using Cat. No. 6295 Signal Bridge.

1. Wire the module as shown in the WIRING DIAGRAM. With the module properly wired, proceed as follows:
2. Press and hold the upper half of the rocker to the desired light level.
3. Tap the lower half of the rocker. The lights will dim to OFF.
4. Tap the upper half of the rocker. The lights will brighten to the last set light level.
5. Press and hold the lower half of the rocker to the desired level.

NOTE: You cannot turn OFF power to the light completely with the adjustment lever. Once the minimum brightness level has been set, the unit automatically sets the display to indicate relative brightness as equally distributed levels, to the maximum level of full brightness, which will vary according to bulb type and manufacturer.

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