

# LITETOUCH HYBRID LAMP MODULE INSTALLATION INSTRUCTIONS

The LiteTouch Hybrid Lamp Module functions as a plug-in dimmer/relay module to deliver control of up to two corded lamps (loads) from LiteTouch Low Voltage Keypads and/or LiteTouch Hybrid Wall Box Dimmers

## WARNING - Hybrid Lamp Module is set with the following default settings.

- RF (Radio Frequency) Mode is the default communication mode. When installing via Cat5, switch the dip switch to WIRED Mode position to ensure equipment communication.
- MLV (Magnetic Low-voltage) Mode or forward phase is the default fixture type. When driving transformer coupled loads, the actual load wattage must be at least 80% of the transformers V/A rating or transformer hum, flashing and/or damage may occur. When connecting to an ELV (Electronic Low-Voltage) transformer or inverse phase load, switch the dip switch to ELV/Normal Mode. (See Fig. 2 for capacity details)
- RELAY Mode is the default functionality mode. When dimming a load, switch the dip switch to DIMMER Mode position to ensure proper functionality.(See Fig. 2 for capacity details)

## PRE-INSTALLATION - Functionality Selection: Dip Switch Configurations

**Switch 1** - The DIMMER/RELAY switch for LAMP ONE, determines load functionality, either DIMMER or RELAY Mode. Default position is RELAY Mode. (See Fig. 1)

**Switch 2** - The MLV/ELV fixture type switch for LAMP ONE, determines dimming functionality indicating either MLV (Magnetic Low-voltage/Forward Phase) or ELV (Electronic Low-voltage/Inverse Phase) dimming modes. Default position in MLV Dimming Mode which is also recommended for most incandescent Lighting. (See Fig. 1)

**Switch 3** - The RF/WIRED switch determines communication method, for LAMP ONE and LAMP TWO, either CAT5 Wired or RF (Radio Frequency) Wireless Mode. Default position is RF Mode. (See Fig. 1)

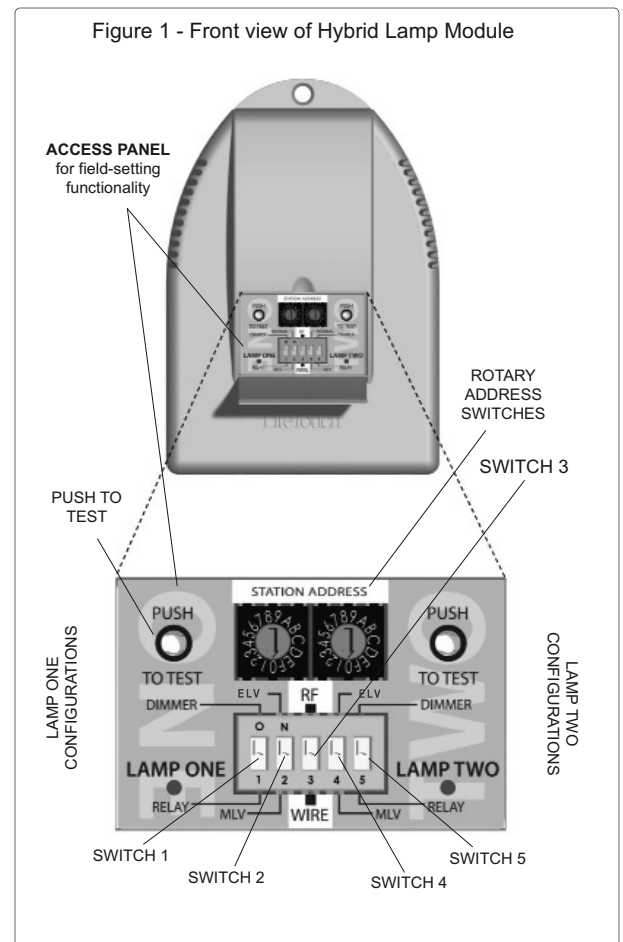
**Switch 4** -The MLV/ELV fixture type switch for LAMP TWO, determines dimming functionality indicating either MLV (Magnetic Low-voltage/Forward Phase) or ELV (Electronic Low-voltage/Inverse Phase) dimming modes. Default position in MLV Dimming Mode which is also recommended for most incandescent Lighting. (See Fig. 1)

**Switch 5** - The DIMMER/RELAY switch for LAMP TWO, determines load functionality, either DIMMER or RELAY Mode. Default position is RELAY Mode. (See Fig. 1)

**Push to Test** - Activates the local load connected to LAMP ONE or LAMP TWO devices. Push once to turn load on. Push again to turn load off. Utilize to verify wiring. (See Fig. 1)

**Terminate Switch** - Disables the unit, preventing the Hybrid Lamp Module from inadvertently turning the load on during fixture adjustment. Toggle the OFF switch to turn off the power to the Hybrid Lamp Module. (See Fig. 2)

**Maintenance Port** - Used to update firmware if there are any future firmware updates for the Hybrid Lamp Module. (See Fig. 2)



**PRE-INSTALLATION - Device Identity: Address wheels**

For system recognition and response, Hybrid Lamp Module Address Wheels must be set. Addresses can be either manually selected and entered into LiteWare® Design and Programming Software, or LiteWare can auto assign device addresses. (See Fig. 1)

- Note:
- When you set the address of the device, both Station and Module communication will utilize the same address.
  - Addresses that are called out at the time of order are preset at the factory. Address wheels must be set at each device.
  - Available address range is "00" thru "FF"; 256 possible addresses. Maximum of 64 Hybrid Lamp Modules per system.
  - Address 00 is reserved for Local Mode. In Local Mode, the Hybrid Lamp Module will allow for control of only the local load that the device is attached to.

**WIRED INSTALLATION - Preparation & Pre-Wire Instructions.**

To Pre-Wire for Hybrid Lamp Modules, used in "WIRED" mode, pre-wire by running CAT5 cable to each location. Do not exceed 1000 feet per run. At each location, pull a CAT5 cable from the Lamp Module to the location of the LiteTouch CCU.

If no enclosures are being used, pull the CAT5 cable directly to the FIVEk, Standard or Compact CCU location. Follow the instructions below to tie the CAT5 Cable into LiteTouch Station & Module Bus.

**Module Bus Connection:**

1. Using the CAT5 cable from the pre-wiring, crimp on RJ-45 Ethernet connectors to each cable in the wall box per pin-out. (See Fig. 3)
2. Plug in each cable to the RJ-45 connectors found on the back of the Hybrid Lamp Module.
3. Continue this procedure until all cables in a run are connected to the Hybrid Lamp Module.
4. Locate the wire for this run at the Enclosure location and wire the Hybrid Lamp Module into the Module Bus as follows:
  - a. If connecting directly to CCU - Strip down CAT5 cable, connect directly to CCU via Module Port. (See Fig. 3)
  - b. If connecting into Module Bus - Splice LiteTouch Module Wire into the CAT5 cable using the pin-out indicated. (See Fig. 3)

**Note:** Also available: Hybrid Wall Box Dimmer to CCU Wiring Adapter. Plug the Module cable into the last Module's out-port in the Enclosure where the Wall Box Dimmer to CCU Wiring Adapter is located. Contact factory for details.

**Station Bus Connection:**

Because the CAT5 cable run contains both Module and Station Bus communications, as long as pin-outs are followed, no additional Station Bus wiring needs to be done at the local Hybrid Lamp Module location. (See Fig. 3)

Wire the Hybrid Lamp Module into the Station Bus as follows:

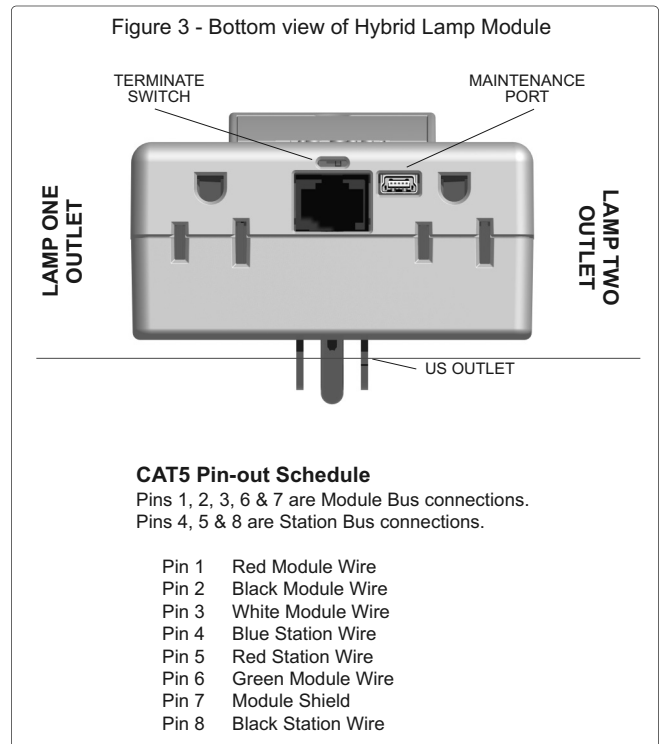
1. If connecting directly to CCU - Strip down CAT5 cable, connect directly to CCU via Station Port pin-out schedule. (See Fig. 3)
2. If connecting into Station Bus - Splice LiteTouch Station Wire into the CAT5 cable using pin-out schedule. (See Fig. 3)

Note: A Power Supply Module must be present to power the Station ports of the FIVEk, Standard & Compact CCUs for communication reference in 'WIRED' CAT5 Installations. Using Station Bus Wiring, connect the positive and negative from a LiteTouch Power Supply Module to the PS + and PS - on the FIVEk, Standard or Compact CCU. Each station port used for Wired Hybrid connections will need to be powered. One Power Supply Module is needed and can be jumpered across all four ports.

Figure 2 - Capacity Details

Incandescent Dimmer/Relay Mode	Magnetic Low Voltage Dimmer Mode	Electronic Low Voltage Dimmer Mode	Relay Mode
350 Watts Each Port	300 Watts Each Port	200 Watts Each Port	350 Watts Each Port

Figure 3 - Bottom view of Hybrid Lamp Module



## WIRELESS INSTALLATION

To allow for Hybrid Lamp Module to communication in RF(Wireless) Mode, position Switch 1 into RF (Wireless) Mode. Wireless association of the Lamp Module to C2000+ Card follows Receptacle Connection.

## RECEPTACLE CONNECTION & TESTING LOADS

The Hybrid Lamp Module Dip Switches should be configured prior to receptacle connection.

1. Plug corded lamp (Loads) into the Hybrid Lamp Module Outlets, LAMP ONE and/or LAMP TWO. (See Fig. 3)
2. Insert the Hybrid Lamp Module into an available outlet receptacle.
3. Use the Push to Test buttons located within the Access Panel to ensure connected loads are functioning correctly. (See Fig. 1)

## WIRELESS SYSTEM ASSOCIATION - FIVEk CCU C2000+ Card & Hybrid Lamp Modules

Place FIVEk CCU C2000+ Card into Association Mode in one of the following two ways:

### Auto Association Mode

1. Plug your computer into the FIVEk CCU C2000+ Card, via Serial Connection
2. Open LiteWare, **CCU Control Panel** and click the **Association Tab**
3. Click **Start Auto**  
The system will automatically search for Hybrid Lamp Modules and will populate the screen. Ensure all Wall Box Dimmers are accounted for, then click on Stop Auto. This process may take several minutes.
4. Once process is complete Hybrid Lamp Module LEDs will cease slow-blink and resume normal operation. Additionally Hybrid Lamp Module and any currently associated Hybrid Wall Box Dimmer serial numbers, addresses and signal strengths will be populated into the CCU Control Panel Table.

Note: System will automatically take itself out of Auto Association mode after 24 hours.

### Manual Association Mode, no computer required

1. Set Address Wheel on the FIVEk CCU C2000+ Card to **Channel F**, now C2000+ Card is in Manual Mode.
2. Press and hold the **'Push to Test'** Button on front of each Hybrid Lamp Module until LEDs illuminate. Approximately a three second press. Once LEDs illuminate release the push to test button.
3. On Hybrid Lamp Module LED will slow blink until it associates with the FIVEk CCU.
4. Once all the Hybrid Lamp Modules have been associated manually, change the channel on the C2000+ Card to **Channel 0-9**, taking into account any potentially conflicting LiteTouch systems that might be nearby. The FIVEk CCU will automatically send out a signal alerting the Hybrid Lamp Modules to communicate on this Operating Channel. (See Fig. 4)
5. Next time a computer connection is made with the FIVEk CCU C2000+ Card, the project's Hybrid Lamp Module serial numbers, addresses and signal strengths will be populated into the CCU Control Panel Table.

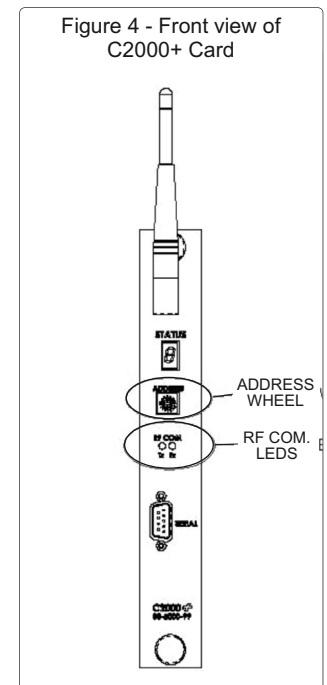
Note: Optional off-site system set-up can be done via CCU Control Panel Association Tab. Manually type in Hybrid Lamp Module Serial Numbers (found on top of each device), reduce job site time as indicated above and eliminate step 2.

### Confirm Hybrid Lamp Modules are within Communication Range

Ensure all Hybrid Lamp Modules are in communication range of the FIVEk CCU:

1. Plug your computer into the FIVEk CCU C2000+ Card, via Serial Connection
2. Open LiteWare, **CCU Control Panel** and click the **Association Tab**
3. Ensure all Hybrid Lamp Modules have signal strength of yellow or green (-80Db or higher). Ideal range is -60 or higher.

**It is not recommended to perform the Association Process until a programming file is present in the FIVEk CCU. If no programming file is present in the FIVEk CCU and Association Process is complete, Hybrid Lamp Modules will perform no function.**



## DISASSOCIATING A HYBRID WALL BOX DIMMER FROM A FIVEK CCU

Where two or more FIVEk CCU Wireless Systems are installed in close proximity, Hybrid Lamp Modules may associate with any FIVEk CCUs in range set to Association Mode. Once associated, the Hybrid Lamp Modules will have to be disassociated before being added to another FIVEk CCU System:

### **Manual Disassociation, No Computer Required**

1. Make sure that the FIVEk CCU is not in Auto Associate mode or Manual Associate mode.
2. Press and hold the 'Push to Test' button at front of the Lamp Module for 10 seconds. This will disassociate current FIVEk CCU.

### **Manual Disassociation, Computer Required**

1. Plug your computer into the FIVEk CCU C2000+ Card, via Serial Connection
2. Open LiteWare, **CCU Control Panel** and click the **Association Tab**
3. Highlight the row containing the Hybrid Lamp Module Serial Number to be removed. Pop-up box will ask if you wish to delete.

### **Wireless System, Hybrid Wall Box Dimmer Boot-Up Process**

1. Each time the Hybrid Wall Box Dimmer is powered on, Button One LED will fast-blink to signify the device is booting up.
2. After Boot Up is complete (approx. 5 sec), Button One on the Wall Box Dimmer will slow-blink to signify the device is searching for CCU connection. Once connection is located, slow-blink will cease and normal operation will resume.

Note: if CCU is not located, slow-blink will continue, however Button One will perform local functions.

## INSTALLATION & TROUBLESHOOTING *(Not Required for installation)*

ISSUE	SOLUTION
Amp or transformer is making a humming sound	Change Switch 4, Fixture Mode (MLV or ELV) from current position to opposite position.
Hybrid Lamp Module will not ramp down to dim	Ensure Switch 2, RELAY/DIMMER dip switch is in DIMMER MODE.
Hybrid Lamp Module is flashing but will not associate to FIVEk CCU	Ensure Switch 1, WIRED/WIRELESS dip switch is in WIRELESS Mode