



## Domaudeo INSTEON Driver for Control4 version 1.2

Available at the Houselogix Marketplace:  
<https://www.houselogix.com/shop/insteon>

### Introduction:

INSTEON is the gold standard networking technology for the connected home. It is a dual-mesh control and sensing, remote control technology. Lighting control, leak, door and motion sensing, garage door control are amongst the most popular applications.

INSTEON uses a unique, dual-band approach to provide reliability not attainable by single band technologies. Using both the existing wires (power line) in the home and radio-frequency communication, INSTEON adds remote control and automation to lighting, appliance and home control applications of all types. From lighting control to integrated security systems, INSTEON allows you to manage your home the way you want. Easy to install and set up, INSTEON offers the flexibility and dependability to make life more convenient, safe and fun.

Over 200 INSTEON products mean that virtually any control or sensing solution in a home or business can be accomplished.

The Control4 driver communicate via many popular INSTEON IP or Serial interfaces for maximum flexibility. It will integrate natively with INSTEON with no third party controller involved, you'll get fast response and the most complete set of features available.

### Features:

- Native INSTEON integration
- Communicate directly to the INSTEON Modem, no third party interface
- Ultra-fast response time and feedback
- FULL control over INSTEON lightning and Keypad modules
- INSTEON Scenes support with whole-scene dimming capability
- Advanced Lightning Agent support
- I/O Linc support with native Control4 Relay/Contact connections
- Motion Sensor support with full configuration
- Mostly generic commands set used to insure compatibility to the broadest range of modules
- Support for any other INSTEON devices by using scenes.
- I2CS support for newer modules and future one
- Button Link support to link INSTEON and non-INSTEON devices
- Complete button push/release/tap events, volume ramping supported
- Modules LED control
- Basic X10 support



## Requirements:

The driver requires one of the following INSTEON interface:

- Powerlinc Serial Modem model 2412s or 2413s
- Smartlinc model 2412n
- INSTEON Hub model 2242-222

Other IP or Serial interfaces are not guarantee to work.

Any Control4 controller that can run OS 2.x will be compatible with this driver. Follow Control4's recommendation for controller model and system sizing.

## Limitations:

For the driver to work, you will need to link all you INSTEON modules to your INSTEON interface prior of connecting it to the Control4 controller. The driver does not provide any way to build INSTEON links between devices but rely on those links to provide two-way feedback. Thus require you to do all your links externally using INSTEON HouseLinc software or other third party software.

Once the INSTEON interface is connected to the Control4 controller, it will be impossible to do any more manipulation over links with Houselinc or other software. To add more devices to your system, you will need to disconnect the Control4 driver first and then use Houselinc to link more modules to your system. See Known Issues section for more details.

## Test before installing

Because there is so many models and revisions of the same INSTEON module, this make it impossible to us for testing them all. We strongly recommend that you test the driver in a lab environment prior or deploying to client site.

## Setup Instructions:

### Factory reset all your INSTEON modules

This step is not mandatory but recommended. By resetting all the modules to factory prior of integrating with Control4 will prevent random effects and unwanted feedback from ghost links. This is especially true when a customer want to integrate a currently installed INSTEON system. For peace of mind, start from scratch and factory reset your interface and all modules.

### Link your 3-Ways, 4-Ways ...

Again, this is not mandatory to be done at this step but we recommend to do so. INSTEON offer a powerful and easy way to link switches together and build a reliable 3-Way setup. We recommend using this linking process for 3-Way to insure responsiveness and reliability with the driver. Although it is possible to do “software” 3-Ways with Control4, this will add unwanted INSTEON traffic and may introduce some slight delays. Also, linking 3-Ways with INSTEON procedure will keep the 3-Way working even if the Control4 controller is offline, adding safety to the project. To link two INSTEON modules, the process is usually to press and hold the slave dimmer button until it beep, then go to the master load and press the SET button until it beep, repeat the process inversely for two-way feedback. For more information about creating 3-Ways with INSTEON modules, please refer to the module’s manual.

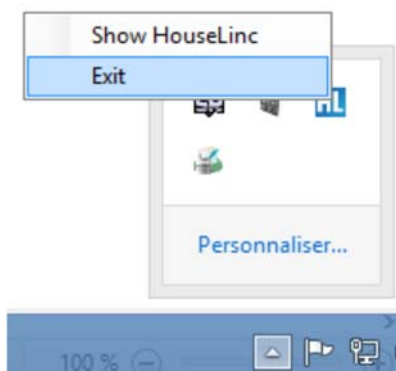
### Link all your modules to the INSTEON Modem/Hub

This must be done prior of integrating with Control4. We recommend using Houselinc software from Smarthome to do all links. <http://www.smarthome.com/houselinc.html>

To use the full potential of our driver, you need to link all your INSTEON modules to the Modem or Hub using Houselinc. The process is simple and well explained in the software. Please refer the Houselinc manual for further instruction. If you are going to use INSTEON Scene in your setup, we recommend also creating all of them through Houselinc software and be sure to use the Modem/Hub as the scene controller. Take note of the scene number if you plan to manage this scene through Control4. For more information on how to create scenes and manage INSTEON links in Houselinc, please refer to Houselinc manual.

### Add the Powerlinc Modem Driver to the project:

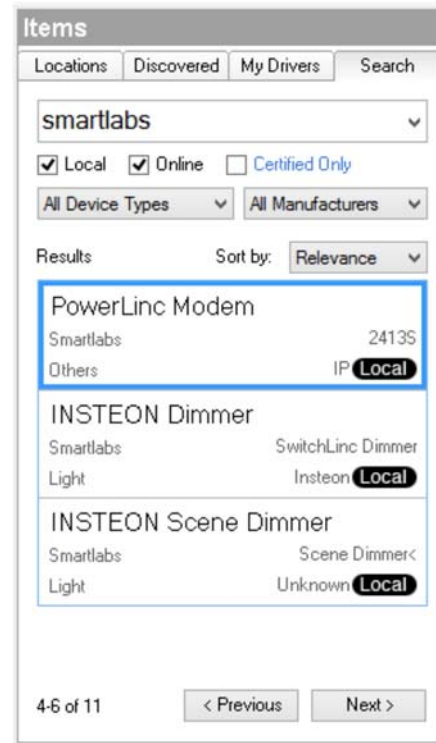
At this step, it is important that you shut down Houselinc software if you have used it to build you links. Be aware that the software will continue to run in the system tray even if you close the window. You have to right click the icon in the system tray and exit the software.



The driver ZIP package contain a number of files for each INSTEON module type supported. Copy all the .c4i files to your My Documents\Control4\Drivers folder.

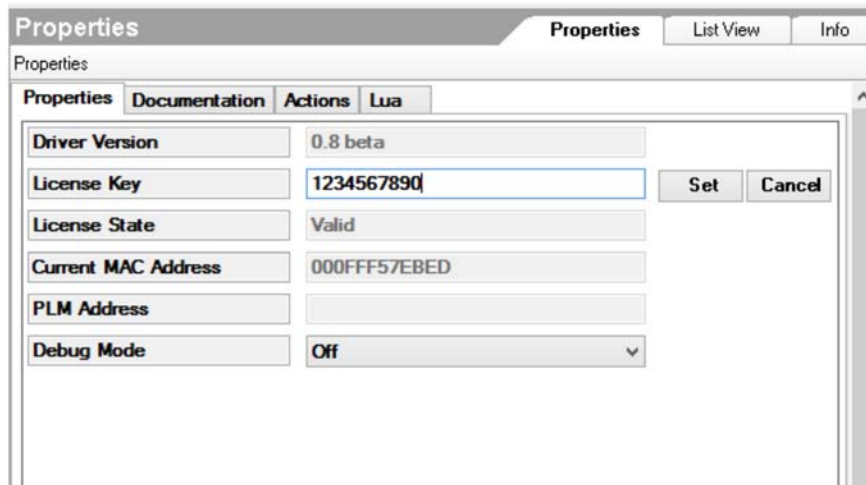
Add the Powerlinc Modem Driver to your project:

- Open Composer
- In System Design, click Search, then type: "smartlabs"
- Add "PowerLinc Modem" to the project.



### Enter a valid license key:

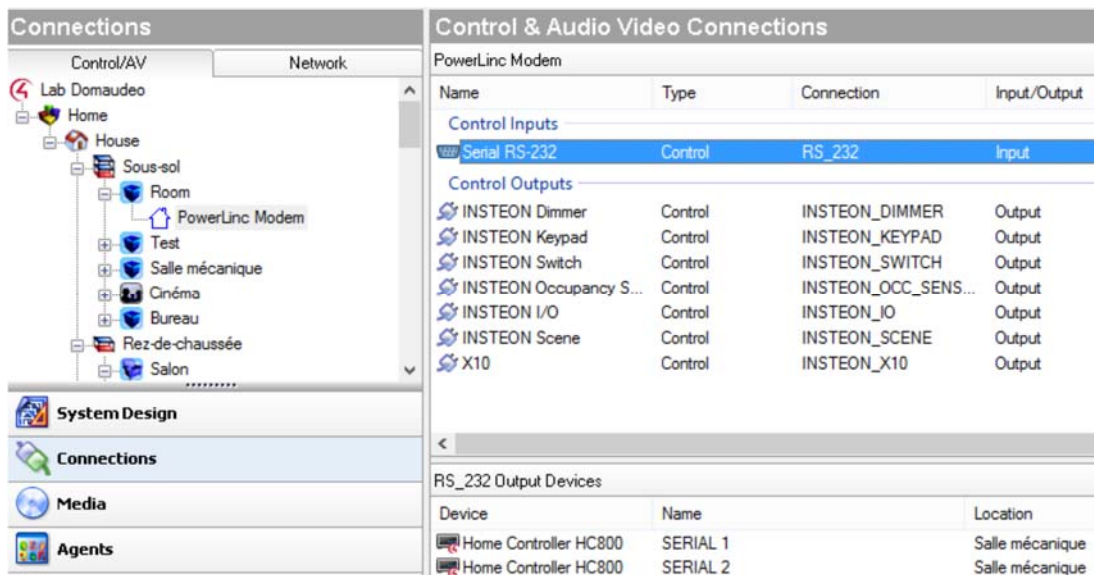
You need to enter a valid license key prior or making any connections or configuration within the driver.



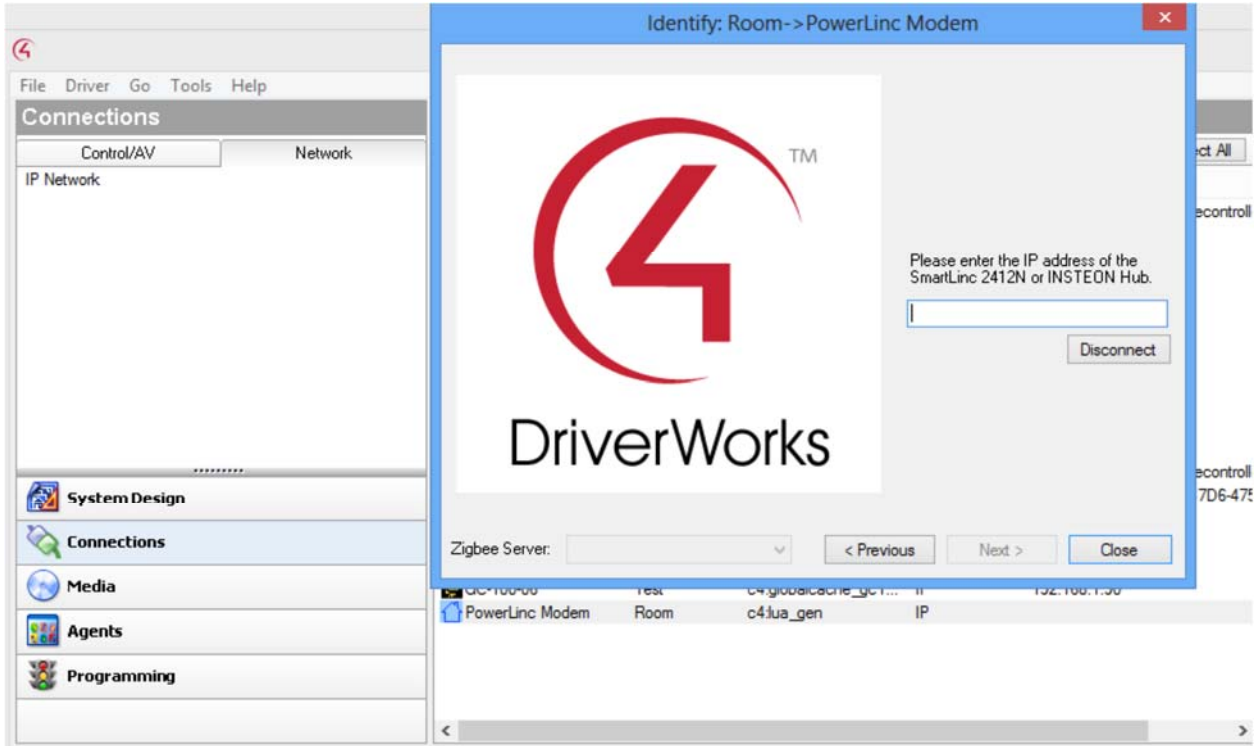
In the Properties of the PowerLinc Modem Driver, enter your license key and click “Set”. The License State will change to “Valid” and the driver will be ready to work.

### Connect the PowerLinc Modem Driver:

The PowerLinc Modem Driver must be connected to either Serial or IP depending of the interface to use. To connect the driver to a Serial Interface, go to Connection, select the PowerLinc Modem Driver in the Control A/V list, then select the Serial RS-232 Control Connection in the Control and Audio Video Connections section and drag it to the serial port where the PowerLinc Serial Modem is physically connected.

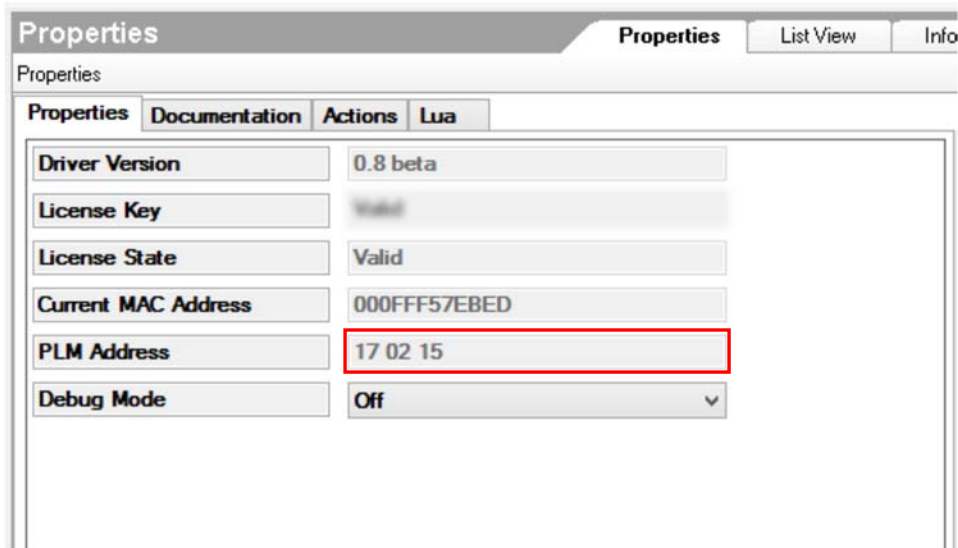


To connect the driver to an IP Interface, got to Connections, click the Network tab, then select the PowerLinc Modem from the list and enter the IP address of the INSTEON Hub or SmarLinc. We strongly recommend to set the IP address of the Hub or Smartlinc to a STATIC IP. For instruction how to do this, please refer to the Hub or SmarLinc manual.



### Check connection status:

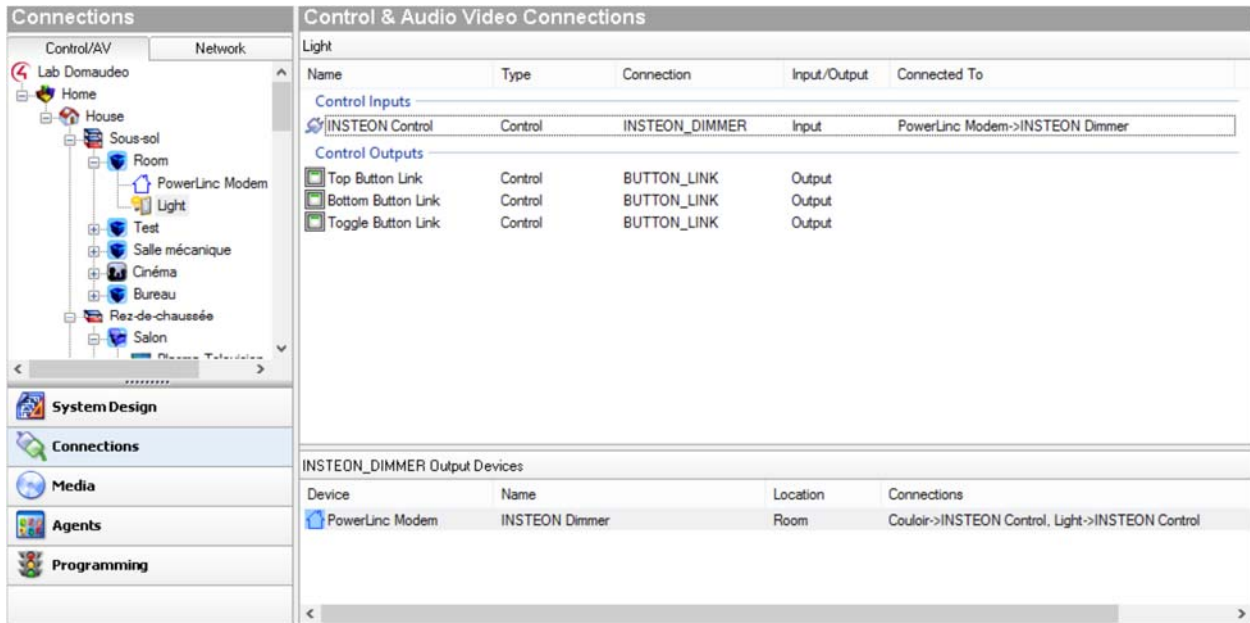
If connection process goes well, you will be able to see the INSTEON address of the interface in the driver properties.



## Adding INSTEON Devices:

Once you have successfully connected your INSTEON interface, you can now start adding the INSTEON devices you want to control and monitor from Control4.

Each added devices driver will connect automatically to the PowerLinc Modem driver if this one is already installed. If not, you will need to connect the device driver manually to the PowerLinc Modem driver.

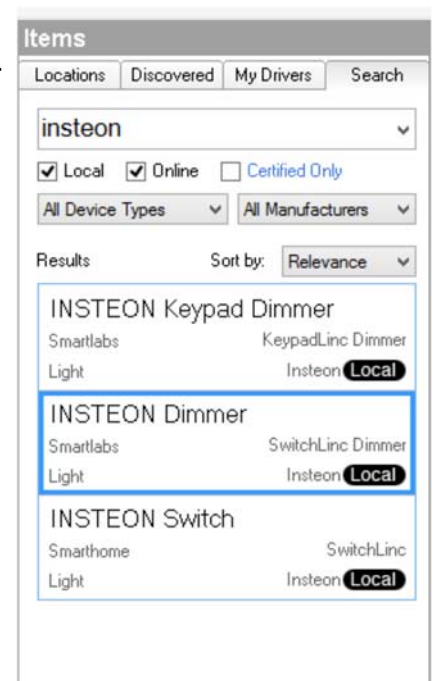


To add devices drivers to the project, in Composer got to System Design, then search for “Insteon”. You will see all the available module device drivers. Double-click on the one you want to add to your project.

## INSTEON Lights

There is two type or light drivers available in the package:

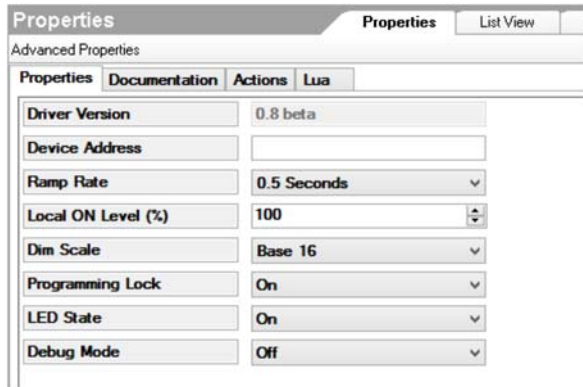
INSTEON Dimmer Driver allow the control of any INSTEON module that is dimmable for example a Switchlinc Dimmer or a Lamplinc. The driver allow the full control over an INSTEON Dimmable Light load including Ramp To, Set Level. The light will also give feedback of Light Level Changes, Button push. INSTEON Switch Driver allow the control of any INSTEON On/Off/Relays module (not to confuse with the I/O Linc that provide a relay but not for On/Off purpose).



Supported modules is the SwitchLinc relay, the ApplianceLinc and other similar relay-based modules. Again, full control and feedback is possible with the driver.

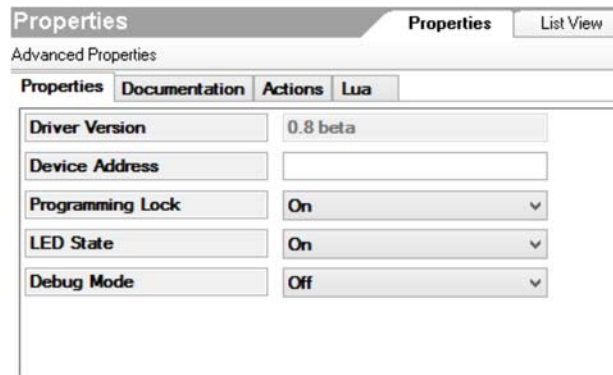
### INSTEON Lights Drivers Properties:

Dimmer Driver:



Property	Value
Driver Version	0.8 beta
Device Address	
Ramp Rate	0.5 Seconds
Local ON Level (%)	100
Dim Scale	Base 16
Programming Lock	On
LED State	On
Debug Mode	Off

Switch Driver:



Property	Value
Driver Version	0.8 beta
Device Address	
Programming Lock	On
LED State	On
Debug Mode	Off

Both lights drivers offer similar settings except that the dimmer as some related to Ramping removed.

#### Driver Version:

Tell you which driver version you are currently running

#### Device Address:

This is the INSTEON address of the device to control. This address is written on the module itself, or you can use Houselinc to see the address of the module or you can also use our Identify feature that will find the module address automatically with button-push (see further instructions on Identify feature in next page). The address is composed of three HEX digit separated by a character that is sometime a space, a dot or a dash (ex: FD.34.A3 or B2 15 19). It doesn't matter how it is entered in the field as soon as it composed of the three HEX digit separated by any character.

#### Ramp Rate:

This is related only to dimmer and is used to set the default Ramp Rate used for local control. This is similar to the "Click Ramp Up/Click Ramp Down" setting on a Control4 dimmer driver.

#### Local ON Level (%):

This setting sets the ON Level for local control. This is similar to "Preset Level" of a Control4 dimmer.



## Dim Scale:

A compatibility settings to allow the use of custom ramp rate with all generation of INSTEON dimmers.

- Base 8 will work best with newer dimmers sold after 2011
- Base 16 will work best with older dimmers, may be buggy with recent dimmers
- Use Preset Ramp Rate will use the Ramp Rate setting from Properties as the only Ramp Rate available but will allow the dimmer to use very precise Ramp To levels.

You should use this information as a baseline but best is to try and see witch setting work best with your dimmer. To see if a setting work, use Composer and try to ramp your dimmer to a level near 50% but a bit lower, check the light level, then try to set it somewhere between 55% and 70% and check it the light dim instead of bright, this is the hint you have to use another “Base” setting as Dim Scale.

## Programming Lock:

This parameter is set ton ON by default to avoid local programming of the default ON Level or Ramp Rate. Local programming is not reflected within the driver so it is HIGHLY recommended to let the programming lock ON. Note that Programming Lock will also prevent the ability to link switches together using INSTEON link feature, thus prevent the ability to create 3-Way, that’s why we recommend to do this before connecting your INSTEON system to Control4. To create an INSTEON 3-Way after adding the device driver in the project, simply disable Programming Lock.

## LED State:

Set the LED located on the dimmer ON or OFF. This can also be done via a Programming action.

## INSTEON Light Driver Actions

- **“Identify (Hold SET Button)”** will trigger the identify process for that module. Once button is clicked, go to the module to identify and press and hold the SET button until it beep. You should then check on Properties tab to see that the Address field is now auto-filled.
- **“Initialize Light Proxy Data”** is used to force the initialization of the Light Proxy in case the light does not start to respond immediately to commands.
- **“Download Scene Data”** will download all the link database from the dimmer and will save the final scene level of every scenes this dimmer is part of. The primary use of this action is to provide level feedback for this load in Navigator when a scene is triggered where it is part of. This process will generate LOT of INSTEON traffic and will complete only if there is no other traffic on the line. You can monitor the progress of the download on the Lua tab, it will show the

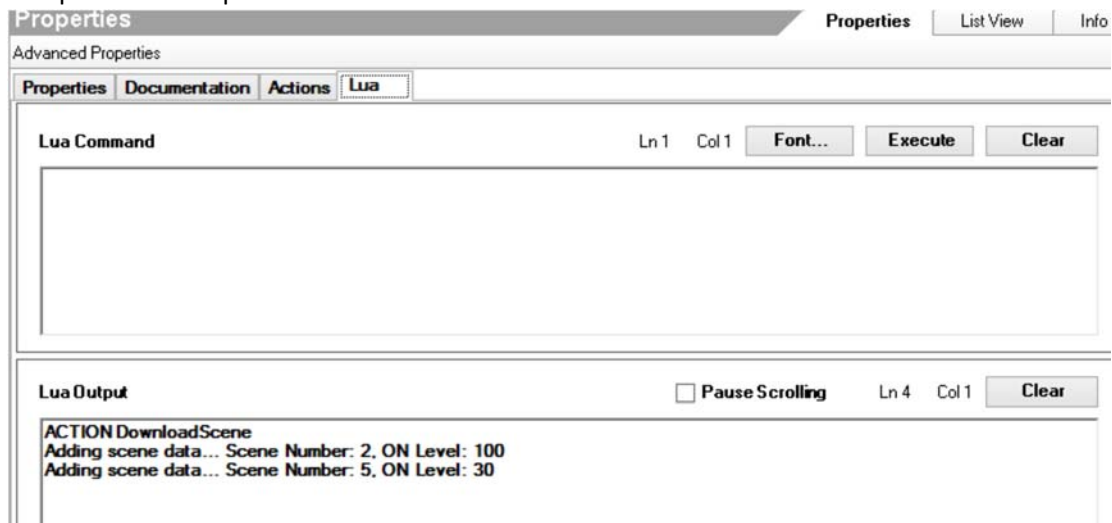


scene found and the level associated with it. If you don't see any output on the Lua tab and you're sure this dimmer is part of a scene, the download may have fail due to the presence of other traffic on the line, in this case just retry the download, scene data is overwritten each time. Remember that our driver does not create the scene, this must be done through Houselinc or external software.

UPDATE: Since v1.2, the Scene Download process will occur automatically within 30 seconds after a light driver is added, or after a reboot/power failure. Since this is not a guarantee that the scene data will stay accurate because of the traffic issue discussed before, it may still be useful to manually download the Scene Data when you don't see accurate light level feedback after a scene is activated.

- **“Display Scene Data”** will display the stored Scene Level Data on the Lua tab.

Sample of Lua output from Download Scene Data:



## INSTEON Slave Dimmer Driver

This driver is intended to make a regular INSTEON Dimmer or Switch act like a 2-button keypad. Primary use is in a 3-Way setup where it could be confusing to see two switches that control the same load in Navigator. Slave dimmer does not use Control4 Light Proxy so it will be invisible to Navigator screen, you still need to configure its INSTEON address as you do for regular switch. Slave dimmer will present two BUTTON\_LINK connections that can connect to any load even non-INSTEON. When connected to an INSTEON load, its local LED will follow the master load's LED and will provide remote control under certain conditions explained below.

Slave Dimmer connections:

Connections		Control & Audio Video Connections			
Control/AV		INSTEON Slave Dimmer			
Network					
Lab Domaudeo					
Home					
House					
Sous-sol					
Room					
INSTEON Slave Dimmer					
Test					
Salle mécanique					
Cinéma					
Bureau					
System Design					
Connections					
Name	Type	Connection	Input/Output		
Control Inputs					
INSTEON Control	Control	INSTEON_DIMMER	Input		
Top Button Link	Control	BUTTON_LINK	Input		
Bottom Button Link	Control	BUTTON_LINK	Input		
Device	Name	Location			

INSTEON Slave Dimmer Driver properties:

Properties	
Driver Version	0.8 beta
Device Address	
Master Load Type	Linked
Debug Mode	Off

**Master Load Type:**

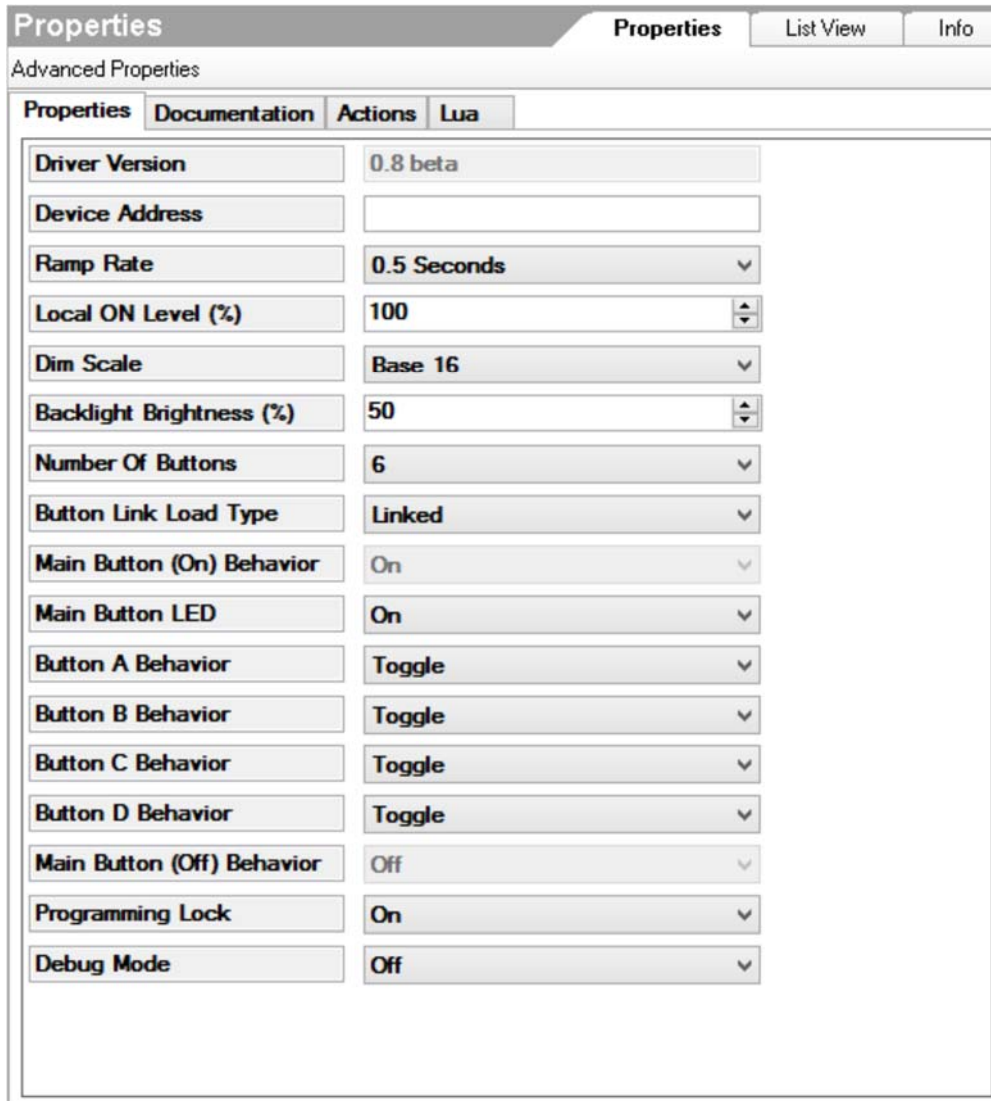
The parameter tells the driver what kind of load the Slave Dimmer is controlling.

- “Linked” means that the load is and INSTEON Dimmer or Switch linked to the slave dimmer through the 3-Way process explained before. This setting will limit the traffic between the Master and the Slave dimmer by sending only LED matching information, no ON/OFF command is sent because they are handled by the INSTEON link that was made between switches. Remember that NO linking can be done through the driver, it must be done with external software. Slave dimmer Button Link with Linked INSTEON load is only to reflect what links is done between devices.
- “Unlinked” setting will enable the full control of any loads connected to BUTTON\_LINK either INSTEON or not. It is not recommended to control INSTEON loads this way, better use INSTEON links as explained before.

## INSTEON Keypad Dimmer Driver

Keypad Dimmer driver offers the same control and properties over the built-in dimmer as the INSTEON Dimmer light driver with some added configuration for buttons behaviors, buttons LEDs and feedbacks for each individual button. Only one driver will work with all variation of the in-wall INSTEON keypads including the Keypadlinc Dimmer, Keypadlinc Switch and the 6 or 8 buttons version or each.

### Keypad Dimmer Driver Properties:



Properties	Documentation	Actions	Lua
Driver Version	0.8 beta		
Device Address			
Ramp Rate	0.5 Seconds		
Local ON Level (%)	100		
Dim Scale	Base 16		
Backlight Brightness (%)	50		
Number Of Buttons	6		
Button Link Load Type	Linked		
Main Button (On) Behavior	On		
Main Button LED	On		
Button A Behavior	Toggle		
Button B Behavior	Toggle		
Button C Behavior	Toggle		
Button D Behavior	Toggle		
Main Button (Off) Behavior	Off		
Programming Lock	On		
Debug Mode	Off		

The first settings are identical to our Dimmer Driver. Here the added settings for Keypads:

### Backlight Brightness:

Sets the global brightness of the whole keypad. This does not affect the brightness of each button LED.

### Number Of Buttons:

Tells the driver to use the 6 or 8 buttons INSTEON keypad model. This will change the way the button's events are generate. More information about events later on.

### Main Button LED:

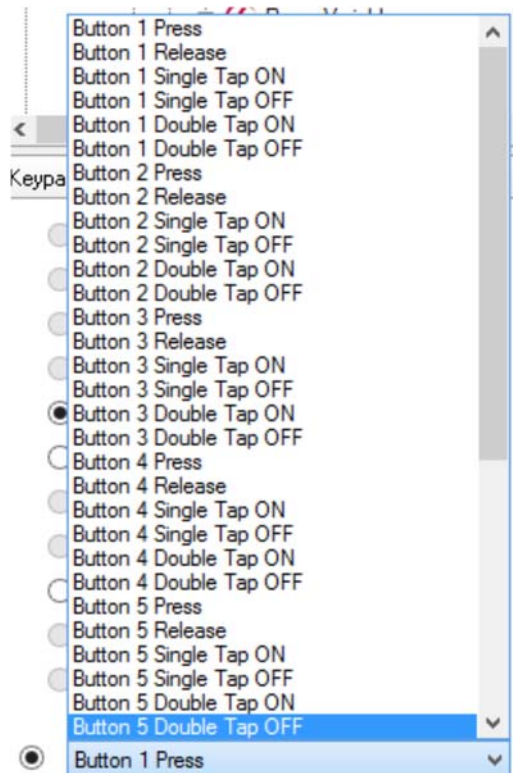
This sets the LED state of the main button that control the built-in switch or dimmer. The command react differently between Keypad models, sometime it can turn ON/OFF the global backlight of the dimmer, some other models will really turn ON/OFF the main button LED.

### Button Behavior:

Because INSTEON allow keypads to send either ON or OFF command from each button, this setting to allow the button to send only ON command or to toggle between ON and OFF. Button feedback will occur accordingly.

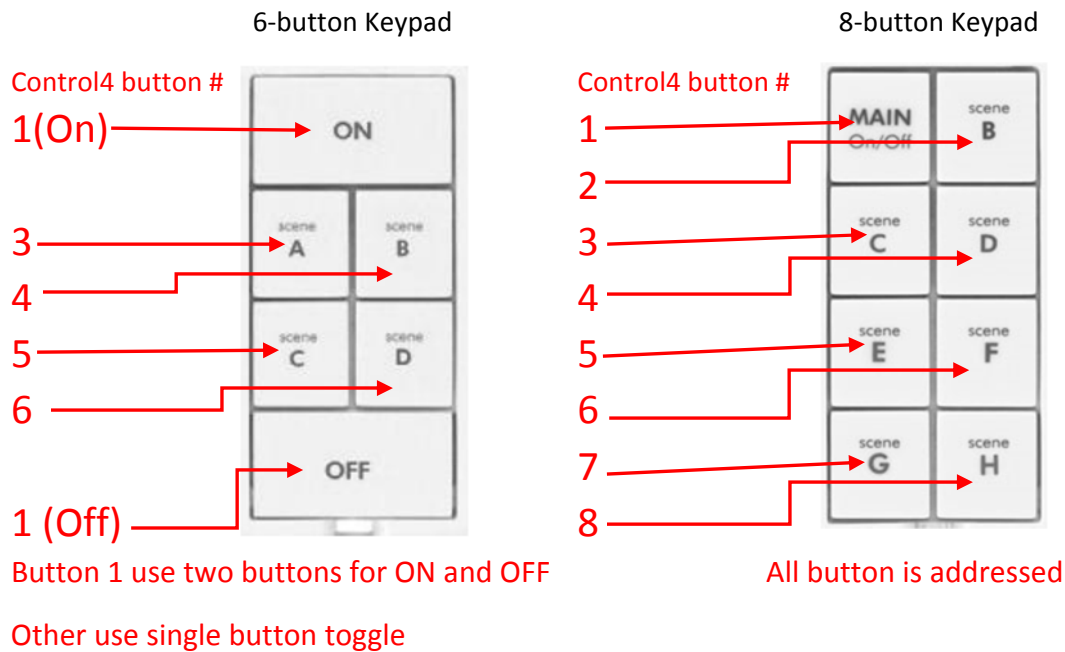
### Keypad Dimmer Events

Each button on the Keypad will generate specific event representing its state, list of the possible event is the following:



and so on up to Button 8.

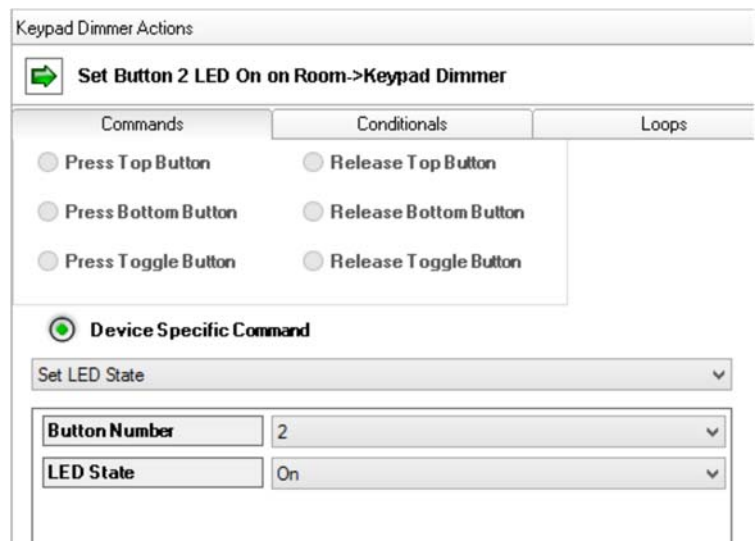
Each event is self-explaining but button number may be a bit confusing. Because INSTEON use letter to define each button and Control4 use number, use the following chart to know how INSTEON Keypad buttons is addressed within the driver:



### Keypad Programming Actions

In addition to standard Control4 Light action, you will get the following actions available:

- **“Raise Dimmer”** will start the dimmer to gently bright the light
- **“Lower Dimmer”** will start the dimmer to gently dim the light
- **“Stop Dimmer”** will stop raising or lowering the light
- **“Set Backlight Brightness”** will set the global backlight brightness of the Keypad, same as “Backlight Brightness” in the driver Properties
- **“Set LED State”** will allow to individually set each button LED to ON or OFF. It can also set all the LEDs to the same state at the same time.



## Scenes

INSTEON Scenes is a group of INSTEON device that will respond to a single command that trigger a preset level and ramp rate specific to each load part of the scene. To be able to manage INSTEON scenes within Control4 the scene must be built externally with Houselinc and must use the INSTEON Modem, Smartlinc or Hub as a Controller. The INSTEON Modem is capable of controlling up to 240 scenes, each scene is numbered. You need to know the number of the scene you want to control before controlling it within Control4. For more information about creating scenes with Houselinc and having the PowerLinc Modem or Hub as controller, please refer to Houselinc manual.

Our driver offer INSTEON Scene support via three ways:

### Scene activation via PowerLinc Modem Driver programming Action

This is useful to quickly trigger an INSTEON scene without any other driver installed except the PowerLinc Modem driver. Scene Level Feedback will be provide only in the scene members devices are configure in the project and have the Downloaded Scene Data done (see Download Scene Data actions).

Scene Activation on the PowerLinc Modem is located under Scene Control in Programming Actions:

PowerLinc Modem Actions

Turn On scene 1 on Test->PowerLinc Modem

Commands    Conditionals    Loops

Device Specific Command

Scene Control

Scene Number: 1

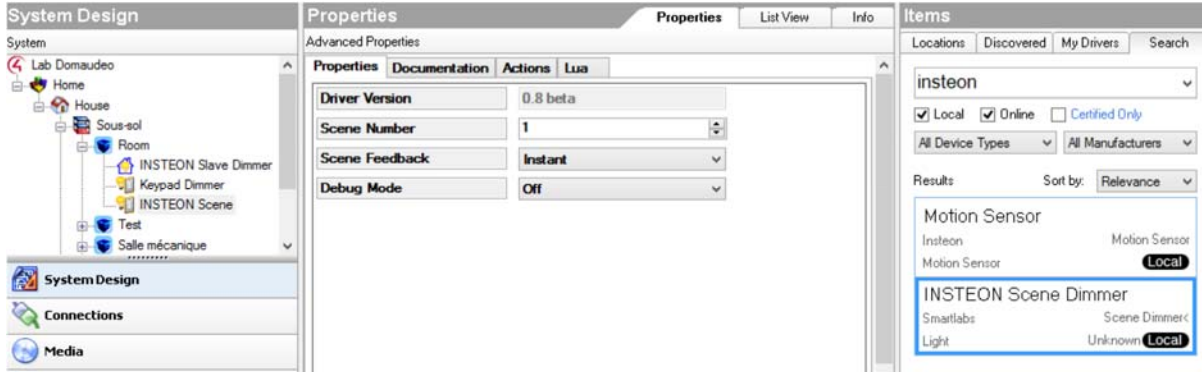
Command: Turn On



## Scene activation via Scene Dimmer Driver

We provide a Scene Dimmer Driver that will be used to control a whole scene with a virtual dimmer that is compatible with any lightning application within Control4. The Scene Dimmer Driver is a 3 in 1 driver that allow an INSTEON Scene to be triggered via Navigator, it allow setting the global brightness of the whole scene with a single dimmer and it also allow an INSTEON Scene to be part of a Control4 scene via the Advanced Lightning Agent.

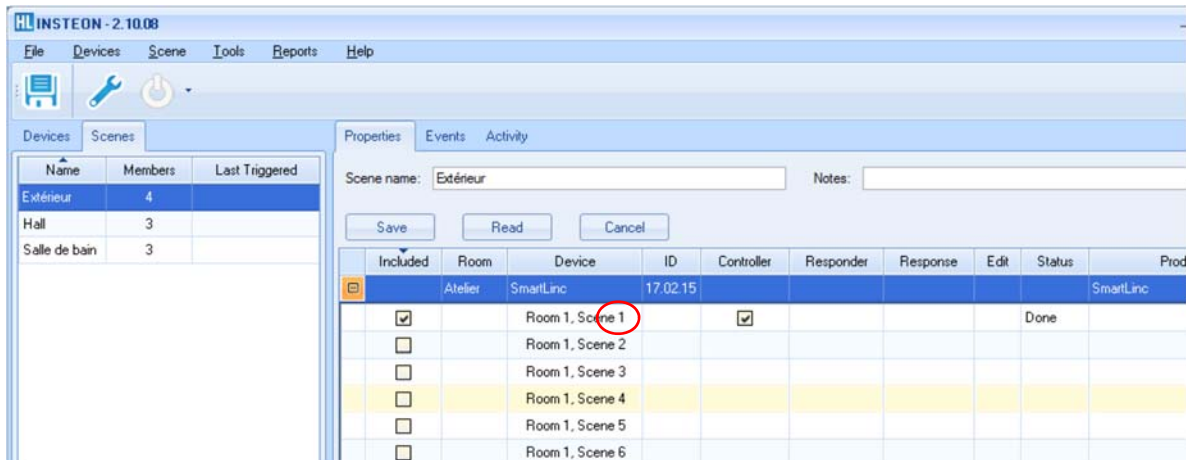
Adding a Scene Dimmer:



## Scene Dimmer Properties

### Scene Number

The scene number is the number the PowerLinc Modem use to control the scene as we explained before about scene number. In Houselinc, scene number can be easily found by selecting “Scene” in the left part, click on the desired scene and then on the right part, select your INSTEON Controller and click the “+” just before its name, you’ll see all scene number and which one is used as Scene Controller. This number is the scene number.



Don't be confuse with Room Number, to use scene with our driver, you need to provide the scene number that goes from 1 to 240, so when Houselinc shows Room 2, Scene 1, it's in fact Scene 17 and that's the number you need to provide.



## Scene Feedback

“Instant” will provide instant light level feedback to all load that is part of the scene without waiting for them to broadcast their actual level. This is very fast but you will not know if a load has failed to get to the scene level. This setting is OK for most user and provide the best user experience in Navigator

“Wait For Load” will wait for the loads to broadcast an acknowledge that they are going to Scene level. This generate a lot of INSTEON traffic and require that no other traffic happen simultaneously. If any other INSTEON traffic is generate while the driver is waiting for scene level feedback, the process is cancelled and level will never change on navigator. This is INSTEON by-design behavior. The main use of this setting is mostly troubleshooting.

## Scene Activation via Advanced Lightning Agent

INSTEON load controlled by our driver can be part of a Control4 Advanced Lightning Agent (ALA) scene but this may provide some delay between each load that turn on (pop-corn effect). The recommended way to use the benefit of the ALA is to add the INSTEON Scene Dimmer Driver to the scene and trigger it to level 100% with 0 s Ramp Rate (set it in the default Toggle scene also). This will trigger the INSTEON scene that Scene Dimmer is controlling. The scene will smoothly goes on and the result will be perfect. If you specify other level or ramp settings, the whole scene will go to that level.

Advanced Lighting Scenes

Test  Show flash option

Colors  
Active   
Inactive

Tracking  
 All Loads  
 Any Load

Hold Rates (sec)  
Up 5  
Down 5

Toggle Scene  
Test (Toggle)  
 

Current State  
Inactive

Name	Tracking	Delay	Rate	Level (%)
Hall INSTEON Scene	At Scene Final Level	0 sec	0 sec	100

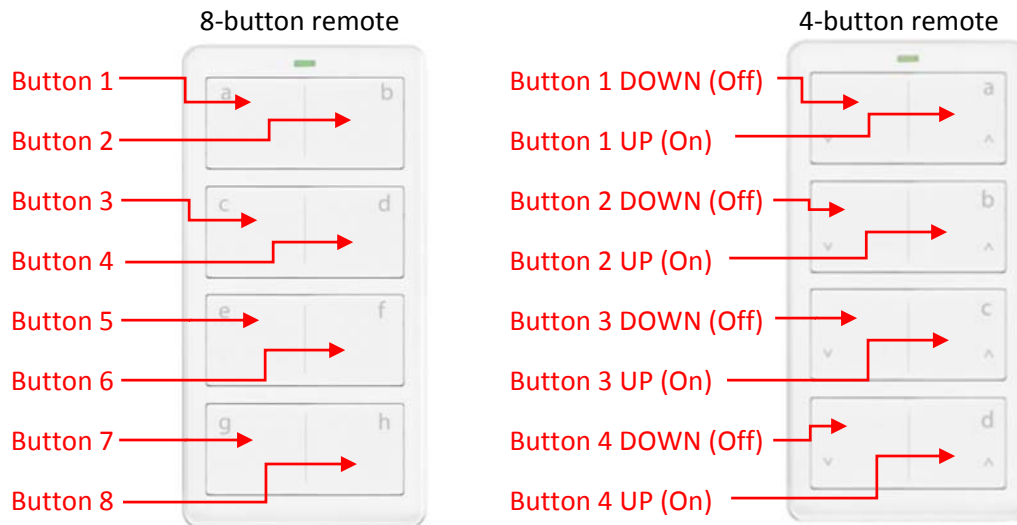
Graph Scale 1 second[s]  
0

Hall  
INSTEON Scene

## INSTEON Mini Remote Driver

The Remotelinc 2 (Mini Remote) driver is similar to the Keypad driver less dimmer control and some options removed. The driver will generate events similar to keypads following button pattern.

Remotelinc2/Mini Remote button pattern:



Options for the Mini Remote Driver are:

### Number of Buttons

This settings will tell the driver you are using a 4 or 8 button Remotelinc 2. This will modify the way events are generate and BUTTON\_LINK available.

### Buttons Behavior

The RemoteLinc 2 / Mini Remote allow only to set the buttons behavior for all buttons at once. This option will affect only the 8-button remote, it will change the way the button react from toggling ON/OFF or sending only ON commands.

### Status LED

This option sets the status LED ON or OFF. On means the status LED will lit when a button a pressed, this is not a steady ON.

## INSTEON I/O Linc Driver

I/O Linc Driver will allow the integration of the INSTEON I/OLINC as a contact input and a relay output in Control4. These connections can be used to trigger any Control4 virtual devices like Garage Door, Blinds or other.

Control & Audio Video Connections				
Stores				
Name	Type	Connection	Input/Output	Connected To
<b>Control Inputs</b>				
INSTEON Control	Control	INSTEON_IO	Input	PowerLinc Modem->INSTEON I/O
<b>Control Outputs</b>				
RELAY 1	Control	RELAY	Output	
CONTACT 1	Control	CONTACT_SENSOR	Output	

### I/O Linc Driver Settings:

**Relay Mode:** To set the way the relay will react to command.

- “Latching” will close or open the relay on each command and will keep this position
- “Momentary” will close the relay for a 2 seconds and will open it after

**Sensor Mode:** To set the way the sensor will react to command.

- “Normal” will report “Closed” when the contact is shorten
- “Inverted” will report “Opened” when the contact is shorten

UPDATE: Since v1.2, the I/O Linc driver support variable trigger delays, this is sometime required to control blinds. To use the variable delay feature, leave the Relay Mode property to “Latching” and you will control the trigger delay with generic relay driver such as the Blinds driver:

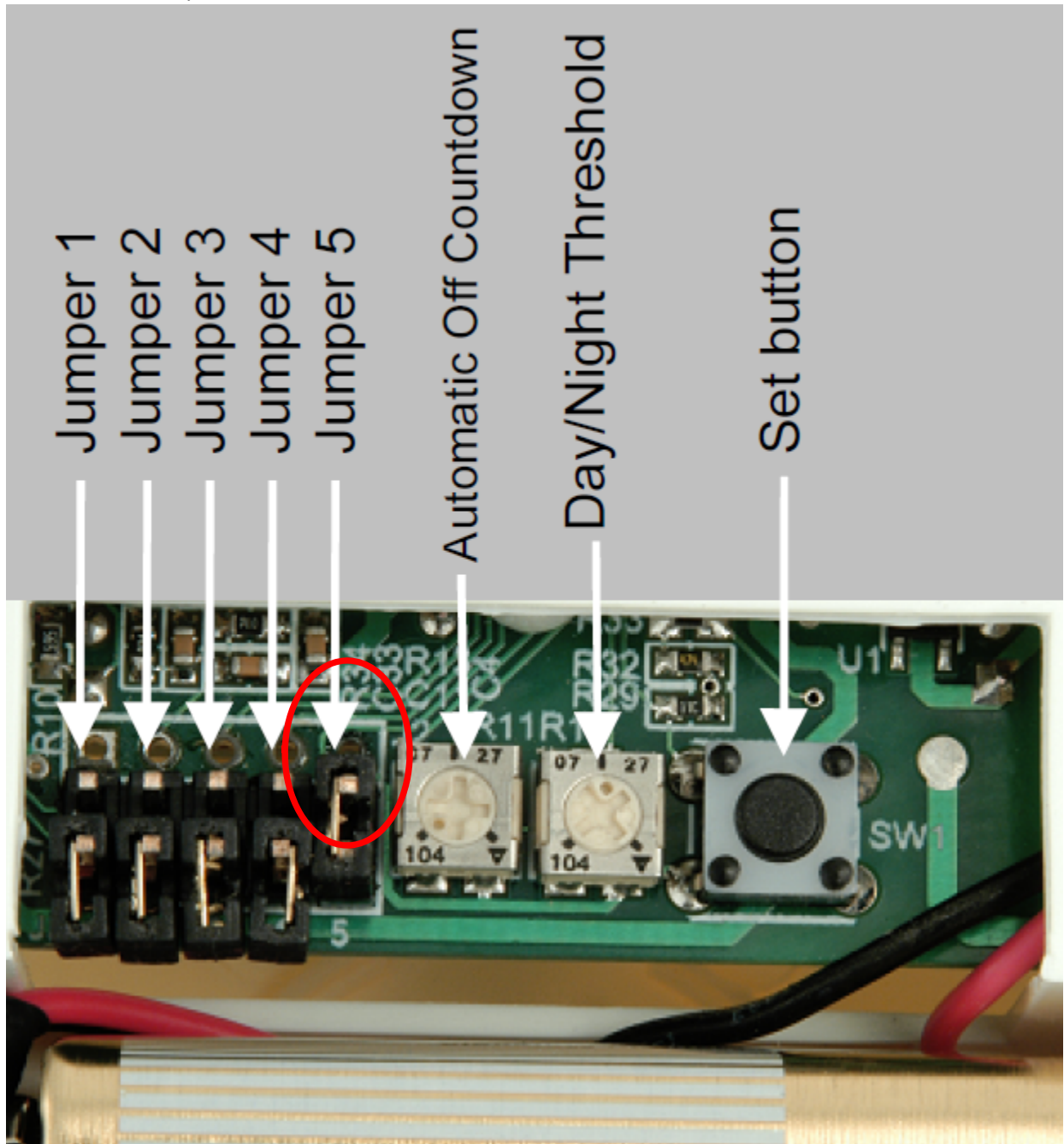
The screenshot shows the Control4 System Design interface. On the left, a tree view shows the system hierarchy: Lab, Home, Maison, Sous-sol, Room, Blinds, INSTEON I/O Linc, Lab, and Salle mécanique. The 'Blinds' device is selected. On the right, the 'Properties' window is open, showing the 'Advanced Properties' section. The 'Single Relay' section has two radio buttons: 'Hold Type' and 'Pulse Type'. The 'Pulse Type' radio button is selected and highlighted with a red box. Below it, the 'Pulse length' is set to 500 milliseconds.

## INSTEON Motion Sensor Driver

The Motion Sensor driver is intended to work with the Skylink INSTEON Motion Sensor model 2420M. No other models was tested. UPDATE: Since v1.2, the driver now support newer Motion Sensor model 2842-222.

The driver will trigger Control4 native Motion Sensor events “Sense Motion” and “Stop Sensing Motion” and will provide full configuration options over the Motion Sensor.

Before configuring any option in the driver, you need to be sure that the Jumper 5 is installed in the motion sensor as pictured:



## Motion Sensor Driver properties

Advanced Properties

Properties	Documentation	Lua
Driver Version	1.0	
Device Address	14 6A 4A	
Motion LED (%)	50	
Night Only Mode	Operate always	
Motion Countdown Duration	1 minute	
Night Light Level Threshold	50	
Occupancy Sensing Mode	Wait for countdown timeout	
Motion Sensor Status	Motion sensed	
Battery State	Unknown	
Debug Mode	Off	

### Motion LED (%)

This is the brightness of the built-in red LED in the motion sensor.

### Night Only Mode

Select if you want the motion sensor to always operate or operate only when it's dark

### Night Level Threshold

To select the sensibility of the built-in light sensor when "Operate only when it's dark" is selected.

Note that the Motion Sensor will still work with the driver even if the Jumper 5 is not installed, you will only lose the possibility to configure the properties of the motion sensor.

## INSTEON Generic Sensor Driver

INSTEON Generic Sensor driver let use monitor most INSTEON sensor modules. It present a contact connection that can be connected to any generic Control4 sensor drivers like the Door Contact.

The screenshot displays the Control4 interface for configuring an INSTEON Generic Sensor Driver. On the left, the 'Connections' pane shows a system tree with 'Lab' selected. The right pane, titled 'Control & Audio Video Connections', shows the configuration for the 'INSTEON Sensor'.

Name	Type	Connection	Input/Output	Connected To
<b>Control Inputs</b>				
INSTEON Control	Control	INSTEON_SENSOR	Input	PowerLinc Modem->INSTEON Sensor
<b>Control Outputs</b>				
Contact Sensor	Control	CONTACT_SENSOR	Output	Door Contact Sensor->Contact Sensor

CONTACT_SENSOR Input Devices			
Device	Name	Location	Connections
Porte patio	Contact Sensor	Salle à diner	Home Controller HC800->CONTACT 4
Porte arrière	Contact Sensor	Garage	Home Controller HC800->CONTACT 1
Doorbell	Contact Sensor	Extérieur	Home Controller HC800->CONTACT 2
Porte de garage	Contact Sensor	Garage	Garage I/O Linc->CONTACT 1
Door Contact Sensor	Contact Sensor	Lab	INSTEON Sensor->Contact Sensor
Water Sensor	Contact Sensor	Lab	INSTEON Sensor 2->Contact Sensor

## INSTEON Leak Sensor Driver

INSTEON Leak Sensor driver is specifically done for this particular INSTEON sensor because it does react differently than other sensors. It presents the same Contact connection as the Generic Sensor Driver but will produce accurate events according to the state of the leak sensor. It also provide Online and Battery Status on Properties and specific events in Programming.

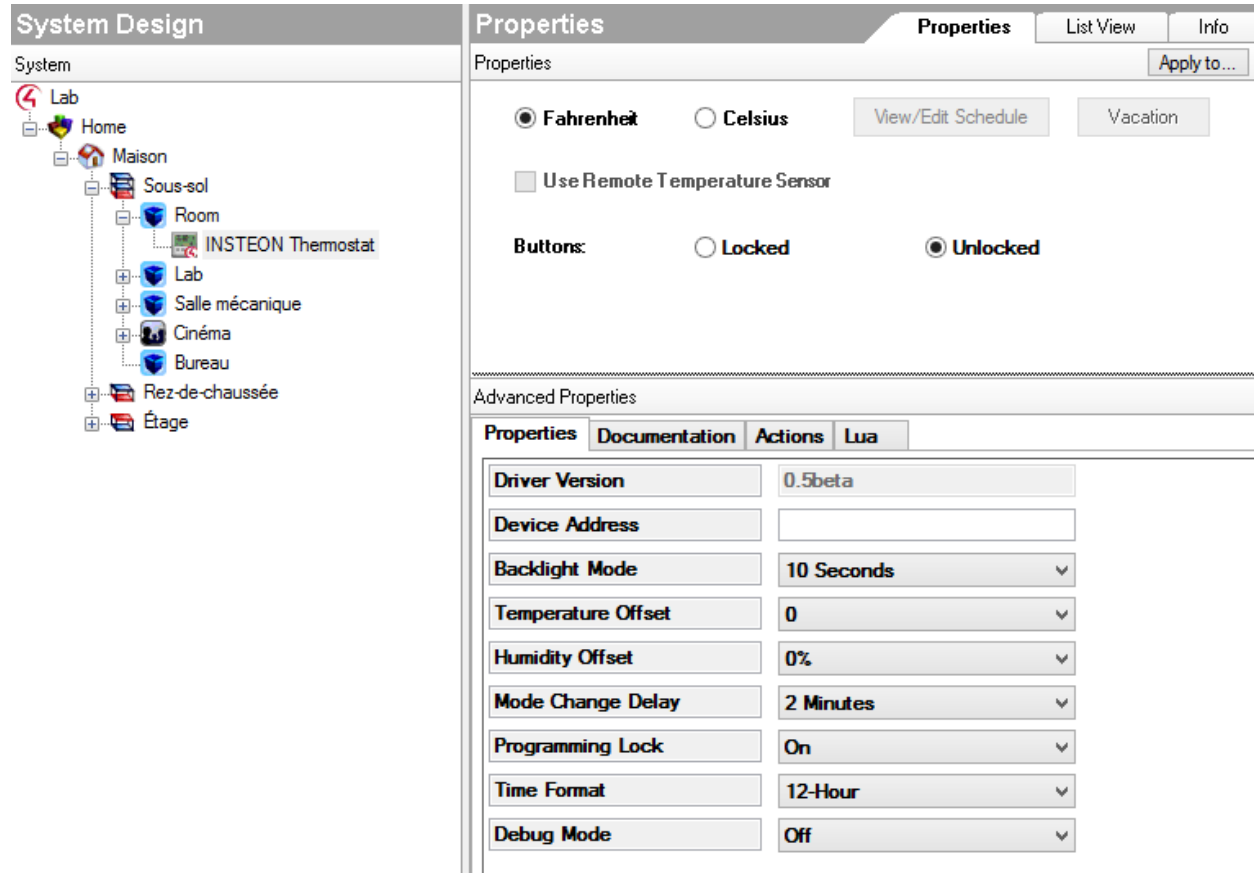
The screenshot displays the Control4 interface for configuring an INSTEON Leak Sensor Driver. On the left, the 'System Design' pane shows a system tree with 'Maison' selected. The right pane, titled 'Properties', shows the configuration for the 'INSTEON Leak Sensor'.

Property	Value
Driver Version	1.2
Device Address	28 07 88
Sensor Status	Online. Last Sensed Unknown
Battery State	OK
Debug Mode	Off

## INSTEON Thermostat Driver

INSTEON Thermostat driver will allow native Control4 integration of the INSTEON Thermostat (model 2441TH). It communicate in full two-way so the Control4 system will be always in sync with the Thermostat. The INSTEON thermostat is a RF-Only device that require at least one dual-band module nearby. As other RF-Only module, response time can be a bit slower that other powerline/RF modules.

### Thermostat Driver Properties:



The screenshot displays the Control4 System Design interface. On the left, the 'System Design' pane shows a hierarchical tree structure. Under 'Maison', there are several rooms: 'Sous-sol', 'Room', 'Lab', 'Salle mécanique', 'Cinéma', 'Bureau', 'Rez-de-chaussée', and 'Étage'. The 'Room' contains an 'INSTEON Thermostat' device. On the right, the 'Properties' window is open for the thermostat. It has three tabs: 'Properties', 'List View', and 'Info'. The 'Properties' tab is selected, showing a 'Properties' section with radio buttons for 'Fahrenheit' (selected) and 'Celsius', a 'View/Edit Schedule' button, a 'Vacation' button, a 'Use Remote Temperature Sensor' checkbox, and 'Buttons' with radio buttons for 'Locked' and 'Unlocked' (selected). Below this is the 'Advanced Properties' section with tabs for 'Properties', 'Documentation', 'Actions', and 'Lua'. The 'Properties' tab is active, showing a list of settings: 'Driver Version' (0.5beta), 'Device Address' (empty), 'Backlight Mode' (10 Seconds), 'Temperature Offset' (0), 'Humidity Offset' (0%), 'Mode Change Delay' (2 Minutes), 'Programming Lock' (On), 'Time Format' (12-Hour), and 'Debug Mode' (Off).

Most of these settings will auto-populate reflecting the actual configuration of the connected thermostat. If it does not, it may have a problem with the thermostat links, see troubleshooting section.

### Backlight Mode:

Sets the delay of the backlight LED to turn automatically off.

### Temperature/Humidity Offsets:

This is the only parameter that is not auto-populated. It set the temperature/humidity offset to match the thermostat value with another thermometer or thermostat. This will change the temperature/humidity values in both Control4 and the physical thermostat.

### Mode Change Delay:

How much time to wait between mode changes. The thermostat will wait this amount of time before changing from Heat to Cold or Off. This is mainly to protect compressor that may not handle well quick start and stop.

### Time Format:

To set how the time is displayed on the thermostat.

### Limitation:

The thermostat driver cannot set the time on the thermostat, this should be done via HouseInc prior of integrating in Control4.



The INSTEON Thermostat driver is presented as a Control4 Wireless Thermostat in Navigator



## X10 Support

Basic X10 support is provided with the PowerLinc Modem driver. The driver will generate an event when it receives an X10 command on the powerline and will update two variables with the received House Code/Unit Code and X10 Command for using in conditional programming.

The screenshot displays the Control4 programming interface. On the left, the 'Script' pane shows a trigger event: 'When Test->PowerLinc Modem receive an X10 command'. Below this, two conditional actions are listed: 'If Test->PowerLinc Modem->X10\_RECEIVED\_ADDRESS EQUAL TO A1' and 'If Test->PowerLinc Modem->X10\_RECEIVED\_COMMAND EQUAL TO On'. On the right, the 'Actions' pane shows a tree view of the device hierarchy, including 'INSTEON Mini Remote', 'PowerLinc Modem', and 'Salle mécanique'. Below the tree, the 'X10\_RECEIVED\_COMMAND Actions' section is active, showing a conditional action: 'If Test->PowerLinc Modem->X10\_RECEIVED\_COMMAND EQUAL TO On'. The 'Conditions' tab is selected, and the condition is set to 'Is = On'.

The X10\_RECEIVED\_ADDRESS will contain the X10 Address of the last X10 command received.  
The X10\_RECEIVED\_COMMAND will contain the last X10 command received.

The commands that can be received are:

<b>All Lights Off</b>	<b>Extended Code</b>
<b>Status = Off</b>	<b>Status Request</b>
<b>On</b>	<b>Off</b>
<b>Preset Dim</b>	<b>All Unit Off</b>
<b>All Lights On</b>	<b>Hail Request</b>
<b>Hail Acknowledge</b>	<b>Dim</b>
<b>Bright</b>	<b>Extended Data</b>
<b>Status = On</b>	

To use conditional, the command typed is case-sensitive and needs to be entered exactly as listed.

The PowerLinc Modem Driver also has a Send X10 action that allows X10 commands to be sent on the powerline, but we do not recommend using this function as X10 is known to be unreliable. This feature is there for those who still have one or two X10 modules to control, but we do not provide any guaranteed reliability.

X10 support is provided mainly to allow the usage of X10 commands to trigger events in Control4. If used as a Send-Command only manner, it works pretty well and all the use of inexpensive X10 RF Remotes and Motion Sensors paired with a TM751 (or equivalent) to trigger advanced programming in Control4.

## Control4 INSTEON Driver Known Issues:

- Linking modules with the Insteon App for Smartlinc 2412N will not be sufficient to provide feedback to Control4. Do all the initial linking with Houselinc software when using the Smartlinc. You can still control your lights after within the Insteon App after. Linking with INSTEON App for Hub is confirmed to work correctly.
- Using BUTTON\_LINK on the Keypad Dimmer Driver to link to an Advanced Lightning Agent scene where the Scene Dimmer is part of is not guarantee to work. Use programming as a workaround.
- Scene Dimmer will not go off if a one or more scene load(s) level is modified after the scene is activated. This is INSTEON by-design behavior. Use an Advanced Scene Agent scene to monitor an INSTEON scene as a workaround.
- As stated in Limitations, it is not possible to connect to an INSTEON IP Interface to more than one client. If Houselinc is connected to the Hub for example, you will not be able to connect our Control4 driver to the same hub. Please be sure to shutdown Houselinc completely before connecting our driver and vice-versa if you have to modify links or scenes later with Houselinc, the Control4 Driver must be disconnected first or else Houselinc will fail to connect. Hub Web Interface or mobile Application is the only thing that will continue to work in parallel with our driver connected to the same Hub. For Serial Interface, you will have to disconnect the modem from your computer once you're done with Houselinc and connect it to the Control4 controller. You will have to reconnect the modem the computer each time you want to add or manage links.
- Don't try to control a remote INSTEON load with an INSTEON Dimmer/Keypad without linking them together with Houselinc software. Although this should work with straight Control4 programming, this is not optimal and will add some major lags when controlling the load.

## Troubleshooting

Before opening a support ticket, check these simple resolution to common problem that happen frequently. Also, remember that this driver will be as reliable as the weakness point in your INSTEON network. INSTEON still relay a lot on Powerline communication and we often see problem that is caused by signal-absorbing devices like Computers or flat TVs on the powerline that block INSTEON communication. Again test before implementing, insure your system run well with Houselinc before starting the Control4 Integration.

Trouble	Resolution
The PowerLinc Modem does not connect to IP Interface, I don't see the PLM Address in properties	<ul style="list-style-type: none"> <li>- Check if Houselinc is running</li> <li>- Try the Get PLM Address in Action</li> </ul>
I don't see light level feedback in Navigator	<ul style="list-style-type: none"> <li>- Check if the module is linked to the INSTEON Interface</li> <li>- Insure that Light Proxy is initialized (triple-click the load in Composer, insure that you can control it)</li> </ul>
Advanced Lightning Agent scene with INSTEON loads does not become Active when triggered	<ul style="list-style-type: none"> <li>- Check if all modules is linked to the INSTEON Interface</li> <li>- Insure that the light proxy is initialized (click-click each load, try to control the load, if it does not work the first time, retry, it will work the second time)</li> </ul>
Load in a scene does not show the right light level in Navigator when an INSTEON scene is activated	<ul style="list-style-type: none"> <li>- Be sure to download Scene Data on each load before triggering the scene</li> <li>- Use the Scene Dimmer to trigger the scene and be sure to use the "Instant" as Scene Feedback setting.</li> </ul>
Thermostat properties does not auto-populate	<ul style="list-style-type: none"> <li>- Relink the thermostat with Houselinc</li> <li>- Try to control the thermostat in Houselinc prior of adding it in Control4</li> </ul>
INSTEON feedback does not work, I can't see light level updates on Navigator or I can't trigger action from INSTEON keypad	<ul style="list-style-type: none"> <li>- Try refreshing your project</li> <li>- Disconnect the INSTEON interface from power for 30 seconds and reconnect it.</li> <li>- Relink to affected module to Houselinc</li> </ul>

**Thank you for your support!**



**For additional support, visit the Smarthome forum at:**

**[http://www.smarthome.com/forum/topic.asp?TOPIC\\_ID=13922](http://www.smarthome.com/forum/topic.asp?TOPIC_ID=13922)**

**or Control4 public forum at:**

**<http://www.c4forums.com/topic/14498-new-insteon-driver-v12-released-now-with-thermostat-support/>**