INSTEON®

INSTEON On/Off Module 2635-222
Owner's Manual

Contents

Getting Started

Everything you need to quickly get up and running.

Device Overview

On Status LED
Off

On
Off
Set Button

INSTEON

Buttons

Tap to turn on

For dimmable responders:
Double-tap to turn on instantly
Press and hold to brighten

Tap to turn off

For dimmable responders:
Double-tap to turn off instantly
Press and hold to dim
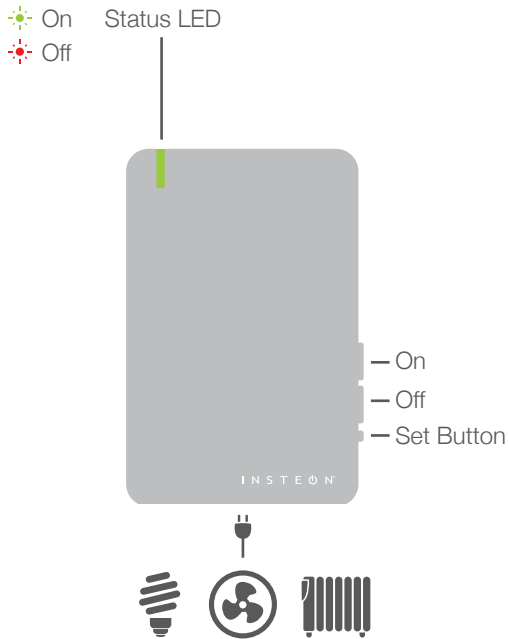
See sections on Basic Linking and
Programming Wheel for set button
functions
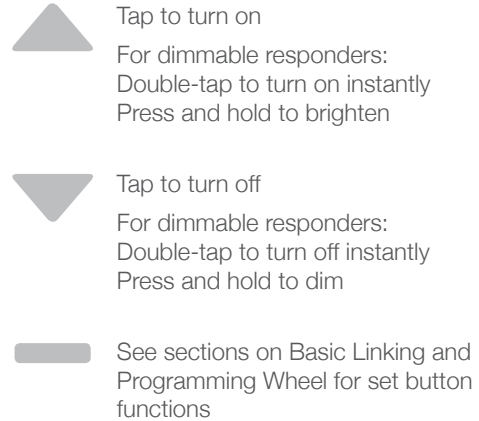
Installation

Plug your appliance into the bottom of the
On/Off Module and plug the On/Off Module
into an unswitched wall outlet.
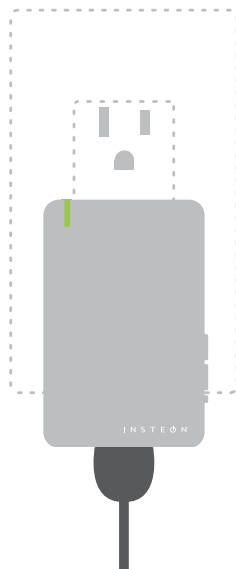
INSTEON

Leave Your Appliance On

If your appliance's switch is OFF, the On/Off
Module will be unable to remotely turn ON
your appliance.

ON
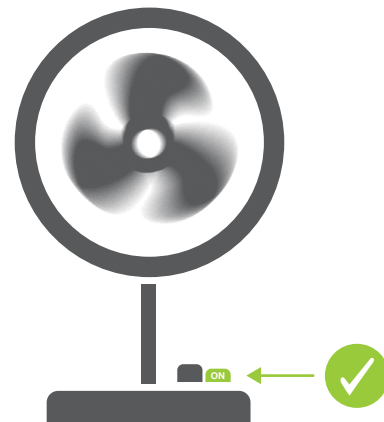
INSTEON Links

INSTEON devices can stand alone and function as a local switch or dimmer, but their real power comes when they are connected together to form a control system. Most INSTEON devices can control one another and be the recipient of control. The process of associating multiple INSTEON devices to one another is called Linking.

Links are One-Way

When linking INSTEON devices, the links that are created are one-way.

A   **B**

Switch A will turn Switch B on and off but Switch B cannot turn Switch A on or off.
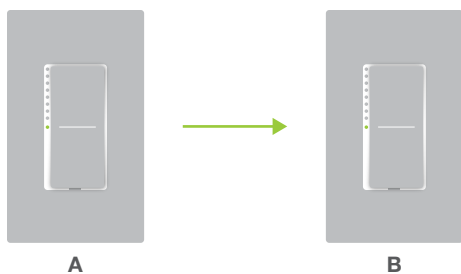
Links Remember a Device's State

The current state of the controlled device is stored in the link: on, off or dimmed.
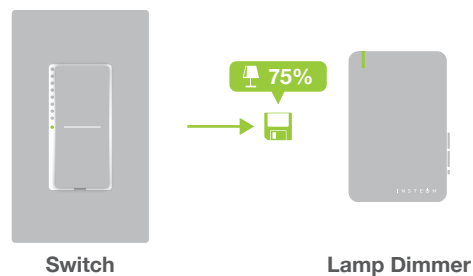
Switch   **Lamp Dimmer**

The switch will turn on the Lamp Dimmer to 75% brightness.

Controllers

INSTEON devices that can turn other devices on or off are called controllers.
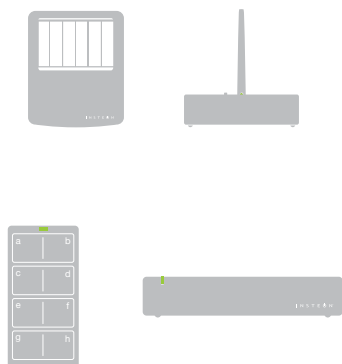
Sensors, Switches, Keypads and the Hub are common controllers.

Responders

INSTEON devices that receive the command of a controller are called responders.

Switches, Keypads, Plug-In Modules and In-Line Modules are common responders.

Understanding Linking

Controller-Only

Some devices like sensors can only control other devices.

Motion Sensor **Dimmer Switch**
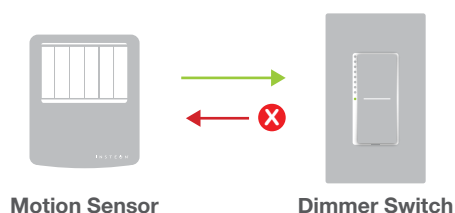
The Motion Sensor will turn on the Switch but the switch cannot control the Motion Sensor.

Responder-Only

Some devices cannot control other devices; these devices only receive INSTEON commands.

LED Bulb **Dimmer Switch**
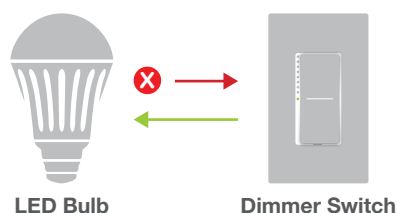
Some devices can only link as responders to devices and scenes.

Grouping Devices

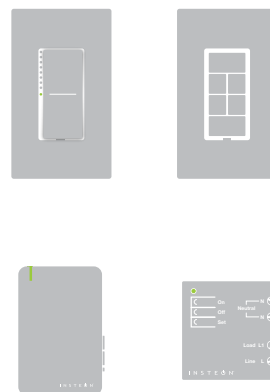You may want to group together two devices, for example, in a virtual-three way configuration. For INSTEON, this is called Cross Linking.

Load **A** **B**
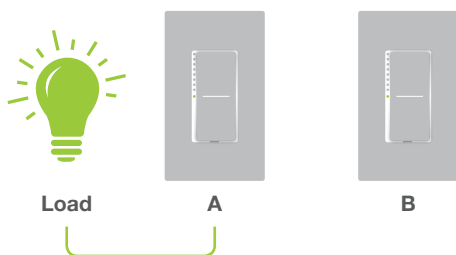
To group Switch A and B so that they each control one another and the connected load, Cross Linking is necessary.

Use Cross Linking

To Cross Link, simply turn on the devices and perform the linking process twice, once in each direction.

A **B**
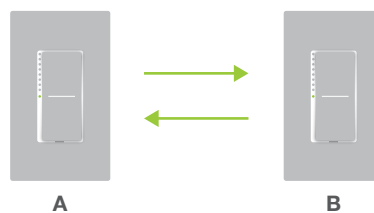
Link Switch A to Switch B and repeat to link Switch B to Switch A.

1 From Rooms, navigate to All Devices.
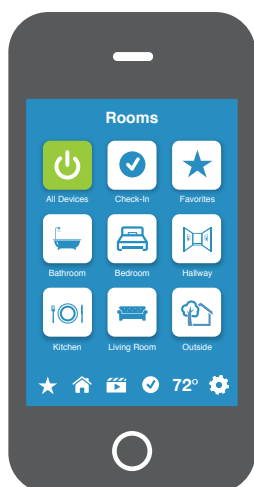
2 Tap the Add button.
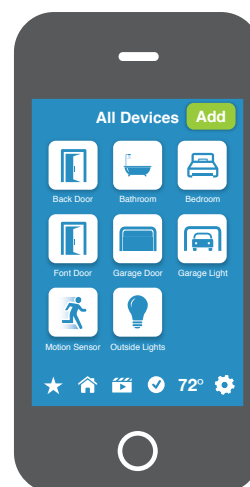
3 Select Plug-In Module form the list of devices.

4 When prompted, press and hold the set button on your On/Off Module until the device double-beeps.
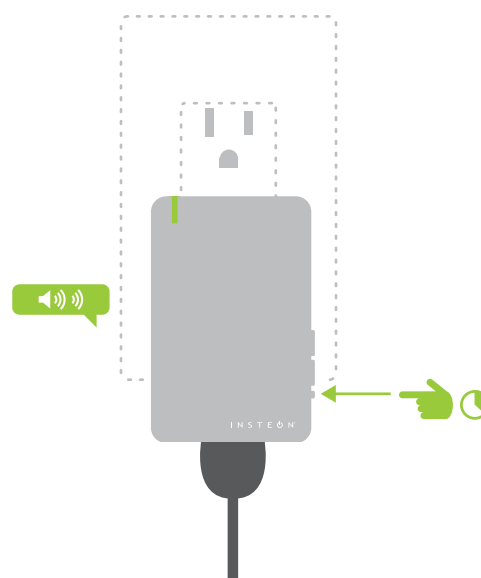
Linking with a Single-Button Controller

1 On your INSTEON controller, press and hold the set button until the device beeps.
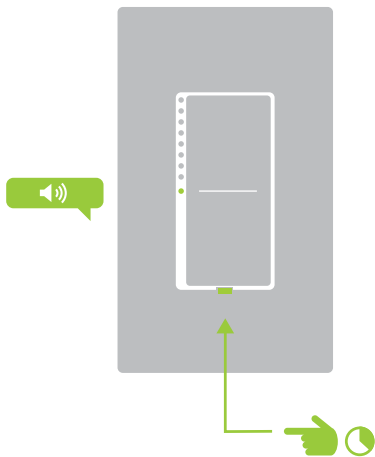
2 Make sure the On/Off Module is On and then press and hold the On/Off Module's set button until the device double-beeps.
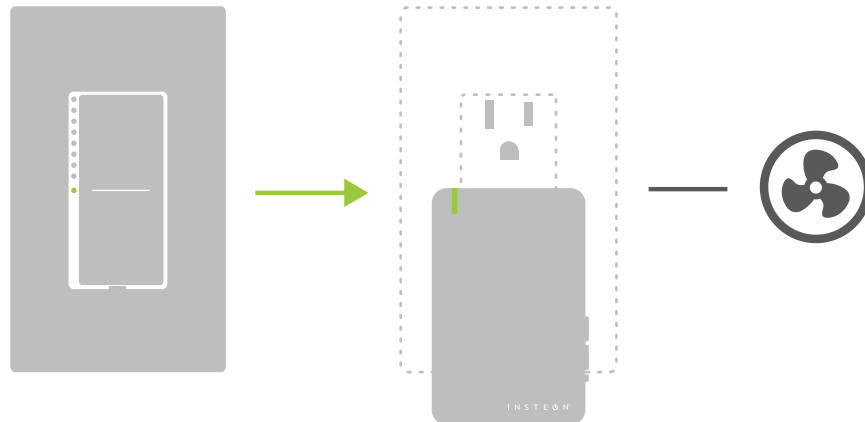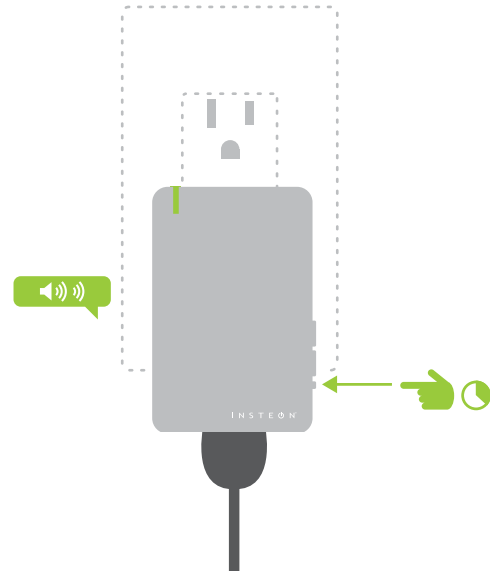
✓ Your INSTEON controller will now control your On/Off Module.

Linking with a Multi-Button Controller

1 On your INSTEON controller, tap the desired control button and then press and hold the set button until the device beeps.

A

B
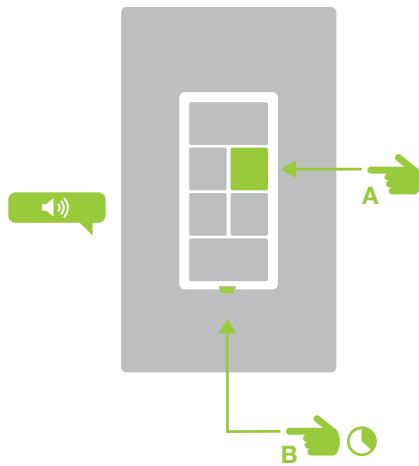
2 Make sure the On/Off Module is On and then press and hold the On/Off Module's set button until the device double-beeps.
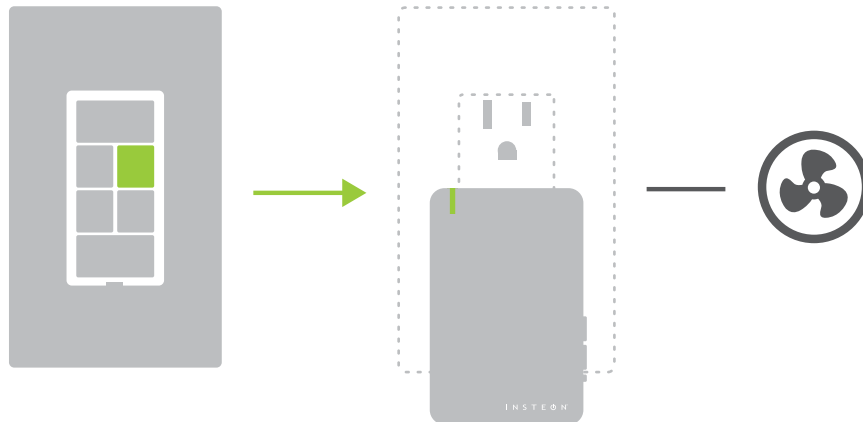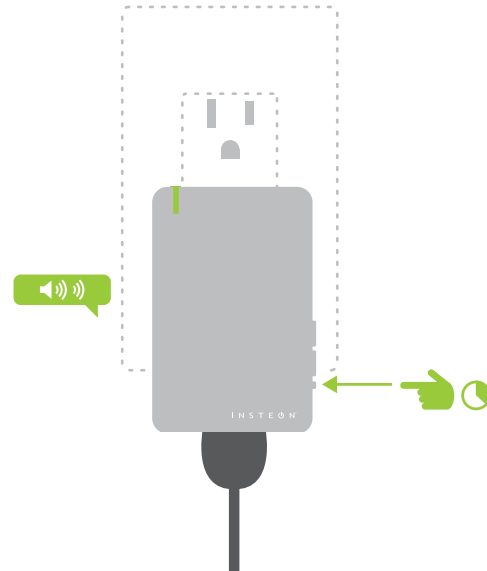
✓ Your INSTEON controller will now control your On/Off Module.

Multi-Linking or Making a Scene

1 On your INSTEON controller, press and hold the set button until the device beeps, then tap the set button.

A
B
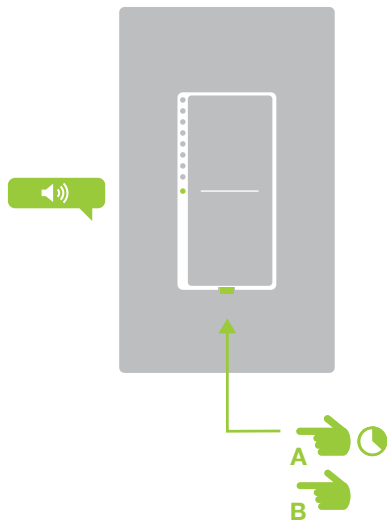
2 Adjust your scene members to their desired state: on, off, or brightness level if dimming.

50% Lamp 1

72% Lamp 2

30% Lamp 3

ON Appliance
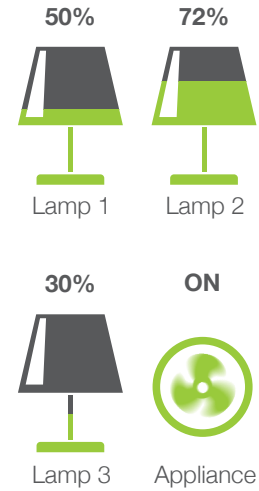
3 One at a time, press and hold the set button on each scene member until it double-beeps.
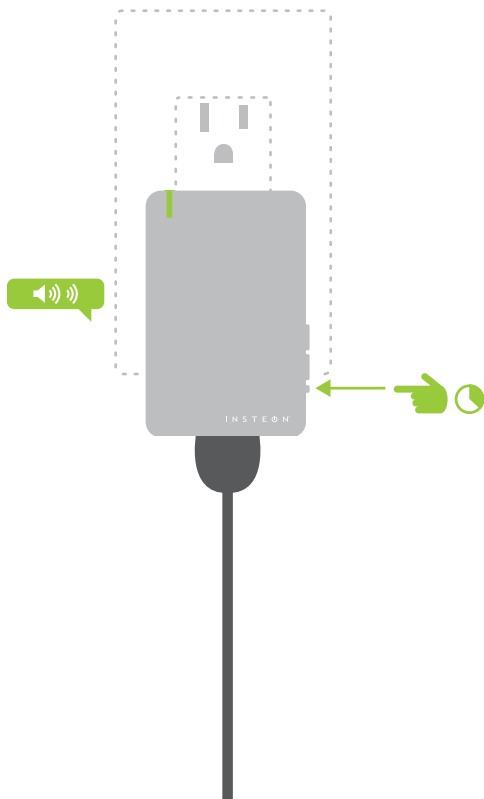
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4 Tap the set button on your INSTEON controller to finish building your scene.
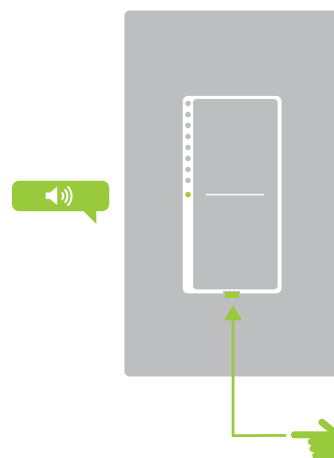
✓ Your INSTEON controller will now control your scene.

Unlinking from a Single-Button Controller

1 On your INSTEON controller, press and hold the set button until the device beeps.
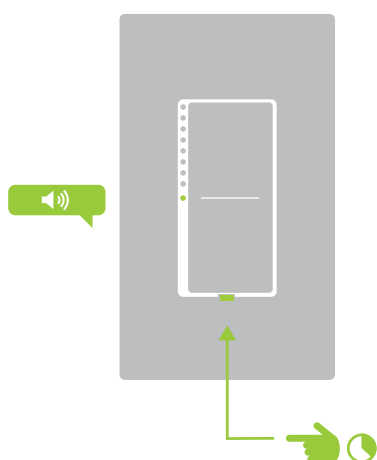
2 Press and hold the set button again until the device beeps.
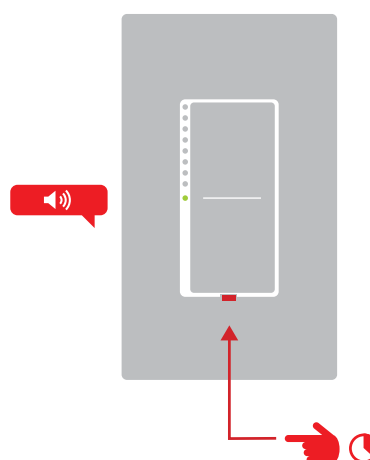
3 Press and hold the On/Off Module's set button until the device double-beeps.
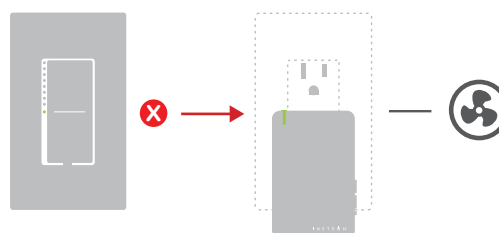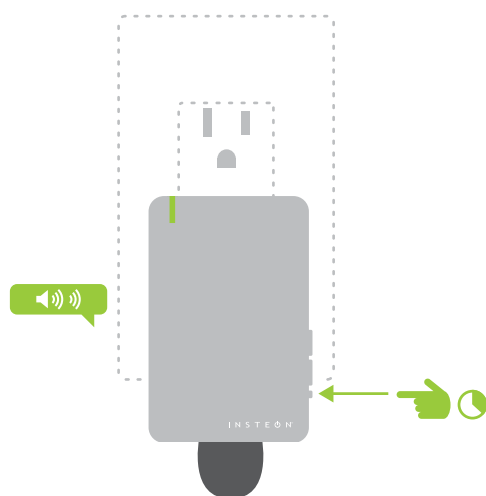
✓ Your INSTEON controller will no longer control your On/Off Module.

Unlinking from a Multi-Button Controller

1 On your INSTEON controller, tap the desired control button and then press and hold the set button until the device beeps.

A

B
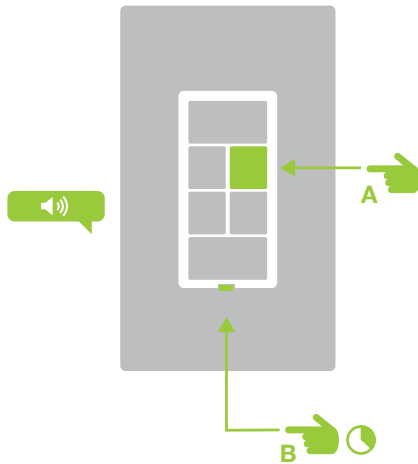
2 Press and hold the set button again until the device beeps.

3 Press and hold the On/Off Module's set button until the device double-beeps.
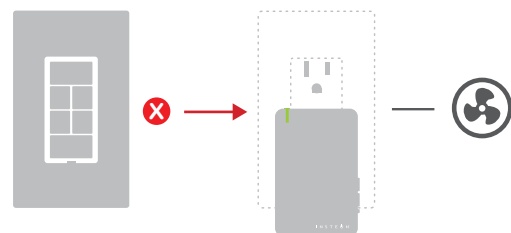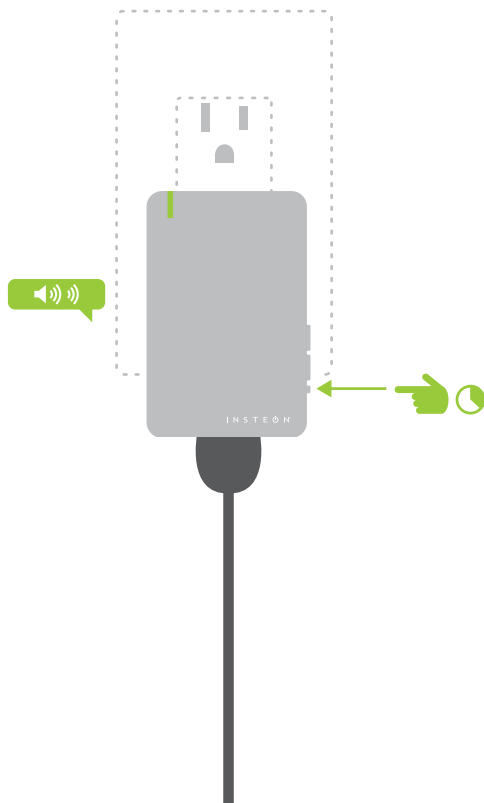
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✓ Your INSTEON controller will no longer control your On/Off Module.

Multi-Unlinking or Removing a Scene

1 On your INSTEON controller, press and hold the set button until the device beeps. Press and hold the set button again, then tap the set button.

A

B

C
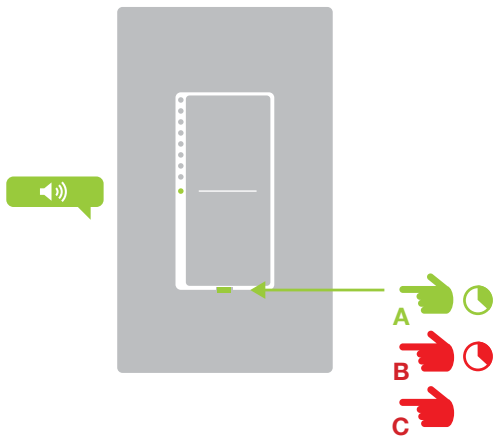
2 One at a time, press and hold the set button on each scene member until it double-beeps.
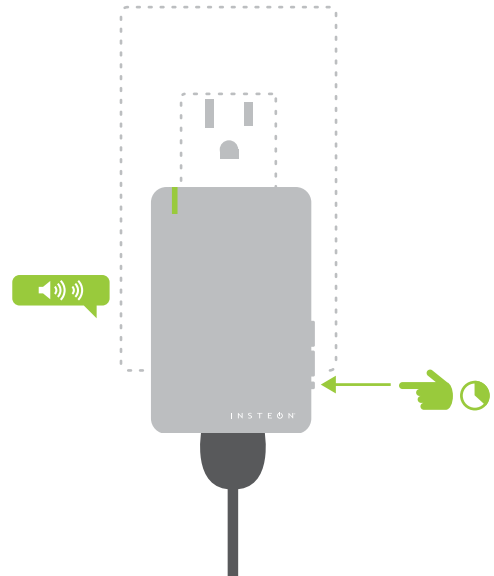
3 Tap the set button on your INSTEON controller to exit Multi-Unlinking mode.
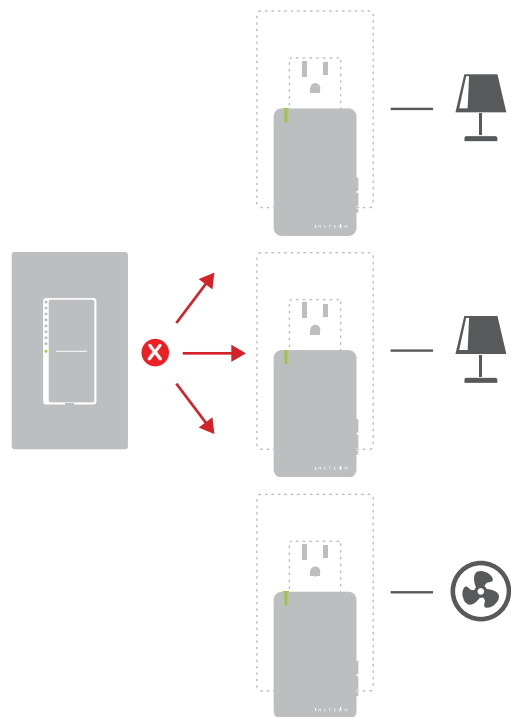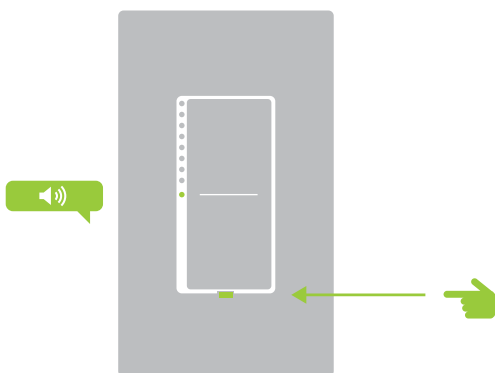
Your INSTEON controller will no longer control your INSTEON responders.

Local Programming

Use the local programming to set local on-level, ramp rates and even perform a factory reset.

About Local Programming

Local Programming

The Programming Wheel is a visual representation of the device's settings. Many device features can be configured using the Programming Wheel. Some devices have more options than others but the programming wheel presents even the most complicated devices with a straightforward, navigable path.

Navigation

→ To move right, press and hold the set button

↓ To move down, tap the set button

• •

Status LED blinks green

Status LED double-blinks green

Status LED blinks red

Status LED double-blinks red

Local Programming Features

|	
Linking Mode	Readies the module for linking to another INSTEON module. As linking is directional, the first device placed into linking mode will become the controller in the controller/responder relationship. The second device will become the responder. The device automatically exits linking mode after a link has been made with another INSTEON device or four minutes have elapsed without linking.
Multi-Linking Mode	Readies the module for linking to multiple INSTEON modules. The module will remain in linking mode for 4 minutes or until the module's set button is tapped. This mode is very usefully for manually creating scenes.
Unlinking Mode	Allows the removal of links from the INSTEON module. The device will automatically exit unlinking mode after a link has been removed from another INSTEON device or four minutes have elapsed without linking.
Multi-Unlinking Mode	Allows the removal of multiple links from the INSTEON module. The device will stay in unlinking mode for 4 minutes or until the device's set button is tapped.
LED Brightness	Allows adjusting the brightness level of the module's status LED.
RF Beacon	Places the module in a mode that broadcasts a signal over INSTEON RF. Any devices beeping or displaying a blinking LED are within range of the module's RF signal.
Factory Reset	Erases any user-customized programming from the device including all INSTEON device links, scenes, ramp rate, on-level, etc. A factory reset cannot be undone.

Local Programming Flow Chart

Linking Mode

Press

Tap

Multi-Linking Mode

Select

Press

Exit

Tap

Exit

Unlinking Mode

Press

Tap

Multi-Unlinking Mode

Select

Press

Exit

Tap

Exit

Press

Tap

LED Brightness

Select

Press

LED Brightness

Adjust

Press

Cancel

Tap

Save

Tap

RF Beacon

Press

RF Beacon

Toggle

Press

Cancel

Tap

Toggle

Tap

Factory Reset

Select

Press

Reset

Tap

Cancel
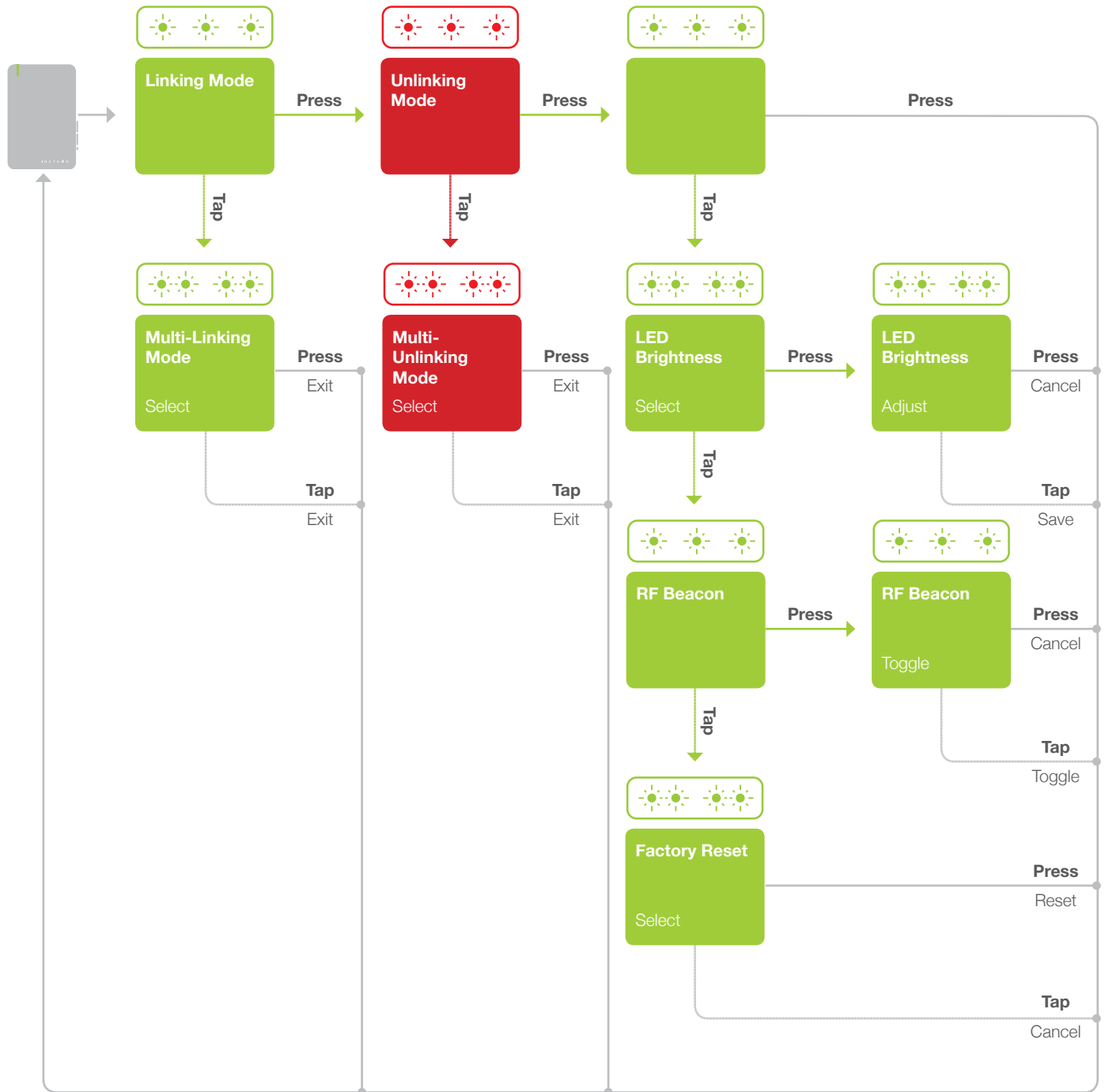
Software-Only Features

Most INSTEON devices contain features that can only be enabled, disabled or modified using INSTEON control software such as HouseLinc and an INSTEON PowerLine Modem or the INSTEON Hub.

Beep on Button Press

The On/Off Module will beep every time one of its buttons are tapped. By default, this feature is disabled.
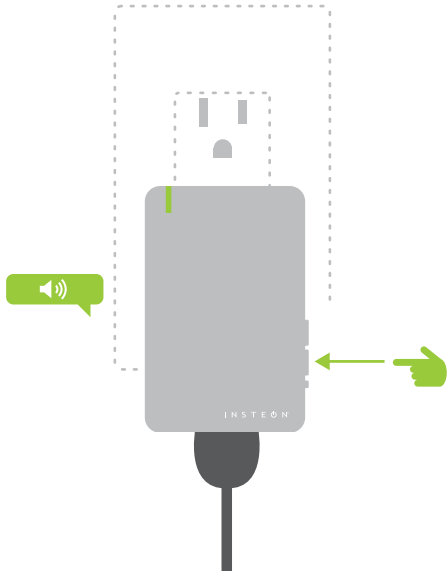
Disable Local Programming

Prevents changing any settings using the set button or tap-and-hold programming. By default, this feature is disabled.
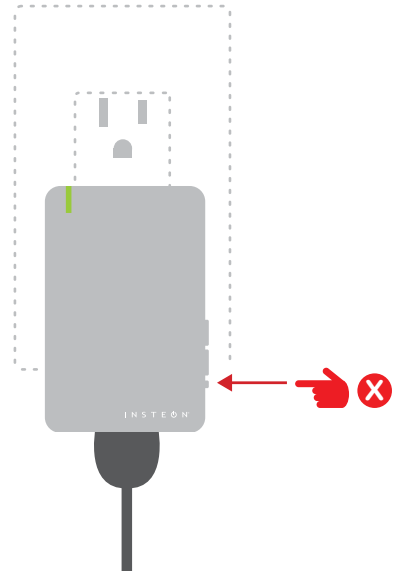
Blink on Traffic

The On/Off Module LED will blink if it detects INSTEON communication. By default, this feature is disabled.
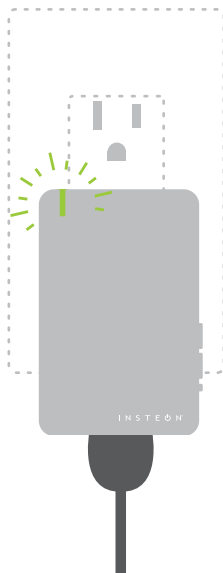
Error Blink

The On/Off Module LED will blink red once if one or more responders do not acknowledge a message and will blink green once if all responders successfully acknowledge a message. By default, this feature is enabled.
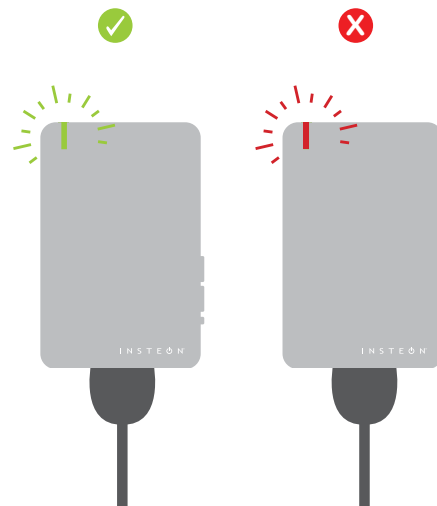
Appendix

Everything else you might need to know about your INSTEON product.

INSTEON Glossary

Controller	The INSTEON transmitter
Responder	The INSTEON receiver
Blinking	LED turning on and off repeatedly
Dual-Band	An INSTEON device that can send and receive both INSTEON powerline signals and INSTEON radio frequency signals
Ramp Rate	The speed at which the load fades on or off
On-Level	The preset brightness level a device will return to when turned on
INSTEON	A dual-band, mesh networking technology developed by Smarthome/INSTEON. The world's most reliable, expandable and simple home automation and control technology.
Link	A one way association between a controller and responder
Linking	A method for associating INSTEON controller buttons with groups of INSTEON responders such that the responders instantly return to a memorized state when the button is pushed. Links can be made manually with the set button or using software.
Unlinking	The process by which an INSTEON device can remove stored links. Just as with linking, unlinking is a one-way process and should be performed in both directions for devices that are both controllers and responders of each other, as in a 3-way switch scenario.
Multi-Linking / Unlinking	A special mode that allows more than one link to be either created or removed simultaneously, without laborious set button presses. When in linking or unlinking mode, an INSTEON device will continue to link to other devices until the set button is tapped or four minutes have elapsed, whichever occurs first.
Factory Reset	A process that erases all stored links and reconfigures the device to factory defaults.
Load	The device that you are controlling (e.g. a light bulb, ceiling fan, etc.)
On/Off	A device that can control its connected load to turn on and off but cannot dim. Usually a relay-based device.
Retry	A 2nd (or subsequent) attempt by a controller to send an INSTEON signal, usually after an acknowledge is not received from the responder in the expected time-slot.
Scene	Multiple devices respond to memorized states. For example, a dinner time scene turns on the dining table light, dims the kitchen lights to 10%, backyard lights turn off and the thermostat adjusts to 72°.
Set Button	A button on an INSTEON device that is used for setting or changing its properties
Simulcast	A method for increasing the reliability of message delivery in a network. When a node in a network sends a message, every other node that hears the message retransmits it at precisely the same time based on a global clock, provided that the message has not already been retransmitted some maximum number of times. Message propagation is more robust because each node adds its energy to the signal, much like voices in a choir. Simulcasting is much simpler than message routing because there are no routing tables to maintain and nodes can join the network without any installation procedure.
X10	A legacy powerline networking technology. Many INSTEON devices are backwards compatible with X10 devices by setting a house and unit code.

Specifications

General

Available Colors	White
Brand:	INSTEON
FCC ID	SBP26352
Industry Canada	5202A-26352
Manufacturer Product No.:	2635-222
Patent No.:	Protected under US and Foreign Patents (see www.insteon.com/patents)
UPC:	813922013368
Warranty:	2 years, limited

Operation

Audio Alert	Beeper, can be disabled through software
Operation Modes	INSTEON only
Load Sensing	No
Local Control	Yes
Setup Memory	Non-volatile EEPROM
Status LED	Red/Green LED

INSTEON Features

INSTEON Device Category	0x02 appliance control
INSTEON Device Subcategory	0x37
INSTEON ID	1
INSTEON Links	417
INSTEON Messages Repeated	Yes
INSTEON Minimum Receive Level	10 mV
INSTEON Minimum Transmit Level	3.2 Vpp into 5 Ohms
INSTEON Powerline Device	Yes
INSTEON Powerline Frequency	131.65 KHz
INSTEON RF Device	Yes
Maximum Controlled Scenes	1

Maximum Scene Memberships	400	
Multi-Link Support	Yes	
Multi-Unlink Support	Yes	
RF Beacon	Yes	
Radio Frequency	915.0 MHz	
Radio Frequency Range	150 feet	
Scene Commands Supported as Controller	On	Off
	Fast-On	Fast-Off
	Begin Brighten	Begin Dim
	End Brighten	End Dim
Scene Commands Supported as Responder	On	Off
	Fast-On	Fast-Off
	Beep	
Software Configurable	Yes	

Mechanical

Dimensions	3.24" H x 2.08" W x 2.02" D 82.5mm H x 53mm W x 51.5mm D
Dimming Technology Employed	Relay - On/Off only
Enclosure Material	UV stabilized plastic
Mounting	Grounded electrical outlet, NEMA 5-15
Operating Environment	Indoors
Operating Humidity Range	0-90% relative humidity, non-condensing
Operating Temperature Range	32° to 104° F 0° to 40° C
Set Button	Yes
Storage Temperature Range	-4° to 158° F -20° to 70° C
Weight	5.2 oz

Electrical

Controlled Outlet	Yes, grounded. NEMA 5-15 type	
Hardwired Remote Control	No	
Load Types	General Appliances	15A Max
	Resistive	15A Max
	Incandescent	1,800W Max
	Motors	1HP Max
	Ballasts	10A Max
Maximum Load	1,800 Watts (15 Amps)	
Minimum Load	None	
Pass-through Outlet	No	
Power Consumption	<0.75 Watts	
Supply Voltage	120 Volts AC ± 10%, 50/60 Hertz, single phase	
Surge Resistance	Surges over 1,000 volts	

X10 Features (Powerline Only)

X10 Support	No

On/Off Module LED does not turn on

It is possible your On/Off Module is not receiving power. If the attached load can still be controlled, It is possible that the status LED has been disabled.

Try this:
- Test On/Off Module in a different power outlet. If the LED illuminates when using a different outlet, check the original outlet for power. Some outlets are controlled by a switch elsewhere in the room. Avoid switched outlets as they disable your INSTEON device when turned off.

- If the outlet works and the connected load can be toggled, use software or the programming wheel to change the behavior of the status LED. The status LED brightness can be dimmed to the point that it appears off. HouseLinc allows setting of this device property.

Unable to add On/Off module to a scene as a controller or a responder

If the device has power, something is likely interfering with the INSTEON signal. Large appliances, power strips and some electronic devices may generate powerline noise.

Try this:
- Check to see if you have connected On/Off Module to a power strip, surge suppressor, backup battery or AC line filter. These devices often filter out the INSTEON powerline signal. Relocate the On/Off Module to a standard AC outlet.

- Large appliances like refrigerators or air conditioners may be generating powerline noise that is disrupting the INSTEON signal. If the issue only appears to happen when one of these large appliances is running, install a noise filter at that device. If you are uncertain of the device generating the noise, disconnect the potentially offending devices from power and test your On/Off Module again. If the issue is resolved, install noise filters at each offending appliance.

- Some small electronics devices that include an AC/DC power supply can generate substantial electrical noise, in some cases, enough to disrupt an entire house of INSTEON devices. Search your home for speaker docks, small stereos, etc. and disconnect them from power to perform testing. If removing these devices from your powerline resolves the INSTEON issue, install a noise filter at each offending small electronic appliance.

- Your On/Off Module may be too far from another INSTEON device to receive a signal. Try locating the On/Off Module closer to another INSTEON device and if the issue is resolved, install a Range Extender or other Dual-Band INSTEON device between the intended location of your On/Off Module and the next nearest INSTEON device.

The On/Off Module is slow to respond to commands from a controller

This issue most likely lies with the controller, not the On/Off Module; the controller is most likely repeating commands not acknowledged by an INSTEON device that has been removed from the network. The repeated commands are slowing down the INSTEON network, resulting in a delayed response from the On/Off Module.

Try this:
- Consider if you have removed any INSTEON devices from you network that were part of the slow-to-respond scene. If so, the links to these devices need to be removed from the controller. Use software to examine the database of the controller or if you know the modules that were removed, manually remove their links using the standard unlinking procedure.

- If you are unable to identify the missing devices, perform a factory reset on the controller. This will remove all links from the controller's database but will also require that you reconfigure the device's scenes and properties.

The connected appliance turned on by itself

There must be a device in your INSTEON network that is unexpectedly linked to the On/Off Module

Try this:
- Use software to examine the On/Off Module's links. If you can identify the stray controller, remove the link.

- If you are unable to identify the unexpected controller, perform a factory reset on the On/Off Module. This will remove all links from the module's database but will also require that you reconfigure the device's scenes and properties.

Using a controller, On/Off Module will turn off but not turn on

Most likely, the On/Off Module was linked to the controller with the load set to Off

Try this:
- Make sure the On/Off Module's connected load is on and then re-link the device to your INSTEON controller. This link will overwrite the previous "off" link.

On/Off Module does not respond to button taps or controller links

A power surge or excessive powerline noise may have caused the module to unexpectedly stop responding.

Try this:
- Unplug On/Off Module for 10 seconds and then reconnect the device to power. Test the local buttons to see if the load will turn on or off.

- While unusual, On/Off Module may require a factory reset to restore normal operation. Follow the procedure outlined in the Programming Wheel to reset the device to factory settings. You will be required to reconfigure the device's scenes and properties after the reset.

When using the connected load's switch, the load does not turn on

Your load may not be receiving power if the On/Off Module is off.

Try this:
- Use the buttons on the side of the On/Off Module to turn on the connected device. Remember, if the connected load is turned off using its own switch, On/Off Module is unable to control the device.

- If your connected load is a lamp, check the bulb. It is possible that your light bulb needs to be replaced.

Read and understand these instructions before installing and retain them for future reference.

This product is not designed or approved for use on powerlines other than 120VAC, 50Hz or 60Hz, single phase. Attempting to use this product on unapproved powerlines may have hazardous consequences.

• Use only indoors or in outdoor rated box

• This product may feel warm during operation. The amount of heat generated is within approved limits and poses no hazards. To minimize heat buildup, ensure the area surrounding this product is as clear of clutter as possible.

• Each INSTEON product is assigned a unique INSTEON I.D., which is printed on the product's label.

• To reduce the risk of overheating and possible damage to other equipment, do not use this product to control loads in excess of the specified maximum(s) or, install in locations with electricity specifications which are outside of the product's specifications. If this device supports dimming, please note that dimming an inductive load, such as a fan or transformer, could cause damage to the dimmer, the load bearing device, or both. If the manufacturer of the load device does not recommend dimming, use a non-dimming INSTEON device. USER ASSUMES ALL RISKS ASSOCIATED WITH DIMMING AN INDUCTIVE LOAD.

This device complies with FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorise aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radiolectrique subi, mme si le brouillage est susceptible d'en compromettre le fonctionnement.

CAUTION - To reduce the risk of overheating and possible damage to other equipment do not install to control a receptacle, a motor-operated appliance, a fluorescent lighting fixture, or a transformer-supplied appliance. Gradateurs commandant une lampe a filament de tungstene – afin de reduire le risqué de surchauffe et la possibilite d'endommagement a d'autres materiels, ne pas installer pour commader une prise, un appareil a moteur, une lampe fluorescente ou un appareil alimente par un transformateur.

DECLARATION OF CONFORMITY

Hereby, INSTEON declares that this device is in compliance with the essential requirements and other relevant provisions of the following Directives:

1) Electromagnetic Compatibility Directive 2004/108/EC
2) Hazardous Substance Directive 2005/95/EC

Technical data and copies of the original Declaration of Conformity are available and can be obtained from INSTEON; 16542 Millikan Ave, Irvine, CA, USA.

Limited Warranty

Seller warrants to the original consumer purchaser of this product that, for a period of two years from the date of purchase, this product will be free from defects in material and workmanship and will perform in substantial conformity to the description of the product in this Owner's Manual. This warranty shall not apply to defects or errors caused by misuse or neglect. If the product is found to be defective in material or workmanship, or if the product does not perform as warranted above during the warranty period, Seller will either repair it, replace it, or refund the purchase price, at its option, upon receipt of the product at the address below, postage prepaid, with proof of the date of purchase and an explanation of the defect or error. The repair, replacement, or refund that is provided for above shall be the full extent of Seller's liability with respect to this product. For repair or replacement during the warranty period, call 866-243-8022 with the Model # and Revision # of the device to receive an RMA# and send the product, along with all other required materials to:

INSTEON
ATTN: Receiving
16542 Millikan Ave.
Irvine, CA 92606-5027

Limitations

The above warranty is in lieu of and Seller disclaims all other warranties, whether oral or written, express or implied, including any warranty or merchantability or fitness for a particular purpose. Any implied warranty, including any warranty of merchantability or fitness for a particular purpose, which may not be disclaimed or supplanted as provided above shall be limited to the two-year of the express warranty above. No other representation or claim of any nature by any person shall be binding upon Seller or modify the terms of the above warranty and disclaimer.

Home automation devices have the risk of failure to operate, incorrect operation, or electrical or mechanical tampering. For optimal use, manually verify the device state. Any home automation device should be viewed as a convenience, but not as a sole method for controlling your home.

In no event shall Seller be liable for special, incidental, consequential, or other damages resulting from possession or use of this device, including without limitation damage to property and, to the extent permitted by law, personal injury, even if Seller knew or should have known of the possibility of such damages. Some states do not allow limitations on how long an implied warranty lasts and/or the exclusion or limitation of damages, in which case the above limitations and/or exclusions may not apply to you. You may also have other legal rights that may vary from state to state.