RemoteLinc™

INSTEON® Wireless Remote Control

Model : 2440

INSTEON COMPATIBLE

SMARTHOME™

INSTEON

RemoteLinc Owner's Manual

TABLE OF CONTENTS

ABOUT REMOTELINC

Congratulations on purchasing the INSTEON RemoteLinc. With its sleek, handheld design, RemoteLinc allows you to use the power of INSTEON to control your home with the convenience of a wireless radio frequency (RF) controller.

Customizable label insert

On/Off button pairs

Status LED

Dedicated simultaneous-control buttons

Dedicated Dim/Bright buttons
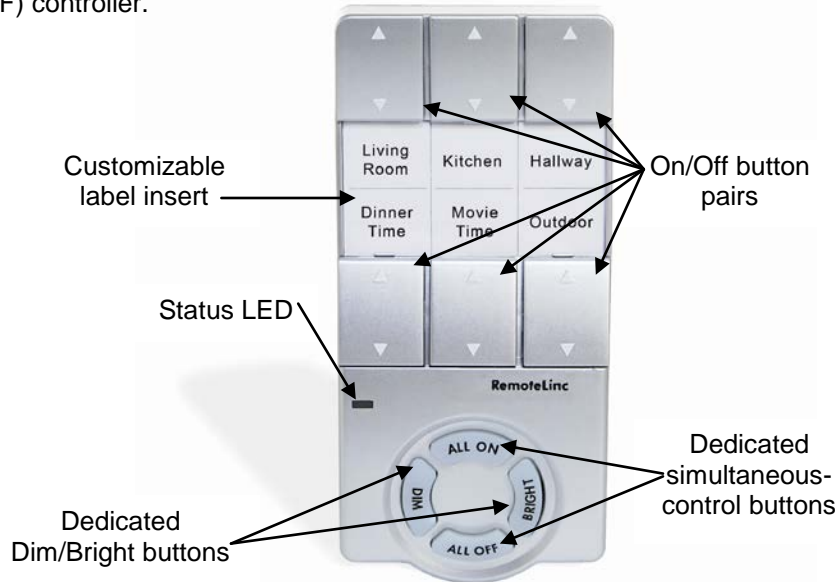
Key RemoteLinc Features

- Setup is easy – install four AAA batteries (included), and then Link to other devices in minutes

- Six individual On/Off button pairs, plus dedicated Dim, Bright, All On and All Off buttons

- Shows command transmission activity with a Status LED and beeper (both features easily disabled/re-enabled)

- Stores setup state in memory so settings aren't lost when batteries are removed

- Smart circuitry detects abnormally long button presses (like those occurring when the remote falls between couch cushions) and puts RemoteLinc into sleep mode to preserve battery life

- Two-year warranty

What is Included with RemoteLinc

- RemoteLinc – INSTEON Wireless Remote Control

- Four (4) AAA batteries

- Quick-Start Guide

WHAT IS INSTEON?

Since its inception in 2005, INSTEON has become a best-selling home-control networking technology, offering more reliability and flexibility than any other home management system on the market. INSTEON systems are simple, reliable, and affordable. Simple, because each device takes mere minutes to install. Reliable, because every INSTEON device works as a network repeater, ensuring your commands will not be lost. Affordable, because INSTEON can be integrated into any number of devices easily and at a very low cost. An INSTEON home grows in value with each added INSTEON device, making life more convenient, safe, and fun.

How Does INSTEON Work?

What makes INSTEON the most reliable home automation network is its dual-mesh network. INSTEON devices use both radio frequency (RF) signals and the home's existing wiring to talk to each other. In an INSTEON network, every INSTEON device also acts as a repeater, receiving and sending every message to all other devices in the network. So by integrating more INSTEON devices you will strengthen the network and ensure no commands will be lost.

No central controller or networking setup is required with an INSTEON network. Simply install your devices and then use a series of button presses or taps to Link your devices together. Throughout this Owner's Manual, you may see the terms "Controller" or "Responder". These generic INSTEON terms refer to the components of an INSTEON scene, and are used on a scene-by-scene basis.

- **Controller** – sends INSTEON commands to other devices

- **Responder** – reacts to commands sent out by another INSTEON device

An INSTEON device may act as a Controller, Responder, or sometimes both.

INSTEON networks are also extremely secure. Each INSTEON device is assigned a unique INSTEON ID, so unless neighbors or would-be hackers have access to your particular device's INSTEON ID, they won't be able to control your home, even if they are using similar products.

INSTALLATION

Installing RemoteLinc

1) RF-only devices require at least one Access Point (#2443) or dual-band INSTEON device for communication. For the best INSTEON network performance, be sure you have properly installed at least two dual-band INSTEON devices.

   Search for dual-band INSTEON devices at: www.smarthome.com/dualband

2) Remove the battery compartment from the rear of RemoteLinc

3) Observe the polarity markings, and then install four AAA batteries (included) accordingly

   NOTE: Use alkaline batteries, or high quality rechargeable batteries. A fully-charged set of alkaline batteries will provide approximately 1,500-2,000 button taps.

4) Replace the battery compartment door before use

USING REMOTELINC

Using the RemoteLinc Buttons

On/Off Button Pairs

The On/Off button pairs will each control any Responders Linked specifically to the pair. Responders will behave differently depending on whether you tap, double-tap, or hold down the buttons.

Button	Tap	Double-tap	Press & hold
On	Ramp to On-Level	Full-bright instantly	Brighten until released
Off	Ramp to Off	Full-off instantly	Dim until released

Bright/Dim Buttons

The Bright and Dim buttons will adjust the brightness of the Responders Linked to the last On/Off button pair you used. (Non-dimming Responders will not be affected.) Pressing & holding the Bright and Dim buttons will adjust the brightness continuously, while tapping the buttons will adjust the brightness one of 32 steps for each tap.

Button	Tap	Press & hold
Bright	Brighten a little	Brighten until released
Dim	Dim a little	Dim until released

All On/All Off Buttons

The All On and All Off buttons can be used to turn *all of the Responders Linked to RemoteLinc* on or off, no matter which On/Off button pair they are Linked to. The All On button can also be used to brighten all dimmable Responders, while the Dim button can be used to dim all dimmable Responders.

Button	Tap	Press & hold
All On	Ramp to On-Level	Brighten until released
All Off	Ramp to Off	Dim until released

Creating a Custom RemoteLinc Label

Downloadable templates are available for easy customization of the RemoteLinc label.

To download the template in Microsoft Word, go to:
http://wiki.smarthome.com/images/5/5b/2440temp.doc

To download the template in Mircrosoft Excel, go to:
http://wiki.smarthome.com/images/4/45/2440_RemoteLinc_Label.xls

CONTROLLING INSTEON RESPONDERS FROM SWITCHLINC DIMMER

Linking RemoteLinc to an INSTEON Responder

To use RemoteLinc as an INSTEON Controller, follow these steps to Link RemoteLinc and an INSTEON Responder (the device you wish to control with RemoteLinc) together. Refer to the Responder's Owner's Manual for detailed instructions on how to properly install and Link it to RemoteLinc.

The following will work for the most common INSTEON devices:

1) At the Responder, set it to the state you wish to be activated from RemoteLinc (turn it on if you wish it to be on, or off if you wish it to be off when RemoteLinc activates the scene, set On-Levels, etc.)

   - If the Responder is a multi-scene device (e.g., KeypadLinc), tap the Scene button you wish to control until its LED illuminates

2) Choose the On/Off button pair you want to use to control your Responder.

   There are six On/Off button pairs, labeled *Scene A* through *Scene F.* You can Link multiple Responders to a single On/Off button pair.

3) Set RemoteLinc to Linking Mode by pressing & holding the On button of the pair until it beeps(10 seconds)

   The RemoteLinc Status LED should begin blinking

   You will have 4 minutes to complete the next step before Linking Mode automatically times out.

   > **BE CAREFUL**
   > Any accidental button presses will exit Linking Mode early.

4) Press & hold the Responder's Set button for 3 seconds

   RemoteLinc should beep and its Status LED should stop blinking and turn off

5) Confirm that Linking was successful by tapping the On/Off buttons you just Linked to on RemoteLinc

   The Responder should respond appropriately

6) If you wish to Link multiple Responders to the same RemoteLinc, either repeat steps 1-4 with each Responder or see *Multi-Linking and Multi-Unlinking*

Unlinking an INSTEON Responder from RemoteLinc

If you are no longer going to use an INSTEON Responder that has previously been Linked to RemoteLinc, it is very important that you Unlink it. Otherwise, RemoteLinc will retry any commands repetitively, thus slowing down the system.

The following will work on the most common INSTEON devices:

1) If the Responder is a multi-scene device, tap the Scene button you wish to remove control from until its LED illuminates

2) Set RemoteLinc to Linking Mode by pressing & holding the On button of the pair you wish to Unlink until it beeps (10 seconds)

   The RemoteLinc Status LED should begin blinking

3) Set RemoteLinc to Unlinking Mode by pressing & holding the same On button until it beeps (10 seconds)

   The RemoteLinc Status LED should continue blinking

   You will have 4 minutes to complete the next step before Unlinking Mode automatically times out.

4) Press & hold the Responder's Set button for 3 seconds

   RemoteLinc should beep and its Status LED should stop blinking and turn off

5) Confirm that Unlinking was successful by tapping the On/Off buttons you just Unlinked from on the RemoteLinc

   The Responder should no longer respond

CREATING AN INSTEON SCENE

INSTEON scenes let you activate dramatic lighting moods with the press of just one button. For example, you can set all the lights in a scene to dim to 50% or turn certain lights on while turning others off, all with the tap of a button on a Controller.

INSTEON scenes are very easy to set up – just Link more than one Responder to the same On/Off or Scene button on a Controller. Then, when you press any of the Linked buttons on the Controller, all of the INSTEON devices Linked in the scene will respond as a group.

To set up an INSTEON scene, you can individually Link each device to a Controller. Or, save time and create multiple Links. See *Multi-Linking and Multi-Unlinking.*

ADVANCED FEATURES

Multi-Linking and Multi-Unlinking

Multi-Linking

Multi-Linking Mode allows you to Link multiple INSTEON devices to a single Controller and quickly create an INSTEON scene. Once the Controller is in Multi-Linking Mode, you can Link any number of Responders, one right after the other.

The following will work for the most common INSTEON devices:

1) For each of the Responders you wish to control, set the device to the state you wish to activate from the Controller

- If the Responder is a dimmable device, set the On-Level and Ramp Rate

- If the Responder is a multi-scene device (e.g., another Keypad), tap the desired Scene button to illuminate the LED. (If you wish the Responder's scene to turn off, tap the Scene button again to turn the LED off, and then proceed to the next step.)

2) Set the Controller to Linking Mode. (For most Controllers, press & hold the desired On or Scene button for 10 seconds or the Set button for 3 seconds.)

3) Tap the Set button on the Controller. If the Controller does not have a Set button, tap the same On or Scene button you used to put the Controller into Linking Mode.

    Multi-Linking Mode will automatically time out after 4 minutes of inactivity.

4) One at a time, press & hold each of the Responder's Set buttons for 3 seconds

5) After you have Linked all the desired Responders, tap the Controller's Set button to exit Multi-Linking Mode. If the Controller does not have a Set button, tap the same On or Scene button you used to put the Controller into Linking Mode.

6) Test that the INSTEON scene is working as expected by tapping the button you just Linked to on the Controller

Multi-Unlinking

Multi-Unlinking Mode can be used to quickly remove devices from an INSTEON scene. You may remove as many of the Linked Responders from the scene as you would like.

The following will work for the most common INSTEON devices:

1) Set the Controller to Unlinking Mode. (For most Controllers, press & hold the desired On or Scene button for 10 seconds **twice** or the Set button for 3 seconds **twice.**)

2) Tap the Set button on the Controller. If the Controller does not have a Set button, tap the same On or Scene button you used to put the Controller into Unlinking Mode.

   Multi-Unlinking Mode will automatically time out after 4 minutes of inactivity.

3) For each of the Responders you wish to Unlink:

   - If the Responder is a multi-scene device (e.g., KeypadLinc), tap the Scene button you wish to Unlink

   - Press & hold the Responder's Set button for 3 seconds

4) After you have Unlinked the desired Responders, tap the Controller's Set button to exit Multi-Unlinking Mode. If the Controller does not have a Set button, tap the same On or Scene button you used to put the Controller into Unlinking Mode.

5) Test that you have removed the desired devices from the INSTEON scene by tapping the buttons you just Unlinked from on the Controller

Enabling / Disabling the Beeper

This procedure will toggle the RemoteLinc beeper on and off. With the beeper turned off, RemoteLinc will no longer beep during button presses. However, the beeper will still sound when RemoteLinc enters and exits setup modes. By default, the beeper is **on.**

1) Simultaneously press & hold the Dim and Bright buttons until it beeps (10 seconds)

   The RemoteLinc Status LED should begin blinking

2) Tap the Bright button

   RemoteLinc should double-beep and its Status LED should turn on solid

The beeper is now disabled and will no longer beep upon button presses until re-enabled.

To **re-enable the beeper,** repeat steps 1 and 2.

Enabling / Disabling the Status LED

This procedure toggles the RemoteLinc Status LED on and off. With the Status LED turned off, the Status LED will no longer flash during button presses. However, the Status LED will still function when RemoteLinc enters and exits setup modes. By default, the Status LED is **on.**

1) Simultaneously press & hold the Dim and Bright buttons until it beeps (10 seconds)

   The RemoteLinc Status LED should begin blinking

2) Tap the All Off button

   RemoteLinc should double-beep and its Status LED should turn off

The Status LED is now disabled and will no longer flash or turn on solid until re-enabled.

To **re-enable the Status LED,** repeat steps 1 and 2.

Stuck Button Feature

If any button on RemoteLinc is depressed for longer than 60 seconds, the Controller will enter sleep mode until the button is released. This feature is provided to preserve the battery life in situations like RemoteLinc falling between sofa cushions.

Restoring Power to RemoteLinc

RemoteLinc stores all of its settings, such as Links to other INSTEON devices, On-Levels/Ramp Rates, etc., with non-volatile memory. Because settings are saved in this non-volatile memory, they will not be lost when the batteries are removed.

Resetting RemoteLinc to its Factory Default Settings

The factory reset procedure will clear RemoteLinc of all INSTEON Links.

1) If you are using RemoteLinc to control any INSTEON devices, Unlink those devices from RemoteLinc. See *Unlinking an INSTEON Responder from RemoteLinc.*

2) Remove a single battery from RemoteLinc for at least 10 seconds

3) While holding down the Bright button, reinsert the battery into RemoteLinc (ensure the battery is properly oriented), making sure not to let up on the Bright button

   RemoteLinc should beep and its Status LED should turn on solid

4) Once the battery has been reinserted, continue to hold down the Bright button for about 10 seconds, and then release

   While the Bright button is held down, RemoteLinc should beep continuously

   Once the Bright button is released, RemoteLinc should double-beep and its Status LED should turn off

ABOUT INSTEON

Using Dual-Band INSTEON Devices to Upgrade Your Network

What are phases?

The majority of single-family homes in North America have two phases (or "legs") of 110 Volts coming into their electricity panels. From the panel, they are distributed throughout the home, providing power to outlets and wall switches. These phases come together in some parts of the home to provide 220 Volts of power to large appliances, such as an electric oven or pool pump.

Why do I need to bridge these phases?

Single-band power line devices send commands via the home's electricity, but only on a single phase. If the command is intended for a device on the opposite phase, there is a good chance the command will go unnoticed. Installing dual-band INSTEON devices, such as Access Points (#2443), on each phase will allow for devices to communicate between the two phases via RF.

Dual-band INSTEON devices embody the full potential of a true INSTEON mesh network. Taking the power line band signal and working in conjunction with the RF band signal, its dual-band function plays out in two ways:

- Phase bridger – a receiver of commands, reacting to and translating signals sent from one power phase to the opposite via RF

- Signal repeater – a participant in an INSTEON network, repeating commands intended for other devices whether those commands are generated from RF or power line-only devices. To ensure reliability, every INSTEON device confirms that it has received a command. If a Controller does not receive this confirmation, it will automatically retransmit the command up to five times.

While using at least one dual-band device is required when using an RF-only device, at least two dual-band devices are recommended to ensure reliable communication across two-phase home wiring systems. For larger applications, it is recommended to install at least one dual-band device for every 750 – 1,000 square feet.

Search for dual-band INSTEON devices at: www.smarthome.com/dualband

Important Note about INSTEON Networks; Split Single-Phase vs. 3-Phase Installation

For the best INSTEON network performance, be sure you have properly installed at least two dual-band INSTEON devices. INSTEON has only been officially tested in a split single-phase residential environment but has been known to work in many 3-phase systems, where three dual-band devices are used (one on each phase). However, due to the potential complexity of its troubleshooting, the INSTEON Gold Support Line is unable to support INSTEON in 3-phase environments.

Further Enhancing Reliability

As signals travel via the power line or RF throughout the home, they naturally become weaker the farther they travel. The best way to overcome weakened signals is to increase the coverage of the mesh network by introducing more INSTEON devices.

It is possible that some audio-video devices, computers, power strips, or other electrical equipment may attenuate INSTEON signals on the power line. You can temporarily unplug suspected devices to test whether the INSTEON signal improves. If it does, then you can plug in filters that will permanently fix the problem.

ADDITIONAL RESOURCES

Find home automation solutions, helpful tips, interactive demos, videos, user forums, and more at the Smarthome Learning Center: www.smarthome.com/learningcenter.html

TROUBLESHOOTING

Problem	Possible Cause	Solution
The Status LED on RemoteLinc is not turning on at all.	Batteries may be missing or depleted.	Install four fresh batteries into RemoteLinc.
	The Status LED might have been disabled.	Re-enable the Status LED. See *Enabling / Disabling the Status LED.*
RemoteLinc will not go into Linking or Unlinking Mode.	You didn't hold the On button down long enough.	Be sure to hold down the On button for at least 10 seconds or until RemoteLinc beeps and the Status LED begins blinking.
RemoteLinc won't Link or work with a Responder.	The Responder may not be receiving the RF command.	Be sure you have properly installed at least one dual-band INSTEON device.
	RemoteLinc may be out of wireless range or the INSTEON signal may be too weak.	Try using RemoteLinc from a different location, closer to an Access Point or other dual-band INSTEON device.
		Add additional INSTEON devices or move around existing INSTEON devices. All INSTEON devices act as INSTEON network repeaters.
Responders are taking a long time to respond to RemoteLinc.	RemoteLinc may be sending commands to a Responder that is no longer in use. Commands for the unused Responder are being resent and loading down the signal.	Unlink any unused Responders from RemoteLinc. HINT: If you are using home automation software, you can easily check scene membership and eliminate unnecessary Links.
		If the above doesn't work, perform a factory reset. See *Resetting RemoteLinc to its Factory Default Settings.*
RemoteLinc can turn off my Responder, but nothing happens when I send an ON command from RemoteLinc.	The Responder may be Linked at its off state.	Re-Link the Responder while the responding device is on. See *Linking RemoteLinc to an INSTEON Responder.*
The beeper on RemoteLinc does not work when I press an On or Off button on RemoteLinc.	The beeper may have been disabled.	Re-enable the beeper. *See Enabling / Disabling the Beeper.*
The RemoteLinc Status LED does not flash when I press an On or Off button on RemoteLinc.	The Status LED may have been disabled.	Re-enable the Status LED. See *Enabling / Disabling the Status LED.*
All of my Responders do not respond to the RemoteLinc Bright or Dim buttons.	The Bright and Dim buttons only control Responders Linked to the last On/Off button pair pressed on RemoteLinc.	Push the On button for the scene you want to control, and then use the Bright and/ Dim buttons.
RemoteLinc is locked up.	Fluctuating battery current may have glitched RemoteLinc.	Remove the batteries from RemoteLinc for 10 seconds, and then reinstall.
		Install a fresh set of batteries.
		If the above doesn't work, perform a factory reset. See *Resetting RemoteLinc to its Factory Default Settings.*

If you have tried these solutions, reviewed this Owner's Manual, and still cannot resolve an issue you are having with RemoteLinc, please call:

INSTEON Gold Support Line
800-762-7845

SPECIFICATIONS, CERTIFICATION, AND WARRANTY

Specifications

View specifications for RemoteLinc at: www.smarthome.com/2440.html

FCC & Industry Canada Compliance Statement

This device complies with FCC Rules Part 15 and Industry Canada RSS-210 (Rev. 7). 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.

The digital circuitry of this device 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 residential installations. 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 and television reception. However, there is not guarantee that interference will no occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna of the device experiencing the interference

- Increase the distance between this device and the receiver

- Connect the device to an AC outlet on a circuit different from the one that supplies power to the receiver

- Consult the dealer or an experienced radio/TV technician

WARNING: Changes or modifications to this device not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Limited Warranty

Seller warrants to the original 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 the Seller's liability with respect to this product. For repair or replacement during the warranty period, call the INSTEON Gold Support Line at 800-762-7845 with the Model # and Revision # of the device to receive an RMA# and send the product, along with all other required materials to:

Smarthome, Inc.
ATTN: Receiving Dept.
16542 Millikan Ave.
Irvine, CA 92606-5027

SMARTHOME™

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.

INSTEON Technology Patent

U.S Patent No. 7,345,998, International patents pending

© Copyright 2011

Smarthome, 16542 Millikan Ave., Irvine, CA 92606, 800-762-7845, www.smarthome.com

Rev 03-07-2011