AccessLinc™

Bridges Insteon Signals Between
Wireless and Powerline

For models:
2442 AccessLinc RF Bridge

SMARTHOME™
MAKING LIFE MORE CONVENIENT, SAFE AND FUN

INSTEON

Congratulations!

Thanks for purchasing and installing the AccessLinc™ for Insteon™ products. This simple, plug-in device is designed to bridge Insteon signals between the AC powerline and wireless devices. By plugging in a single AccessLinc, Insteon signals can be easily bridged (or converted) between wireless radio frequencies (RF) and powerline signals.

When two AccessLinc Interfaces are used in a home, they will also act as powerline signal repeaters. This allows Insteon powerline signals transmitted on one phase of a home's electrical system to be automatically repeated and placed on the opposite phase. Since most homes in North America have two lines of electricity coming in from the power company, getting the powerline signals between phases can often be difficult. By using two or more AccessLinc Interfaces, this problem is easily eliminated.

Key Features

- Bridges RF to RF, RF to powerline, and powerline to RF
- Provide powerlinc phase coupling when 2 or more are used
- Allows wireless devices to communicate long distances over the powerline
- Uses the reliable 900MHz band for good through-wall transmissions
- Solves RF “dead spots”
- Unlimited expansion to support large or complicated installations
- Pass-through outlet for any AC device
- Diagnostic LED aid setup and diagnostics
- Advanced features adjustable over the powerline via computer software
- FCC and ETA approved. Manufactured in an ISO 9001:2000 facility

What is Insteon?

Insteon is a new method of communications between home automation devices. By using the latest technologies, Insteon communications are faster, more secure, and reliable than traditional signaling methods. The signals can travel over 900 MHz wireless and on the AC powerline. Insteon-based products are backwards compatible with the popular X10 powerline standard. With only a few affordable Insteon-based products, a home can be quickly and easily set up to make your life for convenient, safe, and fun.

Quick Start Instructions

Single Interface

1. Plug in the AccessLinc Interface
   The Status LED will illuminate steady

(see page 4 for more detailed instructions)

Two Interfaces

1. Plug in the first AccessLinc Interface
2. Tap the SET button, the Status LED will begin to blink

3. Plug in the second AccessLinc Interface
4. Tap the SET button, observe the Status LED:

LED blinks then goes steady on
OK

LED blinks slowly
Interfaces on the same phase - move one interface

LED is blinking rapidly
Interfaces are too far apart, move them closer together

(see pages 4 for more detailed instructions)

FCC Compliance Statement

This device complies with FCC Rules Part 15. Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

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 no guarantee that interference will not 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 re-locate the receiving antenna of the device experiencing the interference.
- Increase the distance between the AccessLinc 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 unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Installing AccessLinc

AccessLinc Interfaces can be easily installed in any home with conventional 3-prong AC outlets.

- When a single AccessLinc is installed, it functions independently by simply providing a bridge between wireless and powerline devices.
- When two units are used and installed on ***different*** electrical phases, the AccessLinc Interfaces will provide signal bridging.

AccessLinc uses its Status LED to help you find the ideal outlet so that the interfaces communicate between each other and provide signal bridging on the AC powerline. Please see "*Tips for Using AccessLinc*" on page 6 for hints to make your installation more successful.

Single Unit Installation

1. Plug in the AccessLinc Interface into an unswitched outlet
2. The Status LED on the side will illuminate steady
3. Verify operation by sending some powerline or wireless Insteon signals; the Status LED will briefly flicker

Two-Unit Installation and Establishing a Wireless Link

Install the first AccessLinc

1. Locate an unswitched outlet on one side of the house and plug in the first AccessLinc Interface
2. The Status LED on the side will illuminate steady
3. Tap the SET button, the Status LED will begin to blink

Install the second unit

4. Locate an unswitched outlet on the other side of the house and plug in the second AccessLinc Interface
5. The Status LED on the side will illuminate steady
6. Tap the SET button and observe the Status LED

A. If the LED blinks then goes steady on - OK (the two modules are on opposite phases and can talk to each other)

B If LED blinks slowly, the two interfaces are within wireless range of each other, but on the same phase. Try moving the first or second unit to another outlet.

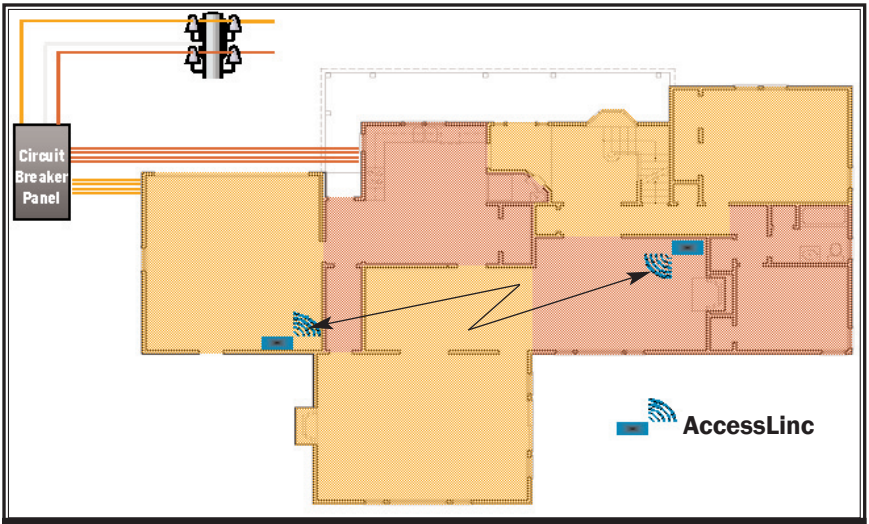
C. If LED is blinking rapidly, the two interfaces are not communicating. Move the first or second unit physically closer to the other and retest.

Ideas for Selecting the Placement of AccessLinc Interfaces

When two AccessLinc interfaces are installed, in addition to bridging between powerline and wireless devices, they will also provide a path for the powerline Insteon signals to travel between the two lines of electrical service found in most homes. Commonly called phase coupling or signal bridging, this feature solves the most common issue with powerline signals not getting from one part of a home to another. Without a reliable coupling method, electrical devices in some parts of the house may not always receive Insteon signals.

In the diagram below, two AccessLinc Interfaces are used. The unit on the left provides wireless coverage for most of the living room, garage, dining and family rooms. The unit on the right covers the remaining areas likes the kitchen and bedroom. Any wireless signals sent in the home has a high probability of being received by at least one AccessLinc.

The diagram has also been shaded to shows how some rooms in the home receive power from split-phase electricity (two lines of power). When one AccessLinc receives powerline Insteon signals, it will wirelessly send the data to its partnered interface on the other side of the house. The receiving interface will insert the signal back onto the powerline. By plugging each interface into a different phase of power, the Insteon signals will be strong on all circuits in a home.



Placing AccessLinc Interfaces in a Home

Tips for Using AccessLinc

#1626 FilterLinc Plug-In Filter

- Do not plug AccessLinc into a power strip or AC line filter.
- Some computers, audio-video products, and their accessories can absorb Power Line Carrier (PLC) signals off the power lines. If the AccessLinc is electrically near these devices, they should be filtered. Use Smarthome's FilterLinc #1626 on this equipment to keep the Insteon powerline signals from getting absorbed.
- Don't plug other PLC transmitters into the same outlet as the AccessLinc. Every PLC transmitter will absorb the other transmitter's PLC signals when they are not transmitting. In some cases, up to half the signal can be lost nearby transmitters.
- The AccessLinc is not designed nor approved for use on power lines that on something other than 120V/60Hz cycles. Attempting to use the AccessLinc on non-approved power-lines may have hazardous consequences.
- Due to the size of AccessLinc, it will block the bottom outlet of a duplex wall receptacle if plugged into the top outlet. If possible, use the bottom outlet so that the other outlet is accessible for other use. For convenience, a pass through receptacle has been supplied on the AccessLinc so you don't lose a receptacle.
- If the AccessLinc is plugged into a receptacle controlled by a wall switch, consider leaving the switch on at all times. This will ensure that the AccessLinc never loses power and is always functioning. Never plug the AccessLinc into an outlet controlled by a dimmer.
- Never stack another Smarthome automation module like LampLinc, ApplianceLinc, or PowerLinc. The internal heat generated when controlling a load may cause them to overheat, catch fire, or lockup and stop functioning.
- When installed in pairs, the antenna direction needs to be the same. If one antenna is vertical and another is horizontal, range and reliability will be reduced.
- Do not place AccessLinc near large metal objects, like a refrigerator, cabinet, or television. AccessLinc works best when placed out in the open.
- If interference from AccessLinc is heard on 900MHz cordless phones, move to a different frequency or channel on the cordless phone. Exact procedures vary from brand-to-brand; please see your cordless phone instructions.

Troubleshooting and Technical Support

The LED on one of a pair of AccessLinc is continuously blinking rapidly	The AccessLinc has lost communications with its paired partner	Move the units closer together
		Re-initialize the link (see installation on page 4)
The LED has turned off and does not flicker during Insteon transmissions	The Interface may have locked up	Remove the interface from power for 10 seconds and re-install
The wireless range is extremely limited	Large objects may be interfering with wireless operations	Move the Interface to a different outlet
	Check antenna orientation on paired interfaces	Both antenna must be pointed in the same direction (vertical or horizontal)

Still having trouble....

If you cannot resolve an issue you're having with the AccessLinc Interface;

- Search our on-line knowledge base at:
  http://smarthome.custhelp.com
- E-mail: ***tech@smarthome.com***
- Call our Technical Support Dept. at 949-221-9200

Specifications

Range	200ft. (line of sight)
Frequency	
RF	904MHz
Powerline	132kHz
RF sensitivity	-103dbm
Modulation	FSK
Messages per seconds	10
Supply voltage, wattage	120VAC, 6VA maximum
Pass-through outlet ratings	120VAC, 15A
Operational environment	Indoors, 0-70°C, up to 85% r.h.
FCC ID #	SBP2442

About AccessLinc's Certification

The AccessLinc has been thoroughly tested by ITS ETL SEMKO, a nationally recognized independent third-party testing laboratory. Products bearing North American ETL Listed mark signifies that the product has been tested to and has met the requirements of a widely recognized consensus of U.S. and Canadian product safety standards, that the manufacturing site has been audited, and that the manufacturer has agreed to a program of quarterly factory follow-up inspections to verify continued conformance.

Smarthome Limited Warranty

Smarthome 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, Smarthome 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 Smarthome's liability with respect to this product.

For repair or replacement during the warranty period, call Smarthome customer service to receive an RA# (return authorization number), properly package the product (with the RA# clearly printed on the outside of the package) and send the product, along with all other required materials to:

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

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Limitations:

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