

Quick-Start Guide

SIGNALINC V2 HARDWIRED

Signalinc™ V2 Hardwired (#2406H)

Your new Signalinc V2 will increase your INSTEON-enabled system's reliability without the need for plug-in phase couplers.



Need Help? For assistance call your friendly support person @ 800-SMARTHOME (800-762-7846)

Preparation

Installation should be performed only by a qualified electrician or by a homeowner who is familiar and comfortable with electrical circuitry. If there are any questions, consult an electrician. For setup questions contact Tech Support at Smarthome for guidance.

Tools you will need:

- A standard screwdriver
- A Phillips screwdriver
- A wire cutter/stripper
- A voltage tester to identify wires inside the junction box

Installation Procedures

- Step 1.** At the service entrance, shut off all power to the breaker box. In some homes, this will be the "Main" breaker in the circuit breaker panel. If there isn't a main power shutoff (master switch) or you can't find it, do not attempt the work. Call a licensed electrician.
- Step 2.** Remove the circuit breaker panel cover.
- Step 3.** Use the circuit tester or AC voltmeter to be sure the circuits are OFF. Check to make sure that there is no voltage from the screw terminals of several circuit breakers to the ground or neutral bus bar.
- Step 4.** The Signalinc will need to be wired directly to two circuit breakers. It is a violation of the electrical code to use an existing breaker that already has a wire connected to it. Install a new 220-volt 15-amp (double-pole) circuit breaker. These breakers have a bar between the paddles so that if one breaker detects an overloaded condition, both will trip.
- Step 5.** Install a single-gang electrical box for the Signalinc near the breaker box. Use either a metal or plastic outlet box. The sales people at your local home improvement center or electrical supply store can help guide you to the right choice that will comply with local electrical ordinances.
- Step 6.** Run electrical cable between the circuit breaker panel and the mounting box for the Signalinc. The cable should be secured with a clamp or wire nail to the wall stud within a few inches of the mounting box. We recommend using 14/3 cable, which has three conductors plus a ground wire.
- Step 7.** Connect the bare copper ground wires together. Using a pair of pliers, twist ground wire from the Signalinc and the ground wire going to the breaker box together in a clockwise motion. Make several turns to ensure a good connection. Place a wire nut on this connection (this is a code requirement).
- Step 8.** Connect the black wire on the Signalinc to the black wire going to the panel. Strip back about 3/4" of insulation. Using pliers, twist the conductors together in a clockwise motion. Cut the exposed twisted copper wires back to about 1/2". Place a wire nut over this connection.
- Step 9.** Connect the red wires following the same instructions above. If you are using 14/2 wire, use a black marker to color the white wires black (at both ends, at the Signalinc and the breaker box). This, too, is typically an electrical code requirement.
- Step 10.** If you have a white wire left over, place a wire nut on it. It is not connected to the Signalinc.
- Step 11.** At the circuit breaker box, connect the ground wire to the ground bus bar. Some panels do not have a separate ground bus bar so the ground wire must be connected to the neutral bus bar. The ground wire must be connected for safety purposes.
- Step 12.** Connect the BLACK wire to one of the 15-Amp circuit breakers.
- Step 13.** Connect the RED wire (or the white wire colored black with a marker if you are using 14/2 cable) to the other 15-Amp breaker.
- Step 14.** Check to be sure that all the wires are securely fastened, no copper is exposed (except for the ground wire), and all screws are tight.
- Step 15.** Restore power to the main breaker.
- Step 16.** You can confirm that the Signalinc is wired to the correct breakers if you can read 220 to 240 volts AC between the two breakers when the power is turned on. If there is no voltage between the two breakers, check to be sure that both of the breakers and the master breaker are "ON". If there is still no voltage between the two breakers, then they are probably on the same leg, and you will have to select another breaker for one of the wires.
- Step 17.** Replace the circuit breaker panel cover.

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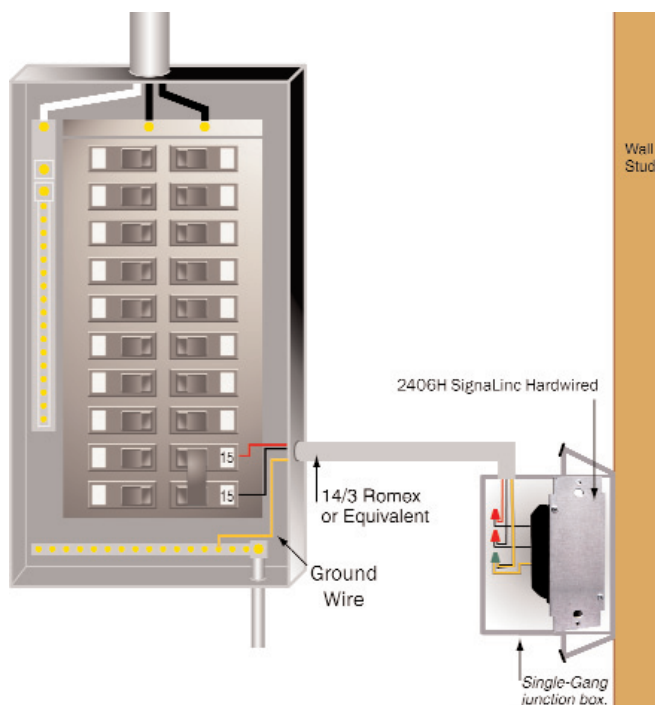
Notes

- The advanced User's Guide can be found at <http://www.smarthome.com/2406h.html>.

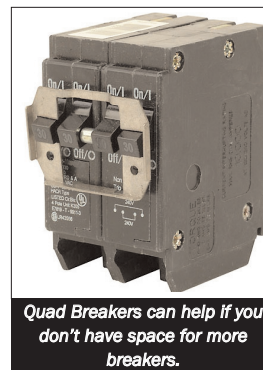
How Does a Signal Bridge work?

The SignalInc V2 is a passive coupler and does not amplify the PLC signals. This means the signals coupled onto the receiving phase will only be as strong as the signals on the transmitting phase. How well the SignalInc works in your home is dependent on many factors, including signal strength for the transmission phase. Other considerations include:

- The phase receiving the signal through the SignalInc may have electrical devices plugged in that will attenuate the signal from the transmission phase. Some of the electrical devices that might cause the receiving phase to absorb the transmitted signal include power line carrier (PLC) X10 transmitters, noise/surge suppressors (like those found in multi-outlet strips), and any electrical device that contains a complex power supply like those found in computers and audio-video products. If the PLC signal is severely attenuated, it may cause devices that once worked on the transmission phase to stop working.
- Noise on the receiving phase may be transferred through the SignalInc onto the transmitting phase, resulting in some interference among receivers. This interference may prevent PLC devices from receiving the signal correctly, even if they were once working properly before the SignalInc was installed. Noise from the transmission phase may also be transmitted to the receiving phase, resulting in missed signals.



TIP: If you don't have any space in your panel for new circuit breakers, use a quad-pole breaker like the one pictured on the right. You will need to remove two existing breakers that are adjoining each other. The quad breaker will need to have two of the poles rated for the amperage as the ones removed. For example, if you removed two 20-amp breakers, you would need a 20/15/15/20 quad breaker. The two 15-amp poles will be for the new SignalInc while the two 20-amp poles will be for the circuits that were connected to the old breakers. A home improvement or electrical supply store should have a good assortment of these.



SmartLabs Limited Warranty

SmartLabs warrants to the original consumer 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 the owner's manual. This warranty shall not apply to defects or errors caused by misuse or neglect.