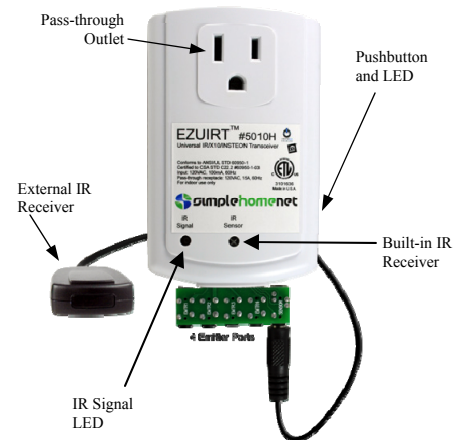


# EZUIRT Universal IR/INSTEON/X10 Transceiver #5010H

Your EZUIRT is a multi-functional device that brings the versatility of INSTEON and X10 to the coffee table through commonly available infra-red (IR) remote controllers. The device allows control of anything connected to an INSTEON or X10 network with the same remotes used with audio-visual/entertainment equipment. As an IR X10 transceiver, your EZUIRT receives and decodes all 256 X10 addresses from an IR remote and sends them over the power line. In INSTEON mode, any IR X10 address or IR code can be set up to send INSTEON group commands or status change broadcast messages to control single or multiple INSTEON devices in a scene. EZUIRT is also an IR sender, capable of converting INSTEON commands to IR codes (singularly or as macros) that your A/V equipment can readily understand.

The built-in IR receiver can be bypassed with an external one (included) allowing ultimate placement flexibility. EZUIRT can also function as an IR repeater or distribution box (IR blaster) sending the IR signals received through 4 separate jacks that accommodate up to 8 IR emitters (not included.)



## Installation

Select a suitable power outlet anywhere in your INSTEON power line network close to where the IR remotes will be operated. The built-in IR receiver is on the lower front of the unit and must be in the line of sight of the controlling remote for best results. Optionally, the unit may be placed behind a cabinet, and the IR signal brought to it by either an external receiver or an IR repeating emitter placed next to the built-in receiver. For convenience, a pass-through outlet is provided. Avoid exposure to moisture. Plug the EZUIRT into the selected outlet and observe its LED flash a number of times and then glow steadily after a few seconds.

## Setting Up EZUIRT With a Remote as an INSTEON or X10 Controller

EZUIRT receives IR X10 codes and sends them on the power line, emulating the IR543 or IR543H. In INSTEON mode, the unit associates an IR code (X10, NEC, RC5 or SONY) with a group number from 1 to 40. Multiple devices can be set up on the same group thus enabling a single IR command to control multiple INSTEON units in a scene. EZUIRT can alternatively be made to send an INSTEON broadcast message (instead of a group command) upon receiving the IR code. This mode is useful with some software applications.

### Controlling INSTEON Devices with IR X10 Codes:

When linked to INSTEON devices using X10 IR codes, EZUIRT will send INSTEON ON, OFF, BRIGHT and DIM group commands upon detection of corresponding X10 commands. It is only necessary to link the X10 ON button of the controller as follows:

1. Press and hold the pushbutton on the side of EZUIRT for about 10 seconds, at which point its LED will flash about once per second (slow rate) indicating EZUIRT is listening for an IR code.
2. On the IR remote press the X10 ON button to be used for control. The LED on the side of the EZUIRT will flash more rapidly when it "learns" the IR signal—EZUIRT is now in INSTEON linking mode.
3. To link one or several INSTEON devices to this code, press the pushbutton on the INSTEON device to be controlled until its LED (or the load connected to it) flashes indicating a successful link (3-4 seconds.) The LED on the EZUIRT will continue blinking as it stays in linking mode ready to accept additional devices.
4. If no additional devices need to be linked, end the linking process by pressing the pushbutton on the EZUIRT for about 4 seconds. The LED on the EZUIRT will glow steadily.

### Controlling INSTEON Devices with IR Codes Other than X10:

When using IR codes other than X10, it is necessary to tell the EZUIRT the desired INSTEON command to be sent, as outlined below.

1. Press and hold the pushbutton on the side of EZUIRT for about 10 seconds. Its LED will flash about once per second (slow rate) indicating EZUIRT is listening for an IR code.
2. On the IR remote press the button to be used for control. The LED on the side of the EZUIRT will flash more rapidly when it "sees" the IR signal—EZUIRT is now in linking mode.
3. To link one or several INSTEON devices to this code, press the pushbutton on the INSTEON device to be controlled until its LED (or the load connected to it) flashes indicating a successful link. The LED on the EZUIRT will continue blinking as it stays in linking mode ready to accept additional devices.
4. If no additional devices need to be linked, end the linking process by pressing the pushbutton on the EZUIRT for about 4 seconds. The LED on the EZUIRT will turn off.
5. We now tell EZUIRT, via taps on its pushbutton, which INSTEON command to send. Tap the pushbutton (according to Table 1 on the right) a number of times corresponding to the desired command to be sent upon receiving this code.
6. Now end the linking process by pressing the pushbutton on the EZUIRT for about 4 seconds. Its LED will glow steadily again.

# of Taps	INSTEON Command
1	On
2	Off
3	Toggle
4	Not Used
5	Bright
6	Dim

### **Sending INSTEON Broadcast Messages in Response to IR Codes:**

Any given code can be used to produce an INSTEON status change broadcast, instead of a group command. This mode may be useful to cause events to be acted upon by another controller in the INSTEON network. Please note that, for a given code, only one mode (either group command or broadcast message) can be employed. Set up as follows:

1. Press and hold the pushbutton on the side of EZUIRT for about 10 seconds. Its LED will flash about once per second (slow rate) indicating EZUIRT is listening for an IR code.
2. On the IR remote press the button corresponding to the desired control (if X10, press an ON button.) The LED on the side of the EZUIRT will flash more rapidly when it “learns” the IR signal—EZUIRT is now in linking mode.
3. Press the pushbutton for about 10 seconds. The LED on the EZUIRT will glow steadily. From now on, the EZUIRT will send a “status change” INSTEON broadcast message every time the learned code is recognized. The code representation is encoded in the “To” field of the broadcast message.

### **Unlinking an INSTEON Device from a Control Button:**

1. Press and hold the pushbutton on the EZUIRT for about 10 seconds, at which point its LED will flash about once per second (slow rate) indicating EZUIRT is listening for an IR code. Then press and hold the pushbutton again for about 10 seconds and the LED will continue to flash at the slow rate.
2. On the IR remote press the button to be unlinked. The LED on the side of the EZUIRT will flash more rapidly when it “sees” the IR signal—EZUIRT is now in unlinking mode.
3. To unlink an INSTEON device on this code, press the pushbutton on the INSTEON device for about 5 seconds until its LED (or the load connected to it) flashes indicating a successful unlink. The LED on the EZUIRT will glow steadily.

### **Using Your EZUIRT as an INSTEON-Controlled IR Sender**

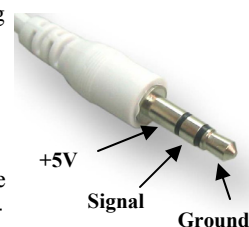
EZUIRT can be programmed to send up to eight IR codes in response to a command from another INSTEON controller. Multiple IR commands are useful to control multiple A/V devices simultaneously with a single button from a controller such as a KeypadLinc. To link an INSTEON controller, and teach the EZUIRT the IR code(s) to send, proceed as follows:

1. Put the appropriate INSTEON controller in linking mode by holding one of its buttons until it indicates linking mode (4-10 seconds depending on the controller.) Usually its LED will blink or a light connected to it will flash.
2. Hold the pushbutton on the EZUIRT and release it after **3-4** seconds. Its LED will now blink slowly when the link is established with the controller. The controller being linked will also give an indication of a successful link by flashing its LED or a load connected to it.
3. Now teach the EZUIRT the code(s) that will be sent by successively activating the IR remote while pointing it at the EZUIRT IR receiver. The LED on the side of the EZUIRT will flash briefly and then resume its slow blinking each time a new code is recognized and stored. Up to 8 codes can be added this way, or the process ended by pressing the pushbutton for **3-4** seconds. The LED on the side of the EZUIRT will turn on solidly indicating the end of the linking process.

### **Using your EZUIRT as an IR Distribution (Repeater) Hub**

IR signals received through the built-in or external IR receiver, are transmitted over the 4 jacks provided using external emitters (not included.) Each jack can drive either single or dual IR emitters thus enabling up to 8 repeaters. The modulated frequency of the IR signal transmitted by the emitters is set at the factory at about 38Khz. Other frequencies are possible by a configuration jumper available on the left side of the unit. Contact product support if other frequency is needed.

Should an external receiver be used in place of the internal one, please follow the pin-out shown on the picture on the right. Note carefully the polarity on this plug or damage will occur to your EZUIRT or external receiver.



### **Other Operating Notes**

#### **Programming with an External PC or Server**

EZUIRT has a built-in power line interface and its configuration may be done through the power line. Although control of INSTEON devices can be set up manually as described in previous sections, EZUIRT is or will be supported by an ever-growing list of home automation software packages such as our free MS-Windows utility and EZBridge/EZSrve. A PC application or utility on a home automation server may be used to rapidly change several parameters such as the INSTEON commands to be sent and the IR codes.

#### **Setting the X10 House**

Some X10 IR remotes do not send House codes and assume the controller is set to a specific X10 House. EZUIRT is factory set to House code C and this code changes automatically in response to IR543H type extended IR X10 codes. For convenience, the House code can also be changed with INSTEON commands with our free MS-Windows utility or other compatible external software.

#### **Resetting EZUIRT to Factory Configuration**

To erase all links, and restore the EZUIRT to factory settings, unplug the unit for about 5 seconds. Then plug it back in while pressing the pushbutton and continuing to hold it pressed for about 12 seconds.