

The Relay8 is an 8-relay module that responds to X10 ON, OFF, ALL OFF and status request commands.

Designed for use with X10-compatible computer interfaces and other devices that can generate X10 power line carrier signals.

The Relay8 supports devices capable of sending a Status Request command. In addition to giving you the power to poll individual relays to determine their on/off status, it also allows your computer send a command to the module then check to see if the command was carried out. If not, the computer can automatically send the command again.

## Verify Contents of Shipping Container

- Relay8 module with detachable terminal blocks in place.
- 110 to 12VDC, 500ma wall-mounted power supply (not need when Powerlinc is used).
- Modular cable (black) for use with PSC05 or TW523 interface.
- RS232 serial cable, DB9 both ends. Used for configuring module only.
- A power line interface (PowerLincII, PSC05 or TW523) is required for operation

## Installation

### Controller Location

- The controller should not be exposed to water. If used outside, it is necessary to provide a weather proof housing for your Relay8.  
<http://www.wgldesigns.com/r8outdoor.html>
- Mount your controller to a smooth dry surface by means of the enclosed Velcro strips.

### Wiring the Relays

- Each of the 8 independent relays is equipped with a form C contact that is brought out to a plug in, detachable terminal strips.
- Care must be taken to insure that the rating of the relay is not exceeded.
  - 1A @24VDC resistive
  - 1A @120VAC resistive
- For inductive loads, suitable transient suppression must be provided externally.
- Relay contacts are designed for dry contact (low current applications) as well as power switching.

### Connecting the Power supply & Interface Using X10's PSC05 or TW523

- Two 120VAC outlets are required when using X10's interfaces. One for the interface and one for the power supply.
- The Relay8 must connect to a power line interface (PSC05 or TW523) using the furnished back modular cable.
- Plug in the 12VDC supply to the jack in the upper right hand corner labeled 12VDC

### Connecting the Power supply & Interface Using Smarthome's 1132B PowerLinc

- With the Powerlinc only a single outlet is required as this device provides both power and the power line interface function in one package.
- Using the black RJ45 (8 pins wide) to RJ11 (6 pins wide) cable that came with your Powerlinc, connect the jack on the Relay8 in the lower right hand corner labeled "X10 Interface" to the Powerlinc jack.
- It is not necessary to connect the module to a power supply in this instance.

### Prepare to Configure the Relay8 module

- Please note that the Relay8 terminal strips are removable. Gently unplug the portion with screw heads from the socket mounted on the module. Remove the Relay8 from the wall and bring it to the location of the PC that will be used for programming.
- Connect the DB-9 connector on the Relay8 to a serial cable, with the other end plugged into a serial port on your PC. It is not necessary to provide power for the unit as it can derive what it needs for programming from the serial port.

### Setting up your PC

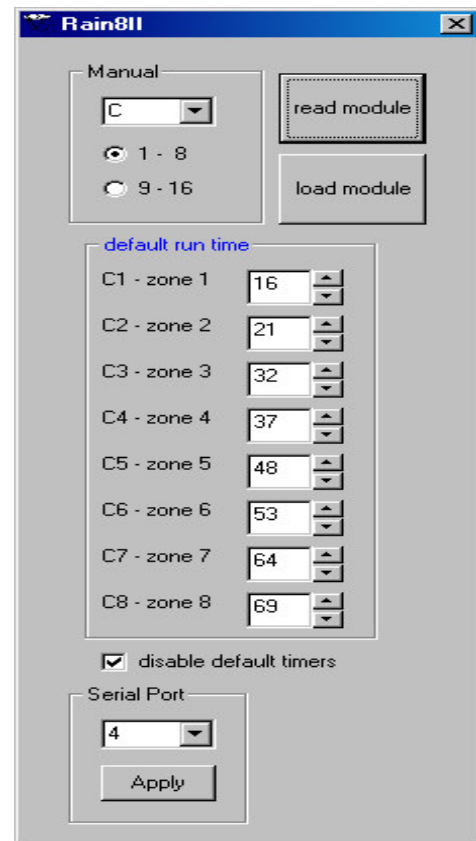
- Download software and start program from <http://www.wgldesigns.com/downloads/relay8.zip>
- Set up the Serial Port box, in the lower left corner, by selecting the serial port number to be connected.
- At this point there is no need for anything to be connected to the Relay8 other than the serial cable. The power for the unit is derived from the serial port.
- Test the assignment by pushing the "Apply" Button. If you get a message "module not responding...", verify connections and port assignment. The proper response "module detected" indicates that everything is now ready to program the unit.

## Programming the Controller

Select the House Code and Unit Code to assign to the 8 relays.

Disable default run time if feature not desired.

1. Locate the drop down box in the upper left hand corner of the window. Select the House Code and bank desired. In the example shown to the right, C1 would control relay 1, C2 relay 2 ...
2. If it is desirable to limit the maximum amount of time that the relay would be energised, verify that the check box near the bottom is cleared.
3. One application where the default run timers may be useful is when the need for a momentary contact closure is desired. In this case set the default run time for the minimum value of 1 minute.
4. Just below are 8 input boxes to program the elapsed time in minutes that a given relay will be active before turning off automatically. The run times for each zone may be anything from 0 to 250 minutes, in one-minute increments. Enter values that are a little larger than what would normally be used by the home automation program. This provides a safety feature that will turn off any given valve in the event of a lost X10 "OFF" command.
5. After the new values have been entered, click on the "load module" button. This causes an upload from the PC to the Relay8 memory. Confirm the upload by clicking on the "read module" button.



### Troubleshooting with the Status LED

The Relay8 features a status LED visible from the top of the module on the left.

#### No LED

Relay8 is not running. Verify Powerline or 12VDC supply connected.

#### Regular flashing LED

No power line interface detected. Check modular cable and verify correct type. Verify interface plugged in to outlet and connected to Relay8 with proper cable.

#### Steady LED

Everything is working okay. No incoming X10 power line carrier signals.

#### Intermittent flashing LED, 1 – 2 seconds OFF

Incoming PLC with **enabled** house & unit code. Relay will be activated or released.

#### Intermittent flashing LED, 2/10 second OFF

Incoming PLC with house & unit codes that are **not** enabled. No relay activity.

## Problems or Questions?

If help is needed, please do not hesitate to contact us. We want to make your installation as painless as possible. Your suggestions or questions will help us improve this document and our product.

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