

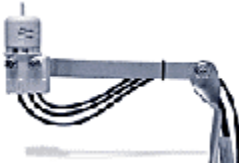
Solution of the Week



Automatically Shut Off Sprinklers When it Rains

Since weather forecasting is never 100-percent accurate, it's not unusual to see sprinklers on during a rainstorm. But with a few affordable products, your sprinkler system can automatically sense rain and override the timed schedule. Setup is easy, as you'll find in the steps below.

Basic Method



Let's say you have a basic sprinkler system on a timer and you simply want a way to override the schedule when it's raining out. Your best bet is to add a [Rain Sensor \(Normally Closed\)](#) (#7194, **\$24.99**) to your system, which you can do in less than half an hour. This low-voltage sensor connects between the controller and the solenoid valves that control the water ([click here for a diagram](#)). Just make sure you mount the actual sensor in an area where it's exposed to rainfall but won't get wet from the sprinklers.

How does it work? The Rain Sensor contains special hygroscopic disks, which absorb water when it rains and simulate the drying of turf. So when the hygroscopic disks get wet, the Rain Sensor opens a set of low-voltage contacts, preventing the low voltage generated by the timer from getting to the valves. Rainfall sensitivity is adjustable from 1/8 inch to 1 inch, so you can adjust it to ignore light showers and only interrupt the system for heavy rain.

When the hygroscopic disks dry out, the set of low-voltage contacts close again, so the next time your sprinkler timer tries to turn on the valves, your system will operate as normal. The reset rate (the speed at which the sensor "dries out") is also adjustable.

Advanced Method

Although the system described above may be great if you have just one or two sets of automated sprinklers, it doesn't offer very much flexibility for multi-zone systems that water different types of foliage. For example, during a light rain, you may want to shut off the sprinklers on the east side of the house and keep the sprinklers on the west side on. To do this, you'll need the ability to add logic to your system. Using

this advanced method will also allow you to control other devices based on rain, like X10-controlled landscape lighting, X10-controlled pool equipment, etc.

Required Shopping List

To complete this project, you'll need the following products:



Rain8 Sprinkler
Controller &
PowerLinc Kit
(#3124C)



Rain Sensor
(Normally Open)
(#7194NO)

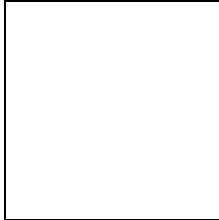


I/O Linc
(#1624)



Contact
Closure Probe
(#8018)

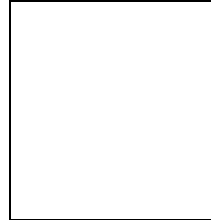
You'll also need **one** intelligent controller or software program that supports conditional events. We've highlighted a few of our most popular and affordable systems, although several other options are available.



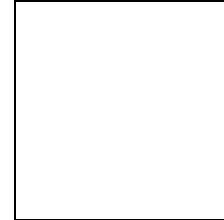
PowerLinc
Controller &
Smarthome
Manager Plus
(#1132CUP)



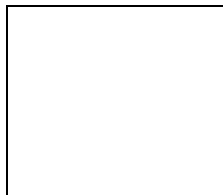
Home Control
Assistant 5 Plus
(#1268)



HomeSeer
(#1266)



Premise 2.0
Personal Edition
(#1410)



Indigo (for Macs)
(#1430)

HAI OmniLT
(#110401)

ComStar CS308
(#3002)

Sprinkler Controller Setup

Start by connecting the [Rain8 X10 Sprinkler Controller & PowerLinc Kit](#) to the solenoid valves that control the water. It will need to be mounted in a water-protected location or in a weatherproof enclosure with nearby access to an electrical outlet.

Next, use the included phone cable to connect the Rain8 module to the bottom receptacle of the PowerLinc. Then plug the PowerLinc into an electrical outlet and plug the transformer into the pass-through outlet on the front of the PowerLinc.

Rain Sensor Setup

The [Rain Sensor \(Normally Open\)](#) doesn't need to connect to the sprinkler system directly. In fact, you can set up the Rain Sensor in *any convenient location on your property with access to an electrical outlet*. Just make sure the Rain Sensor itself is exposed to rainfall and sheltered from your sprinklers.

Next, you'll need the [Contact Closure Probe](#) to connect to the Rain Sensor and plug it into the [I/O Linc](#) (#1624).

Finally, connect the I/O Linc to the included PowerLinc with the included cable, and then plug the PowerLinc into an electrical outlet.

Programming the System

Because each X10 Intelligent Controller is different, the steps for programming them will be different (consult your manual for specific steps). However, the *logic* that runs them is about the same.

First, you'll want to set it up so that the I/O Linc informs your intelligent controller when the rain sensor detects rain. To do this, you need to program the I/O Linc to send an X10 address followed by an ON signal (for example: B5 ON). For detailed instructions on how to do this, see the [I/O Linc instruction manual](#) (PDF format, 256K).

For example, with the [PowerLinc Controller and Smarthome Manager Plus Software](#), you can set it up so that your sprinklers turn on at 8:00 a.m. for 20 minutes every Monday, Wednesday and Friday, except when it rains. So in this example, the logic would look something like this:

- Time Triggered Action
 - At 8:00 A.M.
 - If Day = Mon Wed Fri
 - If Rain Sensor is OFF
 - Turn East Sprinklers On
 - Wait 20 Minutes

- Turn East Sprinklers Off

On rainy days, the system would detect the ON signal sent by the Rain Sensor and I/O Linc and skip the steps of turning the sprinklers on and off. The advantage here is that you can also have your system interrupt other schedules, such as landscape lighting, as well.

If there are sprinklers that you want to keep on, regardless of rain status, simply program a separate schedule for them but without the command "If Rain Sensor is Off."

Want to Turn off Sprinklers on Windy Days?



Another problem with automated sprinkler schedules is the effect of windy days, where the water ends up going everywhere except where you want it to. For that situation, simply substitute the [Wind Sensor](#) for the Rain Sensor.

Irriguard All-in-One Kit

Rather than purchasing numerous separate parts, you can have an entirely interactive, programmable system with a single kit, the [irriGuard™](#). The irriGuard is composed of three separate units that communicate wirelessly, allowing you to monitor the weather from within your home and automatically shutting off your irrigation system when watering becomes unnecessary or hazardous.



This system easily interfaces with virtually any existing sprinkler system. From the portable wireless in-home display unit, you can set your sprinkler control parameters while also monitoring current and past weather data. It also permits you to set the shutoff or lockout point of your sprinklers for rainfall and temperature. You can even define how long your sprinkler system will be disabled after a rain or freeze event. The rain gauge collects outside environmental data such as the current rainfall and temperature and then transmits this data back to the controller. The control unit acts as the data server, managing the incoming information from both the display and the rain gauge while using this data to regulate the existing irrigation/sprinkler system.