



## 1. Sprinkler Remote Garden System (Riego por Aspersión remota) on Rpi

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## Intro: 1. Sprinkler Remote Garden System (Riego por Aspersión remota) on Rpi

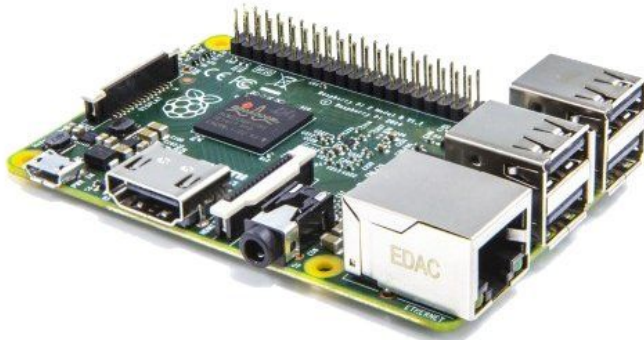
Here explain how build a sprinkler system with Rpi and Relay in 10 step

1. Components: RaspberryPi 2, Relay
2. Software
3. Set up
4. Test

1. This is very simple example how install your auto sprinkler system or automatic garage door etc... all depend of your imagination, your limits are in your mind. :)

I didn't code any time, you no need to have knowledge of programming or electronic. Let's go.

We need a RaspberryPi 2, B+ or Zero, in this case I have used my RaspberryPi2 and Relay that I both on Internet.



## Step 1: 2. Here explain how build a sprinkler system with Rpi and Relay in 10 steps

### 2. Software

The software used in the chapter is very simple.

1. Apache Web server, `sudo apt-get install apache2`.
2. Install sqlite, `sudo apt-get install libsqlite3-dev build-essential -y`  
`- wget http://stuff.intelligent-isi.com/sprinklers\_pi/sp...`
3. php5 `sudo apt-get install php5`
4. the wiringpi <http://wiringpi.com/> is GPIO Interface library for the Raspberry Pi  
`- http://wiringpi.com/download-and-install/ and follow the steps`  
`- sudo apt-get install git-core`

If you get any errors here, make sure your Pi is up to date with the latest versions of Raspbian:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

To obtain WiringPi using GIT: `git clone git://git.drogon.net/wiringPi`

If you have already used the clone operation for the first time, then `cd wiringPi git pull origin`

Will fetch an updated version then you can re-run the build script below.

To build /install there is a new simplified script:

```
cd wiringPi ./build
```

### IMPORTANT POINT:

<http://www.instructables.com/id/1-Sprinkler-Remote-Garden-System-Riego-Por-Aspersi/>

- gpio readall ( this command show you all pins output correspond to your Raspberry Pi, so you can see where do you want to connect your relay output)

6. Sprinklerpi is a web interface for mobiles very useful and very simple to used, just clone the repository in to your Rpi and make install, follow the instructions on this link, [https://github.com/rszimm/sprinklers\\_pi.git](https://github.com/rszimm/sprinklers_pi.git), when you install it, go to your RaspberryPi IPAddress follow port 8080 ex. 192.168.0.20:8080 and you will can access to your sparkling system.

```
else
{
    fprintf(stderr, "Xs: Unknown command: %s.\n", argv[0], argv[1]);
    exit(EXIT_FAILURE);
}
return 0;
}

pi@raspberrypi:~/Documents/wiringPi/gpio $ gpio readall
-----PI 2-----
| BOM | wPL | Name | Mode | V | Physical | V | Mode | Name | wPL | BOM |
-----+-----+
| 1 | 1 | 3.3v | | | 1 | 2 | | | 5v | | |
| 2 | 8 | SDA_1 | OUT | 0 | 3 | 4 | | | 5v | | |
| 3 | 9 | SCL_1 | OUT | 0 | 5 | 6 | | | 0v | | |
| 4 | 7 | GPIO_7 | OUT | 0 | 7 | 8 | 0 | OUT | Tx0 | 15 | 14 | |pg' onclick='change_pin ("3
| 5 | 10 | 0v | | | 9 | 10 | 0 | OUT | Rx0 | 16 | 15 |
| 17 | 0 | GPIO_0 | OUT | 0 | 11 | 12 | 1 | OUT | GPIO_1 | 1 | 18 |
| 27 | 2 | GPIO_2 | OUT | 1 | 13 | 14 | | | 0v | | |
| 22 | 3 | GPIO_3 | OUT | 1 | 15 | 16 | 0 | OUT | GPIO_4 | 4 | 23 |
| 1 | 17 | 3.3v | | | 17 | 18 | 0 | OUT | GPIO_5 | 5 | 24 |
| 10 | 12 | MOSI | OUT | 0 | 19 | 20 | | | 0v | | |
| 9 | 13 | MISO | OUT | 0 | 21 | 22 | 0 | OUT | GPIO_6 | 6 | 25 |
| 11 | 14 | SCLK | OUT | 0 | 23 | 24 | 0 | OUT | CE0 | 10 | 8 |
| 1 | 25 | 0v | | | 25 | 26 | 0 | OUT | CE1 | 11 | 7 |
| 0 | 30 | SDA_0 | IN | 1 | 27 | 28 | 1 | IN | SCL_0 | 31 | 1 |
| 5 | 21 | GPIO_21 | IN | 1 | 29 | 30 | | | 0v | | |
| 6 | 22 | GPIO_22 | IN | 1 | 31 | 32 | 0 | IN | GPIO_26 | 26 | 12 |
| 13 | 23 | GPIO_23 | IN | 0 | 33 | 34 | | | 0v | | |
| 19 | 24 | GPIO_24 | IN | 0 | 35 | 36 | 0 | IN | GPIO_27 | 27 | 16 |
| 26 | 25 | GPIO_25 | IN | 0 | 37 | 38 | 0 | IN | GPIO_28 | 28 | 20 |
| 1 | 39 | 0v | | | 39 | 40 | 0 | IN | GPIO_29 | 29 | 21 |
-----+-----+
| BOM | wPL | Name | Mode | V | Physical | V | Mode | Name | wPL | BOM |
-----+-----+
(Orig: 9)
```

## Step 2: 1.3 set up the files

3. Set up

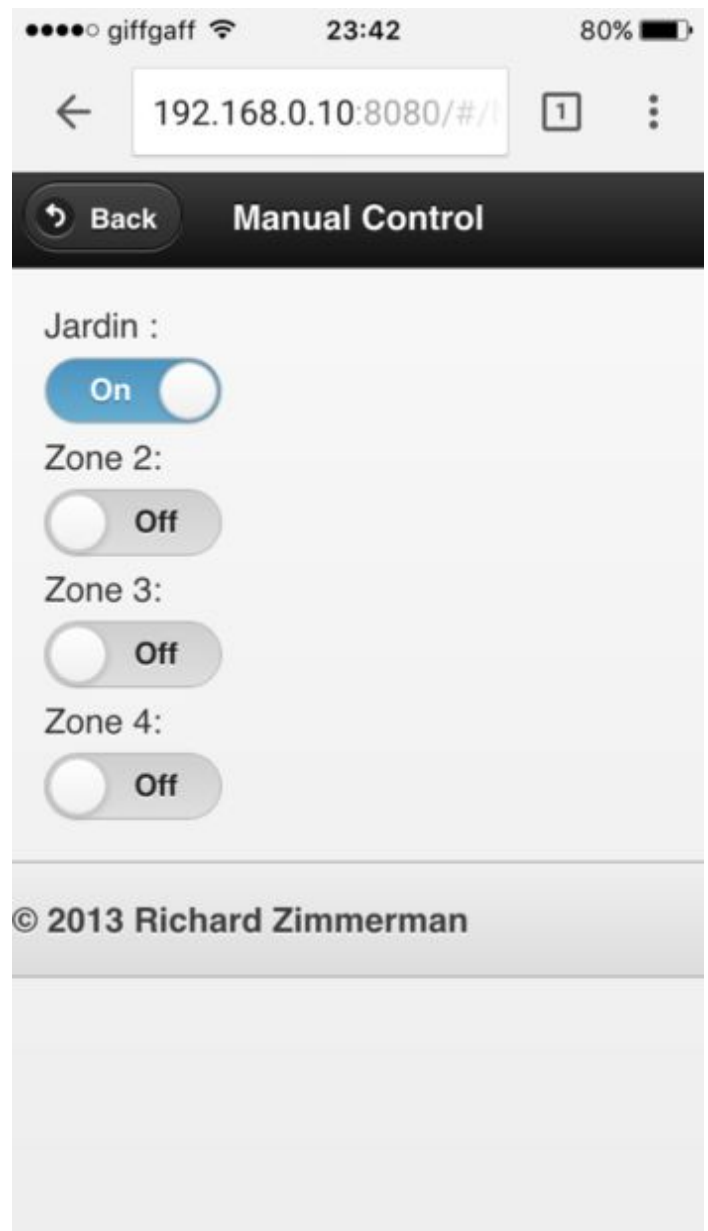
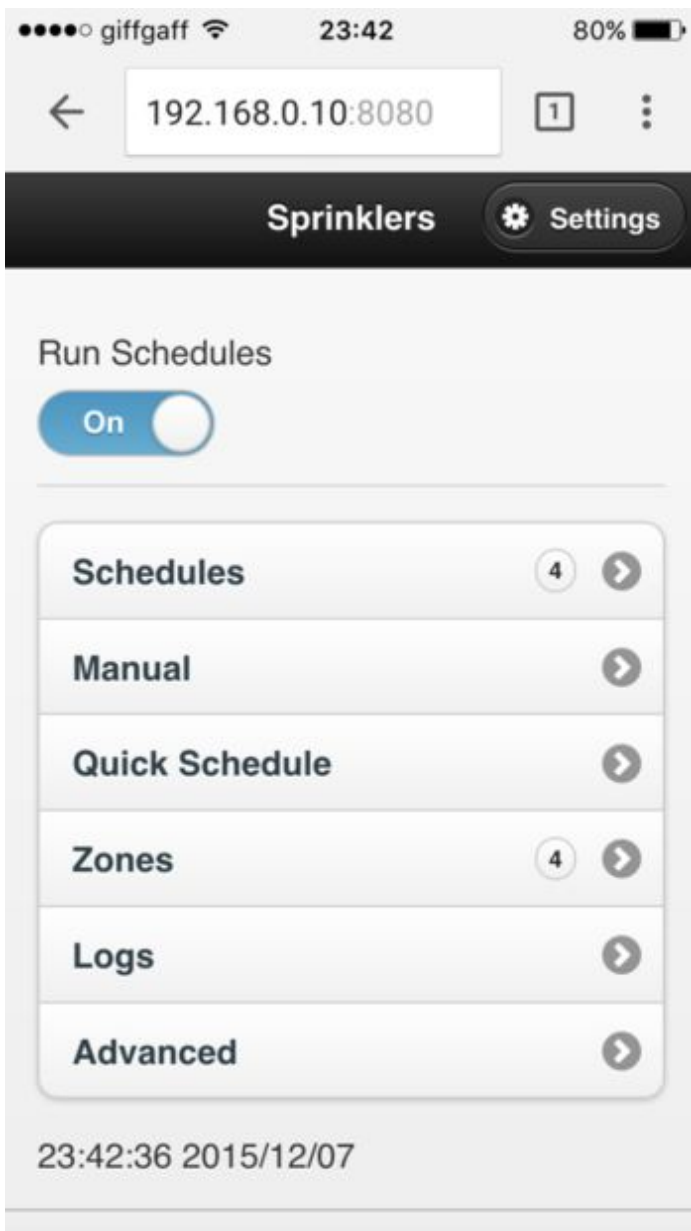
Here we have the system with sprinkler automation. example.

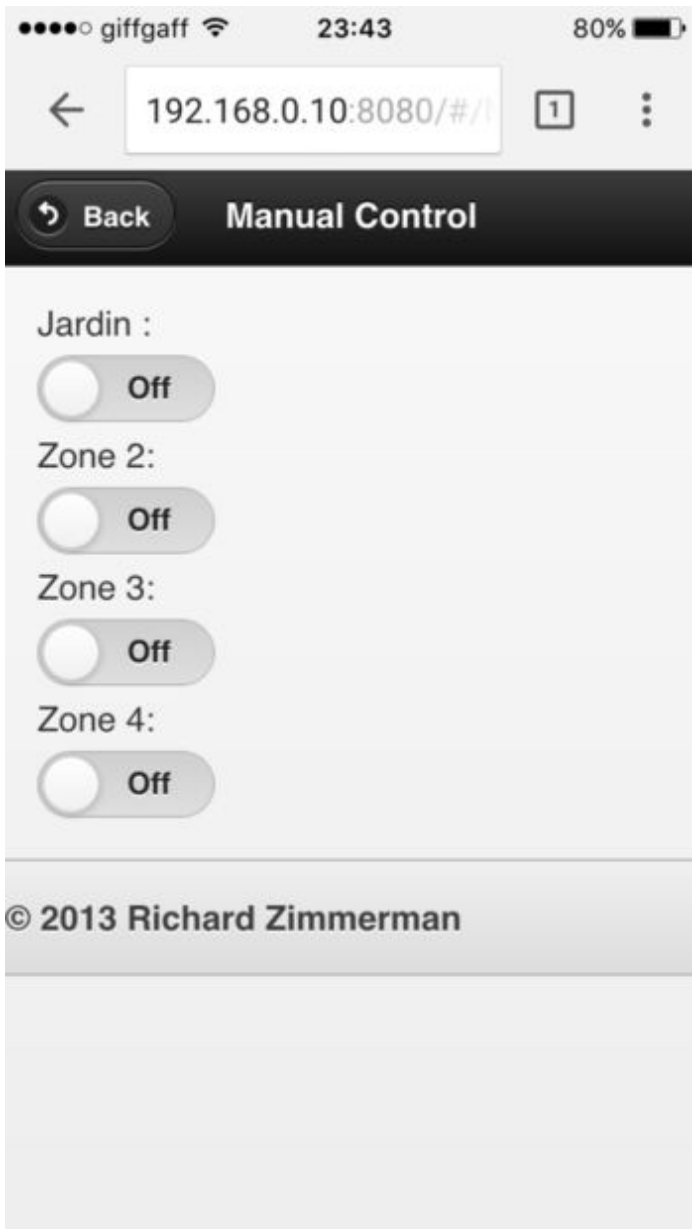
and Now a manual example. you will need 3 files.

1. index.php with the images
2. javascript file to control the images and outputs
3. gpio file to control the out puts

Here is the instructable.

<http://www.instructables.com/member/TheFreeElectr...>



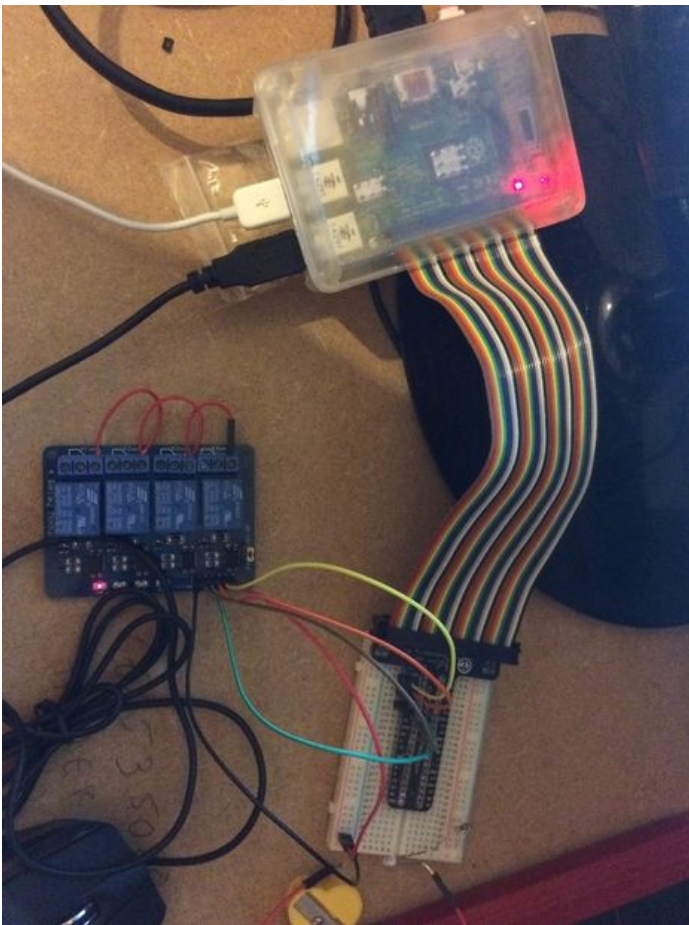


### Step 3: 1.4 Test

#### 4. Test

Now Enjoy Guys, if you have any question or need help, just contact with me please.

Cheers.



## Related Instructables



**Riego de jardines automatizado** by fernando.sandman



**Automatic watering system (video)** by sistemasorp



**Sistema de riego automatizado** by R\_EVOLUTION\_M



**Raspberry Pi - SMS Garage Door Butler** by AkiraFist



**Home monitoring** by dwayneez



**Open Source Garage Door Controller / Monitor** by andrewshilliday

## Comments