# A Smart Sprinkler System

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# Requirements

- Easily programmable
- Visible to home automation system
  - Wi-Fi preferable
- Used weather forecast
- ? Include soil moisture sensor

# What I first thought I would need

- Raspberry Pi controller                                      $35
- Wifi adapter (EDiMax)                                          9
- Bank of 8 DC Relays                                            8
- LCD display                                                    7
- Case                                                          10
- 24v AC power supply (transformer)                            10
- Moisture sensor                                               2
- Labor of love & a fair bit of programming

$81

But then ->

# OpenSprinkler

- ## OpenSprinkler ($149)

    - Pre-built smart controller that can replace existing sprinkler control system (the above ground box in your garage). It has an Atmel microcontroller.

    - Needs wired Ethernet connectivity or pair of Ethernet over power adapters (~$24/pair)

    - Tom McBride very successfully installed replacing a Rain Bird controller

    - Software update requires PC/Mac connection via USB

# A very neat installation

# OpenSprinkler Pi

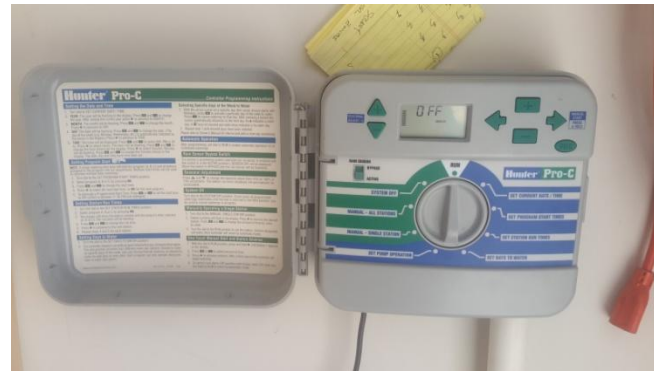- OpenSprinkler Pi                                                                $ 78
- Raspberry Pi (I used a spare Pi 2 but Zero OK, ? Pi 3)                35
- Wi-Fi dongle (already had for Pi 2)                                           9
- Micro SD card (downloaded image from OSPi)                    7

$122

- Just installed Pi & 5 minutes to configure (no room for LCD but not needed)

# Before & After



Hunter Pro-C Model 300







N.B.  I trimmed the power cable only to see that it was too short, then decided to skip trimming other cables.

# Web Access

- Very easy configuration to setup
- Have opened a port (port forwarding) in my home router to allow access for today
- Accessible via any browser (PC, Mac, Unix, tablet, phone)
- OSPi still allows me fully access for Remote Desktop connection and adding any programs or functions that I want.
- Uses free weather forecasting service to adjust water times

# Caution ?

- My neighbor did point out that I am tech savvy but next person buying my house might not be
    - True for any installed home automation systems
    - Requires & programmed for WiFi connection
    - Have kept old Hunter controller