

# Home Automation Fundamentals

Turning on a Light with Your Raspberry Pi

Erik Dietrich

<http://www.daedtech.com>

[erik@daedtech.com](mailto:erik@daedtech.com)

[@daedtech](#)



**pluralsight**   
hardcore developer training

# Overview

- Ordering the right parts.
- Installing NOOBS on the Pi
- First Boot-Up and Initial Configuration
- Installing the Necessary Software for Home Automation
- Let's Turn on a Light!
- Summary

# Ordering the Right Parts

- **Raspberry Pi:**

- Actual Raspberry Pi
- Mini SD Card
- Android-style USB charger
- (Optional) HDMI to DVI or VGA adapter

- **X10 Parts:**

- X10 CM19A Wireless Transceiver Computer Interface
- X10 XT751A Wireless Transceiver Module (\$20)

# Installing NOOBS on the Raspberry Pi

- **If you do not have a pre-loaded SD Card:**
  - Download SD Card formatting tool
  - Format SD Card
  - Download NOOBS
  - Put NOOBS on the SD Card
- **If you do:**
  - Skip to the next clip.

# First Boot-Up and Initial Configuration

- To get the Pi up and running:
  - Plug in the peripherals.
    - Network cable.
    - USB keyboard/mouse
    - Newly configured SD
  - Choose OS (Raspbian)
  - Run the config tool.
  - Start the desktop manager.



# First Boot-Up and Initial Configuration

- **Additional Software Needed:**

- General package update
- Python PIP
- pyusb
- CM19a driver
- Drive configuration

# Let There Be Light!

- **To turn on the light:**
  - Plug in CM19a
  - Plug in the transceiver
  - Issue the command



# Summary

- Ordering the right parts
- Installing NOOBS on the Pi
- First Boot-Up and Initial Configuration
- Installing the Necessary Software for Home Automation
- Let's Turn on a Light!