



Home Automation for Seniors

“Lights, Doorbells, Locks, and
Cameras

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Introduction

- The allure of a smart home is strong
 - Unlock your smart door lock with your phone
 - Have lights turn on automatically
- Monitor everything from your phone
- Many different products in so many ecosystems
- Breaking it down into smaller pieces
 - Start with one or two gadgets

Pick a Category

- How important is voice activation vs. using your phone for control
 - Narrow the field by features
 - Compatibility
- Entry-level systems
 - Door and window sensors
 - Motion detector
 - A hub using one of more wireless protocols
 - Wi-Fi, Z-wave, Zigbee or proprietary Mesh network

Decisions

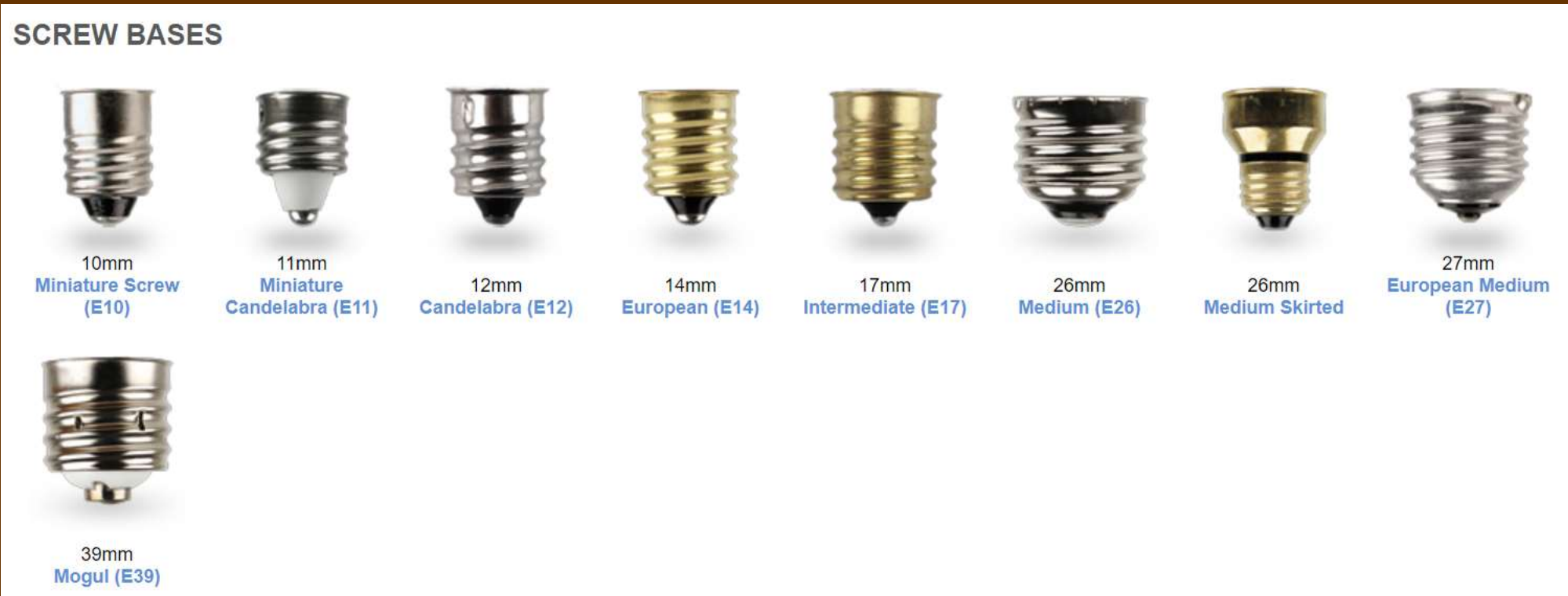
- A home automation project requires decisions to be made
- Begin with lights, doorbells, locks, and cameras
- Core systems of any HA project
 - Smart lamps
 - Video doorbells
 - Locks and cameras

Lights or Smart Lamps

- Your lights are boring
 - Fix that with smart lamps
- Proliferation of low powered LED bulbs
 - Wireless interfaces
 - RGB color changing LEDs
- What's smart about them?
 - Controlled through a mobile app
 - Change color
 - Adjust brightness
 - React to music and more

What to Look For

- Smart lighting can really change your home life
- The first port of call is to check the base fittings
- Many smart bulb manufacturers make a variety of different fittings



What Else You Need to Think About

- To function properly, each integration should follow certain protocols.
- Our recommendations can be split into two camps.
 - Those that require a Hub and those that don't
- If they need a Hub, in all likelihood they are running
 - Zigbee or Z-Wave
- These two wireless protocols function like 'Mesh' networks.
- The benefits of Zigbee and Z-Wave are being more stable and avoid putting a strain on your Wi-Fi.

What Else You Need to Think About

- Wi-Fi bulbs are growing in popularity because they don't need a hub and connect directly to your router.
- The main drawback is they need to have a strong Wi-Fi signal wherever your bulbs are
- Mesh Wi-Fi systems and Wi-Fi extenders can help
- Be careful not overload your home network with all your lights.
- Some bulbs come with Bluetooth.
- Hue bulbs come with Bluetooth built in which allows control from a phone, the obvious drawback you cannot control them outside your home.

Platform

Your platform of choice

- You need to ask yourself what ecosystem will you use?
 - Do you live in an Alexa home?
 - Is Google your friend?
 - Worship at the of Homekit?
- Make sure any smart lighting you buy plays nice.
- Most bulbs work with Alexa and Google Assistant, a smaller number are HomeKit friendly.

Brightness, Temperature and Dimming?

Not all smart bulbs are born equal

- Color temperature within white bulbs – letting you shift from a colder white to a warmer yellow – is an important feature.
- Not all white bulbs support color temperature, and of those that do, the range can vary.
- Brightness A light bulb's brightness is actually measured in lumens.
- That's the big beautiful difference between LED and incandescent light bulb types - an LED uses much less energy (wattage) to produce the same brightness (lumens) as its incandescent cousin

Brightness, Temperature and Dimming?

- **Lumens:** Formula of calculating Lumens to watts $P\text{ (W)} = \Phi_v\text{ (lm)} / \eta\text{ (lm/W)}$, which means that the power in watts is calculated by dividing the luminous flux in lumens by the luminous efficacy in lumens per watt.

Lumens/Incandescent/LED Conversion Tables



LUMENS	INCANDESCENT	LED
2600 lm	150 W	25-28 W
1600 lm	100 W	16-20 W
1100 lm	75 W	9-13 W
800 lm	60 W	8-12 W
450 lm	40 W	6-9 W



Brightness, Temperature and Dimming?

- Finally, do you want your smart lights to be dimmable?
- Chances are they won't work with an existing in-wall dimmer in your home, but some smart light brands now sell dimming accessories.
- Worth thinking about.
- Of course, you'll be able to dim with the app/voice controls in most cases, but sometimes you just want a good old fashioned light switch.



Product Brands

- Philips Hue White and Color Ambiance
- Sengled Color Changing Light Bulb
- C by GE Full Color Direct Connect Smart LED Bulb
- Yeelight LED Bulb 1S
- Wyze Bulb
- Nanoleaf Canvas
- Peace by Hampton



How to Pick

- The bulb you go with is going to depend on a couple of different factors:
 - Budget
 - I just want the cheapest option and only need a few bulbs
 - Go with the TP-Link LB100.
 - It's a \$20 Wi-Fi bulb that connects directly with your router, so it doesn't require a hub, and offers plug-and-play simplicity.



How to Pick

- I just want the cheapest option, and I need a bunch of bulbs.
- If you need a lot of lights, then it makes sense to tie them all to a dedicated lighting platform that won't interfere with your Wi-Fi network.
- Philips Hue is far and away the best-developed platform out there, and its white-light-only bulbs are the cheapest way in.



How to Pick

- The bulb you go with is going to depend on a couple of different factors:
 - Fancy
 - I want something really fancy and money is no object.
 - The Haiku Light from Big Ass Solutions (best known for their Big Ass Fans) is the obvious pick here.
 - It's a classy, recessed fixture that's rmedium expensive.



How to Pick

- The bulb you go with is going to depend on a couple of different factors:
 - Extra Features
 - I want something I can control with Siri, too
 - Philips Hue is the way to go here, as it's the only choice in this roundup that works with both Alexa and Siri.



The DIY Option

- You could pay ludicrously inflated prices for lights that barely give off a noticeable amount of light, or you could go the DIY route – making something far brighter, for a fraction of the cost.
- For about \$20, you can buy a 5-meter strip of RGB LEDs directly from China – including controller and power supply.
- 5 meters is more than enough for most mood lighting projects.
- A standard RGB controller works with infra-red (just like your TV), so any programmable universal remote – such as the Harmony Ultimate Remote can be customized to control the lights.



A Possible Cheap Alternative

- Wink Hub Combos
 - GE Link LED is built to integrate into Wink's emerging smart home platform
- Inexpensive bulbs from GE and Sylvania.
- Wink Hub 2 (incl. power and Ethernet cables), 2 SYLVANIA Smart A19 Dimmable bulbs, \$129.00 online.



Hubs

- A home hub is a device that connects different best home automation systems into one system.



Hubs

What to Look for in a Smart Hub

- Compatibility - There are different standards for communicating with smart home devices including ZigBee and Z-Wave.
- Before purchasing a smart home hub, ensure that it supports the standards used by your existing smart home devices.



Internet Video Doorbells

Get acquainted with what devices are on the market

Internet Video Door Bells

- Installing an Internet Video Doorbell is a popular option for the DIY Home Automation enthusiast.
- Many video doorbells come equipped with the option to connect it to your existing doorbell system or simply operate it on battery power.
- Determine what type of video doorbell will work best for you
- There are a number of other factors to consider.
 - Installation difficulty
 - Consider the design
 - Integration with existing home security

Products

- Video doorbells in home automation has improved significantly over the last couple of years by adding of streaming components.
- Some Models to choose from:
 - SkyBell HD
 - Ring Pro
 - August



Internet Door Locks

Get acquainted with what devices are on the market

Internet Door Locks

- **Commodity among door locks**
- Control and manage with smartphone and web app.
- Same considerations used for video door locks would apply to door locks.

Quirks and Perks

- The operating range
- The difficulty in installation and how well they integrate with your other devices.

Products

- Some of the locks on the market today that are worth considering and will work with your other devices:
- August
- Kevo Lock
- Yale
- Schlage



Internet Security Cameras

Get acquainted with what devices are on the market

Security Cameras

Smart Webcams

- A smart webcam is probably the most desired piece of hardware for your home automation.
- A smart webcam can be placed anywhere to monitor the activities around your home.
- The ability to save events and videos to an internal micro-SD card or the cloud and Remote monitoring anytime from anywhere in the world.
- There are models for both outside and inside use

Security Cameras

DIY vs. Pro Install

- DIY systems (SimpliSafe comes to mind) don't require wiring into your electrical system, which is a big part of what makes the installation easy.
- It also means that if you move, you can take the system with you quite easily.
- Some models to consider:
 - NetGear
 - Nest Cam
 - Belkin
 - NetCam



Thermostats

Get acquainted with what devices are on the market

Thermostats

- Remote Control them from anywhere in the house (or world via the Internet) using a smartphone or tablet.
 - Google Nest
 - Ecobee
 - Sensil Emerson
 - Honeywell
 - Hive
 - Lux/Geo



Thermostats

X10 AlternativeTxb16 X10 HVAC System

- When used with an intelligent home automation system, you can have it automatically respond with any action (i.e. turn on a ceiling fan, open or close dampers, etc.) when certain temperatures are reached.



Thermostats

X10 AlternativeTx16 X10 HVAC System (Cont.)

- Adjust house temperature in the morning from an X10 controller that you can keep on your nightstand

Smart Home Project



Final Thoughts

- If you want to create a smart home that will perfectly suit your needs and budget, plan ahead and plan thoroughly.
- Integration. Decide what devices work well together
- Which would rather do?
 - Clap your hands; lamp turns on.
 - Hey Google, turn the lights off.



Home Automation



Questions and Answers

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