

Deb L Project – Detailed view (v1)

By Bill Weis

Requirements:

1. Be able to intercom with caregiver whose bedroom is at opposite end of the house.
2. Be able to voice control her bed (Drive Delta 1000 – hard wired remote)
3. Be able to use voice to control a lamp

Solution – High Level:

1. Installed two echo dots for intercom ‘drop in’ capability
2. Installed a Google Mini, an Amazon Echo and a custom developed bed controller to allow Deb to control her bed using voice commands
3. Installed an Amazon Smart plug to control a lamp

Details of the Solution

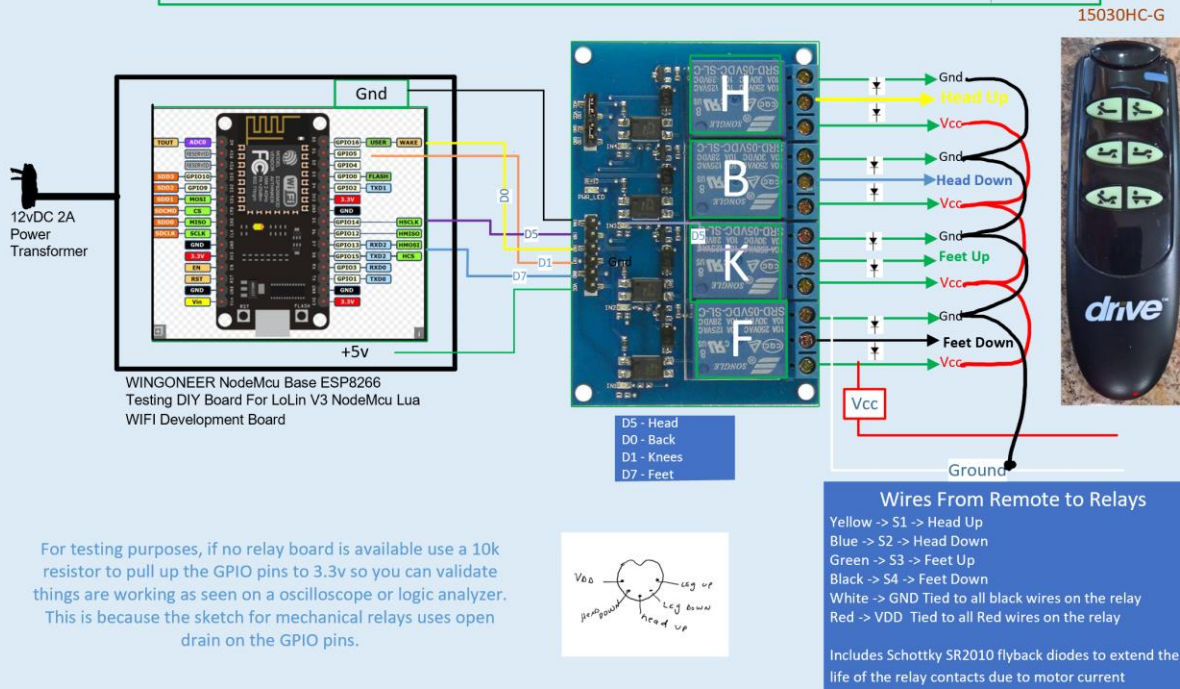
1 - Be able to intercom with caregiver whose bedroom is at opposite end of the house

– A handy feature of the Amazon Echo dot is the ability to have two of them spread across the house and be able to ‘drop in’ from one to the other establishing a intercom-like capability.

2 – Voice Control her bed – Deb has a Drive Delta 1000 bed with a hard wired remote. She wanted to have voice control of raising and lowering the head and foot ends of the bed. The bed can be controlled by both a Google Mini as well as an Amazon Echo Dot. Having the ability to control the bed from both provides for higher availability. If either Amazon or Google has a service outage, the other can be used as a backup. We added Schottky SR2010 flyback diodes on the relay board to extend the life of the relay contacts.

Here is a visio diagram of the solution.

Voice Controlled Bed for Drive Delta 1000 bed (Deb L)
 Bill Weis 2-10-2020
 S/N 18001.02



For testing purposes, if no relay board is available use a 10k resistor to pull up the GPIO pins to 3.3v so you can validate things are working as seen on a oscilloscope or logic analyzer. This is because the sketch for mechanical relays uses open drain on the GPIO pins.

3. **Be able to use voice to control a lamp.** – We provided an Amazon Smart Plug so Deb could control a lamp using voice commands.

Resources

[Amazon Echo](#)

[Alexa Support](#) (Contact Support via the Amazon Alexa app - can have them call your number)

[Google Home getting started](#)

[Google Home Help Forum](#)

[Google Home Support](#) Phone number for Google Home hardware support = 855-971-9121 (24/7 days a week)

[Logitech Harmony Knowledge Base](#)

[Logitech Harmony Support](#) Phone # for Support = 866-601-5644 (M-F 8am to 6pm PST)

[Lifx](#)

[Wemo Support](#) Phone number for Support = 1-844-745-wemo (9366)

