

George Gregory Project – Detailed view (v2)

By Bill Weis

George – Duchenne Muscular Dystrophy

Requirements:

1. Be able to voice control his Drive bed
2. Be able to use voice for making phone calls and have his phone number on receiving caller ID
3. Be able to voice control the ceiling lights
4. Be able to voice control his TV/Netflix/YouTube

Solution – High Level:

1. Designed a voice activated bed controller which gave George the ability to control all desired functions of his adjustable bed.
2. Set up Google Home Mini so George can use voice commands to call people in his google contact list and they will know he is calling because we configured Google Home to show his cell number on their Caller-ID
3. Installed 2 Lix Mini (A19) Wi-Fi Smart LED Light Bulb, which are dimmable and can change colors.
4. Installed an Amazon Fire TV Cube so George can voice control his TV/entertainment.

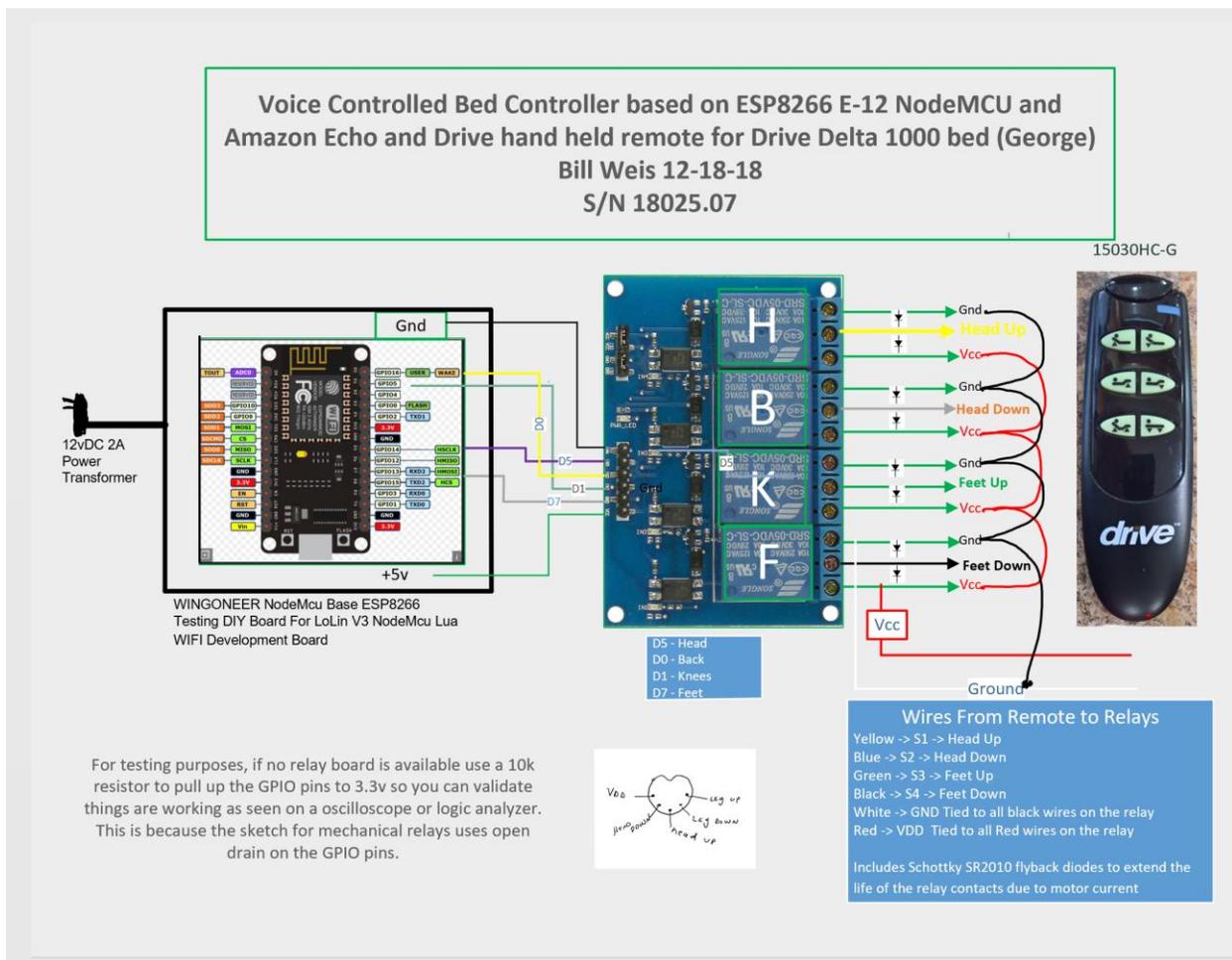
Details of the Solution

1 – Voice Control his bed – George has a Drive Delta 1000 bed with a hard wired remote. He wanted the 4 buttons (head up, head down, legs up, legs down) on the remote to be voice activated. The design of this bed control does not lend itself to being able to have a backup means of controlling the bed by hand in the event of internet downtime or other failures. This means that in cases where the bed cannot be controlled through the use of the voice activated bed controller for whatever reason, it will be necessary to unplug the bed controller and plug in the original handheld controller.

The voice activated bed controller uses mechanical relays with Schottky SR2010 flyback diodes offering protection to the contacts on those relays.

George's bed can be controlled by both an Amazon Echo and a Google Mini for added redundancy.

Here is a Visio diagram of the solution.



3. Turn on/off the lights in his room by voice – We installed (2) Lifx Mini (A19) Wi-Fi Smart LED bulbs in the ceiling fixture enabling George to turn on/off/dim/change color through voice commands using Amazon Echo. The Lifx bulbs do not require a hub as each bulb can be directly accessed by the Amazon Echo.

3. Be able to voice control his TV/Netflix/YouTube – To give George the ability to use voice commands to control his TV/Netflix/YouTube environment, we installed an Amazon Fire TV Cube.

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)

inside the bed controller box. The drawing on the following page shows the voice activated bed controller, solid state relays and the remote.