

Jay Joo Project – Detailed view (v1)

By Bill Weis

Jay – Duchenne Muscular Dystrophy

Requirements:

1. Be able to voice control his adjustable bed
2. Be able to voice control his Samsung TV

Solution – High Level:

1. Designed a voice activated bed controller which gave Jay the ability to control the Head Up, Head Down, Foot up and Foot down functions of his adjustable bed. He can control the bed using Google and Alexa.
2. We provided an Amazon Fire TV Cube and an HDMI cable so Jay could voice control his TV.

Details of the Solution

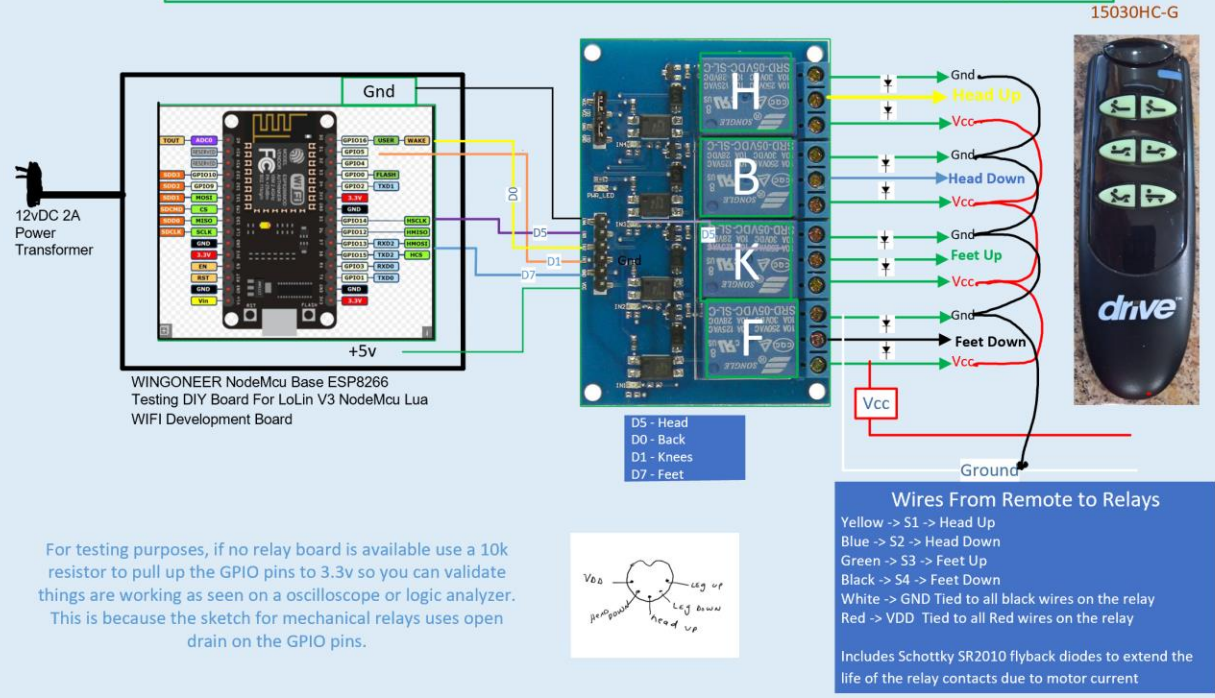
1 – Voice Control his bed – Jay has a Drive Delta 1000 bed with a hard wired remote. He wanted the four functions of Head Up, Head Down, Foot Up and Foot Down to be voice activated. Unfortunately, due to the way the bed controls are wired, it is not possible to provide an alternative way of controlling the bed aside from having the caregiver unplug our bed controller and replacing it with the original hand held 15030HC-G pendant.

Jay will be able to control his bed using an Alexa as well as a Google mini. We provide both means of controlling the bed for purposes of redundancy as well as giving the customer the ability to compare which smart speaker understands them better.

2 – Voice control his Samsung TV – We provided an Amazon Fire TV Cube and an HDMI cable so Jay can control his Samsung TV connected to the Dish network.

Here is a Visio diagram of the solution.

Voice Controlled Bed Controller based on Drive hand held remote 15030HC-G
 for Jay
 Bill Weis 7/30/2019
 S/N 18025.07



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.

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)