

Jordan – Duchenne Muscular Dystrophy
Detailed view by Bill Weis

Requirements:

1. Be able to use voice to control his TV
2. Be able to voice control his bed (Invacare bed with 1115290 pendant).
3. Be able to use zoom and Alexa Calling on the Fire TV cube to collaborate with others

Solution – High Level:

1. We provided an Amazon Fire TV cube so Jordan could control his TV by voice
2. Designed a microcontroller-based Voice Activated solution that provided the desired functions of Head Up, Head Down, Feet Up, Feet Down.
3. We provided a camera and cable that plugs into the Fire TV Cube so the Zoom app on the Fire TV cube can be used for zoom calls as well as Alexa Calling.

Details of the Solution

1 – Voice Control his TV – We provided Jordan with an Amazon Fire TV Cube and HDMI cable so he could control his television

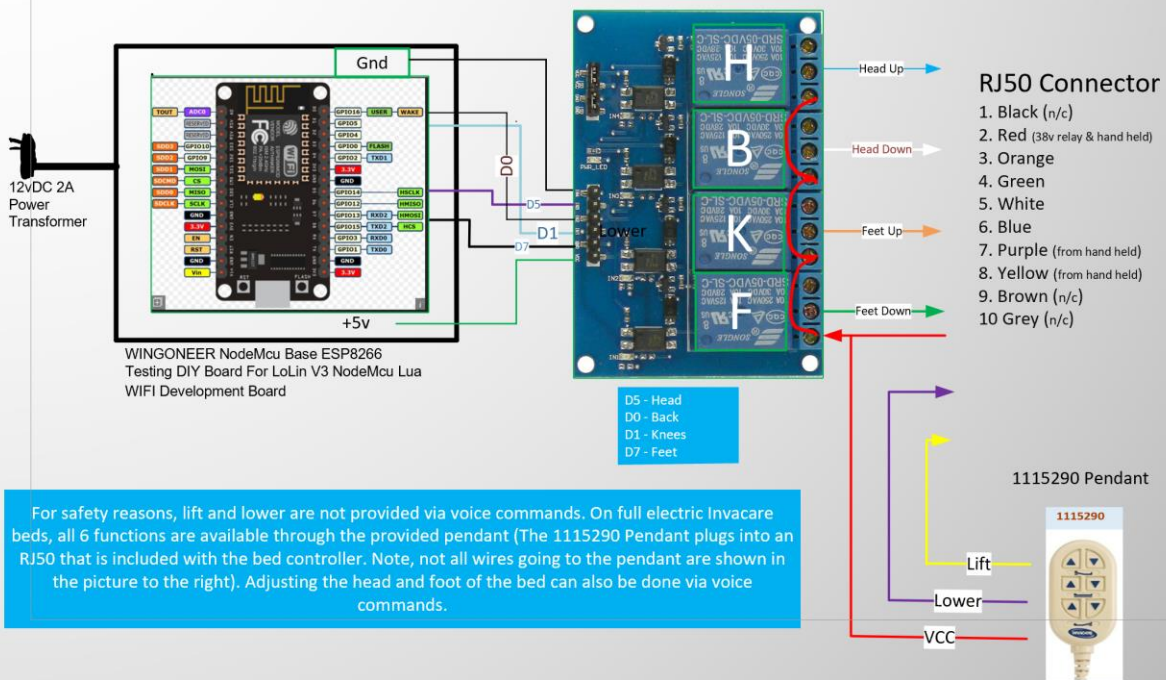
2 – Voice Control his bed – Jordan has a full electric Invacare bed which is controlled by a 1115290 pendant. This bed is a 6-function bed which includes Head Up, Head Down, Foot Up, Foot Down, Bed Up and Bed Down. For safety reasons, Bed Up and Bed Down require use of the 1115290 pendant which is functional through the use of the RJ50 connector that we added to our controller. Bed Up and Bed Down is a feature that is typically used by a caregiver anyhow, and the caregiver can continue to perform Bed Up and Bed Down as they always have. All 6 functions are still controllable via the 1115290 pendant.

The voice commands can be issued through the Alexa device.

We provided Jordan with the ability to move the head of the bed up/down for durations of 1-5 seconds and feet up/down for 1-5 seconds. Routines were created to simplify the commands to the bed controller.

Here is a Visio diagram of the solution.

**Voice Controlled Bed Controller for Jordan, mechanical relays to drive the
Invacare Full Electric bed, manual control for Lift and Lower**
Bill Weis 4-18-2022
S/N 19048.09



3 - Wants to be able to use the Zoom app on the Fire TV cube for interacting with others - We provided a camera and special usb cable to enable zoom calls though the Fire TV Cube.

Resources

[Amazon Echo](#)

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

Amazon Fire TV Cube support number - **888-280-4331**

[Fire TV: Amazon Digital and Device Forum \(amazonforum.com\)](#)

[Fire TV Cube \(amazonforum.com\)](#)

[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)