

**James Brennan – ALS**  
**Detailed View by Bill Weis**

Requirements:

1. Be able to navigate the Roku TV menu by voice.
2. Be able to voice control his Flex-A-Bed that uses a Linak CBD6S-U138 Control box and HC2XRF wireless hand remote supported by the RFRL001 wireless receiver.
3. Be able to communicate over “intercom” with other areas of the house

Solution – High Level:

1. There is an app called **Quick Remote** which gives you the ability to use voice commands to Google or Alexa that enables you to voice command through the Roku menu.
2. Designed a microcontroller-based Voice Activated solution that provided the desired functions of Head Up, Head Down, Feet Up, Feet Down. A customized CBD6S was created to work with the Limited Mobility Solutions voice activated bed controller.
3. Added an echo dot to be used for the ‘Drop-in’ feature.

**Details of the Solution**

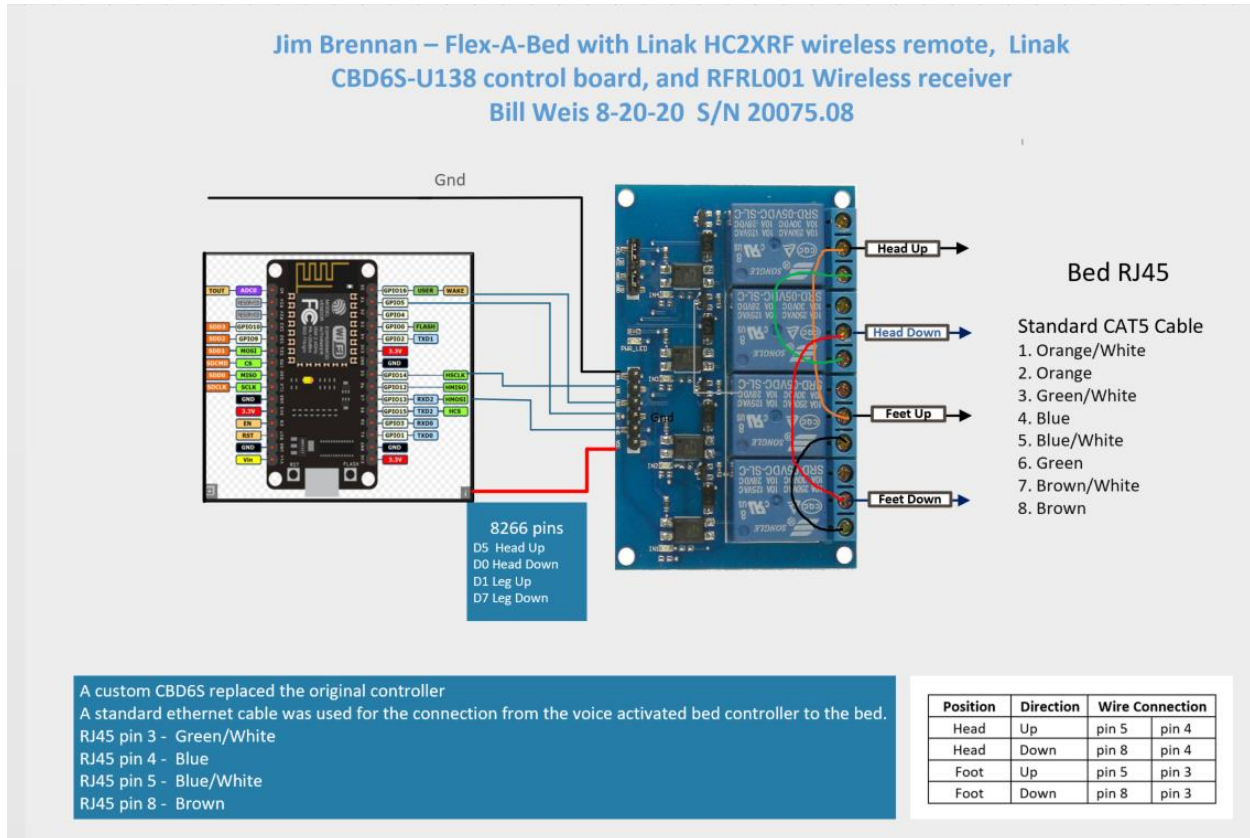
**1 – Use voice to navigate the Roku TV menu and select entertainment** – Jim already has a TV with Roku built-in, so all he needed was to install the **Quick Remote** app on his phone. Unfortunately, the **Quick Remote** app only runs on android devices and Jim uses an iPhone. We provided one of the Pixel3 phones that were donated to Limited Mobility Solutions from Google to run the **Quick Remote** app.

**2 – Voice Control his bed** – Jim has a full electric Flex-A-Bed with LINAK CBD6S controls. The hand control is wireless (Model HC2XRF supported by the RFRL001 wireless receiver). 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 hand held pendant. 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.

The bed controller supports voice commands that are issued through Alexa as well as through the Google Mini, however the facility’s wifi network would not allow the Google mini installation to complete, so Howard will only be using Alexa to control the bed.

Through collaboration with LINAK’s Application Engineering team, and our ability to integrate with Basic American’s versatile LINAK actuation system, we were able to provide Jim with the ability to move the head of the bed up/down for durations of 1,2,3,4,5 and 7 seconds. He can also move feet up/down for 1,2 or 5 second increments.

Here is a Visio diagram of the solution.



**3 – Intercom** – A second Amazon Echo dot was added and moved to another part of the house so Jim could use the ‘Drop-In’ feature.

## 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)

