

“Clarence” - ALS

Requirements:

1. Be able to use voice to call his nurse.
2. Be able to voice control his adjustable bed
3. Provide a low tactile hand remote to replace the 11011474 Joerns pendant

Solution – High Level:

1. Designed a solution that allows “Clarence” to use voice commands to call his nurse by providing a Wemo Smart Mini plug and a small relay box with the Nurse Call light cable attached.
2. Designed a voice activated bed controller which gives “Clarence” the ability to control the Head Up/Down and Foot Up/Down functions of his adjustable Joerns bed. We also provided the means for all 6 functions including Head Up, Head Down, Feet Up, Feet Down, Bed Up and Bed Down to be manually controlled. He can control the bed using Google and Alexa.
3. “Clarence” was having difficulty with the buttons on the standard Joerns 11011474 pendant and we provided a low tactile replacement pendant we purchased from Product Design and Development.

Details of the Solution

1 - Call Nurse Button via voice - “Claren has ALS and is losing strength in his hands. He needed a different solution for calling the nurse. We designed a solution using a small box that holds a relay and we wired the standard nurse call button wires to the normally open contacts on that relay. Power to the relay box is controlled by a WEMO smart min plug which he can turn on by voice. A Google routine was created which turns the relay on for 5 seconds then automatically turns it off. This simulates the way the call button works which holds the contacts closed as long as you depress the button.

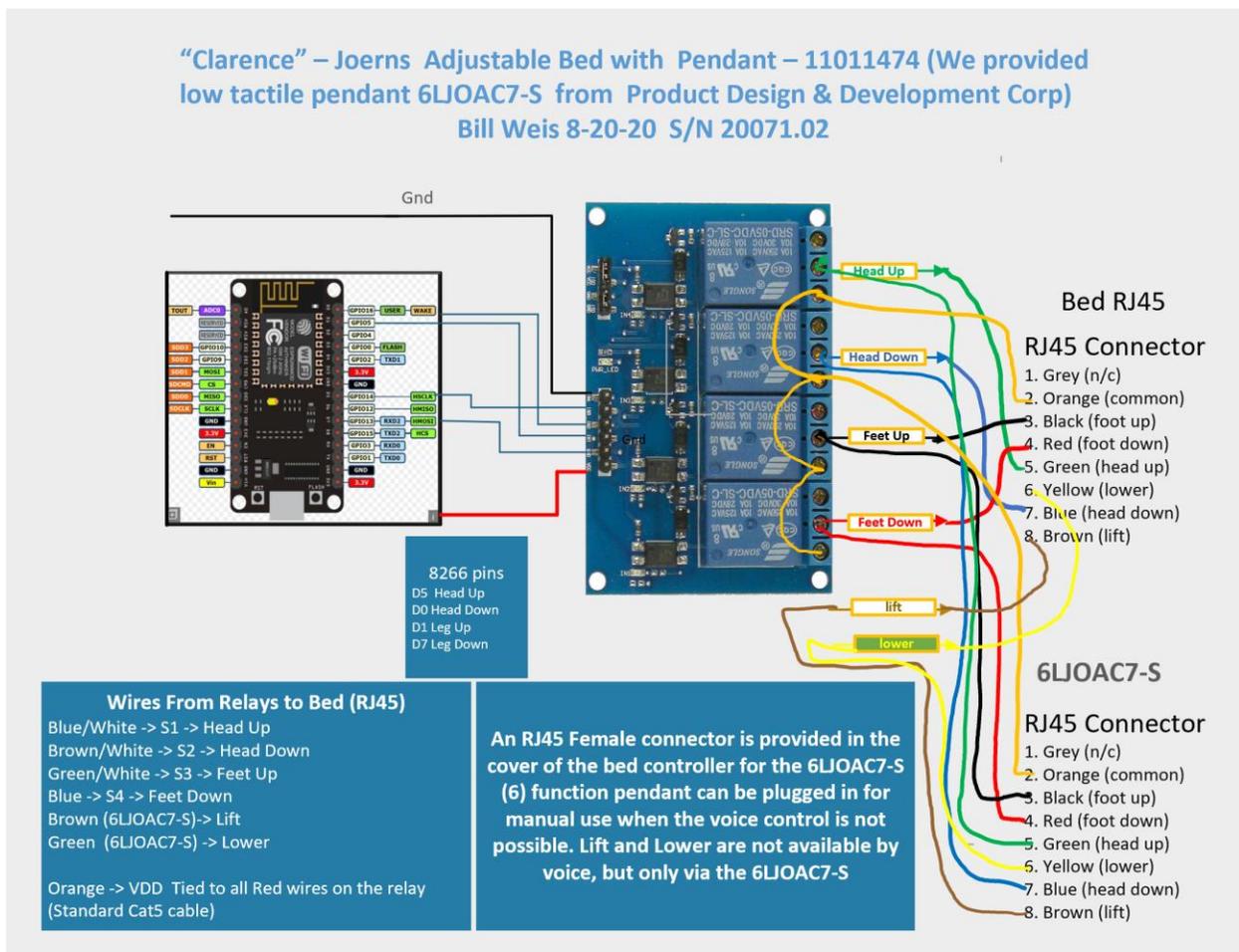


2 - Voice Control his bed – “Clarence” has a full electric Joerns bed which is controlled by a 11011474 pendant. This bed is a 6-function bed which includes Head Up, Head Down, Foot Up, Foot Down, Bed Up and Bed Down. For safety reasons, Bed Up and Bed Down require use of the hand pendant which is functional through the use of the RJ45 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 6LJOAC7-S pendant.

The voice commands can be issued through Alexa as well as through the Google Mini. The benefit of being able to voice control the bed via either smart speaker is redundancy as well as to be able to compare the performance of Alexa vs Google.

We provided “Clarence” with the ability to move the head and foot of the bed up/down for different durations. Routines were created on both Amazon and Google to make these voice commands customized for “Clarence’s” preference.

Here is a Visio diagram of the solution.



3. Provide a low tactile hand remote to replace the 11011474 Joerns pendant –

“Clarence” was having difficulty using the standard Joerns pendant so we provided a low tactile pendant we purchased from Product Design and Development Corp (6LJOAC7-S)

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)