

Dominic Project – Detailed view

By Bill Weis

Requirements:

1. Be able to voice control his Tempur-Pedic Ergo bed

Solution – High Level:

1. Designed a voice activated bed controller which gave Dominic the ability to control the four desired functions of his adjustable bed. He can control the bed using Alexa. We will add a Google mini in the near future.

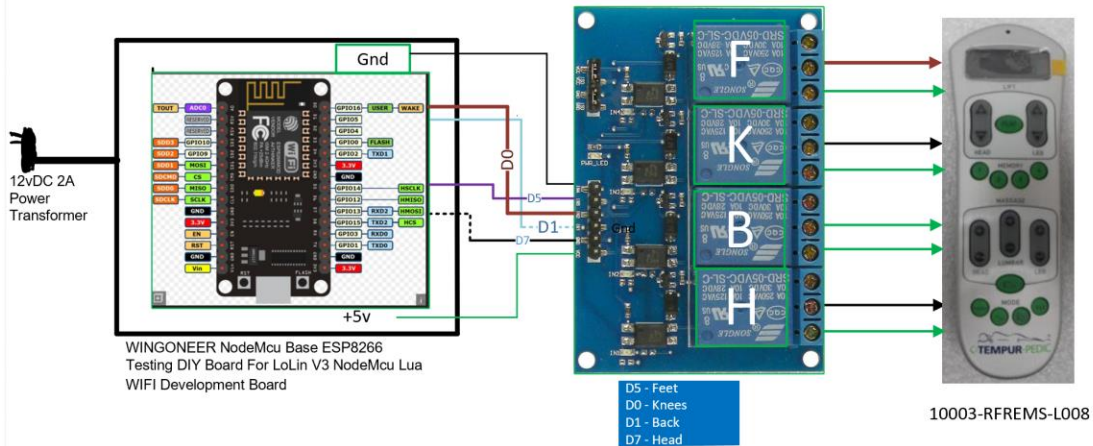
Details of the Solution

1 - Voice Control his bed – Dominic has a Tempur-Pedic Ergo bed with remote 10003-RFREMS-L008. The controls in this bed are from LOGICDATA. This is a 433mhz remote using Frequency Shift Keying as the modulation. The remote can be configured to use specific frequency channels within the 433mhz range which the bed will discover upon applying power to the bed and when the remote is set to “pairing mode” as described on page 14 of the owner’s manual. This setup was too complex for us to develop an elegant solution given the bed is 1000 miles from our development lab, so instead we simply soldered wires onto the remote and connected them to mechanical relays in our controller box. We seemed to run into an impedance issue when using solid state relays, so we replaced the SSRs with mechanical relays.

Here is a Visio diagram of the solution.

**Voice Controlled Bed Controller for Dominic, mechanical relays to drive the
Tempur-Pedic 10003-RFREMS-L008**

**Bill Weis 1-15-19
S/N 19038.01**



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)

[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.