

# Brenda B. Project – Detailed view (v1)

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## Requirements:

1. Brenda is in a health care facility in Wisconsin and needs to be able to call the nurse using a Tobii eye gaze.

## Solution – High Level:

1. We developed a solution using a Shelly Plug that is driven by a program that toggles the state of the Shelly plug.

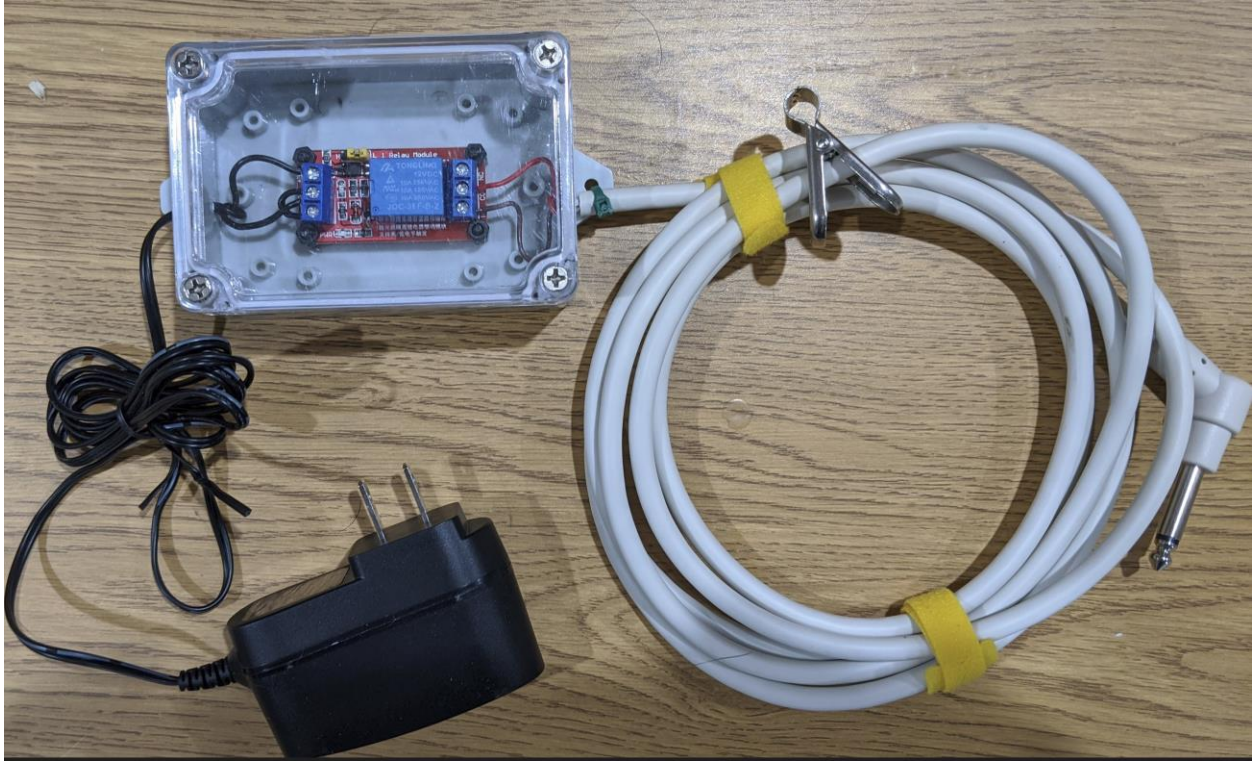
**Call Nurse Call from Tobii in Health Care facility** – The nurse call system at this care facility is configured with call devices that latch closed until the nurse comes in to clear the nurse call event. This means we needed a custom way of using the Shelly Plug as compared to how we typically configure it. Normally we would have the eye gaze button configured to run a .bat file with the following:

```
curl http://192.168.33.1/rpc/Switch.Toggle?id=0
timeout /t 5
curl http://192.168.33.1/rpc/Switch.Toggle?id=0
```

The above program would toggle the gateway address of the Shelly plug from its current state (Assuming off to On), then wait 5 seconds, following by toggling the Shelly plug back to the off state. In the case of the care facility that Brenda is at, we needed to keep the Shelly plug latched until the nurses came in to clear it, so we eliminated the second curl command in the above program. Keeping the timeout command gave Brenda's eyes time to move off the button to avoid clearing it accidentally.

Since our approach of using the standard gateway address of the Shelly plug ties up the wifi adapter, we added a second wifi adapter (USB) so Brenda can continue to have internet access through the original wifi adapter. We added a relay box with a ¼" plug (for the nurse call port) which gets its power from the Shelly plug. We also supply a ¼" Y-Cable so our solution is not replacing the current solution, but is an addition to. The Y-Cable allows for both our solution and the original solution to be connected at the same time. Finally, the Tobii was programmed with a custom button that activated the nurse call event.

Here is a list of components for this solution



12v power supply

12v relay

Nurse call cord

Uxcell plastic enclosure (158mm x 90mm x 60mm)

Shelly plug US

PY-M214M ¼" Y-Cable from Pig Hog Solutions