Project Specifications: Chair Call

System Requirements:

Close Range Remote Control System for controlling wheelchair in a room.

System should be removable. Simple attachment and detachment.

Nurse will place the device upon the wheelchair.

Parts:

**Main Frame:**

A main unit will fit upon the joystick. The main unit has holes for wiring, and 3\* M3 holes for securing the servo holder to the Main Frame.

The frame is built to fit tightly in 3 directions around the joystick housing.

**Servo Holder:**

The servo holder will attach to the main unit, with M3 bolts.

The servo holder is built for two standard size servo motors

It includes a switch and a charge port.

**Ring:**

A ring will attach to the joystick, padded with rubber for a tight fit over the joystick. Internal Diameter is set to be joystick diameter + 4mm to allow padding. Prototype ring was cut from 3mm acrylic in a laser cutter. Similar results where achieved in 3d printing. The sheathing of a DVI cable was cut off, and split down the bottom. The sheathing was wrapped around the inside of the ring, and fastened with sewing string.

**Connecting Rods:**

**Circuit:**

Arduino Nano

Bluetooth Module

2\*100KΩ Resistors

**Mechanical Parts:**

3\* M3x30 Bolt

3\* M3 Nuts