

AZ Mandible · Prototype Code v1.0

Files

- `AZ\_Mandible\_v1.ino` · main firmware (upload this)

Wiring (Arduino Nano)

Component	Arduino Pin
Piezo signal (after amp)	A0
Bone conduction (PAM8403 signal in)	D9 (PWM)
Power	5V / GND

How to Upload

1. Install Arduino IDE
2. Select board: **Arduino Nano**
3. Select the correct COM port
4. Open `AZ\_Mandible\_v1.ino`
5. Click Upload

First-Time Tuning

1. Open **Serial Plotter** (Tools · Serial Plotter)
2. Set baud to **115200**
3. Relax your jaw · note the baseline noise
4. Make a clear intentional jaw movement
5. Adjust this line until peaks are cleanly above noise:

```
```cpp  
int threshold = 80;
```
```

Raise the number if it false-triggers.
Lower it if real movements are missed.

Current Gestures

- **1 clear peak** · YES (single tone)
- **2 quick peaks** · NO (double tone)

Next Steps After This Works

- Add more gestures
- Adaptive thresholds per user
- Longer intent vocabulary