You can play violin this way.

**DRAW-O-LIN**

What does music look like? Let Draw-o-lin show you a new way to visualize the music.

- **Tempo -> Length of Lines**
  The length of lines that Drawolin draws depends on the tempo that performers play.

- **Volume -> Line Weight**
  The line weight that Draw-o-lin draws depends on the volume that performers play.

- **Higher Pitches -> Draw Lines**
  When performer plays a higher pitch compared to the previous one, Draw-o-lin goes forward and backward to draw lines.

- **Lower Pitches -> Draw Arcs**
  When performer plays a lower pitch compared to the previous one, Draw-o-lin rotates to draw arcs.
Servo Motor
Lift the marker up and down for strokes.

H-Bridge
Control gear motors.

Arduino
Microcontroller.

Copic Marker
Draw lines and arcs.

Xbee
Wireless transmission.

9V Battery
Power supply.

Gear Motor
Move Drawolin.
Computational Design Lab
Carnegie Mellon University, USA

Author: Yen-Chia Hsu
Advisor: Mark D. Gross

Thanks to Huaishu’s video recording, Deren’s H-bridge, Zack’s help in mechanics, and Shawn’s gear motor prototype.