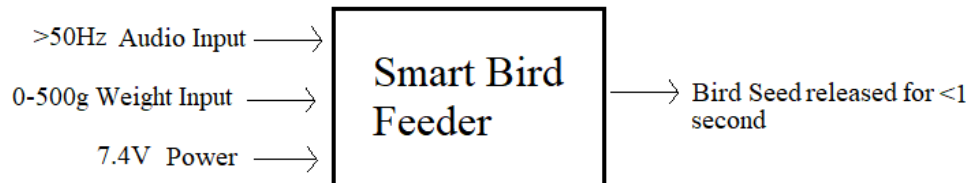


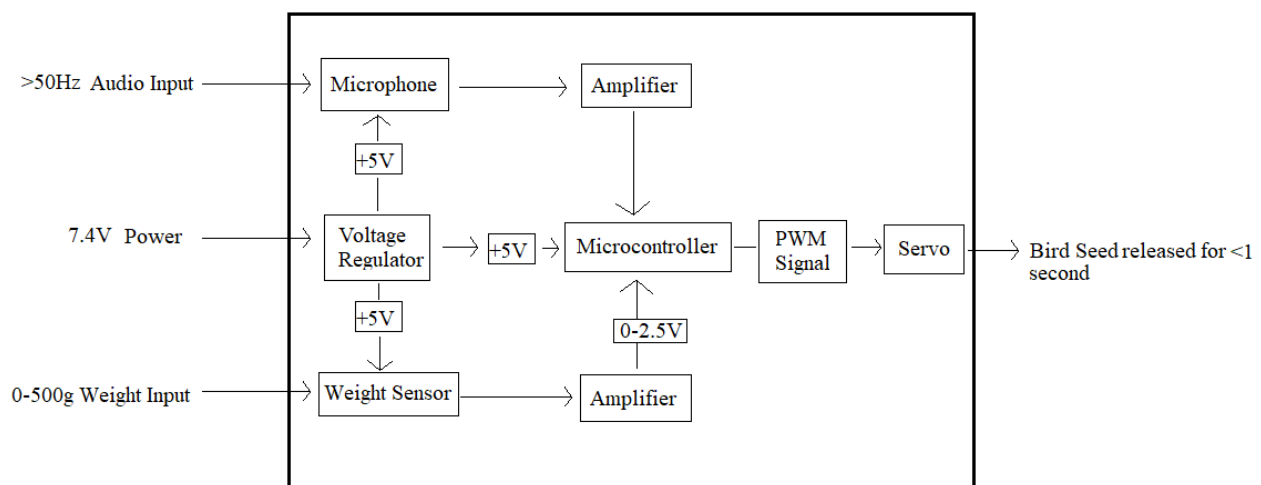
Level 0

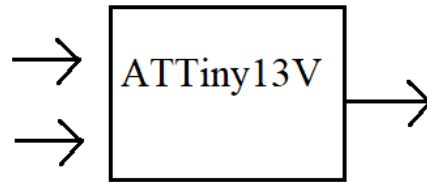
Stevie Nicks and the Xaybanha Zhous
Stevie Taylor, Calvin Xaybanha, Zeming Zhou, Nick Short
12/7/2020, revision 1.1



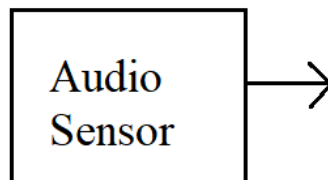
Module	Smart Bird Feeder
Inputs	>50Hz frequency detected interrupt signal and 0-500g Weight Input and 7.4V power supply
Outputs	Bird Seed using PWM signal to run servo to open gate
Functionality	Processes Chirp interrupt signal and Weight measurement to determine whether to run the actuator.

Level 1

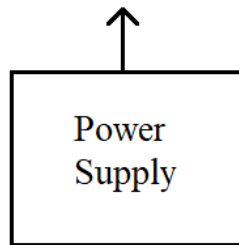




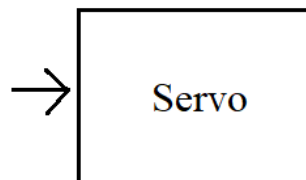
<i>Module</i>	Microprocessor Module
<i>Inputs</i>	Frequency detected signal (interrupt) and 0-2.5V (Chirp measurement)
<i>Outputs</i>	PWM Signal
<i>Functionality</i>	Processes Chirp interrupt signal and Weight measurement to determine whether to actuate the actuator.



<i>Module</i>	Microphone
<i>Inputs</i>	Audio Signal
<i>Outputs</i>	Frequency Detected Signal
<i>Functionality</i>	Outputs an interrupt signal when a sufficiently strong frequency at or above 50 Hz is detected.



<i>Module</i>	Power Supply
<i>Inputs</i>	Power: 7.2VDC
<i>Outputs</i>	5V
<i>Functionality</i>	Converts our lithium ion battery into 5V for the components in the system.



<i>Module</i>	Gate Opener Module
<i>Inputs</i>	PWM Signal
<i>Outputs</i>	Servo Rotation
<i>Functionality</i>	Receives a PWM signal and rotates to a specified position.