

Using Arduino to  
implement a smart object

# IR Bin


Fondamenti di Elaborazione Numerica dei Segnali Project  
Giuseppe Gattulli – AA 2020-2021

# Main Functions

- Opening and closing the bin by reading the infrared code generated by a remote control ([IR remote library](#)).
- The code read is interpreted by the IR receiver module that drives a servo motor ([Servo library](#)).
- When the bin is opened, the ultrasonic sensor checks whether a certain level has been reached or not, if so, the bin is full. In the latter case, the internal buzzer alerts the user through an alarm ([Time Free Tone library](#)).



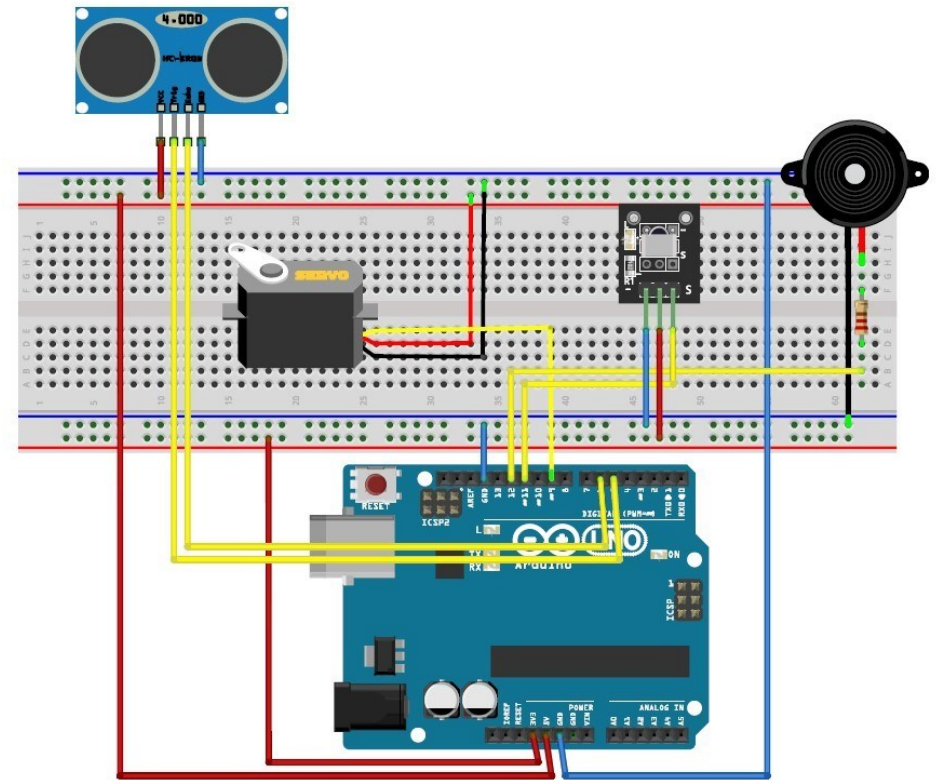
A blue Tower Pro 5V 180° Micro Servo Motor is shown with its red cable and mounting hardware. The servo is labeled "Tower Pro 5V 180° Micro Servo". The cable is red and has a black connector. The mounting hardware includes three white plastic brackets and four screws.



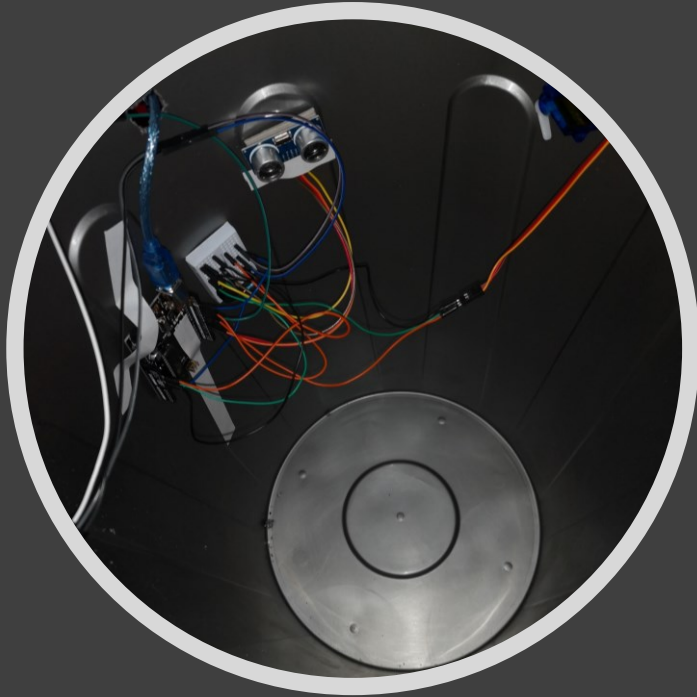
3



# Schematic representation



Fritzing model



# Final product

[Arduino Code](#)