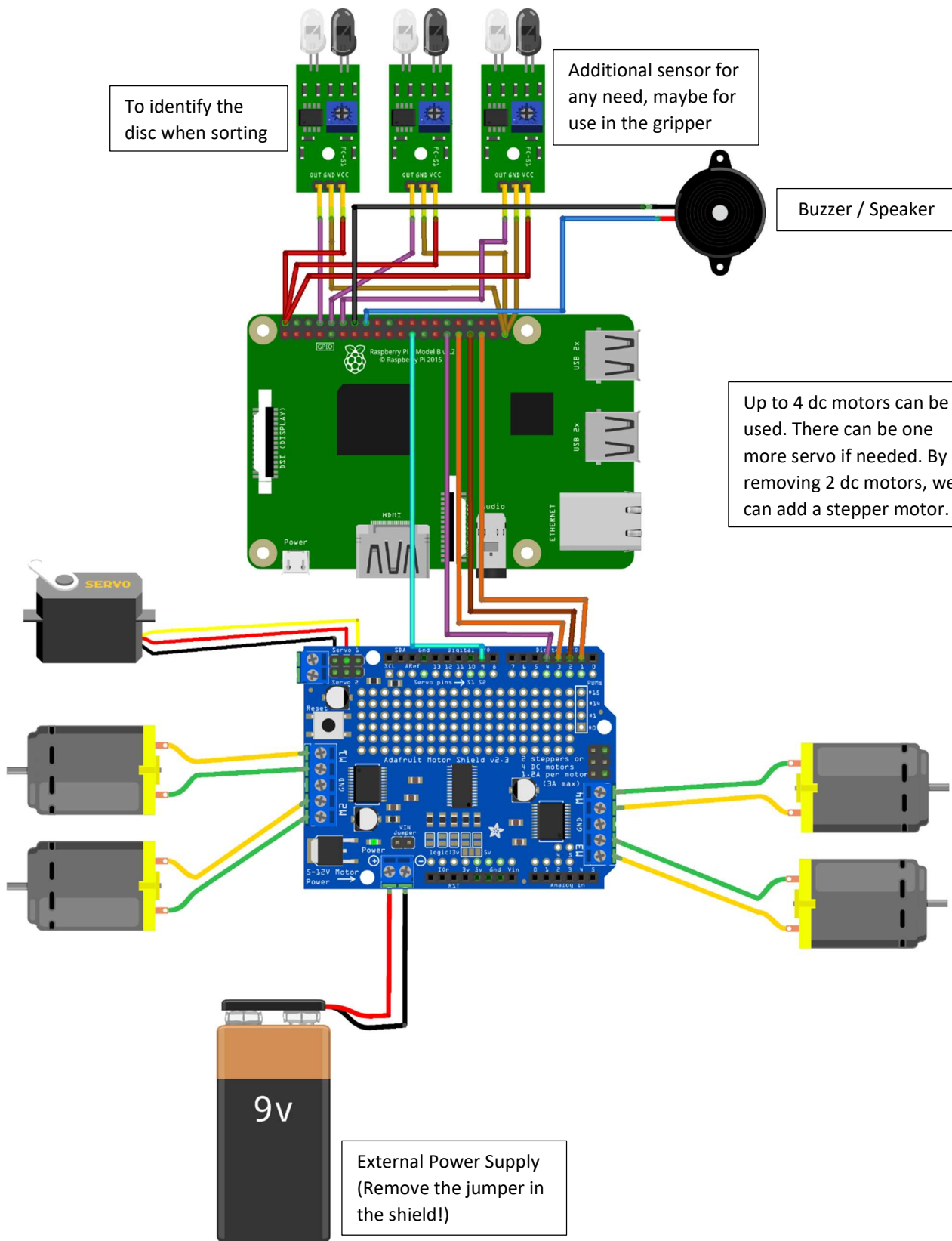To check whether
there are input
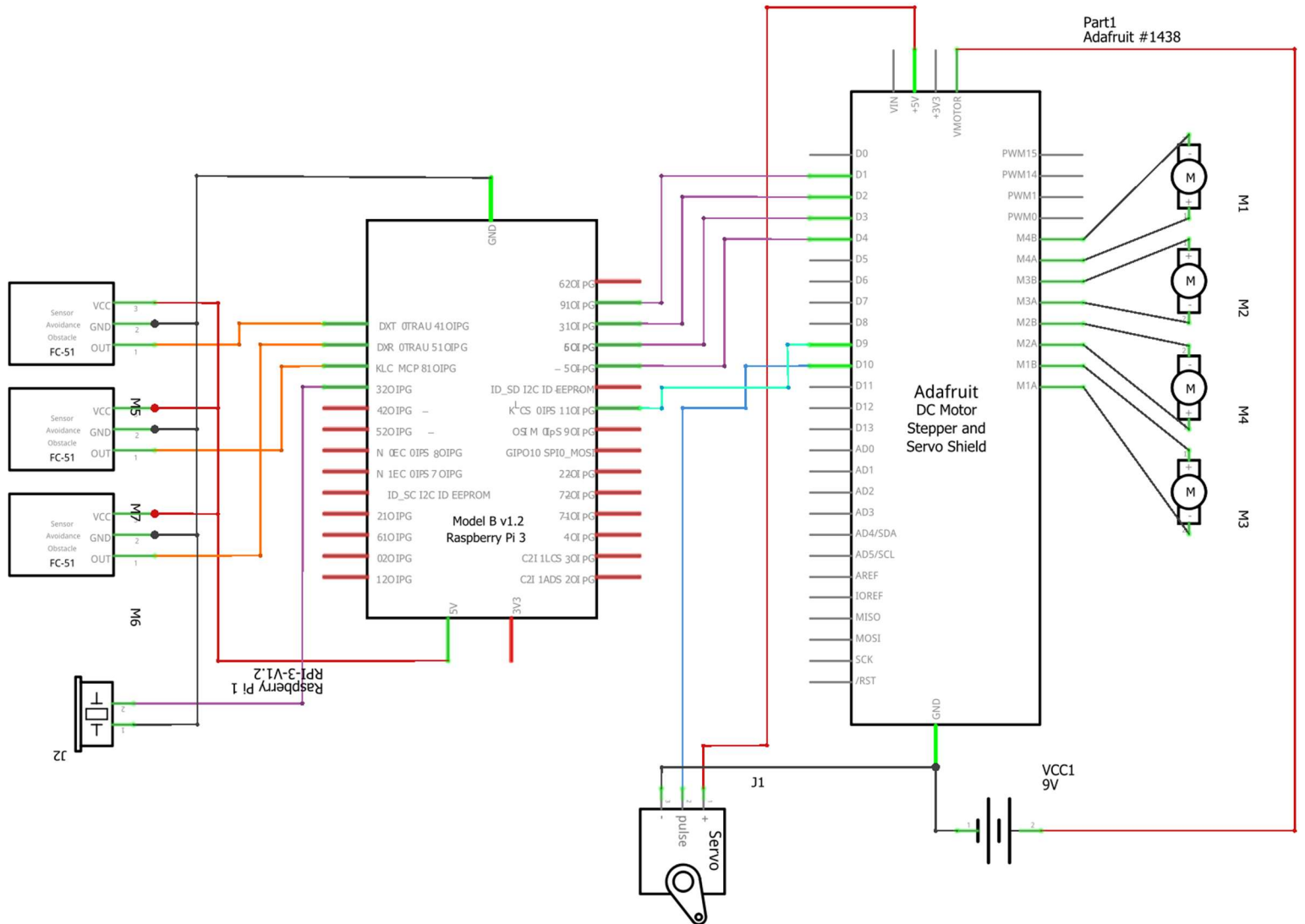disks or not

To identify the
disc when sorting

Additional sensor for
any need, maybe for
use in the gripper

Buzzer / Speaker

Up to 4 dc motors can be
used. There can be one
more servo if needed. By
removing 2 dc motors, we
can add a stepper motor.

9v

External Power Supply
(Remove the jumper in
the shield!)

fritzing

Circuit Schema

Part1
Adafruit #1438

VIN +5V +3V3 VMOTOR

D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
AD0
AD1
AD2
AD3
AD4/SDA
AD5/SCL
AREF
IOREF
MISO
MOSI
SCK
/RST

PWM15
PWM14
PWM1
PWM0
M4B
M4A
M3B
M3A
M2B
M2A
M1B
M1A

GND

Adafruit
DC Motor
Stepper and
Servo Shield

M1
M2
M4
M3

VCC1
9V

GND

GPIO 14 UART0 TXD
GPIO 15 UART0 RXD
GPIO 18 MCP CLK
GPIO 23
GPIO 24
GPIO 8 SPI0 CE0 N
GPIO 7 SPI0 CE1 N
ID EEPROM I2C SC_ID
GPIO 12
GPIO 16
GPIO 20
GPIO 21

GPIO 26
GPIO 19
GPIO 13
GPIO 6
ID EEPROM I2C SD_ID
GPIO 5
GPIO 11 SPI0 SCK
GPIO 9 SPI0 MISO
GPIO 10 SPI0 MOSI
GPIO 22
GPIO 27
GPIO 17
GPIO 4
GPIO 3 SCL1 I2C
GPIO 2 SDA1 I2C

Model B v1.2
Raspberry Pi 3

5V   3V3

Raspberry Pi 1
RPI-3-V1.2

Sensor
Avoidance
Obstacle
FC-51

VCC 3
GND 2
OUT 1

Sensor
Avoidance
Obstacle
FC-51

VCC 3
GND 2
OUT 1

Sensor
Avoidance
Obstacle
FC-51

VCC 3
GND 2
OUT 1

M5
M7
M6

J2

Servo
pulse
+

J1

fritzing