POTENTIOMETERS

+5V   +5V

RV1   RV2
100k   100k

2 A0   2 A1

GND   GND

UNO SHIELD

Vin VCC +5V +3V3

J1
JOREF
RESET

Power

GND

J2
1 SCL
2 SDA
3 AREF
4
5 13 D9
6 12 D8
7 *11 D7
8 *10 D6
9 *9 D5
10 8 D4

Digital/PWM

GND

J3
A0 1
A1 2
IN_RIGHT A2 3
IN_LEFT A3 4
SDA/A4 5
SCL/A5 6

Analog

J4
1 7 D3
2 *6 D2
3 *5 D1
4 4 D0
5 *3 BT2
6 2 BT1
7 TX/1
8 RX/0

Digital/PWM

* Indicates a PWM-capable pin

IMU MPU-6050

J5   +5V
IMU_CONN
8
7
6 SCL GND
5 SDA
4
3
2
1

SCREEN

J6
SCREEN_CONN
4 SDA
3 SCL
2 +5V
1
GND

OLED 12864
128x64 Pixel SSD1306 Mini
0.96 Inch

BUTTONS

+5V SW1   +5V SW2
     BT_1   BT_2
              BT1   BT2
     R1   R2
     100k   100k

GND   GND

10BITs DAC
(R-2R LADDER)

D0   D1   D2   D3   D4   D5   D6   D7   D8   D9

R4   R6   R8   R10 R12 R14 R16 R18 R20 R22
20k 20k 20k 20k 20k 20k 20k 20k 20k 20k

R3
20k

R5   R7   R9   R11 R13 R15 R17 R19 R21 R23
10k 10k 10k 10k 10k 10k 10k 10k 10k 20k

GND

C2
100pF

R24
20k

2
1
3
MCP6002-xP
U1A

R27
100

AUDIO_OUT

+5V
C1
47uF
GND

U1B
MCP6002-xP
5 +
6 -
7

GND

MCP6002-xP
U1C
8 V+
4 V-
GND

+5V
DC OFFSET
RV3
100k
2
3

GND

GND

J9
JUMPER

ANALOG IN/OUT

J10   GND
AudioJack5
S
R   J12
RN   1
TN   2
T   3

AUDIO_IN

IN_RIGHT

IN_LEFT

GND

AUDIO_OUT
3
2
1
J7

J11
AudioJack5
S
R
RN
TN
T

AUDIO_OUT