Arduino Wiring Diagrams

Compiled by Sóley Hyman
Index

Diagram Key.................................................................................................................. 3
Wiring Diagram (color)................................................................................................. 4
Part II: Wiring/soldering
  Tools and Materials.................................................................................................... 6
  Component Layout....................................................................................................... 7
  Connecting power switch, battery, voltage regulator.............................................. 8
  Connecting voltage regulator to the Flora............................................................. 17
  Connecting the Color Sensor to the Flora.............................................................. 19
  Connecting the LED switch to Color Sensor and Flora......................................... 21
  Connecting the NeoPixel to the Flora................................................................. 26
Part IV: Final Wiring
  Tools and Materials.................................................................................................... 32
  Connecting the Codec board to the Flora............................................................. 33
  Connecting the Codec board to the audio jack................................................. 43
Diagram Key

• The following symbol code is used:
  • —— indicate wires
  • —— indicates heat shrink tubing

The following color code is used in the diagram:
  • —— indicates steps not yet completed
  • —— indicates completed steps
  • ——— indicates wire measurement and preparation
  • All other wire colors are used for clarity

Note: The placement of the connections on the diagrammed Adafruit boards does not necessarily reflect their physical positions.
Part II: Wiring/soldering
Tools and Materials

• Materials
  • XXX chassis with switches/jack
  • Battery snap-on
  • Voltage regulator
  • Flora board
  • NeoPixel board
  • Color Sensor board
  • Insulated wire
    • 7 single wires
    • 4-wire, 3-wire, and 2-wire ribbon cables
  • 8-10 lengths of heat shrink
    • One length slightly larger than others

• Tools
  • Wire strippers/cutters
  • Soldering iron and solder
  • Heat gun or blow dryer
Part II: Step 1

Materials needed:
- 1 wire
- 1 heat shrink
Materials needed:
- 2 wires
- 1 heat shrink

Part II: Step 2
Part II: Step 3

Materials needed:
- 1 heat shrink

[Diagram of electronic components and connections]
Materials needed:
- 1 heat shrink
Part II: Step 5

Materials needed:
- 2 wires
- 1 heat shrink
Part II: Step 7

Materials needed:
- 1 wire
- 1 heat shrink
Materials needed:
- 1 heat shrink
Part II: Step 10

VOLTAGE REGULATOR

POWER SWITCH

AUDIO JACK

COLOR SENSOR

NEOPIXEL

CODEC

FLORA

LED SWITCH

LED

VOLTAGE REGULATOR

POWER SWITCH

AUDIO JACK

COLOR SENSOR

NEOPIXEL

CODEC

FLORA

LED SWITCH

LED
Part II: Step 11

VOLTAGE REGULATOR

POWER SWITCH

AUDIO JACK

VOLTAGE REGULATOR

LOUT ROUT AGND 1 0
CODEC
RX RST 3V3 GND

SCL SDA 3.3V GND LED

COLOR SENSOR

FLORA

3.3V

D9

GND

D10

VBATT

D6

GND

NEOPIXEL

LED

SWITCH

POWER

SWITCH

VOLTAGE

REGULATOR

LED

SWITCH

JACK

CODEC

RX RST 3V3 GND

LOUT ROUT AGND 1 0

1

2

3

+ - ▽
Materials needed:
- 4 wires (ribbon cable)
Part II: Step 13
Materials needed:
- 2 wires (ribbon cable)
- 2 heat shrinks
Part II: Step 16
Part II: Step 17

VOLTAGE REGULATOR

POWER SWITCH

AUDIO JACK

LED SWITCH

COLOR SENSOR

NEOPIXEL

FLORA

CODEC

RX RST 3V3 GND

SCL SDA 3.3V GND LED

LOUT ROUT AGND 1 0

3.3V GND

POWER SWITCH

VOLTAGE REGULATOR

AUDIO JACK

LED SWITCH

COLOR SENSOR

NEOPIXEL

FLORA

CODEC

RX RST 3V3 GND

LOUT ROUT AGND 1 0
Part II: Step 18
Part II: Step 19

CHECKPOINT!
Part II: Step 20

Materials needed:
- 3 wires
  (ribbon cable)
Part II: Step 21
End of Part II
Part IV: Final wiring
Tools and Materials

• Materials
  • XXX chassis with components
  • Codec board
  • Insulated wire
    • 4-wire ribbon cable
    • 3-wire ribbon cable
    • 2 jumper wires
  • 3 lengths of heat shrink

• Tools
  • Wire strippers/cutters
  • Soldering iron and solder
  • Heat gun or blow dryer
  • Flush cutters
Part IV: Step 1

Materials needed:
- 4 wires (ribbon cable)
- 2 jumper wires
Part IV: Step 3

LED SWITCH

COLOR SENSOR
SCL SDA 3.3V GND LED

NEOPIXEL

POWER SWITCH

VOLTAGE REGULATOR

CODEC
LOUT ROUT AGND 1 0 RX RST 3V3 GND

FLORA
SCL SDA 3.3V GND
D9 D10 VBAT GND GND D6

AUDIO JACK
L R GND

LED

+ - ▼
Part IV: Step 4
Part IV: Step 6

- AUDIO JACK
- POWER SWITCH
- VOLTAGE REGULATOR
- LOUT ROUT AGND 1 0 CODEC RX RST 3V3 GND
- SCL SDA 3.3V GND LED
- FLORA
- COLOR SENSOR
- NEOPIXEL
- AUDI JACK
Part IV: Step 9

VOLTAGE REGULATOR

POWER SWITCH

AUDIO JACK

LED SWITCH

COLOR SENSOR

CODEC

FLORA

NEOPIXEL

LED

3.3V

GND

POWER SWITCH

VOLTAGE REGULATOR

Part IV: Step 9
Part IV: Step 10

[Diagram of electronic components and connections]
Part IV: Step 12
Part IV: Step 13
Part IV: Step 14

- **POWER SWITCH**
- **VOLTAGE REGULATOR**
- **AUDIO JACK**
- **CODEC**
- **COLOR SENSOR**
- **NEOPIXEL**
- **LED SWITCH**

Diagram showing connections and components.
Part IV: Step 15
Part IV: Step 16

CHECKPOINT!
End of Part IV: Final wiring