



HARDWARE GUIDE



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DIY Setup

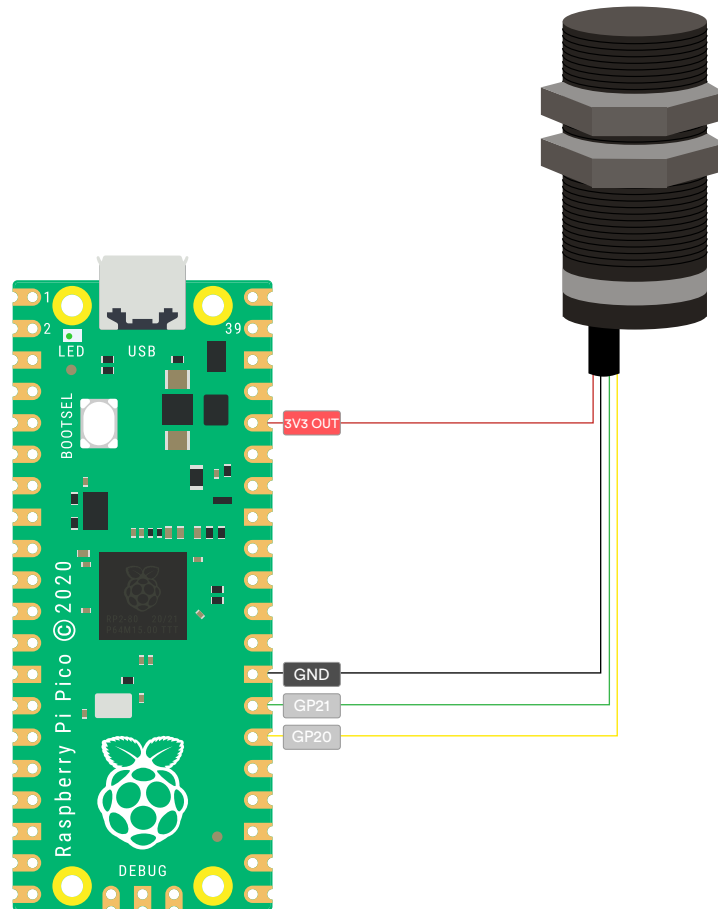
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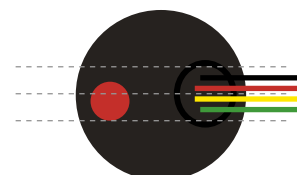
Disclaimer: This DIY guide is provided for educational and informational purposes only. The steps outlined in this guide involve working with electronic components, which may pose risks if not handled properly. Please proceed with caution and ensure you have the necessary skills and knowledge to safely complete this project. The author assumes no responsibility for any injury, damage, or loss that may occur as a result of following this guide. By proceeding with this project, you agree to take full responsibility for your actions and any outcomes. Always prioritize safety and consult a professional if needed.

CAMERA

DF ROBOT IR CAMERA



Camera Alignment
(test in App after construction
for best results)



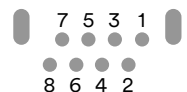
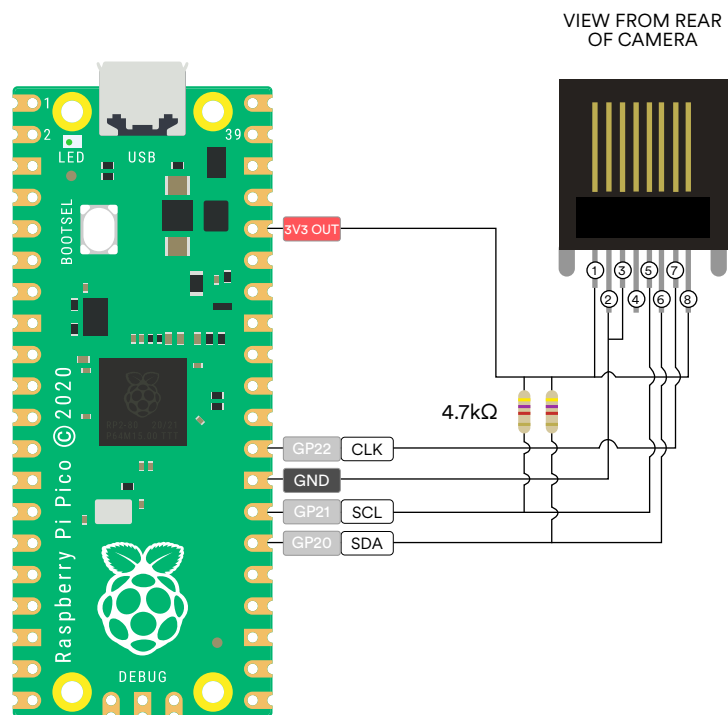
Red - VCC+
Black - GND
Green - SCL
Yellow - SDA

CAMERA

DIY WIIMOTE CONVERSION (USING CLOCK PIN)

NOTE:

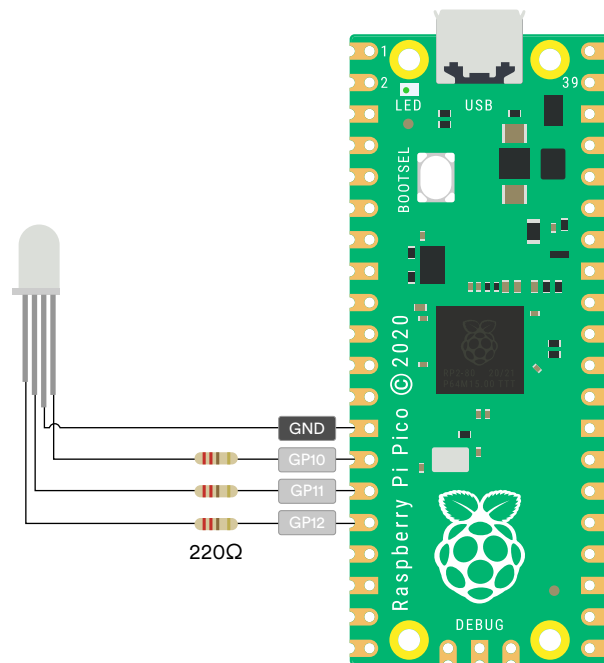
Suggested pin-out.
Clock pin will need to
be set in the App.



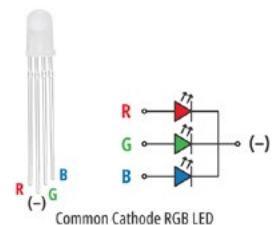
PINOUT VIEWED
FROM BOTTOM

STATUS LED

4-PIN COMMON CATHODE

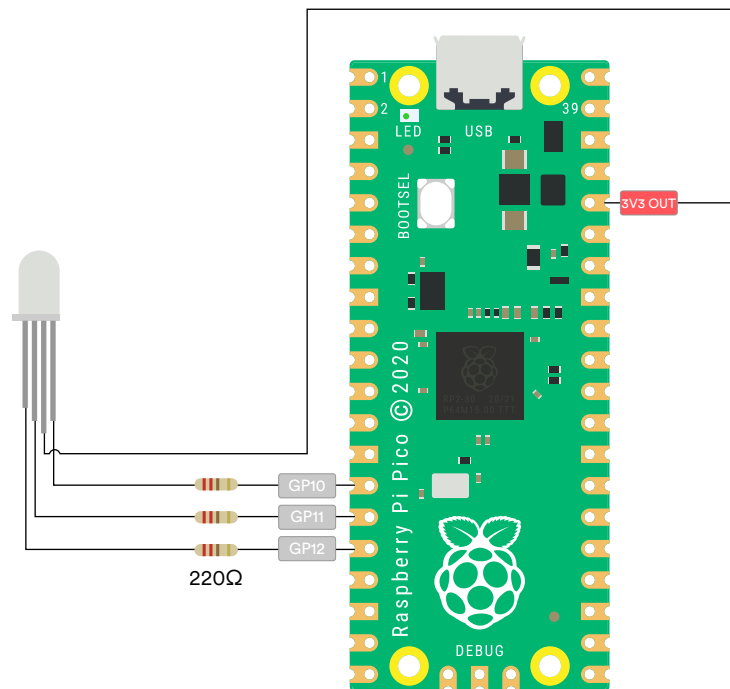


NOTE:
Individual pins can be
reassigned in the App
if needed.

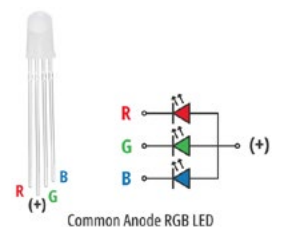


STATUS LED

4-PIN COMMON ANODE

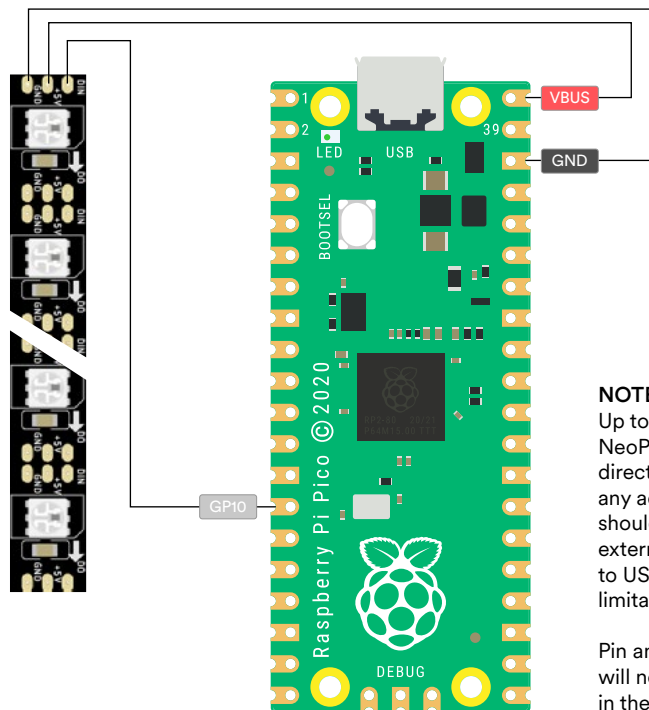


NOTE:
Individual pins can be
reassigned in the App
if needed.



STATUS LED

5V NEOPIXEL



NOTE:

Up to three/four NeoPixels can be run directly off VBUS - any additional pixels should be driven by external voltage due to USB amp draw limitations.

Pin and extra settings will need to be setup in the App.



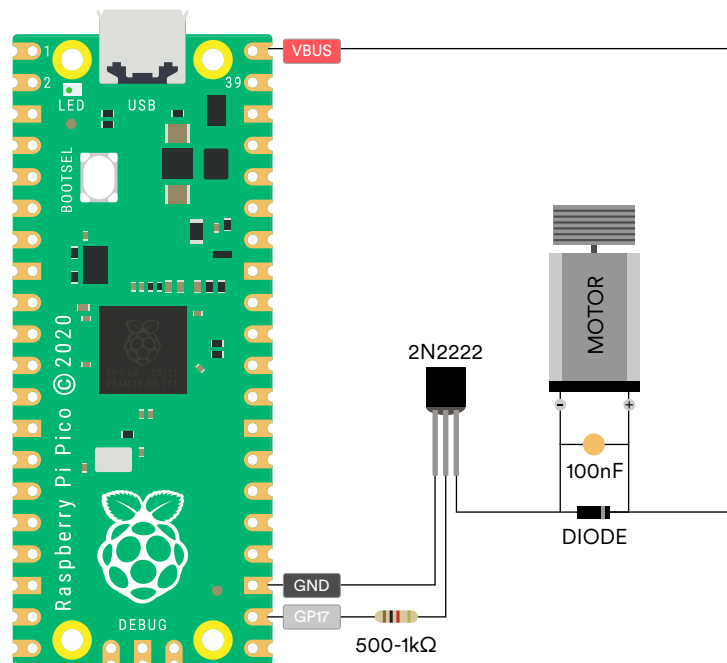
RUMBLE

DIY SETUP

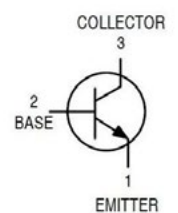
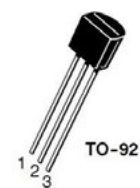
TRANSISTORS:
2N2222

RUMBLE MOTORS:
N20

Diodes:
1N4001 (Obsolete)
1N4007



2N2222



RUMBLE

MOSFET MODULE SETUP

MOSFET MODULES:

AOD4184
LR7843

SOLENOIDS:

JB-0530 (12V)
JB-0530 (24V)
JF-1039(12V)
JF-1039(24V)

TEMP SENSORS:

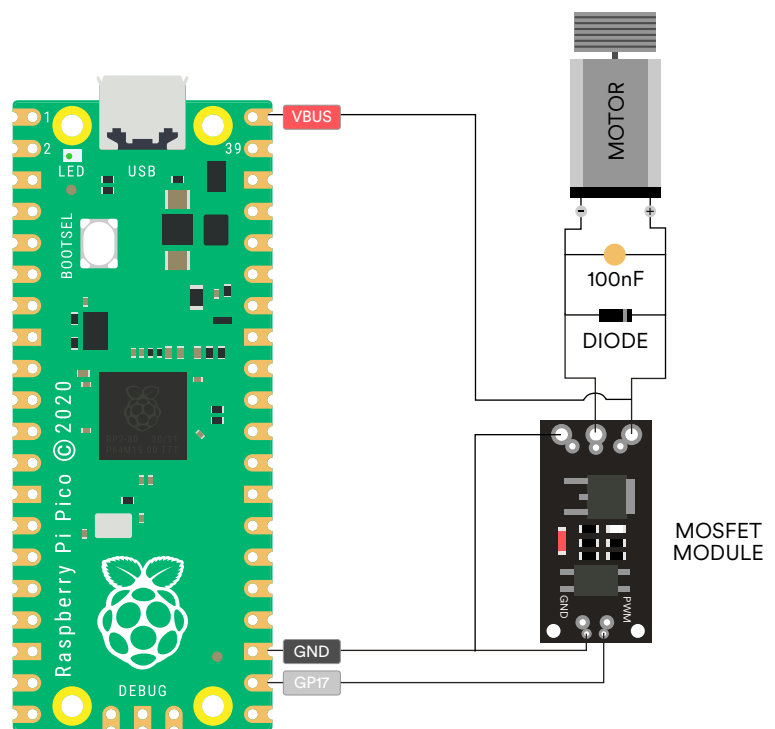
TMP36

Diodes:

1N4001 (Obsolete)
1N4007

NOTE:

Temp sensor pin will need to be allocated in the App (analog pins only).



SOLENOID

DIY SETUP

MOSFET MODULES:

IRL540
IRL44Z

SOLENOIDS:

JB-0530 (12V)
JB-0530 (24V)
JF-1039(12V)
JF-1039(24V)

TEMP SENSORS:

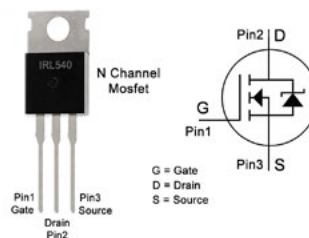
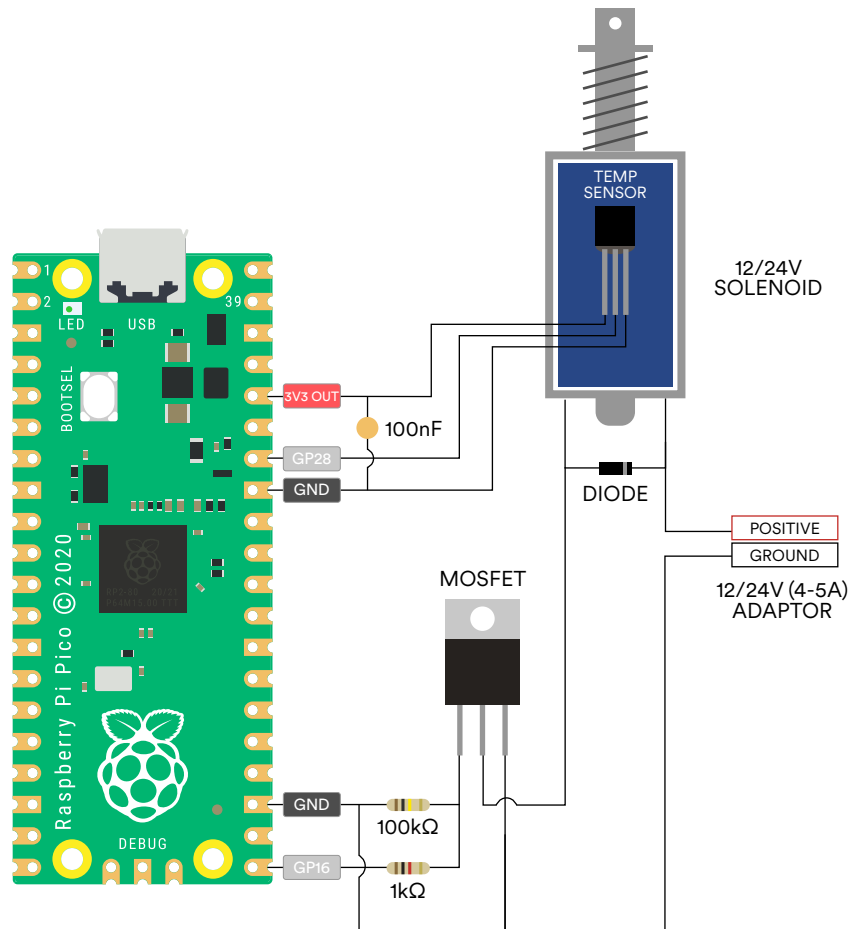
TMP36

Diodes:

1N4001 (Obsolete)
1N4007

NOTE:

Temp sensor pin will need to be allocated in the App (analog pins only).



SOLENOID

MOSFET MODULE SETUP

MOSFET MODULES:

AOD4184
LR7843

SOLENOIDS:

JB-0530 (12V)
JB-0530 (24V)
JF-1039(12V)
JF-1039(24V)

TEMP SENSORS:

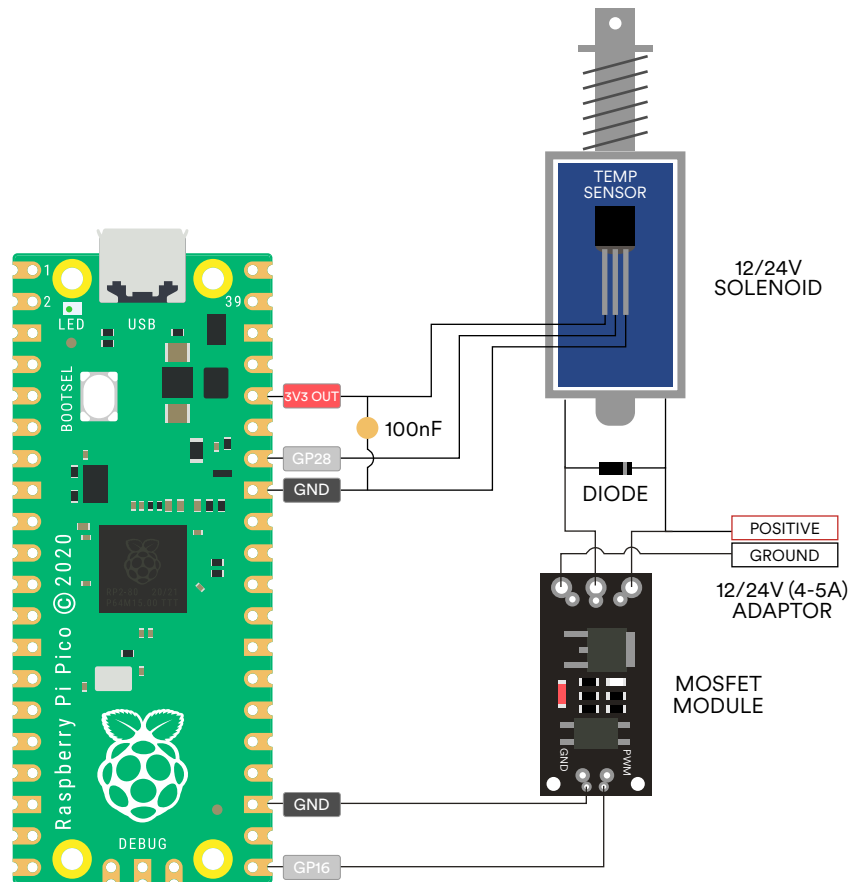
TMP36

Diodes:

1N4001 (Obsolete)
1N4007

NOTE:

Temp sensor pin will need to be allocated in the App (analog pins only).



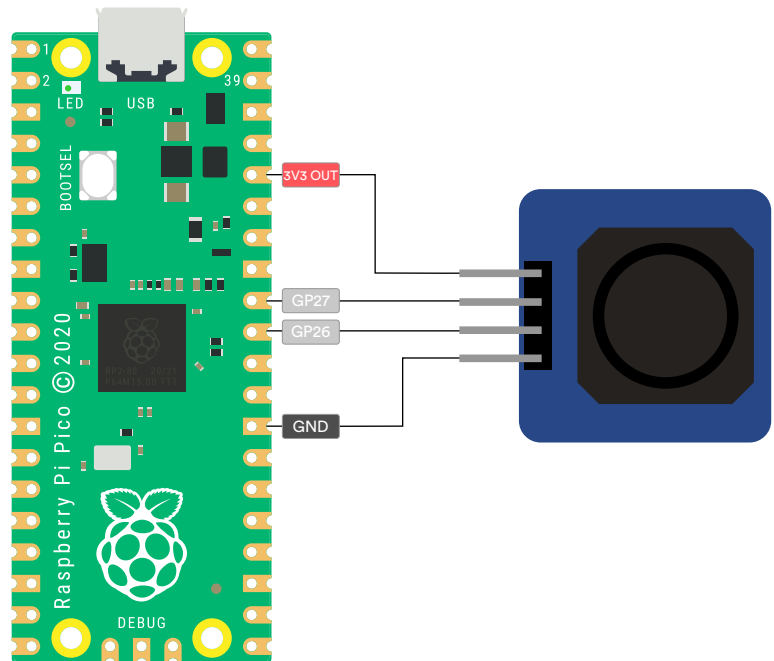
ANALOG STICK

DIY SETUP

NOTE:

There are many versions of these so check your pin-outs carefully.

Suggested Pins
(these need to be assigned to analog pins and will need to be allocated in the App).



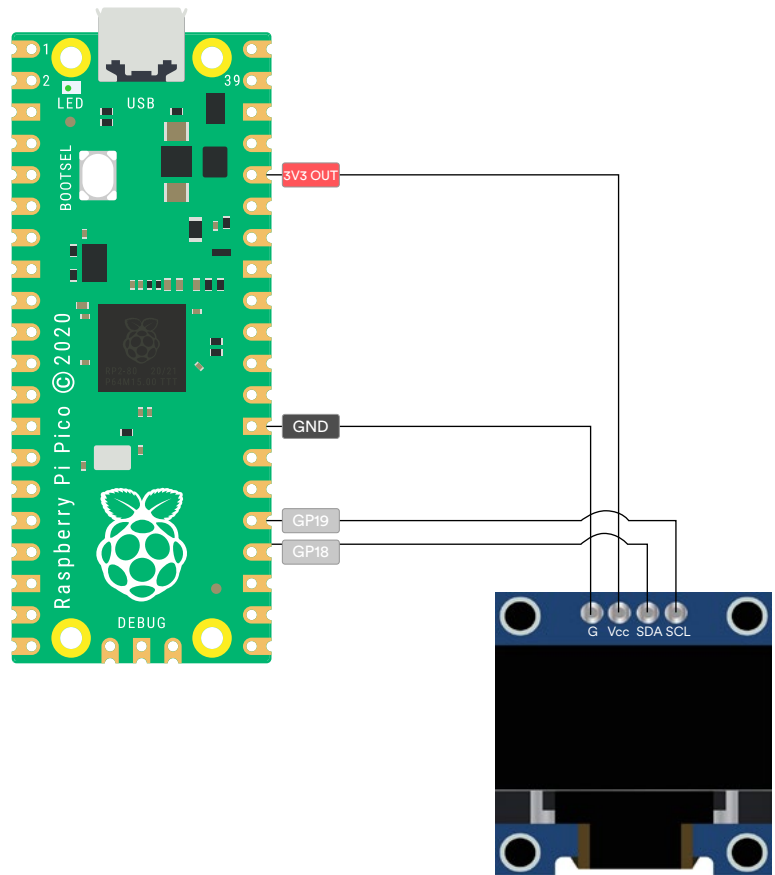
OLED

DIY SETUP

NOTE:

Your pin-outs may differ follow your boards layout.

Suggested Pins
(these need to be assigned to I2C pins and will need to be allocated in the App).

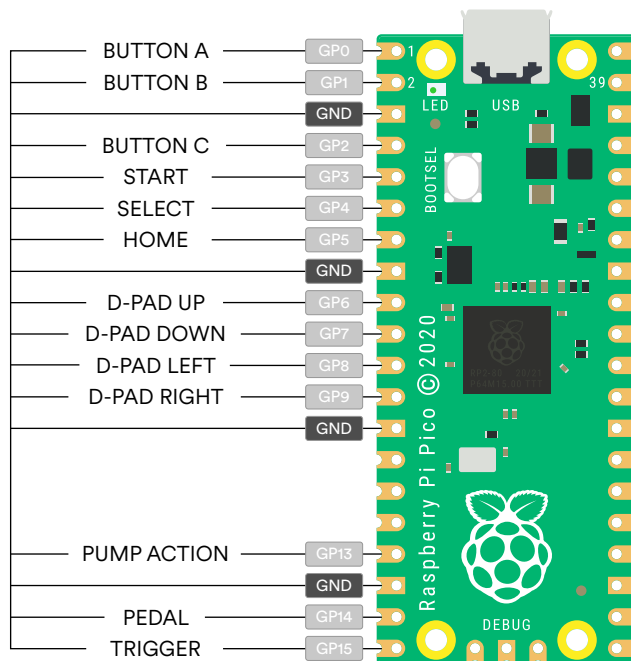


SSD1306 1.3 inch
I2C OLED Display
Module 128x64

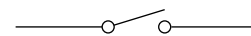
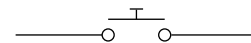


BUTTONS

DEFAULT LAYOUT



Buttons are all assigned internal pull-up resistors so no extra hardware is needed. Any momentary, normally open button will work.



NOTE:

Buttons can be reassigned in the App if needed.

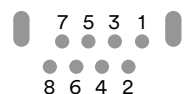
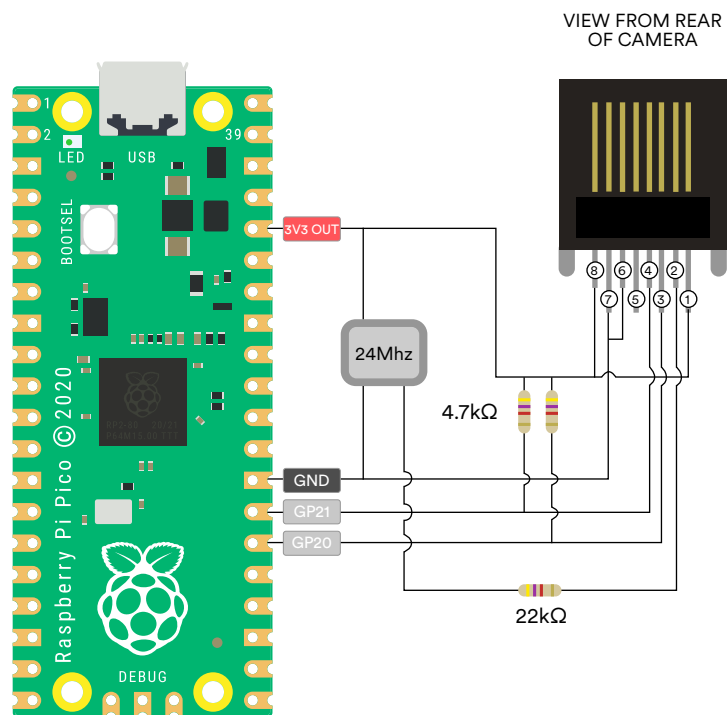


CAMERA

DIY WIIMOTE CONVERSION (USING CRYSTAL)

NOTE:

Suggested pin-out.
Clock pin will need to
be set in the App.



PINOUT VIEWED
FROM BOTTOM