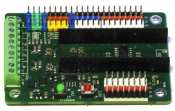

botnroll com PICO4DRIVE Development Board for Pi Pico Instruction Manual

Contents

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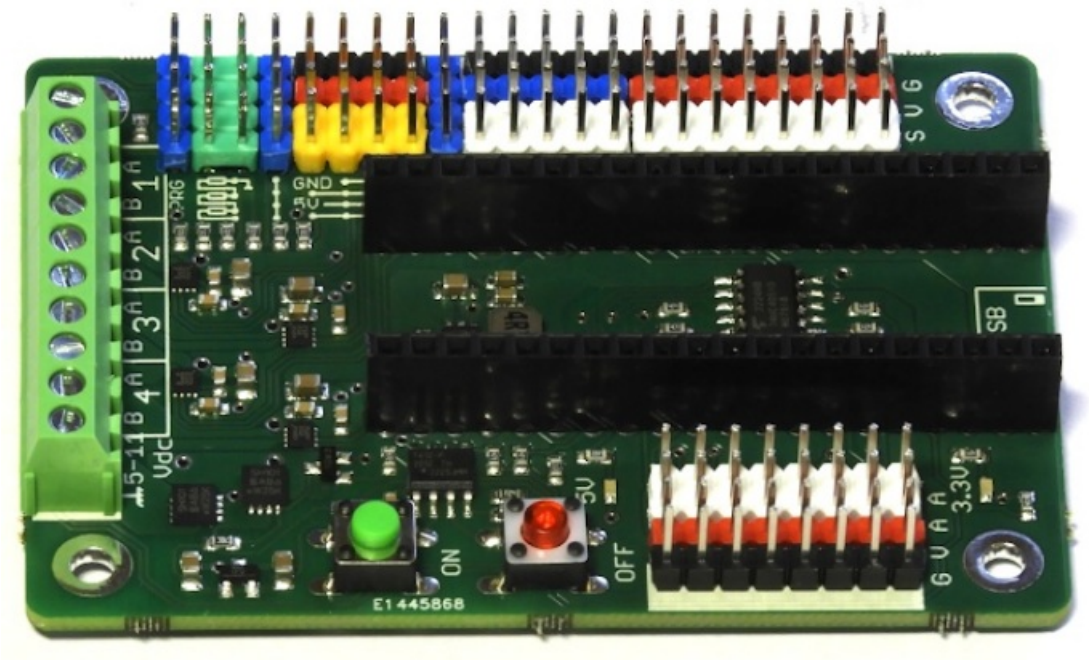


Product Information

The PICO4DRIVE is a PCB assembly kit designed for use with the Raspberry Pi Pico. It allows you to easily connect and interface various components with the Raspberry Pi Pico, such as headers, terminal blocks, and push buttons. The kit comes with all the necessary components to assemble the PCB, including headers, terminal blocks, and push buttons.

Product Usage Instructions

1. Place the headers on a breadboard as shown in the photo. Use a hard object with a flat surface to push all the pins from the same header down at the same time. If only some of the pins are accidentally pushed down, remove the header and reinsert the pins to ensure they are all at the same level.
2. Place the PCB upside down over the header, ensuring it is in the correct position and perfectly horizontal. Use a terminal block as a shim to keep the PCB leveled.
3. Solder all the header pins. Start by soldering one pin first and verify the alignment before soldering the other corners and all the pins.
4. Remove the PCB from the breadboard by gently rocking it from side to side to help pry it out.
5. Repeat the process for the headers on the other side. Place the headers as shown in the photo.
6. Place the PCB as shown, making sure it is horizontal. Verify alignment while soldering the first corner pins.
7. After removing from the breadboard, the PCB should have a completed look.
8. Insert the terminal block from the top, ensuring it is facing the right direction with the openings for the wires facing outwards.
9. Turn the PCB upside down and solder all the pins, ensuring the terminal block is sitting correctly against the PCB.
10. Use a Raspberry Pi Pico to hold the headers for the Pi Pico inplace while soldering.
11. Turn the PCB upside down and solder the Pico header pins. Start by soldering one pin first and verify the alignment before soldering all the pins.
12. After soldering the Pico header pins and removing the Pi Pico, the PCB should have a completed look.
13. Insert the push buttons as shown in the photo. The button pins have a shape that holds the button in place even before soldering. Turn the PCB upside down and solder the button pins. Finally, turn the PCB back up.

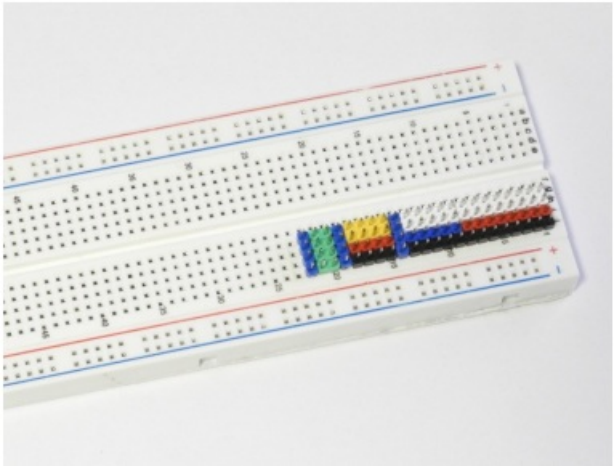
Congratulations, your PCB is ready!

General recommendations

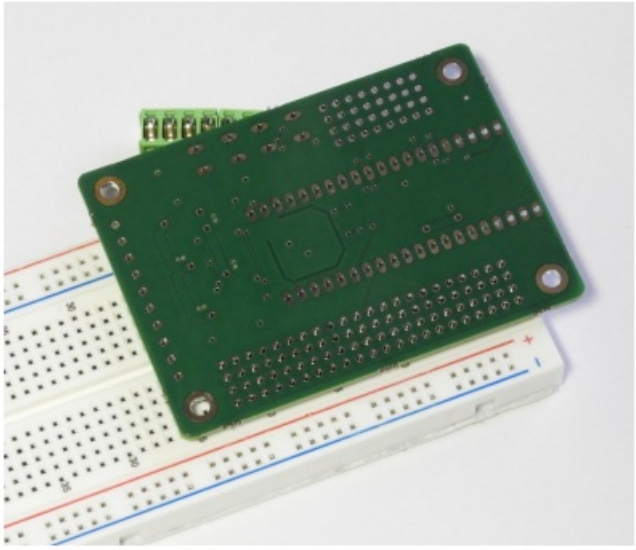
- the solder flux inside the solder wire will release fumes during the soldering process. We recommend doing the assembly work in a well ventilated area
  when soldering multiple pins of an header, solder just one corner pin first and check the board alignment. If the alignment is wrong, it's still easy to re-solder the pin to the correct position. Then solder the opposite corner and re-check. Then solder the other corners to gain stability before soldering all the other pins

Using Instruction

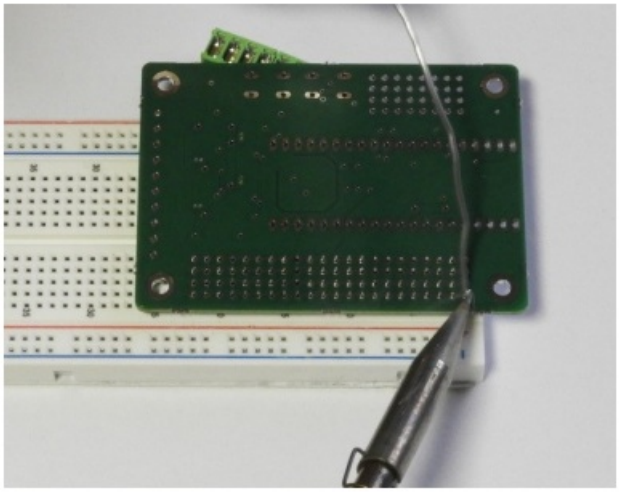
1. Place the headers on a breadboard as shown in the photo. You may need to use a hard object with a flat surface to push all the pins from the same header down at the same time. If just some of the pins are accidentally pushed down,
   remove the header and reinsert the pins to make sure they are all at the same level.



2. Place the PCB upside down over the header. Make sure it is in the correct position and is perfectly horizontal. On the photo, the terminal block is being used as a shim to keep the PCB leveled.

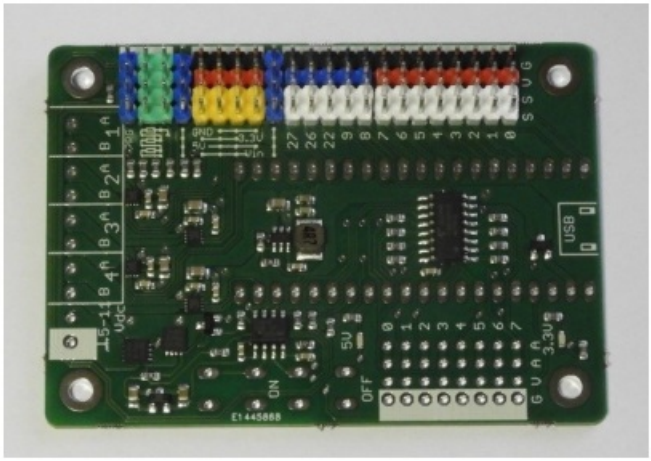


3. Solder all the header pins. Solder just one first and verify the alignment before soldering the other corners and all the pins.

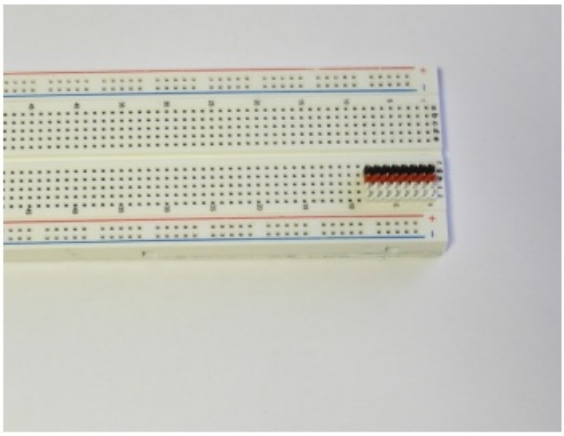


4. Remove the PCB from the breadboard. You may need to gently rock the PCB from side to side to help pry it out.

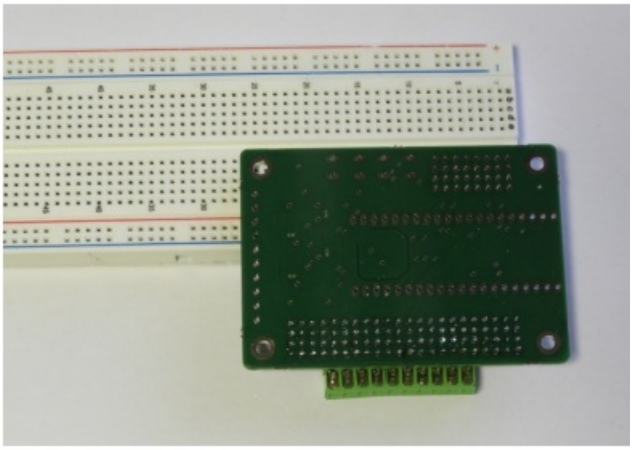
   You're now about half-way done.



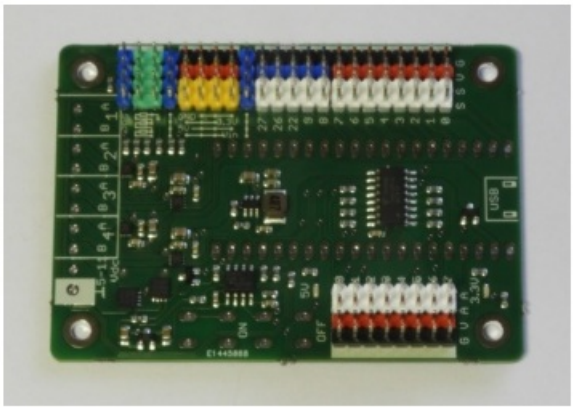
5. Repeat the process for the headers on the other side. Place the headers as shown on the photo.



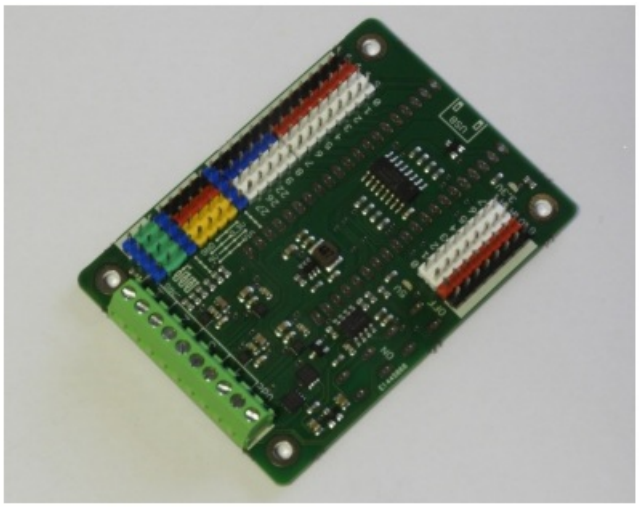
6. Place the PCB as shown. Again, make sure that the PCB is horizontal and keep verifying while soldering the first corner pins.



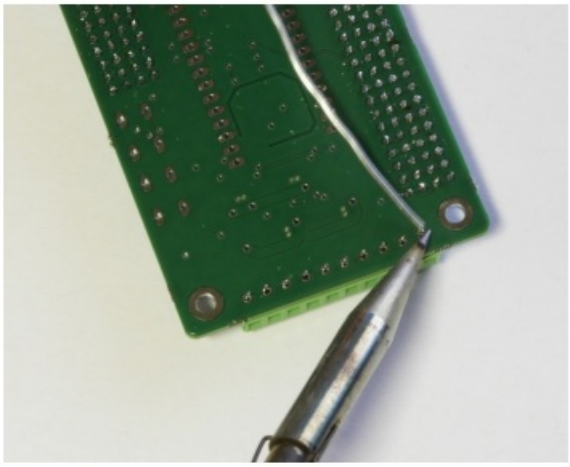
7. After removing from the breadboard, the PCB should look like this.



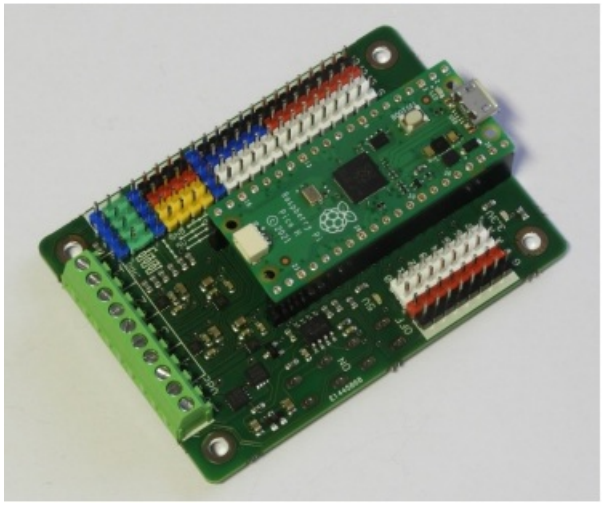
8. Insert the terminal block from the top. Make sure it is facing the right direction, with the openings for the wires facing outwards



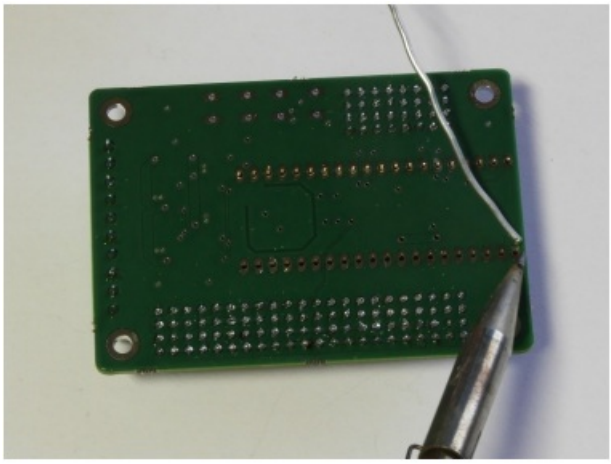
9. Turn the PCB upside down and solder all the pins. Make sure the terminal block is sitting correctly against the PCB.



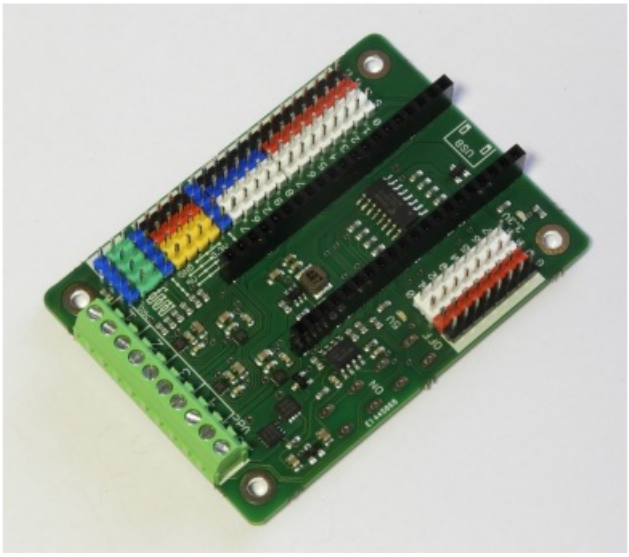
10. Use a Raspberry Pi Pico to hold the headers for the Pi Pico in place while soldering



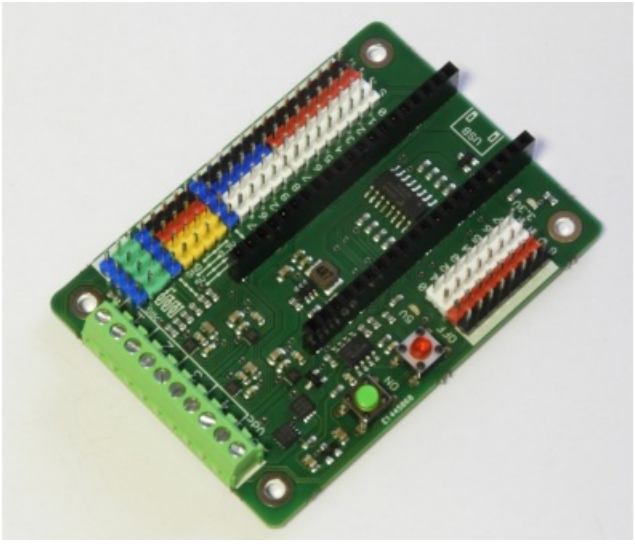
11. Turn the PCB upside down and solder the Pico header pins. Again, solder just one pin first and verify the alignment before soldering all the pins



12. After soldering the Pico header pins and removing the Pi Pico, the PCB should look like this



13. Insert the push buttons as shown in the photo. The button pins have a shape that holds the button in place even before soldering. Turn the PCB upside down and solder the button pins. Turn the PCB back up. Congratulations, your PCB is ready!



Documents / Resources

	botnroll com PICO4DRIVE Development Board for Pi Pico [pdf] Instruction Manual PICO4DRIVE, PICO4DRIVE Development Board for Pi Pico, Development Board for Pi Pico, Board for Pi Pico, Pi Pico, Pico

Manuals+,