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RC Excavator - How To

69% COMPLETE

What We're Building

Sourcing Parts

Sourcing PCB(Printed Circuit Board)

Sourcing Electronics

Required Tools

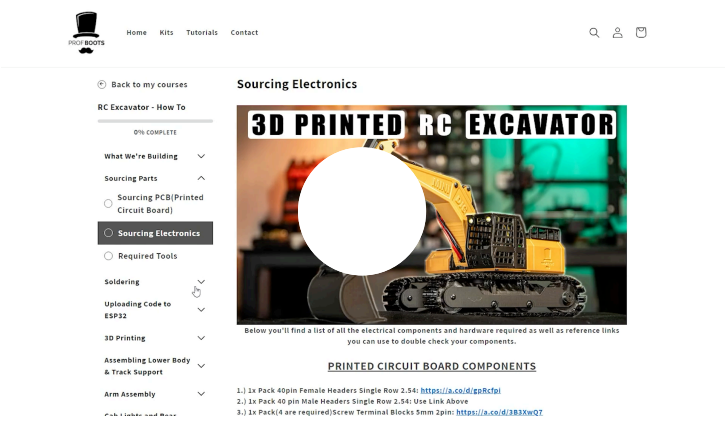
Soldering

Uploading Code to ESP32

3D Printing

Assembling Lower Body & Track Support

Sourcing Electronics



Below you'll find a list of all the electrical components and hardware required as well as some affiliate reference links you can use to double check your components. Remember you can find pretty much all of these parts for cheaper on Aliexpress but will likely take a little longer to arrive. Always double check reviews and delve into the part description to make sure you're really getting what's advertised.

PRINTED CIRCUIT BOARD COMPONENTS

1.) 1x Pack 40pin Female Headers Single Row 2.54:

Arm Assembly

Cab Lights and Rear Cover

Test Drive

Attachments/Upgrades

https://amzn.to/4bmDsSK
2.) 1x Pack 40 pin Male Headers Single Row 2.54: Use Link Above
3.) 1x Pack(10 are required)Screw Terminal Blocks 5mm 2pin: https://amzn.to/3yjh5yX
a.) Comes with 2&3pin terminal blocks. The 3pin will be useful for future projects.
4.) x1 2-3A Switch 3pin 2position: https://amzn.to/3wCvohk
5.) x1 5x20 Fuse Holder C3131(I recommend ordering directly from LCSC)
6.) x2 CR123A Battery Holders: https://amzn.to/3wE5Xw4
7.) x2 4K7 ohm Resistors are optimal but pretty much anything between 2-6k will likely work just fine.
here's a kit that comes with a bunch of different values: https://amzn.to/3UZMOxT

All Other Components

1.) 1x ESP32 30Pin Development Board(Micro USB): https://amzn.to/4bzrJzC
2.) 4x DRV8833 H-Bridges: https://amzn.to/3UKd3H7
3.) 1x Buck Converter:https://amzn.to/3QMb2cC
4.) x3 100RPM 12v N20 Motor: https://amzn.to/4akXYBS
5.) x4 1000RPM 12v Threaded Shaft m4 55mm N20 Motor: Aliexpress

a.) Make sure to select "12v"!
6.) --MG90S Servos:https://amzn.to/4bhSGIF
a.) No servos are required for the base model but I plan on using them for future attachments!
7.) x2 125v 5x20mm 5a Fast Blow-Glass fuses: https://amzn.to/4dKQVW3
8.) x2-4 5v LEDs: https://amzn.to/3wscSIF
8.) x2-4 5v LED Holders: https://amzn.to/3V3ZpjL
9.) MCP23017: https://amzn.to/3ynr9qD
10.) PS3 Controller: https://amzn.to/3WJxp66
11.) x1 2.6mm Truss Head Screw kit: https://amzn.to/3V1TSdu
a.) The kit contains 2.3 and 2.6mm screws but we'll only be using the 2.6mm size.
12.) x1 Metric screws and nuts kit: https://amzn.to/44NruyP
a.) This is just for the 4x m4 nuts required for the push rods, you can pick up a couple m4 nuts for a couple cents at your local hardware store.
12.) 22awg Wire(Preferably 2 different colors): https://amzn.to/4aoeO2P
13.) x2 Fenix Batteries: https://fenix-store.com/products/fenix-arb-l16-700up-usb-rechargeable-16340-battery

COMPLETE AND CONTINUE