Below are the items I made use of for the build, I did not include the normal switches and buttons, wires. You will notice I did not make use of resistors as I uses the microprocessor’s internal pull-up resistor to handle noises from buttons press.

|  |  |  |
| --- | --- | --- |
|  | Arduino Nano | <https://world.taobao.com/item/42296011350.htm?fromSite=main&spm=a312a.7700846.0.0.tO8EAg&_u=81p5mvl5c6fe> |
|  | 74HC595 2 Digits 7-Segment LED | <https://world.taobao.com/item/43447719493.htm?fromSite=main&spm=a312a.7700846.0.0.tO8EAg&_u=81p5mvl503c7> |
|  | 5V 10Amp Relay (to control pusher on/off) | <https://detail.tmall.com/item.htm?id=525509012478&toSite=main> |
| No picture | IRF3708 Mosfet and the IN5408 Diode (to control Flywheel DC motors on/off)  10k resistor and 100 ohm register |  |
|  | PWM controlled module (to control ROF) | <https://detail.tmall.com/item.htm?id=536770526104&toSite=main> |
|  | Voltage sensor module (to find current voltage of lipo to make calculation of ROF voltage) | <https://world.taobao.com/item/43100493066.htm?fromSite=main&spm=a312a.7700846.0.0.tO8EAg&_u=81p5mvl5a29b> |
|  | 104 Capacitor 104P 0.1UF 100NF 50V  (to filter electric noise produced by DC motors) | <https://detail.tmall.com/item.htm?id=41231794779&toSite=main> |
|  | DC to DC Buck converter (to convert voltage from 3s Lipo to 5V, for the 2 relays and the Arduino board) | <https://detail.tmall.com/item.htm?id=17616429123&toSite=main> |
|  | Rotary Encoder | <https://world.taobao.com/item/529477048471.htm?fromSite=main&spm=a312a.7700846.0.0.tO8EAg&_u=81p5mvl5c18c> |
|  | Headers Pin | <https://detail.tmall.com/item.htm?id=13321158484&toSite=main> |
|  | Headers Pin | <https://detail.tmall.com/item.htm?id=13700799942&toSite=main> |
|  | DuPont head | <https://world.taobao.com/item/40698419655.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl5af1b> |
|  | DuPont male head | <https://world.taobao.com/item/19134756118.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl5d7cb> |
|  | DuPont male head | <https://world.taobao.com/item/37120521950.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl51604> |
|  | Button | <https://world.taobao.com/item/536748679303.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl587ab> |
|  | Button | <https://world.taobao.com/item/537772544456.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl5c95a> |
|  | Dean connector | <https://world.taobao.com/item/2003313604.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl55a26> |
|  | Small version of Dean connector | <https://world.taobao.com/item/2386233716.htm?fromSite=main&spm=a312a.7700846.0.0.eysEMU&_u=n1p5mvl5e01d> |
|  | Battery Tape | <https://hobbyking.com/en_us/battery-tape-150mm-5pcs-bag.html> |
|  | Turnigy nano-tech 1200mAh 3S 25-50C Lipo AIRSOFT Pack | <https://hobbyking.com/en_us/turnigy-nano-tech-1200mah-3s-25-50c-lipo-airsoft-pack.html> |

There are more basic items such as pin connectors, etc.

Article on Dealing with Motor Noise:

<https://www.pololu.com/docs/0J15/9>