|  |  |  |  |
| --- | --- | --- | --- |
|  | FRONT PANEL | Source | Part Number |
| Part ID | Description |  |  |
| SW1 | Push Button N.O tactile switch 6mm | On hand | [450-1650-ND](https://www.digikey.com/product-detail/en/te-connectivity-alcoswitch-switches/1825910-6/450-1650-ND/1632536) |
| SW2 | Push Button N.O tactile switch 6mm | On hand |  |
| SW3 | Push Button N.O tactile switch 6mm | On hand |  |
| SW4 | Push Button N.O tactile switch 6mm | On hand |  |
| D8 | Signal Diode 1n914 or 1n4148 | On hand |  |
| BZ1 | piezoelectric speaker | On hand | [433-1104-ND](https://www.digikey.com/product-detail/en/soberton-inc/SP-1605/433-1104-ND/3973691) |
| J1 | Connector 16 Pin 2.54mm 2x8 keyed | Mouser | [**538-87834-1611**](https://www.mouser.com/ProductDetail/538-87834-1611) |
|  | Header for J1 | Mouser | [**629-CWR-220-16-0203**](https://www.mouser.com/ProductDetail/629-CWR-220-16-0203) |
| D1 | 3mm Led Bluish Green | Mouser | [**638-2647UBGCS400A6**](https://www.mouser.com/ProductDetail/638-2647UBGCS400A6) |
| D2 | 3mm Led White | Mouser | [**859-LTW-420D7**](https://www.mouser.com/ProductDetail/859-LTW-420D7) |
| D3 | 3mm Led White | Mouser | [**859-LTW-420D7**](https://www.mouser.com/ProductDetail/859-LTW-420D7) |
| D4 | 3mm Led Yellow | Mouser | [160-1662-ND](https://www.digikey.com/product-detail/en/lite-on-inc/LTL1CHKSKNN/160-1662-ND/573559) |
| D5 | 3mm Led Red | Mouser | [**859-LTL1RMVSKNT**](https://www.mouser.com/ProductDetail/859-LTL1RMVSKNT) |
| D6 | 3mm Led Blue | Mouser | [**638-264-7SUBCC4704**](https://www.mouser.com/ProductDetail/638-264-7SUBCC4704) |
| D7 | 3mm Led Red | Mouser | [**859-LTL1RMVSKNT**](https://www.mouser.com/ProductDetail/859-LTL1RMVSKNT) |
| PCB |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Main Board |  |  |
| Part ID | Description | Source | Part Number |
| D1 | LED 5mm Green | On hand | [160-1939-ND](https://www.digikey.com/product-detail/en/lite-on-inc/LTL1BEKVJNN/160-1939-ND/3198398) |
| D2 | LED 5mm Red | On hand | [160-1939-ND](https://www.digikey.com/product-detail/en/lite-on-inc/LTL1BEKVJNN/160-1939-ND/3198398) |
| D3 | Signal Diode 1n914 or 1n4148 | On hand | [1N914](https://www.digikey.com/product-detail/en/on-semiconductor/1N914/1N914FS-ND/978749) |
| D4 | LED 5mm Yellow | On hand |  |
| C1 | 0.1uF 25V Multilayer Ceramic | On hand |  |
| C2 | Removed from design | On hand |  |
| C3 | Removed from design | On hand |  |
| C4 | 10uF 25V Multilayer Ceramic | On hand |  |
| C5 | 1uF 16 Volt Tantalum | On hand |  |
| C6 | 0.1uF 25V Multilayer Ceramic | On hand |  |
| C7 | 0.1uF 25V Multilayer Ceramic | On hand |  |
| C8 | 470 pF dipped Sliver Mica | On hand |  |
| C9 | 0.1uF 25V Multilayer Ceramic | On hand |  |
| C10 | 0.1uF 25V Multilayer Ceramic | On hand |  |
| C11 | 0.1uF 25V Multilayer Ceramic | On hand |  |
| Q1 | 2n3904 or 2n2222 TO-92 | On hand |  |
| Q2 | 2n3904 or 2n2222 TO-92 | On hand |  |
| Q3 | 2n3904 or 2n2222 tO-92 | On hand |  |
| Q4 | MOSFET P-CHANNEL 60V 20A TO251 | Digikey | [**TSM480P06CHX0G-ND**](https://www.digikey.com/product-detail/en/taiwan-semiconductor-corporation/TSM480P06CH-X0G/TSM480P06CHX0G-ND/7360375) |
| U1 | Dual Op Amp LM258 or LM258 | On hand |  |
| U2 | LM78L05 TO-92 | On-Hand |  |
| U3 | DC/DC Converter | Mouser | [**595-TPSM84212EAB**](https://www.mouser.com/ProductDetail/595-TPSM84212EAB) |
| U4 | MPXV unknown yet |  |  |
| J4 | Connector 16 Pin 2.54mm 2x8 keyed | Mouser | [**538-87834-1611**](https://www.mouser.com/ProductDetail/538-87834-1611) |
|  | Header for J1 | Mouser | [**629-CWR-220-16-0203**](https://www.mouser.com/ProductDetail/629-CWR-220-16-0203) |
| J3 | 2.54mm Header 3 position | On hand |  |
| J2 | Removed from design | On hand |  |
| J1 | 2.54mm Header 2 potion | On hand |  |
| J5 | Molex 2.54mm Header 5 position | On hand |  |
| J6 | Molex 2.54mm Header 4 position | On hand |  |
| J7 | Molex 2.54mm Header 4 position | On hand |  |
| J8 | Molex 2.54mm Header 2 position | On hand |  |
| F1 | Fuse Fast Blow 2A | On hand |  |
| A1 | Arduino Nano V3 | On hand |  |
| R1 | 1.8k 1/4w 5% | On hand |  |
| R2 | 1k 1/4w 5% | On hand |  |
| R3 | 1k 1/4w 5% | On hand |  |
| R4 | Unknown until testing is done |  |  |
| R5 | RES 300 OHM 1W 5% | Digikey | [**PPC300W-1CT-ND**](https://www.digikey.com/product-detail/en/vishay-bc-components/PR01000103000JR500/PPC300W-1CT-ND/597239) |
| R6 | Unknown until testing is done |  |  |
| R7 | Unknown until testing is done |  |  |
| R8 | 330 Ohms 1/4w 5% | On hand |  |
| R9 | Unknown until testing is done |  |  |
| R10 | RES METAL OX 2W 110 OHM 5% | Digikey | RSMF2JT110RCT-ND |
| R11 | Removed from design |  |  |
| R12 | 1k 1/4w 5% | On hand |  |
| R13 | Removed from design |  |  |
| R14 | 100k 1/4w 5% | On hand |  |
| R15 | RES 33K OHM 1/4W 1% | Digikey | [**RNMF14FTC33K0CT-ND**](https://www.digikey.com/product-detail/en/stackpole-electronics-inc/RNMF14FTC33K0/RNMF14FTC33K0CT-ND/4770675) |
| R16 | RES 8.2K OHM 1/4W 1% | Digikey | RNMF14FAD8K20CT-ND |
| R17 | 100k 1/4w 5% | On hand |  |
| R18 | 1Meg 1/4w 5% | On hand |  |
| R19 | 100k 1/4w 5% | On hand |  |
| R20 | 330 Ohms 1/4w 5% | On hand |  |
| R21 | 330 Ohms 1/4w 5% | On hand |  |
| R22 | 330 Ohms 1/4w 5% | On hand |  |
| R23 | 330 Ohms 1/4w 5% | On hand |  |
| R24 | 330 Ohms 1/4w 5% | On hand |  |
| R25 | 330 Ohms 1/4w 5% | On hand |  |
| R26 | 330 Ohms 1/4w 5% | On hand |  |
| R27 | 1k 1/4w 5% | On hand |  |
| R28 | 10K 1/4w 5% | On hand |  |
|  |  |  |  |
|  |  |  |  |
|  | Ribbon Cable 16 conductor 2.54mm | On hand |  |
|  | VIBRATION ERM MTR 10000 RPM 3V | Digikey | [**1597-1245-ND**](https://www.digikey.com/product-detail/en/seeed-technology-co-ltd/316040004/1597-1245-ND/5487673) |
|  | RECEPT 15POS .100 for A1 | Mouser | [**571-5342376**](https://www.mouser.com/ProductDetail/571-5342376) |
|  | Pin headers J1, J2 and J3 | Muoser | [22-28-5030](https://www.mouser.com/ProductDetail/Molex/22-28-5030?qs=l%252BWx29wYPrxnQSoItjIP8g%3D%3D) |
|  | Molex kk 7880 J4, J5, J6, J7 and J8 | On hand |  |