

You do not have to use these exact materials. These links can be used as reference for what you need.

## 1 Arduino Nano

[https://www.amazon.com/ELEGOO-Pre-soldered-ATmega-Compatible-Arduino/dp/B0D5LYFRQP?crid=W1GZ0OYSJY5R&dib=eyJ2ljojMSJ9.hHw19lfVTc6lc5jxd302RnB0IK826JRQat8mDqpsfNintuHNCNVNHO01sF\\_06r2bS-MZHRt-OKS1pgLJcOo49jMrc9S7Vk1ul9X8TbC3V1otxnJQBMhcOn0WNWv0dHG4tRiS10TbQgtHFulNMVJASmRCx74trHRO\\_Jdn-uOt1DUjFNWrHzTNIHOiztAp08kCdKNA29d0eOiFWuTDbsllmBKzEb4L08Gqej9QgSx5gweY.Fmh8Hmds68jtq9UZlaeMh9CzLjYAy735zOFMMVjA4J4&dib\\_tag=se&keywords=Arduino+nano&qid=1741048516&sprefix=arduino+nano%2Caps%2C192&sr=8-1](https://www.amazon.com/ELEGOO-Pre-soldered-ATmega-Compatible-Arduino/dp/B0D5LYFRQP?crid=W1GZ0OYSJY5R&dib=eyJ2ljojMSJ9.hHw19lfVTc6lc5jxd302RnB0IK826JRQat8mDqpsfNintuHNCNVNHO01sF_06r2bS-MZHRt-OKS1pgLJcOo49jMrc9S7Vk1ul9X8TbC3V1otxnJQBMhcOn0WNWv0dHG4tRiS10TbQgtHFulNMVJASmRCx74trHRO_Jdn-uOt1DUjFNWrHzTNIHOiztAp08kCdKNA29d0eOiFWuTDbsllmBKzEb4L08Gqej9QgSx5gweY.Fmh8Hmds68jtq9UZlaeMh9CzLjYAy735zOFMMVjA4J4&dib_tag=se&keywords=Arduino+nano&qid=1741048516&sprefix=arduino+nano%2Caps%2C192&sr=8-1)

1 USB type mini B (male) to USB type A/C (male) (Depending on your device)

## 1 Breadboard (82mm x 54mm x 9 mm)

[https://www.amazon.com/Pcs-MCIGICM-Points-Solderless-Breadboard/dp/B07PCJP9DY?crid=378RVAVQW5HJJ&dib=eyJ2ljojMSJ9.kysEkFuknSsx6HNYyIrkWUhq\\_a3nKPTugQRiE2mrxXvyZy0GL5P8clYtOgQK0yY9e9KNtU61lzGpfyRxiMVVlpYcK6IHgXg0lh6gln4IV935HWsrpa-oXVz3N3ZJMDXtveqp\\_hMqnPZ6YTf4K59V3dlb712M2Nilc3HifyyvbBlv0aVDCe2Yak8jNqEL9tS7ZKKhfeKzDgs5TlqlclR-S66ZeAF6l6is3VXE2UnEZs\\_-uAHAhIKRwJsHu8mznAF9-ABA89uZ-E8RnqySNBu5U&dib\\_tag=se&keywords=small+breadboard&qid=1741046574&sprefix=small+breadboard%2Caps%2C155&sr=8-6](https://www.amazon.com/Pcs-MCIGICM-Points-Solderless-Breadboard/dp/B07PCJP9DY?crid=378RVAVQW5HJJ&dib=eyJ2ljojMSJ9.kysEkFuknSsx6HNYyIrkWUhq_a3nKPTugQRiE2mrxXvyZy0GL5P8clYtOgQK0yY9e9KNtU61lzGpfyRxiMVVlpYcK6IHgXg0lh6gln4IV935HWsrpa-oXVz3N3ZJMDXtveqp_hMqnPZ6YTf4K59V3dlb712M2Nilc3HifyyvbBlv0aVDCe2Yak8jNqEL9tS7ZKKhfeKzDgs5TlqlclR-S66ZeAF6l6is3VXE2UnEZs_-uAHAhIKRwJsHu8mznAF9-ABA89uZ-E8RnqySNBu5U&dib_tag=se&keywords=small+breadboard&qid=1741046574&sprefix=small+breadboard%2Caps%2C155&sr=8-6)

1 Solar panel (dimensions pending)

## 4 Resistors (10 kΩ)

[https://www.amazon.com/10K-Resistor-Tolerance-Resistors-Resistance/dp/B0B4JFPHTW?crid=3QSYXOGCP428P&dib=eyJ2ljojMSJ9.Ds1udzKr1AMB5ViN1ZGune4SPzV3eVVE4Y2zRRBN57THOTbt6Kn3kNaqJKRXq-WAuH3uBKmSpWpA\\_eLq0MN4z8eZbEUyRIVl6ui-gXeaNXtxAmltVl6EI99ECZNQWQiAaePN6ElhjCNUitHqY64wheBbGBaPk5PqrpfBkZix8d6e1B31Xg6v6mZWigMo16G23GF6oY7ltGo3J354oelJZZ8zbx\\_WgVQTrJdWTY9PZA.4T74v9kRt4K-1bk2d-bLWf5z0Vzs28fd28CTsdvz\\_ck&dib\\_tag=se&keywords=10k+ohm+resistor&qid=1741047375&sprefix=10kohm+%2Caps%2C225&sr=8-4](https://www.amazon.com/10K-Resistor-Tolerance-Resistors-Resistance/dp/B0B4JFPHTW?crid=3QSYXOGCP428P&dib=eyJ2ljojMSJ9.Ds1udzKr1AMB5ViN1ZGune4SPzV3eVVE4Y2zRRBN57THOTbt6Kn3kNaqJKRXq-WAuH3uBKmSpWpA_eLq0MN4z8eZbEUyRIVl6ui-gXeaNXtxAmltVl6EI99ECZNQWQiAaePN6ElhjCNUitHqY64wheBbGBaPk5PqrpfBkZix8d6e1B31Xg6v6mZWigMo16G23GF6oY7ltGo3J354oelJZZ8zbx_WgVQTrJdWTY9PZA.4T74v9kRt4K-1bk2d-bLWf5z0Vzs28fd28CTsdvz_ck&dib_tag=se&keywords=10k+ohm+resistor&qid=1741047375&sprefix=10kohm+%2Caps%2C225&sr=8-4)

## 4 Photoresistors

[https://www.amazon.com/eBoot-Photoresistor-Sensitive-Resistor-Dependent/dp/B01N7V536K?crid=QN02VTN2TFOZ&dib=eyJ2ljojMSJ9.4ay-yL4ybE9R-GeBWh8g9spyKQ2K1nmRxegbX1Ue6gaN7XlnlBwjG3nfHP\\_uxE6dcO9rhejqSvIHQTG1hZQKq03smZCGqsUBRYmU-q5yZ5QjoBQtf5ysoD2HzWJWjzd1OXDDaSed1Jo0rOj88p8VswmWIOSEZwH-apaoFFTJr0R8epxjBOPJqccqy6F01mRWWhiMc1CTS6KblLohkklUn5SdskySK5MntB-OkI9kRoDDiU.X9TQk5tO2FCjMK8MPITnG2n3](https://www.amazon.com/eBoot-Photoresistor-Sensitive-Resistor-Dependent/dp/B01N7V536K?crid=QN02VTN2TFOZ&dib=eyJ2ljojMSJ9.4ay-yL4ybE9R-GeBWh8g9spyKQ2K1nmRxegbX1Ue6gaN7XlnlBwjG3nfHP_uxE6dcO9rhejqSvIHQTG1hZQKq03smZCGqsUBRYmU-q5yZ5QjoBQtf5ysoD2HzWJWjzd1OXDDaSed1Jo0rOj88p8VswmWIOSEZwH-apaoFFTJr0R8epxjBOPJqccqy6F01mRWWhiMc1CTS6KblLohkklUn5SdskySK5MntB-OkI9kRoDDiU.X9TQk5tO2FCjMK8MPITnG2n3)

[vTBg81MZv4k4ztDk5v8&dib\\_tag=se&keywords=photo%2Bresistors&qid=1741047309&sprefix=photo%2Bresistor%2Caps%2C220&sr=8-3&th=1](https://www.amazon.com/Photo-Resistor-Variable-Resistor-Photoresistor/dp/B07MLR1498?crid=2HU28MV95MU5&dib=eyJ2ljojMSJ9.Vg3zWlmbXTda-w-S8LOFTUhgngw9UBolpn2Tke-TTApV7HYysTKyPOWx-n2M77keGvbv73DKO57bRwRfqzpcIDb65Rrs9nA_IDJ1z7wQKQOdCOShnvrCB6-3ox9oDPx1U5fGID9-RVjNLn947EtLVSQ-LdJw_b1u38BkmHy8TXNhrKKbJBpD18xiLtgEalV7vzotKY8mk7b3NYwdMEMmcGKldybOOAVJqNnjRw9bRbnv7nLSMyXZtLbhqL3h168F-5GO9hnm0Ne2I9Azeixnu_RaQzXHa2cx9h3dkOSAIWTiwpKfVuvGd9A0pC5SEyHR0_zkqOMND8maBYnZt5t-iWoVFRShEBFHzyHtQ1-p9I0YA_mvj1DTQdW94rWsUw-ciP-L5Yc3vR1Z8RHQ4SfLjYTwpkqQyC9BHZArBL5ThmEkTK54oKSGf7WrkmSrEnt.wuaA_C6q_k9PaysZga3W4y1BdGJwq_pmdFp-CACe_j6E&dib_tag=se&keywords=photo%2Bresistors&qid=1741047309&sprefix=photo%2Bresistor%2Caps%2C220&sr=8-3&th=1)

## 2 SG90 servo motors and rotor blades

[https://www.amazon.com/Micro-Servos-Helicopter-Airplane-Controls/dp/B07MLR1498?crid=2HU28MV95MU5&dib=eyJ2ljojMSJ9.Vg3zWlmbXTda-w-S8LOFTUhgngw9UBolpn2Tke-TTApV7HYysTKyPOWx-n2M77keGvbv73DKO57bRwRfqzpcIDb65Rrs9nA\\_IDJ1z7wQKQOdCOShnvrCB6-3ox9oDPx1U5fGID9-RVjNLn947EtLVSQ-LdJw\\_b1u38BkmHy8TXNhrKKbJBpD18xiLtgEalV7vzotKY8mk7b3NYwdMEMmcGKldybOOAVJqNnjRw9bRbnv7nLSMyXZtLbhqL3h168F-5GO9hnm0Ne2I9Azeixnu\\_RaQzXHa2cx9h3dkOSAIWTiwpKfVuvGd9A0pC5SEyHR0\\_zkqOMND8maBYnZt5t-iWoVFRShEBFHzyHtQ1-p9I0YA\\_mvj1DTQdW94rWsUw-ciP-L5Yc3vR1Z8RHQ4SfLjYTwpkqQyC9BHZArBL5ThmEkTK54oKSGf7WrkmSrEnt.wuaA\\_C6q\\_k9PaysZga3W4y1BdGJwq\\_pmdFp-CACe\\_j6E&dib\\_tag=se&keywords=sg90%2Bservo%2Bmotor&qid=1741047397&spreprefix=sg90%2Bservo%2Caps%2C241&sr=8-5&th=1](https://www.amazon.com/Micro-Servos-Helicopter-Airplane-Controls/dp/B07MLR1498?crid=2HU28MV95MU5&dib=eyJ2ljojMSJ9.Vg3zWlmbXTda-w-S8LOFTUhgngw9UBolpn2Tke-TTApV7HYysTKyPOWx-n2M77keGvbv73DKO57bRwRfqzpcIDb65Rrs9nA_IDJ1z7wQKQOdCOShnvrCB6-3ox9oDPx1U5fGID9-RVjNLn947EtLVSQ-LdJw_b1u38BkmHy8TXNhrKKbJBpD18xiLtgEalV7vzotKY8mk7b3NYwdMEMmcGKldybOOAVJqNnjRw9bRbnv7nLSMyXZtLbhqL3h168F-5GO9hnm0Ne2I9Azeixnu_RaQzXHa2cx9h3dkOSAIWTiwpKfVuvGd9A0pC5SEyHR0_zkqOMND8maBYnZt5t-iWoVFRShEBFHzyHtQ1-p9I0YA_mvj1DTQdW94rWsUw-ciP-L5Yc3vR1Z8RHQ4SfLjYTwpkqQyC9BHZArBL5ThmEkTK54oKSGf7WrkmSrEnt.wuaA_C6q_k9PaysZga3W4y1BdGJwq_pmdFp-CACe_j6E&dib_tag=se&keywords=sg90%2Bservo%2Bmotor&qid=1741047397&spreprefix=sg90%2Bservo%2Caps%2C241&sr=8-5&th=1)

## 3 3D printed parts (solar panel mount, breadboard base, and servo to servo connector piece):

- <https://cad.onshape.com/documents/eef44d8a1125536acff9086a/w/da7723674de3276ea3c64748/e/a0061b86a7e5ab36759d45d8?renderMode=0&uiState=67c649c8916e722f3343a0b1>
- <https://cad.onshape.com/documents/eb3896d06ea33a662959ce07/w/cdcd9218a89535646cc3b3b4/e/40605383c44492e334f90857?renderMode=0&uiState=67c649e04169902a239dd6ab>
- <https://cad.onshape.com/documents/422335432638110f25a848c2/w/cebb42f7896aba/be2b9bdf4c/e/cfcba5000c6d685ff71f68d9?renderMode=0&uiState=67c64a27e915056adb377be7>

## Super Glue

### Jumper Wires (Need Both)

[https://www.amazon.com/Elegoo-EL-CP-004-Multicolored-Breadboard-arduino/dp/B01EV70C78?crid=1BP32LNFDUKCN&dib=eyJ2ljojMSJ9.tjHxIQLJsk16\\_0YVtUGN6Tqnr8euWNsWVjpSaq5RQkbzkWrZ9zwE7F8lZo2lCdlpdQRll4Bkon1oTzbdS\\_Od982O22Niu0TKLICq057pweR7M3NVbZ-X\\_-OezYfaY7nBWGJ-GQa\\_naxmqgVMSf2d\\_xnXFvmlUTbNnITrDRK\\_fgA8mexZvp\\_n6RxxKadM-YvvEP3ZcYLi3adwkGFnmVv2qN\\_9mPDOV7IWfEJTshoQdrmo.PrgkOznL66riRnnofBldUjS5hZ-1QF3yfmJkCv5dMhQ&dib\\_tag=se&keywords=jumper+cable+breadboard&qid=1741048457&spreprefix=jumper+cable+breadboard%2Caps%2C248&sr=8-3](https://www.amazon.com/Elegoo-EL-CP-004-Multicolored-Breadboard-arduino/dp/B01EV70C78?crid=1BP32LNFDUKCN&dib=eyJ2ljojMSJ9.tjHxIQLJsk16_0YVtUGN6Tqnr8euWNsWVjpSaq5RQkbzkWrZ9zwE7F8lZo2lCdlpdQRll4Bkon1oTzbdS_Od982O22Niu0TKLICq057pweR7M3NVbZ-X_-OezYfaY7nBWGJ-GQa_naxmqgVMSf2d_xnXFvmlUTbNnITrDRK_fgA8mexZvp_n6RxxKadM-YvvEP3ZcYLi3adwkGFnmVv2qN_9mPDOV7IWfEJTshoQdrmo.PrgkOznL66riRnnofBldUjS5hZ-1QF3yfmJkCv5dMhQ&dib_tag=se&keywords=jumper+cable+breadboard&qid=1741048457&spreprefix=jumper+cable+breadboard%2Caps%2C248&sr=8-3)

[https://www.amazon.com/MCIGICM-Breadboard-Jumper-Cables-Arduino/dp/B081GMJVPB?crid=15OIO9Y2QPP7Z&dib=eyJ2ljojMSJ9.tjHxIQLJsk16\\_0YVtUGN6eY5DcByK\\_7UqHuaN27c6YPXNiobBCjKnBPzYZ6fw156k5tm](https://www.amazon.com/MCIGICM-Breadboard-Jumper-Cables-Arduino/dp/B081GMJVPB?crid=15OIO9Y2QPP7Z&dib=eyJ2ljojMSJ9.tjHxIQLJsk16_0YVtUGN6eY5DcByK_7UqHuaN27c6YPXNiobBCjKnBPzYZ6fw156k5tm)

[https://www.aliexpress.com/wholesale?catId=0&initiative\\_id=ambp\\_20190715&Kst=UrmYPSI5dTrImAQFI1raBZXqMICf8ceaGDORKvvH9guSLzGu\\_DLL5j7EchmqIz9HpueTXJKaq\\_vTLq7cK\\_3fuUhxmnr8KbZjODanLOlIFoioCOKaVESPXCSca4Tj3qX-X684ew74usfxMri6nyl4\\_y539vzovSxCbUk45TM.gaq98Rm-1g6yzJ5XLN-YX8G-jGF1leTaBKuf\\_Kdt4\\_0&dib\\_tag=se&keywords=jumper+cables+flat+breadboard&qid=1741048479&srefix=jumper+cables+flat+breadboar%2Caps%2C194&sr=8-8](https://www.aliexpress.com/wholesale?catId=0&initiative_id=ambp_20190715&Kst=UrmYPSI5dTrImAQFI1raBZXqMICf8ceaGDORKvvH9guSLzGu_DLL5j7EchmqIz9HpueTXJKaq_vTLq7cK_3fuUhxmnr8KbZjODanLOlIFoioCOKaVESPXCSca4Tj3qX-X684ew74usfxMri6nyl4_y539vzovSxCbUk45TM.gaq98Rm-1g6yzJ5XLN-YX8G-jGF1leTaBKuf_Kdt4_0&dib_tag=se&keywords=jumper+cables+flat+breadboard&qid=1741048479&srefix=jumper+cables+flat+breadboar%2Caps%2C194&sr=8-8)

Instruments that may come in handy:

- Multimeter