

# **ARDUINO BOOTCAMP : LEARNING THROUGH PROJECTS**

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## List of Parts by Projects

### *Simple Projects*

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#### ***First Project***

- Arduino Uno
- USB Cable
- Breadboard
- Red LED
- 220  $\Omega$  resistor
- Connecting Wires

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#### ***Controlling an LED with a Push Button Switch***

- Arduino Uno
- USB Cable
- Breadboard
- Red LED
- 220  $\Omega$  and 1k  $\Omega$  resistor
- Push button switch
- Connecting Wires

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#### ***Controlling an Piezo Buzzer with a Push Button Switch***

- Arduino Uno
- USB Cable
- Breadboard
- Piezo Buzzer
- 330  $\Omega$  and 1k  $\Omega$  resistor
- Push button switch
- Connecting Wires

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#### ***Using a Potentiometer to Adjust LED Brightness***

- Arduino Uno
- USB Cable
- Breadboard
- Red LED
- 220  $\Omega$  resistor
- 10 k  $\Omega$  potentiometer
- Connecting Wires

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#### ***Controlling a CPU Fan - User Input***

- Arduino Uno

- USB Cable
  - Breadboard
  - CPU Fan
  - 220  $\Omega$  resistor
  - MJ182 npn Power Transistor
  - 12V DC Supply - Arduino External Power Supply
  - Connecting Wires
- 

### ***Controlling a CPU Fan - Button Control***

- Arduino Uno
  - USB Cable
  - Breadboard
  - CPU Fan
  - 220  $\Omega$  resistor
  - MJ182 npn Power Transistor
  - 12V DC Supply - Arduino External Power Supply
  - Push button switch
  - Connecting Wires
- 

### ***LED Reaction Game***

- Arduino Uno
  - USB Cable
  - Breadboard
  - 3 x 220  $\Omega$  resistor
  - 3 LEDs (Red, Green and Yellow)
  - 1 k $\Omega$  resistor
  - Push button switch
  - Connecting Wires
- 

## ***Intermediate Projects***

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### ***Buzzer Sound Recall Game***

- Arduino Uno
  - USB Cable
  - Breadboard
  - 3 x 220  $\Omega$  resistor
  - 3 x 330  $\Omega$  resistor
  - 3 LEDs (Red, Green and Yellow)
  - 3 Piezo Buzzers
  - 3 Push button switches
  - Connecting Wires
- 

### ***Ultrasonic Sensor Alarm***

- Arduino Uno

- USB Cable
  - Breadboard
  - 3 x 330  $\Omega$  resistor
  - HC-SR04 Ultrasonic Sensor
  - Red and Green LED
  - Piezo Buzzer
  - Connecting Wires
- 

### ***Digital Dice***

- Arduino Uno
  - USB Cable
  - Breadboard
  - 7 x 220  $\Omega$  resistor
  - 7 Segment Display (Common Cathode)
  - Push button switch
  - Connecting Wires
- 

### ***Infrared Repeater (Various projects)***

- Arduino Uno
  - USB Cable
  - Breadboard
  - IR Receiver TSOP382
  - IR LED
  - 220  $\Omega$  resistor
  - 3 Push button switches
  - Connecting Wires
- 

### ***Joystick Matrix LED (Various projects)***

- Arduino Uno
- USB Cable
- Breadboard
- Thumb joystick
- 8 x 8 LED Matrix
- Max7219 Dot Matrix Module
- Connecting Wires

## ***Advanced Projects***

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### ***Stopwatch (Various projects)***

- Arduino Uno
- USB Cable
- Breadboard
- 4 Digit Seven Segment Display
- 7 x 220  $\Omega$  resistor
- 8-bit shift register (SN74HC595)
- Push button switch
- Connecting Wires

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### ***Pan-Tilt Assembly Control (Various projects)***

- Arduino Uno
- USB Cable
- Breadboard
- 2 micro servos
- Wii nunchuk
- Arduino nunchuk adapter
- Pan tilt assembly frame
- 9V Battery
- 9V Battery holder
- Connecting Wires

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### ***Online Weather Station (Various projects)***

- Arduino Uno
- USB Cable
- Breadboard
- Arduino Wifi Shield
- Standard 1602 LCD
- Male pin header strip (16 count)
- 220  $\Omega$  resistor
- 10 k $\Omega$  potentiometer
- Connecting Wires

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### ***Remote Controlled Car***

- Arduino Uno
- USB Cable
- Breadboard
- Car Kit
- Bluetooth module
- H-Bridge Motor Driver
- 9V Battery
- 9V Battery holder

- 4 x 1.5 AA batteries
- 4 x 1.5 AA battery holder
- Double sided-tape
- Zip ties
- Android mobile device
- Connecting Wires

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### ***Open Source Phone***

- Arduino Uno
- USB Cable
- Breadboard
- Adafruit FONA 800 breakout board starter pack
  - FONA 800 Mini Cellular Breakout Board
  - Right-angle Mini GSM/Cellular Quad-Band Antenna - 2dBi SMA Plug
  - Lithium Ion Polymer Battery - 3.7v 1200mAh
  - Cell-phone TRRS Headset - Earbud Headphones w/ Microphone
- Connecting Wires



## Itemized Parts List

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### Arduino Kits

**Amazon:**

[https://www.amazon.com/Elegoo-Project-Tutorial-Prototype-Expansion/dp/B01D8KOZF4/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481925883&sr=1-1-spons&keywords=arduino+starter+kit&psc=1&linkCode=ll1&tag=arduinoipibake-20&linkId=35fc1d331e16cc9d9e2cc3fa75d6d8ca](https://www.amazon.com/Elegoo-Project-Tutorial-Prototype-Expansion/dp/B01D8KOZF4/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481925883&sr=1-1-spons&keywords=arduino+starter+kit&psc=1&linkCode=ll1&tag=arduinoipibake-20&linkId=35fc1d331e16cc9d9e2cc3fa75d6d8ca)

[https://www.amazon.com/Arduino-Ultimate-Starter-instruction-guide/dp/B00BT0NDB8/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481925963&sr=1-4&keywords=arduino+starter+kit&linkCode=ll1&tag=arduinoipibake-20&linkId=3940e2a0574ff1093f55ab606a1b8114](https://www.amazon.com/Arduino-Ultimate-Starter-instruction-guide/dp/B00BT0NDB8/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481925963&sr=1-4&keywords=arduino+starter+kit&linkCode=ll1&tag=arduinoipibake-20&linkId=3940e2a0574ff1093f55ab606a1b8114)

**Adafruit:**

<https://www.adafruit.com/products/1078>

**Sparkfun:**

Inventor's Kit

<https://www.sparkfun.com/products/14094>

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### Connecting wires

**Amazon:**

[https://www.amazon.com/Boundto-120pcs-Multicolored-Female-Breadboard/dp/B00ZWFEWO8/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481926432&sr=1-2&keywords=male+connection+wires&linkCode=ll1&tag=arduinoipibake-20&linkId=775d474dac0696e331a152d5a7e8b40a](https://www.amazon.com/Boundto-120pcs-Multicolored-Female-Breadboard/dp/B00ZWFEWO8/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481926432&sr=1-2&keywords=male+connection+wires&linkCode=ll1&tag=arduinoipibake-20&linkId=775d474dac0696e331a152d5a7e8b40a)

[https://www.amazon.com/dp/B073X7P6N2/ref=as\\_li\\_ss\\_tl?psc=1&linkCode=ll1&tag=arduinoipibake-20&linkId=1b383c9f59b3fe39be362481691956a6](https://www.amazon.com/dp/B073X7P6N2/ref=as_li_ss_tl?psc=1&linkCode=ll1&tag=arduinoipibake-20&linkId=1b383c9f59b3fe39be362481691956a6)

**Sparkfun:**

Male to Male

<https://www.sparkfun.com/products/12795>

Male to Female

<https://www.sparkfun.com/products/12794>

Female to Female

<https://www.sparkfun.com/products/12796>

The following can all be found in an Arduino Kit :

Breadboard  
Assortment of Resistors  
Potentiometer  
LEDs  
Piezo Buzzer  
Push Button Switch  
Ultrasonic Sensor  
Connecting wires  
Seven Segment LEDs (single and four digit)

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## Push Button Switches

[https://www.amazon.com/Gikfun-12x12x7-3-Tactile-Momentary-Arduino/dp/B01E38OS7K/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482004746&sr=8-2&keywords=arduino+push+button+switch&linkCode=ll1&tag=arduinoipibake-20&linkId=eab7010242e15af96aab0e887a1d1e8](https://www.amazon.com/Gikfun-12x12x7-3-Tactile-Momentary-Arduino/dp/B01E38OS7K/ref=as_li_ss_tl?ie=UTF8&qid=1482004746&sr=8-2&keywords=arduino+push+button+switch&linkCode=ll1&tag=arduinoipibake-20&linkId=eab7010242e15af96aab0e887a1d1e8)

<http://www.mouser.com/ProductDetail/TE-Connectivity-Alcoswitch/FSM2JSMAATR/?qs=sGAEPiMZZMvbyeSUH4qH%2fH49a3du0w9x>

<https://www.sparkfun.com/products/9190>

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## Piezo Buzzers

[https://www.amazon.com/a12081600ux0477-Diameter-Terminals-Electronic-Continuous/dp/B00B0Q4KKO/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482004991&sr=8-2&keywords=piezo+buzzer&linkCode=ll1&tag=arduinoipibake-20&linkId=9473543da9c847641bf013c55681a1a5](https://www.amazon.com/a12081600ux0477-Diameter-Terminals-Electronic-Continuous/dp/B00B0Q4KKO/ref=as_li_ss_tl?ie=UTF8&qid=1482004991&sr=8-2&keywords=piezo+buzzer&linkCode=ll1&tag=arduinoipibake-20&linkId=9473543da9c847641bf013c55681a1a5)

[https://www.amazon.com/uxcell-Industrial-Active-Electronic-Buzzer/dp/B016FCBBT0/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482004991&sr=8-6&keywords=piezo+buzzer&linkCode=ll1&tag=arduinoipibake-20&linkId=f5b7bd20630e749aff30a89da9d9634b](https://www.amazon.com/uxcell-Industrial-Active-Electronic-Buzzer/dp/B016FCBBT0/ref=as_li_ss_tl?ie=UTF8&qid=1482004991&sr=8-6&keywords=piezo+buzzer&linkCode=ll1&tag=arduinoipibake-20&linkId=f5b7bd20630e749aff30a89da9d9634b)

<https://www.sparkfun.com/products/7950>

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## CPU Fan

[https://www.amazon.com/Cooler-Master-SickleFlow-120-Radiators/dp/B0026ZPFCK/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481927074&sr=1-7&keywords=cpu+fan&linkCode=ll1&tag=arduinoipibake-20&linkId=b801715ef77f27e75881befe94646abb](https://www.amazon.com/Cooler-Master-SickleFlow-120-Radiators/dp/B0026ZPFCK/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481927074&sr=1-7&keywords=cpu+fan&linkCode=ll1&tag=arduinoipibake-20&linkId=b801715ef77f27e75881befe94646abb)

[https://www.amazon.com/Cooler-Master-Bearing-Cooling-Computer/dp/B002R9RBO0/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481927138&sr=1-9&keywords=cpu+fan&linkCode=ll1&tag=arduinoipibake-20&linkId=c121c1037892d60f629f44dcd67da5ab](https://www.amazon.com/Cooler-Master-Bearing-Cooling-Computer/dp/B002R9RBO0/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481927138&sr=1-9&keywords=cpu+fan&linkCode=ll1&tag=arduinoipibake-20&linkId=c121c1037892d60f629f44dcd67da5ab)

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## Arduino External Power Supply (9V)

[https://www.amazon.com/Arduino-power-supply-adapter-110V/dp/B018OLREG4/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482121936&sr=8-11&keywords=arduino+power+supply&linkCode=ll1&tag=arduinoipibake-20&linkId=a73b160a475358656d2ce8a7611977ad](https://www.amazon.com/Arduino-power-supply-adapter-110V/dp/B018OLREG4/ref=as_li_ss_tl?ie=UTF8&qid=1482121936&sr=8-11&keywords=arduino+power+supply&linkCode=ll1&tag=arduinoipibake-20&linkId=a73b160a475358656d2ce8a7611977ad)

[https://www.amazon.com/SunFounder-650mA-Power-Adapter-Arduino/dp/B01ABTKHIO/ref=as\\_li\\_ss\\_tl?\\_encoding=UTF8&psc=1&refRID=Q4KCV83M422N8Y1H34KC&linkCode=ll1&tag=arduinoipibake-20&linkId=738edf999cb9ad1ee486bc6088919c47](https://www.amazon.com/SunFounder-650mA-Power-Adapter-Arduino/dp/B01ABTKHIO/ref=as_li_ss_tl?_encoding=UTF8&psc=1&refRID=Q4KCV83M422N8Y1H34KC&linkCode=ll1&tag=arduinoipibake-20&linkId=738edf999cb9ad1ee486bc6088919c47)

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## MJE182 Power Transistor

<http://www.mouser.com/ProductDetail/ON-Semiconductor/MJE182/?qs=HVbQIW5zcXXxi31d6t%252bGpQ%3D%3D>

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## Ultrasonic Sensor (HC-SR04)

[https://www.amazon.com/SunFounder-Ultrasonic-Distance-Duemilanove-Rapsberry/dp/B00E0NXTJW/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482005832&sr=8-5&keywords=ultrasonic+sensor&linkCode=ll1&tag=arduinoipibake-20&linkId=f823d6ffb86d7784e8ad5511f043dc67](https://www.amazon.com/SunFounder-Ultrasonic-Distance-Duemilanove-Rapsberry/dp/B00E0NXTJW/ref=as_li_ss_tl?ie=UTF8&qid=1482005832&sr=8-5&keywords=ultrasonic+sensor&linkCode=ll1&tag=arduinoipibake-20&linkId=f823d6ffb86d7784e8ad5511f043dc67)

[https://www.amazon.com/HC-SR04-Ultrasonic-Distance-MEGA2560-ElecRight/dp/B01MA4O5G5/ref=as\\_li\\_ss\\_tl?s=electronics&ie=UTF8&qid=1507342219&sr=1-3&keywords=ultrasonic+sensor&linkCode=ll1&tag=arduinoipibake-20&linkId=da4654805a40d697d985c68216592a87](https://www.amazon.com/HC-SR04-Ultrasonic-Distance-MEGA2560-ElecRight/dp/B01MA4O5G5/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1507342219&sr=1-3&keywords=ultrasonic+sensor&linkCode=ll1&tag=arduinoipibake-20&linkId=da4654805a40d697d985c68216592a87)

<https://www.sparkfun.com/products/13959>

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## Seven Segment LED - Common Cathode

<http://www.mouser.com/ProductDetail/Broadcom-Avago/HDSP-513A/?qs=sGAEPiMZZMvkC18yXH9ilsSFKp4VzurGGrCZxmusANs%3d>

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## 4 Digit Seven Segment - Common Anode

[https://www.amazon.com/Price-Segment-Digits-Display-Common/dp/B071S2165H/ref=as\\_li\\_ss\\_tl?s=industrial&ie=UTF8&qid=1507342353&sr=1-10&keywords=seven+segment+led+common+anode&linkCode=ll1&tag=arduinoipibake-20&linkId=e75b8213ef3f03a1bfda52fe0ae2d079](https://www.amazon.com/Price-Segment-Digits-Display-Common/dp/B071S2165H/ref=as_li_ss_tl?s=industrial&ie=UTF8&qid=1507342353&sr=1-10&keywords=seven+segment+led+common+anode&linkCode=ll1&tag=arduinoipibake-20&linkId=e75b8213ef3f03a1bfda52fe0ae2d079)

<http://www.mouser.com/ProductDetail/Lite-On/LTC-2623G/?qs=sGAEpiMZZMvkC18yXH9illdXaCJr4RZ8AwAlFANnHvQ%3d>

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## IR LED & IR Receiver

### Sparkfun IR Kit

<https://www.sparkfun.com/products/13235>

### IR Receiver: **TSOP38238**

<https://www.sparkfun.com/products/10266>

<http://www.mouser.com/ProductDetail/Vishay-Semiconductors/TSOP38238/?qs=sGAEpiMZZMvnwheKzbT%252bFvg%2fdck9f6S7>

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## Thumb Joystick

[https://www.amazon.com/Gikfun-JoyStick-Breakout-Controller-Arduino/dp/B00RBHO3EE/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481928036&sr=1-7&keywords=arduino+joystick&linkCode=ll1&tag=arduinoipibake-20&linkId=7057b666a5d057491010232774653117](https://www.amazon.com/Gikfun-JoyStick-Breakout-Controller-Arduino/dp/B00RBHO3EE/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481928036&sr=1-7&keywords=arduino+joystick&linkCode=ll1&tag=arduinoipibake-20&linkId=7057b666a5d057491010232774653117)

[https://www.amazon.com/SunFounder-Joystick-Module-Arduino-Raspberry/dp/B013G8KSB8/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481928036&sr=1-8&keywords=arduino+joystick&linkCode=ll1&tag=arduinoipibake-20&linkId=8ec5e9b61a374f7d59021d807cbe66e9](https://www.amazon.com/SunFounder-Joystick-Module-Arduino-Raspberry/dp/B013G8KSB8/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481928036&sr=1-8&keywords=arduino+joystick&linkCode=ll1&tag=arduinoipibake-20&linkId=8ec5e9b61a374f7d59021d807cbe66e9)

[https://www.amazon.com/HiLetgo-JoyStick-Breakout-Joystick-Controller/dp/B00P7QBGD2/ref=as\\_li\\_ss\\_tl?s=pc&ie=UTF8&qid=1481928036&sr=1-4&keywords=arduino+joystick&linkCode=ll1&tag=arduinoipibake-20&linkId=158c2ae94f8d25cdd58440de054fb0cd](https://www.amazon.com/HiLetgo-JoyStick-Breakout-Joystick-Controller/dp/B00P7QBGD2/ref=as_li_ss_tl?s=pc&ie=UTF8&qid=1481928036&sr=1-4&keywords=arduino+joystick&linkCode=ll1&tag=arduinoipibake-20&linkId=158c2ae94f8d25cdd58440de054fb0cd)

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## 8 x 8 Matrix and Max7219 Panel

[https://www.amazon.com/MAX7219-Microcontroller-Compatible-Atomic-Market/dp/B00TNNDH0A/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006394&sr=8-4&keywords=max7219&linkCode=ll1&tag=arduinoipibake-20&linkId=965570b8bb595f85f93c196753dda31f](https://www.amazon.com/MAX7219-Microcontroller-Compatible-Atomic-Market/dp/B00TNNDH0A/ref=as_li_ss_tl?ie=UTF8&qid=1482006394&sr=8-4&keywords=max7219&linkCode=ll1&tag=arduinoipibake-20&linkId=965570b8bb595f85f93c196753dda31f)

[https://www.amazon.com/Red-Dot-Matrix-Module-MAX7219/dp/B01GNKSC6Y/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006394&sr=8-10&keywords=max7219&linkCode=ll1&tag=arduinoipibake-20&linkId=d5e1525631c153aece4310a86f35e64c](https://www.amazon.com/Red-Dot-Matrix-Module-MAX7219/dp/B01GNKSC6Y/ref=as_li_ss_tl?ie=UTF8&qid=1482006394&sr=8-10&keywords=max7219&linkCode=ll1&tag=arduinoipibake-20&linkId=d5e1525631c153aece4310a86f35e64c)

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## Shift Register (SN74HC595 8-bit)

<https://www.sparkfun.com/products/13699>

[https://www.amazon.com/Texas-Instruments-SN74HC595N-Registers-3-State/dp/B01J6Q1UIY/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006596&sr=8-5&keywords=shift+register&linkCode=ll1&tag=arduinoipibake-20&linkId=d8dc99ed298316e5108b4d71298fb624](https://www.amazon.com/Texas-Instruments-SN74HC595N-Registers-3-State/dp/B01J6Q1UIY/ref=as_li_ss_tl?ie=UTF8&qid=1482006596&sr=8-5&keywords=shift+register&linkCode=ll1&tag=arduinoipibake-20&linkId=d8dc99ed298316e5108b4d71298fb624)

[https://www.amazon.com/Texas-Instruments-SN74HC595N-Registers-3-State/dp/B01J6WI7RA/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006596&sr=8-4&keywords=shift+register&linkCode=ll1&tag=arduinoipibake-20&linkId=01a6d5e1883dcb66cdc60436b8b069f7](https://www.amazon.com/Texas-Instruments-SN74HC595N-Registers-3-State/dp/B01J6WI7RA/ref=as_li_ss_tl?ie=UTF8&qid=1482006596&sr=8-4&keywords=shift+register&linkCode=ll1&tag=arduinoipibake-20&linkId=01a6d5e1883dcb66cdc60436b8b069f7)

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## Wii Nunchuk

[https://www.amazon.com/Generic-B002GEKIOG1-Nunchuk-Nunchuck-Controller/dp/B002GEKIOG/ref=as\\_li\\_ss\\_tl?s=videogames&ie=UTF8&qid=1482006701&sr=1-6&keywords=wii+nunchuck&linkCode=ll1&tag=arduinoipibake-20&linkId=6c57d90fd7484ecaffe0cdf11feea9f](https://www.amazon.com/Generic-B002GEKIOG1-Nunchuk-Nunchuck-Controller/dp/B002GEKIOG/ref=as_li_ss_tl?s=videogames&ie=UTF8&qid=1482006701&sr=1-6&keywords=wii+nunchuck&linkCode=ll1&tag=arduinoipibake-20&linkId=6c57d90fd7484ecaffe0cdf11feea9f)

[https://www.amazon.com/Replacement-Nintendo-Nunchuk-Nunchuck-Motion-Plus/dp/B005JR7FRA/ref=as\\_li\\_ss\\_tl?s=videogames&ie=UTF8&qid=1482006701&sr=1-7&keywords=wii+nunchuck&linkCode=ll1&tag=arduinoipibake-20&linkId=2f715df43468e2c34e548b09750de089](https://www.amazon.com/Replacement-Nintendo-Nunchuk-Nunchuck-Motion-Plus/dp/B005JR7FRA/ref=as_li_ss_tl?s=videogames&ie=UTF8&qid=1482006701&sr=1-7&keywords=wii+nunchuck&linkCode=ll1&tag=arduinoipibake-20&linkId=2f715df43468e2c34e548b09750de089)

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## Arduino Nunchuk Adapter

[https://www.amazon.com/Gikfun-Adapter-shield-Module-Arduino/dp/B00RK1VKUQ/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006790&sr=8-1&keywords=arduino+nunchuck+adapter&linkCode=ll1&tag=arduinoipibake-20&linkId=2beb2339cfa5da78e6cc29cc5a57b582](https://www.amazon.com/Gikfun-Adapter-shield-Module-Arduino/dp/B00RK1VKUQ/ref=as_li_ss_tl?ie=UTF8&qid=1482006790&sr=8-1&keywords=arduino+nunchuck+adapter&linkCode=ll1&tag=arduinoipibake-20&linkId=2beb2339cfa5da78e6cc29cc5a57b582)

[https://www.amazon.com/Arduino-Compatible-WiiChuck-Nunchuck-Adapter/dp/B01MXDHM26/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006790&sr=8-4&keywords=arduino+nunchuck+adapter&linkCode=ll1&tag=arduinoipibake-20&linkId=5476accccd12189c0d9f88faa3ea76e2](https://www.amazon.com/Arduino-Compatible-WiiChuck-Nunchuck-Adapter/dp/B01MXDHM26/ref=as_li_ss_tl?ie=UTF8&qid=1482006790&sr=8-4&keywords=arduino+nunchuck+adapter&linkCode=ll1&tag=arduinoipibake-20&linkId=5476accccd12189c0d9f88faa3ea76e2)

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## Micro Servo

[https://www.amazon.com/TowerPro-SG90-Micro-Servo-2pk/dp/B01608II3Q/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006868&sr=8-3&keywords=mini+servo&linkCode=ll1&tag=arduinoipibake-20&linkId=0fecb6978df47759e6d5695c26d736c6](https://www.amazon.com/TowerPro-SG90-Micro-Servo-2pk/dp/B01608II3Q/ref=as_li_ss_tl?ie=UTF8&qid=1482006868&sr=8-3&keywords=mini+servo&linkCode=ll1&tag=arduinoipibake-20&linkId=0fecb6978df47759e6d5695c26d736c6)

[https://www.amazon.com/Adafruit-Mini-Pan-Tilt-Kit-Assembled/dp/B00XW2NR12/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482006949&sr=8-16&keywords=micro+servo&linkCode=ll1&tag=arduinoipibake-20&linkId=9aff1e7f9423f03ca255b013ac2ba9c2](https://www.amazon.com/Adafruit-Mini-Pan-Tilt-Kit-Assembled/dp/B00XW2NR12/ref=as_li_ss_tl?ie=UTF8&qid=1482006949&sr=8-16&keywords=micro+servo&linkCode=ll1&tag=arduinoipibake-20&linkId=9aff1e7f9423f03ca255b013ac2ba9c2)

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## Pan-Tilt Frame

<https://www.adafruit.com/products/1968>

Assembled:

<https://www.adafruit.com/products/1967>

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## 9V Battery Holder with Barrel Connector

<https://www.adafruit.com/products/80>

[https://www.amazon.com/5pack-Battery-2-1mm-Arduino-Corpc/dp/B01AXIEDX8/ref=as\\_li\\_ss\\_tl?encoding=UTF8&psc=1&refRID=78MVBJC1ZMTX8DCW0B5D&linkCode=ll1&tag=arduinoipibake-20&linkId=11ee9e944dcfe0094d9c399ad5f11fdf](https://www.amazon.com/5pack-Battery-2-1mm-Arduino-Corpc/dp/B01AXIEDX8/ref=as_li_ss_tl?encoding=UTF8&psc=1&refRID=78MVBJC1ZMTX8DCW0B5D&linkCode=ll1&tag=arduinoipibake-20&linkId=11ee9e944dcfe0094d9c399ad5f11fdf)

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## 1602 LCD

<https://www.adafruit.com/products/181>

[https://www.amazon.com/Arducam-Display-Controller-Character-Backlight/dp/B019D9TYMI/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482007191&sr=8-3&keywords=1602+lcd&linkCode=ll1&tag=arduinoipibake-20&linkId=a62ce0a6cab6c881607a9354c713c4b2](https://www.amazon.com/Arducam-Display-Controller-Character-Backlight/dp/B019D9TYMI/ref=as_li_ss_tl?ie=UTF8&qid=1482007191&sr=8-3&keywords=1602+lcd&linkCode=ll1&tag=arduinoipibake-20&linkId=a62ce0a6cab6c881607a9354c713c4b2)

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## Male Header Pins

[https://www.amazon.com/15Pcs-2-54-Single-11MM-Header/dp/B00FR19WQA/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482007228&sr=8-1&keywords=male+header+pins&linkCode=ll1&tag=arduino-pi-bake-20&linkId=0a333fae92eea1396888805b847ddb52](https://www.amazon.com/15Pcs-2-54-Single-11MM-Header/dp/B00FR19WQA/ref=as_li_ss_tl?ie=UTF8&qid=1482007228&sr=8-1&keywords=male+header+pins&linkCode=ll1&tag=arduino-pi-bake-20&linkId=0a333fae92eea1396888805b847ddb52)

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## Wifi Shield

<http://www.ebay.com/itm/WIFI-Development-Board-ESP-12E-Based-ESP8266-Shield-for-Arduino-UNO-OTA-WeMos-D1-/291917155585?hash=item43f79e4d01:g:5FYAAOSw44BYCKrt>

<http://www.ebay.com/itm/WIFI-Development-Board-ESP-12E-Based-ESP8266-Shield-for-Arduino-UNO-OTA-WeMos-D1-/371717727143?hash=item568c1a63a7:g:AboAAOSwo4pYClqC>

Sparkfun Wifi Shield (Will need to solder stackable headers)

<https://www.sparkfun.com/products/13287>

Stackable Header Kit

<https://www.sparkfun.com/products/11417>

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## Car Kit

<http://www.ebay.com/itm/2WD-Smart-Motor-Robot-Car-Chassis-Battery-Box-Kit-Speed-Encoder-for-Arduino-DI-/252426895398?hash=item3ac5d0c026:g:7IkAAOSw3YNXYhcT>

<http://www.ebay.com/itm/2WD-Robot-Car-Chassis-Kit-For-Arduino-Raspberry-Pi-w-Encoder-and-Battery-Box-/321798608491?hash=item4aecb1166b:g:FuoAAOSwoBtW40l0>

[https://www.amazon.com/Ardokit-Chassis-Encoder-Battery-Arduino/dp/B00K5OWHXO/ref=as\\_li\\_ss\\_tl?encoding=UTF8&psc=1&refRID=79GKXDB7QANZTY499K08&linkCode=ll1&tag=arduino-pi-bake-20&linkId=6b41e3f519e9ecdf501b7e330da97808](https://www.amazon.com/Ardokit-Chassis-Encoder-Battery-Arduino/dp/B00K5OWHXO/ref=as_li_ss_tl?encoding=UTF8&psc=1&refRID=79GKXDB7QANZTY499K08&linkCode=ll1&tag=arduino-pi-bake-20&linkId=6b41e3f519e9ecdf501b7e330da97808)

[https://www.amazon.com/CJRSLRB%C2%AE-Chassis-Encoder-Battery-Arduino/dp/B01L0ZY842/ref=as\\_li\\_ss\\_tl?encoding=UTF8&psc=1&refRID=79GKXDB7QANZTY499K08&linkCode=ll1&tag=arduino-pi-bake-20&linkId=3f1f847c3a6425ff08c139bb6b9ee270](https://www.amazon.com/CJRSLRB%C2%AE-Chassis-Encoder-Battery-Arduino/dp/B01L0ZY842/ref=as_li_ss_tl?encoding=UTF8&psc=1&refRID=79GKXDB7QANZTY499K08&linkCode=ll1&tag=arduino-pi-bake-20&linkId=3f1f847c3a6425ff08c139bb6b9ee270)

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## Bluetooth Module

[https://www.amazon.com/KEDSUM-Arduino-Bluetooth-Wireless-Transceiver/dp/B0093XAV4U/ref=as\\_li\\_ss\\_tl?s=electronics&ie=UTF8&qid=1507343122&sr=1-3&keywords=arduino+bluetooth+module&linkCode=ll1&tag=arduinoipibake-20&linkId=e887e9036f1faa5c2526cf3cf40650c2](https://www.amazon.com/KEDSUM-Arduino-Bluetooth-Wireless-Transceiver/dp/B0093XAV4U/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1507343122&sr=1-3&keywords=arduino+bluetooth+module&linkCode=ll1&tag=arduinoipibake-20&linkId=e887e9036f1faa5c2526cf3cf40650c2)

[https://www.amazon.com/Pass-Through-Communication-Compatible-Atomic-Market/dp/B00TNOO438/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482008139&sr=8-5&keywords=arduino+bluetooth+module&linkCode=ll1&tag=arduinoipibake-20&linkId=cb49bb3bcc14ef66c1e91a6f7480e0f](https://www.amazon.com/Pass-Through-Communication-Compatible-Atomic-Market/dp/B00TNOO438/ref=as_li_ss_tl?ie=UTF8&qid=1482008139&sr=8-5&keywords=arduino+bluetooth+module&linkCode=ll1&tag=arduinoipibake-20&linkId=cb49bb3bcc14ef66c1e91a6f7480e0f)

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## Motor Driver

[https://www.amazon.com/Super-H-Bridge-Driver-Module-Arduino/dp/B00NN6EB3U/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482008465&sr=8-11&keywords=arduino+motor+driver&linkCode=ll1&tag=arduinoipibake-20&linkId=3623bb1a9cfddfd11333928283efec9](https://www.amazon.com/Super-H-Bridge-Driver-Module-Arduino/dp/B00NN6EB3U/ref=as_li_ss_tl?ie=UTF8&qid=1482008465&sr=8-11&keywords=arduino+motor+driver&linkCode=ll1&tag=arduinoipibake-20&linkId=3623bb1a9cfddfd11333928283efec9)

[https://www.miniinbox.com/l298n-dual-h-bridge-stepper-motor-driver-controller-board-module-for-arduino-uno-mega-r3-mega2560-duemilanove-nano-robot\\_p1638643.html?prm=2.5.1.1](https://www.miniinbox.com/l298n-dual-h-bridge-stepper-motor-driver-controller-board-module-for-arduino-uno-mega-r3-mega2560-duemilanove-nano-robot_p1638643.html?prm=2.5.1.1)

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## 9V Battery holder in case

<https://www.adafruit.com/products/67>

### Alternative 9V Battery connector

[https://www.amazon.com/5pack-Battery-2-1mm-Arduino-Corpcor/dp/B01AXIEDX8/ref=as\\_li\\_ss\\_tl?s=electronics&ie=UTF8&qid=1507344695&sr=1-14&keywords=9v+battery+holder&linkCode=ll1&tag=arduinoipibake-20&linkId=a8f06b627d335622ab2d9381dcb81b09](https://www.amazon.com/5pack-Battery-2-1mm-Arduino-Corpcor/dp/B01AXIEDX8/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1507344695&sr=1-14&keywords=9v+battery+holder&linkCode=ll1&tag=arduinoipibake-20&linkId=a8f06b627d335622ab2d9381dcb81b09)

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## 4 x AA Battery holder

[https://www.rcplanet.com/Tactic\\_4\\_Cell\\_AA\\_Battery\\_Holder\\_w\\_Futaba\\_J\\_Connect\\_p/tacm2020.htm?gclid=Cj0KEQIAhNnCBRCqkP6bvOjz\\_lwBEiQAMn\\_TMZh0sJmvD4cL3ZmJzfm4JUveR2tzblpMtAosU8IN3laAuxE8P8HAQ](https://www.rcplanet.com/Tactic_4_Cell_AA_Battery_Holder_w_Futaba_J_Connect_p/tacm2020.htm?gclid=Cj0KEQIAhNnCBRCqkP6bvOjz_lwBEiQAMn_TMZh0sJmvD4cL3ZmJzfm4JUveR2tzblpMtAosU8IN3laAuxE8P8HAQ)



[https://www.amazon.com/Tactic-Cell-Battery-Holder-Connector/dp/B002I9V60E/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482121751&sr=8-1&keywords=aa+battery+holder+futaba&linkCode=ll1&tag=arduinoipibake-20&linkId=8381deee0df1b79c23d7e3e1e423a526](https://www.amazon.com/Tactic-Cell-Battery-Holder-Connector/dp/B002I9V60E/ref=as_li_ss_tl?ie=UTF8&qid=1482121751&sr=8-1&keywords=aa+battery+holder+futaba&linkCode=ll1&tag=arduinoipibake-20&linkId=8381deee0df1b79c23d7e3e1e423a526)

[https://www.amazon.com/Generic-Battery-Holder-Connector-Arduino/dp/B00O5AZI12/ref=as\\_li\\_ss\\_tl?ie=UTF8&qid=1482121936&sr=8-12&keywords=arduino+power+supply&linkCode=ll1&tag=arduinoipibake-20&linkId=9da74ddd1ff0dab390c10b56ce0c0552](https://www.amazon.com/Generic-Battery-Holder-Connector-Arduino/dp/B00O5AZI12/ref=as_li_ss_tl?ie=UTF8&qid=1482121936&sr=8-12&keywords=arduino+power+supply&linkCode=ll1&tag=arduinoipibake-20&linkId=9da74ddd1ff0dab390c10b56ce0c0552)

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## FONA 800 GSM

Breakout Starter Pack (Recommended - contains everything you need):

<https://www.adafruit.com/products/2522>

Shield (alternative to the breakout board):

<https://www.adafruit.com/products/2468>

Phone components needed if purchased separately (if you opt not to get the starter pack):

[FONA 800 Breakout GSM Board](#)

[Antenna](#)

[LiPo Battery](#)

[Headset](#)

Misc Components to enhance your phone project:

[Mini-Speaker](#)

[Electret Microphone](#)

[Vibrating Motor Disc](#)

[TFT Shield with Resistive Touch](#)