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For Projects

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Time for Valentines Day.   » $3.6 GPRS GSM MODULE FROM AI THINKER   »   Thermal design: Get the heat out of the electronics   »   Butterfly IQ – Ultrasound Any

Advanced View Arduino Projects List

List of Projects using arduino with advance view:

1. Pan & Tilt Servo bracket controlled by Arduino
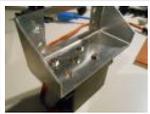
   Hi, in this instructable i am showing you how to build a very nice and very sturdy pan & tilt turret for your rc / arduino projects. (Please don`t judge my english grammer etc. i`m from holland) The things that you need for this project...... Listed under: Other Projects, Projects

2. Clock with Tics (presentation prototype) using Arduino

   Clock with Tics is an Arduino-powered 24-hour digital clock that displays expletives at random intervals. A clock 'ticks'. A 'tic' (note the different spelling) can be a mental disorder and can manifest itself in a number of ways; most seriously, someone suffering from "Tourette's Syndrome"...... Listed under: Clock – Timer Projects, Projects

3. Cheap lcd screen for the Arduino

   We have used the pda with a desktop computer (robot) and with the Nslu2. Here we are going to use an old pda with serial port.to act as an lcd. Everyone either has one or knows someone who has an old pda that they do...... Listed under: LCD Projects

4. Starting with robotics (Arduino)

   Starting with robotics can be hard, if you don't know where and how to start. Best way to start is to make mobile robot. In this step-by-step we will show you, how to make cheap robot with parts available in your local store and household....... Listed under: Robotics – Automation Projects

5. Compact 3-in-1 Stripboard DIYduino with Integrated Sensor and L298N Motor Shield

   I am presenting a compact design of a stripboard Arduino board (DIYduino) that includes a 2A motor driver and has additionally the functionality of a sensor shield. The 2-channel version cost approximately $29.43 and is more affordable compared to $39.00 for a commercially available system...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Motor Projects, Projects, Sensor – Transducer – Detector Projects

6. Rainbow Word Clock using Arduino

   At long last I have managed to finish the Rainbow Word Clock! Once again, this one was inspired by Doug and his creations http://www.instructables.com/id/The-Wordclock-Grew-Up/ I have a fixation with RGB LED's at the moment and I wanted to do something a little different. So, while it...... Listed under: Clock – Timer Projects, Projects

7. Persistence of Vision Wand using Arduino

Persistence of Vision (POV) Wands are a fun way to create interesting long exposure photographs and light displays. The wand consists of a single row of LEDs controlled by an Arduino Uno. When the wand is turned on it appears to be flickering in a...... Listed under: Game – Entertainment Projects, Home Automation Projects, Projects

8. Big Ball Maze Game using Arduino

This project was the result of an urge to contribute something to the Creative Games section of my kids' elementary school fair. The kids loved it for it's simple old-school game aesthetic mixed with Wii-style and Kinect-style video game control. It's a spin-off project of...... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects

9. Batgirl Birkin Bag

What a girl wants. What a girl needs. What's more exclusive and has more cachet than scoring a Birkin bag? Pow!!! A Batgirl Birkin bag! Holey Haute Couture, Batman! Yes, you too can knock off a version of this famous bag. Okay, even mine started...... Listed under: Home Automation Projects, Phone Projects, Sensor – Transducer – Detector Projects

10. Internet Devices for Home Automation using Arduino

This instructable shows the principles involved in making devices to control home automation over the internet. We're going to construct a device (or several of them), that talk to each other over the internet to control lights, motors for curtains/blinds, power sockets etc. In contrast...... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects

11. Arduino powered Solar Battery Charger

The following design is for a Solar battery charger ran by an Arduino Nano. It can handle a standard lead acid 12V battery, like for a scooter or a car. Furthermore the design has been tested and runs with 90% efficiency under 70$\circ$C (158$\circ$F). It...... Listed under: Battery Projects, Solar energy projects

12. Code generator for custom Android or Arduino menus

Introduction This is the first of two instructables that make up a complete customizable Home Automation for Beginners example. See DIY Home Automation for Beginners for the second part. It is aimed at the absolute beginner. If you can handle a sharp knife without cutting...... Listed under: Arduino Android

13. Programmable Temperature Controller + Hot Plate

Heating things up is one of the most performed tasks in a lab. Quite a lot of times it is not enough to simply hold something at a certain temperature, but the rate at which something is heated and for how long is just as...... Listed under: Arduino Programmer Projects, Metering – Instrument Projects, Temperature Measurement Projects

14. DCF77 master clock MK2
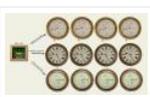
Features Arduino 328 Microprocessor is used to decode and display Time & date from the DCF77 "Atomic" Clock in Mainflingen near Frankfurt Germany The DCF77 signal is decoded using the fantastic new DCF77 library written by Udo Klein meaning the clock stays in sync and...... Listed under: Clock – Timer Projects

15. Arduino-powered LED Clock

A fun, simple LED clock, that will give you the time to the nearest half hour using single-color LEDs. Parts needed are as follows: Arduino Nano 400 tie-point Breadboard Ribbon Cable DS1307 RTC IC 32.768 kHz Crystal (12) 10mm LEDs (12) 180 Ohm resistors (2)...... Listed

under: [Clock – Timer Projects](), [LED Projects]()

16. [Arduino Programmable Constant Current Power Resistance Dummy Load]()

Glad to see you have arrived on this page to learn how to build a programmable constant direct current dummy load. This load will allow you to draw a set current from any source. This load can also be set to a constant resistance or…… Listed under: [Arduino Programmer Projects]()

17. [Network Time Protocol (NTP) Client using Arduino]()

In this example, you will use your Ethernet Shield and your Arduino to query a Network Time Protocol (NTP) server. This way, your Arduino can get the time from the Internet. Circuit The Ethernet shield allows you to connect a WizNet Ethernet controller to the…… Listed under: [Internet – Ethernet – LAN Projects](), [Projects]()

18. [Drive by wire go kart using Arduino]()

I just got a new go kart engine, i went from 6hp to 10hp. This new kohler engine I got I think was not built to put on a go kart, so I had some trouble finding a way to attach the gas petal. Well…… Listed under: [Car Projects](), [Motor Projects]()

19. [Programming Arduino Wirelessly]()
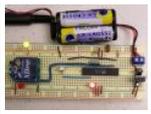
The Arduino system offers an easy and open-source method for programming microcontrollers. Normally this means using a serial cable or USB cable attached directly to the microcontroller project. But what if your project is floating in a weather balloon, glued to the bottom of a swimming pool…… Listed under: [Arduino Programmer Projects](), [Projects]()

20. [Put a Cylon in it!]()

Last year the comedy sketch show 'Portlandia' made fun of an arts and craft trend, where craft artists would take ordinary items and 'put a bird on it'. I fell victim to a similar trend in the geek crowd: Take an ordinary silver item and…… Listed under: [LED Projects]()

21. [Water Flow Gauge using Arduino]()

Measuring the consumption of a resource that has units by volume can be more tricky than it sounds. Use of resources such as water, gas, and even electricity is typically measured by gauges that determine either instantaneous flow rate or cumulative volume over time. Both…… Listed under: [Other Projects]()

22. [Modern RGB LED Clock using Arduino]()

As hard as it might be to believe, I had never built an electronic clock of any kind. I've always thought electronic clocks were passe and not worth the time to design and build one. In addition, I thought that all interesting electronic clocks designs…… Listed under: [Clock – Timer Projects](), [LED Projects](), [Projects]()

23. [Low resolution display done right]()

A resolution of 8×8 pixels may not sound like enough for anything interesting, but with the right setup, it is possible to create beautiful, complex animations and even add some interactivity. In the next pages I will detail the steps needed to build the low-res…… Listed under: [LCD Projects]()

24. [64 pixel RGB LED Display – Another Arduino Clone]()

This display is based on an 8×8 RGB LED Matrix. For testing purposes it was connected to a standard Arduino board (Diecimila) using 4 shift registers. After getting it to work I permatized it on a fabbed PCB. The shift registers are 8-bit wide and...... Listed under: [LED Projects](), [Projects]()

25. [RFID cat door using Arduino]()

Intro: RFID Cat Door This is a cat door /flap that can only be opened by the animal that wears the appropriate RFID tag. Arduino controls the process. It features a custom made antenna large enough to function as a gate, which makes it easy...... Listed under: [Projects](), [RFID – NFC projects]()

26. [Automatic Multi-Photo Taker (Photobooth Style)]()

This is a tutorial on how to program your DSLR camera to take photos photobooth-style. It's a simple Arduino setup that allows you to take continuous photos with 3-second delay intervals. This was built for a college electronics project. A motion sensor detects motion in...... Listed under: [Video – Camera – Imaging Projects]()

27. [How To Smell Pollutants using an Arduino]()

This Instructable explains how to use a gas sensor with your Arduino. This lets your Arduino smell (and hence you program responses to) overall gas levels for a variety of nasties, including ethanol, methane, formaldehyde, and a bunch of other volatile organic compounds. My cost...... Listed under: [Projects](), [Sensor – Transducer – Detector Projects]()

28. [Gas detector / indicator (USB powered) with arduino]()

ArduSniffer This Instructable shows how to build a gas detector / indicator using an arduino. The finished product is USB powered and displays the amount of detected gas on a led display. In this design the reset button on the arduino is also working. This...... Listed under: [Projects](), [Sensor – Transducer – Detector Projects]()

29. [BoB the BiPed]()

Did you buy an arduino after seeing all the cool instructables and now you tired of just making LEDs blink? Are you envious of all the cool walking robots people are building but don't have the experience or cash for all of those servos and expensive brackets?...... Listed under: [Robotics – Automation Projects]()

30. [Arduino Programming With Atmel Studio 6.0]()

How to import the compiled Arduino IDE libraries into Atmel Studio 6.0 using a program written by Omar Francisco. This will allow you to use the feature rich programming environment of Atmel Studio to program the Arduino Uno. Other Arduino boards such as the Mega...... Listed under: [Arduino Programmer Projects](), [Projects]()

31. [How to Control arduino by bluetooth from PC]()

I wanted to make it possible to control an arduino board from my phone. So that I could control other devices. the easiest way seemed to be using bluetooth. but when I received the parts needed I found it want quite as simple as I...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](), [Projects](), [RTOS – OS Projects]()

32. [DIY Motion Sensor Alarm System]()

Are you constantly being scared when people sneak up behind your back? Do you have bad hearing and can't hear people approaching you? Do you want to just build a super fun Arduino project? If you answered yes to any of those questions, then this...... Listed under:

41. [Arduino I2C and Processing](#)

As promised, this week brings another communications tutorial! In this video, we'll use both the serial and processing knowledge that we gained last week, plus an I2C enabled temperature-sensing IC. [box type="note" color=" #202020 " bg="#ffbb00 " font="verdana" fontsize="14" radius="20 " border="#000" float="right" head="Attributes"]Thanks to......
Listed under: [Other Projects](#), [Projects](#)

42. [Scratching with Arduino](#)
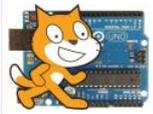
MIT has developed a fantastic visual programming language called Scratch. It is also an amazing learning tool for children, because it is simple, cute, and by providing interaction with the real world by a board called "Scratch Sensor Board". This Instructable shows the development of a shield...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

43. [Build Your Own Arduino](#)

Setting up an Arduino on a breadboard has become a process I have grown to love. Within a few minutes you can have a fully working Arduino platform to work with as you will see in this tutorial. There have been several occasions when I...... Listed under: [How To – DIY – Projects](#), [Projects](#)

44. [High Speed Photography](#)
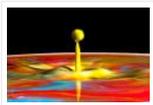
With this device you'll be able to: take pictures from anything you can sense or detect: – movement – sound – ... You don't need to modify your camera or flash for this. It's compatible with the old High Voltage flashes and the new TTL...... Listed under: [Sensor – Transducer – Detector Projects](#), [Video – Camera – Imaging Projects](#)

45. [3 wires interface for LCD display using Arduino](#)

This post is based on the work made previously by tomek in wiring LCD displays using 4 bits. The basic idea is to group the 7 pins that are needed to drive the LCD in only 3 using a shift register. This is a cheap...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [LCD Projects](#), [Projects](#)

46. [Cheap working homemade arduino joystick](#)

Hello everyone! Today I present you : Arduino Joystick! One day I was checking the inside of old joystick. System wasn't that hard to understand, so I thought of making my of system. The whole build is made only by me. I didn't check the...... Listed under: [How To – DIY – Projects](#), [Projects](#)

47. [Artoo [R2] (ATtiny2313 Wall Avoiding Robot)](#)

Since I had a lot of ATtiny2313s lying around I wanted to do something cool with them, I thought for a while and then decided to make a simple wall avoiding robot with the ATtiny2313, an ultrasonic sensor and 2 motors. Its an easy to...... Listed under: [Robotics – Automation Projects](#)

48. [Pet Curfew: An Arduino Controlled Pet Door](#)

The Problem: You want to restrict the time when your pet is allowed to go outside. This could be because the neighborhood is not safe for your cat or small dog at night (marauding coyotes comes to mind). But you would like your pet to...... Listed under: [Home Automation Projects](#), [Projects](#)

49. [Garage Door Opener with iphone using Arduino](#)

What do I need to start? The hardware requirements to start is: *Note: where can I purchase the material with all the components to build myself the system: http://iwup.altervista.org/shop/reference_list.pdf 1.-) Arduino UNO with USB cable 2.-) Ethernet Shield Arduino

3.-) Relay (for arduino 5 V)...... Listed under: [Home Automation Projects](), [Interfacing(USB – RS232 – I2c -ISP) Projects](), [Phone Projects](), [Projects]()

50. [R/C LEGO® Car Redux]()

After I built R/C Lego Car, that used hacked motors and motor housings from the toy Car and toy R/C cars. I realized most of the parts from that toy R/C car that I took the motor out of became wasted. This way was not very...... Listed under: [Game – Entertainment Projects]()

51. [Hercules: The Motion Controlled Android Robot using Arduino]()

When I was in the 8th grade, I was intrigued while playing the motion games on Nokia 5800. I was thrilled, how I could control the racing car by only tilting the phone. I used to dream of making this same car in the real...... Listed under: [Arduino Android](), [Internet – Ethernet – LAN Projects](), [Projects](), [Robotics – Automation Projects]()

52. [2-Player Pong Game with Arduino Uno]()

Classical Pong game implemented on an Arduino Uno using a PCD8544 LCD screen which is better known as the Nokia 5110 screen. Player bars are controlled by a potentiometer for each player. If you want the bar to go left, just turn the potentiometer left....... Listed under: [Game – Entertainment Projects](), [Projects]()

53. [James – Your first Arduino Robot]()

Edit: Thank you so much everyone for voting for James in the Toy Contest! He got first place and I won a $500 Shapeways voucher! Expect to see more robot instructables from me in the future! 😄 So you want to make a robot? Don't...... Listed under: [Robotics – Automation Projects]()

54. [Build a transistor circuit board for controlling Air Conditioner remote control with Arduino]()

I was supporting a group of student on their graduation project. One of the difficulties they faced was on controlling an A/C unit with Arduino microcontroller. The first experiment we tried to work it out was by record the A/C remote control beam signal for...... Listed under: [Home Automation Projects](), [Projects]()

55. [uDuino: Very Low Cost Arduino Compatible Development Board]()

Arduino boards are great for prototyping. However they get rather expensive when you have multiple concurrent projects or need lots of controller boards for a larger project. There are some great, cheaper alternatives (Boarduino, Freeduino) but the costs still add up when you need many...... Listed under: [Development Board – Kits Projects](), [Projects]()

56. [Mini Arduino environment monitor ** UPDATE – Added RTC ***]()

This is an Example of how you can use the Arduino to monitor various environmental parameters And display them on a LCD screen. Note: I Added a Real Time Clock!! To see the steps, added parts and Sketch I added new steps.. Step 1: Parts List...... Listed under: [LCD Projects]()

57. [Stargate LED Lighted Necklace]()

Ever need to have a Stargate handy? You can wear one around your neck and have it at the ready. Ears starting to bleed from the volume of the music at the club or that Euro-chic clothing retailer outlet? Activate the Stargate to jump to...... Listed under: [LED Projects]()

58. Twitter Mood Light using an Arduino

How's the world feeling right now? This box tells you. Powered by: an Arduino, a WiFly wireless module, an RGB LED, Twitter.com and a 9v battery. I'm a news junkie. I want to know everything that is going on in the world as soon as it happens. I want to wake up and...... Listed under: Home Automation Projects, LED Projects, Projects

59. Bootload an Arduino with a ZIF Socket

Bootloading an Arduino with a ZIF socket allows you to easily program a lot of chips at once without worrying about mangling the pins. The reason for this is that ZIF stands for "zero insertion force," and as the name implies, ZIF sockets don't require...... Listed under: Projects, RTOS – OS Projects

60. Designing and building an synthesizer with Meeblip and Arduino, added videos!

For my internship at Create Digital Music/Meeblip I've created quite a fun little synthesizer. This thing is meant to be more flexible than other synthesizer by making it completely independent; it is battery powered, has its own amplifier/speaker and is controlled by a manually operated sequencer. Inspiration...... Listed under: Sound – Audio Projects

61. Arduino V-USB / HID 14 channel data logger
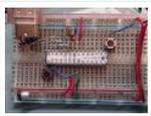
UPDATE: Please see Addendum 2 at the end of this article for an Excel automatic logging implementation. There are several good articles on Instructables about building your own Arduino. Depending on your horde of electrical parts, you may be able to build an Arduino clone...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

62. How to use a 1602 16X2 LCD display with Arduino, TI Launchpad, and standalone MSP430 video instructions

I show how to use a standard 16X2 LCD display in three different use cases. 1. With an Arduino Uno 2. With a TI Launchpad MSP430 running Energia 3. Directly on a breadboard on an MSP430G2553 running Energia This LCD display is low cost -...... Listed under: LCD Projects, Projects

63. The Arduino Internet Gizmo
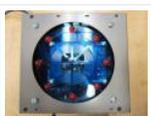
The Arduino Internet Gizmo is a USB, Arduino, and RFID device for web surfing. The gizmo works by placing an RFID tag on the top of the gizmo. The gizmo reads the RFID tag and sends the tag number via USB to a program running...... Listed under: Internet – Ethernet – LAN Projects, Projects

64. Arduino Motors and Transistors

This week, we'll finally be using the Arduino to control some motors! First up, we'll control a standard DC motor running off a 9V battery with the help of an NPN transistor and a PWM (Pulse Width Modulated) signal from the Arduino. [box type="note" color="...... Listed under: Motor Projects, Projects

65. Oscilloscope / Logic Analyzer using Arduino

One of the frustrating things about developing and debugging electronic circuits is that you can't look inside the circuit to see what is happening. Even with a circuit laid out before you on a workbench and powered up it may seem like you're in the...... Listed under: Other Projects

66. Digital Book Cricket Game with ATtiny 85 using Arduino

The project described here is a digital implementation of "book cricket game" which Indian students normally use to play in their childhood time. The heart of the project is 8 bit MCU from AVR family called ATtiny85. ATtiny85 are small and cheap microcontrollers

which are...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

67. [Arduino Weather Station Part2](#)

So my last project was a Arduino wind chill machine. http://www.instructables.com/id/Arduino-Wind-Chill-Machine/ Naturally, this Lazy Old Geek wanted to add a weather vane (wind direction) to my weather station. Who cares, you may ask? Well, I am a Geek. Actually, wind direction has some importance. Here...... Listed under: [Arduino Programmer Projects](#), [Projects](#), [Security – Safety Project Ideas](#), [Sensor – Transducer – Detector Project Ideas](#)

68. [Interactive Arduino Powered Coffee Table](#)

One quick fore note: this is my first Instructable and my first large Arduino project, so if you see any stupid errors or have an idea of how things could be done better, then please let me know. Now that that's out of the way I'll begin, I...... Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [LCD Projects](#), [LED Projects](#), [Projects](#), [Sound – Audio Projects](#)

69. [Larson Scanner with Relay Module using Arduino](#)
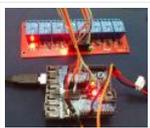
This time I'll show how I used an Arduino to control a relay module with eight channels. Arduino in offers several advantages such as: – Open source; – Easy programming; – You can assemble your own board; – Is supported on various forums on the...... Listed under: [Other Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

70. [Ultrasonic Combination Switch using an Arduino](#)

Time for a follow-up to the Single Button Combination Lock by creating another oddball type of switch/lock. To activate this switch we make use of a Parallax Ping))) Ultrasonic sensor, an Arduino-style board and some other hardware – to make a device that receives a four-number code...... Listed under: [Medical – Health based Projects](#), [Projects](#)

71. [Arduino Street Traffic Light – Breadboard Edition](#)

Build a simple Arduino powered Traffic Light with us! This instructable is meant to walk you through almost every step, but there are a few assumptions. Read over the intro and the first step to make sure you are fully prepared! This is the breadboard...... Listed under: [Car Projects](#), [LED Projects](#), [Projects](#)

72. [Arduino SD Cards and Datalogging](#)

This is my first in a series of more advanced Arduino tutorials. [box type="note" color=" #202020 " bg="#ffbb00 " font="verdana" fontsize="14" radius="20 " border="#000" float="right" head="Attributes"]Thanks to Jeremy , for this articles[/box] Now that we've covered the basics in tutorials 1-10 (you have watched them...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

73. [Introduction to Packet Radio and Arduino Controlled LED Strips](#)

This time on the show we continue coverage of Toorcamp 2012 – the American Hacker Camp. This time Darren speaks with Rob Eby about packet radio as an extension of the Internet. Plus what could be better than flexible individually addressable RGB LED strips? %1...... Listed under: [LED Projects](#), [Projects](#), [Radio Projects](#)

74. [Arduino Controlled Digital Window Sticker](#)

A bumper-sticker sized L.E.D. matrix that displays images in sequence from an SD card, to produce an animated sign or "window sticker." Arduino controlled! Also includes Windows, Mac, and Linux code for converting .xbm image files into Digital Window Sticker files. Perfect for a shop...... Listed under: [LED Projects](#), [Projects](#)

75. [Robopod the Arduino Powered Robot](#)

Robopod is a simple arduino robot that uses antennas to detect obstacles. Robopod's motors are controlled by an H bridge and powered by a nine volt battery. Robopods circuit is based on a breadboard for easy modification. Step 1: Tools and Materials Material Arduino…… Listed under: [Robotics – Automation Projects](#)

76. [Turn your Arduino into the best gift of all](#)

Please vote for me in the Holiday Gift contest and the Make it Glow contest! First, this started out as a gift, and not an instructable. So please excuse some hand waving here and there as I do not have any pictures of the etching and drilling portions. Second,…… Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [Projects](#)

77. [TSA Zombie Scanner Security Wand](#)

Not even Zombies are exempt from a good pat-down. Scanner security wands are used at the most exclusive nightclubs and venues. Does not detect metal to indicate a presence of weapons but will indicate the lack of a soul which means a more rigorous body…… Listed under: [Security – Safety Projects](#)

78. [Android-Controlled Pneumatic Cannon Powered By Arduino](#)

Every summer, Qualcomm hosts a Battle of the Schools competition, which gives employees the opportunity to represent their home universities. This year, entries were to be homemade contraptions, and they were judged according to how cool they were perceived to be. Virginia Tech's cannon project…… Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

79. [IR Remote Agent using Arduino](#)

Remote control is almost a standard accessory for most home applications, like TV, Hi-Fi, air conditioner and so on. Though remote control brings us leisure, when you really need it but have completely no clue where it is, or which one it is, you have…… Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

80. [Making Music with Makeblock](#)

Makeblock is an aluminum extrusion based construction system that provides an integrated solution for aspects of mechanics, electronics and software design. With Makeblock you can make professional robots, toy machines or even art-ware. It's super easy-to-use and helps bring your creations to life. The only…… Listed under: [Sound – Audio Projects](#)

81. [How to use an array with Arduino](#)
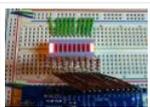
This variation on the For Loop example shows how to use an array. An array is a variable with multiple parts. If you think of a variable as a cup that holds values, you might think of an array as an ice cube tray. It's like a series…… Listed under: [How To – DIY – Projects](#), [Projects](#)

82. [Play a Melody using the tone() function with Arduino](#)
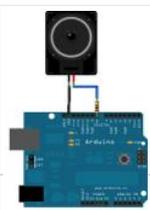
This example shows how to use the tone() command to generate notes. It plays a little melody you may have heard before. Circuit image developed using Fritzing. For more circuit examples, see the Fritzing project page Connect one terminal of your speaker to digital pin 8 through…… Listed under: [Projects](#), [Sound – Audio Projects](#)

83. [Arduino Web Enabled RGB Lighting](#)

I just happened to see some large strips of LED lighting when I was picking up some parts at Maplin which were on sale (if I remember correct they were around £12 per approx. 2m strip) however the controller/driver was still around £40, so I...... Listed under: [LED Projects](#)

84. [Programming a ATtiny2313 with Aceduino](#)

What is an ACEDUINO? It is the Philippine Arduino clone. See pic 2 and 3. Quote from Fall Electronics: If you have already tried you have found out you can't use the ATTiny chips in Arduino. This is because it doesn't have the cores for...... Listed under: [Arduino Programmer Projects](#), [Projects](#)

85. [Simple 18dof Hexapod, Arduino nano (optionally with pololu maestro)](#)

Hello, Here is a simple hexapod that can be built by hand very quickly. The mechanical design is not great, but it is very much in the KISS (keep it stupidly simple) style and should be doable in a weekend for builders of novice to...... Listed under: [Other Projects](#)

86. [A watering controller that can be home networked using an Arduino](#)

A couple of weeks ago, I published a great little controller module that provided 6 relays able to be controlled from a computer via a network. After I published it, I got to thinking that the same basic design, with a couple of changes could...... Listed under: [Home Automation Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

87. [3D Printed Arduino Controlled Eggbot/Spherepot](#)

First off this project was a combination of of two great online resources. I had been looking into building an eggbot for a while and since I had a lot of ping pong balls on hand after one of my other videos the time was right for...... Listed under: [Robotics – Automation Projects](#)

88. [Cup Cooler using an Arduino](#)

This is my first Instructable, so please judge harshly so that I can learn ☐ Its a simple project minimal skills needed. Drawings are made using: Fritzing Code Written using Codebender The cold plate got to -20c Watter in the cup measured @ 5.5c compared...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

89. [Arduino – Simple Simon Says Game](#)

In this instructable, I will show you how to make a simple Simon Says Game using an Arduino. it's not just simple but we can get a psychological benefit. I have a bad memory to remember something fast or a new things. So this project...... Listed under: [Game – Entertainment Projects](#)

90. [The LED Blinky ball using Arduino](#)

Update: I'll add some clarifications after reading comments on various forums. It doesn't need a 70Mhz ARM CPU, all it does is shift bits into a shift register, that'd be a total waste. There aren't 16 CPU's. the slices are designed to be either slave...... Listed under: [LED Projects](#), [Projects](#)

91. [Drive a webpage in real-time using Arduino, SensorMonkey and Processing.js](#)

Remote visualization of real-time sensor data. This tutorial describes in detail how to use the free SensorMonkey service to push real-time sensor data from an Arduino to a webpage for visualization using

Processing.js. No server-side coding or Ethernet shield is required. A standard, run of the mill...... Listed under: [Internet – Ethernet – LAN Projects](), [Projects]()

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92. [Google Play Music Internet Radio (Raspberry Pi and Arduino)]()

I was looking for a project to do with my Raspberry Pi and found thisInstructable and thought I would have a go at something similar which worked with Google Play Music. I had a rough idea of what I wanted the final item to end up like and was...... Listed under: [Radio Projects](), [Sound – Audio Projects]()

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93. [Memsic 2125 Accelerometer using Arduino]()
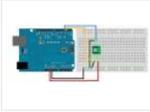
The Memsic 2125 (datasheet) is a two-axis accelerometer capable of measuring acceleration up to plus or minus 2g. It has a simple digital interface: two pins (one for each axis) emit pulses whose duration corresponds to the acceleration of that axis. By measuring the length...... Listed under: [Metering – Instrument Projects](), [Projects]()

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94. [R/C LEGO® "The Bull" Buggy]()

There are more than 20 models of LEGO®'s Dune Buggy type car, even more than the models in LEGO® Race Car category. Dune Buggy is usually four wheels drive off road vehicle, which would not be used on the road. Now that I got excited on...... Listed under: [Game – Entertainment Projects]()

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95. [Arduino Esplora Microphone (Sound Sensor)]()

This sketch shows you how to read the microphone sensor. The microphone will range from 0 (total silence) to 1023 (really loud). It uses the sound level to set a brightness level for the green LED. When you're using the sensor's reading (for example, to...... Listed under: [Projects](), [Sound – Audio Projects]()

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96. [Beach Buddy: 3-in-1 Solar Phone Charger, Boombox, and Sunburn Timer Calculator]()

Imagine the ideal beach trip. The sun is shining, the skies are blue, the water is warm, and the humidity is low. You and your friends have everything you need to soak up the sun, sand and surf: a cooler filled with drinks and snacks, ... Listed under: [Battery Projects](), [Solar energy projects]()

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97. [Add Linux, WiFi, Ethernet and USB to Arduino]()

Web site: http://www.dragino.com/products/yunshield/item/86-yun-shield.html Project Summary: The model of this shield named Yun Shield, the feature of this shield is as its name. User can add this shield into Arduino (Leonardo, UNO, MEGA2560 etc) and "turn" the Arduino into device which has similiar features as Arduino...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](), [Internet – Ethernet – LAN Projects]()

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98. [Bike Turn Signal & Brake Light Handlebars]()

This project was inspired by a very cool kickstarter called Helios Bars. Essentially what this project does, is put an arduino, LEDs, and buttons into your bike handlebars. The LEDs can be used as turn signals, brake lights, or display ambient colors while riding. It's...... Listed under: [Car Projects](), [LED Projects]()

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99. [A Robotic lawn mower powered by Solar Energy with an Arduino heart]()

This robot will mow the grass of your garden, staying within a defined area, avoiding all obstacles and working in complete autonomy, automatically charging itself with a solar panel. In this post we present a robotic lawn mower, powered with solar energy and able to...... Listed under: [Robotics – Automation Project Ideas](), [Solar energy projects]()

100. Arduino based Graph
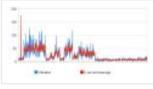
This example shows you how to send a byte of data from the Arduino to a personal computer and graph the result. This is called serial communication because the connection appears to both the Arduino and the computer as a serial port, even though it…… Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

101. Hexapoduino: tiny hexapod 3D printed, Arduino controlled

A few time ago, i found out a 3d printed Micro-Hexapod on Thingiverse. I started to work on it in the following ways: – create new accessories/components 3D printable – explore the possible ways to drive this hexapod. Here the results: – a parametric battery holder that fits…… Listed under: Arduino Programmer Projects

102. DIY Binary Clock with Arduino

Yesterday I was going to start watching a movie, when me and my friend pedro decided to give up on the movie and build a binary clock. After sometime thinking on how to program it, we made it. It works beautifully, so I decided to show here…… Listed under: Clock – Timer Projects, How To – DIY – Projects, Projects

103. Arduino stepper motor and servos shield
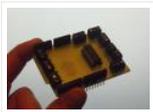
This instructable will show you show to build an Arduino shield which can be used to control 3 servos and 1 stepper motor using 4 potentiometers. You will need: access to a laser printer/cnc router/etching chemicals 7 x 3 pin 3.5mm terminal blocks 2 x…… Listed under: Motor Projects, Projects

104. Home automation system using Arduino and SIM900 GSM module

Hi there! As I've almost finished my studies at Faculty of Engineering, I had to make a graduation project and my thought was to make a jaw-dropping thing (I know that's hilarious 😀) to show everybody that I'm a good prototype maker and I…… Listed under: Home Automation Projects

105. Track-and-explode wolf collar…

Don't worry! First, this is a rebuild out of a movie so it won't explode for real and it won't be worn by a real wolf. However there is fursuiting for which I am a big fan of and my own character (fursona) is a…… Listed under: Game – Entertainment Projects

106. Aquarium Light V1

Version 0 My first attempt at an LED Aquarium light started as an excuse to buy some of those LED light strips off of eBay. I gutted the old 18" fluorescent fixtures and soldered together row after row of 18" RGB LED strips. They mounted…… Listed under: Home Automation Projects

107. Super Brite LED Sneakers 1.0 using an Arduino

Create your own Super Bright LED-lined sneakers that blink with multiple patterns. 1.0 FEATURES: – 1 color LEDs – 6 patterns – reed sensors + magnets that give you control to step through patterns – detachable velcro design – small, wearable microcontroller + power Step…… Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects

108. Control Android mobile by an Apple Remote using Arduino

I love to integrate devices which are not supposed to be integrated and this guide shows you how you can control an Android mobile using Apple's Remote. (Who said Apple devices work only with Apple products 😊) Also this is my entry to the…… Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects

109. [Psychic Fortune Teller – An automaton that reads the mind of Twitter](#)

Creepy fairground attraction and Twitter App! The Psychic Hive-Mind Fortune Teller is a fairground arcade-type attraction which can tell your fortune. Even better than that though – it's also a web-connected Twitter application that can harvest tweets and regurgitate them as fortune readings! The Fortune…… Listed under: [Internet – Ethernet – LAN Projects](#), [Robotics – Automation Projects](#), [Sensor – Transducer – Detector Projects](#)

110. [Bike Dashboard](#)

In this Instructable I'll show you how to make a electronic dashboard for a bicycle. We'll be using an Arduino and a few off-the-shelf parts to create a system with light control and an LED speedometer. Step 1: Materials Arduino Micro (RadioShack #: 276-258) 12V…… Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#)

111. [Game maker Rover using an Arduino](#)

In this Instructable I will be giving you step-by-step instructions on how to interface The Arduino, A Motor Controller (L293D), and a laptop to make a Wifi controlled rover you can drive around your house or work from anywhere in the world. I started and…… Listed under: [Game – Entertainment Projects](#), [Projects](#)

112. [Bluetooth Controlled Message Droid using Arduino](#)

This is an instructable for a bluetooth controlled Message Droid. I call it R2Blue2. It moves around and displays messages that you type using your phone or computer. Atleast it was supposed to. Due to many problems such as underpowered batteries and bad cable management…… Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

113. [Build your own Arduino – Bare Bone System](#)

I've read through a lot of tutorials online to make an Arduino Clone on a breadboard, and some of them are great, but none of them really seem to have it all, so I'm going to attempt to bring it all together here and provide…… Listed under: [Development Board – Kits Projects](#), [How To – DIY – Projects](#), [Projects](#)

114. [Twittering Laser Tripwire with Webcam Capture using Arduino](#)

This instructable will show you how to construct a laser tripwire that can twitter and grab an image from a webcam, as well as execute any command you can put in a bash script. This instructable is actually quite simple and is even suitable as a beginner…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Video – Camera – Imaging Projects](#)

115. [DIY 360 Degree SODAR Device](#)

First off, why did we decide to call this thing SODAR? SOnic Detection and Ranging, or SODAR, is a lot like SONAR and RADAR. However, we don't feel comfortable calling it SONAR because we have no desire to use it for navigation and we aren't…… Listed under: [Sensor – Transducer – Detector Projects](#)

116. [RGB's with Arduino and Processing](#)

Here is an easy(enough) project to introduce you to the Arduino microcontroller, as well as Processing. This is my first Arduino and Processing project and I didn't have too much bother getting it working. This is my entry to the Sparkfun Microcontroller contest so if…… Listed under: [LED Projects](#), [Projects](#)

117. [PixelBrite](#)

I originally started this project because I wanted to recreate the scene in the movie the Close Encounters of the Third Kind where the humans are communicating with the Mothership via a huge color organ. So I glued various bits of software together and made...... Listed under: [LED Projects](#)

118. [Analog Read Serial using Arduino](#)

This example shows you how to read analog input from the physical world using a potentiometer. A potentiometer is a simple mechanical device that provides a varying amount of resistance when its shaft is turned. By passing voltage through a potentiometer and into an analog input on...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

119. [Hack a voice changer to add an Arduino input](#)

Another quick hack. I purchased a voice changer because I was looking for something cheap that could be hacked into an voice input device. Basically I wanted to animate a skull when I spoke. Added bonus, now the skull puppet would also have a scary...... Listed under: [Projects](#), [Sound – Audio Projects](#)

120. [DIY Arduino Remote Control and Lego RC Vehicle!!](#)

UPDATE (8/29/13): Thank you readers for your enthusiasm and kind remarks regarding this project! It has been a tremendous journey since I started this project back in March, but I am very glad with the resulting product and the excitement with which it has been received...... Listed under: [How To – DIY – Projects](#), [Robotics – Automation Projects](#), [Sensor – Transducer – Detector Projects](#)

121. [3-dimensional Star Cluster using an Arduino](#)

This instructable will guide you through the process of making your very own star-cluster from LEDs and acrylic. I made this piece for my electronics final project at college and had access to a machine shop. This instructable assumes that you have access to similar...... Listed under: [Home Automation Projects](#), [LED Projects](#), [Projects](#)

122. [Matrix sound machine: Generative music with a particle system using Arduino](#)

This project is a part of experiments done while doing an artist in residence at Instructables. You can see the other projects here. Creating emergent patterns that can be converted into sounds fascinates me. So this is my first experiment in building an arduino platform for...... Listed under: [Projects](#), [Sound – Audio Projects](#)

123. [ArduinoPhone](#)

Combining Arduino and other shield modules, we make a mobile phone named Arduino Phone. Meanwhile, we printed a shell for it with the 3D printer. Although it's not such fine as you think, even a little bit clunky, it's still very cool. That is the...... Listed under: [Phone Projects](#)

124. [Lite Brite LED clock using an Arduino](#)

Lite Brite pegs look like LED's don't they? That's what I though the other day after working on an LED cube for a few hours. I happened to see my daughter's Lite Brite sitting there, and I looked at the pile of LED's on my...... Listed under: [Clock – Timer Projects](#), [LED Projects](#), [Projects](#)

125. [DIY 3D Controller using an Arduino](#)

Make a 3D interface using an six resistors, aluminum foil, and an Arduino. Take that, Wii. Update: a much more thorough explanation of this project is available from Make Magazine. It might be easier to follow their instructions, and I think their code is more...... Listed
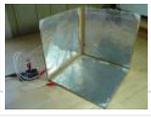
under: [How To – DIY – Projects](#), [Projects](#)

126. [Analog Fabric Joypad using an Arduino](#)

How to make an "analog" input device from fabric and a few other necessary materials. "Analog" in parenthesis because, although it is made up of 4 analog inputs, the only analog transition between the directions (up, right, down and left) comes from the buffering material...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

127. ["12 Thumbs" R/C LEGO Dragster](#)

Impressed by these two LEGO® Dragster sets, a 250 pieces LEGO®TECHNIC Dragster 8847 (released in 1983) and a 391 pieces Top Fuel Racing 5533 (released in 1999). These two Dragsters inspired me to build my own LEGO® dragster, the "12 Thumbs". The name "12 Thumbs" came after I...... Listed under: [Other Projects](#)

128. [An Arduino Powered (Scale) Speed Trap](#)

After a break of around two decades I've recently started building a model railway. One of the issues I've faced is trying to work out how fast I should be running the trains so that their speed reflects reality given the scale at which they...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

129. [Strandbot – a solar & arduino powered R/C motorized Strandbeest](#)

The Strandbot is a DIY upgrade for the Strandbeest originally designed by Theo Jansen. Strandbeests are amazing mechanical creatures that are able to move on their own using just a little bit of wind power. Unfortunately my tiny apartment is short on wind, so I...... Listed under: [Motor Projects](#), [Robotics – Automation Projects](#)

130. [Make your own programmable thermostat for $66 with Arduino](#)

This project will show you how you can create your own programmable thermostat with temperature probe, an LED readout and ability to remote control outlets. The core of this project is actually a driver for a 4 digit seven segment display. There are lots uses for...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

131. [Online Thermometer using Arduino](#)
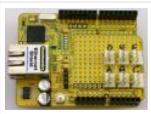
One of the projects in Practical Arduino is the "Online Thermometer", which combines an Ethernet shield with a number of DS18B20 1-wire temperature sensors to allow you to read multiple temperatures and make the values accessible using a web browser. In that project I chose...... Listed under: [Temperature Measurement Projects](#)

132. [Self-balancing skateboard/segw*y project Arduino Shield](#)

General purpose Arduino shield for self-balancing machines. Why did I make it? I previously made an Instructable in 2010 on how to build a self-balancing skateboard. http://www.instructables.com/id/Easy-build-self-balancing-skateboardrobotsegway-/ There are >500 comments on this and many express confusion setting up the balance sensors, software and electronics....... Listed under: [Development Board – Kits Projects](#)

133. [How to control LED's with Processing and Arduino](#)

The other day I was confronted with an interesting problem, I needed to control a series of lights from an interaction on a computer screen and it had to be as inexpensive as possible. I instantly thought of an Arduino. It had everything that I needed,...... Listed under: [LED Projects](#), [Projects](#)

134. [Arduino Waveform Generator Shield](#)

Waveform generators (also called function generators) are useful for testing and debugging circuits. They can be used to test the frequency response of electronic components like op amps and sensors or to characterize and troubleshoot audio effects boxes and pedals. This waveform generator shield is...... Listed under: [Projects](#), [Radio Projects](#)

135. [DIY Flex sensor using Sugru and graphite powder (Resistencia flexible usando Sugru y polvo de grafito)](#)

Este es el primero de 5 instructables que surgieron del Instructables & Sugru build night (and day en nuestro caso) que hicimos en el Laboratorio de Juguete, el 20 de julio del 2013: una Resistencia Flexible o Flex Sensor hecha con Sugru y polvo de grafito:...... Listed under: [How To – DIY – Projects](#), [Sensor – Transducer – Detector Projects](#)

136. [Arduino Audio DAC Options](#)
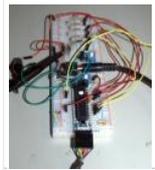
DAC is short for Digital to Analog Converter. In this article we play around the code Michael Smith created for a PWM based DAC. I modified his code so that other DAC options could be tried. I compare the 8-Bit PWM DAC with the R2R...... Listed under: [Projects](#), [Sound – Audio Projects](#)

137. [Laser Shooting Game](#)

This laser game is a simple project that utilizes an Arduino mini. All target boards have an Arduino, sensors, and servo control ports. Shooting the target center triggers the servo and the board falls flat. Step 1:What you need [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14 "...... Listed under: [Game – Entertainment Projects](#)

138. [Clock Two – Single digit clock using Arduino](#)

Time for another instalment in my irregular series of clock projects. (Or should that be "Time for another instalment in the series of irregular clock projects"?) In contrast with the extreme "blinkiness" of Clock One, in this article we describe how to build this single-digit...... Listed under: [Clock – Timer Projects](#), [Projects](#)

139. [Your Image on an Arduino! – TFT LCD Screen Guide](#)

Have you ever heard of TFT LCD screens? They are great ways to display information from your Arduino, or display pictures. The Arduino team just released an official TFT LCD screen with their new Robot at Maker Faire 2013. It's very easy to get started...... Listed under: [Video – Camera – Imaging Projects](#)

140. [Multiplexing 7 Segment displays with Arduino and Shift Registers](#)

In this instructable, I will be teaching the basics of multiplexing 7 segment displays using an Arduino and a couple of shift registers. This project is well suited for displaying numerical information or if you want to control a bunch of LEDs. For beginners, like me,...... Listed under: [Calculator Projects](#), [LCD Projects](#)

141. [DIY 3D Laser Scanner Using Arduino](#)

Maker Alessandro Grossi sent us this great DIY build for a 3D scanner built using a laser, a DSLR, and an Arduino controller. Allesandro is a Mechanical Engineer, holding a Ph.D. in product design. His day job involves helping designers and manufacturing firms develop and...... Listed under: [How To – DIY – Projects](#), [Projects](#)

142. [IPod Information Screen Rev. 2](#)

I'm not usually one to revisit a project after I've finished it, but I made an exception because the problems with the original design were making this device unpleasant to use. For those of you just now viewing this project, it is the second iteration...... Listed under: [LCD Projects](#)

143. An Arduino RSS Feed Display

This Arduino project will display RSS feed headlines on an LCD via an Arduino and a USB cable. It works quite well, and lets you keep up with the world news while you're sitting at your desk. Many of the values in the code can...... Listed under: Internet – Ethernet – LAN Projects, LCD Projects, Projects

144. Arduino Powerd, RGB + White LED, Bluetooth controllable, Floor lamp

A couple of mounts ago i order a 1M long WS2801 RGB led strip, just for fun. I took me a while to get the strip working with my Arduino. The next step was to figure out what to do with the strip. after some...... Listed under: LED Projects

145. Rainbow Jar – RGB Pixel Strip Controlled via Arduino

Our most popular item on our display at Maker Faires is always the Rainbow Jar. One customer has already replicated it so we thought we'd share how we made it so you can make your own! https://vine.co/v/hqxpVgdFQ9z (tried embedding this vine but it breaks instructables!) Step...... Listed under: LED Projects

146. ARDUINO with XBEE- WIRELESS SETUP DEMO

This video describes how to configure two Series 1 XBEEs using Arduino UNO board.The ways of making 2 way communication is also tested on Wireless mode. Overview The Xbee shield allows an Arduino board to communicate wirelessly using Zigbee. It is based on the Xbee module...... Listed under: Development Board – Kits Projects, Projects

147. Super Simple Arduino Powered Roomba Scheduler

Like most people I was skeptical about getting a robotic vacuum cleaner, so as a trial run I thought I would buy the now obsolete iRobot Roomba 530 which was heavily discounted (they're still available in Australia, showing how behind the times we are). Of...... Listed under: Robotics – Automation Projects

148. Arduino String Case Change Functions Code

The String case change functions allow you to change the case of a String. They work just as their names imply. toUpperCase() changes the whole string to upper case characters, and toLowerCase() changes the whole String to lower case characters. Only the characters A to...... Listed under: Development Board – Kits Projects, Projects

149. Blink LED using Arduino

This example shows the simplest thing you can do with an Arduino to see physical output: it blinks an LED. Circuit To build the circuit, attach a 220-ohm resistor to pin 13. Then attach the long leg of an LED (the positive leg, called the...... Listed under: LED Projects, Projects

150. Yogy – The Arduino Powered Robot Made For Kids

In this Instructable I will show you how to make a cute and kid friendly Obstacle Avoiding Robot I like to call Yogy. Yogy gets his name from the Yoghurt tub body he is made from. I am a sucker for seeing the best in...... Listed under: Robotics – Automation Projects

151. How to control 8 leds using Arduino UNO

hey guys this is my first arduino project plz comment how u feel. Step 1: Things u need As this is easy project for beginner's so parts are also simple Parts: 1- Arduino uno or any other board will work 1-Beardboard 9- jumper wires or...... Listed under: LED Projects, Projects

152. Analog Write with 12 LEDs on an Arduino Mega

This example fades 12 LEDs up and the down, one by one, on an Arduino Mega board. Circuit image developed using Fritzing. For more circuit examples, see the Fritzing project page Connect the longer, positive legs of (anodes) 12 LEDs to digital pins 2-13 through 220 ohm current limiting resistors. Connect...... Listed under: LED Projects, Projects

153. Digital/Analog Clock – Arduino + PaperCraft

In this instructable we will be recreating a clock inspired by Alvin Aronson's original design. When I first saw this clock I was very impressed by how clean an elegant the design was I immediately wanted to recreate this effect. I hope some of you feel...... Listed under: Clock – Timer Projects

154. Arduino Hello World Blink Code

This is a basic example how arduino works. In this arduino projects you'll see how arduino control LED on for 1 second and off for 1 second repeatedly. Instruction; 1) Connect cathode lead of LED (shorter lead) to ground pin and anode lead of LED...... Listed under: LED Projects, Projects

155. Autonomous Autonavigation Robot using Arduino

This is a step by step guide to build an autonomous navigation robot. We use the Arduino microcontroller to control this robot. We have two different programs for this robot. The first enables the robot to drive around and avoid anything that gets in its...... Listed under: Projects, Robotics – Automation Projects

156. AAA Robot (Autonomous Analog Arduino)

The AAA Robot is a perfect robot for beginners. It is versatile, easy to build, and discusses many of the topics roboticists need to learn, including but no limited to transistor switches, motor driving nad analog sensors. This Instructable includes step-by-step instructions on how to...... Listed under: Robotics – Automation Projects

157. An Arduino Thermometer with Digital Display

This is a project for Arduino to make a Thermometer with Digital Display, aimed at beginners. Arduino measures the voltage on a TMP36 Temperature sensor, converts the Voltage to Degrees Celcius and Displays the value on an LOL shield display. Objectives: * Learn how to...... Listed under: LED Projects, Temperature Measurement Projects

158. Cell phone text using an Arduino

Arduino text'in. Key Features: 24 relays controlled by 4 I/O lines! Cell phone text using your Arduino. This project hacks a cell phone to text using normally open relays. After investigating cellular modules on the internet I decided it looks not only rather pricy, but...... Listed under: Phone Projects, Projects

159. Thermal Camera
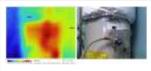
Have you ever had the desire to see what can not be seen? I never had the ability to see in thermal infrared, and it is rather cool to be able to see in the thermal infrared part of the electromagnetic spectrum. Unfortunately, most thermal…… Listed under: Temperature Measurement Projects, Video – Camera – Imaging Projects

160. Arduino FM radio receiver shield
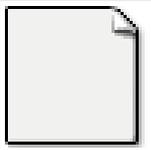
This Instructable will show you how to build your own FM radio receiver shield to be used with an Arduino board. The radio chip we are going to be using is the AR1010 on a breakoutboard found at Sparkfun or Electrokit and there will be code to get…… Listed under: Projects, Radio Projects

161. ArrDrownHo! – Easily convert AVR to Arduino

Cap'n ArrDrownHo! is the lovechild of Ardweeny and Boarduino and he's here to commandeer your AVR ships. ArrDrownHo! inherits pros of both and cons of neither. Pick up an AVR chip and start prototyping instantly on a breadboard! Want to replace that costly Arduino in your project with a…… Listed under: Development Board – Kits Projects

162. Kaosduino: Create your own kaosillitaor using Arduino

This project is a part of experiments done while doing an artist in residence at Instructables. You can see the other projects here. Inspired by Korgs Kaossilator I took it upon myself to build an opensource version of it. This way people can design new ways…… Listed under: Projects, Sound – Audio Projects

163. The Point Shooter Cyborg Mouse

Control cyborg technology and revolutionize your PowerPoint presentations – build a wearable mouse! So you converted some video glasses to a heads-up display glass. You built a wearable Raspberry Pi, pcDuino, or BeagleBone Black. Now, how do you control your cybernetic augmentations? You make a…… Listed under: Robotics – Automation Projects

164. Arduino Esplora Pong

Want to play Pong on your computer with your Esplora? This example shows you how. This example is designed to be used with a Processing sketch. Processing is an open source programming environment. The Esplora reads the slider and buttons and sends data to the…… Listed under: Game – Entertainment Projects, Projects

165. Single button combination lock using Arduino

Time for something different – a single button combination lock. Allow me to explain… Updated 18/03/2013 Normally a combination lock would require the entry of a series of unique numbers in order to unlock something or start an action. For example: A more contemporary type…… Listed under: Projects, Security – Safety Projects

166. The Knock Box: Build a Knock-Sensitive Power Strip

The Knock Box is a power strip with superpowers – it turns on your lamp whenever you knock on your nightstand. You get two outlets, individually controlled by knock-knock-knocking on a nearby hard surface. It's great for hitting the lights when it's pitch dark, but if an…… Listed under: Development Board – Kits Projects

167. Quasi real-time oscilloscope using Arduino

Recently I was reviewing one of my oldest project, and decided to "refresh" previous design by taking full advantage of the new arduino Leonardo board. Based on AtMega32U4, which include PGA (programmable gain amplifier), oscilloscope's analog front end doesn't

require external OPA this time, end...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

168. [Arduino LED Bar Graph Code](#)

The bar graph – a series of LEDs in a line, such as you see on an audio display – is a common hardware display for analog sensors. It's made up of a series of LEDs in a row, an analog input like a potentiometer,...... Listed under: [LED Projects](#), [Projects](#)

169. [The Raspberry Pi – Arduino Connection](#)

The Pi is a fine little computer board, though not nearly as good as the Arduino when it comes to I/O capabilities. The beautifully-engineered Gertboard is a plug-in add-on that neatly overcomes this deficiency by giving the Pi access to an ATMega328, but it's a very...... Listed under: [Development Board – Kits Projects](#)

170. [High Heel Massage using an Arduino](#)

My project is to make a heel (shoe) that senses when your foot is tired and then eases the pain. I will have a force sensor measure how much pressure is on your foot for 3 minutes. If the pressure is at a certain measure...... Listed under: [Home Automation Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

171. [How to use a Piezo element to detect vibration using Arduino](#)
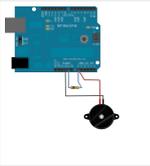
This tutorial shows you how to use a Piezo element to detect vibration, in this case, a knock on a door, table, or other solid surface. A piezo is an electronic device that generates a voltage when it's physically deformed by a vibration, sound wave,...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

172. [Paper Man: a machine created by Arduino and NFC](#)

Paper Man is a machine comprised of Arduino, NFC Shield, thermal printer and a papercraft shell—Iron Man. Thanks to the NFC Shield, you can directly sent messages from your mobile to the paper man, and the paper man will spit it out by printing with...... Listed under: [CNC Machines Projects](#), [Home Automation Projects](#)

173. [Sending and Receiving String via UDP using Arduino](#)

In this example, you will use your Ethernet Shield and your Arduino to send and receive text strings via the UDP protocol (Universal Datagram Packet). You'll need another device to send to and from. The Processing sketch included at the end of the code will...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

174. [Mr. Indecision – a small felt version of yourself that turns its head and looks at you using Arduino](#)

This is a tutorial on how to use 123D Catch to get a 3D scan of your whole body. Once you have the scan or "catch" the tutorial will take you through a technique to clean it up and manipulate it ready for 123D Make....... Listed under: [Game – Entertainment Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

175. [Arduino Beginner and Basic Electronics Kit Primer](#)

I learned that one of my nieces had an interest in programming. She was working with robotics at high school and has a summer internship where they had Arduinos. I think she was able to borrow an Arduino to experiment with at home but every...... Listed under: [Development Board – Kits Projects](#)

176. [Scintillino – an Arduino-based quick&dirty scintillation counter](#)

Have you ever wondered about the radiation levels around you? Well today you can build your very own detector that measures ionizing radiation and displays data in real-time on an LCD (and also your computer if you want). The visual design, as seen below, is...... Listed under: [Calculator Projects](#)

177. [Arduino Quadruped Robot Stalker](#)

Arduino Quadruped Robot – Stalker I am going to build an Arduino Quadruped Robot. As usual, I will share my source code and show as many pictures as possible, to help those of you who are also building Quadruped robots. The way I do things might not...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

178. [Dimmer using an Arduino](#)

This example shows how to send data from a personal computer to an Arduino board to control the brightness of an LED. The data is sent in individual bytes, each of which ranges in value from 0 to 255. Arduino reads these bytes and uses...... Listed under: [LED Projects](#), [Projects](#)

179. [Mystery Beeping Prank](#)

The Mystery Beeping Prank is a device hidden in a hollowed out book that beeps intermittently at different frequencies. I made this because I am surrounded by a lot of incredibly creative people who have a penchant for pranking one another, and this seemed like...... Listed under: [Game – Entertainment Projects](#), [Sound – Audio Projects](#)

180. [Arduino Controlled Catapult](#)

I recently had the idea to create a catapult, But not just any kind of catapult, an electronic catapult! I wanted something I could just sit it down hit some buttons and watch it do its thing without being to big. This is what I...... Listed under: [Other Projects](#), [Projects](#)

181. [How to Make a Tactile Feedback Compass Belt](#)

Have you ever wondered how migratory birds manage to have such an amazing sense of direction despite being so generally clueless? They can sense the Earth's magnetic field with what is basically a compass built into their body. Wouldn't it be cool to feel what...... Listed under: [Metering – Instrument Projects](#), [Sensor – Transducer – Detector Projects](#)

182. [Arduino Liquid Crystal Displays](#)

I had initially planned to do an LCD tutorial a little further down the line, but there was very high demand for it, and I already had a circuit assembled for testing the new LCD that element14 sent me to evaluate. So, this seemed like...... Listed under: [LCD Projects](#), [Projects](#)

183. [Interfacing Electronic Circuits to Arduinos](#)

Interfacing Electronic Circuits to Arduino In this instructable I use an example of interfacing an Arduino to an ARINC 429 transceiver in order to demonstrate the general process of interfacing an Arduino to electronic circuits so you can use these techniques on your own designs....... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

184. [Analog Clock And Temperature sensor On An Oscilloscope using Arduino](#)

Scopeclock is an easy to use hardware to make your X-Y capable analog oscilloscope more useful .Using this simple to use hardware you can convert your analog oscilloscope into a scope clock.This project was me and my friend kshitij gupta at CEDT nsit under the...... Listed under: [Clock – Timer Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

185. How to make A light-up distance sensor
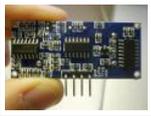
In this instructable, I will show you how to make a sensor that will light up more lights the closer you are to it. Step 1: Placing The Electronics This step will show you where and how to place the electronics on the breadboard Materials: ...... Listed under: Sensor – Transducer – Detector Projects

186. Home Automation (or Robot Butler called Geoffrey) – iPhone controlled, arduino based

Being able to control everything from your pocket has long been a dream shared by many. Previously we've had universal remotes that can both control our TVs and radios, then we had wireless wall sockets. Both great things, but how likely is it that you're...... Listed under: Home Automation Projects, Phone Projects, Robotics – Automation Projects

187. Save data of temperature and humidity on MySQL with Arduino Uno and Wifly

Hello guys, i make this instructable for the people that liked the electronics and the botanic, with this you have the data about the temperatura and the humidity of your orchard and register this in a data base MySQL. For this proyect you need some...... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects, Temperature Measurement Projects

188. Arduino String Addition Operator Code

You can add Strings together in a variety of ways. This is called concatenation and it results in the original String being longer by the length of the String or character array with which you concatenate it. The + operator allows you to combine a...... Listed under: How To – DIY – Projects, Projects

189. Gut Check a Tweeting and Facebooking Fridge using Arduino

I have a problem, I'm trying to lose weight but I love snacking late at night. And no one knows that I even do it. That being one of my biggest hurdles, I figured why not include all my social media friends and followers in...... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects

190. Arduino led pendulum

Step 2: Putting up the wires Strip both ends of wires -insert one end of each wire into sockets numbered -Gnd(black wire in my case)-this will be the common ground connection – 13 (green wire in my case) – 12 (yellow wire in my case) -...... Listed under: LED Projects, Projects

191. Adafruit Flora NeoPixel LED Ring Headphone mod

Wearable Arduino mod for your headphones. Non-invasive procedure for headphones that don't have room inside the drivers or you don't want to hack apart your high end cans. Adafruit just put out a tutorial for adding pattern blinking LED lights to headphones. This instructable takes it...... Listed under: Sound – Audio Projects

192. Candy Tossin Coffin using an Arduino

When you flip a switch, the coffin lid opens and a smiling red eyed ghost arises. The ghost flings some candy, pushes the switch back and returns to rest. Then, the coffin lid closes. Step 1: Major parts include: 4.5 rpm motor #155821 Jameco.com 1.8...... Listed under: Game – Entertainment Projects, LED Projects, Projects

193. Arduino Controlled Solar Fountain

A fountain can make a nice decorative fixture for your garden. But it isn't always easy to run a power cord out to where you want it. So I decided to run it on solar power. The system is controlled by an Arduino. This allows…… Listed under: [Solar energy projects](#)

194. [Arduino Photocell Theremin Synth (glitchamin)](#)

You know theremins, right? Those cool-looking boxes with antennae that produce noise without being touched? They are played by the likes of Jimmy Page of Led Zeppelin, and present in the soundtracks of countless films. Well, with this instructable, I will show you how to…… Listed under: [Solar energy projects](#)

195. [Teclado MIDI Super Simple – Super Simple MIDI Keyboard](#)

Este tutorial te lleva paso a paso por la construcción de un teclado MIDI de una octava, programable via arduino gracias a su conector de 6 pines. Vas a necesitar: Componentes: 1 Atmega328p con el bootloader de Arduino 1 Zócalo de 28 patas 1 Cristal…… Listed under: [Sound – Audio Projects](#)

196. [AIR Project using an Arduino](#)

CODE: download final project code: Arduino Code download additional wiring_analog.c code: Wiring Code download processing code: Processing Code download C code: C CODE FILE EXPLANATION: The final project code is the final arduino code for the project. The wiring_analog.c code should ONLY be used for…… Listed under: [GPS Based Projects](#), [Projects](#)

197. [Arduino-Pneumatic Flight Simulator](#)

Hello, my name is Dominick Lee. I am a senior in high school who is also a programmer and inventor. I created the "LifeBeam Flight Simulator" (name of my project) because I wanted to challenge myself and utilize my software and hardware skills. I was…… Listed under: [Game – Entertainment Projects](#), [Robotics – Automation Projects](#)

198. [Arduino PIR motion water gun](#)

first what youll notice my grammer isnt the best ▢ ok what youll need: 1 transister/mosfet that can handle the current for the water gun motor, this is the one i used – http://www.sparkfun.com/products/10213   – then a diode, i used this one – http://www.sparkfun.com/products/8589 – then a 10k ohm resistor,…… Listed under: [Game – Entertainment Projects](#), [Projects](#)

199. [Pee to Check-In to Foursquare – Mark Your Territory using Arduino](#)

In case you are unfamiliar with the most amazing new way to physically "check in" to foursquare here is a video that will explain it all: Mark Your Territory is a fully open-source system but because it interacts with the physical world as well as…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

200. [Mini invisible MIDI Harp](#)

English: This is a simple and easy to make MIDI harp, it runs on an Arduino UNO and uses infrared sensors as strings. It communicates with every recording software that has MIDI. Its really fun to play with and also very cheap, so enjoy!! Español:…… Listed under: [Sound – Audio Projects](#)

201. [Arduino Electromagnetic Field Detector](#)

A while back I saw an EMF (Electromagnetic Field) Detector at makezine.com that used a led bargraph. I decided to modify it to use a 7-Segment LED Display! Here's my project. Sorry I don't have any pictures of it in use. Hopefully I can post…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

202. Arduino Time-Lapse Controller

This project originally started out with a few simple parts thrown together to create a very simple time-lapse controller for a DSLR camera. After I was happy with the initial prototype, I wanted to make a final version which the programming of the "lapse time"...... Listed under: Video – Camera – Imaging Projects

203. Self Balancing Unicycle
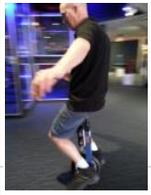
Following the popularity of our self balancing scooter and the SciChair we decided to try something a little edgier, the Self Balancing Unicycle. This project reuses a lot of stuff from our previous projects, using an arduino as the brains behind the scenes. Step 1:...... Listed under: Game – Entertainment Projects, Motor Projects

204. My Arduino Ping Display Robot

Goals Hello all. I hope to please share a little robot that I have just finished building. There are many Ping Boat, perhaps with a tutorials and display less so without pretension, will illustrate what I could do. I gave myself the goal of realizing...... Listed under: LCD Projects, Projects, Robotics – Automation Projects

205. A Gentle Introduction to Arduino for Scratch Users

There are lots of people who are very comfortable with the Scratch programming environment but want to try something with Arduino to Blink Lights, Sense Buttons, Run Servos or whatever. They may find the C programming environment in Arduino IDE – Sketch, a bit too...... Listed under: Other Projects

206. Arduino-controlled RGB LED Infinity Mirror

Update 11/22/2013: Thanks to everyone who voted for this project in theMicrocontroller Contest! It was one of three first-prize winners. Update 9/17/2013: Thanks to everyone who voted for this project in the Arduino contest (I was one of ten "second prize" winners)! If you want to try...... Listed under: LED Projects

207. Visual Network Threat Level Indicator v2 using Arduino

By popular request this is a new wireless version of the Visual Network Threat Level Indicator. This uses a Roving Networks WiFly RN-XV Module to do 802.11 WiFi along with an Arduino to display the threat level on your network. Network monitoring is very important in todays...... Listed under: Internet – Ethernet – LAN Projects, Projects

208. A cardboard televisor (with arduino and LEDs)

Recently I saw a documentary about the history of the television. And to my surprise they showed that there existed a mechanical television before the well known CRT televisions. Those mechanical televisions or televisors were pretty smart and simple. A CRT is simply an electron beam that...... Listed under: LED Projects

209. Arduino Target Practice

A quick demo video for your pleasure. This is an instructable for a target practice system for airsoft and nerf weapons. The system has been designed to test a shooter's reaction times and accuracy. Sam and I have been meaning to do this project for a...... Listed under: Game – Entertainment Projects, Projects

210. Make your own Custom Electronic Widgets, like my Arduino LED Day/Night Widget

This is just a brief run down on how easy it has become to make your own circuits complete with your own PCB's. Have you ever wanted to make something custom that suits your needs? Of course you have!! For me it really started when...... Listed under: LED

[Projects](#)

211. [Virtual Color Mixer using Arduino](#)

This example demonstrates how to send multiple values from the Arduino board to the computer. The readings from three potentiometers are used to set the red, green, and blue components of the background color of a Processing sketch or Max/MSP patch. Software Required Processing or Max/MSP…… Listed under: [How To – DIY – Projects](#), [Projects](#)

212. [Arduino Keyboard Message Code](#)
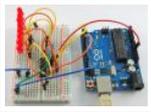
When the button is pressed in this example, a text string is sent to the computer as keyboard input. The string reports the number of times the button has been pressed. Once you have the Leonardo programmed and wired up, open up your favourite text…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

213. [Visual Computer Stress Meter using an Arduino](#)

Have you ever wanted to, without going out of your way to clock your processor, see how much stress your computer is under? With this project you will have a simple bar graph that constantly shows how much stress your computer is under. If the…… Listed under: [Metering – Instrument Projects](#), [Projects](#), [RTOS – OS Projects](#)

214. [Bluetooth Weather Lamp](#)

This was a 2 hour project I whipped up in order to learn how to use a new Bluetooth LE 4.0 module I picked up at redbearlab.com, called a BLE Mini. I've since thought of several much simpler ways (and more dependable) to accomplish the…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#), [LED Projects](#)

215. [DIY Arduino Unit Converter: How to use LCD](#)

Step 1: Ingredients: Electronics Arduino Breadboard LCD* 2x 50k pots 150 ohm resistor Jumper wires, and tons of them! If you do not want to use a LCD then you will have to use serial monitor. Wherever you see lcd.print just change it to Serial.print……. Listed under: [How To – DIY – Projects](#), [LCD Projects](#)

216. [CHR's 8X8X8 LED Cube – Revisited with improvements!](#)

SEE STEP 11 for uploadable code for this cube. This instructable has mutated over the past few months, and you'll see a bunch of end results before we get into how to make the cube, and the improvements that have been made over the original…… Listed under: [LED Projects](#)

217. [Arduino 4 led madness](#)

In this instructables you will learn how to wire 4 LED'S and make them flash 10 times. This is a great Starter project!! what you will need… 1: arduino (I am using an Duemilanove) 1: breadboard 4: LED's 10-15: jumper wires 3: resistors Step 1:…… Listed under: [LED Projects](#)

218. [Fading using an Arduino](#)

Demonstrates the use of analog output (Pulse Width Modulation (PWM)) to fade an LED. PWM is a technique for getting an analog-like behavior from a digital output by switching it off and on very fast. Circuit An LED connected to digital output pin 9 through…… Listed under: [LED Projects](#), [Projects](#), [PWM Projects](#)

219. [Arduino Guitar Tuner](#)

Build your own electric guitar tuner using the Arduino! I decided to make this because I wanted to experiment with audio input and frequency detection. I used Amanda Ghassaei's method for Arduino Frequency Detection in order to get frequency readings using the Arduino. I used LEDs that...... Listed under: [Sound – Audio Projects](#)

220. [Pressure Activated Light-Up Umbrella using an Arduino](#)

Once upon a time, 2 girls greatly enjoyed walking in the rain with umbrellas. They decided the enjoyment of this experience could be maximized by building their own pressure-activated web of LEDs to install under their umbrella. Thus, with the help of an Arduino, some...... Listed under: [Home Automation Projects](#), [Projects](#)

221. [TankWars: A Physical Video Game using Arduino](#)

This instructable will show the game TankWars, a web based game played on an iPad that drives a real robot tank to fire lasers at a robot. When you hit the robot target, the game is updated. The tank and the target are Arduino's equipped...... Listed under: [Game – Entertainment Projects](#), [Projects](#), [Robotics – Automation Projects](#)

222. [ATtiny programming with Arduino](#)

After this Instructable you should be able to program an A Ttiny85/45 with an arduino. It may sound complex but it really isn't. After doing some research I could not find to much info on how this could be done. I however did find http://www.instructables.com/id/Program-an-ATtiny-with-Arduino/. This Instructable...... Listed under: [Arduino Programmer Projects](#)

223. [Electronic Dartboard or How I Learned to Stop Worrying and Love ECE 476](#)

Introduction Ever dream of having a darts game scored automatically without using those annoying plastic darts? We decided it was a dream most of us has had at some point, and so decided to implement an automatic scoring system for a "real" cork dartboard. As...... Listed under: [Game – Entertainment Projects](#)

224. [Arduino 7-Segment Thermometer](#)
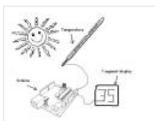
Using a dual 7-segment display, a DS18B20 temperature sensor and a couple of shift registers I figured that I could build a digital thermometer. Step 1: Temperature Sensor The sensor I'm using is the DS18B20, it's a 3pin sensor that just requires a single input...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

225. [Arduino String Comparison Operators Code](#)

The String comparison operators, ==, !=,>, < ,>=, <= , and the functionsequals() and equalsIgoreCase() allow you to make alphabetic comparisons between Strings. They're useful for sorting and alphabetizing, among other things. The operator == and the function equals() perform identically. It's just a matter...... Listed under: [How To – DIY – Projects](#), [Projects](#)

226. [USB Freeform using an Arduino](#)

This is a project in attempting to improve it predecessor "Freeform Arduino" by putting it in an enclosure and having it serve the similar purposes as "Palm Arduino Kit" and "Palm Arduino II" which I can carry it in my pocket and be available to...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

227. [Arduino Board Sound Alarm](#)

I've just completed my second Arduino project, a sound level detector which sets off an "alarm" when there's the sound level is to high for too long. I built it for use in a school that wants to provide visual feedback to students when they…… Listed under: [Projects](#), [Security – Safety Projects](#)

228. [Flicker up to 6 LEDs with Arduino](#)

Hi there. Christmas is coming closer, and I was wondering if I could put some candles in my room to get in the "christmas mood". But after a friends house burned down of christmas tree candles, I don't want to burn real candles into my…… Listed under: [LED Projects](#), [Projects](#)

229. [Displaying Images on 4D OLEDS using Arduino](#)

4D Systems makes some really nice serial OLEDS. They aren't hard to use, but the documentation for them is very scattered. This tutorial pulls together the various pieces i've found so that you can get up and running very quickly. Start by skimming through the…… Listed under: [Video – Camera – Imaging Projects](#)

230. [Program your Arduino with an Android device](#)

Hi, in this Instructable I want to show you, how you can program your Arduino with your Android device. It is very simple and cheap. Also it allows us to program our Arduino where ever we want, this is usefull for permanently installed Arduino boards,…… Listed under: [Arduino Android](#), [Electronics News Updates](#)

231. [Arduino stoplight web server](#)

At the place I work, we use xymon to monitor of our servers. All of the services monitored are important, but we wanted a separate indicator to simply show the overall health of the most critical systems. Furthermore, we came up with the following criteria:…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

232. [Power off from an Arduino Sketch using the Pololu Power Switch](#)
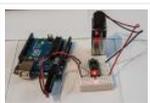
If you need an Arduino to shut off from within your Sketch, this is the solution. We will explore wiring the Pololu Pushbutton Power Switch, programming the Arduino to shut off the power, and making the unit "power on" only. The Pololu Pushbutton Power Switch…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

233. [Wireless nunchuk controlled animatronic doll using Arduino](#)

This instructable will attempt to show you how to make an animatronic doll controlled by a wireless nunchuk. This doll can only move its head though. I'm sure there are plenty of people out there who can take this and expand on it and make…… Listed under: [Game – Entertainment Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

234. [Digital Read Serial using Arduino](#)
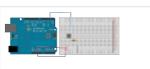
This example shows you how to monitor the state of a switch by establishing serial communication between your Arduino and your computer over USB. Hardware Required Arduino Board A momentary switch, button, or toggle switch 10k ohm resistor breadboard hook-up wire Circuit image developed using Fritzing. For more…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

235. [Arduino Esplora Joystick Mouse](#)

This sketch shows you how to read information from the Esplora's joystick and use it to control the movement of the cursor on your computer. You're making your Esplora into a mouse! This sketch will take over the mouse movement of your computer. If you...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

236. [Hookup an LCD to an Arduino](#)

Adding an LCD display to Arduino projects can add real value but the cost of doing so can be significant. Not a financial cost – you can pick up 16 (characters) x 2 (rows) LCD for as little as £3.50. The cost is the pin...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [LCD Projects](#), [Projects](#)

237. [The Tetris Pumpkin using an Arduino](#)

Who wants grinning faces and candles when you can have an interactive pumpkin this Halloween? Play your favorite block-stacking game on an 8×16 grid carved into the face of the gourd, lit by LEDs and using the stem as a controller. This is a moderately...... Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [Projects](#)

238. [Switch Statement used with serial input using Arduino](#)

An if statement allows you to choose between two discrete options, TRUE or FALSE. When there are more than two options, you can use multiple if statements, or you can use the switch statement. Switch allows you to choose between several discrete options. This tutorial shows you...... Listed under: [How To – DIY – Projects](#), [Projects](#)

239. [A laundry alarm for the hearing impaired and everyone else using Arduino](#)

This Arduino based project was designed to solve a recurring problem for my hearing impaired wife. Our laundry room is located remotely from our living area. If our laundry has finished washing and is not removed in time, it can sour or even get moldy. ...... Listed under: [Home Automation Project Ideas](#), [Projects](#), [Security – Safety Projects](#)

240. [Android & Arduino Controlled Projector Screen](#)

This is my first time using Arduino, or any microcontroller. I'm glad it worked out so well but my wife may not be, due to the stacks of microcontrollers that will being showing up on our doorstep soon for future projects. Any feedback or questions...... Listed under: [Arduino Android](#), [Projects](#)

241. [Freeform Arduino](#)

As an artist, sometime I created an art pieces without planning ahead what I want to draw or paint, just want to add colors or lines onto the drawing or canvas, and never think of the outcome of the piece. Let's our own instinct and subconscious leading...... Listed under: [LED Projects](#), [Projects](#)

242. [L.O.G. sous vide](#)

So have you heard of sous vide? Well, this Lazy Old Geek (LOG) hasn't or hadn't. http://en.wikipedia.org/wiki/Sous-vide It's French. So it's kind of like boil-in-a-bag only you don't boil it. The equipment can be rather expensive. http://www.sousvidesupreme.com/Shop_Online/SousVide_Supreme_Demi/Department.aspx?DeptID=3&&AdID=245&gclid=CN7PyM6uw7cCFWNp7AodomkA6g I thought that was rather expensive for a...... Listed under: [Home Automation Projects](#)

243. [Energy-Saving Light using an Arduino](#)

In the spirit of Earth Day, I have created a revolutionary new energy-saving lighting solution that is only ever on when your eyes are open. This is remarkably more efficient than normal lighting that remains on, even when your eyes are shut. Using my device, you...... Listed under: [Home Automation Projects](#), [Projects](#)

244. [Make your own custom Arduino compatible](#)

I love Ardunio. I love the things that people make with them and I love to make my own. Last August I published an Instructable on how to make your own postage stamp sized Arduino compatible. This Instructable will show you how to to make a...... Listed under: [How To – DIY – Projects](#), [Projects](#)

245. [Arduino String Appending Operators Code](#)

Just as you can concatenate Strings with other data objects using the StringAdditionOperator, you can also use the += operator and the cconcat() method to append things to Strings. The += operator and the concat() method work the same way, it's just a matter of...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

246. [Solar powered arduino on the back of a playing card](#)

Here's a six word tragedy: My arduino needs four AA batteries. Really? Isn't this 2012? Where's my jetpack?!! Here's a way to the future — a way to make a solar panel, from scratch, that can power any arduino off of sunlight or even light...... Listed under: [Battery Projects](#), [Projects](#), [Solar energy projects](#)

247. [How to Build an Arduino Voice Controlled TV Remote](#)
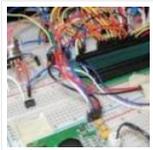
#include <EEPROM.h> #include <Wire.h> #include <SoftwareSerial.h> #include <LiquidCrystal.h> SoftwareSerial voice = SoftwareSerial(15, 16); LiquidCrystal lcd(5, 6, 7, 8, 9, 10); int pulses, A_SIG=0, B_SIG=1, menu=0, datacount, i, buttoncount=0; int count, j, k, m, ready=0, even=0, fail, first_but=0, second_but=0; word Power[100]; word Remote[100]; //word Remote2[100]; word...... Listed under: [Home Automation Projects](#), [Projects](#)

248. [The useless alarmed Coke can using Arduino](#)

Hi all! This is the most useless project in the world! It consist in a Coke can attached to an Arduino trough a coaxial cable and two resistors that make a sound when an hand is near it. Step 1: Materials and Tools For make...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

249. [Building the YaNis EOS Controller using Arduino](#)

The YaNis EOS controller is a device that allows you to wirelessly control your Canon DSLR from your Android phone. What's really exciting here is that the Android interface allows you to change most of the camera's settings (like Shutter Speed, Aperture Size, ISO, White...... Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

250. [Arduino Combi-button Lock optional Android support](#)

Recently, I decided I would like to attempt to make a passcode lock with my newly acquired Arduino Uno, but all the tutorials I could find made use of a modified keypad, something that not every Tom, Dick and Harry has lying about. I therefore...... Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Projects](#), [Security – Safety Projects](#)

251. [PEZ Robo Dispenser Using Arduino](#)

I was strolling down the candy aisle at the supermarket and there it was: the PEZ dispenser, conjuring up sweet (literally) childhood memories served up by my favorite cartoon characters in squarish sugary pellets. Then, all of a sudden, an LED went off in my...... Listed under: [Game – Entertainment Projects](#), [Projects](#), [Robotics – Automation Projects](#)

252. <u>Quality of Life Meter</u>

Harsh new rules at work getting you down? Overtime sucking the life out of you? Or maybe things are great, either way now you can show your co-workers and management exactly how you feel about your job without a single meeting, memo, or team bonding...... Listed under: <u>Metering – Instrument Projects</u>

253. <u>Arduino Switch Statement used with sensor input</u>
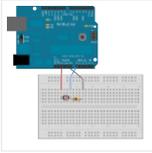
An if statement allows you to choose between two discrete options, TRUE or FALSE. When there are more than two options, you can use multiple if statements, or you can use the switch statement. Switch allows you to choose between several discrete options. This tutorial shows you...... Listed under: <u>Interfacing(USB – RS232 – I2c -ISP) Projects</u>, <u>Projects</u>, <u>Sensor – Transducer – Detector Projects</u>

254. <u>Modifying a Robot Arm using Arduino</u>

Essentially another tutorial involving controlling DC motors. In this post I'm going to first alter a robot arm I had built previously from a beginners kit so that it can be controlled from Arduino. Then I'm going to write a series of posts on different...... Listed under: <u>Projects</u>, <u>Robotics – Automation Projects</u>

255. <u>RC Paper Tank – Bring your 3D models to life</u>

Bring your 3D models to life! In this instructable we will custom make a remotely controlled tank. We will infuse paper-craft with an arduino based system. This tank will be controlled on a android based phone though a bluetooth connection. I've strived to create something with...... Listed under: <u>Game – Entertainment Projects</u>

256. <u>Barcode Reading using Roborealm Output on Arduino LCD</u>

This Instructable shows how to create a Barcode Reader using only a webcam together with Roborealm and Arduino. The webcam used in this demonstration is the Logitech Quickcam and the LCD screen is labelled, JHD162A. What you need for this project: 1. Arduino UNO 2....... Listed under: <u>Interfacing(USB – RS232 – I2c -ISP) Projects</u>, <u>LCD Projects</u>, <u>Projects</u>

257. <u>Analog In, Out Serial using Arduino</u>

This example shows how to read an analog input pin, map the result to a range from 0 to 255, and then use that result to set the pulsewidth modulation (PWM) of an output pin to dim or brighten an LED. Circuit image developed using Fritzing....... Listed under: <u>Projects</u>, <u>PWM Projects</u>

258. <u>Midi Light Show using Arduino</u>

For a class, my teammate and I decided to develop a MIDI based system that has a responsive light for each note played. For example, if you plug our little setup to a keyboard, pending on which note you press, you'll get a specific color....... Listed under: <u>Projects</u>, <u>Sound – Audio Projects</u>

259. <u>3D Printed Digital Camera</u>

This is a 3D printed digital camera that you can build yourself. By making your own digital camera, it takes away some of the mystery around how such devices work, and are fabricated. Also, it allows you to fully customize the camera to your liking....... Listed under: <u>Video – Camera – Imaging Projects</u>

260. <u>The LED Strip Jellyfish Costume with Arduino & LPD8806 Led Strips</u>

It all started when I saw a BBC documentary in 2002 about deep waters of the ocean. There was a biolimunescent jellyfish in the documentary, probably of the species "ctenophores" that grabbed my attention so in the later years I decided use it as a Halloween costume....... Listed under: [LED Projects](#)

261. [How to use a while loop to calibrate the value of an analog sensor using Arduino](#)

Sometimes you want everything in the program to stop while a given condition is true. You can do this using a while loop. This example shows how to use a while loop to calibrate the value of an analog sensor. In the main loop, the sketch below reads...... Listed under: [Metering – Instrument Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

262. [Arduino-l3dgecomm – Integrating L3DGEWorld and Arduino](#)

L3DGEWorld is a tool for monitoring and interacting with networks and computer systems. Within a 3D world, entities bounce, spin, scale and otherwise change. These entities all represent an entity in another context – be it a server, phone, router or other monitorable device. The...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

263. [Mailbox Phone Alert](#)

The mailbox phone alert sends you a text whenever you get mail. I remember anxiously checking my mail multiple times a day during the spring of my senior year of high school as I awaited letters back from colleges. Nervously, I would walk up to...... Listed under: [Phone Projects](#)

264. [Tree Climbing Robot using Arduino](#)

After I got comfortable programming and building with an Arduino, I used my newly acquire microcontroller skills to build a robot. Using a microcontroller, four high-torque DC gear motors, spiked legs, a linear actuator, rotation sensors, and 3 L298 H-bridge circuits, this robot can climb...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

265. [Palm Arduino Board V3](#)

I design and create this Palm Arduino V3 prototype PCB, as I was tired of recreating Arduino Compatible on perf board every time I prototyping a new project, especially when I had to spend a lot of time tracing the wiring to see that I...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

266. [How to make a XY-plotter with Makeblock](#)

Last month, I made a XY-plotter by Makeblock and use it to built a Drawing Robot. This Drawing Robot was built with two Linear Motion Shaft D8x480mm, two Long Beam0824, the timing belt, two stepper motors, two stepper motor driver, and a micro-controller Arduino. You...... Listed under: [Robotics – Automation Projects](#)

267. [Best RGB LEDs for any project (WS2812)](#)

When we're working with LEDs, we often like to control their state (on/off), brightness, and color.   There are many, many different ways of going about this, but none are as compact a solution as the WS2812 RGB LED. In its tiny 5mm x 5mm...... Listed under: [LED Projects](#)

268. [DIY Skee Ball Machine](#)

The skee ball machine is a wonderful thing. The simple experience of rolling a ball into a target is so freakishly satisfying that I used to play as much as I could as a kid at the local amusement park/mini-golf course. The sound of the…… Listed under: [How To – DIY – Projects](#)

269. [The Dryer Messenger using Arduino](#)

The dryer in our house is in an out-of-the-way corner where it's hard to hear the buzzer. When we miss it, the clothes sit in the dryer getting wrinkly, so we start the dryer again, don't hear the buzzer again … it's an endless cycle……. Listed under: [Home Automation Projects](#), [Projects](#)

270. [LED Shoulder Pads](#)

For this project, I was inspired by my best friend. She had been wanting some disco-fabulous armor-inspired wearable technology for music festivals and costume parties for some time. I took a pair of construction/gardening knee-pads and turned them into glitterific shoulder pads that shine bright…… Listed under: [LED Projects](#)

271. [How to Create an Arduino Compatible Bluetooth 4.0 Module](#)

I had been looking for a cheap alternative to some of the Arduino Bluetooth devices I'd seen, which in my opinion are overpriced. Redbear's Mini: $39.95 (Note: This is a uC and BLE combo). Redbear's Uno Shield: $29.95 BLEDuino: $19.95 (if part of Kickstarter) Bluegiga…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

272. [Homemade Arduino Friendly Pulse Sensor](#)

I saw the Open Hardware Pulse Sensor at thought I'd try to make it at home. Took me awhile, but here's my bumbling process. Step 1: Pulse Sensor — Overview I've been working on re-making the the Open Hardware Pulse Sensor so it'd be "easy" to send off to…… Listed under: [Medical – Health based Projects](#), [Sensor – Transducer – Detector Projects](#)

273. [DIY Robotic Hand Controlled by a Glove and Arduino](#)

This project idea came to me when I was sitting on a bed on a hotel room on vacation. I thought: "It'd be really neat to have a robotic hand that I can control with my own hand!" Upon returning home, I embarked upon a…… Listed under: [Robotics – Automation Projects](#)

274. [Arduino Barometric Pressure Web Server](#)

This example shows how to use SPI communications to read data from a SCP1000 Barometric Pressure sensor, and how to then post that data to the web by using your Arduino/Ethernet Shield combo as a simple web server. Using the Ethernet library, your device will…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

275. [Create an Internet Connected Pill Dispenser](#)

The P.I.L. Box – A Better Medication Reminder System Studies show the consequences of patients not taking medications according to doctor's orders can be serious, especially in older patients.With today's low cost micro-controllers and sensors (and the incentive of the Radio Shack / Instructables Micro…… Listed under: [Internet – Ethernet – LAN Projects](#)

276. [Android talks to Arduino](#)

This project slightly modifies the Google Android sample app called "Bluetooth Chat" so you can type a message in the Android app and that same message will appear on an LCD attached to an Arduino Uno. Functionality: Android talks to Arduino 1. Run the Android...... Listed under: [Arduino Android](#), [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Internet – Ethernet – LAN Projects](#), [Phone Projects](#), [Projects](#)

277. [Create Interactive Electronic Instruments with MaxMSP](#)

This Instructable is part 3 in an Intro to MaxMSP series I've just finished teaching atWomen's Audio Mission in San Francisco. Part 1 is an introduction to MaxMSP and MIDI, part 2 is intermediate Max and Audio, and this Instructable is all about interfacing MaxMSP with hardware. I...... Listed under: [Other Projects](#)

278. [Make another Arduino LCD shield](#)

In this tutorial we make an LCD shield for using 20 character by four row LCD modules with Arduino Uno. Updated 18/03/2013 In this article you can follow the process of making another LCD shield for the Arduino Uno or compatible boards. In the past (which explains...... Listed under: [LCD Projects](#), [Projects](#)

279. [RGB LED Skate Light](#)

I like to go skating every week but I noticed that the my skates weren't cool enough so I decided it was time for some lights! I installed these lights on my Dad's skates as a thank-you present for taking care of the pool for...... Listed under: [LED Projects](#)

280. [Homemade Infrared Rangefinder (Similar to Sharp GP2D120) using Arduino](#)

Here is my instructable on how to construct a pretty simple (for some!) short range infrared rangefinder/range sensor. Infrared rangefinders are very useful in a number of projects. The majority of these come from obstacle detection (in robots) or generally detecting distances! The one shown...... Listed under: [Internet – Ethernet – LAN Projects](#), [Metering – Instrument Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

281. [Make your own Enigma Replica](#)

EDIT: This Instructable has won Second prize in the 2013 Radio Shack Microcontroller Contest. Thank You to all who voted! This is our very first Instructable and this step by step guide will show you how to build a fully functional electronic replica of the...... Listed under: [Game – Entertainment Projects](#), [LED Projects](#)

282. [MIDI Note Player using Arduino](#)

This tutorial shows how to play MIDI notes from an Arduino. MIDI, the Musical Instrument Digital Interface, is a useful protocol for controlling synthesizers, sequencers, and other musical devices. MIDI devices are generally grouped in to two broad classes: controllers (i.e. devices that generate MIDI...... Listed under: [Game – Entertainment Projects](#), [Projects](#), [Sound – Audio Projects](#)

283. [Serial Call and Response with ASCII-encoded output using Arduino](#)

This example demonstrates string-based communication from the Arduino board to the computer using a call-and-response (handshaking) method. The sketch sends an ASCII string on startup and repeats that until it gets a serial response from the computer. Then it sends three sensor values as ASCII-encoded...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

284. [Trinity Assembly](#)

Hey dudes! Lets build the trinity synt! ! More information about the synth at: www.bastl-instruments.com Before you start: the board solders from both sides and the component goes always above its printed sign so it hides the sign! You should know that there are some...... Listed under: Other Projects

285. Serial Call and Response using Arduino
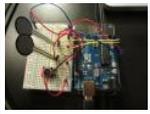
This example demonstrates multi-byte communication from the Arduino board to the computer using a call-and-response (handshaking) method. This sketch sends an ASCII A (byte of value 65) on startup and repeats that until it gets a serial response from the computer. Then it sends three...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

286. A Self-Contained Data Logging Anemometer

I love collecting and analyzing data. I also love building electronic gadgets. A year ago when I discovered the Arduino products, I immediately thought, "I'd like to collect environmental data." It was a windy day in Portland, OR, so I decided to capture wind data....... Listed under: Metering – Instrument Projects

287. Calibrating sensor input using Arduino

This example demonstrates one techinque for calibrating sensor input. The Arduino takes sensor readings for five seconds during the startup, and tracks the highest and lowest values it gets. These sensor readings during the first five seconds of the sketch execution define the minimum and...... Listed under: Projects, Sensor – Transducer – Detector Projects

288. *duino Keg Temp Monitor, or the Quest for the Perfect Pint

I was looking for a project that combined my three favorite things – working in my shop, building cool stuff for my bar and of course, drinking beer. After a couple of weeks in the old country drinking "the Guinness", I decided my I'd put a keg...... Listed under: Temperature Measurement Projects

289. Physical Pixel using Arduino

This example example uses the Arduino board to receive data from the computer. The Arduino boards turns on an LED when it receives the character 'H', and turns off the LED when it receives the character 'L'. The data can be sent from the Arduino...... Listed under: LED Projects, Projects

290. SensoDuino: Turn Your Android Phone into a Wireless Sensors Hub for Arduino

UPDATES Nov 23, 2013: SensoDuino 0.160 gets a face left. Nov 19. 2031: OPINION: The Amazing Synergy Between Arduino & Android. Nov 19, 2013: SensoDuino 0.159 is out. Android phone date (y,m,d) and time (h,m,s) are supported as sensors. Support for Android KitKat (4.4/API 19).   INTRODUCTION Think of SensoDuino...... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Phone Projects, Sensor – Transducer – Detector Projects

291. Sleep n' Tweet using an Arduino

Now I am lucky enough to work at the greatest company in the world as a University of Waterloo, co-op student. It might not even be a company you've heard of yet. They're named Upverter and we are trying to change the way people design,...... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects

292. Arduino Fingerprint Lock

There is a short video for this Arduino fingerprint lock here: http://v.youku.com/v_show/id_XNjIxNzQyNzY4.html I live in a small apartment in Shenzhen with my wife and baby, 5 months old. Sometimes, I need to go out, for example, to go downstairs to buy candy or diapers for my…… Listed under:

293. Slipper Shining with LED strip & Xadow

mo.momi Led strips are amazing! Firewalker-led-sneakers(http://learn.adafruit.com/firewalker-led-sneakers) by Adafruit inspired me. I wanna change a way to control it, instead of "pressure-sensitive", I use a accelerometer sensor judging the motion of slipper. It's simple, I complete this version only calculating the acceleration on "z" axis, weather…… Listed under:

294. Arduino Esplora Blink Code

This sketch blinks the Esplora's RGB LED. It goes through all three primary colors (red, green, blue), then it combines them for secondary colors(yellow, cyan, magenta), then it turns on all the colors to create white. For best results, cover the LED with a piece…… Listed under:

295. Analog Input using Arduino

A potentiometer is a simple knob that provides a variable resistance, which you can read into the Arduino board as an analog value. In this example, you'll connect a poterntiometer to one of the Arduino's analog inputs to control the rate at which the built-in…… Listed under:

296. Sonic Switch: Use a Sonic Screwdriver to turn on your computer!

What it is: An Arduino-based light-sensitive switch for turning on a desktop computer. Why its cool: Use a Sonic Screwdriver to turn on your computer! Story: This project started, as I'm sure a lot of them do, as a result of boredom and the thought…… Listed under:

297. Arduino and 7 segment LED display decoder

In this instructable i will explain how to connect 7 segment display, decoder and arduino. It´s pretty easy. At first we have to learn something about decoder. I´m using BCD to 7 segment decoder. My is D147D, this is old chip, but the newer are…… Listed under:

298. Pixel Shipped Counter

Many times, we often use LCD as display equipment, from tiny temperature monitors to large industrial equipment. The funny thing in this project is that it combines two Red LED Matrices as display. You don't need other devices except Arduino to drive it. This project…… Listed under:

299. Capacitive Touch Arduino Lamp

The Problem It is late night, and your cellphone rings. You can't see where it is, you blindly grope around your nightstand, trying in vain to find that illusive switch that will illuminate your side of the bed. You clumsily turn on the lamp, locate…… Listed under:

300. SPlaying tones on Multiple outputs using the tone() function with Arduino

This example shows how to use the tone() command to play different notes on multiple outputs. The tone() command works by taking over one of the Atmega's internal timers, setting it to the frequency you want, and using the timer to pulse an output pin……. Listed under:
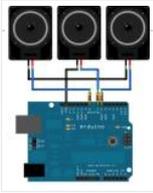
301. Button State Change Detection using Arduino

Once you've got a pushbutton working, you often want to do some action based on how many times the button is pushed. To do this, you need to know when the button changes state from off to on, and count how many times this change of state…… Listed under: Calculator Projects, Projects

302. Redefining the TV Remote using Arduino

We use them every day, but has no one got bored of pressing buttons on a stick, it's far too much effort pressing buttons! Surely there are better ways to control a device? After doing some work with my Nikon camera using IR to control…… Listed under: Home Automation Projects, Projects

303. How to make a Ball Balancing Robot

Last year, I have made this ball balancing robot.It can stand on a ball stable by the balance system of itself. There is only one connect point between the robot and the ground, so it is more flexible than the traditional wheeled robot. It can…… Listed under: Robotics – Automation Projects

304. Using FM RC Controllers using an Arduino

I recently dug up my old RC transmitter and receiver and thought "How can i control my arduino with this?" so i powered on my scope to see what was going on at the receiver. Sure enough, it was sending out the standard PWM signal that servos…… Listed under: Projects, Radio Projects

305. Simple keyboard using the tone() function using Arduino
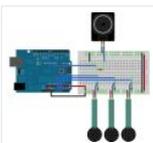
This example shows how to use the tone() command to generate different pitches depending on which sensor is pressed.   Circuit Connect one terminal of your speaker to digital pin 8 through a 100 ohm resistor, and its other terminal to ground. Power your three FSRs (or…… Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Sound – Audio Projects

306. Arduino Powered Nixie Tubes: ArduiNIX Nixie driver shield assembly

www.ArduiNIX.com presents: ArduiNIX Nixie driver shield assembly The ArduiNIX shield is a user programmable platform for driving multiplexed Nixie tube or other high voltage displays**. The ArduiNIX is open source hardware Welcome to the assembly portion of the site. Here we will take you step by…… Listed under: LED Projects

307. LED Show 2 using Arduino Esplora

This example shows you how to read different analog sensors to change the brightness of the three colors in the RGB LED. In this example you will read the amplitude from the microphone, the amount of light on the light sensor, and the position of…… Listed under: LED Projects, Projects

308. The MicroSlice | A tiny Arduino laser cutter

A few years ago I saw an Instructable where Groover had used a pair of DVD-RW drives to make a pocket laser engraver. Inspired by the idea, driven by the recent purchase of a full-sized 50 watt CO2 laser cutter, and roused by the launch of the Microcontroller contest I took…… Listed under: CNC Machines Projects

309. Wally – IR Detection Robot using Arduino

 My First ever Robot. It tracks objects using Infra-red sensors, and has basic AI that follows and avoid objects. I will describe the how I made this robot, and upload some videos. Version 1 (16 Dec 2011): —————–The components used ——————- I actually planned this…… Listed under: Projects, Robotics – Automation Projects

310. Secret Compartment Chess Set

I play chess pretty poorly and have always wanted to get better, but I don't even own a chess set. I decided I wanted to make my own set, but with a twist. I have made a chess board with a secret drawer that is…… Listed under: Game – Entertainment Projects

311. Arduino Projects on a breadboard (no serial com)

Intro: If you've got an Arduino Uno and want to start duplicating projects without having to buy an Uno every time… get ready to live! This instructable will show you how to move your projects (that do not require serial communication) onto a breadboard for…… Listed under: Development Board – Kits Projects, Interfacing(USB – RS232 – I2c -ISP) Project Ideas

312. Automatic Camera Shutter Switch

The best part of haunted houses and amusement park rides is getting to see pictures of your friends screaming in terror. To get these kinds of pictures requires perfect timing. The best way to get this is with an electronic control circuit. So in this…… Listed under: Video – Camera – Imaging Projects

313. Timelapse Panning controller for GoPro Cameras

This instructible will show you how I built (and you can also build) an Arduino Timelapse Panning controller for GoPro cameras. There are obviously some refinements that can be made to the design, but in general I am very happy with the results that I've…… Listed under: Video – Camera – Imaging Projects

314. Pong Playing Flexible Screen on a Shirt

This is my Halloween costume for the year 2013. It's been in the works for about a year and has taken quite a few man hours to create. The screen is 14 by 15 pixels, so, pretty low resolution but it can still do some…… Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects

315. Sky on the Wall (Mood Lighting-IR remote)

I love LED and stars, and after saw another instructables about star constellation and some mood lighting that was very inspired and I decided I wanted to take that idea and want to create some mood lighting with some skies component such as stars, and…… Listed under: Home Automation Projects, LED Projects

316. Pitch follower using the tone() function using Arduino

This example shows how to use the tone() command to generate a pitch that follows the values of an analog input Circuit image developed using Fritzing. For more circuit examples, see the Fritzing project page Connect one terminal of your speaker to digital pin 9 through a…… Listed under: Projects, Sound – Audio Projects

317. [Functional Lit Costume Goggles for Mr Freeze](#)

Egads! LED Goggles you can see through (surprisingly well, too)! They pulse subtly, making them so cold and dehumanizing. They were totally perfect for the character I was going after – Mr Freeze. It was my first time really playing with LEDs and Arduinos, so…… Listed under: [Game – Entertainment Projects](#), [LED Projects](#)

318. [Basic Arduino Tutorials : 01 Blinking LED](#)

In this instructable, I'm going to show you how to make a simple circuit/code with an arduino, which will make an LED connected to it flash from off to on, with 1-second intervals, as shown below. This is a very easy, basic idea, however it…… Listed under: [LED Projects](#)

319. [Phone Controlled Mood Lighting](#)

Dorm rooms are notorious for their dreadful lighting, so I wanted to make a cool alternative light source for my room at school. I made it phone controlled so there would be an easy and wireless way to change the color of the lighting. The…… Listed under: [LED Projects](#), [Phone Projects](#)

320. [How to Make a Makeblock Music Robot with the Music Robot Kit（NEW）](#)

Makeblock is an aluminum extrusion based construction system that provides an integrated solution for aspects of mechanics, electronics and software design. With Makeblock you can make professional robots, toy machines or even art-ware. It's super easy-to-use and helps bring your creations to life. The only…… Listed under: [Robotics – Automation Projects](#), [Sound – Audio Projects](#)

321. [Accelerometer Dice with 123D Circuits](#)

This is the project that got Autodesk's CEO Carl Bass a little extra attention from the TSA on his way to MakerFaire Tokyo. Here's an article about that… We made this as way to demo a few things you can do with our apps, 123D Circuits and 123D Design : Design…… Listed under: [LCD Projects](#), [Metering – Instrument Projects](#)

322. [Better LED as light sensor](#)

As a result of the questions from lekirst on this ible of my hand: LED-as-lightsensor-on-the-arduino/ and the cleaner code made by hansc44 at: Arduino-Use-LED-as-a-light-sensor/ it was time to come with a better Ible. So here it is. (I didn't solve lekirst's problems yet so she probably is open for suggestions) What is…… Listed under: [LED Projects](#), [Sensor – Transducer – Detector Projects](#)

323. [Arduino Mega-ISP Shield](#)

Use this shield to re-burn the bootloader for any arduino. You can always make one on a breadboard, but having a shield is great. This is great for people who works with lots of arduinos. You can also use it with AVRDUDE. I will have…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

324. [Frameless Laser Harp](#)

We are a generation that love sound and light – can't do without them really. Our most preferred time of day is night, or what we would call evening. We are particularly well acquainted with technology; doesn't hurt these days. Our prerequisite for everything is…… Listed under: [Game – Entertainment Project Ideas](#), [LED Projects](#)

325. [5X5 dot matrix on Arduino](#)

With this you just type the text you want on your computer and your 5×5 dot matrix shows the message. Used: ~25 leds ~Arduino uno ~5x 100ohm resistor ~and a bit of skripting It took me a while to figure this all out but in…… Listed under: [LED Projects](#), [Projects](#)

326. [Arduino Chessclock](#)

I could not find instructions on a good Arduino chess clock so instead I built my own which I will describe here. Step 1: Parts list [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14 " radius="20 " border="#985D12" float="right" head="Major Components in Project" headbg="#FFEB70" headcolor="#985D00"] here are the…… Listed under: [Clock – Timer Projects](#), [Game – Entertainment Projects](#)

327. [Input Pullup Serial using Arduino](#)
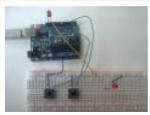
This example demonstrates the use of INPUT_PULLUP with pinMode(). It monitors the state of a switch by establishingserial communication between your Arduino and your computer over USB. Additionally, when the input is HIGH, the onboard LED attached to pin 13 will turn on; when LOW, the…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#), [Projects](#)

328. [Arduino PMW enabled high power shield or non-shield on the cheap](#)

Micro controllers are great, but have you ever wanted to control something bigger then, lets say an LED? If you have, look no further (unless you want more then 0.6Amps for 4 channels, or 2.4Amps for 1 channel), unless you don't mind spending more money.…… Listed under: [PWM Projects](#)

329. [LOG Arduino Sketches 101](#)
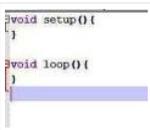
So this Lazy Old Geek (LOG) gets bored sometimes and wants something to do. Actually, sometimes I get tired of trying to solve hardware problems, which are sometimes software problems. So I decided to do a tutorial on Arduino sketches. What is a Sketch? I'm…… Listed under: [Arduino Programmer Projects](#)

330. [Occupational Therapy Dexterity/Cognitive Aid](#)

The Need: Occupational Therapy Device Occupational therapy is used in treating Traumatic Brain Injury during many phases of recovery and rehabilitation. As the patient's condition improves, occupational therapy helps them regain skills ranging from basic self-care, to complex cognitive skills such as memory and problem solving. Occupational therapy can…… Listed under: [Medical – Health based Projects](#)

331. [Laser Triggered Countdown](#)

This is a simple arduino based project that consists of a laser tripwire that, when triggered, will begin a countdown sequence on red, orange and green LEDs. I designed this to be an easy project for someone learning how arduinos work (like me). This is…… Listed under: [Calculator Projects](#), [LED Projects](#)

332. [Mounting a Smapler v0002 step by step](#)

A Smapler is a circuit dedicated to the production of generative sound created by David Cuartielles and Ino Schlaucher from BlushingBoy.org. The Smapler v0002 -aka Singapore edition- is nothing but an Arduino shield to be used for playing funky stereo sounds. As an extra add-on…… Listed under: [Development Board – Kits Projects](#)

333. [Poduino Case](#)

The 'Poduino Case'. A protective case for your Arduino (with breadboard work area): I just received my Arduino Duemilanove and breadboard today. After some careful thought, I realized there is no way this thing could possibly survive daily life on my desk. I saw some...... Listed under: [Development Board – Kits Projects](#)

334. [LCD Temperature Shield Assembly Instuctions](#)

These are assembly instructions for the LCD Temperate Shield with buzzer that i am going to be selling soon. Please note, all the photos are my own, but are of one of my Prototype stage boards, and are subject to change, the production boards WILL...... Listed under: [LCD Projects](#)

335. [Light and Water Reactive Raincoat](#)

This semester at college, I am in a class called Computing and Craft which is about incorporating circuitry and micro-controllers and craft to bring our projects to the next level. For our first big project, I decided to make a raincoat the reacted to light and water....... Listed under: [Home Automation Project Ideas](#), [Security – Safety Projects](#)

336. [Smart Heart Monitor](#)

No longer will you have to pay hundreds of dollars for a heart rate monitor! The Smart Heart Monitor will be able to do all of your cardiac measuring needs for you! The Smart Heart Monitor measures the user's heartbeat using an LED and a...... Listed under: [Medical – Health based Projects](#)

337. [Getting your Nokia 5110 LCD up and running on an Arduino](#)
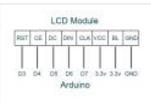
We purchased one of these very cheap, very cool 84×84 LCD backlit screens off of eBay a couple of weeks ago. It's a very nice product for adding visual elements to your projects at a very low price. We paid £3.89 for the screen and...... Listed under: [Electronics News Updates](#), [Phone Projects](#)

338. [Hidden light control using Arduino](#)

I've bought recently some cheap dual axis magnetic sensors at SureElectronics (http://www.sureelectronics.net/goods.php?id=944), I've tried first to use them as straight compass. Annoying problem : it's impossible to accurately compensate the tilt of the sensor without using a gyro sensor. On the other end, if you stay on...... Listed under: [Home Automation Projects](#), [LED Projects](#), [Projects](#)

339. [Arduino Powered Mushroom Environment Control](#)

This is my first Arduino project aimed at helping me with my other hobby which is growing oyster and shiitake mushrooms indoors. In a nutshell, the controller takes in two temperature readings, 1 Humidity reading and 1 Co2 reading and triggers a set of four...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

340. [Paper Electronics: Make Interactive, Musical Artwork with Conductive Ink using Arduino](#)

If you've ever wanted to bring a piece of paper to life, now is your chance. This instructable will take you through all the necessary steps to create an amazing interactive flyer or artwork. This event flyer is no ordinary piece of print. It is printed using...... Listed under: [Projects](#), [Sound – Audio Projects](#)

341. [Diorama, Bat in the cave using Arduino](#)

The purpose of this instructable is to outline our development of this bat in the cave as well as provide instructions and tips for future engineers hoping to complete a similar project or use components of our project in theirs. The goal of this project...... Listed under: [Motor Projects](#), [Sensor – Transducer – Detector Projects](#)

342. [Arduino-based master clock for schools](#)

If your school, or kids school, or other location relies on a central master clock that is broken, you may have a use for this device. New master clocks are available of course, but school budgets are under extreme pressures, and it really is a...... Listed under: [Clock – Timer Projects](#), [Projects](#)

343. [Keyfob Deadbolt using an Arduino Board](#)

The key to my apartment never worked quite right because it is a copy of a copy of a copy. I am fairly certain that the dead bolt is original to the building and the property manager seems to have lost the original key years...... Listed under: [Home Automation Projects](#), [Projects](#)

344. [Rainbowduino Sign using Arduino](#)

The Rainbowduino is a variant of the Arduino and among other things is capable of driving an 8×8 RGB LED matrix. I had just finished a backyard re-model and was in need of an entrance sign. Step 1: Carving and Painting the Sign I had...... Listed under: [LED Projects](#)

345. [Another Arduino Traffic light](#)

After working with the arduino and not knowing what the heck I'm doing I made Another simple traffic light. I looked around the web to find one that looks about normal and came across none. They seemed too fast. So, I found and modded some...... Listed under: [Car Projects](#), [Projects](#)

346. [Electronic Music Box Powered by Arduino (sort of)](#)
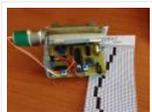
Music is the most universal means of expression. Regardless cultural language or age the idea conveyed though music would not differ much. It is safe to say everyone loves music, one type or another. When one's favourite piece is played there is a overwhelming desire...... Listed under: [Sound – Audio Projects](#)

347. [Battery Reconditioner using an Arduino](#)

So if you are like this Lazy Old Geek, you have a lot of rechargeable batteries lying around. I wrote another Instructable with some battery tips. http://www.instructables.com/id/Rechargeable-Battery-Tips/ Amongst these batteries, I have a lot that no longer work or don't work very well. So I...... Listed under: [Battery Projects](#), [Projects](#)

348. [Aqua Garduino Mini @hydroFishAqua82](#)

Arduino Powered Micro Aquaponic System with Pi Camera and Twitter Feed We are creating an automated aquaponic system with mobile updates via Twitter. Sensors and motors will be controlled from an Arduino while the entire system, including mobile updates, will be orchestrated by a Raspberry...... Listed under: [Home Automation Projects](#)

349. [Homemade arduino printer](#)

If you want to make your own high resolution printer (maybe not so high res), you are at the right place. This Instructable will show you how to do with two dead cd/dvd drive and a pen (pilot, whiteboard marker, whatever you have) at the...... Listed under: [How To – DIY – Projects](#), [Projects](#)

350. [My Arduino In Circuit Programmer](#)
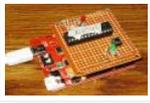
This Lazy Old Geek is also an Arduino Geek. If you are an Arduino Geek, one of the common microcontrollers used by Arduinos is the Atmega328 chip. In order to use Arduino software, the Atmega must have bootloader software on it. Okay, so I bought...... Listed under: [Arduino Programmer Projects](#), [Projects](#)

351. [BLDC Motor Control with Arduino](#)

There is a lot of interest these days among hobbyists in controlling brushless DC (BLDC) motors, which have improved performance and better energy efficiency over traditional DC motors, but are more difficult to use. Many off-the-shelf products exist for this purpose. For example, there are...... Listed under: [Motor Projects](#)

352. [Beginner Programming of Arduino](#)

This video is from a meeting of the Kids and Technology Meetup group in Washington DC. The youth who show up to these free meetings are eager to learn advanced uses of computers. The presenters were John Dukovich and Hugo Estrada.... Listed under: [Arduino Programmer Projects](#), [Projects](#)

353. [Arduino Button Mouse Control Code](#)

Using the Mouse library, you can controls a computer's onscreen cursor with an Arduino Leonardo, Micro, or Due. This particular example uses a five pushbuttons to move the onscreen cursor. Four of the buttons are directional (up, down, left, right) and one is for a...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

354. [Arduino String Character Functions Code](#)

The String functions charAt() and setCharAt() are used to get or set the value of a character at a given position in a String. At their simplest, these functions help you search and replace a given character. For example, the following replaces the colon in...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

355. [Arduino-Radio Controlled Hydrogen Blimp](#)

The blimp is controlled by a transmitter on the ground, operated by a human. There are three control levers– one for each motor, and one for the servo that rotates the axis they're attached to. You push / pull to make the motors speed up...... Listed under: [Projects](#), [Radio Projects](#)

356. [Arduino Switch (case) Statement, used with serial input](#)
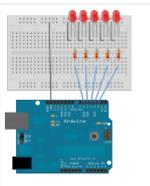
An if statement allows you to choose between two discrete options, TRUE or FALSE. When there are more than two options, you can use multiple if statements, or you can use the switch statement. Switch allows you to choose between several discrete options. This tutorial...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

357. [Potentiometer or variable resistor control LED Code](#)

The if() statement is the most basic of all programming control structures. It allows you to make something happen or not depending on whether a given condition is true or not. It looks like this: if (someCondition) { // do stuff if the condition is true } [Get Code]...... Listed under: [LED Projects](#), [Metering – Instrument Projects](#), [Projects](#)

358. [MultiSerial Mega using Arduino](#)

Sometimes, one serial port just isn't enough! When trying to communicate with multiple serial enabled devices, while also sending info back to the main serial window, a few extra RX/TX ports can be a welcomed thing. This example makes use of one of Arduino Mega's...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

359. Arduino 7 segment Displays Digital Clock With Charlieplexing LEDs

This is my second instructable. I just had a mood of making a digital watch. But wanted to make it a learning process. I already had a sanguino i could have easily used that Atmega644 chip. it would have been more than enough. But i...... Listed under: Clock – Timer Projects, Home Automation Projects, Projects

360. Autonomous Arduino Car

My questions for the Make-to-Learn Youth Contest ☐ What did you make? This goal of this project was to take commonly available electronic equipment and create an inexpensive, self-controlled vehicle. In simpler terms, this is an attempt at basic autonomy. It uses an arduino logic...... Listed under: Car Projects, Game – Entertainment Projects, Projects

361. Remake the Mosquito Killer using Arduino

Hi, everyone, i would like to introduce how i remake my mosquito killer here. With this remaking, my mosquito killer become "Smart", and really facilitate my life. I rented a room in very remote place to save my money, in the summer, the biggest trouble...... Listed under: Home Automation Projects, How To – DIY – Projects, Projects

362. Build an RFID time-clock system using Arduino

With this project you can build an RFID time-clock system to keep track of employees, children and more. Updated 18/03/2013 Recently I was listening to a friend who has three teenage children, of whom needed to arrive home before their parent. Unfortunately the parent needs...... Listed under: Clock – Timer Projects, Projects, RFID – NFC projects

363. Drifter – Arduino controlled RC car

Drifter is based on a cheap RC toy car I found at Toys'r'us, named 'Fast lane Monster Drift'. I think it's the same model Frits has been used in an episode of TLIHR. It doesn't work well, you get what you pay for. But it is a...... Listed under: Car Projects, Projects

364. House Temperature Monitor using Arduino

Recently a family member had his furnace fail while he was away from his house for a long period of time in the winter. His pipes burst and caused quite the mess. This project describes a temperature sensor that broadcasts the temperature in his house to the...... Listed under: Home Automation Projects, Projects, Temperature Measurement Projects

365. Time Lapse Digital Camera using Arduino

Following the instructable here, I was able to turn an old digital camera into a time lapse camera using an arduino, a relay, and an open source software program called makeAVI (windows). To modify the camera I disassembled the camera cover and removed the button that...... Listed under: Projects, Video – Camera – Imaging Projects

366. Arduino Knight Rider Code

Arduino Knight Rider light effect, a simple variation of blink code. Instruction; 1) Connect all LED as diagram below, make sure cathode lead of LED at ground wire. 2) Connect all 330Ω resistor to anode lead of LED. 3) Connect all jumper wire to digital...... Listed under: LED Projects, Projects

367. The Self-Balancing Robot using Arduino
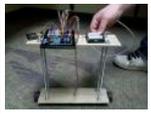
Introduction The idea of this project was to design and construct a robot that consists of a body and two wheels that would be able to balance on its own. This behavior is similar how a segway (a new mode of transportation) works. Our goal…… Listed under: [Projects](), [Robotics – Automation Projects]()

368. [Arduino Thermal Camera]()
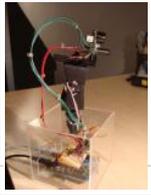
My recent arduino project was to build thermal camera on the cheap using an ir sensor and some pan/tilt hardware. If you look at the device picture to the left there is also acoustic range finder mounted to the top. The device works by sweeping…… Listed under: [Projects](), [Video – Camera – Imaging Projects]()

369. [Arduino MP3 Player]()

I present this new Arduino project: A full MP3 player based on Arduino. As you can see in the photo, the idea was to build a standalone player, in the style of antique radios or 'tapes', in the age of Iphones …. The player uses a small…… Listed under: [Projects](), [Sound – Audio Projects]()

370. [Analog VU meter and Clock using Arduino]()

This project brings back the old time Analog VU Meter, with the added functionality of a neat looking clock! When you turn off your music the meters automatically swing into to clock mode. Behind it all is the popular and easy to use Arduino. This…… Listed under: [Calculator Projects](), [Metering – Instrument Projects](), [Projects]()

371. [Arduino MIDI Foot Pedal Keyboard]()

The Origin My dad is a musician. He can play a multitude of instruments. However, he only has two arms, BUT he also has legs! That's when we decided that we would reuse the foot pedals from an old organ and convert them into an…… Listed under: [Game – Entertainment Projects](), [How To – DIY – Projects](), [Projects]()

372. [Arduino Police Strobe Light Code]()

Arduino Police Strobe Light effect, another simple variation of blink code. Arduino Police Strobe Light effect, another simple variation of blink code. Parts List; 1) 2x 5mm red LED 2) 2x 5mm blue LED 3) 1x Arduino 4) 4x 330Ω resistor 5) 1x 10kΩ potentiometer…… Listed under: [Car Projects](), [LED Projects](), [Projects]()

373. [Arduino RFID Lock]()

The Arduino RFID lock How does it work? The Arduino RFID lock is a lock that can be opened easily, but is secure. The lock works with a server database that can register card codes. On the door there is a RFID reader connected to…… Listed under: [Projects](), [RFID – NFC projects](), [Security – Safety Projects]()

374. [48×8 SCROLLING MATRIX LED DISPLAY USING ARDUINO CONTROLLER]()

A monochrome (single colour) LED dot matrix display is used for displaying the Characters and Symbols which is interface with a microcontroller. This project will deliberate on displaying a scrolling text message on a 48×8 LED dot matrix display. The microcontroller used is Arduino Uno…… Listed under: [LED Projects](), [Projects]()

375. [Connecting Arduino LCD Display Code]()

LCD display is great way to display output from your arduino when it not connected to your computer. The common display used in arduino projects is 16×2 parallel LCD display which compatible with the Hitachi HD44780 driver. It can easily recognize with it 16 pin…… Listed under: [LCD Projects](), [Projects]()

376. [Build a fully featured Arduino Thermostat](#)

In this post I will attempt to describe the steps I took to build the arduino based thermostat shown in the following videos. The first video was taken when around just half of the coding of the menu system was complete, but gives you a...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

377. [DIY FSK RFID Reader using Arduino](#)

This page is describes the construction of an RFID reader using only an Arduino (Nano 3.0 was tested, but others may work), a hand-wound wire coil, and some assorted low cost common components. Credits The hardware and software designs for this project are based in...... Listed under: [How To – DIY – Project Ideas](#), [Projects](#), [RFID – NFC projects](#)

378. [Arduino Voltmeter Code](#)

This arduino projects show how to make voltmeter with your arduino. It use voltage divider concept to estimate the voltage input. Instruction; 1) Connect all jumper wire as shown in diagram. Upload this code to your arduino /* Voltmeter Voltmeter base on voltage divider concept. Code based

on: http://www.clarenceho.net:8123/blog/articles/2009/05/17/arduino-test-voltmeter Coded by: arduinoprojects101.com */...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

379. [Arduino Temperature Sensor Code](#)

This arduino projects show how to read Celsius and Fahrenheit temperature with LM35 temperature sensor. Parts List; 1) 1x 16×2 parallel LCD display (compatible with Hitachi HD44780 driver) 2) 1x Arduino 3) 1x 10kΩ potentiometer 4) 1x LM35 temperature sensor 5) Jumper wire Instruction; 1)...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

380. [Web Server using Arduino](#)

In this example, you will use your Ethernet Shield and your Arduino to create a simple Web server. Using the Ethernet library, your device will be able to answer a HTTP request with your Ethernet shield. After opening a browser and navigating to your Ethernet...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

381. [Arduino Stopwatch Code](#)

Arduino projects, running stopwatch on arduino. Arduino projects, running stopwatch on arduino. Parts List; 1) 1x 16×2 parallel LCD display (compatible with Hitachi HD44780 driver) 2) 1x Arduino 3) 1x 10kΩ potentiometer 4) 1x 10kΩ resistor 5) 1x switch 6) Jumper wire Instruction; 1) Connect...... Listed under: [Clock – Timer Projects](#), [Projects](#)

382. [LED Show using Arduino Esplora](#)
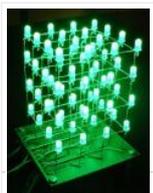
This example shows you how to read the values from the joystick. The output will be displayed through the serial monitor and as a color on the RGB LED. The joystick has two axes, X and Y. Each axis controls a color of the RGB...... Listed under: [LED Projects](#), [Projects](#)

383. [Arduino RPM Counter / Tachometer Code](#)

Arduino projects, make arduino rpm counter with arduino. Instruction; 1) Connect all jumper wire as shown in diagram. 2) Connect IR LED to digital pin 13. 3) Connect IR Phototransistor (dark) to digital pin 2. Make sure shorter lead connected to digital pin 2...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

384. [Arduino HC-SR04 How to use Ultra Sonic Sensor](#)

Arduino HC-SR04 The Arduino HC-SR04 is different from most of those commonly seen on the market, which have 4 pins compared to 3 pins. But the operation principle is the same, transmit signal, and depends on when the signal is received to estimate the distance……. Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#)

385. [Arduino Hexapod Robot](#)

Arduino Hexapod Robot Design I will show you how to build an arduino hexapod robot, from building the body, to how to implement the algorithm. To learn about the implementation of the algorithm, read this first, if you are not sure what is IK, read…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

386. [Real-Time Arduino GPS Tracker with iPhone app](#)

[INTRO] This past semester, I decided to build a GPS receiver with an iPhone app that tracks it for my semester project. Here is a step-by-step tutorial to show you how you can build your own. [OVERVIEW] Architecture of my Real-Time GPS Tracker project. I'll…… Listed under: [Blog](#), [GPS Based Projects](#), [Phone Projects](#), [Projects](#)

387. [Arduino GPS Tracking System](#)

This was easily the most time I've spent producing an Arduino Tutorial. I've been sporadically walking around NYC with this Arduino GPS for weeks as I've tweaked the code and gotten it just right. If it wasn't obvious from the title, this tutorial will teach you…… Listed under: [Featured](#), [GPS Based Projects](#), [Projects](#)

388. [A arduino library for the MAX7221 and MAX7219](#)

These two chips provide an easy way to control either an array of 64 Led's or up to eight digits made of 7-segment displays with a minimum of electronic components. Besides the chip itself you will need only a single resistor and one or two…… Listed under: [Other Projects](#), [Projects](#)

389. [An amplifier for Arduino](#)

For my project, the Arduino output is not enough so digging on the net and asking to a friend some help, I managed to build an amplifier to feed my 3 computer fans. This circuit can be used as an amplifier to switch on and…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Projects](#), [Sound – Audio Projects](#)

390. [Arduino temperature controlled PC Fan](#)

Oscar Gonzalez gives us a simple tutorial for speed controlling a PC FAN and reading a LM35 temperature sensor with an Arduino microcontroller. He covers the use of an optocoupler, PWM (Pulse Width Modulation) and reading analog voltages with the Arduino. He even has a…… Listed under: [Projects](#), [RTOS – OS Projects](#), [Temperature Measurement Projects](#)

391. [Power (Energy) Meter using Arduino](#)

Part 1. Analog Front-End. Opto-Isolator. Looking at the Power Quality Analyzer display, I was wandering, if there is any error in the measurement results, introduced by transformer. Overall THD picture doesn't change much, suspiciously drawing same chart in the morning and in the evening, when…… Listed under: [Metering – Instrument Projects](#), [Projects](#)

392. [Audio VU Meter using Arduino](#)

Biasing AC input using resistor divider and scaling up / down if necessary; Sampling fast and accurately using direct access to Control Registers of ADC and Timer1; Subtract whatever was added at step #1 from result of Analog / Digital conversion and Square; Average /…… Listed under: [Metering – Instrument Projects](#), [Projects](#), [Sound – Audio Projects](#)

393. [True Analog Audio Volume Control using Arduino](#)
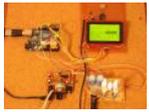
ow my Arduino can precisely measure audio input (VU meter),   and obviously, next thing that comes to mind right after measurements, is regulation or control. There are many different ways how to electronically adjust audio volume or level of AC signal. I'll name a few:...... Listed under: [Projects](#), [Sound – Audio Projects](#)

394. [Sound Localization using Arduino](#)

Well, it's elementary simple in theory, how to do sound localization based on phase difference of signals, that received by two spatially distant microphones. The Devil, as always, in details. I've not seen any such project created for arduino, and get curious if it's possible at...... Listed under: [Projects](#), [Sound – Audio Projects](#)

395. [Speech Synthesizer using Arduino](#)

Synthesized speech was for a long time the Holy Grail of computing, and back in the 1980s when a 4MHz CPU made your computer the fastest machine in the neighborhood it just wasn't practical for software to create intelligible speech. In those days the only...... Listed under: [Sensor – Transducer – Detector Projects](#)

396. [Spectrum Analyzer, Arduino project with FFT algorithm](#)

The basic idea was to create color organ / spectrum analyzer on arduino board, trying to minimize quantity of external components, like analog filters, LED display drivers, etc. Spend a lot of time in search on internet I was able to find only two !...... Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [Projects](#)

397. [Arduino Sound Alarm](#)

I've just completed my second Arduino project, a sound level detector which sets off an "alarm" when there's the sound level is to high for too long. I built it for use in a school that wants to provide visual feedback to students when they...... Listed under: [Projects](#), [Security – Safety Projects](#), [Sound – Audio Projects](#)

398. [MEGAshield KIT for Arduino MEGA 2560 R3 and Arduino DUE](#)

ARDUINO MEGA 2560 REV3 The MEGA 2560 is designed for more complex projects. With 54 digital I/O pins, 16 analog inputs and a larger space for your sketch it is the recommended board for 3D printers and robotics projects. This gives your projects plenty of...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

399. [How To Control A Stepper Motor With An Arduino Uno](#)
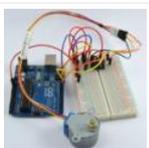
Overview Stepper motors fall somewhere in between a regular DC motor and a servo motor. They have the advantage that they can be positioned accurately, moved forward or backwards one 'step' at a time, but they can also rotate continuously. In this lesson you will...... Listed under: [Motor Projects](#), [Projects](#)

400. [Arduino controlled Bluetooth-bot](#)

This instructable will show you how to convert an old toy R/C car from the thrift-store ($1.50) into a bluetooth controlled robot. To make the conversion, you will need an Arduino (any type), an L298N dual 2-amp motor-controller (or similar), and a bluetooth serial adapter...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

401. [Arduino Battery](#)

As many of you may know, this Lazy Old Geek loves Arduinos. Many of my projects are portable and need a battery source: http://www.instructables.com/id/Arduino-Pedometer/ http://www.instructables.com/id/Arduino-Nokia-LCD-Sensors/ http://www.instructables.com/id/Ultrasonic-Tape-Measure/   All pricing was determined about early 2012. So, I've been using Adafruit 6
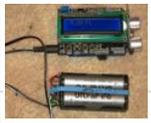
AA Battery holder $5.00 https://www.adafruit.com/products/248...... Listed under: [Battery Projects](#), [Projects](#)

402. [Data Logger Project using an Arduino](#)

This is a data logger I made for my class. I couldn't find any instructions that I could use to make the Arduino record the light brightness and the temperature. Then display the temperature and the light value on the LCD then Save it to...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

403. [Arduino & Visual Basic 6 Light Controller](#)

This instructable is something like a tutorial for new VB users. It shows how to create a parser base VB6 program to interact with Arduino circuit. Basically, interaction is in the form of serial communication via the USB port. This is my practice after learning...... Listed under: [Other Projects](#), [Projects](#)

404. [Arduino LCD Twitter display](#)

a.k.a. the gratuitously complicated bidirectionally communicating Arduino-based scrolling Twitter display and notifier. —- This project was mainly done as an excuse to learn how to use character LCD displays with my Arduino, and figure out how to make a bidirectional serial protocol. One major design...... Listed under: [Internet – Ethernet – LAN Projects](#), [LCD Projects](#), [Projects](#)

405. [Arduino Touch Screen Room Control](#)

Hey everyone, I finally finished my touch panel for my bedroom wall and am here to show you how i made it. Unfortunately its not installed in my wall yet as I might be moving and don't want to make anymore holes in my walls, ... Listed under: [Home Automation Projects](#), [Projects](#)

406. [Very Simple Arduino Electric Lock](#)

This is a instructable for a very simple Arduino controlled electric lock. The key idea here is to be very simple as this was more of a proof of concept prototype type of thing. The Arduino is used as a switch to control the lock...... Listed under: [Projects](#), [Security – Safety Projects](#)

407. [Simple Parking Sensor using Arduino](#)

My car has only parking sensor for the Reverse, so when I enter the Garage there is no way to know if I am close enough to the wall to allow the door to close or too close that I can hit the wall with...... Listed under: [Car Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

408. [Arduino Weather Station Part3, Rain](#)

So one of my last projects was adding a weather vane to my Arduino weather station. http://www.instructables.com/id/Arduino-Wind-Chill-Machine/ http://www.instructables.com/id/Arduino-Weather-Station-Part2/ This Lazy Old Geek decided to add a rain gauge to it even though we don't get much rain in the high desert. Most digital rain gauges...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

409. [simpleTweet_01 python using Arduino](#)
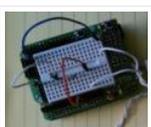
Arduino Python Twitter (Windows) In this instructable we'll modify my simpleTweet_00 and rewrite the Processing code with Python. You can expect an ignorant walkthrough by an illiterate noob, but maybe that's just what you're

looking for. Before you begin: If you need help installing Python,...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

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410. [Arduino Home automation](#)

This is a relatively simple controller for controlling equipment in your home. At the moment I control my central heating, security and lighting. By sending commands from my home computer. My homeeasy central heating controller hack. http://www.instructables.com/id/BampQ_homeeasy_home_automation_central_heating_c/ I am also able to login remotely from...... Listed under: [Home Automation Projects](#), [LED Projects](#), [Projects](#)

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411. [Arduino 4x4x4 LED Cube](#)

Overview: This instructable will cover the building process of an 4x4x4 LED Cube. I will be using an Arduino to control the LEDs. Since the Arduino (Freeduino) has a total of 20 pins (including the analog pins) we will not need to have any multiplexing...... Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [LED Projects](#), [Projects](#)

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412. [Color Changing Night Light with ATtiny using Arduino](#)

I wanted to create something for my wife as a present and this is what I came up with. This is a dark activated color changing night light. It has a sensor that can tell when the room light is turned off. This then will...... Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [LED Projects](#), [Projects](#)

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413. [LED Dot Matrix Display using an Arduino](#)
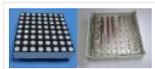
In this project, you shall again use two sets of shift registers. These will be connected to the rows and columns of the dot matrix display. You will then show a simple object, or sprite, on the display and animate it. The main aim of...... Listed under: [LED Projects](#), [Projects](#)

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414. [Simple Relay Shield for Arduino](#)

Shield to control 6 relay, 6 digital input and 6 analog input with Arduino Duemilanove, Arduino UNO. The digital inputs and relay outputs are equipped with an LED that indicates the status. The circuit diagram is very simple: Step 1: Schematics and PCB In this...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

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415. [Squirt – Arduino, motion activated water cannon](#)

Squirt is a motion activated water cannon using Arduino. This was designed for use in the garden but as it's winter we tested it in the bathroom. It works! True motion tracking is expensive and complicated so this system activates when the victim moves into...... Listed under: [Home Automation Projects](#), [Motor Projects](#), [Projects](#)

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416. [Arduino Pedometer](#)

Problem: So my nutritionist (doesn't everyone have a nutritionist) suggested I should increase my exercise which primarily consists of walking my dog. She even gave me a chart of activities and calories burned. Here's an example. http://www.nutristrategy.com/caloriesburned.htm Well, being a LAZY OLD GEEK, I decided...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

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417. [Arduino Mega Pinout Diagram](#)

Arduino Mega Introduction: The Arduino Mega is a microcontroller board based on the ATmega1280 (datasheet). It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB...... Listed under: [Featured](#), [Pinouts](#)

418. [Traffic Lights Beginner Arduino Project](#)

This is a beginners project for the Arduino. I am using the Arduino Uno but should work with little or no modification on other arduino models. Setting up the hardware is very easy. This project is more of a training tool for learning how to program...... Listed under: [Car Projects](#), [LED Projects](#), [Projects](#)

419. [Arduino + Temperature + Humidity](#)

A simple temperature sensor using one LM35 Precision Temperature Sensor , Humidity Sensor and Arduino, so you can hookup on your future projects. The circuit will send serial information about the temperature and humidity so you can use on your computer. I have taken data...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

420. [Marble Disorder – a marble maze simulator with tilt switches using Arduino](#)

Marble Disorder is a borderline case of Marble Madness ▢ It simulates a marble maze by sensing the box's orientation with 2 tilt switches. Stop the press: there's a new and more intuitive version that doesn't require the spin knob (See video). I keep documenting the original...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

421. [Turing Alarm for Arduino](#)

NOTE: This Instructable is currently incomplete. I will finish it before September 19. I started this project after seeing Nick Johnson's Turing Alarm clock. I found that the PIC chip he used was a little too advanced for me, so I decided to use the...... Listed under: [Projects](#), [Security – Safety Projects](#)

422. [Arduino Electronic Dice using random numbers](#)

This instructable will show you how to make an electronic dice with minimal experience using 7 LEDs, resistors, jumper wires, and of course the arduino (or arduino clone). I wrote this instructable for anyone to easily follow along and learn more about the arduino. Questions...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

423. [LED Hat Display with Pong using an Arduino](#)

A while ago, as my first microcontroller project, I made a Pong game on a 5×7 LED display, but then nothing became of it. Recently I was given a hard hat as part of a uniform (for an engineering competition) and told to customize it,...... Listed under: [Game – Entertainment Projects](#), [LED Projects](#), [Projects](#)

424. [Temperature Control For Kitchen Appliances using Arduino](#)

In this Instructable, I will step through controlling the temperature of most kitchen appliances. As an example, I will use an old Westbend Poppery popcorn maker (aka. coffee roaster), but these same techniques will be applicable to most hot plates, coffee makers, and waffle irons....... Listed under: [Home Automation Projects](#), [Projects](#), [Temperature Measurement Projects](#)

425. [Arduino Binary Alarm Clock](#)

This Instructable will show you how to build an binary alarm clock, with a touch sensor snooze button. This is my first instructable and my first real arduino project, I hope you like it! I bought an arduino a while back and I think it's...... Listed under: [Clock – Timer Projects](#), [Projects](#)

426. [Arduino RFID Door Lock](#)

Updated 8/9/2010 I wanted to make an easy and secure way to enter my garage. RFID was the best way to unlock my door, even with my hands full I can unlock the door and push it open! I built a simple circuit with a…… Listed under: [Home Automation Projects](#), [Projects](#), [RFID – NFC projects](#), [Security – Safety Projects](#)

427. [Wireless Altoids Display using an Arduino](#)

This Instructable will show you how to modify an Altoids tin for a wireless 2×16 character display. Using an Altoids tin was inspired by the need to have a small yet protective enclosure for a pair of Xbee modules recently bought from Sparkfun. I purchased the…… Listed under: [LCD Projects](#), [Projects](#)

428. [Fun Sun-tracking Arduino](#)

The Just-For-Fun Sun-tracker using the Arduino and two servos. This device, along the lines of the most useless toy, is not so much for function as it is for fun. But as with many things, you can't spell function…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

429. [Reaction Time Tester using an Arduino](#)

A month ago I knew nothing about Arduino and now.....my first project! Looking back, this project combines allmost all of the tutorials that I have read in this short period: blinking LED, push button, piezo and LCD display. A useful project for every beginner! I…… Listed under: [Clock – Timer Projects](#), [Projects](#)

430. [Kid's Game to Arduino Enigma Machine](#)

The technology behind Enigma machines and the work done to crack them has influenced cryptography, cryptanalysis, and computer science in general. If you're unfamiliar with Enigma machines, it's a device that was developed near the end of World War I, then used extensively by the…… Listed under: [Game – Entertainment Projects](#), [Projects](#)

431. [DIY Arduino or The DIY-Duino](#)

THIS ENTIRE TUTORIAL IS ALSO AVAILABLE ON MY WEBSITE AT http://www.theparsley.com/arduino/diy/ To quote the Arduino website: "Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments."…… Listed under: [How To – DIY – Projects](#), [Projects](#)

432. [Steering Wheel Drive R/C Car with Arduino](#)

IP Control Car was launched in 2001. I make the similar function car utilizing commercialized products. The concept of Car No.02 is to utilize commercialized products, and I am an amateur in electrical. So, do not blame me that the system is not sophisticated, i.e……. Listed under: [Car Projects](#), [Projects](#), [Robotics – Automation Projects](#)

433. [Make A Digital Clock From Scratch using arduino](#)

In some point in the life of every electronics hobbyist the need to make a clock is borned, in my case it was about a month after I soldered my first part on a board, but back then I didn't have the right tools, parts…… Listed under: [Clock – Timer Projects](#), [Projects](#)

434. [Arduino Processing Audio Spectrum Analyzer](#)

In this Instructable I am going to show how to make a program in Processing that analyzes sound on your computer and sends data to an Arduino that controls an LED matrix to show the spectrum analysis. I will be explaining where to get materials,…… Listed under: [LED](#)

Projects, Projects, Sound – Audio Projects

435. Plantduino Greenhouse using an Arduino

This summer I wanted to combine my two loves of plant science and engineering. Thus I am constructing my very own greenhouse in my backyard. I am an undergrad, and as any former student knows, this means I move around constantly, and I am not…… Listed under: Home Automation Projects, Projects

436. Arduino Solar Tracker

What is does: It searches for the brightest light source like the sun. Step 1: How it works How it works: I'd made a sensor of 4 LDRs with sheets between them The withe stips are the LDRs   When the stick on top is…… Listed under: Projects, Sensor – Transducer – Detector Projects

437. Tyco RC Arduino Robot

Wanted to make your own robot but couldn't afford the fancy H-Bridge IC's or etch your own PCB? Want a quick and dirty method of making your own wheeled robot? Then you're in luck, but if you want to make your own wheeled robot AND…… Listed under: Projects, Robotics – Automation Projects

438. My Arduino WordClock

The initial project, and certainly the one to which many were inspired is that of Doug Jackson. http://www.instructables.com/id/The-Word-Clock-Arduino-version/ also inspired by http://www.highonsolder.com/blog/2011/1/8/arduino-word-clock.html http://www.instructables.com/id/Sleek-word-clock/ Step 1: The Materials The list of materials for the board depends on how you plan to make the electronics, if you…… Listed under: Clock – Timer Projects, Projects

439. Chicken Light Timer using an Arduino

The wife is into raising chickens and now that the daylight savings is getting near she wanted a way to keep the egg laying production in high gear. According to the material that she reads, chickens will maintain their egg laying production if they get…… Listed under: Clock – Timer Projects, CNC Machines Projects, Projects

440. Ultrasonic Range Finder with an ATtiny85 using an Arduino

I'm here to show you how to use a HC-SR04 Ultrasonic Range Finder with an ATtiny85 as well as programming the ATtiny85 using the wonderful shield that randofo created. List of materials: ATtiny85 Programming Library Arduino Uno HC-SR04 Ultrasonic Range Finder and Library Jumper Wires Breadboard ATtiny85 Step 1: Program…… Listed under: Metering – Instrument Projects, Projects

441. Auto Leveling Laser Cross using Arduino

So this Lazy Old Geek purchased a Laser Cross. I created a manual leveling Laser Cross to use for aligning stuff on my drill press: http://www.instructables.com/id/ManualLevelingLaserCross/ Well, being a Geek I decided to make an automated platform that adjusts automatically with an Arduino. Well, the…… Listed under: Projects, Sensor – Transducer – Detector Projects

442. Arduino 2-axis servo solar tracker

What is a solar tracker? A solar tracker can increase the efficiency of a solar panel by up to 100%! It does this by always keeping the panel perpendicular to the incoming rays of sunlight. here's an equation to prove this: P = AW sin…… Listed under: [Sensor – Transducer – Detector Projects](#)

443. [Arduino True Random Number Generator](#)

This is just a fun project I have been working on in the last little while. If you like this instructable, consider voting for it in the Arduino Challenge! Anyone who has experience with programming will have probably used random numbers in their code. These random…… Listed under: [Calculator Projects](#), [Projects](#)

444. [Bubble Alarm Clock Makes Waking Up Fun using Arduino](#)

Waking up to a buzzing alarm clock sucks. I'm one of those people who doesn't like to wake up before the sun is out (or has been out for many hours). So what better way to make waking up fun than having a bubble party…… Listed under: [Clock – Timer Projects](#), [Game – Entertainment Projects](#), [Home Automation Projects](#), [Projects](#)

445. [Uno The Arduino Robot](#)

Age: 13 Meet Uno the Arduino powered robot. Some functions include a blinking nose, moving antennas, rotating head, IR distance sensor, twin motor gear box and rotation counters. Uno is made with relatively easy to obtain parts. This project provides a good introduction to Arduino. robot.skp475 KB Step 1: Materials Material and tools • Foam board…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

446. [Arduino Based Auto Timer](#)
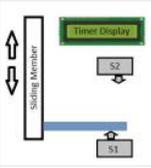
The Need: Last week around at work I had another usual un-usual problem to face with. Having to make lots of mechanisms n components to work with-in seconds or fracs at times I kind-of knew this was always coming. And invariably so my poor mind…… Listed under: [Clock – Timer Projects](#), [Projects](#)

447. [Arduino Color Sensor](#)

Here we will be learning how to make a color sensor. my model consists of three cardboard compartments containing an LED – one red, one blue, and one green – and an OP550B phototransistor. The LED's shine simultaneously on a solid colored card. The phototransistors…… Listed under: [LED Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

448. [Carduino- A simple Arduino robotics platform with its own library](#)

This is, as the title says, an Arduino-based robotics platform, with its own library. The "standard" model comes with two back motors, two omni-wheels in the front, and a distance sensor mounted on the front. It also has breadboard space on top for adding whatever…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

449. [Building a semi Smart, DIY boat with Arduino and some other sensors](#)

I based this off of this really nice instructables.com post for building a water bottle boat, with some additions for obstacle avoidance and light-guided control. I used Arduino as a microcontroller, an ultrasonic sensor in the front, a few simple switches on the side of the boat,…… Listed under: [Game – Entertainment Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

450. [Remote controlled webcam using Arduino](#)

Web-enable your interactive sensors over desktop, smartphone and tablet devices. This tutorial describes in detail how to use the free SensorMonkey service to remotely control a pan and tilt webcam attached to an Arduino using nothing more than a simple webpage. The webpage can be...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Video – Camera – Imaging Projects](#)

451. [Bike Speedometer using an Arduino](#)

Monitor your road speed using the Arduino. This project uses a magnetic switch (also called a reed switch) to measure the speed of one of the bike's wheels. The Arduino calculates the mph, and send this information out to the LCD screen on the handlebars...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

452. [Waveform Generator using an Arduino](#)

Waveform generators (also called function generators) are useful for testing and debugging circuits. I often use them to test the frequency response of electronics components like op amp and sensors. This waveform generator is powered by an Arduino. It outputs four waveshapes: sine, triangle, pulse,...... Listed under: [Metering – Instrument Projects](#), [Projects](#)

453. [LED Matrix with Game Controller using an Arduino](#)

This project was built for my introductory electronics class at the University of Waterloo in Canada. This was my first introduction to electronics and therefore, my first project. Follow these steps to build a 16 x 16 LED array with a wall (different colored LED...... Listed under: [LED Projects](#), [Projects](#)

454. [Sous-vide Arduino Shield](#)

NOTE THIS PROJECT IS DONE BY A GROUP OF STUDENTS FROM SINGAPORE POLYTECHNIC Sous-vide (/suËË¯viËd/; French for "under vacuum")[1] is a method of cooking food sealed in airtight plastic bags in a water bath for a long time—72 hours in some cases—at an accurately determined...... Listed under: [LCD Projects](#), [Projects](#)

455. [Audio Output using an Arduino](#)

Generate sound or output analog voltages with an Arduino. This Instructable will show you how to set up a really basic digital to analog converter so you can start generating analog waves of all shapes and sizes from a few digital pins on an Arduino. ...... Listed under: [Projects](#), [Sound – Audio Projects](#)

456. [Audio Input using an Arduino Board](#)

Send sound into your Arduino. This Instructable will show you how to prepare audio so that it can be sampled and processed by an Arduino to make sound responsive projects and audio effects. (This article is a companion to another Instructable I've written about building...... Listed under: [Projects](#), [Sound – Audio Projects](#)

457. [DIY Arduino Motor Shield](#)

Today, I'm going to show you how to make an Arduino motor shield (driver) at a low cost. It works splendidly, its posses almost all the characteristics of the original Arduino motor shield. It's almost considered as a clone. The original Arduino motor shield has the...... Listed under: [How To – DIY – Projects](#), [Motor Projects](#), [Projects](#)

458. [Arduino Board Step Sequencer](#)

I was wondering about on making a sequencer, a big 16 step sequencer was what I wanted to make. To it's full extension with lots of features including single leds for each step, midi input and output, etc. Then I realised that I should start from a...... Listed under: [How To – DIY – Projects](#), [Projects](#)

459. [Localizer with SIM908 module using Arduino](#)

The device is based on a GSM/GPRS module with included GPS. Its main function is to detect and communicate its own geographical position using, on the choice, the cellular phone reference system or the GPS. Its small dimensions are due to the use, for the...... Listed under: [GPS Based Projects](#), [Phone Projects](#), [Projects](#)

460. [GSM GPS shield for Arduino Board](#)

Shield for Arduino designed and based on the module GSM/GPRS SIM900 or the GSM/GPRS & GPS module SIM908, to make calls, voice and data connections via GPRS. HARDWARE INNOVATIONS This new version (old Arduino GSM shield) has several new hardware features, that allow maximum customization...... Listed under: [GPS Based Projects](#), [Phone Projects](#), [Projects](#)

461. [Easy Bluetooth Enabled Door Lock With Arduino + Android](#)

Thanks to everyone who supported this project and voted for it in the Arduino Challenge! I was awarded second prize and hope to participate in more Arduino contests in the near future. This tutorial will explain a simple way to make a password protected bluetooth...... Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

462. [Beginners guide to building Arduino robots with Bluetooth and Android](#)

In this tutorial we are going to go over building a Arduino robot that can be controlled via bluetooth with an Android phone/tablet. This is a beginners guide that is going to briefly go over the process of wiring and programming your robot. Build list... The following is the list...... Listed under: [Arduino Android](#)

463. [LINUSBot – Line Follower Robot using Arduino](#)

The operation of this Robot is quite simple. Infra-red sensors placed at the front of the chassis will monitor when our Robot is over a black line or when it is over a white background. In this project we will use the appropriate rounded chassis...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

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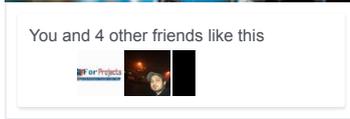
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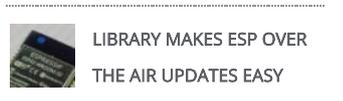
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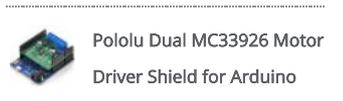
Pololu Dual MC33926 Motor Driver Shield for Arduino