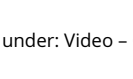
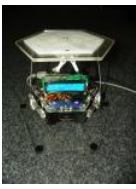


Advanced View Arduino Projects List

List of Projects using arduino with advance view:

1.  DIY Parking Sensor using Arduino The last time I was home visiting my parents I noticed bumper imprints caused by my mother suburban on the stairs up from the garage. Their garage it turns out is just barely long enough to fit their gigantic vehicles. So I decided it..... Listed under: Car Projects, How To Projects, Sensor – Transducer – Detector Projects
2.  Using Mozzi Library with 5 potentiometers using arduino Getting Started The goal of this project was to create filters and controls to that can manipulate that is being generated through an Arduino. Normally Arduino can only generate simple tones that are not useful if you are trying to achieve complex so and..... Listed under: Metering – Instrument Projects
3.  Arduino Quilting Machine The Arduino Quilting Machine combines the mechanics of a sewing machine, CNC technology and Arduino as an operating system. The project is designed to translate a vector file from a computer into G-code and subsequently into Arduino language which then moves the machine. This project..... Listed under: CNC Machines Projects
4.  Diy Xbox wireless controller adapter for Pc This instructable will go over the steps to connect a RF module from an RROD xbox to your computer so you can use a wireless controller with your computer. *****DISCLAIMER***** DONT TRY THIS IF YOU DONT HAVE ANY EXPERIENCE WITH ELECTRONICS/SOLDERING COMPUTERS IM NOT..... Listed under: How To – DIY – Projects, Internet – Ethernet – LAN Projects
5.  Make a digital “meow” from analog clock using arduino Is your analog clock just not doing enough stuff? Want to do digital things with an analog clock? This tutorial will show you how to make a Kit Cat Clock play a “meow” sound clip, at precise time intervals, using the Atmega 328P-PU via the..... Listed under: Timer Projects, Home Automation Projects
6.  DIY Telepresence Documentation This is the documentation page for the Spring 2012 DIY Telepresence project. Here you will find schematics, software, guides for the robot. The goal of the project was to design a low-cost, easy to build telepresence robot. Some of the features include: Segway based..... Listed under: Robotics – Automation Projects
7.  Total Recall- Arduino Simon Says on steroids Total Recall is a Simon based game for the Arduino. Your basic Arduino Simon Game consists of 4 buttons, an Arduino, some code and maybe a speaker and sound effects. Total Recall takes things a step further by adding an LCD display and..... Listed under: Game Entertainment Projects, Projects
8.  Voice Activated LED Lighting with Arduino This project is an extension to the Speech Recognition with Arduino by leandro4b (<http://www.instructables.com/Speech-Recognition-with-Arduino/>). However, instead of using 3 separate colored LEDs, I used a multicolor 4-channel RGBW LED Emitter. I had the opportunity of working at Engin last summer, which is why I..... Listed under: LED Projects
9.  The Wondrous Weather Cube We created an Internet-enabled companion cube for your computer, which displays different kinds of information by glowing red or green. Depending on its orientation, and which labeled face is oriented upwards, our companion cube displays either stock readings of the NASDAQ composite or outside temperature..... Listed under: Home Automation Projects
10.  Laser Pointer Switch using arduino This instructable will detail how to make a switch that uses an arduino to sample light. When the light sample reaches a threshold it will trigger a relay that can be used to turn on/off a small appliance (light, radio, fan, etc...) The parts for..... Listed under: Home Automation Projects, Interfacing(USB – RS232 – I2C – ISP) Projects
11.  FabECG: a simple electrocardiogram board Technologies for rudimentary physiological sensing are getting cheaper and easier to implement. Consider, for instance, these non-contact sensors from UCSD which can be used to take an EEG through hair or an ECG through a T-shirt! One can even make a simple oscilloscope to digitize..... Listed under: Medical – Health based Projects
12.  Arduino controlled Rotary Stewart Platform This instructable is about building a Rotary Stewart Platform. It allows to position its moving platform in six degrees of freedom. This specific platform is designed to be able to position a DSLR or any other digital camera. This version of Stewart Platform uses instead..... Listed under: Video – Camera – Imaging Projects



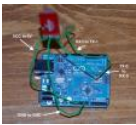
13. DC motors Relays Let's get the math over right off the bat. There are a LOT of attempts to describe how Ohm's Law works, each one nerdier than the last. Here's one I like. Warning: SFWBN (safe for work but nerdy). V = voltage measured in volts -..... Listed under: Motor Projects



14. ATtiny85 POV Display using arduino The first time I saw a POV (Persistence Of Vision) display was on a show called FAQ on TV. The POV display consisted of an oscillating shaft with 6 LED's mounted on the end of the shaft. Since then I have always wanted to make..... Listed under: LED Projects



15. making art interactive Unfortunately, due to my need to reclaim my arduino and breadboards, we don't have photographic documentation of our circuit. However, the structure of it was rather self-evident. Although we arranged the circuit in a such a way that we could program other functions, but we..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects, Phone Projects



16. Control Keyboard & Mouse Android app via Arduino This instructable will show you how to control your computer's keyboard and mouse with an Android app via bluetooth to an Arduino. Ever wanted to control your computer's mouse/keyboard functionality without having to actually sit in front of it and do all the time..... Listed under: Arduino Android, Internet - Ethernet - LAN Projects, Projects



17. Augmented Water using arduino The Augmented Water device helps you save water by turning red after one Liter. The device, built by @tamberg during a hackathon, is made from an Arduino, a flow sensor and coloured LED pixels. Video <https://www.flickr.com/photos/tamberg/14346321456/> (thanks kiilo) In case you want to build..... Listed under: Home Automation Projects



18. Blind Maze Navigation using 2-DOF Haptic Joystick The domain of haptics has immense potential as a technology to assist visually-impaired individuals with their navigation of the physical world. In this project, we sought to develop a 2-DOF haptic joystick to provide force-feedback to a user as she attempts to navigate a maze..... Listed under: Game - Entertainment Projects



19. Temperature Displayed on 4 Digit 7 segment using Arduino In this project I'll display the temperature in a 4 digit 7 segment display (common anode). This is the cheapest you can find so actually the temperature changes pretty easily which makes the display to show always different temperatures. But the idea is to..... Listed under: Projects, Temperature Measurement Projects



20. A compact, Arduino altimeter for RC Planes Please vote for this Instructable if you think it deserves it! Thanks! The Ultimate Altimeter is a super-compact Arduino controlled altimeter capable of measuring the altitude with an accuracy of 0.3 meters, and saving the highest and lowest values it has measured. It is powered..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects



21. Wiring Harness for the LCD Panel Assembly of the Female Connector Block The wiring harness has a male and female end. The gender of electrical and mechanical parts is described on this Wikipedia page. The header pins that are soldered into the circuit board for the LCD panel are plugged into..... Listed under: LCD Projects

22. Android Accessories Made Easy With Arduino The Android Open Accessory Protocol makes it possible for you to create custom Arduino-based accessories for your Android phone or tablet. Attend this session to learn how to get started, the hardware & software required and how Handbag makes development easier. Content will be useful..... Listed under: Arduino Android, Internet - Ethernet - LAN Projects, Projects



23. Huge Arduino Animatronic LED Eyeball using arduino I'm currently in the process of making a Halloween contraption that has a few components that are worth documenting. The Huge Arduino Animatronic LED Eyeball is one of them. Background Most animatronic eyeball projects that I found were more or less like they were usually..... Listed under: LED Projects



24. Brain-Computer Interface Introduction Our goal was to build a brain-computer interface using an AVR microcontroller. We decided that the least invasive way of measuring brain waves would be using electroencephalography (EEG) to record microvolt-range potential differences across locations on the user's scalp in order to accomplish this,..... Listed under: Medical - Health based Projects

25. Happy Androids with Arduino Video instructions Arduino + Android Normally smartphone events are tightly coupled to your phone device itself. When your phone is ringing, your phone speaker plays a ringtone. When you get a new text message, your phone displays it on its screen. Wouldn't it be thrilling to have your Arduino control these events? Listed under: Arduino Android, Internet - Ethernet - LAN Projects, Projects

26. Hack an old iPod using an Android and an Arduino This tutorial shows you how to use an Arduino to turn that old dusty music player into a Bluetooth controlled docking Even if it has a cracked screen or a dead battery it can still be used. The following instructions will show you how..... Listed under: Arduino Android



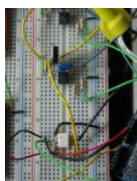
27. Finalized Prototype Shown below is the finalized prototype. The purpose of the prototype was to demonstrate the feasibility of a small, highly maneuver search and rescue robot. As such, the completed prototype was successful. Capabilities include a ground speed of 10 inches per second, battery life of... under: Development Board – Kits Projects



28. Line Following Robot using arduino This is a Line Following Robot. It follows a black line that is drawn. It is able to detect the black line through one phot and one analog light sensor. There is an LED in between the two sensors that gives off red light when..... Listed under: Robotics – Automation Projects



29. AC Dimmer Circuit Overview Simple AC Dimmer circuit for incandescent bulbs. 128 levels of brightness. Parts are relatively cheap! How it Works This is a Chopping Circuit. The dim level sets where the AC waveform gets chopped on. More of the cycle makes the bulb brighter, less..... Listed under: Developr Board – Kits Projects



30. Traffic Signal Wiring with Arduino Controller I always wanted an old traffic signal and finally got one recently. However, it was very simply wired so that a lights were fixed on. What fun is that? I also wanted to try out an Arduino controller and thought this would be a..... Listed under: Interfacing(USB – RS2 -ISP) Projects, Other Projects, Projects



31. Make a High-Altitude Balloon Tracker (Arduino) One of the coolest projects I have done so-far with my kids is a "near-space" balloon. That's not quite intr itself (100Km+) but so high that the sky looks black and you can start to see the curvature of the earth below you. The..... Listed under: Other Projects



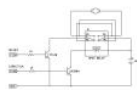
32. Zigbee Wireless Relay Control and Power Monitoring System Introduction We designed a system for wirelessly controlling relays and monitoring current used for a home load simulation. By wirelessly turning relays on and off by sending commands from a PC to a microcontroller we can change the total I (current) to our..... Listed under: Metering – Instrument Projects



33. Balancing Instructable Robot using arduino In this Instructable I wanted to show to you how to make a self balancing robot. What makes it unique is tha exterior is made to look like the Instructables Robot. Internally it works in the principle of PID, it is a very popular..... Listed under: Robotics – Automatio Projects



34. Bidirectional motor control One of the simplest ways to get a motor to turn in both directions is by using a double-pole, double-throw (DPDT) relay. Along the relay, this hookup requires two transistors and two Stamp pins, one for on/off control and the other for direction control..... Listed under: Motor Pro



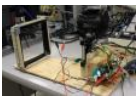
35. Fab Lab Barcelona SuperNode [assignment] Add an output device to a microcontroller board and program it to do something. Class syllabus:: http://academy.cba.mit.edu/classes/output_devices/index.html [what i learned /am learning] _ Relearned Arduino installation. _ Work with DC motors ar Bridge IC with Arduino; and its general concepts. _ About the various..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects



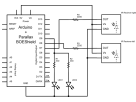
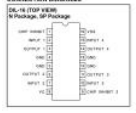
36. LED Matrix Bike Safety Backpack using arduino Biking around cars can be a frightening thing, and staying visible at night is crucial for your safety. This tu will teach you how to make a custom LED Matrix Backpack that is much larger and brighter than traditional rear bike lights. Parts You'll Need:..... Listed u LED Projects

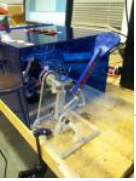
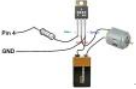
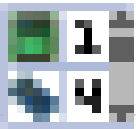
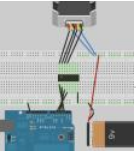


37. An FTIR Touchscreen Device The DJ Touch is a portable turntable touchscreen and interactive LED display. Our end goal was to produce a low cost touchscreen device, an demonstrate its application in a common consumer application. Out of an interest in electronic music, and with the knowledge of deejaying's..... Listed under: Sensor –

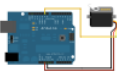
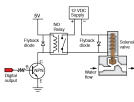


Transducer – Detector Projects

38. **Arduino Scouting Robot Summer Project: Arduino Scouting Robot** [video id="P6PVLhjQ5FY" type="youtube"] Arduino Scouting Robot Part 1 * 12,9,5 volt supply recharge it with a 12-volt charger keep power switch on to charge * 2 DC motors operate at 7.2V with a maximum current draw of 3 amps..... List under: Projects, Robotics – Automation Projects
39.  **Rubik's Cube Solver using arduino** This robot that can solve a Rubik's cube using Arduino. I learned how to solve a Rubik's cube last year, and I was also in Arduino, so eventually I ended up with an idea to make my own Rubik's cube solver. Like many people searching..... Listed under: Robotics – Automation Projects
40.  **Connecting an IR Sensor Schematic** Since the IR Sensor uses a light sensor, the schematic is very similar to that of the light sensor. The only difference is the addition of an IR LED and that the IR detector requires connection to 5V and ground. Breadboard Setup To setup..... Listed under: Sensor – Transducer – Detector Projects
41.  **Learn how to use 7-Segment LED Display using Arduino** 7-Segment LED Display is a very useful component, but also a very confusing and difficult piece for beginners. It won't be difficult once you get it working for the first time. This is what you will get at the end of the tutorial (part..... Listed under: LED Projects
42.  **Bass Master 3000 Carnival Game using arduino** The Bass Master 3000 is a game that I built for a work carnival along with a small and very talented team of workers. I've seen this type of game on the net, but I wanted to kick it up a notch with some Arduino..... Listed under: Game – Entertainment Projects
43.  **L293 Motor Driver and H-Bridges** The most common method to drive DC motors in two directions under control of a computer is with an H-bridge motor driver. It can be built from scratch with bi-polar junction transistors (BJT) or with field effect transistors (FET), or can be purchased as an..... Listed under: Motor Projects
44.  **How to connect a servo to the Arduino** Servo Cable The continuous rotation servos that come with the BOE Shield-Bot have a 3-wire cable for connecting the power and controller. The black wire is the ground, the red wire is the power (positive) and the white wire (sometimes yellow, depending on..... Listed under: Motor Projects
45.  **Conversational Gloves using arduino** This is what came out of my attempt at combining some of my favorite tools and themes...Grasshopper, 3D printing, kinetic motion, and linguistics. I put these gloves on my friends, asked them to tell me a story, and used Grasshopper to record the data from..... Listed under: Radio Projects
46.  **Pneumatic Inverted Pendulum Construction** Mechanical structure Compressed air comes from air compressor and goes in the proportional valve. Coming from the proportional valve, there are two branches of air flow (one is compressor air, the other one is exhausted air) which connect to the air cylinder (pneumatic..... Listed under: Interfacing(USB – RS232 – I2C -ISP) Projects
47.  **Make your own TV ambilight using Arduino** This is a very easy project. Here is the result I won't go into too much detail how each part works, because I have written some information on my blog. But you should be able to make it work with the information given on this..... Listed under: LED Projects
48.  **Step Sequencer Drum Machine Overview [top]** As avid audiophiles, we wanted to apply our newly acquired knowledge of microcontrollers to build a fun consumer electronic device. Our project is a step sequencer drum machine. The user is able to program a 16-step percussion pattern using one of a wide variety of sounds..... Listed under: Sound – Audio Projects
49.  **Build your own 4x4x4 RGB LED CUBE** LED Cubes are awesome. The first one I created was a 8x8x8 blue led cube. It still works like a charm being able to display every colour in the spectrum is much more spectacular. Let's start with a small and simple 4x4x4 RGB LED..... Listed under: LED Projects
50.  **Programming an ATtiny13A using Arduino & servo interpreter** So there I was, browsing eBay, looking for some cheap deals on Atmel chips when I came across a pair of ATtiny13 chips for £2.50. I just had to have them! After all, how hard can it be? I needed a small chip to read..... Listed under: Arduino Programming Projects, Interfacing(USB – RS232 – I2C -ISP) Projects, Motor Projects, Projects
51.  **Retablillo de las Maravillas v1.0** 4./ Interactivity & electronics 4.1/ Switches / characters 4.2/ Screen / interface 4.3/ Motor controller 4.4/ I/O controller & interface 4./ electronics [4.1/ switches / characters] The characters on top of the moving platform function, as interfaces, actually as on-off switches. While standing on the platform..... Listed under: Robotics – Automation Projects

52.  How to control a Servo using Arduino In this one, servo is programmed to be controlled by two buttons, one turns servo to the left and the other one turns it to the right. When the servo is turning, corresponding LED will be switched on to indicate the operation. Result: Because Arduino..... Listed under: Motor Projects
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53. Desktop Fist Bumper using arduino This simple device sits on your desk at work, ready to give you fist bumps throughout the day as you need them. A 3D printed "fist" is driven by a servo attached to a rack and pinion mechanism. An ultrasonic range finder detects when you..... Listed under: Battery Projects
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54.  Arduino Basic Wifi Project using ESP8266 wifi module Overview ESP8266 is a highly integrated chip designed for the needs of a new connected world. It is a complete and self-contained Wi-Fi networking solution, allowing it to either host the application or to offload all Wi-Fi networking functions from another application processor. ESP8266 has..... Listed under: Internet – Ethernet – LAN Projects
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55.  \$1.50 Arduino TV Annoyer Hey Arduino fans! Here is an Instructable for making a device that turns TVs on when you want them off, and off then you want them on. You hide it in something inconspicuous, it would make a great April Fools joke or gag gift..... Listed under: Home Automation Projects, Projects
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56.  Katrina And Maya bOunce is a haptics-based learning game system that teaches the concepts behind wave dynamics, and in particular, resonance. The device (an adaptation of the Haptic Paddle) allows a user to "bounce" a ball in a virtual environment. By feeling the haptic force feedback from..... Listed under: Robotics – Automation Projects
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57.  Stereo Audio with an Arduino Recently I've been posting a lot of projects that use an 8 bit resistor ladder digital to analog converter(DAC) and an Arduino to make sound. (see the Arduino vocal effects box, the Arduino drum sampler, and my audio output tutorial). The technique I've been using to make these is..... Listed under: Projects, Sound – Audio Projects
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58.  Arduino All-In-One Remote Now you can have all the remotes of your house in a device that fits in your hand with Arduino, never fight for who has the TV remote again! To make it you will need: Arduino (I used a cheap copy of the arduino UNO)..... Listed under: Robotics – Automation Projects
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59.  Just Veggin with an Arduino Beetbox Bring Touch Control to the Arduino. Use interesting touch sensors like Carrots or Beets to make a "Beetbox". In this instructable you will learn: * How to use the Cap Sense library to make Arduino responsive to touch * How adding a Wave Shield (and..... Listed under: Fingerprint Sensor – Transducer – Detector Projects
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60.  MOTOR SWITCH LED Here is how to connect a motor, a switch and an LED to your Arduino and how to do some checking to make sure that everything works. The strategy is to get the circuit going in stages, testing each part as you go. Once everything..... Listed under: LED Projects, Motor Projects
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61.  Arduino Controlled Lighthouse Overview: I've often thought that a lighthouse would make a great project for an Arduino, and so I decided to give it a try. I chose one of the local lighthouses here in Erie, Pennsylvania as inspiration. I chose the North Pierhead Lighthouse that guards the..... Listed under: LED Projects
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62.  LittleGoal: World Cup Match Notifier using Arduino [This Instructable was made at the Taipei Hackerspace littleBits Instructables Build Night.] Can't wait for World Cup football games, but want to know when important game events (ie. goals) happen? Then littleGoal is for you! The littleGoal setup will monitor a game's progress,..... Listed under: Game – Entertainment Projects
-
63.  Pololu Dual MC33926 Motor Driver Shield for Arduino This shield makes it easy to control two brushed DC motors with your Arduino or Arduino-compatible board. The MC33926 motor drivers operate from 5 to 28 V and can deliver a continuous 3 A per motor. These great drivers also offer current-sense feedback and an ultrasonic..... Listed under: Motor Projects
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64.  Stepper Motors Stepper motors are not smooth - they move in "steps". Different motors have a different number of steps to make one complete rotation. You can use software to step the motor forward or backward at different speeds. There are two kinds of stepper motor bipolar and..... Listed under: Motor Projects
-
65. DIY FPV RC Tank V2 [2km RANGE upgrade!] using Arduino Lets build An FPV tank that could be controlled within 2 kilometers! With the help of my best friend ASCAS I was able to borrow his old parts for this updated version. Ok So Roverbot version 2 is a highly educational Arduino based ATV-drone. It's..... Listed under: Game – Entertainment Projects

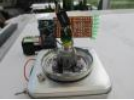


66.  Sweep Sweeps the shaft of a RC servo motor back and forth across 180 degrees. This example makes use of the Arduino servo library. Hardware Required: Arduino Board (1) Servo Motor hook-up wire Circuit Servo motors have three wires: power, ground, and signal. The power wire..... Listed under: How To Projects, Motor Projects
67.  DIY GPS Tracked Bike Lock using Arduino Having just purchased a half decent bicycle, and living in a city with a bike theft rate almost as high as New York, I wanted to have some peace of mind that if a thief with an angle grinder were to cut through my U-lock..... Listed under: Car Projects, GPS Based Projects, Security – Safety Projects
68.  Critter Twitter Trap using Arduino Havahart traps are really nice if you have pests to rid your home of but you don't feel the need to do this through means of killing the animal. The problem we are faced with is constant monitoring of the trap. If you forget to..... Listed under: Internet – Ethernet – LAN Projects
69.  Capture the image of a falling object using Arduino The aim of this project is to create a setup to capture the image of a falling object or any object in motion at a precise time using a DSLR and Arduino microcontroller. It can be done in many different ways, but the method I..... Listed under: Video – Camera – Imaging Projects
70.  LED Binary Clock using an Arduino A Binary Clock! I was recently looking at some binary clocks and I felt like Why not? I have everything to make one and have a clock in my room. So I decided to build one and here it is. Hope you Like..... Listed under: Clock – Timer Projects, Projects
71.  Wiring of the Solenoid Valves Overview of Wiring for the Salinity Sensor Other pages describing fish tank wiring: Connect electrical power to the pump and the Arduino board Connect the salinity sensor to the breadboard and Arduino Connect the solenoids to the cascade control circuit (this page) Return to the main page..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects
72.  Cheap wireless transmission between two Arduinos with Infrared Hi all, For a project, I was looking for a cheap solution to send data from an Arduino to another one. The serial port was already taken, and my transmission (unidirectional) needed to be wireless. My researches have brought me to discover the kinds..... Listed under: Internet – Ethernet – LAN Projects
73.  Bug-Catching Spider in Web using Arduino Part 2 This project is a collaboration between idesigner4 and bhasudha(me), students in the Fall 2012 course That Think (CSCI 7000) at The University of Colorado - Boulder. The story of our bug-catching spider automaton goes like this: A giant evil spider resides in the web..... Listed under: Internet – Ethernet – LAN Projects, Projects, Security – Safety Projects
74.  Hack a TowerPro Micro Servo to Spin 360 / Continuous Rotation Hey guys! Since I've got my servos, I've had two that I set aside for hacking. So, coming to my favorite website for help, I was sorely disappointed when I couldn't seem to find any instructables on how to mod a micro servo. After viewing..... Listed under: Motor Projects
75.  Arduino R/C Lawnmower What this is: This instructable will show you how to make your Arduino into an R/C interface that you can use for just about anything requiring remote control. I will also show you how I built an R/C lawnmower using my Arduino, a cheap R/C transmitter and..... Listed under: Home Automation Projects, Projects
76.  RGB LED Tutorial (using an Arduino) (RGBL) using Arduino LEDs are great. But with any project there comes a point where flashing is simply not enough. In these cases an RGB (Red, Green, Blue) LED is the answer. With an RGB LED you'll be able to produce any colour glow your heart desires. At..... Listed under: LED Projects
77.  Darkness Map Data Collection Device The Darkness Map encompasses both data collection and visualization of nighttime light levels. You can add to the map by downloading the app for iPhone or Android, but you can also contribute data by creating your own data collection device. This tutorial will cover how to build it..... Listed under: Sensor – Transducer – Detector Projects
78.  Arduino-based line follower robot using Pololu QTR-8RC line sensor UPDATE FEB 2012: This guide is featured on Adafruit's blog <http://www.adafruit.com/blog/2012/02/14/arduino-based-line-follower-robot/> This is Faz3a II, my first line-following robot, which I also hope to use for more projects. I used the Arduino Uno, Adafruit motor shield, Pololu's QTR-8RC line sensors and motors. You can build a..... Listed under: Projects, Robotics – Automation Projects, Sensor – Transducer – Detector Projects
79.  RGB LED Rainbow Fader using an Arduino Introducing the RainBoard: A simple RGB LED Rainbow fader using an Arduino Uno and a few simple components. Believe it or not, we will control 45-channels of RGB LEDs at 32 brightness levels using only 3 digital pins from the Arduino! How is this possible..... Listed under: Game – Entertainment Projects, Home Automation Projects, Projects
80. Window Painting Robot (arduino, processing, accelerometer) The idea for this project came from one of my favorite 'tricks': the polarograph. I loved the drawing style and thought how cool would it be to do this on the side of a building? Unfortunately the challenges to setting up such a large polarograph..... Listed under: Home Automation Projects,

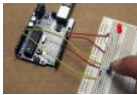
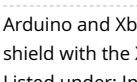
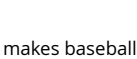


Robotics – Automation Projects

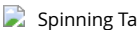
81.  Kaleiduino: A Battery Powered Arduino LED Kaleidoscope Hello everyone, and welcome to my Instructable! This instructable will show you how I made the first ever DIY Arduino controlled "LED Kaleidoscope"! What is an LED kaleidoscope? Well, our traditional kaleidoscopes used 3 mirrors joined as a triangle with like sequins and stolen..... Listed under: Battery Projects, LED Projects
82.  Using The PCF8575 I2C i/o Expander To Read Inputs With Arduino This Instructable will show you just how easy it is to add extra inputs to your Arduino. I use this technique to add hundreds of extra inputs to your Arduino with only two wires by using a fancy communication protocol called I2C (eye-squared Step)..... Listed under: Sensor – Transducer – Detector Projects
83.  Robotic Spider V8 I needed a project that would use all my servos, so I decided to make the do-nothing, worthless spider. If you have Fischertechnik and servos to waste, the project for you! Really, this flopping spider makes for a great learning project. The main..... Listed under: Robotics – Automation Projects
84.  Laser Cut Sphere-O-Bot using Arduino The Sphere-O-Bot is a simple 2 axis CNC machine that can draw on most spherical surfaces. You can use it to decap ping balls or eggs. This design is based on the 3D printable Sphere-O-Bot. By building your Sphere-O-Bot using a laser cutter, you can..... Listed under: Robotics – Automation Projects
85.  Arduino controls cheap RC car transmitter OBJECTIVE Cheap Chinese RC toy cars can be had for about 5 Euros in the local market. The wireless brains behind the majority of these cheap RC toys is a pair of very cheap ICs the TX2 and the RX2. Yup, that's what they are called. So this..... Listed under: Car Projects Projects, Radio Projects
86.  Arduino Ping Ultrasonic Range Finder Code The Ping))) is an ultrasonic range finder from Parallax. It detects the distance of the closest object in front of the sensor (from 2 cm up to 3m). It works by sending out a burst of ultrasound and listening for the echo when it bounces..... Listed under: Projects, Sensor Transducer – Detector Projects
87.  Internet Devices for Home Automation This instructable shows the principles involved in making devices to control home automation over the internet. I'm 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. I'll contrast..... Listed under: Home Automation Projects, Interfacing(USB – RS232 – I2C – ISP) Projects
88.  Arduino based Bi-color LED Matrix Audio Spectrum Visualizer After we came up with the Bi-color LED Matrix Driver Module kit, we have been looking at interesting projects to work with it. You may be interested in some of the projects we have put up at instructables using this LED Matrix kit. Instructable. Listed under: LED Projects, Sound – Audio Projects
89.  Breathalyzer using an Arduino What is a breathalyzer you may ask? It is a device for estimating blood alcohol content (BAC) from a breath sample. In simple terms it is a device to test whether a person is drunk or not. As the title suggests it runs on the Arduino. Our breathalyzer..... Listed under: Medical – Health-based Projects, Projects
90.  Magic Light Capacitance Sensor using an Arduino This was my very first Arduino project. It's great for beginners. Fade the color or the lights by moving your hands near it. It fades from a pretty purple blue to a fiery red-orange. It was SUPER easy to build, not too hard to write..... Listed under: LED Projects, Proximity Sensor – Transducer – Detector Projects
91.  LED Flipbook: full color and brightness control with an Arduino Step 1: Gather the materials Materials: - addressable RGB LED strip : I used a new variety of three conductor WS2811 strips. - an Arduino : I used an Arduino Leonardo. Any 5Vdc Arduino should be adequate. - 4 AA batteries and a battery holder.... Listed under: LED Projects
92.  Infinity Mirror Clock using Arduino Ever since my addressable RGB LED strips (WS2812B) came from Aliexpress, I've been fascinated with LED projects. For my success with my Charlieplexed LED clock, I wanted to create something with more jazz.. While browsing Google Images, I came across an instructable for an Infinity Mirror Clock. Listed under: Clock – Timer Projects
93.  How to Make a PIP-Boy using an Arduino So what exactly is a PIP-Boy, you ask? For those unfamiliar, a PIP-Boy is a device used by the protagonist in the Fallout series of video games for navigation, radiation detection, data storage/playback, and inventory management. Being a major fan of the franchise, I decided to make one. Listed under: Game – Entertainment Projects, Projects

94.  Experimenters Guide for Arduino as Performed at OIT Resources Adafruit ARDX - v1.3 Experimentation Kit for Arduino Experimenters Guide for Arduino Bread Board Layouts (PDF) Arduino Tutorial Bundle (Instructable) This Arduino Tutorial is going to be very similar to the Arduino Tutorial Bundle Instruct because we are working on this in..... Listed under: Other Projects, Projects
95.  ZAppelin, or how to train your blimp with an Arduino and IR remote Is it flying seal? A flapping alien? No it's a ZAppelin, an Arduino controlled indoor blir setup to learn in the signals from an IR remote to command it. This project came to life at the third Arduino Jam Februari 15th to 17th 2013, at Timelab,... Listed under: Game – Entertainment Projects, Radio Projects
96.  Digital Zoetrope using Arduino A zoetrope is a mechanical device that animates a series of pictures by spinning them fast enough that the images appea merge together and move, My digital zoetrope works on a similar principal, by flashing the LEDs while they are spinning it is possible..... Listed under: Vi Camera – Imaging Projects
97.  The machine of answers Should you ask your boss for a raise? Call that cute guy you met at a party? Sell your stock? Wouldn't it be nice to have a handy method of handling some of life's more pressing dilemmas? This machine give you the answer to all..... Listed under: How To – DIY – Projects
98.  ABC 123 Toddler Trainer using Arduino Here is a kid tested and teacher approved trainer for the kids in your family and / or extended family that are lea their ABCs and their 123s. It was kid tested on my granddaughter, who really loves it, and was approved by my wife,..... Listed under: Home Automation
99.  Aergia: Android controlled TV Remote(with Speech Recognition) using Arduino Have you ever faced this situation while sitting on your favorite spot on th or recliner, comfortably watching your favorite TV program? You're snugly tucked under the blanket, the air conditioning is pleasantly cool, the sun outsi shining it's delicate warm golden rays..... Listed under: Arduino Android
100. The Arduino AA Undershield I recently bought an Arduino Diecimila board. It's awesome and the applications, you can use it for or with is almost unlimited. However the problem when you want to use it in portable applications. You can use the Liquidware lithium backpack, which is a..... Listed under: Development Board – Kits Projects, P
- 
101.  Bluetooth RGB Shelf Lighting using Arduino Being the giant fan of LED's that I am i'm always trying to come up with new ways I can put them throughout house. Today i'm going to show you how to create a simple, yet extremely eye catching, RGB Bluetooth controlled Shelf lighting..... Listed under: Home Automation Projects, LED Projects
102.  L.O.G. \$10 Arduino There are probably thousands of articles on making an Arduino. So who needs another Arduino? Well, this Lazy Old Geek(L.O.G.) need Here's the features I would like: Features: Low cost More permanent than a breadboard Not a custom PCB More prototyping area than a..... Listed unde Arduino Programmer Projects, Projects
103.  Love Gauge I'm working together with my wife. But sometimes one of us has an external appointment. So, if one of us is thinking about the other, we we show it together. For this, I have made an Love Gauge for us. It stands on our..... Listed under: Other Projects
104.  Arduino Powered Autonomous Vehicle A few months back I started playing around with Arduino micro controllers as a learning exercise (and for fun); th project is the culmination of that. The goal of the project was to create a vehicle that can autonomously navigate through a series of waypoints..... Listec Car Projects
105.  Emotidora: Hats with Emotions using Arduino This project, Emotidora, will help a user express his/her emotions about events in day-to-day life. Weve all situations where something very exciting or unfortunate has happened to us and we want to share it with other people. This usually involves the expres of..... Listed under: Game – Entertainment Projects, Home Automation Projects, Projects
106. Traffic Signal / Stop Light Wiring with Arduino Controller I always wanted an old traffic signal and finally got one recently. However, it was very simply wi that all the lights were fixed on. What fun is that? I also wanted to try out an Arduino controller and thought this would be a..... Listed under: Other Projects



107.  WAVEbuoy using Arduino The WAVEbuoy is a arduino lamp connected to the internet that displays the current wave height of any of the National Data B Centre's wave buoys. This lamp is currently connected to the Sevenstones Lightship buoy that gives an indication of swell approaching Cornwall in..... Listed under: Home Automation Projects
108.  Arduino Keyboard and Mouse Control Code This example illustrates the use of the Mouse and keyboard libraries together. Five momentary switches act directional buttons for your cursor. When a button is pressed, the cursor on your screen will move, and a keypress will be sent to the computer. Once you have finished, you can disconnect the mouse and keyboard. Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
109.  Arduino ADK LED Lighting Have you ever wanted to control electronics with your smartphone? The Arduino ADK (Android Development Kit) is the Arduino Mega with a built-in USB host device, ready for your smartphone to be plugged in! We'll make a simple introductory project with a few LEDs..... Listed under: LED Projects, Projects
110.  Pixel Drop Ceiling using Arduino In our living room we have a small patch of drop ceiling right in the middle of the room, basically a giant piece of duct tape that we used to cover up bad carpentry. It was constantly getting water damage from what looks like a giant hole in..... Listed under: Home Automation Projects
111.  Arduino Leonardo Pinout Diagram Arduino Leonardo Introduction: The Arduino Leonardo is a microcontroller board based on the ATmega32u4 (datasheet). It has 20 digital input/output pins (of which 7 can be used as PWM outputs and 12 as analog inputs), a 16 MHz crystal oscillator, a micro USB connection, a DC power jack, an ICSP..... Listed under: Pinouts
112.  Push-button using an Arduino Pushbuttons or switches connect two points in a circuit when you press them. This example turns on the built-in LED on the Arduino when you press the button. image developed using Fritzing. For more circuit examples, see the Fritzing project page Connect three wires to the Arduino. Listed under: How To – DIY – Projects, Projects
113.  Create an internet controlled robot using Livebots Here you will learn how to create an internet controlled robot or other installation using Livebots. Livebots is a project I'm working on which consists of an easy to use website for all the robots that people can interact with through the internet. As an example I'll show you how to create a robot that can move. Listed under: Robotics – Automation Projects
114.  Model Airplane Autopilot using Arduino Hi All! I am twenty years old. I picked up my arduino for the first time this Christmas, and I've been keeping busy with arduino applications so that I can bring you this instructable. I hope that it helps!!! The purpose of this project..... Listed under: Game – Entertainment Projects, Projects
115.  Using the Arduino Uno to program ATTINY84-20PU Using the Arduino Uno to program ATTINY84-20PU (Newark item # 68T3783). This Instructable shows how to use the Arduino platform to work with physically smaller processors, such as the ATtiny84 (84/44/24), ATtiny85 (85/45/25), and ATtiny2313. This example is specifically for the ATtiny84-20PU processor (Newark item..... Listed under: Arduino Programmer Projects, Projects
116.  Home Made Bezel / Window for LCD, LED, TFT Displays. I've been working on a project that used a 16x2 LCD display and wanted a nice finish that also allowed me to seal against water and other liquids. I also needed impact resistance, low cost and the ability to be changed easily if worn or..... Listed under: LCD Projects, LED Projects
117.  MaKey MaKey Monome using Arduino Objective: build a monome - a complex electronic music instrument - using easy-to-learn, inexpensive components. The process that's so easy a kid could do it. Gist: This touchscreen music instrument is essentially 4 parts: MaKey MaKey (or Arduino) Neopixels copper tape cardboard Sound is..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Sound – Audio Project Ideas
118.  Arduino and Xbee wireless setup The Arduino Wireless shield allows your Arduino board to communicate wirelessly using Zigbee. This documentation describes the use of the Arduino Wireless shield with the XBee 802.15.4 module (sometimes called "Series 1" to distinguish them from the Series 2 modules, although "Series 1" doesn't appear in the official name). Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
119.  Arduino or Twitter Mets Apple Whenever I go to Citi Field with my kids to see the Mets, they go crazy for the Home Run Apple. To me, the Apple is part of what makes baseball exciting for kids. Even though my kids may not watch most of the games, I..... Listed under: Internet – Ethernet – LAN Projects



120.  Control Fluorescent Lights with a Laser Pointer and an Arduino A few members of the Alpha One Labs Hackerspace do not like the harsh light given out fluorescent fixtures. They wanted a way to be able to easily control the individual fixtures, perhaps with a laser pointer? I got right on it. I dug out a..... Listed under: Sensor – Transducer – Detector Projects
121.  How to make your own Arduino board If you are like me which I am guessing you are, then ever since you got into doing stuff with Arduino you have to make your own Arduino board. You may be surprised to find out that making the prototyping board is actually very..... Listed under: Development Board Projects, How To – DIY – Projects, Projects
122.  Polydexter: Arduino Robotic Translation Arm Polydexter was the introductory project in the Creative Architecture Machines (CAM) advanced options arch studio at the California College of the Arts (CCA), taught by Jason Kelly Johnson (co-founder of Future Cities Lab) and Michael Shiloh. Parts developed for robot would go on to..... Listed under: Robotics – Automation Projects
123.  Boot Bot Arduino Bootload Shield The Boot Bot Shield lets you burn the Arduino bootloader onto a blank Atmega 328 chip. The bootloader is that magic of software that turns a mundane chip into the open source programmable miracle known as the Arduino. Blank chips cost a few dollars..... Listed under: Projects, Robotics – Automation Projects
124.  Arduino Power outlet with exposed pins I found myself often trying to plug stuff at home with Arduino. So I thought it would be good to have a system that can just plug your sensor, plug the appliance and code something to see how it goes. I never liked..... Listed under: Home Automation Projects, Sensor – Transducer – Detector Projects
125.  Arduino Orb Build Warden An Arduino-based Ambient Orb designed explicitly for monitoring Source Code Autobuild systems. This orb can easily be repurposed for monitoring really anything that can have alerts from time to time. Step 1: Purpose Some time ago a co-worker passed me an article about "Extreme.. Listed under: Other Projects, Projects
126.  Spinning Tardis with blinking LED (Powered by littleBits) using Arduino Construct a Tardis that spins and blinks! Total Build Time: 30 mins · Coding: 5 mins · Constructing the Tardis: 20 mins · littleBits LED and motor assembly: 5 mins Tardis.wmv(320x240) 10 KB Step 1: Gather all needed parts. LittleBits: · (2) Wires ·..... Listed under: LED Projects
127.  4x4x4 RGB LED Cube using Arduino A while ago, when I first started using Arduino, my first project was a 4x4x4 LED cube, I built it from a Guide I found Instructables, I didn't know anything about programming, and little about electronics, yet I was able to build it..... Listed under: LED Projects, Projects
128. Simple Basement Security System using Arduino In this project I will show you how to build a very simple security system for all kinds of rooms. It might be simple but still effective. It is based around an Attiny85 and uses a reed switch and a key switch as inputs to..... Listed under: Security – Safety Projects
- 
129.  Monitor – Thinking Skins using Arduino This project was part of Multimodal Media Madness 2014, hosted by the chair for Computer Aided Architectural (CAAD) and the Media Computing Group of RWTH Aachen University. For more Thinking Skins, please check this page: http://hci.rwth-aachen.de/m3_ss1 were small shared space containers for 6/8..... Listed under: LED Projects
130.  Make Voice Call using Arduino This sketch connects a voice call from your GSM shield and Arduino to a remote phone number entered through the serial monitor. You'll need to attach a speaker and microphone to hear the connected phone and send your voice. First, import the GSM library..... Listed under: Phone Projects, Projects, Sound – Audio Projects
131.  Arduino Peak Power Tracker Solar Charger This project is an update of my original Peak Power Tracker Battery Charger Project. It is designed to control a solar panel charging a 12V lead acid battery. The updated version of this project uses the Arduino Duemilanove development board (from www.sparkfun.com) as the..... Listed under: Battery Projects, Projects
132.  Ping Organ using an Arduino I was trying to think of a quick toy I could build for my kids. I came up with this idea of an ultrasonic range finder, an Arduino, and a speaker. Basically the Arduino plays a tone out of the speaker based on the distance..... Listed under: Game – Entertainment Projects, Projects
133.  Papercraft Automata Race Game littleBits Circuit using Arduino This instructable will show you how to create a game using littleBits. The game will start with a sound trigger. Each player will have to press a button repeatedly. The first person to press their button 25 times wins. A buzzer will sound to end..... Listed under: Game – Entertainment Projects
134. Arduino decision box (Attiny85) So I was a bit bored this weekend (actually I wrote this some months ago) and since I had ordered a bunch of Attiny85 chips a week after I decided to make a quite random project with them. This is a decision box, it takes..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects



135.  RGB LED with Arduino 101 To Learn about the basic LED usage practice, read here. What is a RGB LED? With an RGB (Red Green Blue) LED you'll be able to produce any colour that is flashing everyone's eyes. At first glance, RGB LEDs look just like regular LEDs, however, inside the usual..... Listed under: LED Projects
136.  SmartMesh – Arduino and Android Controlled Pneumatic Facade This project was part of Multimodal Media Madness 2014, hosted by the chair for Computer Aided Architectural Design (CAAD) and the Media Computing Group of RWTH Aachen University. For more Smart Skins, please check this page: http://hci.rwth-aachen.de/m3_ss14 During this project, the students were asked to..... Listed under: Arduino Android
137.  LED Pattern Hat using an Arduino This is a (moderately) simple Arduino project that is a spectacular display from LEDs - that you can wear on your head and uses a program that is not intricate at all, so you can modify it for different patterns and cycles. It's also..... Listed under: Game – Entertainment Projects
138.  DIY Android Home Automation Box Here's a little show and tell of my Android controlled home automation box. It's a small extension box that controls a smartphone. You can turn the individual outlets on by tapping a button from the app or use the speech recognition app, found..... Listed under: Arduino Android, Home Automation Projects
139.  Use foot switch to open Linux terminal using an Arduino So here is how I made my foot pedal used to start Linux terminal using an Arduino. It's made by an Arduino board of pressing the terminal icon with my mouse. P.S. Sorry for my English. I am from Croatia. Tools needed: -Soldering iron and..... Listed under: RTOS – OS Projects
140.  Musical Table using Arduino The Musical Table is a toy table that allows kids to play musical phrases by moving toys around the surface. Each of seven sensors can play different musical phrases in four bases, making 27 different musical phrases in total. Some of the phrases are..... Listed under: Home Automation Projects, Projects, Sound – Audio Projects
141.  ARDUINO WIRELESS HOME SECURITY SYSTEM In this project I will discuss how you can make a cheap wireless home security system. Though during start of this project the main objective was only for security alarm but later I found this device can be used to solve several problems. These are the few..... Listed under: Home Automation Projects, Security – Safety Projects
142.  Assembling the ZIFduino USB 1.2 The ZIFduino, for all intents and purposes, is an Arduino with a ZIF socket. It's geared toward those that want to do prototyping on the platform, but then move the ATmega chip to a stand-alone environment. The pin layouts are exactly the same, so it..... Listed under: Interfacing(USB – RS232 – I2C -ISP) Projects, Projects
143.  Using Servo Motors with Arduino In this instructable, I am going to show you what a servo motor is, how to use it, and ideas for starting projects using it. To control my servo, I added how to use a 555 in some of the later steps..... Listed under: Interfacing(USB – RS232 – I2C -ISP) Projects, Motor Projects
144.  How to build a whole home energy monitor using Arduino This page and linked pages detailed below document how to build whole house energy monitor. It has a display for easy, quick access to current energy use information, USB datalogging for detailed long term data storage and Internet connectivity for graphing. First a quick..... Listed under: Home Automation Projects, How To – DIY – Projects, Metering – Instrument Projects, Projects
145.  Internet-Controlled RC Car using Arduino The Internet Controlled RC Car allows you to remotely drive around a small RC car from wherever you may be. It's where it is going. This is fun because you can remotely explore whatever space you leave it in, or hand over the keys..... Listed under: Car Projects, Game – Entertainment Projects, Internet – Ethernet – LAN Projects
146.  Arudino- No Blinky So you just bought this Arduino kit or Arduino-clone kit. You spent hours inserting parts and soldering components. You connect everything up and turn it on and stare at the little LED. You wait a second and nothing happens. You wait a minute and still..... Listed under: Development Board – Arduino Projects, Projects
147.  Arduino Seismic Activity Monitor – Ethernet Shield Have you ever wanted to impress your friends by saying something crazy like, "I think there's going to be an earthquake soon" moments before an earthquake hits? Or do you just want some warning, a few seconds that could save your life. This project will..... Listed under: Internet – Ethernet – LAN Projects, Metering – Instrument Projects, Projects
148. Arduino Traffic Light Controller with Remote Control I had a traffic light that I was refinishing. The only thing left to do was to build the controller for the light's signal path. To give it a twist I incorporated a remote control. This was also the perfect opportunity for me to try..... Listed under: Car Projects, Projects, Radio Projects



149.



Light-Up Disco Table using Arduino Every apartment needs awesome furniture, so why not make your own? This coffee table contains LED strips that light up into various customizable patterns and colors. The lights are controlled by an Arduino and a hidden button, and the entire thing is battery powered so...
Listed under: Game – Entertainment Projects

150.



DIY Arduino FM Radio (Part 2) If you have read my first blog on the topic, than you already know what I'm experimenting with. Low price FM Radio, build with TDA7088 / YD 9088. It was obvious, that technology from the early 90-x is outdated. I mean, simple "search and hold" function of..... Listed under: P
Radio Projects

151.



Theremin Toy using Arduino I wanted to make a little toy for my granddaughter to play with when she visits. I know like most kids, she enjoys things that sounds and have different colored lights on them and if she does something, the toy does something. I thought..... Listed under: Game – Entertainment
Projects

152.



Using Servos with Arduino made easy ! Servomotors or simply servos are essential components of a robot which convert electrical energy into mechanical energy. They are widely used in the field of RC hobby and robotics. But unlike simple geared motors, these servos are made by integrating a geared motor with a microcontroller. Listed under: Motor Projects

153.



Face detection and tracking with Arduino and OpenCV UPDATES Feb 20, 2013: In response to a question by student Hala Abuhasna if you wish to use the Serial class, use the naming convention "COMn" and replace n with a number > 9 to define your com port for COM ports above 9..... Listed under: P
– Ethernet – LAN Projects, Projects, Sensor – Transducer – Detector Projects

154.



Teensy MIDI USB foot controller for controlling Mobius Looper using Arduino Motivation: Playing in a 2 piece band, with the drums and lots of other sounds being played back as backing tracks, there was a need to use a looper to add in more elements to the tracks. A hardware based looper fails in this respect. Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects

155.



Under \$8 Arduino Serial Data Logger – Record to SD Card Disclosure: This project operates the ATmega328P-P outside the published ATmel specifications. According to ATmel, the 328P requires slightly over 3.3V to reliably start the oscillator at 16MHz and to otherwise perform acceptably. Lab testing here at SofKinetics has shown that the 'board-duino' 328P-P can withstand..... Listed under: Memory – Storage Projects, Projects

156.



DIY Solar Tracker using Arduino Introduction We aim to introduce young students to engineering and teach them about solar energy; by having them build Helios as part of their curriculum. There is an effort in engineering to push energy generation away from the use of fossil fuels and towards renewable energy. Listed under: How To – DIY – Projects, Sensor – Transducer – Detector Projects, Solar energy projects

157.



iAndroidRemote – Control Android mobile using an Apple Remote I love to integrate devices which are not supposed to be integrated and this guide shows 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: Internet – Ethernet – LAN Projects

158.



Arduino Digital Switch Code This is basic for your Arduino projects, input switch read from digital input. When ever switch pressed, LED will turn on. [caption id="attachment_4235" align="center" width="600"] PushButton_arduino_code[/caption] Instruction; 1) Connect cathode lead of LED (shorter lead) to ground pin and anode lead of LED..... Listed under: How To – DIY – Projects, Projects

159.



Hacking my RC Car using Arduino and Android Smart Phone Have an old toy car? I hacked mine using Arduino and an H bridge circuit to control the motor. I used my Sony Z1 Android phone to control it with the recent 1Sheeld I got from Kickstarter. I thought to use the Gyroscope sensor in it..... Listed under: Arduino Android, Car Projects, Phone Projects

160.



Analog reading box using an Arduino I made this box for my music project to our school. This is only a tutorial for the box, not for playing melody. It's basically a serial connected switch. You will need: Some wire 6x switch 1x LED 1x 330 ohm resistor 5x 2000 ohm resistor..... Listed under: Metering – Instrument
Projects, Projects

161.



Washing machine countdown timer using Arduino Hello, and welcome to my instructable for a washing machine countdown timer. The timer is operated by the very popular Arduino micro controller. See here for more information. Arduino Home Page Aim The aim of this project is to be able to delay the start of the wash cycle. Listed under: Clock – Timer Projects, Home Automation Projects

162. Nintendo Keyless Entry System using an Arduino Use a Classic Nintendo controller to lock and unlock your door! The output from the Controller is read by an Arduino and the Arduino looks for a particular combination of buttons, once the combination is entered it sends a signal to eject a CD-ROM Drive which..... Listed under: Home Automation Projects





176. **Arduino Joystick Mouse Control Code** Using the Mouse library, you can controls a computer's onscreen cursor with an Arduino Leonardo, Micro, or Due. uses a pushbutton to turn on and off mouse control with a joystick. Cursor movement from the Arduino is always relative. So every time..... Listed unde Interfacing(USB – RS232 – I2c -ISP) Projects, Projects



177. **Arduino Modules – Flame Sensor** Quick and simple start guide for using and exploring the Flame Sensor module with an Arduino. The model in the exan am using is from Deal Extreme [DX] and can be found HERE. (The instructable for the Rain Sensor is now available!) Materials needed:..... Listed under: S Transducer – Detector Projects



178. **Arduino Row-column Scanning** to control an 8×8 LED Matrix Code LED displays are often packaged as matrixes of LEDs arranged in rows of common an and columns of common cathodes, or the reverse. Here's a typical example, and its schematic: These can be very useful displays. To control a matrix, yo connect both its rows..... Listed under: LED Projects, Projects



179. **Read ASCII String using Arduino** This sketch uses the Serial.parseInt() function to locate values separated by a non-alphanumeric character. Often people comma to indicate different pieces of information (this format is commonly referred to as comma-separated-values), but other characters like a space o period will work too. The values..... Listed under: LED Projects, Metering – Instrument Projects, Projects



180. **Arduino Controlled Lego Lighthouse** Lighthouses have been guiding boats to safety for thousands of years. One of the earliest and most notable of thes the Pharos of Alexandria. This huge structure stood for nearly two thousand years. When deciding on a lego project, I wanted to build something..... List under: Game – Entertainment Projects



181. **4x4x4 LED Cube (Arduino Uno)** In this tutorial I'll show you how to make a 4x4x4 LED cube for around \$15.00. The cube has 64 green LEDs which make u layers(positives) and 16 columns(negatives). These are all wired to a Arduino Uno. An Arduino is a single-board microcontroller,..... Listed under: LED Prc



182. **Arduino Chicken Coop Controller** Over the last few years my family has been keeping ex-battery hens - they are about 18 months old and have had a horrendous life kept cooped up in small cages in large warehouses. As much as we love these little bundles of joys and..... Listed under: Home Automat Projects, Projects



183. **Debounce an input using Arduino** This example demonstrates how to debounce an input, which means checking twice in a short period of time to make definitely pressed. Without debouncing, pressing the button once can appear to the code as multiple presses. Makes use of the millis() function to keep Listed under: How To – DIY – Projects, Projects



184. **Arduino Calculator** In this Instructable I will show you how to make an Arduino calculator that is just as good as any other calculator (well... sort of). Even it's probably not practical due to it's size, repetitive use of the equals button (due to the lack..... Listed under: Calculator Projects

185. **DIY AM Radio with Arduino** After I finished my last project, I couldn't stop thinking how to build an AM receiver, that would also operate in conjunction with my little friend Arduino. To minimize a workload and complexity, especially with RF part of the circuitry, I come up to conclusion,..... Listed under: How To – DIY – Projects, Projects, Radi Projects



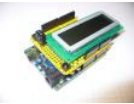
186. **Blink Without Delay using Arduino** Sometimes you need to do two things at once. For example you might want to blink an LED (or some other time-sens function) while reading a button press or other input. In this case, you can't use delay(), or you'd stop everything else the program while..... Listed under Projects, Projects



187. **DIY navigation device for blind people using Arduino and Android smart phone** In this project you can cover your eyes and let your smartphone navigate avoid obstacles, the application is mainly a DIY navigation device for blind people. I knew that 1Sheeld is about to launch a new text to speech shield, an I..... Listed under: Arduino Android, Home Automation Projects, How To – DIY – Projects, Medical – Health based Projects, Phone Projects

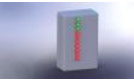
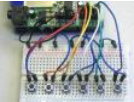
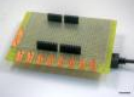


188. **Arduino Timer Interrupts** Timer interrupts allow you to perform a task at very specifically timed intervals regardless of what else is going on in your code instructable I'll explain how to setup and execute an interrupt in Clear Timer on Compare Match or CTC Mode. Jump..... Listed under: Clock – Timer Proj Projects

189.  Quiz Game Show Buzzer using Arduino A good friend of mine who's a teacher was doing quizzes in her class making students compete to answer questions resulting in them complaining they raised their hands before the others. I decided to give her this quiz show type buzzer for Christmas to solve..... Listed under: Game – Entertainment Projects
190.  Make an Arduino LCD shield In this short tutorial we make an Arduino LCD shield. Updated 18/03/2013 Today we are going to make an Arduino shield with an LCD module. More often than not I have needed to use an LCD shield in one of my projects, or with the..... Listed under: LCD Projects, Projects
191.  Web Client using Arduino This example shows you how to make a HTTP request using an Ethernet shield. It returns a Google search for the term "Arduino" results of this search are viewable as HTML through your Arduino's serial window. Circuit The Ethernet shield allows you to connect..... Listed under: Internet Ethernet – LAN Projects, Projects
192.  LED Head Arduino TED LED HEAD TED meet the world. I have always been interested in a bare-bones Arduino but never really saw the point if it was not practically useful, This is my entry into Little Bits contest, I tried to stay true to the " little bits"..... Listed under: Game – Entertainment Projects
193.  Arduino Esplora Remote This example is designed to be used with a Processing sketch. Processing is an open source programming environment. The application on the computer reads the sensors on the Esplora board and controls the buzzer and the RGB LED through a graphical interface. The image Listed under: Projects, Radio Projects
194.  Access control with Arduino plus Keypad 4x4 plus Servo Hi guys, I bring a new instructable for arduino, the control access with password, 4x4 keypad and a servo. We will use the Password and Keypad libraries for arduino, besides using the servo library, but this project can also be modified by changing the serial Listed under: Interfacing(USB – RS232 – I2C -ISP) Projects, Motor Projects, Projects
195.  Animatronic Eyes and Wii Nunchuck Part 2 using Arduino After I built the animatronic eyes in PART 1, I wanted to complete the face with a voice and pos moving eyebrows. If you look back at my PART 1, you'll see that for the base I used a model from Thingiverse. Once you have..... Listed under: Game – Entertainment Projects
196.  iPod Information Screen using Arduino My girlfriend, a music buff, asked me to come up with a better way for her to look at the track information of the song playing on her iPod touch while she was using it in the car. Those of you that have or..... Listed under: Phone Projects, Projects
197.  Autonomous Race Car using Arduino Build this autonomous driving robot car based on a old RC toy car. I removed the radio control board from the car replaced it with a brain in the form of an Arduino UNO board (plus a motor driver board) and gave it an..... Listed under: Car Projects
198.  Arduino powered GLCD (Graphic LCD) Displays are always nice. So far I've just been demonstrating how to use 7-segmented displays to display numbers: very few resources. But what if you want to display text? Or pictures? Or both? Well in order to do that, you're going to need a..... Listed under: LCD Projects
199.  ATTiny powered Arduino Projects Arduino is a great platform. No question. But what if I told you that you could take your entire board and compact it in a package. And I mean really small. The chip in the picture is an ATTiny84, and that is the big version..... Listed under: Interfacing(USB – RS232 – I2C -ISP) Projects
200.  Irrigation logic controller/project log using Arduino Hello, I am going to explain my project in just a minute, but first I wanted to explain how I became involved in this project. I like to save money where I can, so it is not hard to understand why I carpool to work..... Listed under: Home Automation Projects
201.  Keyless Entry / Arduino Keyless Entry System Enter the correct code into the keypad and the servo will unlock the door. Enter the incorrect code and the servo stay out. There was a couple of stipulations I wanted in my Keyless Entry system: Helper Light. A light that would..... Listed under: Calculator Projects
202.  An Arduino real time clock shield Today we are going to make a real time clock Arduino shield. Doing so will give you a simple way of adding ... real time capability to your projects such as time, date, alarms and so on. We will use the inexpensive Maxim DS1307 real-time..... Listed under: Clock – Timer Projects
203. Qtechknow Robot Obstacle Course using Arduino Have you ever thought of controlling your FuzzBot wirelessly? Do you want to make a real - life video game? Do you want to learn about the tech behind NFC and RFID? - the Qtechknow Robot Obstacle Course How - To Guide is for you!..... Listed under: Robotics – Automation Projects



204.  Twitter Physical Client In this project I'm building a physical Twitter client using Arduino and a flag, basically an arduino powered retweet indicator, when any of my tweets is retweeted some physical action will happen to notify me of that. You'll need: 1. Flag. 2. Arduino. 3. Laptop..... Listed under: Internet - Ethernet - LAN Projects
205.  Simple RFID access system using Arduino In this tutorial you can make an RFID access system. It's very simple and can be used with a wide variety of enc Updated 18/03/2013 The purpose of this project is to prototype a basic RFID access system. Although it is not that complicated, this..... Listed under: Pro RFID - NFC projects, Security - Safety Projects
206.  Clock Four - Scrolling text clock using Arduino Introduction Time for another instalment in my highly-irregular series of irregular clock projects. In this w "Clock Four" - a scrolling text clock. After examining some Freetronics Dot Matrix Displays in the stock, it occurred to me that it would be neat to display. Listed under: Clock - Timer Projects, Projects
207.  The Pill Reminder using Arduino Back in January 2014 I was at a meetup of Baby Boomer Makers at TechShop in San Carlos, California. We were going ar the table, each taking a turn to talk about projects we'd like to do. Bob spoke up to describe a problem his..... Listed under: How To - DIY - Projects
208.  Bear With Me This instructable teaches how to make our Bear With Me system, a prototype that allows two users to tangibly send and receive hugs (as v motion) in near real-time. The bears will be able to send tweets when physically hugged. Their hearts will glow..... Listed under: Game - Entertainment
209.  Using switch to control Piezo speaker with Arduino In this project, we will learn how to use a speaker (piezo sounder) and use switch button to change th of the sound. Sorry about this one, you might find it a bit difficult to digest at first, and I didn't realise it's actually..... Listed under: Projects, Sound - Audi Projects
210.  DIY Arduino FM Radio Shield I've been visiting local convenience store (Dollarama, here in Montreal, Canada) and notice nice looking FM Radio, just for o Why not to try to interface it to my lovely Arduino? Idea looks quite challenging, the same time what is the point in interfacing..... Listed under: How To - Projects, Projects, Radio Projects
211.  Word Clock in German using Arduino While in Germany last year, I saw a world clock in a store similar to this one in a store that was priced at 900€. I rea several instructables online on how to create a World Clock so I decided to give it a shot..... Listed under: Clock - Timer Projects, Home Automation Proj
212.  How to set up a Public Window Public Window (<http://www.publicwindow.net>) is an open source project which allows artists to display their creations in window and have people from all around the world interact with it. This is a step-by-step guide on how to set up a Public Window of your own. A..... List under: Home Automation Projects, Video - Camera - Imaging Projects
213.  Sonar For The Blind using Arduino This is a project I'm calling Tacit. No, I didn't bother making an awkward backronym for it, it just seemed like an appropriate name that' shorter (though less descriptive) than "Hand-Mounted Haptic Feedback Sonar Obstacle Avoidance Assistance Device". It measures the distance to things i translates that into pressure..... Listed under: Medical - Health based Projects, Projects
214.  Backpack Anti-Theft Alarm using Arduino If you're a student, like me, then you have heard of all the theft that occurs on campuses today. I can't even lea backpack alone for five minutes without worrying about it getting stolen. To ease my mind and to help fellow students, I've..... Listed under: Home Auto Projects, Security - Safety Projects
215.  Arduino Breadboard Shield Are you tired of having a hard time trying up a circuit on a breadboard because your arduino takes up a lot of space? This sh be a solution to your problem! The Arduino breadboard shield is again, an accessory for your arduino board..... Listed under: Development Board - Kits
216.  Arduino Serial Communication Code Arduino can send output through serial communication to your computer over USB. The output can be anything su status, text, sensor reading, value, number etc. You can view the status output by clicking Serial Monitor button at Arduino Environment software. Instru Connect your..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Projects
217.  Connect several digital inputs to one analog input using Arduino I often run out of digital pins on my Arduino. Anything as complicated as, say, a video g; controller, was near impossible with the amount of pins I had available. Multiplexing buttons works, but it requires lots of connections and soldering. So together..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Projects

218.  RC tank with a moving FPV camera using Arduino In this instructable I show you how to build remote control tank with FPV camera. At the beginning I built an RC tank without FPV camera but when I was driving it in the house I have not seen where it is. So I came..... Listed under: Video – Camera – Imaging Projects
219.  Arduino home energy monitor shield Although products are becoming more and more available for monitoring your home power usage, I'm one of those who can't leave well enough alone and who would rather shell out \$100 and hours of my time in order to save \$20 and learn something..... Listed under: Metering – Instrument Projects, Projects
220.  Quiz Game Controller using “Lights and Sounds Buzzers” and Arduino Jeopardy style quiz games are favorites for creating excitement and educational instruction at the same time. Teachers, summer camp counselors, and even industry educators find this type of game to help generate interest and involvement from the participants. The idea behind the game is simple,..... Listed under: Game – Entertainment Projects, LED Projects, Projects, Sound – Projects
221.  Arduino Phone Book Ever wanted to have a Phone Book, controlled using a microcontroller, which is very easy to use, and you can use it while talking or and is saving data on SD Card? then this instructable is for you. In this instructable you will learn..... Listed under: Phone Projects
222.  Soundgraffiti with arduino mega So we have been working on the new soundgraffiti board. This is an installation which creates sounds using sprayed water connection is made with water. We used copper plates as our sensor. the plates had a cutout line in the middle of 0,1 mm..... Listed under: Sound – Audio Projects
223.  Arduino: Electrical Engineering Basics In this week's arduino tutorial, we take a bit of a detour and focus on some key elements of electrical engineering design that we'll use in future episodes. [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
224.  Temperature Sensor for Shower using Arduino With this device you diminish the use of water in your house or work. Instead of waiting to see vapor in the shower to get in, this device helps you to know when the water is at the temperature you want and you can instantly..... Listed under: Home Automation Projects, Projects, Temperature Measurement Projects
225.  Fifty Dollar Box Bot The objective is to construct a programmable hobby bot that is affordable and simple to make. The parts will be purchased from places like Wal-Mart, Radio-Shack, any Hobby Store, or online store that is accessible to the public. The price range is 50 dollars..... Listed under: Robotics – Auto Projects
226.  Motion Controlled Ultrasonic Lamp using Arduino Recently I've been learning about Ultrasonic waves and how to harness their power. It's simple enough to make some type of sonar device, but I wanted to take it a step cooler and see if I could use Ultrasonic waves to not only detect movement,..... Listed under: Home Automation Projects, Sensor – Transducer – Detector Projects
227.  Arduino Interrupts and Debouncing Interrupts are an extremely useful, yet often feared element of microprocessors. Interrupts allow you to run a program while still being able to react to asynchronous input from the outside world. [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
228.  Chat Server using Arduino A simple server that distributes any incoming messages to all connected clients. To use, open a terminal window, telnet to your device's IP address, and type away. Any incoming text will be sent to all connected clients (including the one typing). Additionally, you will be..... Listed under: Internet – Ethernet – LAN Projects, Projects
229.  Monkey Automaton! This instructable will guide you through the process of building a set of automaton monkeys in the style of “Hear No Evil, See No Evil, Speak No Evil.” Our design ends with two monkeys reacting at the push of a button located in the Speak..... Listed under: Game – Entertainment Projects
230.  SOLAR POWERED ARDUINO WEATHER STATION In countries like India most of the people are dependent on agriculture. For effective planning in agriculture, weather forecast is of utmost importance. So farmers are always interested in the Weather Forecasts. As farmers stay in remote areas, they have to wait for news updates in tv,..... Listed under: Solar energy projects
231.  Arduino Controlled Motion Sensor In this Instructable, I'll be explaining how to build a motion activated alarm! It uses an Arduino microcontroller, a PIR (infrared) sensor, and a type of alarm. You can use an LED indicator, a buzzer, or a piezo. That's the easy part. I will..... Listed under: Projects, Sensor – Transducer – Detector Projects
232.  MaKey MaKey Shield for Arduino MaKey MaKey is a project created by Eric Rosenbaum and Jay Silver. It's an Arduino based keyboard. A very special key because you can use apples, bananas or Play Doh as keyboard keys. Sounds strange, but it works very well. How it works: The trick is..... Listed under: Development Board – Kits Projects, Projects
233. Classic Joystick to USB Adaptor using Arduino If you grew up in the early 1980's and were into video games, you probably had an Atari 2600, ColecoVision, or similar game console. The controllers or joysticks for each of these systems had a distinct feel that is different from today's game consoles or..... Listed under: Interfacing(USB – RS232 – I2C – SPI) Projects



234.



LEGO T-Intersection LED Traffic Light using Arduino Video not playing? See it on YouTube: <http://www.youtube.com/watch?v=q0tiiWwC6Zo> Background E Christmas we set up a large LEGO train layout in a section of the living room. This year, I ended up winning an eBay auction for a number of older-mode road plates, one of..... Listed under: Car Projects, Game – Entertainment Projects, LED Projects, Projects

235.



Six wheeled All Terrain Vehicle (6WD) using Arduino Hello, In this post we'll be making a Six wheel drive all terrain vehicle (ATV). These are rare and hence expensive robots (at least in India). I made this ATV as my summer project. Dagu manufactures a similar 6WD chassis but its way too expensive..... Listed under: Robotics – Automation Projects

236.



The CoaTracker Has this ever happened to you? You wake up in the morning and realize that you're terribly late for work/class/your weekly pedicure/when you throw on a t-shirt and flip flops, sprint around your warm, heated house grabbing your belongings, and race out the door...where you..... Listed under: Sensor – Transducer – Detector Projects

237.



Model Police Car using an Arduino We wanted to build a model police car with working lights and sirens. Then we decided to add a motor and instead of switch to turn everything on and off we used a photodiode. For our car the photodiode signal is a simple on off..... Listed under: Game – Entertainment Projects

238.



Open a box with the flick of a switch! Have you ever given something to someone and wished that the box you gave it in opened automatically? No? Well have I (well, maybe) :D. However if you have, this is the guide for you! With just a flick of a switch the box..... Listed under: Robotics – Automation Projects

239.



How to turn inkjet printer to print on Coffee using Arduino The aim of this project is to make latte printer, I used 1 printers and 1 scanner , it prints one I time, all what I have done is hacking the sensors of the printer and I used Arduino Uno to send different values..... Listed under: Game – Entertainment Projects, Home Automation Projects

240.



Arduino + fischertechnik TX-C – Connecting I2C True Colour Sensor Colour reading is a real issue for industrial models. I've been working on it for more than months now, since December 2009. After many months of hard work, • starting with the standard colour reader (season 1) with features a red LED, •..... Listed under: Projects, Sensor – Transducer – Detector Projects

241.



The 4x4x4 LED cube using an Arduino In this instructable I will show you how to make a 4x4x4 LED cube that will be controlled by an Arduino Demulionc yes you might say" that Arduino has only 14 I/O pins well also the 6 analog pins can be used as pins..... Listed under: LED Projects, Projects

242. Froggy World 3 The Seesaw Froggy put on a little eye makeup before heading out for the new ride, "The Seesaw." The Seesaw is the third ride in the amusement park for adventurous plastic frogs. This ride received Froggy from "The Boot" and slides him over to a waiting rail..... Listed under: Game – Entertainment Projects



243.



Arduino DIY SD Card Logging Shield Ready-made SD card logging shields for the Arduino typically cost in the range of \$15 - \$25. This is quite reasonable, might save a couple of bucks if we make our own. Not to mention all the fun in building it. Forget about..... Listed under: Other Projects, Projects

244.



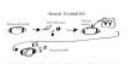
Virtual USB Keyboard Using Arduino Communicating with a host computer can allow a simple Arduino-based system to gain access to a wide variety of commands and information. Most people link an Arduino to a host using serial communications across a USB connection with custom code running on the host too.. Listed under: Interfacing(USB – RS232 – I2C -ISP) Projects, Projects

245.



Smart Homer Web-enabled TV remote using Arduino Smart Homer, a Web-enabled TV remote puppet Smart Homer is a Web-enabled puppet that turns your TV when Simpsons is on. As Homer is too lazy to browse the Web himself, a script in the cloud checks the online TV program for him. If..... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects

246.



The Musical Football This project is to construct a musical football. The reason for my project is that I was inspired by a little kid with autism who loves music. So what better way to have fun than have a ball that you can play with..... Listed under: Game – Entertainment Projects

247. Simple Arduino L.E.D Police Lights This was one of the first programs I wrote for the Arduino after having it a few days 😊 we will be making L.E.D police lights with minimal materials Step 1: You will need. You will need Arduino (or suitable clone) Breadboard 2x 240ohm resistors..... Listed under: Car Projects, LED Projects, Projects



248.



Lightning Shutter Trigger for a Camera using Arduino I knew there were devices that could trigger a camera to fire during a lightning strike, but their circuits were more complicated than I wanted to make. I'm a software guy not a hardware guy so I decided to use an Arduino and that allowed me to write a..... Listed under: Projects, Video – Camera – Imaging Projects

249.



Dr Blinkenlights... (or how I learned to afford the BlinkM) I love the idea of the BlinkM (individually addressed RGB leds controlled with 2 pins), but not so the price (nearly 15 quid each!). Luckily, the hardware is open source and somebody has brought out an alternative firmware (although if you know where Listed under: LED Projects

250.



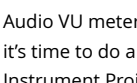
Arduino wall avoiding robot This instructable assumes very little with respect to prior knowledge. If there are any areas you feel could be improved or clarified please feel free to message or comment and I will update. Here are all the details you need to produce a simple wall..... Listed under: Robotics – Automation Projects

251.



Power Quality Meter (PQ Monitor) using Arduino Arduino UNO project, Power Quality Meter, someone would call it's PQ Monitor or PQ Analyzer. I had already published one blog devoted RMS voltage measurements on full band 20 – 20 000 Hz audio signals. (Following my own style, I'd refer to already published Listed under: Metering – Instrument Projects, Projects

252.



Audio VU meter with Extra wide Dynamic Range 69 dB using Arduino O'K, after having some fun with stereo version of the VU meter I described in my previous blog-post it's time to do a serious stuff. Studio grade VU meter !!! 24 steps, equally spaced every 3 dB, covering Extra wide Dynamic Range from -63 up to..... Listed under: Metering – Instrument Projects, Projects, Sound – Audio Projects



253.



Light Suit Why build a light suit? Probably because I've watched Tron a few too many times (the 1984 version of course). I'd just discovered Arduino and was excited, I'd made LEDs flash and buzzers sound but now I wanted to make something new and interesting..... Listed under: LED Projects

254.



Dot Matrix Printer from a CD/DVD Reader with Arduino Hey! Some time ago while going through the pages here in Instructables, something caught my attention: a printer made of a CD reader, and I was amazed. I thought: "This is incredible, I have to make one!" I know that these kind of projects don't..... Listed under: CNC Machines Projects, Video – Camera – Imaging Projects

255.



Arduino powered hangman giftbox/lockbox A medium sized box that requires the user to succeed in a game of Hangman in order to gain access to the contents of the box. Great gift idea!!! my Arduino sketch will be included in this instructable sorry for the poor quality pictures!..... Listed under: Game – Entertainment Projects

256.



Measure RPM – Optical Tachometer using Arduino This Instructable will show you how to make a Portable Digital Optical Tachometer using an Arduino Uno. This project is inspired from This instructable and is an enhanced version of it with an LCD display and a modified code. Instead of a slotted sensor ,..... Listed under: Metering – Instrument Projects

257.



How to build an Arduino WiFi 4x4 with Android Controller RC cars can be WiFi Cars...? RC cars are cool, but cheap RC cars have limited range and can only be controlled with the particular controller that was included with the car. I purchased a RC jeep, complete with 4 wheel drive, flexible suspension, and..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects

258.



Autonomous Control of RC Car Using Arduino This instructable shows how to modify an inexpensive RC car so it can be controlled by an on-board microcontroller. You can program the controller to make the car do any number of driving patterns and stunts. Once you have the car being controlled by the..... Listed under: Car Projects, Game – Entertainment Projects, Projects

259.



How to make a robotic dart shooting sentry Tools: Hot Glue Gun Laptop with Arduino software 22 awg hookup wire (black, red, yellow) wire strippers used drill 1/16th drillbit exacto knife Parts: 2 tongue depressors 1 clothespin 1 rubber-band 1 dart 1 cup (paper or plastic) 1 Arduino 1 breadboard 1 LED 1 momentary button..... Listed under: Robotics – Automation Projects

260.



Controlling Hand Drill with Roboduino using Arduino This will explain how we re-purposed a hand drill to re-spool solder using a Roboduino (Arduino compatible), two servos, and a DIY encoder. While one could use TRIACs to play with the AC power going into the drill, just using a servo to control the throttle..... Listed under: Motor Projects, Projects

261.

Adding CV inputs to the Arduino granular synth When I first got into the Arduino I went looking for audio projects. One of the first things I built was Tobix's Arduino granular synth. I was so impressed I built a permanent unit in a heavy duty enclosure and incorporated it into my occasional..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects



262. GoFly – paragliding/hangliding/gliding altimeter-variometer from Your car navigation using Arduino GoFly is a project based on PNA (car navigation device) LK8000 tactical flight computer software and variometer (altimeter) external input based on Arduino board and pressure sensor. Why? -You can build this for about 150\$, -Your ordinary PNA (Personal Navigation Assistant) changes..... Listed under: Car Projects, Metering – Instrument Projects, Projects



263. Quick and Easy Arduino Nightlight Honestly, how many people have been in this scenario (leave a yes or no in the comments) : It is 2:30 in the morning and you wake up with a need to do something whatever that may be (bathroom, forgotten homework assignment, project due in..... Listed under: LED Projects



264. Using an Arduino to Control an Infrared Helicopter In this Instructable we will explain how infrared signals are used by a remote to control a toy or device and show how a simple circuit can be added to an Arduino to operate the same device through free, Open Source software. This document is part of..... Listed under: Game – Entertainment Projects, Internet – Ethernet – LAN Projects, Projects



265. USA Flag made with diffused LED using Arduino USA flag constructed using a total of 2,301 diffused red, white and blue LEDs completed with Arduino sketch and animations, I hope this instructions helps anyone who wants to try this out. This flag can be displayed during the 4th of July, memorial day or during..... Listed under: Home Automation Projects, How To – DIY – Projects, LCD Projects



266. Arduino Skateboard Speedometer Using an Arduino, it is easy to make a speedometer/tachometer for virtually any man-powered vehicle. I made one for a skateboard that used a small magnet to count revolutions and utilized an LCD display screen. This Instructable will show you how you can do the..... Listed under: Game – Entertainment Projects, Metering – Instrument Projects, Projects



267. Automate Your Garage Opening Times 1. Background My 1st project with Arduino Online was about to solve a simple problem, close the garage door at sunset, when it has been left open. We have a garage in the basement, which is used not only for car parking, but gardening tools..... Listed under: Home Automation Projects



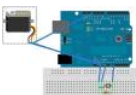
268. How to control arduino board using an android phone and a bluetooth module In this tutorial you'll learn how to use a bluetooth module and MIT's app inventor to create a wireless serial link between an android phone and an arduino board. Here is a short video showing an example app I created. I'll describe how to do..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects



269. Quantifying Access to your Mind using Arduino So, I manage a creative technology lab at California College of the Arts. It's essentially an educational hackerspace for art and design students. Pretty awesome, right? After graduating from the University of Minnesota with a degree in mechanical engineering I was desperately trying to find..... Listed under: How To – DIY – Projects



270. Control Servo with Light using Arduino Hello! In this Instructable I will teach you how to control a servo using a Photocell. This is very simple and good for beginners. Step 1: Materials 1 x Photocell 1 x 10k Resistor 1 x Arduino 1x Breadboard 1x Servo and some jumpers Step..... Listed under: Motor Projects, Projects



271. Arduino Wireless Animatronic Hand BTW!!!! This instructable is awesome!!!! This is a very simple but at the same time a very hard project depending on skill level. Let's get to building! What this is, is a wireless animatronic hand that doesn't need a computer to operate. The user wears..... Listed under: Pro Sensor – Transducer – Detector Projects



272. Binary/ Analog Clock I was inspired by the digital/ analog clock to make my own special clock as my second instructable. I browsed the internet and found that servo clocks are rare and binary are common. So I decided to combine the two and this is what I..... Listed under: Clock – Timer Projects



273. Control anything remotely with Infrared signals using Arduino Who would have thought that just about every Arduino attachment can be controlled in some way with a TV remote? Now it's time to find out how. Arduino.skp141 KB Step 1: Setup and Materials The setup for this is quite basic. The real challenge is..... Listed under: Projects, Radio Projects



274. How to make an Arduino from scratch Frugal Engineering is the best way forward for science. If you're interested in making some arduinos from scratch, come to the right place. You can see a video tutorial of this instructable : here It will supplement any loopholes or doubts you may..... Listed under: How To – DIY – Projects



275.  Arduino Bluetooth Serial Connections This is an introduction on how to setup, make a basic connection, and send data to and from an Arduino using BLU. Bluetooth is great for transmitting data over medium distances and what's more, Arduino just treats it like a serial data connection. This means..... Listed under: Other Projects, Projects
276.  To blink LED from mobile phone or iPod or another computer via WiFi Hello Everyone, I like this site too much, the site really played very important role awakening my enthusiasm and creativity. This is my first project and its really for the first timers project. I got this project from Instructible site , modifier access..... Listed under: LED Projects
277.  RGB LED Strip Circuit with Arduino This Instructable covers the assembly of a circuit capable of PWM-ing (pulse width modulating) a high-power RGB LED and programming an Arduino to cycle through a range of colors. In this context, "high power" is 9-12 volts. I will discuss how to mount a..... Listed under: Projects
278.  Arduino – Control LEDs with a Remote Control Step 1: IR library First you need to go to this page and download the IR library. You just need to follow the me file to install. I think that any IR remote control can do this, I'll be using a Philips Universal one..... Listed under: LED Projects
279.  'Knock Back' – A Knock Echoing Arduino This is a simple Arduino sketch that was originally designed to experiment with arrays and the built-in timing functionality. I based it on the tutorial sample code <http://www.arduino.cc/en/Tutorial/Knock> The system consists of a piezo sensor connected to an ana that listens for a knock from..... Listed under: Sensor – Transducer – Detector Projects
280.  How to Build a Robotic Hand with Haptic Feedback using Arduino For science fair this year, I felt like building something instead of doing an experiment. needed to do was look around Instructables for a project idea. I was inspired by njkl44's robotic hand since it reminds me so much of stuff out of..... Listed under: Projects, Robotics – Automation Projects
281. Arduino Tutorial: Capacitive Touch Sensors Hello everyone! This instructable is a tutorial that will guide you on using the Capacitive touch sensors with Arduino. A Capacit sensor is a kind of touch sensor, that requires little or no force to activate. In this Instructable about capacitive touch sensing, I'll show..... Listed under: Sensor – Transdu Detector Projects
282.  Make Wired Robotic Arm Edge to "Wireless" with DIY Arduino and XBee UPDATE: Added Schematic, Top Layer PCB, Bottom Layer PCB, and both Top, Bott images When I finished the "RevIO" - an Arduino Clone that has the different way of exposing pins usage. I decided to go further to the next project. To t my..... Listed under: Projects, Robotics – Automation Projects
283.  7-Key Slider/Wheel Tutorial with Synthesizer This is a tutorial for using the 7-Key Slider/Wheel Breakout from Rachel's Electronics. I'll show you how to so the header pins for maximum usability. Rachel's has the QT1106 datasheet on their site, and a great arduino library for this breakout. The kit from..... Li: under: Sensor – Transducer – Detector Projects, Tutorials
284.  Arduino Watch with Nokia 3110 screen My goal for this project is to make a watch with selectable dials, stopwatch and millidays. This idea started with a fools prank about metric-time. (<http://www.youtube.com/watch?v=K35xG1buyFA>) First I wanted to make a metric clock but soon this idea evolved from a watch into..... Listed under: Clock – Timer Projects, Phone Projects, Projects
285.  Uber Home Automation w/ Arduino & Pi A few years ago, I became a dog owner for the first time. I didn't like leaving Cody in the kennel alone all day. I h webcam on him, but I couldn't watch it all day long. What if he was in some kind..... Listed under: Home Automation Projects
286.  Come Home! Connecting Distant Spaces EASILY over Web using Arduino Can you believe that we live in an age where you can touch an object (any objec has metal on it) and a light will turn on in your loved-one's space - even if they live in a different city, state, or..... Listed under: Home Automation Project Internet – Ethernet – LAN Projects
287.  Simple 2-way motor control for the arduino When I say simple, I don't mean use a speed control. But control the motor directly without any external circ Here's how: How this came about: I recently was working on an instructable about charlieplexing with an arduino. And I was wondering if the same princ Listed under: Motor Projects, Projects
288.  Assembling the 8x8 LED Board Kit These are step by step instructions for assembling the 8x8 LED Board kit from moderndevise.com. I had never played LED displays before using this kit. I suggest reading through all the assembly steps BEFORE starting to solder because assembly order DOES matter with Listed under: LED Projects

289.  CatGenie: A smart, resettable SaniSolution cartridge The project This project follows on from the excellent work by ScotSEA and his Arduino reset progra <http://www.instructables.com/id/CatGenie-Resetting-a-SaniSolution-Cartridge/>). I had never taken my Catgenie apart as Scott did, but had built a small board instead. I had previous updated Scott's program to..... Listed under: Security – Safety Projects
-
290. My Ninth Project: Robot Arm with Joystick Shield using Arduino Although it is great controlling the robot arm with computer or mobile phone, I think using joystick is also I've bought a joystick shield and make a new project. This joystick shield is compatible with Arduino. It also support Nokia 5110 LCD module,..... Listed under: Robotics – Automation Projects
-
291.  Beat Sync Beat Sync is a single frequency audio spectrum volume meter. It can isolate around a certain frequency (I choose the bass) display it on a creative 8 segment LED bar graph. This is meant to be quite simple, yet allowing room for..... Listed under: Projects, Sound – Audio Project
-
292.  Laser Tag Stuffed Animals Ever feel like there aren't enough toys at the intersection of cuddly and terrifying? Wish your stuffed animals could double as weapons? Then I've got the toy for you. These Laser Tag Stuffed Animals easily transform from being a cuddly night light to the world's..... Listed under: Projects
-
293.  Arduino and L293D Robot (Part 1) Here is part 1 of the Arduino and L293D Robot.This is part of a series of instructables leading to a Line follower Robo a basic Robot made by controlling two motors via the L293D chip through an Arduino Board. I have done this project in..... Listed under: Projects, Robot Automation Projects
-
294.  Mini Billboard using Arduino Designing a Mini Billboard using LED Lights(different colors) , Arduino and Bread Board. Thought of creating a mini billboard could display my name ("Josh") . This is for one of the build nights (required us to use LED lights). This billboard would blink in..... Listed under: Game – Entertainment Projects, LED Projects
-
295.  D-Led Shield v1.0 (for monitoring) Good day fellow enthusiast! Here is one of my latest and simplest shield designs for an arduino board. The thing here sometimes we have a hard time checking out which I/O pins are LOW or HIGH, especially when we are dealing with LED, motors,..... Listed under: LED Pi
-
296.  How to Make Musical Floppy Drives using an Arduino My brother posted a video about this on facebook almost a year ago. Some old floppy drives playir Bach's masterpiece Toccata & Fugue and it got me really interested. So I read about it when the author posted a how-to on his blog and did a couple of tweaking,..... Listed under: Game – Entertainment Projects, Projects, Sound – Audio Projects
-
297.  Pimp My Zoomobil using Arduino I recently put together the Playmobil Zoomobil for my kids. As I was busy snapping all the pieces together, I became m more convinced that this cart had been made to have lights. It's hard for me to believe the original product designers at..... Listed under: Game – Entert. Projects
-
298.  Using a Dot Matrix LED with an Arduino and Shift Register The Siemens DLO7135 Dot matrix LED is one amazing piece of optoelectronics. It's billed as a Matrix Intelligent Display (r) with Memory/Decoder/Driver. Along with that memory, it's got a 96-character ASCII display set with upper and lower case characters, a built-in character generator..... Listed under: LED Projects, Projects
-
299.  SYNTHDUINO The synthduino is a fun arduino project to do and as a beginner it is a great way to learn new things about arduino's many features. With using household items to build the synthduino you will be satisfied with the finishing project and feel..... Listed under: Game – Entertainment Projects
-
300.  Arduino Controlled ATX Power Supply Can a microcontroller control its own power? Well nearly! An ATX power supply, either new or from an old PC, is a way to power Arduino and other microcontroller projects. That is covered in several 'ibles such as this one. However, because of some..... Listed under Projects, Projects
-
301.  Reading Digital Callipers with an Arduino How to use an Arduino to read the signal from a set of digital callipers and send the reading over USB. Why? Th be useful for accurate position sensing in home made / hacked computer aided manufacture systems. Adds USB functionality to your callipers..... Lister Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
-
302. Personalised Word Clock using Arduino Build a unique personalised gift that's cool and reflects the character of the recipient. What's different about this Clock is that it is small enough to sit on a bedside desk, displays the recipients name and has personalised messages that appear at different times..... L under: Clock – Timer Projects
-



303.



Arduino String Instrument Sure you can use LDR's, potentiometers and buttons to generate sounds, but what about strings? When I began thinking about Arduino string instrument, I realized what I wanted to create was a soft potentiometer. I found my inspiration from Hannah Perner-Wilson's Fabric Potentiometer <http://www.kobakant.at/DIY/?p=543>. Step..... Listed under: Metering – Instrument Projects

304.



Autonomous Paintball Sentry Gun using Arduino Make your own, custom AUTONOMOUS SENTRY GUN! A Microcontroller Contest Finalist and Runner Up Winner. This instructable is out-of-date. For the most recent version of the tutorial, see the website . Cheers! This sentry gun autonomously tracks, aims, shoots at targets, using: -An airsoft or..... Listed under: Arduino Programmer Projects, Projects

305.



BUGBot – Light Follower Robot using Arduino The figures above shows the basic idea of any robot, where we have some inputs and output devices connect the brain and some outputs controlled by the brain. In our case we will have the Arduino like the brain. The central Brain, controls all..... Listed under: Robotics – Automation Projects

306.



The “all in one box” aquarium feeder using Arduino Step 1: Things you will need the images show you what you need. you will also need (but is not show picture soldering iron shrink tubes lighter 5 volt power supply usb cable (to program you're arduino) info on the foamed pvc sheet..... Listed under: Home Automation Projects

307.



Dirt cheap Arduino LED light bar This instructable was designed for beginners in mind, but advanced users can easily adapt it to fit their needs and want only uses a few common components, so you shouldn't have much trouble putting this together. It's a good waste of 5 minutes with..... Listed under: LED Projects, Projects

308.



Intelligent Solar Garden Light using an Arduino- Part 1 I bought a solar powered garden light. The solar panel charges the batteries and when it gets dark lights (3x LEDs) turn on until it either gets light again or the batteries run out. It has a small amount of intelligence (turns on when..... Listed under: Battery Projects, Home Automation Projects, Projects

309.



Kickstarter Backer Alert with Stats Scroller, using Arduino Yun The Arduino Yún is a curious addition to the Arduino family. There is a fairly widespread community surrounding the Arduino concept, platform and software. There's another popular community dedicated to hacking and improving inexpensive wireless routers, which often run Linux. The Yún combines the two...it's..... Listed under: Car Projects

310.



Interactive Stereoscopic Installations: visual rupture with the Diplopiascope What is it? This is an ongoing project that i've been working on to see the possibilities of stereoscopic installations in examining the perceptual process. I use a setup that i've called a Diplopiascope to investigate this. The Diplopiascope has gone through a few..... Listed under: Video – Camera – Imaging Projects

311.



Make a 24X6 LED matrix using an Arduino After making a 8X10 matrix a lot of people asked me about expanding the matrix to something bigger, and so I wanted to write stuff to the matrix via a PC, so one day I looked at a pile of LEDs that I had leftover..... Listed under: LED Projects, Projects

312.



8x8 LED Matrix Animations using an Arduino For a party we were about to have I wanted a cool light display to use with my new Xmas present - an Arduino Uno. Having looked at the LED matrix's here I wanted a bigger one that I could hang on the balcony. I also wanted..... Listed under: LED Projects, Projects

313.



Arduino-Based Blue Box (Phone Phreaking) History and Story In the 1950s, 1960s, 1970s, 1980s and even up into the 1990s phone phreaking was an amazing cool way to explore an unknown world of phone switching networks. To "phreak" a telephone switch, can be done by using frequencies, or tones to..... Listed under: Phone Projects

314.



Serial Servo Controller with Arduino I'm going to show you how to use your Arduino to control up to 12 servos at once with minimal jitter. Using a simple interface you can control the position of up to 12 servo channels. Up to 10 snapshot positions can be saved..... Listed under: Interfacing(USB – RS232 – Projects, Motor Projects, Projects

315.



LED Watch using an Arduino This instructable will show you how to make your own arduino based watch that tells time using a matrix of LEDs. This is my first instructable, so if something is unclear leave me a comment or send a message! I was inspired by all the..... Listed under: Clock – Timer Projects, LED Projects

316.

DIY a Spelling Game with an Interactive Robot using Arduino Did you hear before about Social Robot? Did you see the Pepper Robot or Jibo robot? There are many kinds of robots that can hear you, understand you and make a social contact with you via sound, facial expressions and body gestures. Social robots have many various..... Listed under: How To – DIY – Projects, Robotics – Automation Projects



317.  DinoCalc Version 1.0 (Arduino Pro Mini Protoboard Version) Latest Release: <http://code.google.com/p/dinocalc/> Development: <https://github.com/WeaselJones/DinoCalc> This is a calculator without a LCD that tells you if your math answer is right or wrong, without giving you the answer. This instructable will show you how to make this simple math checking..... Listed under: Calculator Projects
318.  MP3 Interface for Arduino I have added a follow-on to this Instructable: <http://www.instructables.com/id/Cheap-and-Easy-MP3-Shield-for-Arduino/> The follow-on shows you how to design, etch and build a PCB shield to connect the MP3 to the Arduino. Replaces the analog switches with a 74HC244. Single layer with large surface mount component design. Only..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Sound – Audio Projects
319. Ethernet Switching – with Arduino Aim: Switch relays from the ethernet or the internet, using your mobile, tablet or computer with a nice graphical user interface. Update: Please read the below steps to Step 2 if you are viewing this article for the first time. Please go to step..... Listed under: Internet – Ethernet – LAN Projects
- 
320.  Virtual Etch A Sketch The Etch A Sketch: famous, creative, and unique. Unfortunately I have no clue where the one from my childhood is, so I decided to make my own virtual one! Check it out (and my awful drawing skills) below. This Etch A Sketch is quite like..... Listed under: Game – Entertainment Projects
321.  ATtiny programmer using Arduino ISP Thanks to: <http://jeonlab.wordpress.com/> For relatively small (less number of pins than ATmega328) projects, ATtiny series, ATtiny45 or ATtiny85 are good choice in terms of its physical size (8-DIP or 8-SOIC) and low power consumption. There are many ways to program the ATtiny..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
322.  TurtleDuino Object Avoidance Robot using Arduino Hello, in this instructable I'll be showing you step by step how to build the TurtleDuino, an object avoidance robot, with an Arduino UNO microcontroller on board. I designed the TurtleDuino using material from the hardware store (Home Depot) and all the electronics from sparkfun.com..... Listed under: Projects, Robotics – Automation Projects
323.  Home Automation: Drapes using Arduino Hate having to manually open and close your drapes? Hate getting back from work/school and your room is dreary? Do you want curtains that open and close themselves? Then you need Dr. Drape! Dr. Drape is an easy DIY project using an Arduino..... Listed under: Home Automation Projects
324.  Convert a toy piano to work as a midi device and use it with Synthesia Goal of this project: Convert a cheap toy piano to work as a midi device and use it with Synthesia (<http://www.synthesiagame.com/>) Other programs that use midi inputs can also be used. Approach: The pushbuttons of the piano are used to create a simple pull-down circuit..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Sound – Audio Projects
325.  Tankbot – Internet Controlled Tank Robot using Arduino Do you remember a game called Tank Wars? This is an attempt to make a physical version of the classic arcade game. You, the player drive an Arduino powered tank and fire a laser at a target. This project uses an Arduino to control a tank..... Listed under: Internet – Ethernet – LAN Projects, Projects, Robotics – Automation Projects
326.  Guitar Tuner for the Blind (using an Arduino) How to modify a guitar tuner so it can be used by a blind person This build uses an Arduino Pro mini microcontroller, (all code is provided). This project was undertaken for the charity Remap, which provides custom-made equipment for people with disabilities. Summary Begin with..... Listed under: Sound – Audio Projects
327.  An FM Stereo Broadcaster PLL using Arduino I have two good AM transmitters - one I'd built using a single 6888 Tube plus an old KnightKit Broadcaster that I refurbished, as well as a high-quality solid state transmitter from SSTRAN that I use to play music over the several antique AM radios I've repaired..... Listed under: Projects, Radio Projects
328.  AC Arduino dimming circuit THANKS TO CONCERNED VIEWERS, I HAVE LEARNED THAT THIS IS NOT SAFE AND SHOULD NOT BE REPLICATED. SO PLEASE DO NOT TRY THIS 😊 THANKS TO EVERYONE WHO COMMENTED, I LEARNED A LOT I am not an engineer, just an experimenter and hacker and prototyper etc..... Listed under: Home Automation Projects, Projects
329. Tiny Altoid Tin Robot With Personality I love robots. Normally the ones I build are quite large and wouldn't fit in your pocket, but for a change of pace I decided I would try something small and fun! This robot is exactly that, and in fact fits inside of an altoids..... Listed under: Robotics – Automation Projects



330.  5x5 LED Cube using Arduino Uno This is a step by step explanation of how to build a 5x5 LED cube using an arduino. I did this project for my undergrad electronics class and it took me about 2 weeks to complete. Note: Apparently, some of the links for the supplies..... Listed under: LED Projects, Projects
331.  Self-Watering Plant using an Arduino Plants live up any space by adding a sense of airiness and life. That is - of course - when you don't forget to water and they shrivel up and die. I am very bad at remembering to water plants. That is why I..... Listed under: Home Automation Projects, Projects
332.  Froggy World 5 The Coffee Gripper In Froggy World, the amusement park for adventurous plastic frogs, it became necessary to to move the frog from a back to the catapult. Because I couldn't know whether the frog would be upright or sideways--and in what orientation--the gripper was a challenge..... Listed under: Home Automation Projects
333.  Dual H-Bridge – Arduino L298 Breakout Board This is my homemade Dual H-Bridge using the IC L298N. For control DC motors or step Motors as other projects just like you need. Breakout L298N.ppt1 MB Step 1: Hardware and Materials This is the basic schematic. It works perfectly. A more advanced schematic is available. Listed under: Arduino Android
334.  Interfacing a Digital Micrometer to a Microcontroller We had a project that required connection to a digital micrometer with a data output jack. The idea was to connect a microcontroller to the micrometer, to read the measurements and make decisions based on the readings. The micrometers that we used are by..... Listed under: Metering – Instrument Projects
335.  Bubble Wall | Interactive, Inflatable Panel Bubble Wall | Breathing Wall Panel System Interactive, Inflatable, Playable Wall Brief Project Description This was an artistic piece installed for a digital fabrication show at the University of South Florida School of Architecture and Community Design. While this brief is specific to this panel,..... Listed under: Game – Entertainment Projects, LED Projects
336.  Big Spectrum Analyzer with Arduino Let's put together a pixel strip with an HL1606, an Arduino UNO and the Spectrum Shield to build a seven bands "large" Spectrum Analyzer of simple construction. The Strip used uses the HL1606 controller to allow direct management of each of the LEDs. The chip..... Listed under: Game – Entertainment Projects, Home Automation Projects, Projects
337.  Wii Nunchuk Controlled Model Train using Arduino Using an Arduino microcontroller, an Adafruit motor shield, and a Wii Nunchuk, you can create a fully programmable, model train controller to run your layout. Amaze your friends. Entertain your kids. Not quite DC, not quite DCC. You're headed for the lands of PWM..... Listed under: Game – Entertainment Projects, Projects
338.  A Facebook-Connected, Arduino-Powered Music Party Music party is a new way to listen to music with others. By tapping an RFID/NFC device that is synced to a Facebook account on an Arduino RFID reader shield and sending that unique ID to Music Party server using the Arduino WiFly shield, we..... Listed under: Internet – Ethernet – LAN Projects, Sound – Audio Projects
339.  DIY Arduino Board Water Meter Working with the interaction design team, a bunch of us at Teague have been tinkering with measuring water, analyzing data in realtime to affect behaviors, and storing it to see patterns over time. At the heart of the exploration was a need to cheaply measure water..... Listed under: How To – DIY – Projects, Metering – Instrument Projects, Projects
340.  Arduino LCD Metronome Connecting the LCD The first step is to wire up the LCD. The HD44780 has 16 pins: Pin 1 - Vss Pin 2 - Vdd Pin 3 - Vo Pin 4 - RS Pin 5 - R/W Pin 6 - E Pin 7 - DB0..... Listed under: LED Projects
341.  Custom Large Font For 16x2 LCDs using Arduino A couple of years ago I was learning to use the Arduino and started playing around with an Hitachi HD44780 based 16x2 LCD screen. I soon learned that the screen has 8 customizable character slots. I had found a project where someone used those slots..... Listed under: LCD Projects, Projects
342.  Garduino-Automated Gardening System using Arduino This instructable is a guide for setting up an automated gardening system using an Arduino and cheap electronic parts. It allows sustainable gardening by using sensors to determine soil moisture, as well as a webscraper to determine future weather. It uses this information to save water by only..... Listed under: Home Automation Projects, Projects
343.  Self-Contained 7x7x7 LED Cube LED cubes are true 3D displays that work by lighting up points in a 3D lattice of LEDs. On the 3D display you can produce truly mesmerizing animations. This Instructable will walk you through creating an LED cube for yourself that is completely self-contained and powered.. Listed under: LED Projects
344. Burning the Bootloader on ATmega328 using Arduino UNO as ISP I had one remote controlled project that needed an Arduino running 24/7 but I didn't want to leave my Arduino UNO, so I decided to buy some pieces and created my own Arduino. The most important part was buying the microcontroller. These were my..... Listed under:



Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

345.



How To Make A Board Game Using Arduino In this Instructable, we'll teach you how to create your own "Would you rather..." board game using conduct paint, an Arduino microcontroller, and some electronics components. Players take turns moving along the game path as directed by an electronic dice roll. Along the way,..... Listed under: Game – Entertainment Projects, Projects

346.



FuzzBot The FuzzBot is an awesome, fast, fully autonomous small Arduino robot that everyone loves!!! It uses the compact Pololu ZumoBot Chassis kit for a great drive system, and uses a Parallax Ping sensor to sense proximity, to make the FuzzBot fully autonomous. I like to..... Listed under: Robotics – Auto Projects

347. Arduino camera Lens Controller My Lumix GH2 Micro Four Thirds camera not only shoots fantastic high definition videos, but with inexpensive adapters I can use it with manual lenses that are cheap and often very high quality. I shoot a lot of performance videos for my daughter's dance studio, and I..... Listed under: Projects, Video – Car Imaging Projects



348.



Capacitive touch Mood light using Arduino This instructable is a quick write-up of my experience creating a multifunctional moodlight. Some basic knowledge of electronic circuits is expected. The project has not yet finished, some adding functionality and tweaking has to be done but it is already functional. If you are..... Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects

349.



Arduino-plex 2.0: Modular Plexiglas Arduino Work Surface Last year I needed a board that I could stick my breadboards to, that would also securely hold an Arduino. I used some Plexiglas I picked up at Skycraft in Orlando and I glued everything together with Crazy Glue. This worked well, but it didn't..... Listed under: Development Board – Kits Projects

350.



The morse code generator by a PS/2 keyboard using Arduino Hi, all! Today I'm trying to explain you my last project: "The morse code generator by a PS/2 keyboard" I've used an PS/2 keyboard to send input to my Arduino board (like described in here) and transform it in morse code that activates..... Listed under: Arduino Programmer Projects, Projects

351.



Nokia LCD & Sensors using an Arduino Arduino: Nokia LCD & Sensors PROBLEM: Making my Arduino, a Temperature-Relative Humidity sensor and a Nokia3310LCD screen work together. Now, I'm a Lazy Old Geek, so what I wanted was an Arduino kit that would take shields. This Freeduino was the closest that I could..... Listed under: LCD Projects, Phone Projects, Projects, Sensor – Transducer – Detector Projects

352.



Program an ATtiny with Arduino Follows are directions for programming the ATtiny microcontrollers using the Arduino IDE. In plain English, this is how to program 8-pin Atmel chips as you would normally an Arduino. This is cool because the ATtiny is tiny, and - well - this allows you to..... Listed under: Arduino Programmer Projects

353.



Stupid Simple Arduino LF RFID Tag Spoofer RFID tags are all over the place. They're used in building access control systems, passports, inventory tracking. This instructable will show how you can use an Arduino and a few simple components (wire coil, transistor, capacitor, resistor) to make a device..... Listed under: Projects, RFID - NFC projects

354.



Ultrasonic Tape Measure using Arduino Have you ever wanted an ultrasonic tape measure, like this Stanley? (See picture). Well, I have but then I am a Lazy Geek. I don't really need one but I thought I'd try to make one. And naturally, I thought of an Arduino. August..... Listed under: Metering – Instrument Projects

355.



Interface Arduino to MySQL using Python Here's a brief tutorial that should get you up and running interfacing your Arduino with a MySQL database. For the sake of this tutorial, I am assuming you know how to set up and use MySQL. This tutorial does not require much Python experience, but..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Internet – Ethernet – LAN Projects

356.

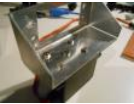
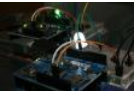


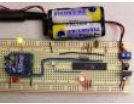
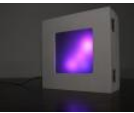
LDR Robot using an Arduino LDR Robot with IR and a Servo The LDR/IR Robot is designed to seek out light and avoid obstacles. The robot uses the Light Dependent Resistor to seek out light and the Infrared Sensor to detect and avoid objects in its path. The following are..... Listed under: Projects, Robotic Automation Projects

357.



Jeopardy Ring-in Buttons with Built-in Rules using Arduino There are several good Jeopardy/Game Show lockout buttons/buzzers, but none incorporate the timing rules of Jeopardy. I am learning about the Arduino and I thought that this would be a great project to practice with. The rules include a question time period with no timeout..... Listed under: Game – Entertainment Projects, Projects

358.  Frankenstein Laser Engraver This Frankenstein Laser Cutter was built out of an old scanner and printer. The whole thing evolved around the instructable Groover and his 'Pocket Laser Engraver'. This is a Making-Of. Although a lot, if not everything, of the mechanical construction requires ingenuity I tried..... under: Metering – Instrument Projects
359.  Low cost Ethernet shield with ENC28J60 using Arduino Economical alternative to original Arduino ethernet shields, allows data rates up to 10 Mbps and is achieved with a traditional assembly components. One of the most interesting shield that you can mount on the Arduino platform is certainly the etherr shield, because enable numerous networking..... Listed under: Internet – Ethernet – LAN Projects, Projects
360.  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 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
361.  Clock with Tics (presentation prototype) using Arduino Clock with Tics is an Arduino-powered 24-hour digital clock that displays expletives at random intervals 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
362.  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 its 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
363.  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 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
364.  Compact 3-in-1 Stripboard DIYduino with Integrated Sensor and L298N Motor Shield I am presenting a compact design of a stripboard Arduino board (D 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, Project: Sensor – Transducer – Detector Projects
365.  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
366.  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: Games Entertainment Projects, Home Automation Projects, Projects
367.  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. It's a spin-off project of..... Listed under: Arduino And Internet – Ethernet – LAN Projects, Projects
368.  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 Haute Couture, Batman! Yes, you too can knock off a version of this famous bag. Okay, even mine started..... Listed under: Home Automation Projects, Projects, Sensor – Transducer – Detector Projects
369.  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
370.  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°C (158°F). It..... Listed under: Battery Projects, Solar energy projects
371.  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 knife without cutting..... Listed under: Arduino Android

372.  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 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 Pr Metering – Instrument Projects, Temperature Measurement Projects
373.  DCF77 master clock MK2 Features Arduino 328 Microprocessor is used to decode and display Time & date from the DCF77 "Atomic" Clock in Mainflinger Frankfurt Germany The DCF77 signal is decoded using the fantastic new DCF77 library written by Udo Klein meaning the clock stays in sync and..... Liste under: Clock – Timer Projects
374.  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 follc 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: Clo Timer Projects, LED Projects
375.  Arduino Programmable Constant Current Power Resistance Dummy Load Glad to see you have arrived on this page to learn how to build a programmat 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
376.  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 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... under: Internet – Ethernet – LAN Projects, Projects
377.  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 so I had some trouble finding a way to attach the gas petal. Well..... Listed under: Car Projects, Motor Projects
378.  Programming Arduino Wirelessly The Arduino system offers an easy and open-source method for programming microcontrollers. Normally this means u 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 swimming pool..... Listed under: Arduino Programmer Projects, Projects
379.  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 'pu on it'. I fell victim to a similar trend in the geek crowd: Take an ordinary silver item and..... Listed under: LED Projects
380.  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: as water, gas, and even electricity is typically measured by gauges that determine either instantaneous flow rate or cumulative volume over time. Both... under: Other Projects
381.  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 clc 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 – T Projects, LED Projects, Projects
382.  Low resolution display done right A resolution of 8x8 pixels may not sound like enough for anything interesting, but with the right setup, it is possible to 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
383.  64 pixel RGB LED Display – Another Arduino Clone This display is based on an 8x8 RGB LED Matrix. For testing purposes it was connected to a standard . 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: LF Projects, Projects
384.  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. Ardu 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 p
385. 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 you to take continuous photos with 3-second delay intervals. This was built for a college electronics project. A motion sensor detects motion in..... Listec Video – Camera – Imaging Projects

386.  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 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
387.  Gas detector / indicator (USB powered) with arduino ArduSniffer This Instructable shows how to build a gas detector / indicator using an arduino. The final 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
388.  BoB the BiPed Did you buy an arduino after seeing all the cool instructables and now you're tired of just making LEDs blink? Are you envious of all the cool 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
389. 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 Mega..... Listed under: Arduino Programmer Projects, Projects
390.  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 wasn't quite as simple as I..... Listed under: Interfacing(USB – RS485) I2C – I2C (ISP) Projects, Projects, RTOS – OS Projects
391.  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: How to Build Projects, Security – Safety Projects, Sensor – Transducer – Detector Projects
392.  Android talks to Arduino board This project slightly modifies the Google Android sample app called "Bluetooth Chat" so you can type a message in the 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, Internet – Ethernet – LAN Projects, Projects
393.  Motion Triggered Fog Machine using an Arduino Fog machines can be unruly beasts. Especially the non-professional models you buy for halloween. With duty cycles, causing massive amounts of fog when you don't need it, and no fog when you do. Wouldn't it be nice to have fog only when people come..... Listed under: Other Projects, Projects
394.  The Boss Box Bot Welcome to the Boss Box Bot instructable, or as we like to call it, the Bo-Bo Bot. The Bo-Bo Bot was designed to use extremely low cost materials to allow people to construct a robot without high-priced kits. Our Bo-Bo Bot will be made using..... Listed under: Robotics – Automation Projects
395.  Daft Punk Coffee Table 5x5 LED Matrix using an Arduino Yes, I know this has been done before, but I wanted to build my own, using as few parts as possible. I built this as a table top or wall mount model, but it can be scaled up to make a coffee table. I built..... Listed under: Home Automation Projects, LED Projects
396.  Capacitive-Touch Arduino Keyboard Piano Using only an Arduino, a few resistors, a buzzer, and some bits of aluminum foil, you can create your own touch sensor piano keyboard in just a few minutes! Using an Arduino Uno, you can create a piano with up to 18 keys; or with an..... Listed under: Development Projects – Kits Projects, Sound – Audio Projects
397.  Arduino MIDI-in shield This instructable shows how to build a shield to connect devices that send MIDI signals (e.g. a master keyboard) to an Arduino. The schematic is derived from: <http://www.arduino.cc/cgi-bin/yabb2/YaBB.pl?num=1187962258/> Step 1: The schematic Basically the schematic is just an optocoupler with some resistors to decouple the..... Listed under: Projects, Radio Projects
398.  Arduino Servo Basic Code In arduino projects, you might add a servo to your projects. This short tutorial shows you the basic how arduino and servo work together. Instruction; 1) Connect all jumper wires as shown in diagram. 2) Connect the signal wire from servo to digital pin 9..... Listed under: Motor Projects
399.  Arduino EMF Detector Here's a small, quick project you can do with an arduino, the EMF Detector! Step 1: Circuit All you need for this project is 10k-330 ohm resistors 10- LED's 1-3.3m resistor 1-Solid core wire (this will serve as the probe) breadboard, wires, battery &..... Listed under: Projects, Sensor – Transducer Projects
400. 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

401.



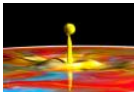
Scratching with Arduino MIT has developed a fantastic visual programming language called Scratch. It is also an amazing learning tool for children, because it is simple, cute, and by providing interaction with the real world by a board called "Scratch Sensor Board". This Instructable shows the development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

402.



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

403.



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

404. 3 wires interface for LCD display using Arduino This post is based on the work made previously by torek in wiring LCD displays using 4 bits. The basic idea is to group the 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



405.



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 own system. The whole build is made only by me. I didn't check the..... Listed under: How To – DIY – Projects, Projects

406.



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 then decided to make a simple wall avoiding robot with the ATtiny2313, an ultrasonic sensor and 2 motors. It's an easy to..... Listed under: Robotics – Automation Projects

407.



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

408.



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 materials 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

409.



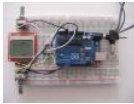
R/C LEGO® Car Redux After I built R/C Lego Car, that used hacked motors and motor housings from the toy Car and toy R/C cars. I realized most of the parts from that toy R/C car that I took the motor out of became wasted. This way was not very..... Listed under: Game – Entertainment Projects

410.



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 5810, 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 Projects, Internet – Ethernet – LAN Projects, Projects, Robotics – Automation Projects

411.



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 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

412.

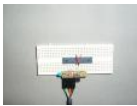


James – Your first Arduino Robot Edit: Thank you so much everyone for voting for James in the Toy Contest! He got first place and I won a \$500 Shapeways voucher! Expect to see more robot instructables from me in the future! 😊 So you want to make a robot? Don't..... Listed under: Robotics – Automation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

413. Build a transistor circuit board for controlling Air Conditioner remote control with Arduino I was supporting a group of students on their graduation project. One of the difficulties they faced was controlling an A/C unit with Arduino microcontroller. The first experiment we tried to work it out was by recording the A/C remote control beam signal for..... Listed under: Home Automation Projects, Projects



414.



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

415.



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: P List..... Listed under: LCD Projects

416.



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 f volume of the music at the club or that Euro-chic clothing retailer outlet? Activate the Stargate to jump to..... Listed under: LED Projects

417.



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..... under: Home Automation Projects, LED Projects, Projects

418.



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: Pr RTOS – OS Projects

419.



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 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

420.



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

421.

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

422.



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 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

423.



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 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

424.



Oscilloscope / Logic Analyzer using Arduino One of the frustrating things about developing and debugging electronic circuits is that you can't look inside a 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: (Projects

425.



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

426.



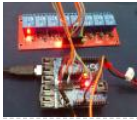
Arduino Weather Station Part2 So my last project was a Arduino wind chill machine. <http://www.instructables.com/id/Arduino-Wind-Chill-Machine/> Now this Lazy Old Geek wanted to add a weather vane (wind direction) to my weather station. Who cares, you may ask? Well, I am a Geek. Actually, wind direction has some importance. Here..... Listed under: Arduino Programmer Projects, Projects, Security – Safety Project Ideas, Sensor – Transducer – Detector Projects, Ideas

427. 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 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

428.



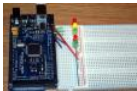
Larson Scanner with Relay Module using Arduino This time I'll show how I used an Arduino to control a relay module with eight channels. Arduino in offer several advantages such as: - Open source; - Easy programming; - You can assemble your own board; - Is supported on various forums on the..... Listed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

429.



Ultrasonic Combination Switch using an Arduino Time for a follow-up to the Single Button Combination Lock by creating another oddball type of switch/ 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 receive four-number code..... Listed under: Medical – Health based Projects, Projects

430.



Arduino Street Traffic Light – Breadboard Edition Build a simple Arduino powered Traffic Light with us! This instructable is meant to walk you through all 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

431.



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 basics in tutorials 1-10 (you have watched them..... Listed under: Metering – Instrument Projects, Projects

432.

Introduction to Packet Radio and Arduino Controlled LED Strips This time on the show we continue coverage of Toorcamp 2012 - the American Hacker C 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 LED strips? %1..... Listed under: LED Projects, Projects, Radio Projects

433.



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 animation or "window sticker." Arduino controlled! Also includes Windows, Mac, and Linux code for converting .xbm image files into Digital Window Sticker files. Pe a shop..... Listed under: LED Projects, Projects

434.



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

435.



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 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

436.



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

437.



Android-Controlled Pneumatic Cannon Powered By Arduino Every summer, Qualcomm hosts a Battle of the Schools competition, which gives employees an 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

438.



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

439.



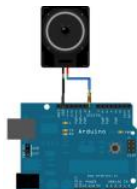
Making Music with Makeblock Makeblock is an aluminum extrusion based construction system that provides an integrated solution for aspects of mechanical electronics and software design. With Makeblock you can make professional robots, toy machines or even art-ware. It's super easy-to-use and helps bring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

440.



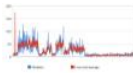
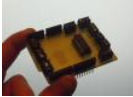
How to use an array with Arduino This variation on the For Loop example shows how to use an array. An array is a variable with multiple parts. If you think of a variable as a cup that holds values, you might think of an array as an ice cube tray. It's like a series..... Listed under: How To – DIY – Projects,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

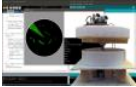
441.

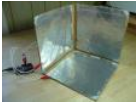
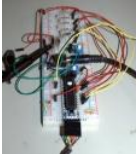
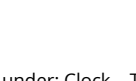


Play a Melody using the tone() function with Arduino This example shows how to use the tone() command to generate notes. It plays a little melody you have heard before. Circuit image developed using Fritzing. For more circuit examples, see the Fritzing project page Connect one terminal of your speaker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

442.  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 correct they were around £12 per approx. 2m strip) however the controller/driver was still around £40, so I..... Listed under: LED Projects
443.  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 Projects, Projects
444.  Simple 18dof Hexapod, Arduino nano (optionally with pololu maestro) Hello, Here is a simple hexapod that can be built by hand very quickly. The mecha 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
445.  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
446.  3D Printed Arduino Controlled Eggbot/Spherebot First off this project was a combination 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
447.  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 made using: Fritzing Code Written using Codebender The cold plate got to -20°C. Water in the cup measured @ 5.5°C compared..... Listed under: Game – Entertainment Projects, Projects
448.  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 you also get a psychological benefit. I have a bad memory to remember something fast or a new thing. So this project..... Listed under: Game – Entertainment Projects
449.  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 CPUs. The slices are designed to be either slave..... Listed under: LED Projects, Projects
450.  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 code or Ethernet shield is required. A standard, run of the mill..... Listed under: Internet – Ethernet – LAN Projects, Projects
451. Google Play Music Internet Radio (Raspberry Pi and Arduino) I was looking for a project to do with my Raspberry Pi and found this Instructable 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
452.  Memsic 2125 Accelerometer using Arduino The Memsic 2125 (datasheet) is a two-axis accelerometer capable of measuring acceleration up to plus or minus 1g. 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 pulse length..... Listed under: Metering – Instrument Projects, Projects
453.  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. The Buggy is usually a four-wheel drive off-road vehicle, which would not be used on the road. Now that I got excited on..... Listed under: Game – Entertainment Projects
454.  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

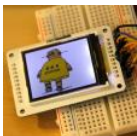
455.  Beach Buddy: 3-in-1 Solar Phone Charger, Boombox, and Sunburn Timer Calculator Imagine the ideal beach trip. The sun is shining, the skies are blue, the air is warm, and the humidity is low. You and your friends have everything you need to soak up the sun, sand and surf: a cooler filled with drinks and snack
Listed under: Battery Projects, Solar energy projects
-
456.  Add Linux, WiFi, Ethernet and USB to Arduino Web site: <http://www.dragino.com/products/yunshield/item/86-yun-shield.html> Project Summary: The most popular 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 a device which has similar features as Arduino..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects, Internet – Ethernet – LAN Projects
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457.  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 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
-
458.  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, avoid 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
-
459.  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's..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects, Projects
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460.  Hexapodino: 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
-
461.  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 something 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
-
462.  Arduino stepper motor and servos shield This Instructable will show you how 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: Projects, Projects
-
463.  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 a hacker
Listed under: Home Automation Projects
-
464.  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, it is fun for which I am a big fan of and my own character (fursona) is a..... Listed under: Game – Entertainment Projects
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465.  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
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466.  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 per LED - 6 patterns - reed sensors + magnets that give you control to step through patterns - detachable velcro design - small, wearable microcontroller + power supply
Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects
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467.  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
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468.  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, Sensors – Transducer – Detector Projects
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469.  Bike Dashboard In this Instructable I'll show you how to make an 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

470.  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
-
471.  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 cable management..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects
-
472.  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 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, Projects
-
473.  Twittering Laser Tripwire with Webcam Capture using Arduino This instructable will show you how to construct a laser tripwire that can twitter and grab 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
-
474.  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
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475.  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
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476.  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
-
477.  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 mechanical device that provides a varying amount of resistance when its shaft is turned. By passing voltage through a potentiometer and into an analog pin..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects, Projects
-
478.  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 turned into a 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
-
479. 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 – Projects, Robotics – Automation Projects, Sensor – Transducer – Detector Projects
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480.  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
-
481.  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. 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
-
482.  ArduinoPhone Combining Arduino and other shield modules, we make a mobile phone named Arduino Phone. Meanwhile, we printed a shell for it with a 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

483.  Lite Brite LED clock using an Arduino Lite Brite pegs look like LED's don't they? That's what I thought the other day after working on an LED cube for a few 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
484.  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: To – DIY – Projects, Projects
485.  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
486.  "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 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
487.  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 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 – Instrumentation Projects, Projects
488.  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
489.  Make your own programmable thermostat for \$66 with Arduino This project will show you how you can create your own programmable thermostat with a 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. It has lots of uses for..... Listed under: Projects, Temperature Measurement Projects
490.  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
491.  Self-balancing skateboard/segway 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-/> This has had >500 comments on this and many express confusion setting up the balance sensors, software and electronics..... Listed under: Development Board – Kits Projects
492.  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 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
493.  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
494.  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 en 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 Sensor hecha con Sugru y polvo de grafito:..... Listed under: How To – DIY – Projects, Sensor – Transducer – Detector Projects
495.  Arduino Audio DAC Options DAC is short for Digital to Analog Converter. In this article we play around with the code Michael Smith created for a PWM based DAC and 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
496.  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 port. 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=12]..... Listed under: Game – Entertainment Projects
497.  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 clock..... Listed under: Clock – Timer Projects, Projects



498.



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 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

499.



Multiplexing 7 Segment displays with Arduino and Shift Registers In this instructable, I will be teaching the basics of multiplexing 7 segment displays using 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

500.



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. Alessandro 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

501.



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

502.



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 be changed..... Listed under: Internet – Ethernet – LAN Projects, LCD Projects, Projects

503.



Arduino Powered, RGB + White LED, Bluetooth controllable, Floor lamp A couple of months ago I ordered a 1M long WS2801 RGB LED strip, just for fun. I took 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 time..... Listed under: LED Projects

504.



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 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 broke instructables!) Step..... Listed under: LED Projects

505.

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

506.



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'd 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 course..... Listed under: Robotics – Automation Projects

507.

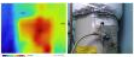


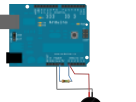
Arduino String Case Change Functions Code The String case change functions allow you to change the case of a String. They work just as their names imply: toUpperCase() changes the whole string to upper case characters, and toLowerCase() changes the whole String to lower case characters. Only the characters.....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

508.



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 anode)..... Listed under: LED Projects, Projects

509.  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
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510.  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 beginner's so parts are also simple Parts: 1- Arduino uno or any other board will work 1- Breadboard 9- jumper wires or..... Listed under: LED Projects, Projects
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511.  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 12 current limiting resistors. Connect..... Listed under: LED Projects, Projects
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512.  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 and elegant the design was I immediately wanted to recreate this effect. I hope some of you feel..... Listed under: Timer Projects
-
513.  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
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514.  Autonomous Autonav 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: Robotics – Automation Projects
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515.  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 that roboticists need to learn, including but not limited to transistor switches, motor driving and analog sensors. This Instructable includes step-by-step instructions on how to..... Listed under: Robotics – Automation Projects
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516.  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 Celsius and Displays the value on an LCD shield display. Objectives: * Learn to..... Listed under: LED Projects, Temperature Measurement Projects
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517.  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 use normally open relays. After investigating cellular modules on the internet I decided it looks not only rather pricey, but..... Listed under: Phone Projects, Projects
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518.  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
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519.  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, Projects
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520.  ArrDrownHo! – Easily convert AVR to Arduino Cap'n ArrDrownHo! is the lovechild of Ardweeny and Boarduino and he's here to commandeer your AVR shield. 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 shield in your project with a..... Listed under: Development Board – Kits Projects
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521.  Kaosduino: Create your own kaosillator using Arduino This project is a part of experiments done while doing an artist in residence at Instructables. You see the other projects here. Inspired by Korg's 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
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522.  The Point Shooter Cyborg Mouse Control cyborg technology and revolutionize your PowerPoint presentations - build a wearable mouse! So you convert 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
-
523.  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

524.  Single button combination lock using Arduino Time for something different - a single button combination lock. Allow me to explain... Updated 18/03/2017
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
-
525.  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 black if an..... Listed under: Development Board – Kits Projects
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526.  Quasi real-time oscilloscope using Arduino Recently I was reviewing one of my oldest projects, and decided to “refresh” previous design by taking full advantage of the new Arduino Leonardo board. Based on ATmega32U4, which includes PGA (programmable gain amplifier), oscilloscope's analog front end doesn't need an external OPA this time, end..... Listed under: Metering – Instrument Projects, Projects
-
527.  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 of a series of LEDs in a row, an analog input like a potentiometer,..... Listed under: LED Projects, Projects
-
528.  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. A 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
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529.  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, – Transducer – Detector Projects
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530.  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 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
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531.  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—I call it Paper Man. Thanks to the NFC Shield, you can directly send 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
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532.  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 using 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
-
533.  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
-
534.  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
-
535.  Scintillino – an Arduino-based quick&dirty scintillation counter Have you ever wondered about the radiation levels around you? Well today you can build your 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 shown below, is..... Listed under: Calculator Projects
-
536.  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 a few 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 – Home Automation Projects
-
537.  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



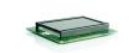
538.  Mystery Beeping Prank The Mystery Beeping Prank is a device hidden in a hollowed out book that beeps intermittently at different frequencies. I made it because I am surrounded by a lot of incredibly creative people who have a penchant for pranking one another, and this seemed like..... Listed under: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



539. 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 sit it down hit some buttons and watch it do its thing without being too big. This is what I..... Listed under: Other Projects, Projects



540. 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



541. 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



542. Interfacing Electronic Circuits to Arduinos Interfacing Electronic Circuits to Arduino In this instructable I use an example of interfacing an Arduino to an ADXL429 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



543. 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 made by me and my friend kshitij gupta. Listed under: Clock – Timer Projects, Projects, Sensor – Transducer – Detector Projects, Temperature Measurement Projects



544. 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 LEDs 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



545. 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 ideas but how likely is it that you're..... Listed under: Home Automation Projects, Phone Projects, Robotics – Automation Projects



546. Save data of temperature and humidity on MySQL with Arduino Uno and Wifly Hello guys, I made this instructable for the people that like the electronics and the botanists. This way you have the data about the temperature and the humidity of your orchard and register this in a database MySQL. For this project you need some materials. Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects, Temperature Measurement Projects



547. 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 – Arduino Projects, Projects



548. 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 how to 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



549. 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) -13 (green wire in my case) -12 (yellow wire in my case) -..... Listed under: LED Projects, Projects



550. Adafruit Flora NeoPixel LED Ring Headphone mod Wearable Arduino mod for your headphones. Non-invasive procedure for headphones that don't have LEDs 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

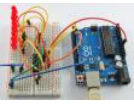
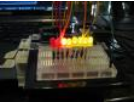
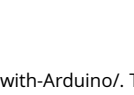


551. Candy Tossin Coffin using an Arduino When you flip a switch, the coffin lid opens and a smiling red-eyed ghost arises. The ghost flings some candy, pushes the switch back and returns to rest. Then, the coffin lid closes. Step 1: Major parts include: 4.5 rpm motor #155821 Jameco.com 1.8..... Listed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



552. 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

553.  Arduino Photocell Theremin Synth (glitchamin) You know theremins, right? Those cool-looking boxes with antennae that produce noise without being to
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
to..... Listed under: Solar energy projects
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554.  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, progra
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
-
555.  AIR Project using an Arduino CODE: download final project code: Arduino Code download additional wiring_analog.c code: Wiring Code download proces
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
should ONLY be used for..... Listed under: GPS Based Projects, Projects
-
556.  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 und
Game – Entertainment Projects, Robotics – Automation Projects
-
557.  Arduino PIR motion water gun first what youll notice my grammer isnt the best 😊 ok what youll need: 1 transistor/mosfet that can handle the current fo
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
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558.  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 wel
Listed under: Projects, Sensor – Transducer – Detector Projects
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559.  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 commu
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
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560.  Arduino Electromagnetic Field Detector A while back I saw an EMF (Electromagnetic Field) Detector at makezine.com that used a led bargraph. I decided
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, Se
Transducer – Detector Projects
-
561.  Arduino Time-Lapse Controller This project originally started out with a few simple parts thrown together to create a very simple time-lapse controller fo
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: \
Camera – Imaging Projects
-
562.  Self Balancing Unicycle Following the popularity of our self balancing scooter and the SciChair we decided to try something a little edgier, the Self Balanc
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
-
563.  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 v
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
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564.  A Gentle Introduction to Arduino for Scratch Users There are lots of people who are very comfortable with the Scratch programming environment but w
try something with Arduino to Blink Lights, Sense Buttons, Run Servos or whatever. They may find the C programming environment in Arduino IDE - Sket
too..... Listed under: Other Projects
-
565.  Arduino-controlled RGB LED Infinity Mirror Update 11/22/2013: Thanks to everyone who voted for this project in theMicrocontroller Contest! It was one
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
want to try..... Listed under: LED Projects
-
566.  Visual Network Threat Level Indicator v2 using Arduino By popular request this is a new wireless version of the Visual Network Threat Level Indicator. Th
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
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567.  A cardboard televisior (with arduino and LEDs) Recently I saw a documentary about the history of the television. And to my surprise they showed that th
existed a mechanical television before the well known CRT televisions. Those mechanical televisions or televisors were pretty smart and simple. A CRT is
an electron beam that..... Listed under: LED Projects

568.  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 while..... Listed under: Game – Entertainment Projects, Projects
569.  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 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
570.  Virtual Color Mixer using Arduino This example demonstrates how to send multiple values from the Arduino board to the computer. The readings from 10 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
571.  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 editor..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects, Projects
572.  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
573.  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 – Project Ideas, LED Projects
574.  DIY Arduino Unit Converter: How to use LCD Step 1: Ingredients: Electronics Arduino Breadboard LCD* 2x 50k pots 150 ohm resistor Jumper wires, and the LCD module! 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: Interfacing(USB – RS232 – Project Ideas, LED Projects, LCD Projects
575. 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
- 
576.  Arduino 4 led madness In this instructable 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
577.  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 behavior from a digital output by switching it off and on very fast. Circuit: An LED connected to digital output pin 9 through a resistor..... Listed under: LED Projects, PWM Projects
578.  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 the code that..... Listed under: Sound – Audio Projects
579.  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 the Arduino, some..... Listed under: Home Automation Projects, Projects
580.  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 world 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
581.  ATtiny programming with Arduino After this Instructable you should be able to program an ATtiny85/45 with an arduino. It may sound complex but it really isn't. After doing some research I could not find too much info on how this could be done. I however did find <http://www.instructables.com/id/Program-an-ATtiny85-with-Arduino/>. This Instructable..... Listed under: Arduino Programmer Projects



582.  Electronic Dartboard or How I Learned to Stop Worrying and Love ECE 476 Introduction Ever dream of having a darts game scored automatically without 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 I "real" cork dartboard. As..... Listed under: Game – Entertainment Projects



583.  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 bu 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

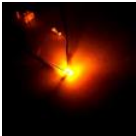
584. Arduino String Comparison Operators Code The String comparison operators, ==, !=, >, <, >=, <=, and the function equals() and equalsIgnoreCase() allow you to make alph comparisons between Strings. They're useful for sorting and alphabetizing, among other things. The operator == and the function equals() perform identically. It's just a matter..... Listed under: How To – DIY – Projects, Projects

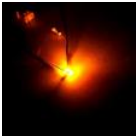


585.  USB Freeform using an Arduino This is a project in attempting to improve it predecessor "Freeform Arduino" by putting it in an enclosure and having it s similar purposes as "Palm Arduino Kit" and "Palm Arduino II" which I can carry it in my pocket and be available to..... Listed under: Interfacing(USB – RS2 -ISP) Projects, Projects



586.  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 leve 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 Pri



587.  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 "christm 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, Projec



588.  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 the 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



589.  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's simple and cheap. Also it allows us to program our Arduino where ever we want, this is usefull for permanently installed Arduino boards,..... Listed unde Arduino Android, Electronics News Updates



590.  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: I – Ethernet – LAN Projects, Projects



591.  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 r wiring the Pololu Pushbutton Power Switch, programming the Arduino to shut off the power, and making the unit "power on" only. The Pololu Pushbutt Power Switch..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects

592. 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 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 P Internet – Ethernet – LAN Projects, Projects



593.  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 C image developed using Fritzing. For more..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
594.  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
595.  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 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
596.  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 8x16 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
597.  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: tutorial shows you..... Listed under: How To – DIY – Projects, Projects
598.  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 get moldy. Listed under: Home Automation Project Ideas, Projects, Security – Safety Projects
599.  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 be due to the stacks of microcontrollers that will be showing up on our doorstep soon for future projects. Any feedback or questions..... Listed under: Android, Projects
600.  Freeform Arduino As an artist, sometime I created art pieces without planning ahead what I want to draw or paint, just want to add colors or lines on drawing or canvas, and never think of the outcome of the piece. Let's let our own instinct and subconscious lead..... Listed under: LED Projects, Projects
601.  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 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=CN7PyM6uw7cCFWNp7Aodc I thought that was rather expensive for a..... Listed under: Home Automation Projects
602.  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 you are. 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
603.  Make your own custom Arduino compatible I love Arduino. 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 make a..... Listed under: How To – DIY – Projects, Projects
604.  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 concat() 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
605.  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
606.  How to Build an Arduino Voice Controlled TV Remote `#include <EEPROM.h> #include <Wire.h> #include <SoftwareSerial.h> #include <LiquidCrystal.h> #include <SoftwareSerial.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 command, 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`

607.  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 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
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608.  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 An 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, ISC White..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects
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609.  Arduino Combi-button Lock optional Android support Recently, I decided I would like to attempt to make a passcode lock with my newly acquired Arduir 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 und Arduino Android, Internet – Ethernet – LAN Projects, Projects, Security – Safety Projects
-
610.  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 (liter 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 und Game – Entertainment Projects, Projects, Robotics – Automation Projects
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611. Quality of Life Meter 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-w and management exactly how you feel about your job without a single meeting, memo, or team bonding..... Listed under: Metering – Instrument Projects
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612.  Arduino Switch Statement used with sensor input An if statement allows you to choose between two discrete options, TRUE or FALSE. When there are m than two options, you can use multiple if statements, or you can use the switch statement. Switch allows you to choose between several discrete option: tutorial shows you..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Sensor – Transducer – Detector Projects
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613.  Modifying a Robot Arm using Arduino Essentially another tutorial involving controlling DC motors. In this post I'm going to first alter a robot arm I had bu 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: Projects, Robotics – Automation Projects
-
614.  RC Paper Tank – Bring your 3D models to life Bring your 3D models to life! In this instructable we will custom make a remotely controlled tank. We will in 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: Game – Entertainment Projects
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615.  Barcode Reading using Roborealm Output on Arduino LCD 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 project: 1. Arduino UNO 2..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, LCD Projects, Projects
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616.  Analog In, Out Serial using Arduino This example shows how to read an analog input pin, map the result to a range from 0 to 255, and then use that resu the pulsewidth modulation (PWM) of an output pin to dim or brighten an LED. Circuit image developed using Fritzing..... Listed under: Projects, PWM Pr
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617.  Midi Light Show using Arduino For a class, my teammate and I decided to develop a MIDI based system that has a responsive light for each note played. example, if you plug our little setup to a keyboard, pending on which note you press, you'll get a specific color..... Listed under: Projects, Sound – Audio
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618.  3D Printed Digital Camera This is a 3D printed digital camera that you can build yourself. By making your own digital camera, it takes away some of the r around how such devices work, and are fabricated. Also, it allows you to fully customize the camera to your liking..... Listed under: Video – Camera – Im Projects
-
619. The LED Strip Jellyfish Costume with Arduino & LPD8806 Led Strips It all started when I saw a BBC documentary in 2002 about deep waters of the ocean. There was a bioluminescent 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 costum Listed under: LED Projects



620.  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 sensor value is read and compared to a target value. If the value is not within a certain range, the program enters a while loop that keeps reading the sensor until it is. Listed under: Metering – Instrument Projects, Projects, Sensor – Transducer – Detector Projects



621. Arduino-L3dgecomm – Integrating L3DGEWorld and Arduino L3DGEWorld is a tool for monitoring and interacting with networks and computer systems. In 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 L3DGEWorld interface allows you to interact with these entities in a 3D environment. Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects, Projects



622. 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



623. Tree Climbing Robot using Arduino After I got comfortable programming and building with an Arduino, I used my newly acquired 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



624. Palm Arduino Board V3 I designed and created this Palm Arduino V3 prototype PCB, as I was tired of recreating Arduino-compatible boards on perf board every time I was prototyping a new project, especially when I had to spend a lot of time tracing the wiring to see that it was correct..... Listed under: Development Board – Kits Projects



625. How to make a XY-plotter with Makeblock Last month, I made a XY-plotter by Makeblock and used it to build a Drawing Robot. This Drawing Robot was built using two Linear Motion Shaft D8x480mm, two Long Beam0824, the timing belt, two stepper motors, two stepper motor drivers, and a micro-controller Arduino Uno..... Listed under: Robotics – Automation Projects



626. 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 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



627. 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 use 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

628. 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 wrinkled, so we start the dryer again, don't hear the buzzer again ... it's an endless cycle..... Listed under: Home Automation Projects, Projects



629. 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 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 brightly..... Listed under: LED Projects

630.  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 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 Kicks Bluegiga..... Listed under: Interfacing(USB – RS232 – I2C – ISP) Projects

631. 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



632.  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 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 – Automati Projects
633.  Arduino Barometric Pressure Web Server This example shows how to use SPI communications to read data from a SCP1000 Barometric Pressure sensor 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
634.  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 incen the Radio Shack / Instructables Micro..... Listed under: Internet – Ethernet – LAN Projects
635.  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 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
636.  Create Interactive Electronic Instruments with MaxMSP This Instructable is part 3 in an Intro to MaxMSP series I've just finished teaching at Women's Aud 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 interfaci MaxMSP with hardware. I..... Listed under: Other Projects
637.  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/ 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 Pr Projects
638.  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 install lights on my Dad's skates as a thank-you present for taking care of the pool for..... Listed under: LED Projects
639.  Homemade Infrared Rangefinder (Similar to Sharp GP2D120) using Arduino Here is my instructable on how to construct a pretty simple (for some!) shor infrared rangefinder/range sensor. Infrared rangefinders are very useful in a number of projects. The majority of these come from obstacle detection (in or generally detecting distances! The one shown..... Listed under: Internet – Ethernet – LAN Projects, Metering – Instrument Projects, Projects, Sensor – Transducer – Detector Projects
640.  Make your own Enigma Replica EDIT: This Instructable has won Second prize in the 2013 Radio Shack Microcontroller Contest. Thank You to all who vote 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
641.  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 pr for controlling synthesizers, sequencers, and other musical devices. MIDI devices are generally grouped in to two broad classes: controllers (i.e. devices t generate MIDI..... Listed under: Game – Entertainment Projects, Projects, Sound – Audio Projects
642.  Serial Call and Response with ASCII-encoded output using Arduino This example demonstrates string-based communication from the Arduino board to t 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 fr computer. Then it sends three sensor values as ASCII-encoded..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
643.  Trinity Assembly Hey dudes! Lets build the trinity synt! ! More information about the synth at: www.bastl-instruments.com Before you start: the board sc 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
644.  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 comp. Then it sends three..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

645. 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 product 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 – Instrumentation Projects



646.  Calibrating sensor input using Arduino This example demonstrates one technique 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 are the minimum and..... Listed under: Projects, Sensor – Transducer – Detector Projects

647.  *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

648.  Arduino Fingerprint Lock There is a short video for this Arduino fingerprint lock here: http://v.youku.com/v_show/id_XNjlxNzQyNzY4.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 baby. Listed under: Security – Safety Projects

649.  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 print. It is printed using..... Listed under: Projects, Sound – Audio Projects

650.  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

651.  Rainbowduino Sign using Arduino The Rainbowduino is a variant of the Arduino and among other things is capable of driving an 8x8 RGB LED matrix. I have 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

652.  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 modified some..... Listed under: Car Projects, Projects

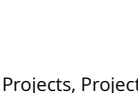
653.  Electronic Music Box Powered by Arduino (sort of) Music is the most universal means of expression. Regardless of cultural language or age the idea conveyed through music would not differ much. It is safe to say everyone loves music, one type or another. When one's favorite piece is played there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

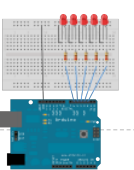
654.  Aqua Garduino Mini @hydroFishAqua82 Arduino Powered Micro Aquaponic System with Pi Camera and Twitter Feed We are creating an automated aquaponic system with mobile updates via Twitter. Sensors and motors will be controlled from an Arduino while the entire system, including mobile updates, will be orchestrated by a Raspberry..... Listed under: Home Automation Projects

655.  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 drives and a pen (pilot, whiteboard marker, whatever you have) at the..... Listed under: How To – DIY – Projects, Projects

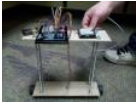
656.  My Arduino In Circuit Programmer This Lazy Old Geek is also an Arduino Geek. If you are an Arduino Geek, one of the common microcontrollers used by Arduinos is the Atmega328 chip. In order to use Arduino software, the Atmega must have bootloader software on it. Okay, so I bought..... Listed under: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

657.  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

658.  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 free meetings are eager to learn advanced uses of computers. The presenters were John Dukovich and Hugo Estrada.... Listed under: Arduino Programming Projects, Projects

659.  Arduino Button Mouse Control Code Using the Mouse library, you can controls a computer's onscreen cursor with an Arduino Leonardo, Micro, or Due. 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
660.  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 i 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
661.  Arduino-Radio Controlled Hydrogen Blimp The blimp is controlled by a transmitter on the ground, operated by a human. There are three control levers-- 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, Radi Projects
662.  Arduino Switch (case) Statement, used with serial input An if statement allows you to choose between two discrete options, TRUE or FALSE. When there 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 c This tutorial..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
663.  Potentiometer or variable resistor control LED Code The if() statement is the most basic of all programming control structures. It allows you to make son 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
664.  MultiSerial Mega using Arduino Sometimes, one serial port just isn't enough! When trying to communicate with multiple serial enabled devices, while als 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: Developm Board – Kits Projects, Projects
665.  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 wante 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..... Liste Clock – Timer Projects, Home Automation Projects, Projects
666.  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 ava 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
667.  Remake the Mosquito Killer using Arduino Hi, everyone, i would like to introduce how i remake my mosquito killer here. With this remaking, my mosquit 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 unde Home Automation Projects, How To – DIY – Projects, Projects
668.  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. Unfortunat parent needs..... Listed under: Clock – Timer Projects, Projects, RFID - NFC projects
669.  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 mode Frits has been used in an episode of TLHR. It doesn't work well, you get what you pay for. But it is a..... Listed under: Car Projects, Projects
670.  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 winter. His pipes burst and caused quite the mess. This project describes a temperature sensor that broadcasts the temperature in his house to the..... under: Home Automation Projects, Projects, Temperature Measurement Projects
671.  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 ardu relay, and an open source software program called makeAVI (windows). To modify the camera I disassembled the camera cover and removed the button Listed under: Projects, Video – Camera – Imaging Projects
672. 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 ground wire. 2) Connect all 330Ω resistor to anode lead of LED. 3) Connect all jumper wire to digital..... Listed under: LED Projects, Projects

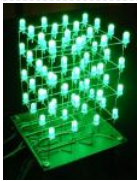
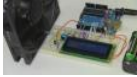


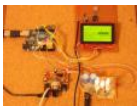
673.  The Self-Balancing Robot using Arduino Introduction The idea of this project was to design and construct a robot that consists of a body and two wheels would be able to balance on its own. This behavior is similar how a segway (a new mode of transportation) works. Our goal..... Listed under: Projects, R Automation Projects
674.  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 loo the left there is also acoustic range finder mounted to the top. The device works by sweeping..... Listed under: Projects, Video – Camera – Imaging Projec
675.  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 standal 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
676.  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! WI 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: Calcul Projects, Metering – Instrument Projects, Projects
677.  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 al: 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
678.  Arduino Police Strobe Light Code Arduino Police Strobe Light effect, another simple variation of blink code. Arduino Police Strobe Light effect, another si 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: C Projects, LED Projects, Projects
679.  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 database that can register card codes. On the door there is a RFID reader connected to..... Listed under: Projects, RFID - NFC projects, Security – Safety P
680.  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 m display. The microcontroller used is Arduino Uno..... Listed under: LED Projects, Projects
681.  Connecting Arduino LCD Display Code LCD display is great way to display output from your arduino when it not connected to your computer. The comm 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..... L under: LCD Projects, Projects
682.  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 follo 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, Temp Measurement Projects
683. 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-w 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 – Pro Ideas, Projects, RFID - NFC projects



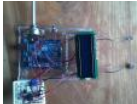
684.  Arduino Voltmeter Code This arduino projects show how to make voltmeter with your arduino. It use voltage divider concept to estimate the voltage inp Instruction; 1) Connect all jumper wire as shown in diagram. Upload this code to your arduino /* Voltmeter Voltmeter base on voltage divider concept based on: <http://www.clarenceho.net:8123/blog/articles/2009/05/17/arduino-test-voltmeter> Coded by: arduinoprojects101.com */..... Listed under: Me Instrument Projects, Projects
685.  Arduino Temperature Sensor Code This arduino projects show how to read Celsius and Fahrenheit temperature with LM35 temperature sensor. Parts Li: 16×2 parallel LCD display (compatible with Hitachi HD44780 driver) 2) 1x Arduino 3) 1x 10kΩ potentiometer 4) 1x LM35 temperature sensor 5) Jumper w Instruction; 1)..... Listed under: Projects, Sensor – Transducer – Detector Projects, Temperature Measurement Projects



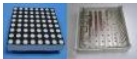
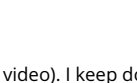
686.  Web Server using Arduino In this example, you will use your Ethernet Shield and your Arduino to create a simple Web server. Using the Ethernet library, device will be able to answer a HTTP request with your Ethernet shield. After opening a browser and navigating to your Ethernet..... Listed under: Intern Ethernet – LAN Projects, Projects
687.  Arduino Stopwatch Code Arduino projects, running stopwatch on arduino. Arduino projects, running stopwatch on arduino. Parts List; 1) 1x 16x2 paralle 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
688.  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 monit 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
689.  Arduino RPM Counter / Tachometer Code Arduino projects, make arduino rpm counter with arduino. Instruction; 1) Connect all jumper wire as shown i 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..... Lis under: Metering – Instrument Projects, Projects
690.  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, v 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
691.  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 imple 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
692.  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 se 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, C Based Projects, Phone Projects, Projects
693.  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: Fea GPS Based Projects, Projects
694.  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 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: Projects, Projects
695.  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) Proje Projects, Sound – Audio Projects
696.  Arduino temperature controlled PC Fan Oscar Gonzalez gives us a simple tutorial for speed controlling a PC FAN and reading a LM35 temperature senso an Arduino microcontroller. He covers the use of an optocoupler, PWM (Pulse Width Modulation) and reading analog voltages with the Arduino. He even a..... Listed under: Projects, RTOS – OS Projects, Temperature Measurement Projects
697.  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 a error in the measurement results, introduced by transformer. Overall THD picture doesn't change much, suspiciously drawing same chart in the morning the evening, when..... Listed under: Metering – Instrument Projects, Projects
698.  Audio VU Meter using Arduino Biasing AC input using resistor divider and scaling up / down if necessary; Sampling fast and accurately using direct acces Control Registers of ADC and Timer1; Subtract whatever was added at step #1 from result of Analog / Digital conversion and Square; Average /..... Listed Metering – Instrument Projects, Projects, Sound – Audio Projects
699. 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: Pr



Sound – Audio Projects

700.  Sound Localization using Arduino Well, it's elementary simple in theory, how to do sound localization based on phase difference of signals, that received 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..... List under: Projects, Sound – Audio Projects
701.  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 y computer the fastest machine in the neighborhood it just wasn't practical for software to create intelligible speech. In those days the only..... Listed und Sensor – Transducer – Detector Projects
702.  Spectrum Analyzer, Arduino project with FFT algorithm The basic idea was to create color organ / spectrum analyzer on arduino board, trying to minimiz 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
703.  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 l 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, Sr Audio Projects
704.  MEGAshield KIT for Arduino MEGA 2560 R3 and Arduino DUE ARDUINO MEGA 2560 REV3 The MEGA 2560 is designed for more complex projects. With 5 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 of..... Listed under: Development Board – Kits Projects, Projects
705. 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. The 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 les will..... Listed under: Motor Projects, Projects
706.  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 controle 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..... Lister Projects, Robotics – Automation Projects
707.  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 holde <https://www.adafruit.com/products/248>..... Listed under: Battery Projects, Projects
708.  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 recor 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
709.  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 prograr interact with Arduino circuit. Basically, interaction is in the form of serial communication via the USB port. This is my practice after learning..... Listed un Other Projects, Projects
710.  Arduino LCD Twitter display a.k.a. the gratuitously complicated bidirectionally communicating Arduino-based scrolling Twitter display and notifier. ---- Th 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 prot One major design..... Listed under: Internet – Ethernet – LAN Projects, LCD Projects, Projects
711.  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 Automatic Projects, Projects
712.  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 wa 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
713. 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 er 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



714.  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 – D Projects
715.  simpleTweet_01 python using Arduino Arduino Python Twitter (Windows) In this instructable we'll modify my simpleTweet_00 and rewrite the Processing 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
716.  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
717.  Arduino 4x4 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. 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
718.  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 dar 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
719.  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
720.  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 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
721.  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
722.  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, I being a LAZY OLD GEEK, I decided..... Listed under: Metering – Instrument Projects, Projects
723.  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
724.  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
725.  Arduino + Temperature + Humidity A simple temperature sensor using one LM35 Precision Temperature Sensor, Humidity Sensor and Arduino, so you can use it as a hook up on your future projects. The circuit will send serial information about the temperature and humidity so you can use it on your computer. I have a lot of data..... Listed under: Projects, Temperature Measurement Projects
726.  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



727.



Turing Alarm for Arduino NOTE: This Instructable is currently incomplete. I will finish it before September 19. I started this project after seeing Nick John 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

728.



Arduino Electronic Dice using random numbers This instructable will show you how to make an electronic dice with minimal experience using 7 LEDs, re 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

729.



LED Hat Display with Pong using an Arduino A while ago, as my first microcontroller project, I made a Pong game on a 5x7 LED display, but then nothing 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

730.



Temperature Control For Kitchen Appliances using Arduino In this Instructable, I will step through controlling the temperature of most kitchen appliance use an old Westbend Poppery popcorn maker (aka. coffee roaster), but these same techniques will be applicable to most hot plates, coffee makers, and irons..... Listed under: Home Automation Projects, Projects, Temperature Measurement Projects

731.



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

732.



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 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

733.



Wireless Altoids Display using an Arduino This Instructable will show you how to modify an Altoids tin for a wireless 2x16 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

734.



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 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

735.



Reaction Time Tester using an Arduino A month ago I knew nothing about Arduino and now.....my first project! Looking back, this project combines all 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: Timer Projects, Projects

736.



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

737.



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

738.



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

739. 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 ago 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



740.  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



741. Plantduino Greenhouse using an Arduino This summer I wanted to combine my two loves of plant science and engineering. Thus I am constructing my v 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: Automation Projects, Projects



742. 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 sheets between them The withe stips are the LDRs When the stick on top is..... Listed under: Projects, Sensor – Transducer – Detector Projects



743. 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 metho 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 – Autorn Projects



744. 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/TI-Word-Clock-Arduino-version/> also inspired by <http://www.highonsolder.com/blog/2011/1/8/arduino-word-clock.html> <http://www.instructables.com/id/S-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 – Tir Projects, Projects



745. 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 eg; production in high gear. According to the material that she reads, chickens will maintain their egg laying production if they get..... Listed under: Clock – Projects, CNC Machines Projects, Projects



746. 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 programming the ATtiny85 using the wonderful shield that randofo created. List of materials: ATtiny85 Programming Library Arduino Uno HC-SR04 Ultra Range Finder and Library Jumper Wires Breadboard ATtiny85 Step 1: Program..... Listed under: Metering – Instrument Projects, Projects



747. 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 (drill press: <http://www.instructables.com/id/ManualLevelingLaserCross/> Well, being a Geek I decided to make an automated platform that adjusts autom with an Arduino. Well, the..... Listed under: Projects, Sensor – Transducer – Detector Projects



748. 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 perpendicular to the incoming rays of sunlight. here's an equation to prove this: $P = AW \sin$ Listed under: Sensor – Transducer – Detector Projects



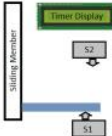
749. Arduino True Random Number Generator This is just a fun project I have been working on in the last little while. If you like this instructable, consider vot it in the Arduino Challenge! Anyone who has experience with programming will have probably used random numbers in their code. These random..... Li under: Calculator Projects, Projects



750. 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 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 P Game – Entertainment Projects, Home Automation Projects, Projects

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



752.  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 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 – T Projects, Projects
753.  Arduino Color Sensor Here we will be learning how to make a color sensor. my model consists of three cardboard compartments containing an LED - on one blue, and one green - and an OP550B phototransistor. The LED's shine simultaneously on a solid colored card. The phototransistors..... Listed unde Projects, Projects, Sensor – Transducer – Detector Projects
754.  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 for adding whatever..... Listed under: Projects, Robotics – Automation Projects
755.  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 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
756.  Remote controlled webcam using Arduino Web-enable your interactive sensors over desktop, smartphone and tablet devices. This tutorial describes in c 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 webpage can be..... Listed under: Internet – Ethernet – LAN Projects, Projects, Video – Camera – Imaging Projects
757.  Bike Speedometer using an Arduino Monitor your road speed using the Arduino. This project uses a magnetic switch (also called a reed switch) to measu 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
758.  Waveform Generator using an Arduino Waveform generators (also called function generators) are useful for testing and debugging circuits. I often use t 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
759.  LED Matrix with Game Controller using an Arduino This project was built for my introductory electronics class at the University of Waterloo in Canada. T 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..... Li under: LED Projects, Projects
760.  Sous-vide Arduino Shield *NOTE* THIS PROJECT IS DONE BY A GROUP OF STUDENTS FROM SINGAPORE POLYTECHNIC Sous-vide (/suˈɛ̃vɛ̃/; French f "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
761.  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 c 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, Sour Audio Projects
762.  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
763.  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 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 Projects, Motor Projects, Projects
764.  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 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 – F Projects

765.  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
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766.  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 provide 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
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767.  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 door lock via bluetooth..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects
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768.  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. The following is the list..... Listed under: Arduino Android
-
769.  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 our Robot as it moves 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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