
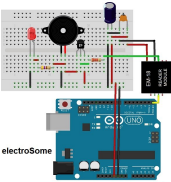




Advanced View Arduino Projects List


List of Projects using arduino with advance view:


- 


1. The Lightning Simulator/Breathalyzer/Graphic Equalizer – Arduino Powered using arduino UPDATE: A portable version of the Talking Breathalyzer is here <http://talkingbreathalyzer.com> The LED strips are mounted on an outdoor trellace which functions as a lightning simulator, outdoor breathalyzer, graphic equalizer synced to music, and a few other effects with sound. Materials: 8 12v RGB Waterproof Flexible..... Listed under: LED Projects
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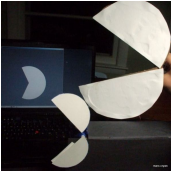
2. Interfacing EM-18 RFID reader with Arduino Uno Arduino Uno is an opensource physical computing platform based on ATmega328 microcontroller and provides a development environment for writing software for the board. It can be used for a variety of projects. EM-18 RFID reader is one of the commonly used RFID reader to read..... Listed under: Other Projects
- 


3. Arduino + WiFi, Music Responsive LED Light Fixture using arduino This instructable gives instructions for constructing a Saiko5 WiFi enabled LED light fixture based on the Arduino hobbyist platform. It includes step-by-step instructions from board design to soldering to case integration, as well as instructions explaining how the software and firmware can be used to..... Listed under: LED Projects
- 


4. Trinket Audio Player using arduino Overview We usually think of the Adafruit Trinket as a tiny subset of a “real” Arduino; less RAM, less code space, less I/O. But this little chip has a couple tricks up its sleeve, things its larger brethren can't do. One of these is a..... Listed under: Sound – Audio Projects
- 

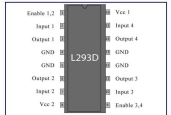
5. Beatfly : Make an illuminating blimp and control it with your voice, Keyboard, MIDI Controller, Garageband file, iPhone, Flash, and more! [Mac OSX] using arduino [Mac OSX Only] Because I use Quartz Composer, my program works only on Mac OSX. I am now extending and improving it toward cross-platform. If you have knowledge of computer programming, you can make your own system that connects to the blimp. The communication protocol..... Listed under: LED Projects, Sound – Audio Project Ideas
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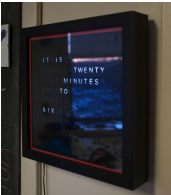
6. Arduino Solar Radio Solar charging, via the panel on the back. * 12 position switch to select channel number * Seek up / seek down controls and 'store' button * RDS display of call sign * Frequency display * Battery voltage display * Solar charging current display The..... Listed under: Radio Projects
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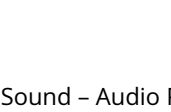
7. Updating the Arduino Garage Door Circuit for the new Gliderol Garage Controller. We moved house recently and I was obviously very keen to continue the home automation routine. As described in Adventures with an Arduino – Part 1: The Business Problem, I created an Arduino based garage door interface to integrate with a BOSS BOL6 garage door controller..... Listed under: Home Automation Project Ideas
- 

8. PUPPET CONTROLLER using arduino Three kinds of motion: Human, Mechanical, Animation. Blend them together to build a puppet controller for the real and virtual world. Or, Pacman - three ways. This Instructable includes: - Using an adjustable resistor as input to the Arduino Micro-controller - Controlling two servo motors from..... Listed under: Game – Entertainment Project Ideas
- 

9. Intelligent Letter Box using Arduino and GSM In the days of technology postman still comes to our house for delivering the letters, couriers and parcels. Because some things like courier, parcels can't sends via email and by using any other electronic media. So for getting notification of our letter delivery in our..... Listed under: Other Projects
- 


10. LED Umbrella with Arduino using arduino The LED Umbrella with Arduino combines an umbrella, an 8x10 LED matrix and an Arduino microcontroller to create a controllable, programmable LED experience in the privacy of your own umbrella. This project was inspired by the Electric Umbrella by sockmaster and a number of LED matrix instructables..... Listed under: LED Projects
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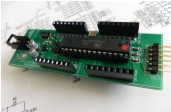
11. ARDUINO based IR remote control robot using arduino Hi everyone. This my new project IR remote control robot using arduino. This is a simple design robot you can easily build it. Step 1: Requirements: Project requirements: Arduino uno Tsop1738 (ir receiver) H bridge ic (L293D) Two dc motor A robot base 9v Battery..... Listed under: Robotics – Automation Project Ideas
- 


12. Sleek word clock using arduino nspired by drj113's great instructable on making a word clock, I wanted to make my own. After seeing the (extremely overpriced) commercial "qlocktwo" word clock, I decided to borrow its smooth glossy black design while basing the innards of my clock on drj113's design. In..... Listed under: Clock – Timer Project Ideas
- 


13. Project work3:Arduino code and the circuit diagram using arduino In order to realise the “music garden”,the most important part is the Arduino code and circuit diagram. First of all,I will present my Arduino code:(I will show you the way I think as a flow chart at first) Flow Chart: Details:this flow chart is a..... Listed under: Sound – Audio Projects




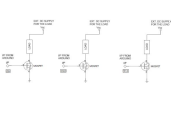
14.  Haptic Feedback device for the Visually Impaired [Project HALO] using arduino I recently watched an episode of Stan Lee’s Superhumans which featured a blind man who used a series of clicks, like a bat, to echo locate his surroundings. I got to thinking about other blind people and their ability to navigate freely – without the……. Listed under: Medical – Health based Project Ideas


15.  Hobbyduino Mini V1.0 using arduino Introduction The Hobbyduino Mini is a clone of the Arduino main-board. It contains a ATmega328 processor programmed with the Arduino bootloader. The Hobbyduino does not contain the circuitry for USB communication. I opted to rely on the FTDI232R serial boards to handle the USB-to-Serial protocol. Here……. Listed under: Development Board – Kits Projects


16.  A simple DIY spectrophotometer using raduino What's all this? This instructable will explain how to build a fairly basic but working spectrophotometer out of easily sourceable parts. Of course, this device is nothing compared to a commercial spectrophotometer, but it will allow the builder to understand how such a device works……. Listed under: Metering – Instrument Project Ideas


17.  Build Your Own Arduino & Bootload an ATmega Microcontroller – part 1 There are many reasons to build your own Arduino circuit on a protoboard or a custom-designed printed circuit board. At the heart of the Arduino platform is an AVR microcontroller, in usual way you need a special hardware programmer and suitable hex files to program……. Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects

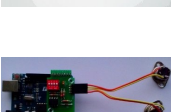
18.  High-speed Photography with Arduino and CHDK using arduino This project uses an Arduino microcontroller and a laser break-beam trigger to fire via USB remote a Canon camera modified with CHDK (Canon Hack Development Kit) firmware. Immediate influences are the high-speed flash photography triggered by sound or light project by Glacial Wanderer and the……. Listed under: Video – Camera – Imaging Projects

19.  Arduino PWM Led Control using arduino Looking for a simple circuit to control the light intensity of Light Emitting Diodes (LEDs) or similar lighting sources? Here is an Arduino based circuit with three independent pulse width modulated (PWM) channels to fulfil your requirements! Just follow the schematic diagram to complete the……. Listed under: LED Projects

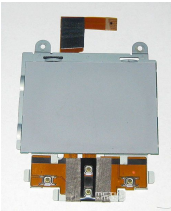
20.  Lunchtime Clock using arduino Have you ever wished lunchtime were longer, but didn't know where to find those few extra minutes? Well, wish no longer! Thanks to great in advances in clock technology, I present to you a clock that speeds up 20% every day at 11:00 and slows……. Listed under: Clock – Timer Project Ideas

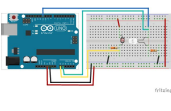
21.  Arduino project: Stereo Peak Program Meter using arduino Previously, we introduced the Arduino’s analog-to-digital converter (ADC) in detail, looking at successive-approximation A-D conversion and how it’s the best compromise between speed and cost. This time, we start putting some of that theory into practice by building a stereo peak-program meter. Our Peak Program……. Listed under: Metering – Instrument Project Ideas


22.  Simple Animatronics with Servos and Arduino using arduino Servos are surprisingly easy to use. Even more so than simple DC motors and steppers when you have a microcontroller. In this instructable we'll use a 'duino to drive five servos which will control a doll's limbs and neck. I bought the servos at HobbyPartz……. Listed under: Game – Entertainment Projects

23.  MIDI Bass Pedal Arduino Encoder using arduino MIDI BASS PEDAL ARDUINO UNIT The MIDI Bass Pedal circuit is capable of encoding any number of momentary action, push to make, single pole single throw (SPST), switches from 1 up to 30 to produce the equivalent MIDI note-on/note-off data commands. The encoded switches are……. Listed under: Sound – Audio Projects

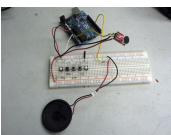
24. Arduino + Laptop Touchpad using arduino Yes, this is more or less your average touchpad that one can find from inside a laptop. This model, like majority of touchpads out there operates with PS/2 standard. This means that it can be directly plugged in to a PS/2 connector and with proper……. Listed under: Sensor – Transducer – Detector Project Ideas




25.  Electronic Circuit: photocell and LED The cmd_response sketch is very general with respect to the ANALOG IN and DIGITAL I/O of the Arduino boards. We can use it to read a wide variety of sensors from remote computer systems. First, we demonstrate how the Arduino cmd_response sketch works, we construct……. Listed under: LED Projects

26.  Sending Message Using Alpha-Numeric Keypad with GSM and Arduino GSM is quite a common Device which is used in major Projects and Real Time Operations. There are many applications which are using features of GSM Module like the feature sending Messages, making a Voice Call, Reading Messages, attempting Call etc. Many at times you……. Listed under: Development Board – Kits Project Ideas


27. Arduino Wind Instrument using arduino I wanted to create an Arduino instrument that was easy to play, but would sound better with practice. This "wind" instrument combines the Sparkfun Electret Microphone breakout board with the Tone library and 5 buttons on one analog pin. The musician must make a sound……. Listed under: Home Automation Project Ideas



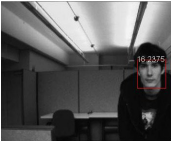
28.




Peggy2: High And Low First and foremost, big thanks to Damien for her time and effort on soldering 265 LEDs on peggy2 circuit board, which made my programming part possible to continue. Instead of soldering LEDs directly onto the Peggy2 board, we have to use Ethernet cables as “extensions” Listed under: LED Projects
29.




Rechargeable Battery Capacity Tester using arduino Do you have a pile of AA rechargeable batteries in your drawer? Some are old, some are new, but which sets would you bring with your camera on your next trip, and which ones are past their useful life? I like using rechargeable batteries, but..... Listed under: Battery Projects
30.




CMUcam3: Working Module But Not Working CMUcam3-Arduino System After over spending nearly 20 hours extra on fixing peggy2 board I mentioned in the previous post, there is only a few hours left for me to work on CMUcam3-Arduino system and its facial-recognition driven motor system. The basic programming architecture is shown below. When in..... Listed under: Video – Camera – Imaging Projects
31.




NESBot: Arduino Powered Robot beating Super Mario Bros for the NES using arduino An Arduino Duemilanove (other boards will probably work, but you will have to adjust the steps for your device) Working NES Console Super Mario Bros. (Note: this must be only the single game, not the two- or three-in-one cartridge) A controller you can cut the..... Listed under: Game – Entertainment Project Ideas
32.




Camera controller Intervawhat? An intervalometer is a camera controller that signals the camera to take a picture after some set interval. This is really useful for creating timelapse videos. For a long time, I used my TI-89 calculator to create timelapse videos with my Canon digital Rebel XTi. It..... Listed under: Video – Camera – Imaging Projects
33.



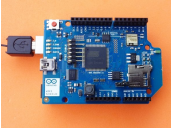
Q&D-Poor man's-Skinner-Sadist-Jeopardy game using arduino In this instructable you will learn how to make a Q&D-Poor man's-Skinner-Sadist-Jeopardy game . First off, the disclaimer: I'm not responsible of whatever you do. You have to know that with a great power comes...bla-bla-bla. Just be careful and remember that electricity reserves respect. While..... Listed under: Game – Entertainment Project Ideas
34.




Radio Telemetry for a Model Rocket using arduino Flying model rockets is fun, but there is always the question of how high did it go. Using a programmable micro-controller and some sensors, you can monitor the entire phase of flight and measure acceleration and altitude, among other things. With this project, I'll show you how..... Listed under: Radio Project Ideas
35.




Bubblebot: Gigantic Bubble Generator using arduino While being a bit lengthy and requiring experience with Arduino, this contraption is bound to grant you infinite glory among your friends, toddlers and grownups alike! Step 1: What You Need Here's a list of the materials and parts I used: The Frame * 5..... Listed under: Game – Entertainment Project Ideas
36.




New Arduino WiFi Shield (Testing) usign arduino The WiFi Shield was delivered by Amazon. The Arduino UNO Rev 3 was found at RadioShack... First you need to load the last Arduino IDE (Ver 1.0.2) it has the necessary library to use the WiFi shield. Tried the examples “Scan for available networks” and Listed under: Wifi - Wlan Projects
37.




Yet Another Daft Punk Coffee Table (5×5 LED Matrix) using 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: LED Projects
38.



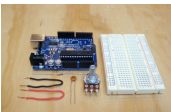
Review – Maxim MAX7219 LED Display Driver IC using arduino Today we are going to examine the Maxim MAX7219 LED display driver IC. The reason for doing so is to show you how something that used to be quite complex can be made very simple – and that is what all this technology is for,..... Listed under: LED Projects
39.



Arcade Button MIDI Controller using arduino Having a hardware interface to your favourite music / DJ / VJ software can really open up doors in your creativity. The most widespread form of hardware control to your PC for such applications is a MIDI based controller. A MIDI controller can send and..... Listed under: Sound – Audio Project Ideas
40.




Brushless DC (BLDC) motor with Arduino. Part 3 – The Stroboscope Project It has been all dry theory in the Brushless DC (BLDC) motor with Arduino series up to this point. This is where it gets to be more fun. If you've just arrived, please check out the previous two installments: Driving a three-phase brushless DC motor..... Listed under: Motor Projects
41.



Arduino Basics: Rctime using arduino Rctime is a function for the Arduino that finds its roots in Basic-based micro controller programming languages (such as the Basic Stamp). This function basically counts the amount of time it takes to charge a capacitor through a resistor and returns a digital value. In..... Listed under: Sensor – Transducer – Detector Project Ideas

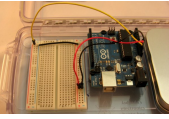
42.



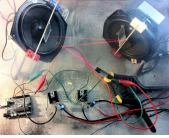
Arduino Mega Pololu Shield using arduino RepRap Arduino Mega Pololu Shield, or RAMPS for short. It is designed to fit the entire electronics needed for a RepRap in one small package for low cost. RAMPS interfaces an Arduino Mega with the powerful Arduino MEGA platform and has plenty room for expansion..... Listed under: Development Board – Kits Project Ideas
43.




The Wordclock Grew Up! using arduino Well, It had to happen. I first published my WordClock project in September 2009. It was a Microchip PIC based clock, using a PIC16F877A microprocessor. In the last year and a half, I have been constantly improving it, and have adapted it to the Arduino,..... Listed under: Clock – Timer Projects
44.




Light Meter Using I2C Level Converter, LCD, and TSL2561using arduino I recently needed to measure how different materials affect light transmission for a gardening project. I decided this was the perfect opportunity to try out the new logic level converter to run both a 5v LCD and a 3.3v light sensor on a single i2c..... Listed under: LCD Projects, Metering – Instrument Project Ideas
45.



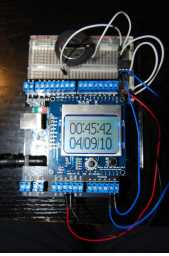
Arduino Laser Show with Full XY Control using arduino Update! See Step 32 to find out how to use this project with a green laser! Also - checkout the LaserTweet Instructable to make this project display data from Twitter: <http://www.instructables.com/id/LaserTweet-Twitter-Projecting-Laser-Show/> This project uses an Arduino and some cheap audio speakers to create a real..... Listed under: Game – Entertainment Project Ideas
46.



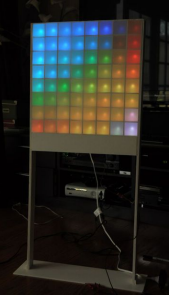
Arduino GPS Clock usign arduino I had a Holux M-1000B Bluetooth GPS module that was just gathering dust in my room. I had bought it from DealExtreme back in the days when I had GPS-less (but external GPS capable) Nokia E51. Upgrading to a Nokia E52 has since made this..... Listed under: Clock – Timer Project Ideas, GPS Based Project Ideas
47.




How to Build an Arduino Powered Chess Playing Robot using arduino Judging by the sheer number of chess related Instructables, I think it's safe to say the community enjoys the game. It can be difficult, however, to find someone who plays on the same level you do. To solve this dilemma, and to increase my playing..... Listed under: Robotics – Automation Project Ideas
48.




DS1307 I²C Clock using arduino I wanted to learn how to interface with I²C devices using my Arduino, so I bought a DS1307 clock and crystal kit from Earthshine Electronics. I've no association to them, but I'd recommend having a look at their shop. Their prices are very reasonable, unlike..... Listed under: Clock – Timer Project Ideas
49.

Lampduino – an 8×8 RGB Floor Lamp using arduino Lampduino is a computer-controlled free-standing floor lamp, comprised of an 8x8 RGB LED matrix. The lamp stands 45" high and 18" wide. Light emanates from both sides. It has various display modes, as well as an included editor for creating animations. The lamp is controlled..... Listed under: Home Automation Project Ideas
- 
50.



Theremin w/Zapper,laser,Arduino using arduino I created this Theremin like device after seeing this article in Make magazine: <http://m-cdn.dashdigital.com/make/vol15/?pg=69#pg67> While this looked pretty straight forward it turned out to be a bit much for me at the time. But after much effort, I got it to work pretty good. I..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas
51.




Room roving robot – phase 1 using arduino My second holiday project was a bit more fun than just blinking lights. I decided to tear apart a \$10 RC jeep and control it with the Arduino. For this project, I added a motor shield on top of the Arduino that I purchased at..... Listed under: Robotics – Automation Project Ideas
52.



Make a simple platform and give mobility to your computer using arduino A computer is a very handy thing to use in your robots. If you start listing all the features that can be used for robotic purposes you'll find that it is cheaper to buy a netbook than buying LCD, wifi and bluetooth modules, cameras, speech synthesizer..... Listed under: RTOS – OS Projects
53.

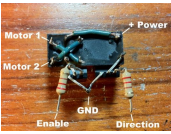



Hacking Hex Bug Spider using arduino For the Smart Cities exhibition in Leeds in a couple of weeks, we've been building a physical representation of an agent based simulation. Hex Bug Spiders are relatively cheap hexapod robots that are controlled via an infra-red transmitter which has an A or B code so..... Listed under: Game – Entertainment Project Ideas
54.



(w/ Video) Basic Arduino Robot, Light Seeker! using arduino Many times I have Googled for "Arduino Robot" in hopes of finding a robot to build. I end up finding many versions of a obstacle avoiding robot that uses either an infrared or a sonar range finder sensor mounted on a servo to detect objects..... Listed under: Robotics – Automation Project Ideas
55.

Easy, Reversible Motor Control for Arduino (or any Microcontroller) using arduino This project uses just three main components to provide forward and reverse control for a single motor. You can easily interface it to an Arduino or any other microcontroller. It's so simple - you can wire it up "free-form" without a circuit board in about..... Listed under: CNC Machines Project Ideas



56.  How To Use a Nokia Color LCD! Nokia manufactures a wide variety of cell phones and many of their cheaper phones contain simple LCD's which may be used in microcontroller projects. There is one particular LCD model that is used in a wide variety of their phones and is often referred to..... Listed under: Phone Project Ideas



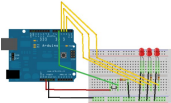
57. Tutorial – Arduino and the MAX7219 LED Display Driver IC using arduino Use the Maxim MAX7219 LED display driver with Arduino in Chapter 56 of our Arduino Tutorials. The first chapter is here, the complete series is detailed here. Update – 4/1/15 – This article is pending a re-write, please refrain from comments and questions until the new version is published. Introduction..... Listed under: LED Projects



58. Ollie- a DIY autonomous robotic blimp using arduino Ollie is an open source blimp-based autonomous and ambient robot that dwells in human habitats. Ollie is observant, often flying in a manner suggesting curiosity for the world around him. Ollie reacts to voices by excitedly flapping his wings, communicating his friendliness and eagerness to..... Listed under: Robotics – Automation Project Ideas



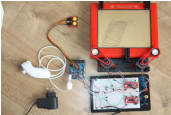
59. PS1 Controller Joysticks with Arduino Idea: To take one of my old Playstation 1 controllers and extract the dual thumbstick setup so that it can be easily used in a microcontroller project (in my case: with the Arduino) without extra libraries or drivers that you would need if you want..... Listed under: Game – Entertainment Project Ideas



60. Arduino Binary Die using arduino After buying a Nanode (an Arduino-compatible board with ethernet built-in) last weekend, we've been trying to work it out by making a couple of simple examples, the 'Binary Dice' is the first one with input and outputs. A note, this code example is based on..... Listed under: LED Projects, Other Project Ideas



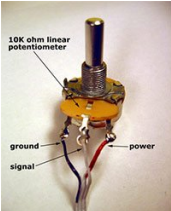
61. Shaun The Noisy Sheep using arduino Make A "doorbell" using an Arduino Uno, a Wave shield from Adafruit, a small speaker, a plug, a Sharp distance sensor and a Shaun the Sheep. Our Shaun is used in an open doorway to alert store staff when a customer has entered. Step 1:..... Listed under: Game – Entertainment Project Ideas



62. Telecran (Etch a Sketch) + Arduino = Telecranduino ! using arduino I came across a bunch of stepper motors and I have since been looking for a project to do with the kids. An old Telecran (French for Etch-a-Sketch) later, we are in business ! What I used for this project: - an arduino Uno -..... Listed under: CNC Machines Project Ideas



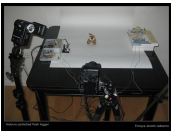
63. Boozeduino using arduino Now with more LED. Arduino mega powered breathalyser using the MQ-3 sensor. A relative gauge for judging how intoxicated you are. NOT TO BE USED AS MEANS OF BREATHALYZING NEVER DRINK AND DRIVE. This is more of a device to encourage one to drink..... Listed under: LED Projects



64. Analog Sensors using arduino Analog sensors produce an analog (continuous) voltage that typically varies from 0 to 5 volts. They have three wires – ground, power, and signal (typically red, black, and white, respectively). Examples shown below include: Potentiometers Proximity Accelerometers Ribbon Bend Pressure Light Temperature Sound Multi-touch Touch..... Listed under: Sensor – Transducer – Detector Projects



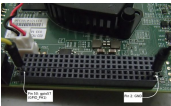
65. LoL Shield Audio Spectrum VU Meter using arduino This is an audio spectrum VU meter using the LoL Shield for Arduino . The LoL Shield is a 14 x 9 LED matrix which fits onto the Arduino as a shield and is controlled through an efficient method known as Charlieplexing . It was..... Listed under: Metering – Instrument Project Ideas



66. Flash trigger using arduino his project is mainly based in this one from Glaciar Wanderer. I just liked his idea and worked it on my own. (I think this guy and me would be friends, as the projects he has in his photography category are things I've been wanting..... Listed under: Video – Camera – Imaging Projects



67. TROBOT: A Miniature Articulated Robot using arduino The TROBOT is a miniature six-axis articulated robot, modeled after large industrial & assembly line robots. The prototype versions were developed to be interfaced with ABB's Robot Studio software. Robot Studio was designed to program, simulate, and debug real industrial robots in an offline virtual environment..... Listed under: Robotics – Automation Project Ideas

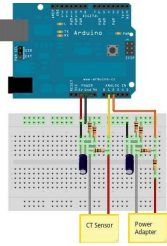



68. Jetson/Tutorials/GPIO using arduino Quickly testing a GPIO pin To set pin GPIO_PH1 as an output: sudo su (Enter your user password. Defaults to "ubuntu") # See which pins are currently configured as GPIO, and what their state is. cat /sys/kernel/debug/gpio # Validate that the entry for the Tegra..... Listed under: Other Project Ideas



69. Arduino + LEDs + fan = POV “APPLAUSE” sign I saw these POV(Persistence of Vision) devices on other Instructables and thought I would like to make one and I have always wanted my own "APPLAUSE" sign. Next improvement will be to make it go on whenever I enter the room. 😊 Maybe have it..... Listed under: Robotics – Automation Project Ideas

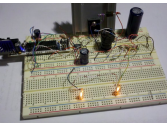
70. How to build an Arduino energy monitor – measuring mains voltage and current This guide details how to build a simple electricity energy monitor on that can be used to measure how much electrical energy you use in your home. It measures voltage with an AC to AC power adapter and current with a clip on CT sensor,..... Listed under: How To – DIY – Project Ideas



71.  Magic Music Table No menus, no buttons using arduino NOTE: This instructable is now slightly old and a better machine has been made with lower cost parts and much better software that automatically allows you to "pair" new cards with new tracks as they are added to the iPod playlist. iPod playback track selection..... Listed under: Sound – Audio Project Ideas



72. Using the tymkrs “Turn Me” with an Arduino Here is a quick write up on how to use the tymkrs “Turn Me” rotary encoder. This supports the “push down” feature of the tymkrs kit. Fritzing Rotary Encoder Part: Rotary Encoder with Knob bth.fzpz Fritzing Project: RotaryEncoderDemo.fzz Arduino (1.5) project: RotaryEncoderDemo.ino 1 2 3 4 5 6 7 8..... Listed under: Sound – Audio Projects



73. Boost Converter Intro with Arduino Let’s say that you’re trying to drive a few Nixie clock tubes, or you want to make a strobe light. A variable high voltage DC power supply from 50-200+ volts may be required. Transformers are terrific, but difficult to find the right one and a..... Listed under: PWM Projects

74. Arduino Circular Cylon! This is a quick arduino project that is great for beginners. Enjoy! There is a video on the last step! Step 1: What you Need To build this project you will need: 10 LEDs, any color will do. Some wire, I used a ribbon cable..... Listed under: LED Projects



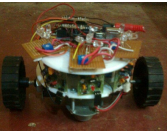
75. Reading pulses from meters with pulse outputs.. using arduino A note on what this document covers The main thing that's being added here to the wealth of information on the internet about pulse counting is how to count pulses from more than two pulse outputs sources (up to 12 sources) using a continuous sampling..... Listed under: Temperature Measurement Project Ideas



76. Car No. 06 Programmed Automatic Driving Car using arduino Hi! Kaeru no Ojisan is back with Car No.06. Car No.06 is a Programmed Automatic Driving Car with following procedure; - Simulate the Car Trajectory based on the Target Passing Points. - Drive automatically as simulated using Reflective Photosensor and Gyro Sensor . - Adjust..... Listed under: Car Projects



77. Interactive skull using arduino I bought this skull to decorate my computer desk. However, analyzing better, I could do something more interesting. I hope you enjoy. Step 1: Materials - A plastic skull - 8 screws; - Microcontroller (I used an Arduino board); - A Protoboard - A nunchuck..... Listed under: Game – Entertainment Project Ideas



78. Light and obstacle detecting bot using arduino Introduction For our ECSP project we have made a bot that senses and follows light and at the same time avoids obstacles. Rationale We wanted some hands on experience in using microcontrollers and electronics in general . Using a combination of light and distance sensors..... Listed under: Robotics – Automation Project Ideas



79. 8 LED Chaser with 74HC595 8 Bit Shift Register using arduino Have you wanted to make a sweet Cylon/Knight Rider (Larson) Scanner effect? But you don’t want to use up all of your Arduino IO pins? Well, you can make a nice 8 LED Scanner with a shift register IC. In this tutorial we’ll be using..... Listed under: LED Projects



80. arduino based distance sensor using arduino Here is a simple tutorial to build a Distance sensor which will show the distance from the distance sensor HC-SR04 (Or any other compatible devices) to the wall or obstacles in front of the sensor in CentiMeters. This project uses a HCR-SR04 distance sensor and..... Listed under: Temperature Measurement Project Ideas



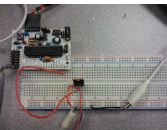
81. 3D LED Cube using arduino The 3D LED Cube is a really cool device that enables you to see in three dimensions, get some depth perception and has 512 LED's or 512 pixels. It is based on an arduino uno which is an Atmel AVR microcontroller on a development board..... Listed under: LED Projects



82. TiDiGino Contest using arduino The project TiDiGino We developed a new GSM remote control called TiDiGino. The name recalls the initials (TDGxx) of our previous GSM remote control and is also based on the Arduino project. All the details of this circuit can be found below, but no the sketch, because this is your assignment. The contestYou have to write..... Listed under: Wireless Projects

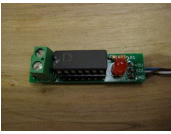


83. Control Ikea Dioder LED Strip with Arduino + 16X PWM LED Fader Board using arduino We're going to show how to wire up and control an Ikea DIODER LED strip with an arduino, using a 16X PWM LED Fader board as an intermediary. The 16X PWM board is basically a bunch of mosfets under PWM control (switches that turn on..... Listed under: LED Projects





84. Secret Knock Final using arduino Secret Knock Description - My final project is a door lock that listens for your personalized knock. The lock uses an arduino board and a piezo speaker and will not unlock the door unless the specific pattern is used as a knock. Arduino Program -..... Listed under: Home Automation Projects, Security – Safety Project Ideas


85. Thermocouple Sensor 1.0 using arduino Overview Jump to the Table of Contents This is a simple board for measuring temperature. It uses an AD595 chip to make thermocouple measurements easy. The AD595 amplifies the thermocouple signal and conditions it for easy use. Thermocouples are great due to their linearity over..... Listed under:

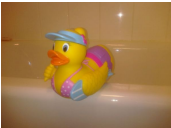



Temperature Measurement Project Ideas


86.  Display Live Txts on Costume at Party w/ Scrolling LED Belt Buckle using arduino This project shows how to send SMS text messages to a cheap scrolling LED display via an Android app and arduino with USB host shield. The project was originally inspired by a friend wanting to make a "sexting themed" costume, with a scrolling LED display..... Listed under: LED Projects


87.  Arduino: measuring the Earth's magnetic field with the magnetometer HMC5883L using arduino The HMC5883L magnetometer This component (a small chip) HMC5883L, produced by Honeywell, bases its operation on AMR (Anisotropic Magnetoresistive) technology and allows you to be able to measure both the direction and the magnitude of the earth's magnetic field. This magnetometer HMC5883L has within 3 magneto-resistive..... Listed under: Temperature Measurement Project Ideas

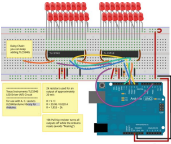
88.  Nunchuk-controlled Helicopter using arduino Welcome to my 3rd Instructable everyone ! Today we're going to build a 'device' to control a mini-sized helicopter with a Wii Nunchuk. The helicopter that we're using is a cheap (26\$) 3-channel (yaw, throttle, pitch) helicopter that I bought a 1 month back from..... Listed under: Game – Entertainment Project Ideas

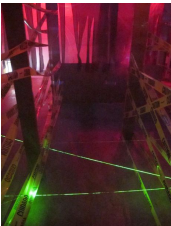
89.  Surfin' Bird (Arduino Style) using arduino I just hope every body's heard. The Bird is the Word! This is a simple device to play Surfin Bird really loudly when someone trips off the motion sensor. If you don't already own an Adafruit Wave Shield, I'd highly suggest purchasing one. It's become..... Listed under: Game – Entertainment Project Ideas

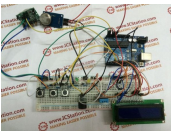
90.  Voice Recognition System using arduino Contents 1 Team Members 2 Mentor 3 Concept 4 Softwares Used 5 circuits 5.1 Pre Amp circuit 5.1.1 Circuit Diagram 5.1.2 Working 5.2 EEPROM circuit 5.3 Led Matrix display circuit 6 Algorithm for silence & noise removal 6.1 Pre-Emphasis 6.2 Silence and Noise Removal 6.2.1..... Listed under: Sound – Audio Projects


91.  Arduino powered Haunted Pumpkin using arduino This is a cute little project that takes a pumpkin, motion sensor, and some parts from Radio Shack. It was fun to create and build. This project was sponsored by the Radio Shack Great Create and I was able to make the whole thing with..... Listed under: Game – Entertainment Project Ideas


92.  A Makers Wedding – Photo booth usnig arduino This Instructable is about: building an automated photo booth. The total build cost was around \$150 as I re-used a lot of the components and materials I already had in my garage - in addition to what I could salvage from scrap yards. Why? -..... Listed under: Video – Camera – Imaging Projects

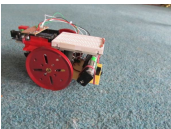
93.  Extending PWM output pins with a Texas Instruments TLC5940 LED driver using arduino Introduction Microcontrollers like the Arduino were designed to facilitate the use of electronics for designers and DIY enthusiasts. The interface provides a great starting points for a variety of electronic circuit designs. However, as the microcontroller is standardized, it is also limited in its use..... Listed under: PWM Projects

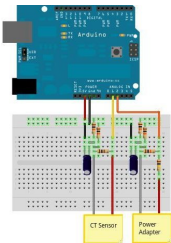
94.  LASER Maze – Halloween Haunted House using arduino The LASER Maze was our Processing and Arduino powered garage haunted house for 2011. A monitor sits outside of the garage, displaying "PRESS START." After the button is pressed, an intro video plays that instructs you to dodge the lasers and get your candy in..... Listed under: Sensor – Transducer – Detector Project Ideas

95.  Human Body Infrared Smoke Temperature Alarm System with Arduino Web site: <http://www.instructables.com/id/Human-Body-Infrared-Smoke-Temperature-Alarm-System/> Project Summary: The Human Body Infrared Smoke Temperature Alarm System works under the DC 5v voltage and uses the DH11 Temperature Module to detect the room temperature. When the module detects the temperature is higher than the maximum, the buzzer alarms and..... Listed under: Security – Safety Projects

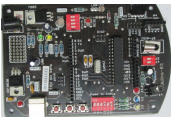
96.  Doorbell to Arduino 'Interface' Hi Everybody In my first Instructable I want to show you how to build an cheap and easy Doorbell to Arduino 'Interface' so you can let your Arduinoproject get triggered through it or simply use your Arduino as a bell. Almost endless possibilities 😊 Step..... Listed under: Home Automation Project Ideas

97.  1RE45 Non contact digital thermometer using arduino Contents 1 Introduction 2 Components Used 3 Description 4 Idea 5 Plan Of Action 6 1st week: 7 2nd week: 8 3rd week: 9 4th week 10 5th week 11 Expenses(In Rupees) 12 Videos, Photos 13 Code 14 Team Members 15 Resources: Introduction Temperature is..... Listed under: Temperature Measurement Projects

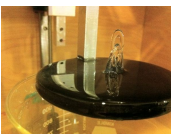
98.  SPROT, my SimPLeROBoT using arduino in this instructable i will show you how to make a very simple robot, using an arduino. this robot could be the base for a wide range of projects, i am planning on adding LDRs to mine so it can seek put light and also..... Listed under: Robotics – Automation Project Ideas

99.  How to build an Arduino energy monitor – measuring mains voltage and current arduino Including voltage measurement via AC-AC voltage adapter and current measurement via a CT sensor. This guide details how to build a simple electricity energy monitor on that can be used to measure how much electrical energy you use in your home. It measures voltage with..... Listed under: How To – DIY – Projects, Temperature Measurement Project Ideas

100. VOICE CONTROL CAR USING ARDUINO AND ANDROID Hello friends,Welcome to ElectroPLUS . This is a post to show how to make voice control car using arduino and android. COMPONENTS REQUIRED: 1.Arduino uno or Induino R3 board. Hello friends,Welcome to ElectroPLUS . This is a post to show how to make voice control..... Listed under: Car Projects, Sound – Audio Projects



101. Build a Laser 3D Printer – Stereolithography at Home using arduino Here is how to make a Stereolithography 3D Printer. It is still a bit of a work in progress but so far it is working pretty well. This is mainly an experiment which started as a Delta Robot Stereolithography Printer but ended as a more..... Listed under: CNC Machines Project Ideas



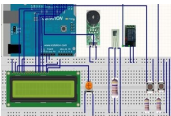
102. A new board for the 3Drag: there's more than Sanguinololu using arduino When we first released our 3D printer, we tried to use some parts that were already available and tested, in full respect of the open source philosophy. In particular, we decided to use the electronic card Sanguinololu. The “open” firmware we chose, the Marlin firmware..... Listed under: Blog, Motor Projects



103. Serial Communications with Arduino using arduino At this point you should have a robot that can think on its own, we need to be able to tap into its thought process. See what he sees. Make some of his decisions for him. in essence, we need to be able to guage..... Listed under: Internet – Ethernet – LAN Project Ideas



104. Temperature Detecting Heating Control System with Arduino Mega2560 Web site: http://www.icstation.com/product_info.php?products_id=3517 Project Summary: To help electronic DIY hobbyists, will show you how to use Temperature Detecting Heating Control System with Arduino Mega2560. Full Project: The temperature detecting heating control system works with DC5V voltage. This system uses DS18B20 temperature detection chip as the..... Listed under: Temperature Measurement Projects



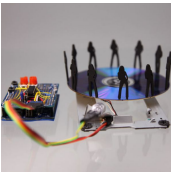
105. RoboBrrd using arduino RoboBrrd is an robot / animatronic character whose purpose morphs to mirror that of the virtual world. It is designed to be used as a tangible real world interface to virtual world learning applications. As a standalone robot, RoboBrrd is an entertaining platform that can..... Listed under: Game – Entertainment Project Ideas



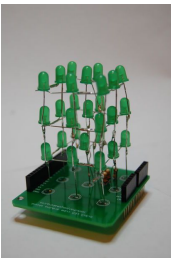
106. Camera and flash trigger module using arduino Here we go again, here is a picture of the camera and flash trigger module I made for my arduino photographic projects: It includes three 4N26 optocouplers. One (first one from the left side) to trigger a flash, as I did in the arduino controlled..... Listed under: Video – Camera – Imaging Projects



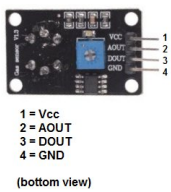
107. Stroboscope (zoetrope) using Arduino and a broken Xbox 360 DVD drive using arduino Stroboscope (AKA zoetrope) is a device that creates an illusion of a moving picture by showing a rapid successions of frames "stopped" for a fraction of a second due to the persistence-of-vision (POV) effect. It is a very old toy; zoetropes have been amusing crowds..... Listed under: Game – Entertainment Project Ideas



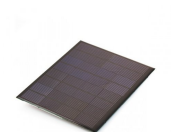
108. 3x3x3 LED cube shield using arduino What should be in your kit: 1 – PCB 27 – LED's 2 – 6 Pins for Arduino 2 – 8 Pins for Arduino 3 – Resistors 1 – Foam Guide 1 – Small Wire 1 – Medium Wire 1 – Large Wire You will..... Listed under: LED Projects



109. MQ-8 Hydrogen Gas Sensor Circuit Built with an Arduino In this project, we will go over how to build a hydrogen gas sensor circuit with an arduino. The hydrogen gas sensor we will use is the MQ-8 sensor. This is a sensor that is sensitive to effects of hydrogen gas. Hydrogen gas (H2), at..... Listed under: Sensor – Transducer – Detector Projects



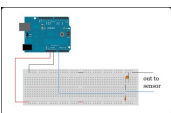
110. Simple Solar Power using arduino Simple Solar Power Light contains energy. When light hits a conductor (or semiconductor) some of the energy is translated into moving electrons, creating current. We can harness the current using solar cells (aka photovoltaic cells). When the sun shines on a solar cell, the current..... Listed under: Battery Projects



111. DIY Turntable using arduino You always wanted to be a Disc-Jockey. You know nothing about beats, delays or mixing but, damn, scratching is like the coolest thing ever invented! If this is also your case, follow this instructable to build a low-fi DJ set: the DIY Turntable as featured..... Listed under: Sound – Audio Project Ideas



112. Arduino-enabled Patron Interaction Counting using arduino Using the Arduino development board (<http://arduino.cc>) has become a very popular way to create hardware prototypes that bridge the divide between the physical world and the Internet. This article outlines how to use an Arduino, some off-the-shelf electronic parts, the Processing programming language, and Google..... Listed under: Internet – Ethernet – LAN Projects



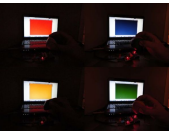
113. Make a Fire Breathing Animetronic Pony from FurReal Butterscotch or S'Mores usnig arduino For Maker Faire Detroit 2011, I displayed a hack I made to a FurReal Friend Butterscotch Pony. My fellow LVL1 Hackers and I had taken control of the motor control system of the toy and added a flame thrower to it. It seemed to go..... Listed under: Robotics – Automation Project Ideas




114. Real-Time Energy Monitor with Arduino and LabVIEW using arduino We present the candidature of Mr. Michele Mancini for the TiDiGino Contest. He proposes us a recent application with Arduino: Real-Time Energy Monitor This is a simple power meter to analize the current consuming in a house using the led indicator of a house energy..... Listed under: Temperature Measurement Project Ideas




115.



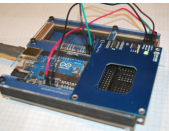
Using an RGB LED to Detect Colours using arduino I am going to show you how you can use an RGB LED and a Cds photocell as a colour sensor for a micro-controller. I will illustrate the method to retrieve a colour using Arduino, and I will show you a how you can verify the..... Listed under: LED Projects
116.




Reviving a dead arduino Well I managed to kill my arduino. It no longer accepted uploads with the classic out of sync error. After asking on the arduino forum I was told I would need a high voltage programmer to rectify, so I decided just to buy a new..... Listed under: Development Board – Kits Projects
117.




Cosmic ray detection from vertical and horizontal directions using three Geiger counters using arduino Research Group: Ryan Mountcastle, Minh Trang Nguyen, Nathan Ranno, and Ryan Ward Launch: Whitworth Fall 2012 This experiment was designed to examine cosmic ray activity in the Earth's atmosphere as altitude increases. The previous group's project utilized three Geiger counters stacked vertically to eliminate false..... Listed under: Other Projects
118.




Using the Parallax RFID Reader with an Arduino f you've ever wanted the ability to use some form of hardware-based authentication in your projects then this is the board to do it with. The Parallax RFID (Radio Frequency Identification) reader is super easy to configure. It only takes four wires! It uses serial..... Listed under: Projects, RFID - NFC projects
119.




Inflatable Teddy Bear/LED Costume/Power Glove using arduino This was a behemoth of a project involving an inflatable costume, a LED costume, and a glove that controlled the colors and patterns of the LEDs. I've been wanting to make an inflatable creature that would give birth to me for a while now (lots..... Listed under: Game – Entertainment Project Ideas
120.




Build a network clock (NCLK) with Microduino-RTC The resolvent of clock synchronization over internet. by PKJ, The web-based clock management system allows you to monitor clock status from wherever they are and centrally change settings. and this small device is built with PoE technology, thus IP clocks get their time, data and power..... Listed under: Clock – Timer Projects, Internet – Ethernet – LAN Projects
121.




TFT Display with microSD breakout board using arduino 128X160 pixels in 18 bit color with a microSD breakout board courtesy of Adafruit Industries You can purchase the 18-bit color TFT LCD display with microSD card breakout kit (part# ST7735R) from Adafruit Industries This tutorial from Adafruit is for a 1.8" diagonal TFT display..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, LCD Projects
122.




SPI Interfaces using Arduino Update (6/7/2012) – I've had to disable comments on this post, because it is being targeted by spam bots for some reason. Please use the contact page if you have a question about this topic. [box type="note" color=" #202020 " bg="#ffbb00 " font="verdana" fontsize="14" radius="20..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
123.



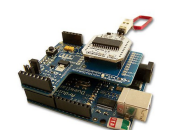
Awesome button, and then some. usnig arduino Many of you have probably seen the Awesome button done by Matt Richardson of Make Magazine. If not here is his video which was very well done and was the inspiration of my project. I liked the idea of having a button to press for..... Listed under: LED Projects
124.



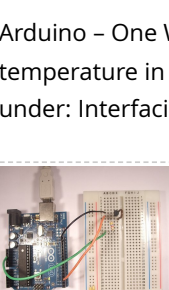
Secret Knock Detecting Door Lock using Arduino Protect your secret hideout from intruders with a lock that will only open when it hears the secret knock. This started out as a bit of a joke project, but turned out to be surprisingly accurate at judging knocks. If the precision is turned all..... Listed under: Home Automation Projects, Projects, Sensor – Transducer – Detector Projects
125.




The Soil Temperature Sensor using arduino You are building a soil temperature sensor. We need a waterproof thermometer that we can burry in the soil. The sensor is made up of a small circuit enclosed in a piece of heat shrink (to waterproof it). Supplies: (see the parts page) an LM335..... Listed under: Home Automation Projects, Temperature Measurement Projects
126.




Arduino RFID Card Reading Finally! It's been about 3 months since my last arduino tutorial – I've been keeping busy as usual. I've been working on this one for some time. I got the parts months ago, made an outline a few weeks ago, prototyped the circuits and wrote..... Listed under: Projects, RFID - NFC projects
127.



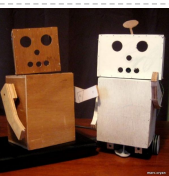
Arduino – One Wire Digital Temperature Sensor – DS18B20 The one wire Digital Temperature Sensor - DS18B20 from Maxim (formerly Dallas) is a great chip for measuring temperature in your projects. Luckily, there is a Dallas Temperature library for the arduino which makes using this sensor very easy. The most recent version of this..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas, Temperature Measurement Projects
128.



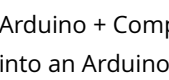
Traffic Light Stoplight LED Scarf – Safety Scarf of Righteousness using arduino Multipurpose like a traffic light, this one keeps you warm and blinks to make you more visible in the night. Stop traffic with this fun scarf worn around your neck. Repurpose a dollar-store bicycle safety flasher to embed in the scarf. Simulates the light changing..... Listed under: LED Projects
129.



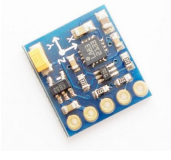
Soldering an SMT MOSFET Driver with a hotplate Soldering SMD components isn't as hard as you might think. In fact it's easy. If you follow this instructables you'll soon see just what great results you can obtain at home using just a hotplate. It's not just being able to make small circuit boards..... Listed under: Development Board – Kits Projects, How To – DIY – Projects
130.




Wendell the Robot using arduino What follows is my proposed design for a robot. A robot with a simple design, that is easy to share and change. A robot you can build with a hand saw or a laser cutter; from cardboard or karbonite. A robot you can share; and change..... Listed under: Robotics – Automation Project Ideas
131.




Arduino + Compass Module 3-Axis HMC5883L Background In this blogpost we're going to deal with the Compass Module 3-Axis HMC5883L from Parallax and how to integrate it into an Arduino. The Compass Module 3-Axis HMC5883L is designed for low-field magnetic sensing with a digital interface. This compact sensor fits into small..... Listed under:




CNC Machines Project Ideas, Robotics – Automation Project Ideas

- 132.

3D AIR mouse | Arduino + Processing 3D AIR mouse | Arduino + Processing I'm an Industrial design student, and last year as part of a course called "Technology as RAW materiel" I built this project as my final work. I work most of the time with SolidWorks, a CAD software for..... Listed under: Arduino Programmer Projects, Projects, Sensor – Transducer – Detector Projects

- 133.


Arduino Chiptunes usnig arduino I am not a big fan of programming. I may like it but, I try to keep it down to a 555 timer like in this ible. However, when it comes to synths, well, I just NEED programming. One day, while exploring Synthesizers, I came..... Listed under: Sound – Audio Project Ideas

- 134.

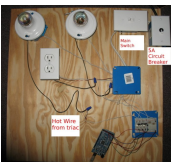
LilyPad Arduino – the wearable technology using arduino Introduzione LilyPad Arduino is one of the many Arduino microcontrollers, but unlike the more well-known Arduino UNO, MEGA and Yun, this little board has very specific characteristics that make it unique. In fact, the LilyPad can be sewn on fabric. In fact, with only 19..... Listed under: Medical – Health based Project Ideas

- 135.


Twitter Poem Box This is a project that was inspired by Marc de Vinck's Kitty Twitty Cat Toy <http://makezine.com/22/kittytwitty/> . It incorporates an RFID reader and the BlinkM, a programable RGB LED. The lamp tweets random colored poems when it detects one of the three RFID cards which..... Listed under: Internet – Ethernet – LAN Projects

- 136.

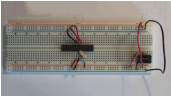
Smart Relay Power Box(SiriProxy Compatible) If you have ever wanted to control high voltages/currents with an Arduino, setup up a complicated light timer, or even have Siri turn on a Lamp. Then this is an instructable for you! In this instructable in a few simple steps we will build a self-powered..... Listed under: Development Board – Kits Project Ideas

- 137.


BennyP's Light Contraption using arduino Introduction Disclaimer: I am not an expert in any of this. There is lots of information online regarding such designs. Although this setup worked for me, do not trust any of my calculations. Please work all this out for yourself and consult many other sources,..... Listed under: Home Automation Project Ideas, PWM Projects

- 138.


ST7565 LCDs: Graphical LCDs What it is... Type: Graphical (128x64) monochrome LCD with LED backlight Interface: Serial / SPI This is a good time to read the datasheet Available from: Adafruit, of course! Introduction: This mini-tutorial will go through the process of setting up a ST7565 LCD. These LCDs..... Listed under: LCD Projects

- 139.

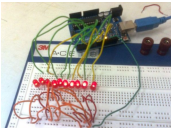
Standalone Arduino chip on breadboard If you're like me, after I got my Arduino and performed a final programming on my first chip, I wanted to pull it off my Arduino Duemilanove and put it on my own circuit. This would also free up my Arduino for future projects. The problem..... Listed under: Development Board – Kits Projects, Projects

- 140.


USB Biofeedback Game Controller using arduino Building upon our last tutorial, which taught you how to build a muscle sensor, we've decided to give you a project that really showcases the power of our muscle (EMG) sensors. Advancer Technologies' "USB Biofeedback Game Controller" harnesses the power of electromyography to allow players to..... Listed under: Game – Entertainment Project Ideas

- 141.

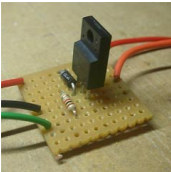
CT sensors – Interfacing with an Arduino To connect up a CT sensor to an Arduino, the output signal from the CT sensor needs to be conditioned so that it meets the input requirements of the Arduino analog inputs: a positive voltage between 0V and the ADC reference voltage. Note: This page give the..... Listed under: Sensor – Transducer – Detector Project Ideas

- 142.


Making 1×10 LED Array with Random Patterns This will teach you how to make a very simple 1x10 array of LEDs on a breadboard controlled by an Arduino Uno to make the LEDs blink and flash in 10 different patterns. Link to notebook for project: <https://docs.google.com/document/d/1YP4p11SbDnOnM7mDn-sRjJLnXGPj6o0DkrFZnznVMvk/edit> Link to YouTube video of LEDs..... Listed under: LED Projects

- 143.

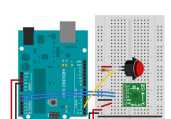
The party starter using arduino A desktop motorized musical disco ball. Great for holiday parties, impromptu dance-offs, and Tuesday afternoons. Bling, Music, Arduino, and glitter covered styrofoam; this Instructable has got what you need to get your boogie on. Fires need help go get going, so do parties. I recently..... Listed under: Game – Entertainment Project Ideas

- 144.

Controllers and Sensors using arduino John has been working to recover components from old power supplies and available trash electronics, in order to build controllers to power stepper motors and other mechanisms for the FabLab. Intro The Arduino microcontroller board is able to supply a current of 40mA from its..... Listed under: Sensor – Transducer – Detector Project Ideas


- 145.

Arduino lets you play Atari 2600 and ZX Spectrum using a NES controller This instructable shows you how to use NES controller in Atari 2600 or ZX Spectrum (with Kempston Interface) with the aid of an Arduino. Step 1: Background talk I have recently acquired a couple of Atari 2600s and a bunch of joysticks. Both consoles were working..... Listed under: Game – Entertainment Projects, Projects


- 146.

Serial Duplex using an Arduino Overview In the first serial lab, you sent data from one sensor to a personal computer. In this lab, you'll send data from multiple sensors to a program on a personal computer. You'll use the data from the sensors to create a pointing-and-selecting device (i.e..... Listed under: Sensor – Transducer – Detector Project Ideas


147.




Yet Another Arduino 110v Power Controller This Instructable shows you how to build a four-gang outlet box in which each outlet is controlled via an Arduino (or any other TTL level signals). It differs from the other relay boxes in that it uses no circuit boards and has very few parts (one..... Listed under: Projects, Solar energy projects
148.



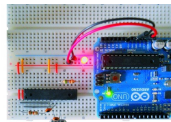
Sensing color with the ADJD-S371 + Arduino About 2 years ago I picked up a ADJD-S371 color sensor from Sparkfun to work with my arduino. I spent a few days getting it to work, but finally got it going pretty well. I still get a few emails here and there asking for..... Listed under: How To – DIY – Project Ideas, Sensor – Transducer – Detector Project Ideas
149.




Displaying Twitter feed without a PC! using Arduino There are a lot of Twitter feed readers around the Web that use Arduino AND a PC to display twits on LCD displays or whatsoever. Then, I decide it was the time to design a solution for performing the same job WITHOUT A PC, and..... Listed under: Internet – Ethernet – LAN Projects, LCD Projects
150.




Geiger counter triggered LED decorations using arduino Bored of blinky lights that blink in response to time? Make them blink with space instead! This instructable shows a quick method for connecting LED tree decorations to a Geiger counter via arduino, so that the lights blink between different strings each time radiation is..... Listed under: LED Projects
151.




Arduino ISP (In System Programming) and stand-alone circuits We use an Arduino to program other ATmega without bootloader . This technique allows you to use all flash memory for code and make boards using new ATmega, cheaper than those with bootloader. The qualities that have made the success of Arduino are undoubtedly the open-source..... Listed under: Arduino Programmer Projects
152.



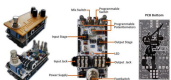
Introducing PETBOT: A node.js Telepresence Robot using arduino It's a telepresence robot I built for our office, consisting of an iPad mounted on a lightweight chassis powered by an RC car. To operate it, you open up a video chat session with the iPad, then control the robot from your browser using the..... Listed under: Robotics – Automation Project Ideas
153.




Digispark RGB LED Fader Forward: This instructable was roiginally posted at <http://www.instructables.com/id/How-to-make-LED-Fader-using-Digispark/> My students and I developed it into this exemplar, for wich they received a very good mark. Viewing the following video may leave you with a sense of too much too fast. Please continue to read this..... Listed under: LED Projects
154.




Rocket Brand Studios Medium Tank using arduino This is the assembly instructions for the Medium Tank from Rocket Brand Studios. This is a great little robot kit, and can be purchased as a complete kit or as a rolling chassis, ready for the micro controller of your choice --Arudino Uno, Duemilanove, Picaxe..... Listed under: Robotics – Automation Project Ideas
155.




pedalSHIELD Arduino Guitar Pedal Web site: <http://www.electrosmash.com/pedalshield> Project Summary: pedalSHIELD is a programmable Arduino Open Source & Open Hardware guitar pedal made for guitarists, hackers and programmers. Users can program and share their own effects in C/C++. Full Project: pedalSHIELD is a programmable Arduino guitar pedal. It is Open..... Listed under: Sound – Audio Projects
156.




World's Smallest Stepper Motor with Arduino and EasyDriver This little wonder of electromechanical engineering came from inside a laser diode sled of an HP CT10L Bluray drive I've opened some time ago. The device on the picture consists of several parts, all easily fitting on a dime coin: a bipolar stepper motor with..... Listed under: Motor Projects
157.



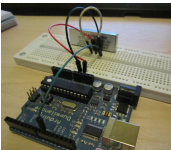
Telemetry with solar cell using an Arduino *NOTE* THIS PROJECT IS DONE BY A GROUP OF STUDENTS FROM SINGAPORE POLYTECHNIC. Telemetry - Solar Cells Our project is using Arduino with the ZigBee to transmit and receive data from the solar cell. Data will be shown in the LCD and the software called..... Listed under: Battery Projects, Metering – Instrument Projects, Projects, Solar energy projects
158.




LED Gingerbread house using arduino Last year my Wife and I started a new tradition of building a Gingerbread house for Christmas. We had a few nicely decorated houses last year, and I wanted to do a little more this year. Adding LEDs makes everything better, so that is exactly..... Listed under: Home Automation Project Ideas
159.



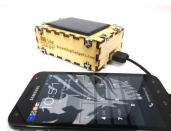
An I²C Bus powered Arduino IO Expander Board controlled via Bluetooth and Android Today we'll expand Arduino's digital resources thanks to an I2C bus equipped shield and we'll allow the management of the board via a bluetooth connection RN-42 through an Android systems. All Arduino boards feature a number of digital I/Os. For the simplest projects, such resources..... Listed under: How To – DIY – Projects, Interfacing(USB – RS232 – I2c -ISP) Project Ideas
160.



Linking an Arduino to a Radiometrix NTX2B Transmitter Part 1 - Test Circuit and Test Code Introduction Getting your Arduino to transmit via the radio initially may seem daunting but its actually pretty simple. Please freely substitute the word “Arduino” for any micro-controller you wish to use. The example below works for 5V..... Listed under: Wireless Projects
161.




Extreme Color Organ using arduino Hi All! I have wanted to do something fun with my bedroom for a while now and the Make it Glow challenge provided me with a reason to do so. A few months ago I acquired a strand of GE-35 Color Effects lights and owing..... Listed under: Home Automation Project Ideas
162.




Solar USB Charger 2.0 Everyone has USB gadgets. It's pretty much a fact of life. Another fact of life is that these USB gadgets also continually run out of power when you most need them. No need to fear, solar power is here! Ditch those crazy wall adaptors, throw..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Solar energy projects
163.

0 to 99 Light display this circuit will take a light reading then display a number between zero and 99 please leave constructive comments Step 1: Parts you will need [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14 " radius="20 " border="#985D12" float="right" head="Major Components in Project" headbg="#FFEB70" headcolor="#985D00"] to make the 0-99..... Listed under: LED Projects




164.  PS/2/You: Go-anywhere, LED digital message board using Arduino microcontroller Combine three inexpensive LED matrix display panels, an Ardweeny microcontroller and a standard PS/2 computer keyboard into your own go-anywhere, instantly updatable 768-pixel digital message board. The code can hold up to six lines of text with a maximum of 100 characters each. Pressing a..... Listed under: LED Projects

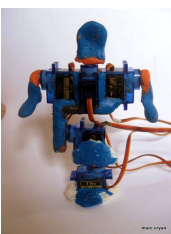



165. Solar Tracker Relay circuit using Arduino I've reached the point where I need to think how I'm going to control the motor & linear actuator for my solar tracker. Things to consider - Must be able to go forwards and backwards - so that makes 4 channels, 2 for each motor..... Listed under: How To – DIY – Projects
166.  BARC Jeep – An XBOX Controlled Power Wheels Make a power wheels jeep that is controlled by an XBOX controller. This particular build is using Power Wheels® Jeep® Hurricane with Monster Traction™ but should be usable across many different types of power wheels with small adjustments. I wanted to do this project so I could..... Listed under: Car Projects, Game – Entertainment Projects

167. Nick Smith – Magical Music Box using arduino This is my Magical Music Box which converts music into a light show. When i was daydreaming what to make for my final project, i wanted something that would make a light show for any song simply by hearing it. Materials used: 1x arduino 8x..... Listed under: Game – Entertainment Projects



168.  Interactive LED Lab Coat using Arduino This is an instructable for the Interactive LED Lab Coats, showcased at Autodesk University. Check out the videos below! The first is a demo of the colors actuated by the buttons. The second is a demo of the breathalyzer! (this will be explained later) Tools Listed under: Home Automation Projects, LED Projects, Projects




169. Sugru + Servos = Robot using arduino Build a robot using a bag of Sugru and 5 mini-servo motors. Motivation:Build a robot using very few parts and very cheap servo motors. Steps: Parts list Build Wire Program Play! Outcomes of this project: Robot with 5 joints Arduino Code which is expandable Control..... Listed under: Robotics – Automation Project Ideas
170.  Sleep Tracking using an Arduino Background and motivation This project was motivated by two things: my almost complete inability to get out of bed in the morning, and my fondness for recording data from routine activities and making graphs with that data. My main problem with waking up in the..... Listed under: Home Automation Projects, Metering – Instrument Projects, Projects




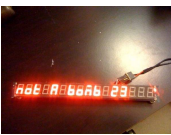
171. [Said Alyami] – [Funny Cartoon Sounds with a twist] arduino Introduction My project is about providing multiple saved cartoon sounds then do funny effect on them through controlling the speed of play either faster or slower. It contains 4 sound files: Crazy Frog, Bird is the Word “by Family Guy”, oompa loompa “by Willy..... Listed under: Game – Entertainment Project Ideas



172. How to convert (almost) any 27 or 49 MHz RC Car into a Robotic car using arduino controller I am teaching a robotics course in my kids high school (Rambam Mesivta in Lawrence, NY). I was looking for a cost effective way to teach them about the principles of robotics without spending an arm and a leg, and getting them excited about the..... Listed under: Robotics – Automation Project Ideas
173.  [OoB] Shooting paintball maker with relay, Arduino and .NET WinForms [OoB] Shooting paintball maker with relay, Arduino and .NET WinForms My first Arduino based project was Sonar with C#, JS and HTML5. Now I continue the "Out of Boredom" series with a setup that allows firing a paintball marker (gun) with a command sent from..... Listed under: Game – Entertainment Project Ideas

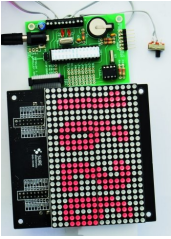



174. Arduino Controlled RGB LED Dot Matrix Board This project is a relatively straightforward and simple DIY music board. The Dot Matrix Board will allow any aged person to create their own music and beats. All you need to have is an understanding of Arduino and circuitry. Step 1: Gather Parts Needed [box..... Listed under: LED Projects
175.  5x5 rgb lpd6803-led matrix arduino controlled what: a 5*5 rgb led matrix, made with arduino and lpd6803 based leds from adafruit. with an pir sensor, it goes on if it detects movements and a ir distace sensor, 1 animation shows the distance you have from the sensor :). why: because its..... Listed under: LED Projects, Projects





176. Self-contained 16-Digit display – Arduino & Attiny85 Ever wanted a 7-segment display for around the house? Here's your chance to make one! It can even be interactive based on the programming.Parts: (\$7.60) 16 Digit TM1640 based display Dealextreme.com SKU: 104311 <http://www.dealextreme.com/p/jy-mcu-16x-digital-tube-yellow-led-module-104311> (\$2.50) Atmel ATTiny85 Digikey PN: ATTINY85-20PU-ND(\$1.73) Extra long female header pins..... Listed under: Home Automation Project Ideas

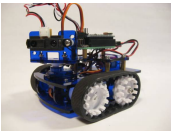
177.


An Open Source, hackable Digital Clock Andrew O'Malley, an amazingly creative maker, created this fanstastic Open Source Arduino-based clock that can display the time in many different ways: if not enough, one can also add his own personal animation. Compared to other clocks based on Arduino, this one has two distinctive..... Listed under: Clock – Timer Projects
178.


Tiny Wearable LED kit – 12 PWM LEDs from a reprogrammable ATtiny85 This instructable covers the assembly and use of a Tiny Wearable LED kit. The kit is useable immediately but is desigend to be hackable and can be reprogrammed to your liking using an ISP programmer or Arduino board and the Arduino IDE. There are not..... Listed under: LED Projects, Projects, PWM Projects
179.


Infinity Mirror – Tony Stark Arc-Reactor thing using arduino I'm creating a robot, but am finding that it's better if I break the build down into smaller projects. This is one of those projects, and it seems to have a look that could be used for other things as well. Step 1: Destroy a lady's..... Listed under: Battery Projects
180.


Ultraviolet nightlight, ingredients and setup This simple instructable will show you how to make a nightlight out of a translucent container, a bottle of tonic water, an Arduino, and ultraviolet LEDs. If you've ever played with a black light, you've noticed that some substances glow brightly under these lights. In..... Listed under: LED Projects
181.


Rocket Brand Studios Tiny Tank using arduino This is the assembly instructions for the Tiny Tank from Rocket Brand Studios. This is a great little robot kit, and can be purchased as a complete kit or as a rolling chassis, ready for the micro controller of your choice --Arudino Uno, Duemilanove and..... Listed under: Robotics – Automation Project Ideas
182.


LCD & Keypad Shield Quickstart Guide using arduino The 16x2 LCD And Keypad Shield is very simple to use because it's fully compatible with the Arduino "LiquidCrystal" library. You can initialise the LCD and display messages on it with just a few lines of code, but it also gives you the flexibility to..... Listed under: LCD Projects
183.


Arduino Esplora Light Calibrator This sketch shows you how to read and calibrate the Esplora's light sensor. Because light levels vary from one location to another, you need to calibrate the sensor for each location. To do this, you read the sensor for a few seconds, and save the..... Listed under: Development Board – Kits Project Ideas, LED Projects, Projects, Sensor – Transducer – Detector Projects
184.


MultiMovEDIA The title “MultiMovEDIA” does not mean much – if anything – at first sight. However, looking at more carefully, we can see it is a composition of two words: “Multimedia”, referring to the information content and the channels it uses (text, image, sound), and “Move”,..... Listed under: Sound – Audio Projects
185.

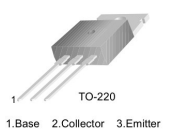
[Team PGH] – Prototype I Final Report: [Motion RC Car] using arduino Introduction: Give a brief description of what you are trying to solve. Include a high-level overview of what you made, why you made it, what parts you used, and what it does. In today’s growing technology, it seems every little electronic is becoming touch or motion sensed..... Listed under: Car Projects
186.


The IKEA Robot Lamp using arduino Welcome to the SM-1 project from ArduinoArts.com! (A.K.A as the Annoying IKEA Lamp) We are proud to introduce you to the SM-1 project (aka the Annoying IKEA lamp), as part of the Toy hacking contest from the SeeedStudio.com friends. The project consists in modifying an..... Listed under: Robotics – Automation Project Ideas
187.

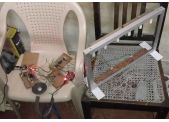
Single Digit Decimal counter using Arduino “Hello world”,I am not going to start this blog with typical “Hello world” program,since lot of resources already covered Arduino way of telling “hello world”,that is Blinking a LED. This project is absolutely for beginners who prefers to run than taking a walk,I am going..... Listed under: Clock – Timer Project Ideas
188.


Python Meets the Arduino Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. Python is our favorite programming language that allows you to integrate systems more effectively. Learn how to use Python to ... Listed under: Internet – Ethernet – LAN Projects, Projects
189.


Alarm Clock with Tetris to Prove You’re Awake using Arduino This is an Arduino powered alarm clock that after hitting snooze twice the alarm will not cancel until the user has cleared 4 lines in the game Tetris. You physically turn the clock sideways, so the screen is vertical, to play Tetris. It's never fun..... Listed under: Clock – Timer Projects, Home Automation Projects, Projects
190.


Using a transistor to control high current loads with an Arduino In this tutorial, you'll learn how to control a high-current DC load such as a DC motor or an incandescent light from a microcontroller. (:toc Table of Contents:) Connect a transistor to the microcontroller The transistor allows you to control a circuit that's carrying higher..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas
191.


Wireless Glove-Controlled Electric Mountainboard: An Analysis Hey guys! So I finally decided to make a page that has everything you could possibly know about my project. Even though I had previously answered everyone's questions, they were usually through a message. Because of that, I was usually asked the same questions and..... Listed under: Radio Project Ideas

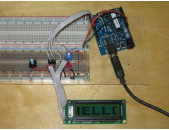
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192. IR Harp using arduino Contents 1 Team Members 2 Mentor 3 Introduction 4 Components Used 5 Idea 6 Arduino Uno Board (ATMega328P) 7 Approach to Project 8 Sound Synthesis 8.1 Delay() 8.2 Interrupts 8.3 The nature of the periodic waveform 8.4 The nature of the amplitude envelope 9 Working..... Listed under: Home Automation Project Ideas, Security – Safety Project Ideas
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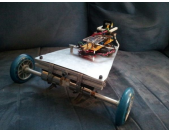
193. Arduino Mobile Processing How the mobile sketch works: The brain of the system is really on the arduino or the web page the phone requests. . . The phone just passes any data it sees back and forth. . . For the phone app to run, it needs..... Listed under: Phone Projects
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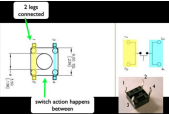
194. Bleeber – A physical layer between data and action. using arduino This project is a contribution to the first belgian Arduino Jam (2012). First of all we would like to thank the organisation and especially the main sponsor, Capgemini, which made all of this possible. Bleeber is a physical way of interacting with data trough oobleck. In..... Listed under: Development Board – Kits Project Ideas
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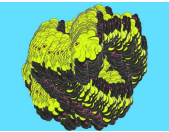
195. Lego Spybotics with Arduino A friend gave me his old Lego Spybotics robot, however, the programming environment that goes along with it is a bit too orientated to the younger user. So why not control it using an Arduino? Step 1: Open up! In order to get this robot..... Listed under: Home Automation Projects, Robotics – Automation Projects
- 


196. Arduino animatronics- make your awesome costumes more awesome Here's how to add lights, sound and action to your favorite Halloween project using the open source Arduino microcontroller. Arduino is easy to learn to use and it opens up a whole new world for costume builders and creature creators. If you want to learn..... Listed under: Game – Entertainment Projects, Projects
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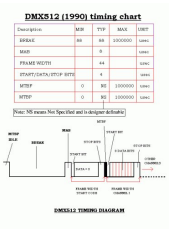
197. Custom Large Font For 16x2 LCDs using arduino A couple of years ago i was learning to use the Ardiuno and started playing around with an Hitachi HD44780 based 16x2 LCD screen. I soon learned that the screen has 8 customizable character slots. I had found a project where someone used those slots..... Listed under: LCD Projects
- 


198. General Instruments SP0256-AL2 English Phoneme Speech chip & an Arduino The GI SP0256 chip is an early 1980s bit of technology. It's a 5V (to 7V) NMOS chip which is compatible enough with the 5V TTL circuitry common in that era. 5V TTL disappeared for a while, then came back with the Atmel _28-based Arduino..... Listed under: Home Automation Project Ideas, Sound – Audio Project Ideas
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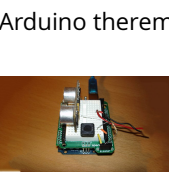
199. CARduino – Arduino-Powered, LabVIEW-Controlled Vehicle The CARduino is a remote-operated vehicle which is controlled by a controller attached to a computer running LabVIEW. The vehicle is powered by the Arduino, and can be expanded upon through the addition of sensors or other devices. Using LabVIEW, one can easily modify the..... Listed under: Car Projects
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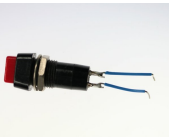
200. Momentary Switch as Digital Sensor using arduino many cases switches are just switches. They directly control the flow of electricity to an appliance, flashlight or mains-voltage lamp. An example of this is the switch on the wall in your living room. In many cases nowadays however, switches are digital sensors, meaning that..... Listed under: Sensor – Transducer – Detector Project Ideas
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201. Read analog data directly in Processing using arduino This instructable presents a fast an easy way to use data received from an analog sensor in Processing. You will learn to utilize the Arduino and prototype electronic boards to read meaningful data from the environment. The sensors can be affected by the light, the..... Listed under: Arduino Programmer Projects
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202. The Arduino Noise Machine Okay, okay, I know you all were wondering what I am up to now. I love synths and so, I built this. There are three things that can catch my attention: Synthesizers, Amplifiers and free. The other day (Actually it was just Thursday) I was..... Listed under: Projects, Sound – Audio Projects
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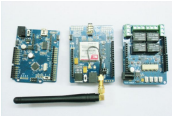
203. Arduino DMX shield for Christmas projects This shield allows to connect an Arduino with DMX equipment. It implements the RS485 interface to adapt the electrical levels needed for DMX connection. This shield has been designed with flexibility in mind and allows the user to choose between several Arduino pins for digital..... Listed under: Game – Entertainment Project Ideas
- 

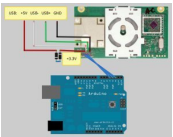
204. The Soil Moisture Sensor using arduino You are building a cheap soil moisture sensor so the brain can read the amount of moisture in the soil. The version we are building is very low tech, but it is also very cheap and easy to build. It consists of a block of..... Listed under: Home Automation Projects, Temperature Measurement Project Ideas
- 

205. Arduino theremin like musical instrument When I got my Arduino protoshield from sparkfun, I wanted to make something cool with it. And since I had seen a few Theremin projects before, and already thought about making some, I finally made one, using the Parallax PING sonar sensor. Here are some..... Listed under: Projects, Sensor – Transducer – Detector Projects
- 

206. Mouse Control With Pushbuttons using arduino Overview In this lab, you'll build an alternative computer mouse using an Arduino Leonardo using pushbuttons to move the mouse left, right, up and down. You'll see the difference between reading a digital input continually and reading for a change of state. (:toc Table of..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
207. G Meter using arduino I have a late 80's VW and the gauge cluster has 5 dummy LED locations underneath the other warning lights. Well I was tired of the m not doing anything, so I decided to do something about it. I came up with the idea to..... Listed under: Metering – Instrument Projects



208.  Remote control via GPRS or GSM SMS using Arduino Remote control, it has been a very profound things in the past. When I was a child, I always imagine that I have an equipment which can control all home appliances. Now, this has become a reality, and it is quite easy. Then I will..... Listed under: Ideas, Phone Project Ideas, Radio Project Ideas



209. Xbox 360 RF module + Arduino I was going to make a huge write-up on this, but I can't be bothered right now. I'll probably do something about it later. Until then, have an Arduino sketch. If you don't know what you're doing with it then chances are you don't have..... Listed under: Radio Project Ideas, Wireless Projects



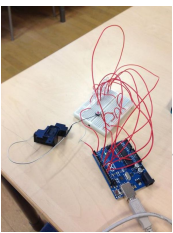
210. Robotic Talking Turret using Arduino Here I will show you an overview on how to make a robotic talking turret, loosely based off of the turrets from the popular game, Portal. This instructable should help anyone wanting to do an animatronics project. For more detailed pictures, go to: <http://razorconcepts.net/turret.html> This..... Listed under: Projects, Robotics – Automation Projects



211. New Textiles 2012 using arduino Twist Switch by ttseng Through the action of twisting, swatches of conductive fabric are folded in upon each other, completing a circuit that then turns on LEDs. On each face of stretched spandex are swatches of conductive fabric. Before choosing which swatches to designate as..... Listed under: LED Projects



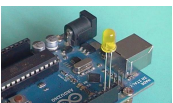
212. Demystifying 4 pin RGB LEDs (Radio Shack 276-0028) using arduino RGB LEDs are fairly useful in projects allowing for a wide range of color from a single unit. However they can be a pain in the neck to work with and they too often come with little or no documentation. I searched for some time..... Listed under: LED Projects



213. Connect the arduino and make the speaker play To make your Arduino to play a melody you need thes accessories. One 5 ohm speaker One Arduino uno board One Push button One 10 kohm resistor 8 leds And a lot of core wires Step 1: Connect the arduino and make the speaker play This..... Listed under: Sound – Audio Projects



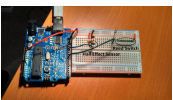
214. Team 1 Final Project Report & Video: Arduino Video Game System using arduino Introduction We built a video game system that can play either Snakes or Pong. We saw a project called “Arduino Pong” and wanted to recreate it with our own twist. Description Parts Needed: Arduino Uno Video Game Shield 2 LEDs 2 non-latching push buttons 2..... Listed under: Game – Entertainment Projects



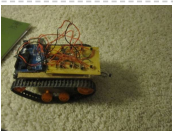
215. Arduino Morse Code Flaher using arduino I am a big fan of programming but I like to keep it down to 555 timer but when it comes to complex functions like flashing a LED in a certain pattern programming is necessary. One day while surfing through the I came across something known as Morse code. I decided..... Listed under: Arduino Programmer Projects



216. Arduino Robotic Arm In this instructurable I will show you how to make a simple robotic arm controlled by 4 servos , 2 analog joysticks, and an Arduino UNO. It is very similar to my "2 Servos + Thumbstick" instructurable. This tutorial is in particular to help out another..... Listed under: Robotics – Automation Projects



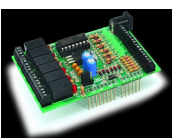
217. Rear Wheel Tachometer using arduino One of the goals of Movable Party is to provide an interactive experience for audiences/participants. Since power will be generated from a hub motor attached to the rear wheel of each bike (see this post), the speed of the rear wheel directly translates to the..... Listed under: CNC Machines Project Ideas, Temperature Measurement Projects



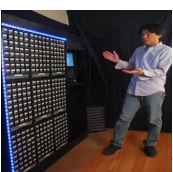
218. The Versatile Arduino Robot using arduino This is my first arduino robot, and I am quite happy with the outcome. What I came up with is a robot that with modifications can do just about anything in the realm of small arduino robots. The electronics are very simple. You only need..... Listed under: Robotics – Automation Project Ideas



219. Time-Lapse Camera Controller using Arduino Simple digital cameras can produce remarkably good quality photos and are now cheap enough that it doesn't hurt the wallet too much to buy one with the intention of modifying it for use in a project. You may even already have an old digital camera..... Listed under: Video – Camera – Imaging Projects



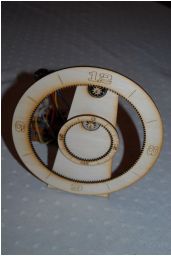
220. A useful and simple IO Shield for Arduino In order to “visually” highlight the behavior of Arduino programs you must connect a device to the I/O pins, which gives you tangible signals. Normally, if you want to check if a program changes a level of an output pin, answering a command or executing..... Listed under: Development Board – Kits Projects, How To – DIY – Projects

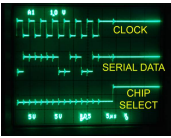


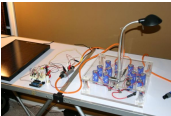
221. StorageBot – voice controlled robotic parts finder using arduino Introduction I created the StorageBot to help solve a problem experienced by most Makers. After many years of accumulating thousands of parts stored in storage bins, I began to go crazy looking for parts scattered between so many of these bins. The hardest parts to..... Listed under: Robotics – Automation Project Ideas

222. Automated LED stairs using arduino After seeing the lovely LED stairs at interactivefurniture.de, I decided to make my own, open-source version. Here is a video of them in action. I am not an expert videographer and cannot do the stairs full justice, but they came out exactly as I wanted..... Listed under: Home Automation Project Ideas

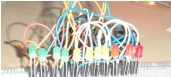


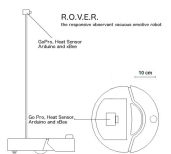
223.  Laser cut gear clock with ChronoDot using Arduino This summer, my hackerspace LVL1 (in Louisville, Ky) got an awesome laser cutter <http://fslaser.com/40w-deluxe-hobby-laser-engraver-and-cutter>. LVL1 is an awesome community of creative folks that like to build stuff. You can always check out what we are up to at <http://www.lv1.org>. If you like instructables and making..... Listed under: Clock – Timer Projects, Projects

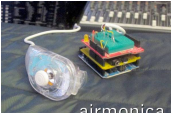


224. Using an Arduino to Control or Test an SPI electronic device There are many electronic devices that use the SPI bus, or Serial Peripheral Interface bus, for communications (e.g. various sensors, LCD displays, digital potentiometers, D/A and A/D converters, wireless transmitters and receivers, audio volume controls). The devices receive data serially from a microcontroller using a..... Listed under: Battery Projects
225.  Solar Powered LED/Ultracapacitor Arduino Regulated Light This instructable primarily shows how to control the charging voltage from a solar panel to an energy storage device (capacitors in this case). I showed how to construct the light previously <http://www.instructables.com/id/Human-Powered-Light-from-my-book-Doable-Renewab/> Step 1: This solar panel can produce up to 18 volts, but my..... Listed under: LED Projects, Projects




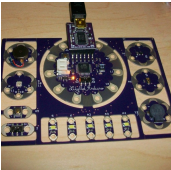
226. Arduino – based camera trigger unit I developed the camera trigger unit in order to synchronize various events and actions during free-flight experiments with hawkmoths in the wind tunnel described in a previous post. More specifically, the goal was to trigger multiple high-speed cameras and have LEDs that indicate the exact..... Listed under: Home Automation Project Ideas, Video – Camera – Imaging Projects
227.  Bouncing Multicolored LED line This is an arduino controlled project and uses leds, jumper wires, and a breadboard. This is one of my first attempts on programming arduino and I am pleased with the outcome. I'm ten years old and I just started programming 2 weeks ago. Step 1:..... Listed under: LED Projects





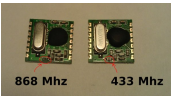
228. R.O.V.E.R.: Reactive Observant Vacuous Emotive Robot using arduino R.O.V.E.R. is an autonomous robot. He was built and designed as an interactive art installation specifically for the MAT EoYS 2013. He navigates the space with a heat array and bump sensors and interacts with attendees. When R.O.V.E.R. recognizes that a person is present he..... Listed under: Electronics News Updates, Robotics – Automation Project Ideas
229.  Airmonica – a free-air musical instrument improvise + harmonize + customize The airmonica is a easy-to-learn tweakable musical instrument that you can use to perform harmonic musical ditties by accompanying a tri-tone arpeggiator. There are endless opportunities to expand the airmonica in any way that will make it your your own..... Listed under: Sound – Audio Projects




230.  Programming Arduino in C++11 — ROM dumping In this tool-assisted education video I show how to program an Arduino Atmega2560 board in C++11 to dump a ROM chip, such as a 386sx BIOS or a Famicom cartridge ROM. I also make a ZMODEM sender and a LED blinker in this video. Sorry..... Listed under: Arduino Programmer Projects, Projects
231. Smallsword Choreography Shirt usnig arduino Stage combat is the art of theatrical violence. Rather than resembling fencing, stage combat is choreographed like dance for aesthetic and theatrical effect as well as for safety. Over years of choreographing and teaching others stage combat choreography, I realized that one of the most..... Listed under: Game – Entertainment Project Ideas



232.  Arduino Automatic Watering System For Plants Sprinkler Last month, Elecrow have left from the original office and moved to a new office. We will miss our original office where we worked so hard for more than two years, we will miss everything here, the desks, the windows, and those potted plants, that..... Listed under: Home Automation Projects
233.  The iButton garage-door opener using an Arduino I've made an iButton garagedoor opener and logger. On a Dutch (kind of) eBay (www.marktplaats.nl) I found some iButtons and readers very cheap. I had no idea what to do with them, but I bought them anyway. My garage opens with a push on a..... Listed under: Home Automation Projects, LCD Projects, Projects

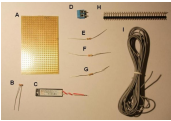


234. RFM12B – Part 1 – Hardware Overview To see how RFM12B wireless compares to other similar wireless options (e.g Xbee, XRF etc..) check out this well compiled comparison overview by Stuart Poulton: <http://blog.homelabs.org.uk/wireless-connectivity/>. Overview Made by Hope RF, re-branded by RFSolutions in the UK. Sometimes called 'Alpha RF' Low cost RF transceiver (from Rapid, Farnell,..... Listed under: Radio Project Ideas, Wireless Projects
235.  Arduino Throttle Body Synchronization Shield A common Motorcycle maintenance task is to synchronize the throttle bodies on the engine to smooth out any rough idle. This is done by monitoring the vacuum on each throttle body and using the idle screw to make the adjustment. While this sounds rather advanced,..... Listed under: Car Projects, Projects




236. Ardusumo: an Open Source Platform for Fighting Robots using Arduino The idea Ardusumo is a universal platform to build robots on wheels that can move around avoiding obstacles using infrared sensors and follow routes marked with dark lines on a white background. We have created Ardusumo to bring young students to the world of robotics:..... Listed under: Projects, Robotics – Automation Projects

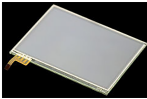
237.



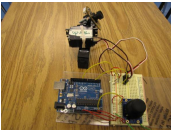
A laser barrier with Arduino In this post we will see how to make a laser barrier to integrate with an Arduino board. The applications of a light barrier (laser and infrared) are numerous, especially whenever we want that the passage of a person or of an object through a threshold..... Listed under: Home Automation Project Ideas, Security – Safety Project Ideas
238.



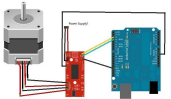
BUILD YOUR OWN LASER HARP using Arduino The laser harp is a musical instrument made of light. A fan of beams shoots up from the floor into the night sky. The performer can create music by placing their hands in the beams. Not only does “breaking” the beam produce notes, but sliding..... Listed under: Game – Entertainment Projects
239.



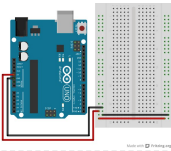
Touch Control Panel using Arduino Small 4-wire resistive touchscreens are now amazingly cheap: they are produced in such enormous quantities for mobile phones, PDAs, and particularly handheld games such as the Nintendo DS that they can be bought brand new for under US\$10. Larger touchscreens are also rapidly falling in..... Listed under: Sensor – Transducer – Detector Projects
240.



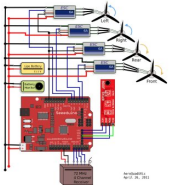
Arduino + 2 Servos + Thumbstick (joystick) using arduino In my other 2 Arduino tutorials I have help new users to play tones and making 2 servos move with a mouse. This time I will help you move the same 2 servos with a thumbstick. And again I have surf the internet to see If there..... Listed under: Motor Projects
241.




Stepper Motor drive from Arduino Stepper Motor drive from Arduino In this tutorial we will show you how to connect a bipolar stepper motor to an Arduino Uno board. The stepper motor we are using is the Sparkfun Stepper Motor but you can use any other 4-wire bipolar stepper motor..... Listed under: Motor Projects
242.




Analog In with an Arduino Overview In this lab, you'll learn how to connect a variable resistor to a microcontroller and read it as an analog input. You'll be able to read changing conditions from the physical world and convert them to changing variables in a program. (:toc Table of..... Listed under: How To – DIY – Project Ideas
243.




UVic Quadcopter using arduino Hardware Controller The Arduino platform is selected for this project, mainly due to its open software and hardware nature which has resulted in availability of extensive technical information. As a result there are many tutorials and example project available for this platform. A list of..... Listed under: Car Projects, Robotics – Automation Project Ideas
244.



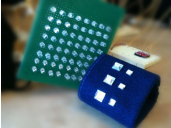
How to: Use Arduino to Generate Glitchy Audio VGA Visuals This post is a guide for people that are interested in my previous posts about dual monitor VGA hacking (see 1, 2 and 3). You will need: • A laptop or a computer with a VGA output • A breadboard (optional) and some wires or..... Listed under: Sound – Audio Projects, Video – Camera – Imaging Projects
245.




Hacked Pan and Tilt Camera Mount So my sister managed to break a pan and tilt camera mount and naturally thought daddy can fix this. After sitting on my dads workshop bench for a while he had a go at it and couldn't work out how to fix it so it..... Listed under: Video – Camera – Imaging Projects
246.




Adafruit Arduino Motor Shield Build Overview The Arduino Motor Shield is based on the L298 (datasheet), which is a dual full-bridge driver designed to drive inductive loads such as relays, solenoids, DC and stepping motors. It lets you drive two DC motors with your Arduino board, controlling the speed and..... Listed under: Motor Projects, Projects
247.



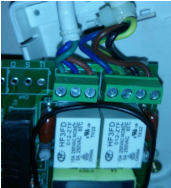
How to make fist pumping with LED animation using Arduino It's to make a fist pumping LED controller. What is it? Have you noticed yourself fist pumping to the music at a party or a club? That's exactly for that. You would wear a band with a accelerometer/gyro mounted. As you move your hand around..... Listed under: LED Projects, Projects
248.




Developed on Hackaday: First Version of the Hardware The Hackaday writers and readers are currently working hand-in-hand on an offline password keeper, the mooltipass (click to see the project description). Next in our Developed on Hackaday series, we present the first version of our schematics. There's already been a lot of discussions going on in..... Listed under: Security – Safety Projects
249.




DIY Teagueduino What is Teagueduino? Teagueduino is an open source electronic board and interface that allows you to realize creative ideas without soldering or knowing how to code, while teaching you the ropes of programming and embedded development (like arduino). Teagueduino is designed to help you discover..... Listed under: How To – DIY – Projects, LED Projects
250.



Automatic blind hooked up to existing projector screen using Arduino Hello my name is Chipsy, I'm French, reading instructables since at least 2 years, it is the first entry i make on this website. Why i made this project : I have a small homecinema system in my living room, with a projector and a..... Listed under: Home Automation Projects, Projects
251.



4x Multiplexed RTD Temperature sensor module Description This module can be used to measure temperature using RTD (resistive temperature detectors) temperature sensors. It produces an analog voltage that is proportional the temperature of the probe. The module contains a multiplexer to enable measurement of up to 4 temperature probes. Design RTD..... Listed under: Temperature Measurement Project Ideas
252.



MenZ-DECK About a year ago, we drunk beer in The-MenZ Lab. When Zagan said "I want PCDJ controller, So next project is make controller!". The project began at this time. ***MenZ-DECK featured by Maker Faire UK Blog.*** <http://www.makerfaireuk.com/maker-faire-tokyo/> (Continue with broken English) Components for make controller: Arduino..... Listed under: Development Board – Kits Projects
253.

Arduino Watch Build Instructions Update: New version out that works with Arduino 1.0 and higher! The Arduino Watch provides augmented sensing of temperature and range, 16-bit color drawing program, Breakout game, and also tells the time in your choice of digital, binary, or analog. Additional sensors, devices, and programs..... Listed under:



Clock – Timer Projects, Projects

254.



Girino – Fast Arduino Oscilloscope using Arduino power connector I am a Physicist and the nicest part of working in this field is that I get to build my own instruments. With this way of thinking, I decided to build a homebrew Arduino Oscilloscope. This instructable was written with the purpose of teaching a..... Listed under: Metering – Instrument Project Ideas

255.



GSM Remote Control – GSM Module This GSM Mobile is used for our Remote Control (for example Gate Control, Temperature Control....). We use the word ‘module’ because, unlike what we did in our remote control projects, this time around the mobile phone is not mounted on a printed board, but rather on..... Listed under: Phone Projects

256.



Team 12 – Prototype I Final Report: Home Automation Project using arduino Introduction The Home Automation Framework project is a web application that can remotely control the electronic devices in one’s home using a web interface on a smartphone, tablet or desktop computer. The project facilitates ease of access and remote control of electronic devices for those..... Listed under: Home Automation Project Ideas

257.



Interface a rotary phone dial to an Arduino An old rotary phone can be used for a number of purposes in your Arduino projects - use it as a novel input device, or use the Arduino to interface a rotary phone to your computer. This is a very basic guide describing how to..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Phone Projects, Projects

258. Arduino Controlled Can Crusher With LCD Readout I have always wanted to do an instructable, but I never had a somewhat original idea that hasn't been done a million times, or something that had no means of building. I have some friends who recycle aluminum for money and after seeing the large bags of an unknown..... Listed under: Home Automation Projects, LCD Projects, Projects

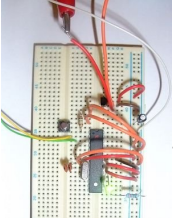


259.



Infinite Loop – Prototype I Final Report: Hazardous Weather Warning System using arduino Introduction: The LED warning system notifies local residents of emergency withing the area. The difference in the color of the LED will allow residents to differentiate between different warnings. Each shelter building has a person who is in charge of unlocking the door for residents..... Listed under: Security – Safety Project Ideas

260.



Arduino ATmega328 – Hardcore Ok, you've completed your prototype using an Arduino Uno board, perhaps using a shield or a breadboard for any additional components, but now you want to finalise your design and construct it using your own pcb. Well, that is fairly straightforward, as we have made..... Listed under: Arduino Programmer Projects

261.



Computers are Dumb Objective: Overcome your fear of computers! If you can count to two, then you can master the basics of computers. If you think computers are smarter than you, you are wrong and I will prove it. For normal people, just follow the LOG: comments. Computers..... Listed under: RTOS – OS Projects

262.



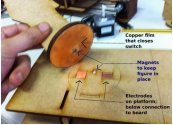
Bicycle North Indicator using Arduino Magnetoception is the ability of some animals to detect magnetic fields as a means of orienting themselves. Although humans do not seem to posses the same biological mechanisms that allow other animals to sense magnetic fields, there are still many ways that we can improve our..... Listed under: Game – Entertainment Projects, Home Automation Projects, Projects

263.



Shade Technologies – Prototype I Final Report: Motorized Wheelchair Canopy using arduino Introduction Our Motorized Wheelchair Canopy intends to help those people with disabilities that confine them to their motorized wheelchairs and need shelter at times of inclement weather, such as rain or extreme heat. Although manual wheelchair canopies do exist, no type of motorized wheelchair canopy..... Listed under: Medical – Health based Project Ideas

264.



Fab Lab Barcelona SuperNode /Fab Lab Sevilla /Jose Perez de Lama Retablillo de las Maravillas v1.0 Developed july>>august 2013 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,..... Listed under: Game – Entertainment Project Ideas

265.



SPI interface to the FlySky/Turnigy 9x Interfacing a RC radio to a microcontroller is a bit of a pain, especially if you want a lot of channels, because you have to time each channel's output individually. An AVR only has one 16 bit timer with two compare channels, so either you..... Listed under: Radio Projects

266.




Arduino powered 7seg led display with Port Manipulation Time for something a little more advanced. Direct Port Manipulation. Normally when using Arduino software, the actual logic behind changing the values in pins is abstracted away with digitalWrite and digitalWrite. Now, for most people that's just fine. But it has some limitations. For one,..... Listed under: LED Projects, Projects

267.

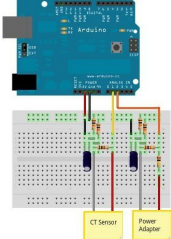
Arduino controlled animatronic wooden head (reading lamp) usnig arduino This head is a reading lamp which can be adjusted for direction of lighting, and dimmed as required. This Instructable combines Arduino programming, some simple electronics, carving with hand and power tools, mechanical control and a bit of woodwork. Apart from the Arduino and a..... Listed under: Home Automation Projects




268.




Temperature-Sensitive Infinity Mirror using arduino As per an assignment in my digital multi-media class, I've combined two Arduino-related tutorials into a functional object! The result is a pair of infinity mirrors that flash red and blue depending on minute fluctuations in ambient temperature. This is my first experience with Arduino,..... Listed under: Temperature Measurement Project Ideas
269.




How to build an Arduino energy monitor – measuring mains voltage and current This guide details how to build a simple electricity energy monitor on that can be used to measure how much electrical energy you use in your home. It measures voltage with an AC to AC power adapter and current with a clip on CT sensor,..... Listed under: Temperature Measurement Project Ideas
270.




High Power RGB LED Moodlamp which syncs with Philips Hue In this instructable the main focus lies on the software which I've created - not so much on the hardware side. You needn't to use a high- power led for this, you can use every RGB- LED you like. The "High Power RGB LED Moodlamp"..... Listed under: LED Projects
271.




Buggy Wheelchair Robot using an Arduino This is a Modification of an electric wheelchair. I called it "Buggy" for two reasons. #1 My kids can still ride it around because I left the seat intact. #2 I haven't programmed anything for a long time. I plan to create "jobs" for it..... Listed under: Projects, Robotics – Automation Projects
272.




FOBO bipedal walking robot FOBO is the fourth prototype from Project Biped. It is a 3D printed, self-contained, statically balanced, bipedal robot. It has 8 DOF (degrees of freedom) and can walk around its environment and avoid obstacles using an ultrasonic range sensor. All of the designs, instructions, source..... Listed under: Robotics – Automation Project Ideas
273.




Build the Ultimate Larson Scanner! using arduino I have watched the availability of high power (>10W) LED's jump over the past year or so and... drop in price. I came across some very inexpensive 10W white LED's from Deal Extreme that were in the \$3 dollar range and put out 900lumens, which..... Listed under: CNC Machines Project Ideas
274.



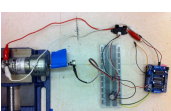
Precision Fermentation: Arduino-Controlled Crock Pot Yogurt Maker A homemade thermostat attachment for a crock pot (or other electric heating device). It can be used to precisely control the temperature of the crock pot for things like yogurt fermentation. Why Making yogurt is fun. It is also way cheaper than buying it. You..... Listed under: Home Automation Projects
275.




BLU-BOARD, control your home with blue tooth! Big thanks to the fine people at Hack-A-Day for sharing this with the world! if you'd like to donate to the project: <https://www.suprmasv.com/projects/167/blu-board> This project has been in the works for along time, three months if I reckon Correctly, but anyways, this device will allow you..... Listed under: Development Board – Kits Projects, Home Automation Projects
276.




CatBot: Automated Cat Laser using an Arduino The CatBot is an autonomous laser toy for your cat. You may say "But Joe, isn't the laser pointer the best toy for the lazy cat owner?" I'd have to say no, the CatBot takes one step further. Using two servos, an Arduino and a..... Listed under: Projects, Robotics – Automation Projects
277.



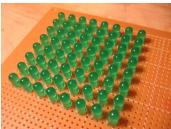
Group 9 – Prototype I Final Report: Remote Piano Pedal Controller using arduino Introduction: As a group, we feel that everyone should be able to enjoy the things they love to do despite their limitations. Our project is designed to enable people who are unable to use their legs to operate the pedals of a piano and..... Listed under: Sound – Audio Project Ideas
278.



Arduino compatible Luna Mod Looper The Luna Mod Looper, basically lets you record a sequence using a potentiometer to control the pitch of the note, and then play it back and add affects. Ever since I saw videos of the Luna Mod being played, I wanted to build my own..... Listed under: Projects, Sound – Audio Projects
279.




Glowing Color-Changing Guitar In the kingdom of rock and roll it is important to set oneself apart. With millions of people in this world who can play the guitar, simply playing well is just not going to cut it. You need something extra to rise up as a..... Listed under: Sound – Audio Projects
280.




LED matrix using shift registers using arduino This instructable is meant to be a more complete explanation than others available online. Notably, this will provide more hardware explanation than is available in the LED Marquee instructable by led555. Goals This instructable presents the concepts involved with shift registers and high side drivers..... Listed under: LED Projects


281.

A small electronic device, likely an Arduino-based car tracking system, housed in a clear plastic case with a yellow label.

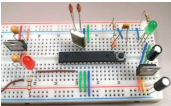
Athena: The Global Car Tracking System(3D Images) Bring out your 3D glasses and enjoy viewing in a novel way! I have added a new dimension to my instructable. If you do not have 3D glasses, then you can make one yourself. The following link explains how to make 3D glasses (link). Please..... Listed under: Car Projects, Sensor – Transducer – Detector Projects
282.

A black and white photograph of a staircase with a piano keyboard integrated into the steps.


Piano Stairs with Arduino and Raspberry Pi Who doesn't love music? These Piano Stairs are an interactive, relatively portable, musical installation that can be applied to basically any stairwell. I built them for HackPrinceton and won 2nd place in the hardware track. I've had requests to share my code and diagrams, so..... Listed under: Sound – Audio Projects
283.

A photograph of several white plastic milk bottles with blue LED lights at the top, arranged in a row.

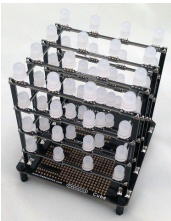
Addressable Milk Bottles (LED Lighting + Arduino) using arduino Make PPE milk bottles into good looking LED lights, and use an Arduino to control them. This recycles a number of things, mainly the milk bottles, and uses a very low amount of power: the LEDs apparently dissipate less than 3 watts but are bright..... Listed under: LED Projects
284.

A photograph of an Arduino Uno board connected to a breadboard with various electronic components.


How to Build an Arduino Circuit on a Breadboard Small Kit with Big Functionality By Ryan Winters Product Manager There are many reasons to build your own Arduino circuit on a breadboard or PCB. It takes less space, projects don't always require every pin to be used on the I/O headers, or maybe you..... Listed under: Development Board – Kits Project Ideas
285.

A photograph of a hand holding a small, yellow, rectangular device that looks like a miniature smartphone.


Make your own cellphone from scratch The DIY Cellphone is a working (albeit basic) cellphone that you can make yourself. It can make and receive phone calls and text messages, store names and phone numbers, display the time, and serve as an alarm clock. It connects to GSM networks (like AT&T and T-Mobile..... Listed under: How To – DIY – Projects, Phone Projects
286.

A photograph of a black metal frame holding a grid of small, white, cube-shaped objects, likely LEDs.


LED Cube Spectrum Analyzer In this project we'll create a small add-on PCB containing the a MSGEQ7 spectrum analyzer circuit and show how it can drive the RGB LED cube kit from Freetronics. This allows the cube to display the seven bands over four horizontal planes. There is a small amount..... Listed under: LED Projects
287.

A photograph of a blue liquid being captured in mid-air above a blue bowl, creating a splash.


High Speed Outdoor Photography High speed photography is generally carried out in a dark room with dedicated equipment (controlled remote flash for example)... The instructable proposed here enables to make high speed photography outside (and enjoy the sun!), in less than 2 hours with some generic DIY basic tools. The principle is the following..... Listed under: Video – Camera – Imaging Projects
288.

A photograph of an Arduino Uno board with various sensors and components connected to it.


DIY Sensors Workshop using arduino The Arduino offers the advantage that a lot of people are using it so it is usually quite easy to get help or information via the internet. The main website for the Arduino is: <http://www.arduino.cc/>. The Arduino can also be programmed to behave in many..... Listed under: Sensor – Transducer – Detector Projects
289.

A photograph of a car battery with a small electronic device connected to it, likely for troubleshooting.

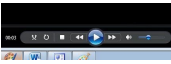
Troubleshoot your car battery with ATtiny Last winter I experienced some problems with my car battery. I knew that it was about time to replace it so off I went to buy a new one. This fact reminded me of an old article about a car battery/charging system diagnostics kit I..... Listed under: Battery Projects, Car Projects
290.

A photograph of a circular device with a wire mesh, likely a solar-powered theremin.

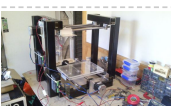
Solar theremin with Arduino using arduino materials: arduino uno 3 photoresistors 4 buzzers 3 10k resistor (optional) usb solar pannel or usb battery Step 1: Why? During the 2014 art Exhibition at Met (M. di Ragusa), I created (with the technical collaboration of Carmel Iurato), this theremin made from three photoresistors,..... Listed under: Solar energy project Ideas
291.

A photograph of a breadboard with various electronic components, including an Arduino Uno.


Arduino Prototype Center This is a relatively inexpensive and easy to build project that will help you test out all of your Arduino projects and prototypes. Since it has a plug-in power source, it eliminates frequent battery use and leaves the breadboard free of voltage regulators and capacitors..... Listed under: Metering – Instrument Project Ideas
292.

A photograph of a small, mechanical-looking device with a gauge and lights, likely a steampunk-themed Arduino project.


STEAMPUNK STEAM GAUGE, POWERED BY ARDUINO This was created to be some eye-candy for my kitchen. I wanted something unique for a special blank space on my wall, and adding movement, blinky lights and interesting mechanical “guts” made it even better. Ultimately, this project ended up requiring the following range of..... Listed under: Metering – Instrument Projects, Sensor – Transducer – Detector Projects
293.

A photograph of a laser engraver machine with an Arduino Uno connected to it.

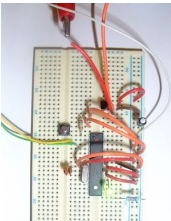
Arduino Laser Engraver I started this project because I wanted to make something that had mechanical, electrical and software components. After looking around on Instructables, I figured that an Arduino based laser engraver would be an interesting machine to make, and that the machine itself could make interesting..... Listed under: Other Projects
294.

A photograph of an Arduino Yún board with a USB cable connected to it.

Google Docs and the Arduino Yún Introduction This is the second in a series of tutorials examining various uses of the Arduino Yún. In this article we'll examine how your Arduino Yún can send data that it captures from the analogue and digital inputs and a real-time clock IC to an online Google..... Listed under: Internet – Ethernet – LAN Projects
295.

A photograph of a hand touching a small, blue, rectangular device, likely a multitouch music controller.

Multitouch Music Controller This project is an Arduino-powered infrared touchscreen / coffee-table interface that I've been using to control various music and graphics applications on my computer. This is an old project that I've recently had time to go back and document/fix up; this project is a little..... Listed under: LCD Projects, Sound – Audio Projects
296.


A photograph of an Arduino ATmega328 board with various components connected to it.

Arduino ATmega328 – Hardcore using arduino Ok, you've completed your prototype using an Arduino Uno board, perhaps using a shield or a breadboard for any additional components, but now you want to finalise your design and construct it using your own pcb. Well, that is fairly straightforward, as we have made..... Listed under: Development Board – Kits Project Ideas

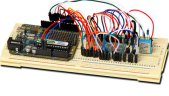
297.




Controlling Cubase with Arduino based MIDI A friend of mine wanted to control Cubase, his audio recording software, with a push button so that he could stop and start recordings remotely without having to go over to the computer and type on the keyboard. You may be able to do this..... Listed under: Projects, Sound – Audio Projects
298.




Plugduino – Arduino based 120 Volt outlet controller give your Arduino a 120 volt kick in the pants! The Arduino is a great tool for anyone interested in learning microcontroller programming, but after blinking some LEDs, what's next? This project enables your Arduino to control real-world 120 Volt electrical appliances you have in..... Listed under: LED Projects
299.




Arduino Masterclass Part 2: Build an LED weather station using arduino Project-specific parts You'll need the standard parts (Arduino board breadboard wires pliers and so on) along with these extras: DHT11 temperature/humidity sensor 7 x 330-ohm/0.5W metal film resistors 3 x 4.7k-ohm/0.5W metal film resistors 2 x BC337 NPN transistors 2 x LTS543R or FND500 common..... Listed under: LED Projects
300.




Proximity Sensing Origami Flower using Arduino Origami is the traditional Japanese art of paper folding. In this project, with a little help from an Arduino, you can bring your origami into the 21st century and make it an interactive art! The result shown here uses Bare Conductive paint to give an..... Listed under: Projects, Sensor – Transducer – Detector Projects
301.




Worms in Space Board Game Story: NASA has taken worms to the ISS on their own special capsule. There was an accident aboard the station and the worm astronauts have to navigate to the escape capsule to return to Earth. The airlock to the escape capsule has been damaged but..... Listed under: Game – Entertainment Projects
302.



FireHero: Turn Guitar Hero into an extreme sport by adding flamethrowers! using Arduino microcontroller So, long ago I had read about propane fire poofers. They're pretty cool... I mean, who doesn't love fire?! But, no matter how awesome, they could get pretty boring after a while of seeing the same large fireball. I never built one because I wanted..... Listed under: Game – Entertainment Projects
303.




How to Display Text on an HD44780 LCD with an Arduino In this article, we will go over how to connect an HD44780 LCD to an arduino in order to display any text that we want to show on the LCD. To do this, first, we must make the appropriate physical connections from the arduino board..... Listed under: LCD Projects
304.



DIY Antique Phone Doorbell using Arduino Bryan Zimmer emailed us this fantastic retro-themed DIY hack, a most timely submission as we just revisited the noir art deco-science fiction classic Dark City and we think this would have perfectly fit in the world (or in Adama's quarters on BSG). Bryan gives step-by-step..... Listed under: Home Automation Projects, How To – DIY – Projects, Phone Projects
305.



Controlling speed controllers with Arduino Hey guys, I'm back with another instructable. This is about RC speed controllers. What this will do is allow you to test out your speed controller in the Arduino world using Serial, then you write the values down and can use them for your projects..... Listed under: Ideas, Metering – Instrument Project Ideas
306.



Arduino Touch Screen iTunes control (ATSIC) using arduino What I'm going to show you is how to make an iTunes control device using an Arduino and a touch screen. The iTunes Control works by reading area's of the touch screen and send a letter to the computer via the serial port, which is..... Listed under: Phone Projects
307.



Building an Arduino Robot, Part II: Programming the Arduino Welcome to the second article in the tutorial series in which I'm building a remote controlled Arduino based vehicle robot. Here is the list of articles I have published: Part I: Hardware Components Part II: Programming the Arduino (this article) Part III: Assembling the Robot..... Listed under: Robotics – Automation Projects
308.




Color changing display Custom made Multiple color display. Have you ever wanted a display that is a little larger then one you can buy? Have you ever wanted to make a display the way you wanted it? Me too! This is how I made a custom multiple color..... Listed under: LED Projects
309.



DMX Ardweeny Node using Arduino I've settled on the lighting industry standard of DMX as my overall control protocol as I explore the world of blinky lights. This universal control method is electrically robust, radio transmissible, and flexible enough for my needs (not to mention the needs of major concert,..... Listed under: Development Board – Kits Projects, Interfacing(USB – RS232 – I2c -ISP) Projects
310.



Control a Relay with Arduino In this quick Arduino tutorial I will explain how you can control a relay using the Arduino Board, one 1K and one 10K resistors, 1 BC547 transistor, one 6V or 12V relay, one 1N4007 diode and a 12V fan. When the button is pressed the..... Listed under: Sensor – Transducer – Detector Projects
311.




Easily control your iPod using Arduino Easily control your iPod with Arduino using serial commands. This instructable includes the schematic, the code and some extra info; everything you need to make this work. USB,battery or wall power supply powered. Step 1: What you need Parts: 5x 1K ohm resistors 2x 1M..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Phone Projects, Projects
312.



Make an Arduino timer Hi, so me and my pal are setting up so we can make PCB's. We are currently making a UV exposure box (possibly another instrucable) and for this box, we needed a timer, so this is what we have done so far, and what we..... Listed under: Clock – Timer Projects, Projects
313.

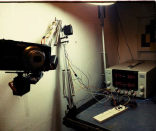
RC Car to Robot using arduino Converting an RC car into a robot is a quick and easy way to get started with robotics. At the very least, when you get bored of playing with your remote control car after three days, you can turn it into a robot that will..... Listed under: Game – Entertainment Project Ideas



314.  Easy 4x6 LED Matrix, Arduino! In this inst'able, I will show you how to create your very own 4x6 LED matrix as well as show you how to write code for it! There is an animation creator program in step 4! Here is one ANIMATION to get you excited about the project! ***Wave..... Listed under: LED Projects, Projects



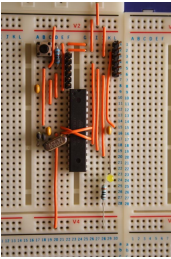
315. Pulse Width Modulation : PWM using Arduino Pulse Width Modulation or PWM is a method of Digital to Analog Conversion. It helps in delivering analog average voltage using digital pulses of variable pulse width. By controlling the on time and off time, we can generate an analog average voltage using the digital..... Listed under: PWM Projects



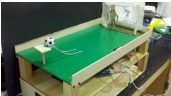
316. Robot arm from a desk lamp (IKEA Tertial hack) This project answers to a need I had: a third hand that holds a camera while I perform a test and takes photos/videos (useful when you're stuck at the lab late at night, and suddenly need a photographer). The downside to a robotic arm was..... Listed under: Robotics – Automation Projects



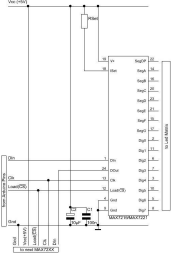
317. Arduino Guitar Pedal using arduino The Arduino Guitar Pedal is a digital multi-effect pedal based upon the Lo-Fi Arduino Guitar Pedal originally posted by Kyle McDonald. I made a few modifications to his original design. The most noticeable changes are the built-in preamp, and the active mixer stage which lets..... Listed under: Game – Entertainment Project Ideas



318. Breadboard Arduino Received a couple of nice big bread boards for Christmas and decided that one of them needed an arduino to use with it. After some thought I decided that the best option was to build the required parts of an Arduino circuit direct on the..... Listed under: Development Board – Kits Projects



319. Tabletop Soccer Game using arduino Send a Foosball down a ramp and try to score on the goalie! But scoring is not so easy - the goalie moves left and right to block your shot! This project was made for a class called "Thinks that Think" at CU Boulder for the Spring..... Listed under: Game – Entertainment Project Ideas



320. The MAX7219 and MAX7221 Led drivers These two integrated circuits from Maxim are for driving either 64 individual Led's, or up to 8 digits of 7-segment displays. The drivers implement a SPI compatible slave interface that can be controlled from the Arduino using only 3 of the digital output pins. An..... Listed under: LED Projects



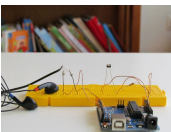
321. Arduino Time & Temp Display Shield Another project I'm working on required a good timer, but the more I read about Arduino, I realized that I couldn't make an accurate timer using an Arduino that was already devoted to other tasks. The Arduino will always lose time if you perform other..... Listed under: Temperature Measurement Projects



322. Measuring Battery Capacity With an Arduino I needed a couple of AA batteries and found the display at the supermarket where they were all arrayed. Normally when I'r shopping in the supermarket, I tend to look at the price/kg or price/l when comparing similar products. In the case of the batteries,..... Listed under: Battery Projects, Projects



323. Sunflower Automaton using arduino This was a 6 week project created for the Spring 2012 Things That Think course at the University of Colorado at Boulder. Our project is an autonomous Sunflower. As in nature, the highest priority for our flower is sunlight, necessary for photosynthesis. Our Arduino controlled..... Listed under: Video – Camera – Imaging Projects



324. Arduino Optical Theremin When I first became aware of Arduino, a theremin seemed like a natural project: sensor + actuator. It turned out to be quite affordable and fun to make. It is a naive design, using just one photocell and some hacked headphones. After some experimentation, I..... Listed under: Ideas, Sound – Audio Project Ideas




325. Charlieplexing LEDs with an Arduino Charlieplexing is an ingenious method for controlling many LEDs without using many microcontroller pins. You can turn on or off one LED at a time. To light more than one LED at a time, you can scan the LEDs by turning a sequence of them..... Listed under: LED Projects, Projects

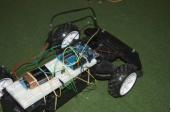


326. Mobile Earth Rover One – 3.5G Exploration using arduino If you can't explore the Moon or Mars ... you can always explore your neighborhood! The main goal of this project is to alter a remote controlled vehicle and control it via Internet Telerobotics using the Mobile Telephone Network (WWAN - Wireless Wide Area Network)..... Listed under: Robotics – Automation Project Ideas


327.




Nocturnal Emissions: My Arduino Powered Internet Enabled Dream Generator We all need to dream more so I've created this Arduino Powered "dream generator" to help plant the seeds for some big thinking craziness. When you approach the generator a Maxbotix ultrasonic sensor triggers lights and music that draw you in so you can stare..... Listed under: Internet – Ethernet – LAN Projects
328.



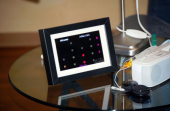
Light Seeking R.C Car Hack (with Arduino) using arduino Creating a robotics platform from scratch takes allot of work and a few dollars. Buying a ready built one is easy but costs allot of money (at least for me). So instead I decided to piggy back off of the companies who make remote control..... Listed under: Car Projects
329.




Appliance Remote Control using Arduino One of the basic tasks in many home automation systems is controlling power to appliances. They could be lights, or a heater, or an exhaust fan, or just about anything else that runs on mains power. The problem of course is that it's dangerous to..... Listed under: Home Automation Projects, Robotics – Automation Projects
330.



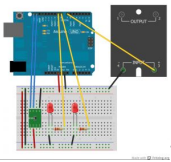
Arduino Wireless Programming with XBee Series 1 or 2 Hi. This Instructable will guide you through the process of wirelessly programming your Arduino using two XBees. I just finished designing a wireless EEG system with the XBee modules, so I've become quite fluent in their programming and have just now been able to accomplish this. It still amazes..... Listed under: Arduino Programmer Projects, Projects
331.



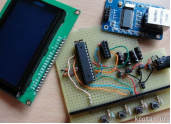
My Arduino Binary Clock Hi from Italy Although many watches are created binary, my project was inspired mainly to this: <http://www.instructables.com/id/LED-Binary-Clock-1/>, very smart and funny. I tried to improve the design and to add something personal. I think it's a good result at the end. The project is..... Listed under: Clock – Timer Projects, Projects
332.



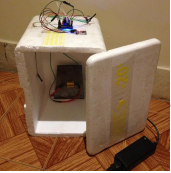
Power Supply unit for arduino power and breadboard using arduino how you can take a computer u hv old (power supply unit) and turn it into a power supply that will power your Arduino and give you all the amperage you need as well as your standard 3.3 volts, 5 volts, and 12 volts for..... Listed under: Development Board – Kits Project Ideas
333.



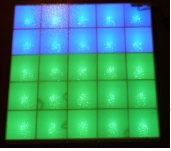
Using Arduino tide predictions using arduino In the previous post, I outlined some Arduino code to generate tide height predictions for a NOAA tidal reference station. Now let's do something useful with this newfound functionality. In the experiments I run, it's useful to keep intertidal animals like snails and limpets on..... Listed under: Home Automation Project Ideas
334.




Arduino weather station part 2 using arduino Sometimes I just do not have time to connect to the internet and check current weather conditions. This is the reason why I made this indoor LCD weather display based on Atmega328 Arduino MCU. The circuit board consists of two LP2950 voltage regulators, MCU, four..... Listed under: Sensor – Transducer – Detector Project Ideas
335.




Cheap Arduino Controled Yogurt Maker These days I was reading an interesting post on how to make yogurt "by the gallon" (<http://www.instructables.com/id/Yogurt-By-The-Gallon/>). One thing needed was to maintain a rather constant temperature of 43°C (110°F), so the bacteria can grow properly. Though you can buy commercial yogurt makers, they aren't..... Listed under: Home Automation Projects, Projects
336.



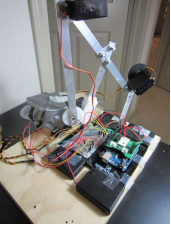
Low Cost LED Grid There are a number of great Instructables on LED grids out there. This is a low cost version - not quite as polished, but easy to make. This project uses a couple of sheets of foam core, a fluorescent fixture cover from the local home..... Listed under: LED Projects
337.




Make an Attiny13 based IR proximity sensor This is an extremely cheap IR proximity sensor you can make with a few cheap parts and an AVR programmer. I use an Arduino as my programmer in this Instructable. This sensor only has a range of about 3 inches. You can easily add more..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Sensor – Transducer – Detector Projects
338.




Google Weather on graphical display with Arduino In this project, I am using an Arduino board to show forecast of the weather from Google Weather service on a VGA screen. The display is obviously graphical one, with icons and some colorful text. It is one of those gadgets I wanted to have..... Listed under: Internet – Ethernet – LAN Projects, LCD Projects, Projects
339.




Bluetooth plus Infrared Controlled Robotic Arm Hi. I'm Darren a 17 year old hobbyist, and this is the first Instructable I'm posting here, so I apologize if it kinda sucks! I hope it's good enough... So how did the idea of a robotic arm come to me? Well, the first thing..... Listed under: Internet – Ethernet – LAN Projects, Robotics – Automation Projects
340.



Arduino controlled Interactive wallpiece This project is a subset of my idea of an interactive wall.. so this is an interactive wall-piece.. What does it do ? Mine is a touch activated light display. How does it work? It is controlled by an Arduino UNO which senses the inputs..... Listed under: Game – Entertainment Project Ideas, Home Automation Project Ideas, Ideas
341.




Intro to Arduino An Arduino is an open-source microcontroller development board. In plain English, you can use the Arduino to read sensors and control things like motors and lights. This allows you to upload programs to this board which can then interact with things in the real world..... Listed under: Development Board – Kits Projects
342.

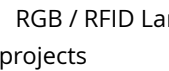


Transforming Chandelier In this tutorial I will go over how to make a transforming chandelier. This project will be heavily CAD oriented (Solidworks and Illustrator), made by laser cutting/engraving acrylic sheets, and a little bit of Arduino coding and soldering. Step 1: Choosing materials. All the pieces..... Listed under: Other Projects


343.



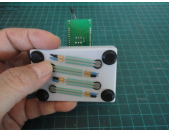
Sentrduino! Its the all new Sentry turret Hey guys, Today I would like to show you how to make a simple sentry turret out of household Items! You would only need to get an Arduino UNO or Mega, a Ping))) Ultrasonic Range finder, two servos, and an electronic water squinter! The rest of..... Listed under: How To – DIY – Projects
344.



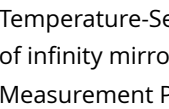
RGB / RFID Lamp We have taken this project down, due to vendor's request. Please wait till we get approval again..... Listed under: Home Automation Projects, RFID - NFC projects
345.




How to make a Ghost Knocker Step 1: Check the materials you need. Below is the list of stuff you need to make it: 1. Arduino I used an Arduino Pro Mini 3.3V. You also need USB-Serial tether to program it. 2. A battery box I used a AA x 4..... Listed under: Game – Entertainment Projects
346.




Wireless Finger Drum using Arduino I came across these Force Sensitive Resistors. I like them a lot and I wanted to do something with them, may be making them more usesable than standing on the breadboard. Few months ago, I created the pocket-sized RevIO - Arduino Compatible and having fun with..... Listed under: Game – Entertainment Project Ideas, Ideas
347.



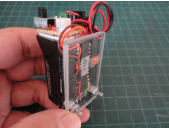
Temperature-Sensitive Infinity Mirro As per an assignment in my digital multi-media class, I've combined two Arduino-related tutorials into a functional object! The result is a pair of infinity mirrors that flash red and blue depending on minute fluctuations in ambient temperature. This is my first experience with Arduino,..... Listed under: Temperature Measurement Projects
348.




Wireless nunchuk controlled animatronic doll This instructable will attempt to show you how to make an animatronic doll controlled by a wireless nunchuk. This doll can only move its head though. I'm sure there are plenty of people out there who can take this and expand on it and make..... Listed under: Game – Entertainment Projects
349.



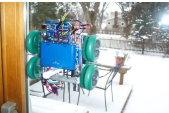
The Word Clock Arduino version ***** Major updates - A much better enclosure for this clock has been designed - check out <http://www.instructables.com/id/The-Wordclock-Grew-Up/> ***** Last month I wanted to build a special gift for my beautiful wife, Megan. She has a teaching background in English, so what better present to..... Listed under: Clock – Timer Projects, Projects
350.



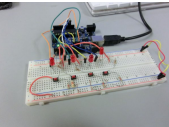
Palm Arduino II I have a "through the Looking Glasses" idea of making another version of Palm Arduino. Since this design derived from Palm Arduino, I will called it Palm Arduino II. This Palm Arduino, the Second, will be the combination of Palm Arduino and Portable 5V Voltage Regulator. So..... Listed under: Development Board – Kits Project Ideas, Ideas
351.



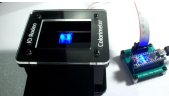
Arduino BlinkyBall Project I frequent a blog called hackaday.com which featured a project by "Nikolai", it was a 10cm LED ball that used shift registers. It seems like a really fun project to attempt but the cost of having the boards made & not having any experience sending..... Listed under: LED Projects
352.



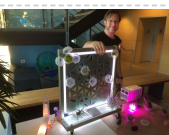
Window Painting Robot using Arduino The idea for this project came from one of my favorite 'ibles: the polargraph. I loved the drawing style and thought how cool would it be to do this on the side of a building? Unfortunately the challenges to setting up such a large polargraph..... Listed under: Ideas, Robotics – Automation Project Ideas
353.




ButtonHero using Arduino ButtonHero is a game made on an Arduino that involves the use of buttons, LEDs, wires, and resistors. In this game, you have to hit the corresponding button to the light that is randomly selected before the light changes. You start with 5 lives and..... Listed under: Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas
354.



Educational colorimeter kit This instructable is a step-by-step assembly guide for the educational colorimeter kit we launched in April 2012 on Kickstarter. Assembly takes from 20-40 minutes. Once assembled the colorimeter can be used in a wide variety of science experiments to measure the absorbance and concentration of..... Listed under: Metering – Instrument Projects
355.



Blinky Lights using Arduino and LumiGeek I used the Arduino UNO combined with three LumiGeek shields to run lighting. LumiGeek has dedicated shields to support 1 Watt RGB LEDs that require constant current, Addressable RGB LED Strip, and Non-Addressable RGB LED Strip. Step 1: 1 Watt RGB LEDs (2x) I wired..... Listed under: LED Projects
356.



Control an Arduino With a Wristwatch The watch The Texas Instruments eZ430 Chronos is a cool gadget. It has bidirectional radio communication, and a whole bunch of sensors: temperature, pressure, acceleration. In fact, it is a development kit for the MSP 430 (a low-power microcontroller), that TI packaged as a watch..... Listed under: Clock – Timer Project Ideas, Ideas

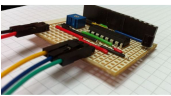
357. Servo 360 rotation mod (Parallax) In this instructurable I will expalin and show you how to make a Parallax servo rotate 360°. And againI have search the internet to see tutorials clear enough to make this posible with no luck. Don't get me wrong they are some how good but not..... Listed under: Motor Projects



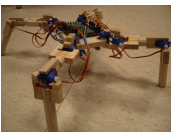
358. Wu-Tang Can: Interactive Tipping Cash rules everything around me. C.R.E.A.M. Get the money. Arduinos are showing up everywhere. Even in space. But what about the lowly tip jar? No. Are Arduino projects giving the Wu-Tang Clan the proper respect they deserve? Not even close! Rectification. That's what this is..... Listed under: Other Projects



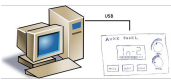
359. Hookup an LCD to an Arduino in 6 seconds with 3, not 6 pins Adding an LCD display to Arduino projects can add real value but the cost of doing so can be significant. Not a financial cost - you can pick up 16 (characters) x 2 (rows) LCD for as little as £3.50. The cost is the pin..... Listed under: LCD Projects, Projects



360. Arduino Based Four Legged Robot The name of our robot is FIER and here is a video of it saying hello to the world. In this instructable, I will try to show you the basic steps to making your own walking robot for the most bang for your buck. You..... Listed under: Robotics – Automation Projects



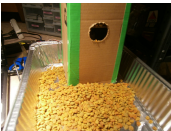
361. Analog audio panel for PC using Arduino Have you ever struggled with audio settings in control panel in middle of a VoIP call? Or, wondered if the other guy can hear you properly? I have. My work requires great deal of remote conference calls using PC. The first thing I wonder always..... Listed under: Projects, Sound – Audio Projects



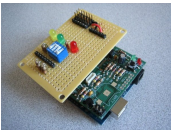
362. 4X4X4 LED Cube w/ Arduino Un As someone who is very new to digital electronics this LED cube was fun to make, challenging and a great lesson in soldering. If you have some patience (64 LED's to solder!) and steady hands, this project will be well worth it in the end!..... Listed under: LED Projects



363. Vacation Pet Feeder from Recycled Materials If you are a pet owner, going on vacation can be stressful. Usually, you need a friend or neighbor to come over every day and feed your pets. However, by enslaving robots you can keep your pet happy and enjoy a stress-free holiday. To save..... Listed under: Home Automation Projects



364. HexiLogger, an Arduino based data logger The purpose of this project was to create a simple, portable device that would periodically read sensors and then store the sensor data so it could be retrieved later. The result is the HexiLogger, "hexi" because it can support up to six different sensor inputs..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects



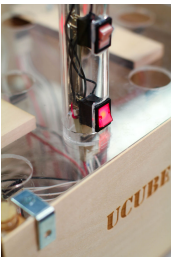
365. Open Source Server Room Monitor using Arduino This server room environmental monitoring system is a low cost high performance device with the same onboard features as commercial devices costing hundreds of dollars more. In addition to a low cost platform we will provide low cost sensors for many important devices to insure..... Listed under: Internet – Ethernet – LAN Projects, Metering – Instrument Projects, Projects, Sensor – Transducer – Detector Projects



366. iTime clock in a Mac Mini box using Arduino After the untimely death of my Mac Mini (the last thing Apple I never buy), I recycled her limping in a clock display LEDs. Technically, there is not rocket science: an Arduino reads the time from an external clock and displays a matrix of 8x6..... Listed under: Clock – Timer Projects, Projects



367. The UCube: Design & Print 3D Objects by flipping switches This instructable goes through how to design and print a variety of 3D models using a system called the 'UCube'. Note: I would love to eventually publish detailed instructions on how to make your own UCube, but since the design is still changing and improving,..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects



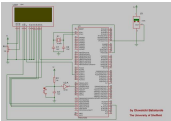
368. Open Source Hearing Impaired Alarm Clock using Arduino Activities of daily living (ADL) are self-care activities that are usually taken for granted, since as the name implies they are performed on a daily basis. If you have ever ended up in a cast, or on crutches you can empathize how menial daily activities can suddenly be very difficult to..... Listed under: Clock – Timer Projects, Projects



369. DIY Mod an Omnibot 80's Robot with Voice, Camera, Servos, Bluetooth *Check back for more updates on this build 😊 So, have you heard of the Omnibot? Well! Any kid from the 80's will remember how amazing this robot was. For you young kids, this robot was released in the early 80's by Tomy. The robot..... Listed under: Internet – Ethernet – LAN Projects, Motor Projects, Robotics – Automation Projects, Video – Camera – Imaging Projects



370. Tag Archives: arduino speaking clock How to: Speaking Clock Hello 😊 Setup and Procedure The wave shield is interfaced with the Arduino Mega 2560 as normal. A couple of pins were remapped because the wave shield was initially made for a different device. The DAC pins were remapped to pins 22,23,24..... Listed under: Clock – Timer Project Ideas




371. LED Calculator with Rotary Quadrature Encoder for Target System Voltage Selection using Arduino I'm still working on the LED calculator (original idea and most recent work) — I've finally got 'round to adding a rotary encoder to set the target system voltage. Now you can turn the potentiometer to set the LED brightness, turn the rotary encoder to set what..... Listed under: Calculator Projects, LED Projects, Projects




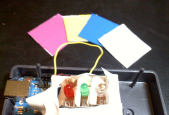
372. Arduino Lens Controller – Synchronized Zoom/Focus with Wii Classic Controller My Lumix GH2 Micro Four Thirds camera not only shoots fantastic high definition videos, but with inexpensive adapters I can use it with older manual lenses that are cheap and often very high quality. I shoot a lot of performance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





373.  Sensing Squeeze using Arduino I'm researching squeeze sensing as a mode of tactile interface. Here I will cover the process of developing a squeezeable sensor and the firmware/software concerns associated with interpreting the data from the sensor. This fulfills the "sensor project" for my class called Computational Principles in..... Listed under: Projects, Sensor – Transducer – Detector Projects

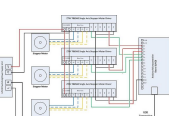
374. S.A.M. Spring Aided Machining (CNC with adhesive remover) S.A.M. Spring Aided Machining (CNC with solvent) is a school project designed by three architecture students at CCA, San Francisco: Matt Boeddiker, Abelino Robles, and Tim Henshaw-Plath. (www.cca.edu) The machine is capable of rapidly prototyping and creating subtractive formwork that can be used to cast..... Listed under: CNC Machines Projects


375.  A Beginner's guide to making an Arduino Shield PCB (This tutorial has gotten really popular recently, and I'm very pleased that so many people are interested. I learned all of this stuff while working on my first PCB. If you're interested, I've started to sell the most recent version of my Arduino ProtoShield. If..... Listed under: Development Board – Kits Projects


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


377.  Cat Repelling PIR motion sensor (covert) speaker box alarm using Arduino This is a PIR motion sensor device that works with the arduino uno. In order to make it covert enough to be placed in multiple settings and portable enough to fit most places, I decided to make the case for it appear as a speaker. The inspiration for..... Listed under: Projects, Security – Safety Projects, Sensor – Transducer – Detector Projects, Sound – Audio Projects


378.  Arduino MIDI Volume Pedal I'm playing keyboards this fall in another rock concert to benefit the high school robotics team, and for some of the tunes I need to be able to fade an organ in and out over a period of a measure or two. My keyboards are..... Listed under: Projects, Sound – Audio Projects


379.  Arduino Stepper Motor Control Hardware Preparation Stepper Motor Driver Board Arduino Board (UNO) If you have purchased the Arduino Board from ZTW, we have already uploaded the g-code library for you. If you are using your own Arduino Board, you can download grbl Arduino library online and load it..... Listed under: Motor Projects


380.  Arduino Thermostat with TC74 sensor Hello all! This is a quick guide on how to use an Arduino© to control whether a cooling fan and a heater is turned on depending on the detected temperature from a TC74 Arduino sensor. This is for a final project for an Electronics class..... Listed under: Sensor – Transducer – Detector Projects


381.  Geiger Counter with Touch Interface! There are quite a few geiger counter instructables. The difference with this one is that I wanted to give it a modern interface, similar to smart phone touch screens, that anyone would feel comfortable using. The reason for this is that I want to use it as..... Listed under: Calculator Projects, Sensor – Transducer – Detector Projects


382.  Digital Clock with Arduino and DS1307 In this article you will learn how to make a digital clock using Arduino and the DS1307 RTC IC. What is DS1307 IC actually? Well, it is a Real Time Clock (RTC) IC that is simple to use, low cost and easy available. The IC..... Listed under: Clock – Timer Projects

383.  Arduino Drawbot In some of my previous Arduino instructurables I have show to the Arduino beginners on how to control servos in different ways. And in my last instructurable I have show the modification of a Parallax servo for a 360° rotation. So in this one I will show Arduino..... Listed under: Robotics – Automation Projects

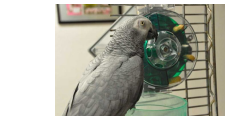
384.  Arduino Led Dice This instructable will show you how to create a dice using Arduino and few components. It's an easy and fun project, suitable for beginners and those who want to start with Arduino; it also requires a minimal amount of components. This explaines how to create..... Listed under: LED Projects, Projects


385.  Arduino-Square with Color LCD B-Squares is a modular electronics platform that enables users to build, customize, and continuously update their own electronics applications. In this B-Squares App we will cover how to assemble a simple Color-LCD Application using the Arduino-Square. Hardware: 1. Arduino-Square. 2. Battery-Square 3. Color LCD Shield..... Listed under: LCD Projects, Projects

386.  Simon the Octopus Everyone loves the Simon game ! So we decided to take it to another level. This project was done for our Things That Think class where we had to make a PlushBot (a plush toy that thinks! "with computation") thus, kids were our target. We..... Listed under: Game – Entertainment Projects


387.  The Traveling Geocache using Arduino This project and future projects can be found at my website <http://revoltlab.com/> where you can also find my blog. UPDATE LOG: NOW SUPER SIMPLE TO REPROGRAM! Easy FTDI USB interface hardware explained in step 10 Easy FTDI USB interface programming explained in step 13 NEW..... Listed under: GPS Based Projects, LCD Projects, Projects

388. Arduino Button Activated Treat Dispenser For my Digital Multimedia class final, I created a treat dispenser that is activated by pulling a chain, which starts a servo motor that spins a wheel to dispense treats to my to African Grey parrots. Step 1: Gather Materials [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14..... Listed under: Motor Projects, Other Projects

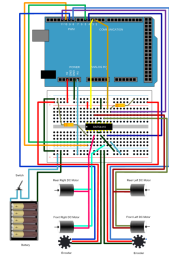


389.  DIY Arduino Stepper Motor Driver Board This page will show you how to put together a simple stepper motor driver board that can be controlled with an Arduino. I built mine to use with my heliostat projects, but it could be used for other things too. Update: I no longer use..... Listed under: How To – DIY – Projects, Motor Projects

390.



Giant LED bar graph For a recent project I needed to build a large and obvious bar graph display. This was to show the power generated from a bicycle generator. I came up with this design and was pretty pleased with the final results as it is relatively low..... Listed under: LED Projects
391.




Drive with PID Control This example shows how to simulate a simple closed-loop control algorithm in Simulink® and how to run it on an Arduino® board. Supported Hardware: Arduino Leonardo Arduino Mega 2560 Arduino Mega ADK Arduino Pro Arduino Uno Available versions of this example: Arduino Mega 2560 board:..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
392.



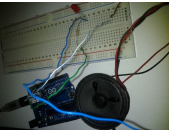
BLINKING AN LED USING AN ARDUINO UNO (EXPLAINED) So you're here because you want to start learning some of the Arduino Basics... So let's start with THE most basics... no this "tutorial" is actually a little more basic than what you have in mind. It only requires that you: Have ANY Arduino Board..... Listed under: LED Projects
393.



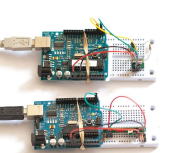
Easy Arduino Audio Annoyatron This simple device simple plays a small tune at a random interval, between 5 and 30 seconds when the lights in a room go off. It can be cleverly disguised inside a tissue box, or inside or under any number of household objects. This is a vary simple project (my..... Listed under: Projects, Sound – Audio Projects
394.




Blinky the one-eyed clock using Arduino In this tutorial you learn how to make a blinking clock with a difference! Updated 18/03/2013 Followers of my website would realise that I tend to make too many clocks in those tutorials. Well, I like making clocks... so here is another one. However this time..... Listed under: Clock – Timer Projects, Projects
395.



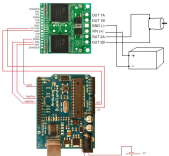
Arduino SOS signal with 8ohms speaker and LED blinking SOS is the commonly used description for the international Morse code distress signal (· · — — · · ·). [read more on wiki] Requirements: 1) Arduino 2*) 8 Ω speaker 3*) 150 Ω or similar resistor 4) 5mm RED LED 5) Hook-up..... Listed under: LED Projects, Projects, Radio Projects, Sound – Audio Projects
396.



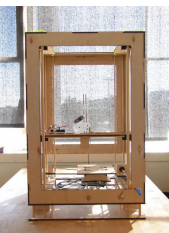
Radio link between two Arduino boards I was looking for a way to handle wireless communications between two Arduino boards. Other options like Xbee or Bluetooth were going to cost \$50 to over \$100. Then I found a cheap RF transmitter and receiver at Sparkfun. The total cost is only \$9!..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Radio Projects
397.




DIY Amp / Watt Hour Volt Meter – Arduino Major corrections and additions made 9/9/2014 For my off-grid Ham Radio and Solar projects, I needed a way to measure volts, amps, watts, amp hours and watt hours. There's a couple of commercial products that can do this, but not with the flexibility I wanted..... Listed under: How To – DIY – Projects, Metering – Instrument Projects
398.



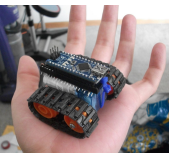
Pololu Motor Controller Testing and Troubleshooting Finally, I finished reading the datasheet. It didn't give much information about how to connect the motor controller to a micro-controller. I used the simple circuit I found from a post in Pololu's forum: Using Dual VNH3SP30 Motor Driver with arduino @ <http://forum.pololu.com/viewtopic.php?f=15&t=1923>. Dual VNH2SP30..... Listed under: Motor Projects
399.



Webster: A Geometric Pattern Weaving Machine We are three students from California College of the Arts in San Francisco in the Architecture program. This studio is called Creative Architecture Machines and is taught by Jason Johnson and Michael Shiloh. Webster is a geometric pattern weaving machine that takes inspiration from Islamic..... Listed under: Calculator Projects, PWM Projects
400.



Colorful Countdown Clock for tight timeline management using Arduino This is a funny looking clock that has that displays time on relatively large 32x16 Bi-Color LED Matrix. It includes also a countdown counter that I find very useful in many situations. Features: Date And time display Temperature display Countdown timer Buzzer notification Randomly changing..... Listed under: Clock – Timer Projects, Projects
401.



Arduino Nano based Microbot This instructable was created to be entered in the Robot Challenge. If I win, the parts will of course, go into robots like this one. Notes on how to include some of the very components in the prize packages are given in the last step. I..... Listed under: Robotics – Automation Projects
402.




Simple Arduino light meter This Arduino project is a simple light meter using a photo-transistor. An LDR would be more appropriate but the photo-transistor is what I has spare at the time. On the other hand the photo-transistor is sensitive to infrared, so its handy for testing remote controls..... Listed under: Metering – Instrument Projects
403.




Arduino Based Automated Lighting Control This is my second instructable. i want to share some of the basic things i made using the arduino i am so busy lately. then i got the chance to have this spare time... inspired by my former student and a fellow co league to..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, LED Projects, Projects

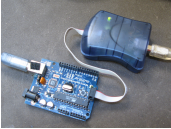
404.




Mobile Chicken Coop with some automation using Arduino My wife and I have wanted to raise chickens(for the eggs) and we finally decided to do it this spring. I have read a lot about pastured chicken and wanted to create a mobile coop so that the chickens would not destroy the yard. I..... Listed under: Home Automation Project Ideas, Ideas
405.




Remote Control Door – Internet Your Thing We can instantly open a door or control anything we can connect. It works from any iPhone, Android, or PC. After connecting something we want to control, download the free app to a PC, open a port, and control it remotely from anywhere. It's open..... Listed under: Internet – Ethernet – LAN Projects
406.




Minimal Arduino with ATmega8 Like me, you may have a few old Arduino boards or ATmega8 chips (in the boards) laying around from when you were first playing with Arduino. Those chips can still be really useful as the heart of a tiny “Minimal Arduino” setup. A normal Arduino..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
407.



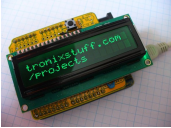
Control Arduino Wirelessly with MATLAB Been seeing few DIYs on how to establish a communication between MATLAB application and Arduino that is hardwired to PC. However, I haven't encountered anything that control Arduino via MATLAB wirelessly using the ENC28J60 compatible Ethernet shield. In this ible', I'm going to show the..... Listed under: How To – DIY – Projects, Internet – Ethernet – LAN Projects
408.




Turn your Arduino into a 4 voice wavetable synth Multiple synthesizer projects have been done for the Arduino, but few have been able to utilize the full power of the Arduino processor. DZL from GeekPhysical wrote a 4 voice wavetable synthesizer that is one of the more advanced software based synths for the Arduino..... Listed under: Sound – Audio Projects
409.




Perfboard Hackduino (Arduino-compatible circuit) Never again will you have to dismantle a finished project just to reuse an Arduino board! This tutorial will go through the steps involved in fabricating your own Arduino-compatible circuit using just ~\$8 of parts (this includes the ATmega chip!). This is perfect for installing..... Listed under: Development Board – Kits Projects
410.



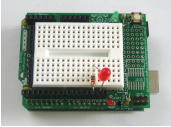
Arduino Backlit LCD shield In this tutorial learn how to make your own backlit-LCD Arduino shield. Updated 18/03/2013 Let's see how simple it is to make your own Arduino LCD shield. Sure – you can just buy one, but where's the fun in that? Getting Started Our LCD is..... Listed under: LCD Projects, Projects
411.




Knight Rider Rides Again using an Arduino This a Knight Rider Style LED Chaser Done with a Arduino Duemilanove with an ATmega328 chip. Step 1: Things you'll need: 6 LEDs (any color) 1 Breadboard 1 100 Ohm Resistor 12 Breadboard Jumpers 1 Arduino Duemilanove "or" Decimila 1 USB cable with A-type connector..... Listed under: LED Projects, Projects
412.




Simple Buck LED Driver with PWM Input High-power LEDs over 1W are now quite inexpensive. I'm sure many of you are incorporating LEDs as light sources in your projects. However I realize that the finding and configuring the power supply is still not as simple as it can be; commercially available LED..... Listed under: LED Projects, PWM Projects
413.




Breadboard and LEDs (lesson 3) Introduction You've started modifying sketches, and played a bit with the onboard LED (or if you have an NG, an LED you added). The next step is to start adding onto the hardware component of the Arduino. We will do this by adding a solderless breadboard..... Listed under: LED Projects
414.




The Talking Breathalyzer using an Arduino *** Additional info at <http://droidalyzer.com/talkingbreathalyzer/index.html> *** A customizable Breathalyzer that talks and tells you how much you've had to drink. It's also open source and can easily be modified with your own text on the LCD screen and audio MP3 files. When tethered to a PC with..... Listed under: Medical – Health based Projects, Projects
415.




FaceBooth – One button to facebook photobooth I wanted to make a photobooth for a Christmas party. I wanted it to be simple to operate and only be one click easy so that even a guest who was chemically uncoordinated could even operate it.I wanted a solution that would take a photo..... Listed under: Internet – Ethernet – LAN Projects, Video – Camera – Imaging Projects
416.




Arduino-controlled, Aluminum Archangel Costume Wings I have always loved the Marvel character Archangel. When my brother, (Shameless plug alert) budding comic book artist David Fernandez, showed me pics of a cosplay convention he went to I thought "wouldn't it be awesome if someone made life-size archangel wings?". The idea sank into the..... Listed under: Game – Entertainment Projects, Projects
417.



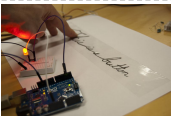
Arduino Breathalyzer What is a breathalyzer you may ask? It is a device for estimating blood alcohol content (BAC) from a breath sample.In simple terms it is a device to test weather a person is drunk or not. As the title suggests it runs on the arduino.Our breathalyzer..... Listed under: Medical – Health based Projects
418.



Add a real-time clock to the Freetronics TwentyTen using Arduino Let's add a DS1307 real-time clock to our Freetronics Arduino-compatible board. Updated 18/03/2013 Now and again I find myself making another kind of clock or timing device using the Arduino system, and each one has been making use of the Maxim DS1307 real-time clock IC. However..... Listed under: Clock – Timer Projects, Projects
419.




Arduino Masterclass Part 1: Make your own hardware The world is going nuts over the Raspberry Pi single-board computer (SBC) for being a whole system under \$50. In reality though the Pi isn't actually the cheapest computing device available. If you want really cheap how does \$13.50 sound for a mini computer that..... Listed under: Development Board – Kits Projects
420.



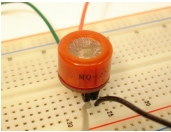
Turn a pencil drawing into a capacitive sensor for Arduino Did you know? You can make pencil drawings reactive to touch for use with your projects! It's really easy, and gives you a lot of flexibility in making interfaces for whatever microcontroller project you're making. I put this together as part of my UnoJoy project,..... Listed under: Sensor – Transducer – Detector Projects

421.




ARDUINO
SYNTHESIZER


The Arduino Synthesizer The Arduino is able to output sound through a library that has been developed called the Tone Library. By creating an interface and a program that can call certain values to be output to an audio out, the Arduino Synthesizer is a robust tool for..... Listed under: Sound – Audio Projects
422.




Arduino Breathalyzer: Calibrating the MQ-3 Alcohol Sensor The MQ-3 is an alcohol gas sensor that is available for about \$5 from Sparkfun, Seeed Studio, and others. It's easy to use and has sparked the imagination of anyone who has dreamed of building their own breathalyzer device for measuring the amount of alcohol..... Listed under: Sensor – Transducer – Detector Projects
423.



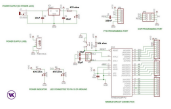
SD Card Data Readable Anywhere This project started as many of mine usually do, as a honey-do. We have compiled an extensive list of our book and movie collections on our computer at home, but my wife wanted to be able to scan the list from the video store (yes,..... Listed under: Memory – Storage Projects
424.




Arduino Powered Binary Clock This instructable will help you to build an Arduino Binary Clock. The original idea for this instructable was designed by Daniel Andrade. My instructable uses surface mount components, but can easily be adapted to through-hole components if you wish. You can follow my other Instructable..... Listed under: Clock – Timer Projects, Projects
425.



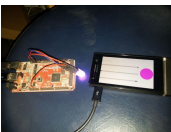
PCB Quadrotor (Brushless) Quadrotors are the new Segways: a mesmerizing, somewhat magical, self-stabilizing platform that every tech person wants to have. You can't ride a quadrotor (well, maybe you can), but they do fly, and you can build one yourself from scratch! I helped with a previous quadrotor..... Listed under: Robotics – Automation Projects
426.



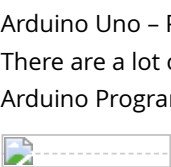
Build Your Own Arduino Board Need more Arduino board? Do not spend more money for another one. Why not try to build your own DIY Arduino board? It is easy and simple. DIY Arduino Step 1 Get an Atmega328-PU or Atmega328P-PU (with bootloader inside). atmega328p A brief introduction on the..... Listed under: Development Board – Kits Projects
427.



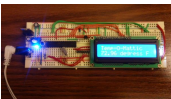
Electronic Instrument This electronic instrument allows you to sequence and loop audio and MIDI data. Most of the time I use it to sequence drum samples so I can play around with different beats and rhythms. The really great thing about this instrument is that it is..... Listed under: How To – DIY – Projects
428.




ANDROID+ARDUINOADK+RGB led this is a project which makes an android app, then configure it to use it with android debug bridge or android accessory development kit. for making the android app we use android mode of processing. For hardware, i always choose arduino. here i have a..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects
429.



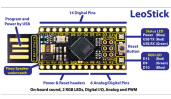
Arduino Uno – Programming With A Serial Port I'm working on an Arduino clone. The Arduino is essentially an ATMEGA328P development board with a bootloader pre-loaded. There are a lot of custom macros built into the programming interface that make it really easy to use, and even easy to build some powerful applications. Listed under: Arduino Programmer Projects
430.




Arduino from Scratch Digital Thermometer I have loved making projects with Arduinos, but at \$30 a piece your projects can get expensive. So I want to show you how you can make your own Arduino from scratch and save money doing it. Make your own Arduino for around \$8. For..... Listed under: Projects, Temperature Measurement Projects
431.




BrainTap: the interactive arthritis and memory exercise game I built this project at uni as a 3rd year project (with a couple of classmates) at the University of Technology, Sydney.It is aimed at Baby Boomers and targets a skill and level based memory and fine motor skills exercise game. The form is..... Listed under: Game – Entertainment Projects
432.




LeoStick Getting Started Guide The Freetronics LeoStick is a handy break-out board for the ATmega32U4 microcontroller. The board has a convenient USB stick format, and is based on the pinout and connections of the Arduino Leonardo reference design for compatibility with the Arduino IDE. Before you plug in your LeoStick..... Listed under: How To – DIY – Projects
433.



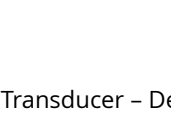
Arduino Wall Lamp So, I have always wanted a nice lamp by the side of my bed, Something simple with out any buttons. Of course this would mean it had to be wireless.I also wanted to use it from my bed but not getting out of my bed to turn it off..... Listed under: Home Automation Projects, LED Projects
434.



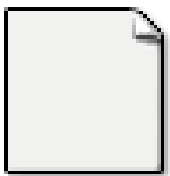
Sensor Less 3d Printed Robot Tyree (he wears a tie and he has tires) actually smiles after he bumps into something (see video). Using an Arduino motor shield, he detects obstacles using the "more current into the motor means something is in the way" principle. Tyree started out as a..... Listed under: Robotics – Automation Projects, Sensor – Transducer – Detector Projects
435.





Building an 8x8x8 LED Cube – The Driving Circuit In this article we are going to take a detailed look at how to build the driving circuit for the 8x8x8 LED cube. In other words we are going to design and analyze the circuit which translates the signals coming from the Arduino to appropriate..... Listed under: LED Projects
436.





ArduSensor Fun Pack ArduSensors are open source plug-in-play sensors for Arduino. These were originally made for beginners to get started with Arduino, a very cool electronics prototyping platform, but anyone can use them. I still play around with them all of the time, and I bet a ton..... Listed under: Sensor – Transducer – Detector Projects

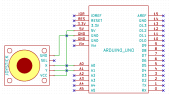


437.  TiDiGino, the Arduino-based GSM remote control Using an ATmega 2560 and therefore the heart of Arduino, we have developed a universal remote control with GSM. This allows to control 2IN/2OUT, DTMF key, gate control and GSM thermostat activated remotely. We have already presented several remote control with different functions. But now..... Listed under: Phone Projects, Radio Projects

438.  UltraSonic Arduino Video instructions How To – Parking your car with an Arduino How To - Parking your car with an Arduino Code: // Back up Helper, by Kevin Darrah v4 #include <SoftwareSerial.h>// to read the data from the range finder on any digital pin SoftwareSerial sonar(5, 6); // RX, TX //we're only using the RX pin (5),..... Listed under: Car Projects, Projects

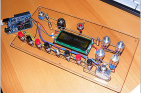
439.  Hack Your Hasbro R2D2 With an IOIO Microcontroller My wife bought me a Hasbro Interactive R2D2 Astromech Droid for my birthday a few years ago after I said how much fun it would be to hack it and I've finally managed to get inside and start playing!Although the built-in voice control functions are..... Listed under: Robotics – Automation Projects

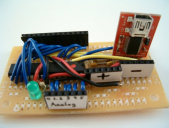
440.  Clock One – Digital plus Analog Clock An Arduino For some strange reason I have a fascination with various types of electronic clocks (which explains this article). Therefore this project will be the start of an irregular series of clock projects whose goal will be easy to follow and produce interesting results. Our “Clock..... Listed under: Clock – Timer Projects, Projects


441.  Ardu-Bot-Tom – RF Link Controlled Robot [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14 " radius="20 " border="#985D12" float="right" head="Major Components in Project" headbg="#FFEB70" headcolor="#985D00"] Ardu-Bot-Tom List of Materials Controller Parts: 1x - Arduino Uno 1x - 9V Battery 1x - 433Mhz TX Module 1x - SparkFun Joystick Robot Parts: 1x - Arduino Uno..... Listed under: Robotics – Automation Projects

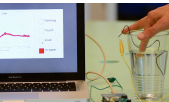
442. Multiplexing with Arduino and the 74HC595 The 74HC595 is an easy and inexpensive (at about 60 cents apiece) way to increase the number of digital out pins on your Arduino. In this tutorial I'll show you how to drive up to 16 LEDs with one 74HC595 using a technique called multiplexing..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects





443.  Arduino punk console This is my first build using an arduino microcontroller. I wanted to create a simple tone output device along the lines of the 555-basedatari punk console, but using solely the mcu as the tone generator. Unfortunately, that was just too simple a task with a microcontroller to..... Listed under: Projects, Sound – Audio Projects

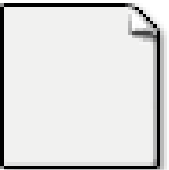
444.  Perfduino: Build Your Own Arduino Microcontroller This how-to takes you through all the steps of making your own arduino on a perfboard or perfduino! Arduino microcontrollers are great for learning about physical computing and are very useful for rapid prototyping. Arduino's simple programming language makes it a favorite of hobbyists and..... Listed under: Development Board – Kits Projects, How To – DIY – Projects, Projects

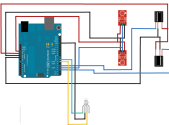
445.  Arduino LED Flasher Circuit In this project, we will go over how to build an arduino LED flasher circuit. We will use a standard arduino board, doesn't matter which, and connect it so that it flashes an LED a certain amounts of times on and off repeatedly to create..... Listed under: LED Projects

446.  Touche for Arduino: Advanced touch sensing Update: New interface - look at the last step. Credits: Arduino sensing done by DZL, Processing sketch and Instructable done by Mads Hoby. Disney Research lab designed a novel way to detect touch. You can see a video of their demo here: I had the honor to meet..... Listed under: Sensor – Transducer – Detector Projects

447.  Clock Three – A pillow clock using Arduino Time for another instalment in my irregular series of irregular clock projects. In contrast with the minimalism of Clock Two, in this article we describe how to build a different type of clock – using the “lilypad” style of Arduino-compatible board and components designed for use in e-textiles..... Listed under: Clock – Timer Projects, Home Automation Projects, Projects


448.  Get Into the Kit Business: How to Build and Sell Your Own Arduino Shields The DIY industry is booming, despite the desperate blackmailing of society by finance capitalists. Companies like Adafruit and Makerbot are grossing well over a million dollars a year, and Evil Mad Science Laboratories just recently dedicated themselves to running a full-time kit business. Making kits..... Listed under: Development Board – Kits Projects

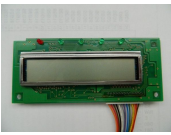
449.  Arduino Internet Controlled Desk Lamp Step 1: What You'll need A linux web-server with PHP, an arduino, a relay and some other components. Step 2: Upload your code to the arduino Upload the following code to your arduino: void setup(){ Serial.begin(9600); } void loop() { if (Serial.available() > 0) { char inByte =..... Listed under: Home Automation Project Ideas

450.  Arduino IR Transmitter & Receiver w/ LEDs Flickering Issue I have an Arduino Uno connected to two IR transmitters and respective receivers. Basically, when one of the receivers detects a beam break, I have a strand of LEDs display a pattern. This all works in principle, but the problem is that when the IR..... Listed under: LED Projects, Radio Projects

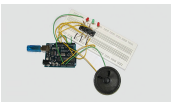
451. Intro to Model Airplane Autopilot I am twenty years old. I picked up my arduino for the first time this Christmas, and I've been keeping busy on my arduino applications so that I can bring you this instructable. I hope that it helps!!! The purpose of this project was to..... Listed under: Car Projects, Game – Entertainment Projects



452.  Making the Good Night Lamp using Arduino Last March, Alexandra Deschamps-Sonsino registered a new limited company in London, and booked a booth at CES, the consumer electronics trade show, taking place 10 months later. She had no team, and only a dated prototype product that she had designed back in 2005. "I..... Listed under: Home Automation Projects, LED Projects, Projects



453. Salvaging an LCD from a fax machine using an Arduino I acquired an old fax machine that looked like a ripe source of parts, like steppers, IR sensors, micro switches and things. As it turned out, it was. It also had a nice looking 2 x 16 character LCD. However, after taking everything apart, I..... Listed under: CNC Machines Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, LCD Projects, Projects




454. Arduino hardware hacking: Part 3 In our previous two tutorials (see here and here), we created a Simon-type game using the Arduino, a hardware platform for simple, and not so simple, electronics projects. We placed three buttons and three LEDs on to something called a breadboard, and wrote a small..... Listed under: How To – DIY – Projects



455. Arduino Solar Tracking Robot This is a simple solar tracker which automatically orients itself towards the sun or any bright source of light like the sun .If you place solar panels on this robot it can increase their productivity by 90 to 95 %. At first creating a solar..... Listed under: Robotics – Automation Projects, Solar energy projects

456. Arduino Esplora Accelerometer This sketch shows you how to read the values from the accelerometer. To see it in action, open the Arduino serial monitor on your computer and tilt the board. You'll see the accelerometer values for each axis change as you tilt the board. Circuit Only..... Listed under: Metering – Instrument Projects, Projects



457.  Arduino hardware hacking: Part 2 In part 1 of our Arduino tutorial series we covered the basics of how the Arduino works, and we're going to use that knowledge in a hands-on project and see how this open-source hardware programming environment works when we're actually trying to get something done..... Listed under: How To – DIY – Projects



458. The Revenge of the Yellow Drum Machine (Arduino) I was inspired by Frits Lyneborg's Yellow Drum Machine. Watching the videos, it has such personality! I have also been thinking recently about sound and robotics. I did some research looking for a version of the robot that used the Arduino as a brain, but..... Listed under: Sound – Audio Projects



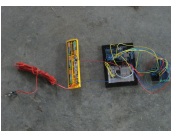
459. Theremin with Zapper,laser,Arduino I created this Theremin like device after seeing this article in Make magazine: <http://m-cdn.dashdigital.com/make/vol15/?pg=69#pg67> While this looked pretty straight forward it turned out to be a bit much for me at the time. But after much effort, I got it to work pretty good. I..... Listed under: Other Projects, Projects



460. Arduino hardware hacking: Part 1 Arduino is cool. It's cool because it's a tiny device - about three inches by two inches - that comes with a USB port and a programmable chip. It's cool because you can program it using a very simple programming language known as Wiring. But..... Listed under: How To – DIY – Projects



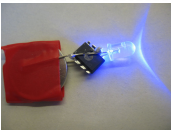
461. Fluid In.Flux_3D Wax Printing In Water Fluid In.Flux is a 3D printing experimental machine which prints wax in water. The Machine was a semester-wide exploration as part of the Advanced Architecture Studio called "Creative Architecture Machines" by Professor Jason Kelly Johnson and Michael Shiloh at the California College of the Arts, in San Francisco..... Listed under: CNC Machines Projects



462. RC Rocket Launch System This instructable will show you how to make an RC launch system for your Estes rocket, which can be operated with a TV remote. What it does is it allows you to press the center button on your TV remote, and it'll automatically launch your..... Listed under: How To – DIY – Projects



463. Controlling your trains with an Arduino A quick introduction to the Arduino 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. Arduino can sense the environment by receiving input from a..... Listed under: How To – DIY – Projects



464. Throwduino Basic – Light-Sensing Flashing Throwie Throwies are great. They have a minimal parts count - 2 or 3 depending on whether you use a magnet - and produce a great effect. They are very cheap and easy but not highly efficient: 1) They are on all the time, so on..... Listed under: LED Projects, Sensor – Transducer – Detector Projects




465. Arduino Online Thermometer Project I have been researching a project which will help me with my understanding of electronics, networking, and programming. I decided to build an online thermometer which could be used in applications that need temperature monitoring. I currently work in a lab environment where I test, troubleshoot,..... Listed under: Medical – Health based Projects, Temperature Measurement Projects

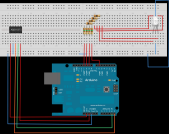


466. Pachube Client using Arduino This example shows you how to answer a HTTP request using an Ethernet shield. Specifically, it connects to pachube.com, a free datalogging site. The example requires that you set up a pachube.com account, as well as a pachube feed (for more information on setting up..... Listed under: Ideas, Internet – Ethernet – LAN Project Ideas

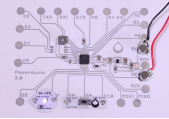
467.




Graphing values in Arduino Sometimes when you're testing a sensor or debugging a value in an Arduino project, you want to see something other than numbers flying by in the Serial Monitor. However, you want to get the sensor working quickly, and you don't want to take the time..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
468.




RGB Color Sensor on Arduino The next board I want to show you is the ADJD-S371 Color Light Sensor Evaluation Board from sparkfun. It emits light and analyses the reflected color spectrum. The board can be controlled via I2C. The sleep and xclk pins were not used in this example..... Listed under: Sensor – Transducer – Detector Projects
469.



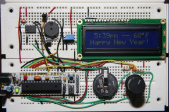
Paperduino 2.0 with Circuit Scribe – Paper Arduino What if making an Arduino, or wiring up an Arduino was as easy as printing one out? In this tutorial we printed our own Arduino Pro Mini board using a pen plotter and the Electroninks Circuit Scribe (a rollerball pen with highly conductive ink). Within..... Listed under: LED Projects
470.



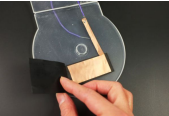
Daft Punk LED Matrix Breakout Board I was always impressed by the Daft Punk Coffee Table. Being able to light up a bunch of LEDs and flash them in patterns has so many applications. It was one of the reasons why I bought an Arduino seeing how it could control a..... Listed under: LED Projects
471.




LEARN! ARDUINO – A HANDS-ON APPROACH INTRODUCTION This manual will show you how to use each of the components in the kit, and give you software Sketch examples for each one. Then you can combine some components to make examples of Automatic Systems such as a lighting controller. You're probably..... Listed under: How To – DIY – Projects
472.



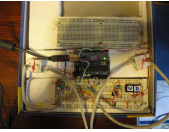
Alarm Clock Overkill I don't get up at the same time every day, so I thought it'd be nice to have an alarm clock that would drag me out of bed at different times on different days. That was the initial idea: things got out of hand, of..... Listed under: Clock – Timer Projects
473.




The Clamshell Stompbox This is a DIY variable resistor I created as an interface for live performance-- like a stomp box. I designed it as a project my audio students could build with materials we already have in the classroom. The result is a variable resistor that can be..... Listed under: LED Projects
474.




Arduino and CueCat barcode scanner I've had a cuecat barcode scanner sitting around for over 10 years. Basically it connects to a PS2 port (apparently there is a USB version) like a keyboard and spits out a barcode when scanned. Nice!. The annoying thing is that it is "encrypted". What..... Listed under: Sensor – Transducer – Detector Projects
475.




Domotic arduino In this introduction I will show you a overview of this project with Arduino Uno. The purpose of this instructable is move a electric roller shutter by Arduino Uno. The prototype that I made is my first electronic project with Arduino and I hope this..... Listed under: Development Board – Kits Projects, Projects
476.



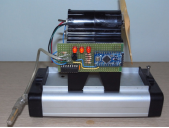
Cylon Pumpkin This has been done before. There are several good ways to do it: most use either a 555 timer chip and decimal counter chip, or an Arduino. Stefan and I used an Arduino (Boarduino, technically) which limited our scanner to 14 LEDs. No problem ---..... Listed under: Game – Entertainment Projects
477.




Build Your Own Programmable LED Matrix QR codes are addicting. Smartphones are smart enough to read them from virtually any angle or orientation. But imagine taking it a step further. I had dreams of a digital LED array that I could program with QR codes, and I wanted it really big!..... Listed under: LED Projects
478.




Botanicalls Clone using an Arduino During the past spring a good friend of mine bought me my first house plant, a Lady Palm, and I've found myself rather invested in keeping it alive. To that end I wanted to monitor the plant's environment so I could ensure that its needs..... Listed under: How To – DIY – Projects, Projects
479.




Arduino-Controlled Physics Lab Fan-Cart A "fan cart" is a roughly constant-force device used in introductory physics labs. It consists of a fan (usually a model airplane propeller on a brushed DC motor) mounted on top of a low-friction cart. Students use it to pretend they're learning something about force,..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas
480.



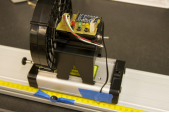
Arduino DDNS (Dynamic DNS) by Open-Electronics.org This device captures the IP address of your network and it publishes on site DynDNS.com. All without PC. It allows a remote access to your LAN even if the IP address of the connections changes. For logistics reasons the provider can not assign a IP..... Listed under: Internet – Ethernet – LAN Projects, Projects
481.



Visualize data from sensors using Arduino + coolterm Once you're getting some values from sensors, for example using Arduino, (see my previous instructable), sometimes it's nice to see the sensor data in a graph. Here's how in only a few steps! I made this particular Instructable using a sonar sensor (XL Max Sonar)..... Listed under: Sensor – Transducer – Detector Projects
482.



USB Game Pad With Tilt-accelerometer Mouse using an Arduino Make a game pad with an accelerometer inside! This project tutorial will show you how you can convert a console game pad into a USB keyboard mouse for playing games on your PC. The USB game pad can be used with nearly any software, such..... Listed under: Game – Entertainment Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, Metering – Instrument Projects, Projects
483.



Improved Fan Cart In an earlier post I described an Arduino-controlled fan cart. The driver I used was an L293D quad half-H chip, because I had one handy and was out of simpler parts at the time. It's always bugged me that I was just controlling speed on..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas
484.

Singing plant. Make your plant sing with Arduino, a touch sensor, and a gameduino This project is a part of experiments done while doing an artist in residence at Instructables. You can see the other projects here. Making a plant sing has been a trick since the Theremin was invented. Here I am going to teach you how to do..... Listed under: Game –



Entertainment Projects, Home Automation Projects, Projects, Sound – Audio Projects

485. BaW-Bot Part 2: Build the motor-controller & body This is the second part of our BaW-Bot (Bells-and-Whistles Bot) build – 5 separate instructables that look into different Arduino-related technologies, combining to create a Bot with all the bells-and-whistles. Part 1: Build an Arduino on a Board Part 2: Build the motor-controller & body..... Listed under: Motor Projects, Robotics – Automation Projects



486. Remote key-switch operation One of my colleagues, Dr. Shane Mayor, has built a very nice LIDAR system for atmospheric research. It's located at a remote site, at the end of a dirt road, and everything about the system can be controlled remotely except the main pump laser power..... Listed under: Radio Projects



487. Connecting a 12V relay to Arduino To connect a 12V relay to the Arduino you need the following things: - 1 Arduino - 1 diode for example 1N4007 - 1 NPN transistor for example 2N2222 (in the US) or BC548 (in Europe) - 1 relay for example one with coil voltage..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects



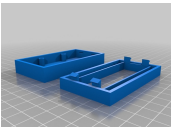
488. Arduino Flash Controller for Photography Being a broke amateur photographer isn't easy. Film, chemicals and paper aren't cheap and a budget for some studio lights is non existant. So, I decided to, with the help of my trusty arduino, create my own sync controller to use with disposable camera flash circuits. By using a..... Listed under: Video – Camera – Imaging Projects



489. Super Secret Lock Box w/ Capacitive Touch Hey everyone, I wanted to share a project I just finished up. I built a super secret locking box for my girlfriends little brother. He has a knack for creative lego building so I thought it would be a good idea to open him up..... Listed under: Security – Safety Projects, Sensor – Transducer – Detector Projects



490. Driving multiple Sparkfun 7-segment displays with an Arduino I'm currently helping a couple of engineering students finish a senior project that didn't get finished last year. Long story... Anyway, it's a bicycle brake tester being built for Paul Components. The mechanical design is great, but they had trouble with the electronics. Part of..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects



491. Aquameterduino: Water meter plus Arduino After a bad water damage (our cellar basically filled up whilst we were away for several days), I decided to monitor our water usage for anomalies. Enters Arduino... The idea of this project is to use an arduino to count every drop of water that..... Listed under: Metering – Instrument Projects



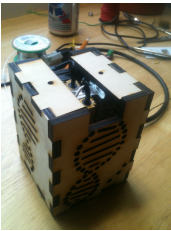
492. Wrap Beats – Capsense Arduino Instrument Wrap Beats is an instrument that lets you string together notes in order to create different melodies and visual patterns. I constructed it using the Capacitive sensing library for Arduino and combining that with the music abilities of processing to create a dynamic instrument that..... Listed under: Sound – Audio Projects



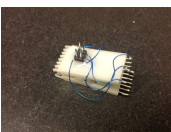
493. Arduino datalogging accelerometer with μ -SD storage Thanks to Will Greiman's Fat16 library for the Arduino, I finally got a useful version of this datalogger working! Here's the schematic: And here's the code. The code is highly configurable: it can save raw A/D values or converted values, it allows software-defined gain, it..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas, Memory – Storage Project Ideas, Metering – Instrument Project Ideas



494. Arduino PCR (thermal cycler) for under \$85 This tutorial will show you how to make a thermal cycler from scratch for about \$85. In short, PCR (polymerase chain reaction) amplifies bits of DNA, creating millions of copies of a target sequence. You can use it to test a DNA sample for a..... Listed under: How To – DIY – Projects



495. ISP Clip for ATtiny44/84 (or others!) I got my start in microcontrollers with the Arduino, as many of us outside of electrical engineering did. (And still do!) The ease of programming that little board makes it a great gateway... and like any gateway, sometimes you go through. Most of my projects..... Listed under: Development Board – Kits Projects, Interfacing(USB – RS232 – I2c -ISP) Projects



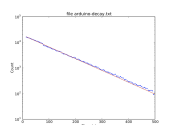
496. RFI-DJ: MP3 Playing RFID Thing The RFI-DJ is a USB device for playing MP3 files from your computer. You have a set of RFID cards, each one with a song name written on it. You choose a card and place it on the RFI-DJ, and your computer will play that..... Listed under: RFID - NFC projects, Sound – Audio Projects



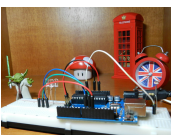
497. RGB LED Color Selector One Challenge with working with RGB LEDs is getting the right Red, Green and Blue values to match a color you are trying to display. You can start with web colors, and then sometimes need to adjust them since the LEDs don't look quite the..... Listed under: LED Projects

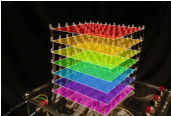



498. Radioactive isotope decay simulation My students need to learn LabVIEW —I know, it's proprietary software, and expensive, but until a viable open-source equivalent comes along we're stuck with it— and one of the exercises I have them do is to make a program to analyze radioactive decay. This gives..... Listed under: Radio Projects

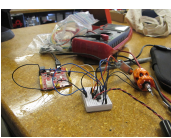


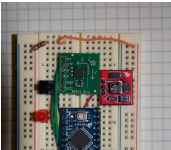
499. Mood Lamp with Arduino Hi! In this tutorial you will learn to make a mood lamp with arduino. I know that you may have seen a lot of mood lamp projects with arduino, but I wasn't very satisfied with them because they all change the color very abruptly. So,..... Listed under: Home Automation Projects




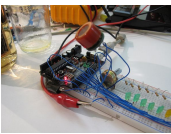
500.  Self-Contained 7x7x7 LED Cube using Arduino LED cubes are true 3D displays that work by lighting up points in a 3D lattice of LEDs. On the 3D display you can produce some truly mesmerizing animations. This Instructable will walk you through creating an LED cube for yourself that is completely self-contained and powered..... Listed under: LED Projects, Projects

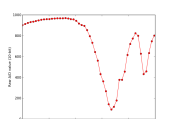
501.  Using a quadrature encoder (rotary switch) with Arduino I've found several sites and posts explaining how to use a quadrature encoder with an Arduino, but wasn't completely satisfied with any of the methods used. Perhaps part of the problem is with the encoder I'm using: it's part #COM-09117 at Sparkfun.com. This encoder has..... Listed under: Arduino Programmer Projects

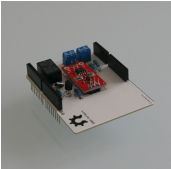
502.  Use xbees (series 2) to control a motor Using two xbees, an arduino, an xbee explorer, and an h-bridge, wirelessly control a DC motor to spin in both directions (last video). Note: I used the xbee I linked to, but for a one to one communication, rather than a network of wireless devices,..... Listed under: Motor Projects


503.  Simple Datalogger Here's a simple Arduino-based datalogger I'm currently developing: This test-of-concept model is based on the Arduino Pro Mini (ATMega168). It runs on a 1.5-V battery, using a voltage up-converter from Sparkfun.com. For a sensor, it's using a 3-axis accelerometer on a breakout board, also from..... Listed under: Development Board – Kits Projects


504.  BaW-Bot Part 3: Adding Sight and Touch to the Bot This is the third part of our BaW-Bot (Bells-and-Whistles Bot) build – 5 separate instructables that look into different Arduino-related technologies, combining to create a Bot with all the bells-and-whistles. Part 1: Build an Arduino on a Board Part 2: Build the motor-controller & body..... Listed under: Robotics – Automation Projects


505.  Building an Breathalyzer with MQ-3 and Arduino During the First Meeting of Electronic Arts in Florianópolis, we built a Breathalyzer using the Alcohol Gas Sensor MQ-3 and a Arduino Board to use in the last day of the meeting, in which we gave a party. You can see a quick video two..... Listed under: Medical – Health based Projects, Projects, Sound – Audio Projects


506.  Simple Arduino data-collection At this year's "Arduinos in the Physics Lab" workshop at the AAPT meeting, one of the participants asked for a simple way of using the Arduino as a tethered A/D converter for data collection direct to a computer. This is my quick & dirty demonstration..... Listed under: Metering – Instrument Projects

507.  Energino: an Arduino-based energy consumption monitoring shield Energino is a plug-load meter that measures the amount of power consumed by whatever DC electrical appliance is plugged into its. It was originally designed to monitor the energy consumption of simple networking devices such as Ethernet switches and WiFi access points, but it can..... Listed under: Metering – Instrument Projects

508.  More Humane Moisture sensor Recently I got a project from Titan industries, who were in search of something as an interactive plant pot which could bridge this gap of emotional communication, in mins this reminded me of brilliant projects done by people where the plant could tweet and..... Listed under: Sensor – Transducer – Detector Projects


509.  Arduino-based event counter I teach Modern Physics here at CSUC, and we occasionally use isotopes with half-lives of a year or less (such as Zinc-65 and Cadmium-109) for energy-calibration sources for a gamma-spectroscopy lab. I thought it might be fun to try measuring the activity of one of..... Listed under: Calculator Projects

510.  Lithium Battery Solar USB – iPhone – Arduino Charger One of the most fun and useful projects on instructables is to create your very own solar USB/ iPhone charger. They're not overly difficult to make, nor are the parts overly expensive or hard to find. For the most part they do a rather good..... Listed under: Battery Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, Phone Projects

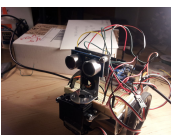
511.  ATtiny85/45/25 LED dice If you have looked at my 5 LED ATtiny85 POV display, we programmed the ATtiny with the Arduino. (If you haven't seen it, click here) We will be doing the same thing for this LED Dice project. The total parts cost for this project is..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, LED Projects

512. Morse-code trainer My kids are learning Morse code this summer, so I threw together this little circuit to help them learn. And to make it more fun... It uses an ATtiny85 (\$2.26 at digikey.com) to drive a piezo beeper (≈ \$3.50 at Radio Shack.) The ATtiny85 takes..... Listed under: Arduino Programmer Projects

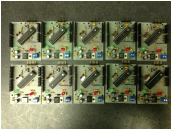


513.  Light Painters Palette aka Light Box Today I'm going to show you how I made my "light painters palette" aka light box. If your into electronics and photography than this is probably something you are going to like. Supplies: -Arduino (I'm using a arduino pro mini which requires a ftdi basic to program,..... Listed under: LED Projects, Video – Camera – Imaging Projects


514. How To Make an Obstacle Avoiding Arduino Robot Hello all! In this Instructable I'll be showing you how to make a robot similar to the "Mobile Arduino Experimental Platform" (MAEP) that I made. It is equipped with two motors that can steer the robot and the ability to see obstacles in front of..... Listed under: Robotics – Automation Projects



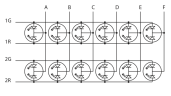
515.



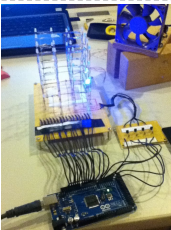
“Ayrduino” Single-Sided Arduino Clone I'm teaching "Electronics for Scientists" this semester, and I wanted to allow each student to have their own Arduino to play with for microcontroller lab exercises and possibly use for their final projects. The Arduino is not very expensive at roughly \$30 per, but they..... Listed under: Development Board – Kits Projects
516.



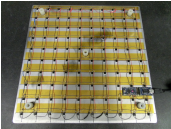
Fijibot Fijibot is an autonomous, self-charging photovore. I built him using a 1.5 liter Fiji Water bottle, an Arduino Uno, 6v solar panel (plus various other parts) from Radio Shack, an Arduino Proto Shield (plus various other parts) from Adafruit, and the wheels and steering arrangement..... Listed under: Robotics – Automation Projects
517.




Network-status indicator I run a NFS/NIS network under a combination of OS's for the upper-division physics lab here at CSUC, and one source of irritation is when one machine goes down and nobody lets me know until suddenly that machine is absolutely necessary NOW! So I figured..... Listed under: Internet – Ethernet – LAN Projects
518.




4x4x4 LED Cube Arduino After seeing all the different instructables for Led cubes i was still left with a lot of unanswered questions. So after reading everything i could find this is what i got. I decided to make the instructable after building it...so ill try to recreate the process the best..... Listed under: LED Projects
519.




Quantitative Two-Dimensional Temperature Measurements Lab Experiments involving the Heat Equation are usually one-dimensional exercises involving a copper pipe and a half-dozen thermocouples. But with DS18B20 "One-Wire" thermometer chips and an Arduino, it's possible to measure hundreds of temperature values simultaneously. Here's what my students Daniel Lund and Lawrence Lechuga..... Listed under: Temperature Measurement Projects
520.




Arduino ATtiny2313 Programming Shield Today, I made a small 3x3x3 LED cube with an ATtiny2313 that I had from about 2 weeks ago. Whenever I had to reprogram the LED cube when I thought of more awesome patterns, I had to get out my breadboard and then wire up..... Listed under: Arduino Programmer Projects, Development Board – Kits Projects, Projects
521.




Full Binary Clock I was wandering the internet looking for a good arduino tutorial on how to build a binary clock with seconds, but I could not find one. So now I am writing this for you to have a binary clock with seconds, minutes, and hours. What..... Listed under: Clock – Timer Projects
522.




Universal clock suitable for visually impaired using Arduino I was googling around looking for some sort of device I could make using arduino and stumbled upon eshop with devices for visually impaired. What really shocked me was the price. I mean-I do realize that such sorts of devices are not really mainstream, but..... Listed under: Clock – Timer Projects, Projects
523.




Arduino Robot Arm – LarryArm v0.1 I have constructed a basic Arduino robot arm using 3 servos that cost me £15 in total plus a couple of hours in time to build and it's very simple that I think anyone can replicate and build this. I already had the Arduino Duemilanove..... Listed under: Robotics – Automation Projects
524.




Cwik Clock v1.0 – An Arduino Binary Clock Overview This is a guide to building an Arduino-powered clock that uses LEDs to display a 24-hour clock (hours and minutes) as binary digits, an analog meter to display the seconds, a switch to toggle between time-display and time-setting mode, and 2 knobs for setting..... Listed under: Clock – Timer Projects
525.




Arduino: Controlling the Robot Arm So the arm is wired into Arduino as per the previous post, Arduino: Modifying a Robot Arm and hopefully this has worked. In this next part I alter the Arduino sketch slightly and write the first Processing sketch to test control of the arm –..... Listed under: Robotics – Automation Projects
526.




Clusterbot What is Clusterbot? He is a small, affordable, autonomous Arduino-powered robot. He can move, see, avoid obstacles, and makes a melodic chirping sound sometimes. Clusterbot was my first Arduino project, and I think he makes a great project for a beginner. While building Clusterbot you..... Listed under: Robotics – Automation Projects
527.



4 Servo drive CellBot which can be remotely controlled using Arduino I started with an idea of what I wanted to do from the beginning but one attempt after another I finally got to where I am now. This robot can be remotely controlled from anywhere in the world and driven around the house. I can..... Listed under: Motor Projects, Projects, Robotics – Automation Projects
528.




Using Processing to Send Values using the Serial Port to Arduino In this write-up, I'll show how to create a value in Processing and then send this value over the serial port to the Arduino. In the example I'm setting values of LEDs making them brighter or dimmed but this example can be extended to control..... Listed under: Arduino Programmer Projects
529.

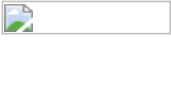



Over the Counter Kitchen Radio using Arduino This project used the Si470x FM radio receiver and an arduino to make an over the counter kitchen radio. These parts had been purchased for a different build that unfortunately met a premature end. The concept for this project is simple. Play my favorite news..... Listed under: Home Automation Projects, Projects, Radio Projects
530.


SPEAKR Nature has a way of speaking to us in a way that soothes and revitalizes. Sounds of the wind in various places create low volume tones that we barely hear. They have a certain beauty and randomness to them that are unique to nature. We've..... Listed under: Game – Entertainment Projects




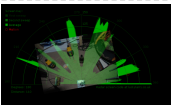
531.  Box Scurity Package using Arduino If you touch the package, it will scream and run away--changing its course when it strikes an obstacle. When you lift the gift tag, light strikes a photocell and operation commences. Motors and a sound module are controlled by an Arduino (and Arduino Motor Shield)..... Listed under: Projects, Security – Safety Projects

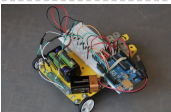
532.  Arduino + Processing – 3D Sensor Data Visualisation So following on from my previous posts about visualising sensor data in Processing, I'm now looking at drawing 3D representations of the data recorded from the Sharp IR sensor – although can be any kind of range finder. I started by rigging 2 servos, one..... Listed under: Sensor – Transducer – Detector Projects


533.  LED Cylinder using Arduino This is a little art project I made with 95 RGB LEDs arranged in a 3D cylinder shape, sitting atop a microcontroller-based driver circuit. The LEDs are individually addressable, and when you power it on, the software cycles through a series of animations, e.g. various..... Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects

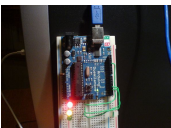
534.  Electrically Insulated Altoids Tin Ah yes, it's time for another Instructable involving an Altoids tin... But this time it's not about what's inside the Altoids tin, it's about the Altoids tin itself. In all its greatness, the Altoids tin we all know and love has one rather major flaw..... Listed under: Development Board – Kits Projects

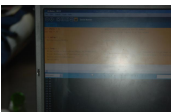
535.  How To Interface a CDV 700 Geiger Counter to a PC Using an Arduino Video instrucitons How To Interface a CDV 700 Geiger Counter to a PC Using an Arduino (Part 1) The second part of our video series of our project to interface to a CDV-700 radiation meter using an Arduino Uno! How To Interface a CDV 700 Geiger Counter..... Listed under: Calculator Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, Projects


536.  Arduino + Processing – Make a Radar Screen – Part 3: Visualising the Data from Sharp Infrared Range Finder So I had some luck with getting the Sharp Infrared range finder working and I've now plugged this on to my servo rig to see if I get better results on my radar styled display. Check out how to use the Sharp IR range finder..... Listed under: LCD Projects, Metering – Instrument Projects


537.  Using the Sparkfun Motor Driver 1A Dual TB6612FNG using Arduino As a beginner myself, I struggled to find a one-stop set of instructions to get up and running with Sparkfun's Motor Driver 1A Dual TB6612FNG. This motor driver breakout board is exceptional value, is beautifully small, but does need a little more effort to get..... Listed under: Motor Projects, Projects


538.  Motion Controlled Robotic Arm This instructable is not complete, I will post code soon The Arm: This instructable shows the process of building a robotic arm using servos, Arduino microprocessor, a gyroscope and multiple bend sensors. The user wears a glove containing the gyroscope and bend sensors which translate..... Listed under: Robotics – Automation Projects


539.  Arduino traffic lights I made this project on the same night that my Arduino Duemilanove arrived from Cool Components. After being an Instructables member for about a year I though it was time I should contribute. There is another Arduino traffic light project similar to this, but it..... Listed under: Car Projects, LED Projects, Projects


540.  Arduino – Using a Sharp IR Sensor for Distance Calculation Well, looks like my sonar sensor (SRF05) is a just a tad inaccurate for precise measurement as I found from my radar screen I made (Arduino Radar Sscreen). So I've got hold of a Sharp GP2Y0A02 series infrared distance sensor. It'll detect and measure anything..... Listed under: Sensor – Transducer – Detector Project Ideas

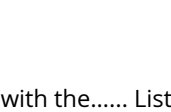
541.  Controlling a clock with an Arduino Update: The Arduino system is fine; the only thing you have to take into consideration is the 9.54 hour rollover event, which Rob Faludi has provided an excellent solution for here. I made up a nice little over-analysis of the issue, available here. I have..... Listed under: Clock – Timer Projects, Projects

542.  RGB flashing iPod dock from an old speaker Using an Apple Pro speaker, I made a flashing RGB LED iPod dock for about \$35. I recommend reading the entire 'ible before starting. Also, note that the volume is control from the iPod. It consumes minimal power in shutdown mode, and is controlled by..... Listed under: Sound – Audio Projects


543.  Arduino + Processing: Make a Radar Screen to Visualise Sensor Data from SRF-05 – Part 2: Visualising the Data This is where all the work is done to read and interpret the values from the servo and the sensor. If the readings are to erratic then you won't have nice shapes. Also if you don't allow enough time to the signals to be sent..... Listed under: LCD Projects, Sensor – Transducer – Detector Projects

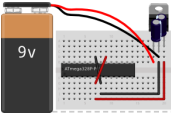
544.  An 8-Bit Waterfall using Arduino So far my Arduino projects have all needed only a small number of output pins. In a previous post I talked about moving some of the logic off the Arduino and into other integrated circuits in order to free up pins on the Arduino. While..... Listed under: Other Projects, Projects

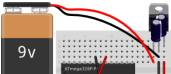
545.  Vibration Foam Speaker Concept: Very simple, using an arduino and the play melody basic program, create a music playing speaker out of a vibration motor and a piece of flexible foam. Instead of pulsing signal to a speaker, signal is pulsed to a motor varying how fast it..... Listed under: Sound – Audio Projects

546.  Arduino + Processing – Make a Radar Screen to Visualise Sensor Data from SRF-05 – Part 1 First things first, we need to build our circuit. This is the easy bit! We'll be using the Arduino to control a servo that will rotate our sensor around 180 degrees. The Arduino will then send the value from the distance sensor along with the..... Listed under: LCD Projects, Sensor – Transducer – Detector Projects




547.  Police Lights using an Arduino ****DISCLAIMER**** I do not and will not take responsibility for anyone who gets in trouble for this, by either imitating emergency personnel, or using without a permit/lisence. Updates! -I have shortened the code -Changed 16 LED's to 8 -Changed/added more flash patterns -Renamed variables As..... Listed under: Car Projects, LED Projects, Projects




548.  Honey, I Shrunk The Arduino As you might be able to tell from recent posts, I've been doing quite a bit of work with an Arduino. I've now got at least one project that I'd like to make a little more permanent, rather than it just being a bunch of..... Listed under: Other Projects, Projects




549.  Color Changing LED Tree Ever wanted an LED tree? Well now you can have your LED tree and eat it too (no, wait, you probably shouldn't).. Step 1: Gather the parts You will need: 1x ATtiny85 10x male header pins Solid core wire, 2 colors A bunch of LEDs..... Listed under: Game – Entertainment Projects, Home Automation Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, LED Projects




550.  Arduino – Basic Theremin meets Processing! My last theremin involved a small speaker. Now I've replaced the speaker with my PC, using processing to pick up the values from the SRF05 ultrasound sonar distance sensor and play different notes accordingly – which gives multiple possibilities and far better sounds. So to..... Listed under: Sound – Audio Project Ideas




551.  Brute force attack a BIOS with Arduino The goal of this experiment is to convert the Arduino board into an USB keyboard plus a VGA sniffer to crack the password of a standard BIOS using the brute force attack method. There are no advantages in using this method, in fact this can..... Listed under: Memory – Storage Projects, Projects

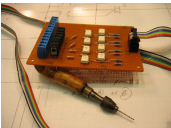


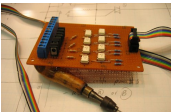
552.  Send and Receive MIDI with Arduino This instructable will show you how to use an Arduino to send and receive a variety of MIDI messages so you can start building your own MIDI controllers and instruments. First I'll talk a little bit about MIDI protocol, if you're just looking for sample..... Listed under: Sound – Audio Projects

553. Arduino – A Basic Theremin Theremins are cool. Fact. You may also have heard of them as either aetherphone/ etherophone or termenvox/ thereminvox. Essentially its an electronic music instrument that plays a certain note depending on the position of your hand and its distance from an antenna. Building a very..... Listed under: Sound – Audio Projects




554.  Tweetosapien: Hack a Robosapien With Arduino to React to Tweets A really fun project sent into us by Thomas Meghe. He's translated it all from his native French, which is a technical achievement itself. If you'd like to see the original, you can find it here. Bored of your favorite Twitter client ? No problem,..... Listed under: Internet – Ethernet – LAN Projects, Projects




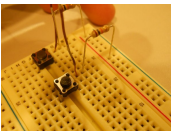
555.  Walleye using Arduino Walleye is an interactive light installation which engages users in temporal gestural and bodily play. It generates temporal light propagation patterns, or a large scale very low resolution pixilated image (depending on how you look at it) based on the realtime movement of visitors in..... Listed under: Other Projects, Projects

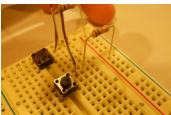


556.  How to build your own sugru robot – Fixbot So you saw our video and you've fallen in love with Fixbot, have you? That's okay, it's understandable. We've fallen in love with it too. We have some great news! You can build your own Fixbot too, provided that you're okay with getting your hands..... Listed under: Robotics – Automation Projects




557.  Arduino – Basic Persistence of Vision I think this'll be the start of a few more projects for me. I've seen some cool LED PoV stuff (Persistence of Vision) with mounting displays on bikes, so hopefully I'll get round to doing something like that. Anyway as a start I've got 5..... Listed under: LED Projects




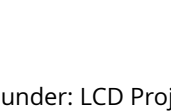
558.  How to make a servo leg using Arduino This instructable will show you how to create a simple servo leg that can be controlled by buttons on an arduino or via serial. Here is a video of the leg in action <http://www.youtube.com/watch?v=Q8i1nrPIJvo> Leg Materials: Popsicle sticks-make sure that all of them are flat..... Listed under: Motor Projects, Projects




559.  A Study in Non-Standard Distributed Computer Architecture using Arduino In the following tutorial, directions are given for creating a single node for the DoHas (Distributed Optical Harvard Architecture System). After constructing two of these nodes, a small distributed computer can be implemented which uses one node for sending instructions, mimicking input and the instruction..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, RTOS – OS Projects

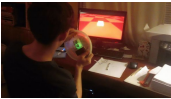


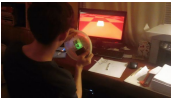
560.  BOXZ BOXZ is an open source robot platform for interactive entertainment! We connected Arduino,Plexiglass(or cardboard) Origami and your idea together, so we can easily and quickly build a remote robot by ourself! You can assembled it like LEGO! We can use it to playing football..... Listed under: Game – Entertainment Projects, Robotics – Automation Projects

561.  Arduino – Getting my LCD Screen to work I've gotten hold of what I assumed was a compatible 16x2 LCD screen with my Arduino board – it's a Powertip PC1602F and uses a compatible display driver for the Hitachi HD44780 display chip. This is essentially what the Arduino LCD libraries are built around,..... Listed under: LCD Projects




562.  Hacked roomba and arduino snowballs into a Eurobot 2013 entry It all started as a weekend project with my kids and soon enough I got sucked into a 4 month project with their school ! The idea was to get a small group of kids aged 6 to 9 to participate to a robotics contest..... Listed under: Projects, Robotics – Automation Projects




563.  DIY Driving Simulator using an Arduino If you haven't noticed, as soon as you clicked into this instructable, you are now following me if you weren't already, you Favorited the instructable, and you voted for this instructable in all contests it is entered in. Then the buttons all dissappeared. It's okay..... Listed under: Car Projects, Game – Entertainment Projects, How To – DIY – Projects, Projects




564.  BIKEDUINO – Stopping Point Predictor for bike riders The project consists in a Arduino that gets the speed of the bike from a dynamo and it controls a laser which points always to the point where the bike is gonna stop if it continues going at the same speed. Used Hardware: Arduino mini..... Listed under: Car Projects




565.  Version 2.0 Arduino Controlled Car Tracking System based on SMS This system is upgraded version of previous project... You will be able to track your car after you build this system, you will call the device then it will send you an sms which includes LAT, LON and Google Map link for just one touch..... Listed under: Car Projects, Phone Projects, Projects

566. Building a Doodle Bot kit from DAGU Doodle Bot is a very simple beginners robot that can write messages using white board markers, jumbo chalk or crayons. The kit comes with all parts including an Arduino compatible controller and a screwdriver. You will need to supply 4x AAA batteries and a suitable..... Listed under: Robotics – Automation Projects




567.  larryBot – Arduino robot versions 0.1 to 0.5 lessons learned So I've decided to build a robot using Arduino to control the sensors. Here's my progress so far – I am hoping that my mistakes here and over the coming posts will guide people in more detail about what to avoid. Also I won't provide..... Listed under: Robotics – Automation Project Ideas




568.  Algorithmic noise machine This project is a part of experiments done while doing an artist in residence at Instructables. You can see the other projects here. You can use bit-shifting as an alternative way of creating "music". This principle enables you to squeeze as much processing power as..... Listed under: Sound – Audio Projects




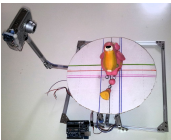
569.  Arduino & Processing – Getting values from SRF05 ultrasound sensor & serial port I've started to delve into Processing and passing values between Processing and Arduino. If you're wondering what Processing is, basically its an open source programming language for vizualising data that can interface with Arduino either by reading values/ pins or by setting them. Just remember..... Listed under: Sensor – Transducer – Detector Projects

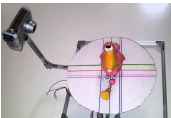


570.  SMS controlled Wireless Irrigation System using an Arduino UPDATE 02/13/11 : Voting has started for the Sparkfun Microcontroller Contest. Please VOTE for me! UPDATE 02/26/11 : I won a second prize!! Huzzah! Thanks for all the votes guys! UPDATE 03/17/11: I would love to win a Laser cutter in the Epilog challenge as..... Listed under: Phone Projects, Projects




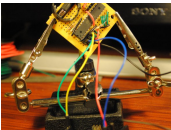
571.  Tissue Box Guitar – Light Strings using Arduino the idea of anything can be an instrumental music has been always in my mind so i made a wooden tissue box that i installed inside it a guitar of light strings Step 1: Building Box i made this wooden tissue box Step 2: Wiring..... Listed under: Game – Entertainment Projects, LED Projects, Projects, Sound – Audio Projects

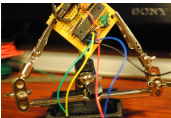


572.  123D Scanner – Home made 3D Scanner Hey - have a look at my new project HERE In this project I built a 3D Scanner, that enables generating 3D models of physical objects. The files can later be viewed in 3D software (GLC Player, Sketchup, Rhino, or sites such as http://3dfile.io) and..... Listed under: How To – DIY – Projects




573.  Arduino – making a basic drum machine Had a quick look round at turning a piezoelectric speaker in to a sensor that will detect a tap or knock. I also then had a search around for setting the output of a speaker to a different note. Combining this has given me a..... Listed under: Sound – Audio Project Ideas




574.  Mint Tin Hero using Arduino A friend at work proposed a friendly competition between a few co-workers: to make something cool out of a Trader Joe's green tea mint tin. Anything – whatever our creative hearts desired. The prize? Nobody cared – we'd figure that part out later. I thought..... Listed under: Game – Entertainment Projects, Projects




575.  Track Honeybees With Temperature Data analysis coming soon! My school is kind of strange. We don't have a cafeteria, but we do have a four week course on "The Simpsons." We don't have a jungle-gym on the elementary playground, but we do have a half-buried firetruck. We don't have..... Listed under: Temperature Measurement Projects


576.




Arduino – (Very) Basic motion tracking with 2 PIR sensors Took me a little while to get started but I've managed to wire 2 PIR infrared sensors with an Arduino to sense motion either on the left or on the right side. The result will trigger an LED to represent each PIR sensor then I..... Listed under: Sensor – Transducer – Detector Projects
577.




Pachube Client using Strings with Arduino This example shows you how to answer a HTTP request using an Ethernet shield. Specifically, it connects to pachube.com, a free datalogging site. The example requires that you set up a pachube.com account, as well as a pachube feed (for more information on setting up..... Listed under: Internet – Ethernet – LAN Projects, Projects
578.




Making a Better Mouse Trap There are a lot of things this world needs at the moment. One of them is a better mouse trap. Mice are getting smarter every day and if we're not careful we'll end up with Planet of the Mice. Luckily, with the help of a..... Listed under: Home Automation Projects
579.




Arduino – motion triggered camera So having worked out that I can make a remote for my Nikon D80 to do some timelapse photography. I started thinking of things I can do to trigger the remote, below video shows it working but you'll need sound to hear the shutter going..... Listed under: Sensor – Transducer – Detector Projects, Video – Camera – Imaging Projects
580.




Accelerometer Table using Arduino Esplora This example simplifies the task of collecting data from the Esplora's accelerometer and graphing it with your computer. The Esplora sends keypresses to a connected computer about the state of the accelerometer. If you open a spreadsheet application, you can log the data from the..... Listed under: Development Board – Kits Projects, Metering – Instrument Projects, Projects
581.




Arduino Esplora Kart This example demonstrates how to turn your Esplora into a customized computer game pad. It uses the analog joystick and the four switches as inputs to a video game. The Esplora will appear to the computer as a standard keyboard, the computer will see joystick..... Listed under: Development Board – Kits Projects, Game – Entertainment Projects, Projects
582.




Arduino text'in Arduino text'in. Key Features: 24 relays controlled by 4 I/O lines! Cell phone text using your Arduino. This project hacks a cell phone to text using normally open relays. After investigating cellular modules on the internet I decided it looks not only rather pricy, but..... Listed under: Phone Projects
583.




Arduino – IR remote/ intervalometer for Nikon D80 DSLR I'm cheap and skint, yet I want to do timelapse photography with my Nikon D80 DSLR. Unfortunately that requires spending some cash on an intervalometer for time lapse photography which will set me back a sizeable chunk of cash. Or I could get a remote..... Listed under: Video – Camera – Imaging Projects
584.




My hat with full of stars Top hats are cool; just like bow ties. Not only are they stylish, but they give you a lot of room for incorporating techno goodness. I recently had cause to buy a tuxedo, which necessitated a kilt, and then a top hat. You know how..... Listed under: Game – Entertainment Projects, Home Automation Projects
585.



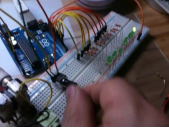
Arduino – Sonic range finder with SRF05 A guide to using the SRF05 Distance Sensor with Arduino in order to calculate distances from objects. In this case I'm also altering the output of an LED with PWM according to how close an object is to the sensor. So the nearer you are..... Listed under: Metering – Instrument Projects
586.




Arduino Esplora Temperature Sensor This sketch shows you how to read the Esplora's temperature sensor. You can read the temperature sensor in Farhenheit or Celsius. Circuit Only your Arduino Esplora is needed for this example. Connect the Esplora to your computer with a USB cable and open the Arduino's..... Listed under: Projects, Temperature Measurement Projects
587.




Knock Block using an Arduino board Knock Block: a modern knocking framework Man has long wrestled with Time. Also, with knocking on things and not getting the time of day. We propose a knocking platform through which these fundamental needs are met. This is illustrated with the Knock Block KUI and..... Listed under: Home Automation Projects, Projects
588.



Arduino Analog Inputs This week is all about analog inputs for the arduino. I'll show you how you can use a voltage divider circuit (see episode 3) and a variable resistor to make an analog sensor. [box type="note" color=" #202020 " bg=" #ffbb00 " font="verdana" fontsize="14" radius="20 " border=" #000"..... Listed under: Projects, PWM Projects
589.

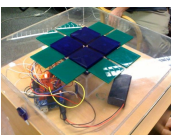


Intervalometer for Sony NEX 5n This intervalometer used infrared LED To built intervalometer you need: Arduino Nano (or Arduino-compability). I used Nano V3 Serial LCD Joystick Module IR Led and resistor ~200 Ohm Switch Push Button Plastic enclosure Battery 9V Schematic is very simple Step 2: Connection Serial LCD has..... Listed under: Metering – Instrument Projects
590.



Arduino – Control a DC motor with TIP120, potentiometer and multiple power supplies A quick circuit showing how to control the speed of a DC motor with a potentiometer with your Arduino board. Also shows how to use a TIP120 transistor to allow the Arduino control a larger power supply. Transistors are 3 pin devices, which via the..... Listed under: Metering – Instrument Projects, Motor Projects

591. Combo Blocks using an Arduino Project by CU Boulder Thinks That Think students: Michelle Bourgeois, Charles Dietrich, and Ben Link Imagine having a safe in which the combo is any small object of your choosing. Perhaps it's your favorite coffee mug, or a bat man figurine. This project is based..... Listed under: Home Automation Projects, Projects,



Security – Safety Projects

592.

Fart Operated Random Channel TV Remote using an Arduino OK, I know that sounds weird, but bear with me for a moment. My Pops really enjoys two things; 1) channel surfing and 2) farting. So one day I was over at <http://hackaday.com/> and read about a guy who used his Arduino to turn a..... Listed under: Home Automation Projects, Projects
593.

Haptic Proximity Module (HPM) for Low Vision users The Haptic Proximity Module (HPM) seeks to enable people with low vision, or other vision impairments, to engage with their direct surroundings through vibration feedback from a range detector, and do so cheaply with readily available components. The aim of this instructables is to share..... Listed under: Development Board – Kits Projects
594.

Control a DC motor with Arduino and L293D chip This is a quick guide with a bit of extra info (pin configurations etc..) that I've learnt along the way on how to use the L293D with the Arduino, showing that we can: A) Use a supplemental power source to power the DC motor B)..... Listed under: Motor Projects
595.

Reaction Timer using an Arduino I am new to Arduino and wanted a project which would teach me different things. This got me involved with sound and the use of a LCD. This project is based on the Instructable posted by bertus52x11 which you can find here <http://www.instructables.com/id/After-Dinner-Reaction-Time-Tester/> . While..... Listed under: Clock – Timer Projects, Projects
596.

Buzz Wire Alarm Clock Does it happen to you to slide your finger across your phone's screen and turn the alarm off ... just because you have automated this task and don't even need to open your eyes? Well, let me present to you the alarm clock that WILL..... Listed under: Clock – Timer Projects
597.

Making a 9v Battery DC power supply Rather than use the USB to power my Arduino board with a handy trip to the electronics store with some more knowledgeable people than I, I have constructed a 9Volt DC power supply. Taking a 9 volt battery, a 9v battery holder and a 2.1mm..... Listed under: Battery Projects
598.

Simple Ipod Controller using an Arduino This instructable will help you understand the iPod serial protocol, and how to send commands to an iPod using an Arduino. This instructable is only meant to show the basics of the protocol and is by no means complete. I only had enough hardware space..... Listed under: Projects, Sound – Audio Projects
599.

3 LED Crossfade with PWM and Arduino This ones quite simple, just mix/ crossfade 3 separate LEDs using Phase Width Modulation (PWM) and Arduino. You will need 3 LEDs, I'm using a 5mm Red, Green and Blue so I can make the full light colour spectrum (When all combined they make white..... Listed under: LED Projects, PWM Projects
600.

Making a Mayan Tzolkin Calendar OK, I will admit that I am a little obsessed with things Mayan at the moment, which explains why I wanted to make a Mayan Tzolkin calendar. I modeled the general layout and fabrication on the very nice Sleek Word Clock by scottbez1 which you..... Listed under: Clock – Timer Projects
601.

Small form factor DIY Arduino on stripboard This board needs FTDI cable to program it. It is not Arduino compatible in the meaning of taking shields (just like every small form factor board isn't). But it has all the same pins (exept 3.3V power and Vin*) available as female headers. The input..... Listed under: Development Board – Kits Projects, How To – DIY – Projects, Projects
602.

Robot Snake Purpose This project was built for the Things that Think undergraduate/graduate class CSCI 4830-7 and CSCI 7000-7 for the University of Colorado at Boulder. Our group consisted of one graduate and two undergraduate students. We worked on the project for 8 weeks, most of the time trying..... Listed under: Game – Entertainment Projects, Robotics – Automation Projects
603.


Controlling a Servo with Arduino Very simple basics of building a circuit to control a servo using Arduino and PWM For this you will need: Arduino Board – I'm using a Duemilanova ATMEGA328 Arduino Sketch software – I'm using version 0015 Arduino Servo Library found here save it to lib/targets/libraries..... Listed under: Motor Projects
604.

Use your android phone sensors on the arduino Hello, this is my very first step-by-step instructable, and today, we're going to learn how the sensors in your android smartphone can communicate with your arduino. In modern smartphones, there are a lot of useful sensors for an ingenious arduino project. I have a motorola..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects
605.

Two ways to reset arduino in software If you want to RESET Arduino from the beginning without manually pressing the RESET button, there are a few ways. Here are two ways, using minimal wiring / circuitry. Step 1: Using 1 wire connected to the RESET pin 1. electronically, using only 1 wire..... Listed under: Arduino Programmer Projects
606.

Siduri – An Arduino Control Smart Coaster Siduri named after the Sumerian god of happiness and merriment, is a smart coaster for your drinks. It recognizes when a glass is near empty and then glows yellow to alert waiters that you will be in need of a refill soon. Designed specifically for..... Listed under: Home Automation Projects



607.  How I'm building my bi-copter with Android and Arduino Last year I was fascinated by the "How to build your own Quadrocopter" by Lenz Grimmer and decided that somehow I should try to do a similar thing. This talk is about the way I'm building a bi-copter using lessons learned for last year's talk..... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects, Robotics – Automation Projects



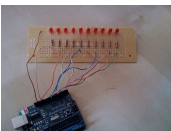
608. Discreet Data Logger using Arduino There is no better way to hide a covert device than to stick it inside a larger conspicuous device. That said... Essentially, this is a guide for making a data logging system for use with the breathalyzer microphone. To accomplish this, an Arduino and a..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas, Projects



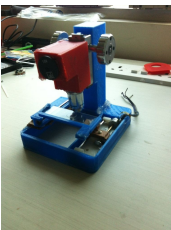
609. A DVD Player Hack This is a description of an open source/open hardware project of a remotely controlled Arduino (Freeduino) based clock/thermometer utilising power supply and VFD panel from a broken DVD player in a custom made acrylic enclosure. The aim of the project was to demonstrate what could..... Listed under: Video – Camera – Imaging Projects



610. Texting mat using arduino Lusha and May created a "Text-Mat". This surface can allow the user to write and send messages using one's feet. This text-mat is designed to send secret messages during meetings or classes. The design utilizes conductive fabric and thread, as well as a flora-board. The..... Listed under: Home Automation Projects



611. The KIT-duino, DIY Larson Scanner with an Arduino IMPORTANT: CODE IS NOW UPDATED. FIXES INCLUDE ADDING AN INTEGER VALUE TO MANIPULATE TIMING AND FIXING A DOUBLE-BLINKING LED. Thanks. It is my understanding that many Larson Scanners can only pulse from side to side. I felt that that needed to be changed, seeing as..... Listed under: CNC Machines Projects, How To – DIY – Projects



612. Low cost digital microscope with automated slide movement using arduino This is an easy-to-implement product modification that will be extremely useful for clinicians, pathologists, researchers or other microscopy enthusiasts interested in capturing whole slide images or creating virtual slides for later use. The device allows one to take multiple images of the slide under high..... Listed under: Medical – Health based Projects



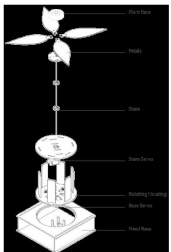
613. Obstacle avoidance Arduino robot – build your own larryBot So after 5 previous versions that had various flaws, I now have an Arduino robot that actually works and although basic is very cheap – although there a probably a few more flaws so please point them out to me but this is a good..... Listed under: Robotics – Automation Projects



614. Water Tank Depth Sensor using Arduino Water is a precious resource in many parts of the world, and many people rely on water tanks to supplement their water supply by storing collected rainwater or water pumped from a well or bore. But how do you measure how full a tank is?..... Listed under: Sensor – Transducer – Detector Projects



615. Arduino Dragon Wings Hello World!! I am making this Instructables on how to make arduino controlled dragon wings. XD I planned on wearing these dressed as Smaug to 'The Hobbit Desolation of Smaug' premier but I didn't complete the entire outfit in time, but I will continue working..... Listed under: Game – Entertainment Projects



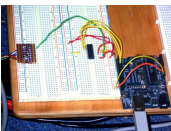
616. Augmenting Plant Behavior Through Robotics using Arduino The PhytoBot is a semi-intelligent plant which responds to external stimulus (light intensity and light location) and responds to it as a phototropic plant would. Essentially it is designed as a piece of interactive artwork for operation over a long period of time. The motivation..... Listed under: Projects, Robotics – Automation Projects



617. Rabbit Ears on a Cap using Arduino We are students from Singapore Polytechnic. After looking at the famous Nekomimi Arduino Cat Ears, we decided to give it a try to help us familiarise ourselves with the accelerometer and the arduino. Using the materials that we had on hand, we managed to produce..... Listed under: Game – Entertainment Projects, Projects



618. Geoweaver: A Walking 3D Printer Hexapod using arduino Geoweaver is a student designed (team members Jia Wu, Mary Sek, and Jeff Maeshiro) robot created in the Creative Architecture Machines advanced options studio at the California College of the Arts (CCA) in San Francisco, California, taught by Jason Kelly Johnson of Future Cities Lab..... Listed under: CNC Machines Projects




619. Programmable auto filter interface for C64 using Arduino Overview A software / hardware combo that allows for control of the analog filter inside a Commodore 64 that is running Cynthcart from a host computer (eg, Macbok, PC). Software • 16-step filter sequencer • Set the speed of the filter sequence (with intervals between..... Listed under: Arduino Programmer Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, Projects


620. Control Access of Arduino YÚN with MySQL, PHP5 and Python Hello Friends! Well, as you know, in September the new premiere shield of Arduino, Arduino YUN. This little friend has a Linux embedded system with which we can run anything you can think of (at least so far). While there is very little information on..... Listed under: Robotics – Automation Projects



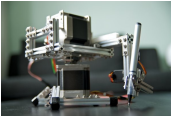
621.




All in one Remote using Arduino Introduction August, 2007 One of my other hobbies is photography, and, about a year ago, I purchased a new digicam - a Panasonic FZ30. I joined the Panasonic forum on the dpreview site. One of the posters, a programmer and electronic hobbyist, designed a nifty wireless..... Listed under: Projects, Radio Projects
622.



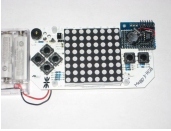
Simple Arduino Wing Shield I buy a lot of these stackable Arduino header sets because they are handy for a lot of things. I make some breakout boards with them, I use them to add some clearance between a taller shield and the next shield that I am stacking..... Listed under: Development Board – Kits Projects
623.




Polar Plotter on Arduino and MakerBeams The project A polar plotter is a plotter with a rotating, extendable arm. Its characteristics differ greatly from those of a traditional plotter, which in most areas have a superior design. You could say the polar plotter is more portable or something, but mainly I..... Listed under: CNC Machines Projects, Projects
624.



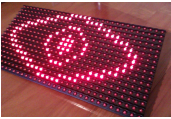
Build the Remote Control Bobble-head Bobbler! using arduino Bobble-heads!!! Every sports fan loves em, but they're kind of boring, just sitting frozen on your shelf 😊 I thought it might be fun to create an Automatic Bobble-head Bobbler something that can wake that old bobble-head up and get him nodding away. I finally found..... Listed under: Robotics – Automation Projects
625.




Clock with Meggy Jr RGB using Arduino There is a saying: "If all you have is a hammer, everything looks like a nail". Well, when I see a display, I think of clocks 😊 I will show you here how to easily make a simple digital clock by hacking Meggy Jr RGB..... Listed under: Clock – Timer Projects, Projects
626.




Let's cook: 3D scanner based on Arduino and Processing Ever wonder of cypaste method, usable in real life, not only in virtual reality? Me too. It is 21th century, and those are nearer than most of all can imagine! This is possible thank to 3d scanners and printers. So let's try to scan something!..... Listed under: How To – DIY – Projects
627.



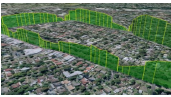
Motion Sensing Eye using arduino I have always wanted to make something with my LED dot matrix display, and so when I found a old alarm motion sensor I knew just what to make, a Motion Sensing Eye! This instructable will hopefully finish with you having a working dmd, that..... Listed under: LED Projects, Sensor – Transducer – Detector Projects
628.




LED Clock A 24-hour clock with hour, minute, and second indicators. Here's the catch, despite being a digital media (LED's) it is still displaying using an analog method (circles!). I finished making this clock months ago but did not bring it with me to school so I..... Listed under: Clock – Timer Projects, LED Projects
629.




Arduino Webserver Control Lights, Relays, Servos, etc... In this project using only an Arduino with an Ethernet shield. I'll be controlling one LED and a servo, but you can apply this method to control a DC motors, buzzers, relays, stepper motors, etc.. Overview: When you upload the the code provided in this..... Listed under: Internet – Ethernet – LAN Projects
630.




Vehicle Telemetry Platform using Arduino Ever wondered what goes on under the hood of your car? Wish you could peek inside the engine management system and read values from it? Annoyed that your dashboard displays a cryptic "Check Engine" light (yep, the engine is still there) but gives absolutely no..... Listed under: Car Projects
631.



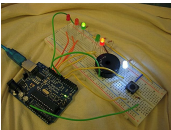
Weather Station Receiver using Arduino The incredible popularity of home weather stations shows that it's not just farmers who are interested in the weather. Many people want to be able to track and record weather events within their local environment rather than relying on a state or national weather service..... Listed under: Sensor – Transducer – Detector Projects
632.




Arduino Beer Pong Arcade We are going to be making a flashy beer pong table. The table lights up as cups are eliminated and old style arcade sounds are played. This games elevates the subtle art of BEER PONG to a new level. A sporting level. A competitive,..... Listed under: Game – Entertainment Projects
633.



Lunch Decider Wheel using arduino The lunch decider wheel is basically a carnival-style wheel that spins every day at 11:45am and selects what is for lunch. It came about on account of my perpetual indecision on this very important culinary matter. In fact, this device does more than just decide..... Listed under: Game – Entertainment Projects
634.




Arduino: Making a set of traffic lights THIS PROJECT IS STILL A WORK IN PROGRESS FEEDBACK APPRECIATED!!!This tutorial will step you through the process of creating a set of controlable and configurable traffic lights whilst also teaching you the basics of Arduino. Some knowledge is needed and I highly recommend reading and..... Listed under: Car Projects, Projects
635.




Brickduino (2. Parallel connector) This instructable is part of the "Brickduino" series. [Brickduino 1. LED] - I expect that you did the Brickduino LED before you start with this instructable - Mainly this instructable is the same as the Brickduino LED! So if you want to skip all the..... Listed under: Arduino LED Project Ideas


636.




3D Printed Webcam Controller The camera controller box is an easy way to rotate a webcam from a PC or remotely through the internet. Step 1: Materials and 3D files In this project I used a Teensy 2.0 micro-controller since it was available, but you can use any other MCU like an ATtiny85..... Listed under: Internet – Ethernet – LAN Projects, Video – Camera – Imaging Projects
637.



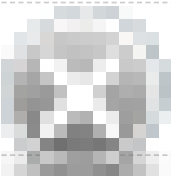
Woooshing leds – Rotated animation by arduino This project allows you draw in the air letters, symbols or other shapes - as you like. Controlled by the Arduino, the 7 simple leds blinking on and off - creating the illusion of floating text in the air. This combination of simple components with..... Listed under: LED Projects
638.




UnDecima Audio Output from Arduino I already have one project where arduino outputs audio signal to USB speakers via software 10-bits PWM. In first, I was not satisfied with quality of sound generated via PWM. There are just not enough speed in arduino engine to run PWM well. For example for..... Listed under: Projects, Sound – Audio Projects
639.




Security / Automation Sensors using Arduino Security system sensors such as motion detectors, reed switches, pressure mats, glass-break detectors, infra-red beams, and conductive film can be very handy for all sorts of things including home automation systems, interactive art installations - and sometimes even security systems! Almost all security system sensors..... Listed under: Security – Safety Projects, Sensor – Transducer – Detector Projects
640.



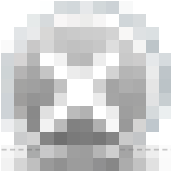
Interval Long Exposure Camera There's a real beauty in long exposure photography. Hours and days and weeks and months and even years can be condensed onto a single frame, and that frame will catalog the constants in our fast paced and forever changing lives. However, the issue is that..... Listed under: Video – Camera – Imaging Projects
641.




Lego Technic Car with Arduino + XBee Wireless Control I was perusing Instructables one fine winter Saturday, when my 8 yo son came in and peered over my shoulder and saw this: <http://www.instructables.com/id/RC-Lego-Car/> by sath02. My son is a huge fan of all things Lego, and loves robots and cars, and this was right..... Listed under: Game – Entertainment Projects
642.




Visual Navigator Making it MOBILE using Arduino Obstacle avoiding vehicle, continue in “3D Laser Range Finder” series (project 1, project 2). The basic idea is the same, measuring distance using red laser pointers, CCD analog camera and Arduino UNO. Modification was made in geometry. Two lasers were set for “far field”..... Listed under: Game – Entertainment Project Ideas, Projects, Robotics – Automation Projects, Sensor – Transducer – Detector Projects
643.




The Adventure of Electricity: An interactive light diorama Where does electricity come from? Who invented the light bulb? How do cities use this technology today? These are just a few questions that we hope to address in this interactive diorama, The Adventure of Electricity! This project was designed for educational purposes so that..... Listed under: Game – Entertainment Projects
644.




8x8x8 LED Cube with Arduino Mega (+Sound +PS controller +Game) This is a instructable which is based on the Cube by Chr, (<http://www.instructables.com/id/Led-Cube-8x8x8/>) by SuperTech-IT, (<http://www.instructables.com/id/CHRs-8X8X8-LED-Cu...>) and by das-labor.org, (http://www.das-labor.org/wiki/Borg3d_Bauanleitung...) but i think its better and easier. I started this Project without any skills from soldering to programming. First of..... Listed under: Game – Entertainment Projects
645.




Tears of Rainbow using an Arduino It's time to release new updates for my first (ever) project with Arduino, “Color Light Music”. From artistic perspective, VU BarGraph style (IMHO) is the best one for spectral dynamic representation, and not much could be improved on this side. But this time, it cross my..... Listed under: Game – Entertainment Projects, Projects
646.




Joystick controlled Camera using Arduino Hi, First of all, my English is not perfect =) I've seen many projects with Arduino that describes how to control 2 servo's with a joystick or use a lcd screen. All of the projects that i have seen are all seperate things. So i..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Video – Camera – Imaging Projects
647.




HandSight: A Glove for the Blind to Feel Shapes and Navigate Obstacles HandSight is a prototype glove to aid the blind. It can sense the lightness or darkness of a surface with tactile feedback from a vibration motor for each individual finger. It can also sense distance from physical objects or obstructions and indicate direction and distance..... Listed under: Medical – Health based Projects
648.



Arduino IR Musical Stairs This is a small scaled musical stairs! It was a project that had a deadline; had only two days to build it. So, it is a very small scaled project, but still serves its purpose! IR Sensor (receiver) that I used is TSOP38238 from Adafruit,..... Listed under: Home Automation Projects
649.




Gyro Camera for Motorcycle using Arduino As seen in MotoGP Race, the rider is seen riding through corners while laying aside his bike to the left and right. But there is an interesting moment when the motor looks to collapse sideward, the front views remain horizontally. How could that be? Such..... Listed under: Car Projects, Projects, Video – Camera – Imaging Projects
650.




Building a device that clips to your belt Our goal in this step-by-step instructable is to build a device you can clip to your belt and wear throughout the day. This device will log data that, when downloaded to a back-end server system, will provide a report showing the location history of your..... Listed under: Clock – Timer Projects


651.



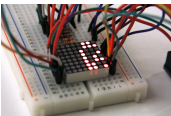
Hidden Wall Outlet Safe (w/Arduino Lock) using arduino Stash your valuables where no one will ever suspect. Wall outlets are perfect for stashing valuables since you have tons of them at home. You must be crazy enough to search every household outlet for a secret stash. Probably, no one would even think of..... Listed under: Home Automation Projects
652.




Power Arduino with a cellphone Old cellphones are easy to acquire and they have built in lithium charging circuitry. What a wonderful base for a power supply for small mobile things. I hooked up a cellphone to the arduino with the ability to charge the cellphone when you plug the..... Listed under: Phone Projects
653.




DIY Arduino Motor Shield [for only \$8!] (L298N 2x4A) Today, I'm going to show you how to make an Arduino motor shield (driver) at a low cost. It works splendidly, its posses almost all the characteristics of the original Arduino motor shield. It's almost considered as a clone. The original Arduino motor shield has the..... Listed under: How To – DIY – Projects, Motor Projects
654.



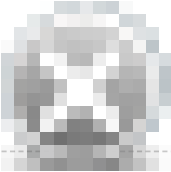
Intermediate Arduino: Inputs and Outputs using arduino Continuing from my Intro to Arduino post, this Instructable will go over some slightly more advanced topics with Arduino, specifically relating to controlling and managing many inputs and outputs. The next class covers how to connect the Arduino's inputs and outputs to MIDI. Parts List:..... Listed under: LED Projects
655.




EL Wire Hat: Sequenced and Sound Activated with Remote Control Welcome to the Instructable guide of my EL Wire hat with some fun features. The concept is an EL Wired hat with 8 sequenced EL wires controlled by a wired remote. Multiple speed controllable sequence modes are pre-programmed into an Arduino UNO, including a sound..... Listed under: Game – Entertainment Projects, Sound – Audio Projects
656.



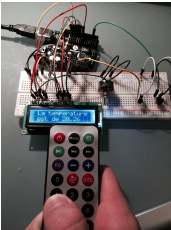
Earth Globe Rotating With Arduino Or Raspberry Pi Controlled Stepper Motor using arduino This instructable describes how to upgrade your globe to a motorized version. It looks amazingly better on the shelf when it is slowly rotating, and any demonstration with your kids (to explain the day/night cycle or the seasons) will gain in interest. No need to..... Listed under: Motor Projects
657.



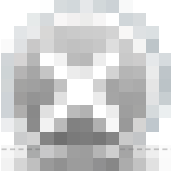
TV Remote Controlled Car Nothing is worse than loosing the controller that came with your remote control car. Replace that sucker with an arduino and the one remote that always seems to be around, the TV remote! Remove these ads by Signing Up Step 1: Materials The materials for..... Listed under: Car Projects, Game – Entertainment Projects
658.



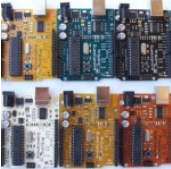
Arduino Solar Cell Tester When I'm building Solar Shrubs and other solar-powered creations, I often scavenge cells from various off-the-shelf devices such as solar garden or security lights. But these cells are rarely labeled as to their voltage, current, and power output. So it's off to my bread-boarding station. First, I put each cell under..... Listed under: Battery Projects, Metering – Instrument Projects, Projects, Solar energy projects
659.




Capteur temperature choix du type de degres par infrarouge using arduino ENGLISH VERSION HERE Dans ce programme nous allons voir comment capter une température et afficher sa valeur sur un lecteur LCD en choisissant si on veut l'afficher en°C ou °F grâce à une télécommande infrarouge. Dans ce tuto j'utilise: - Une carte SainSmart (similaire à Arduino..... Listed under: LCD Projects
660.



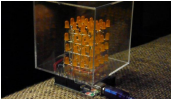
Attiny serial monitor using arduino walkthrough Alllllllllright dudes and dudets. Here is whats up, we're going to make attiny and arduino bestest of friends. If you have ever worked with capacitive switches you know how much it makes you want to smash your face into a wall...Now imagine you have no..... Listed under: Development Board – Kits Project Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas
661.




A World of Possibilities with Java ME + Bluetooth + Arduino "This presentation shows how to easily go from user stories to automated integration tests that themselves read like user stories. You can accomplish this by using custom domain-specific languages. Too often our automated integration tests rely on coding and intimate technical knowledge of our systems,..... Listed under: Internet – Ethernet – LAN Projects, Projects
662.



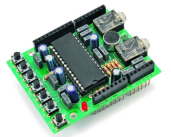
Smart Snow Globe (gives snow day alerts) using arduino What does a smart snow globe do? It tells you if tomorrow's going to be a snow day! Is it snowing tonight? Will you have the day off from school or work tomorrow? Put this snow globe next to your bed when you go to..... Listed under: Radio Projects
663.



4x4x4 interactive LED-cube with Arduino To explain my 4x4x4 interactive LED-cube published before, a bit more clear, I will try to make my first step by step instructable. This 4x4x4 cube is interactive by using the top four corner LEDs both as LEDs and as sensors that will react on..... Listed under: LED Projects, Projects
664.




IR Remote Controlled Color Changing Cloud (Arduino) CLICK HERE FOR THE UPDATED INSTRUCTABLE: <http://www.instructables.com/id/IR-Rainbow-Cloud-ver-1/> This is a project I created for a Digital Art and Installations class. The class covered basics of several types of programming, and our projects were meant to be an interactive cross between art and technology. This was a fun..... Listed under: Game – Entertainment Projects
665.

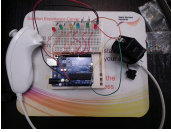


A Voice Shield for Arduino Board The objective of this project is to build an Arduino voice shield to empower thousands of voice related applications! All this mostly thanks to an integrated ISD1790PY chip. This particular voice/TTS feature can be useful to integrate voice messages in alarm systems, to implement generic..... Listed under: Projects, Sound – Audio Projects

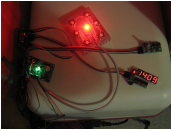
666.




Open Bitcoin ATM using arduino The world's first completely open-source Bitcoin ATM for Education and Experimentation. <http://openbitcoinatm.org> for more information. Step 1: Fabricate Box and Faceplate Out of a piece of 12"x12" aluminum sheet metal, cut two rectangles and drill six rivet holes and four holes to attach the bill acceptor..... Listed under: Robotics – Automation Projects
667.



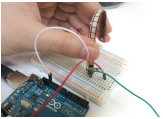
Arduino Wii nunchuck and Wii motion plus with updated code for IDE 1.0.2 and LEDs So, I was trying to hack my Wii nunchuck because I want to control motors and lights with the Wii nunchuck. The first problem that I found was how to connect the control without an adapter, I was planning to make one, but when I..... Listed under: LED Projects
668.



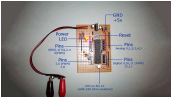
LED Dawn / Sunrise Alarm Clock, Nightlight & Security Light – Arduino Compatible As the nights gradually lengthened in autumn 2011, I discovered the joys of Arduino and thought that it would be a great way to implement something that I have wanted for a long while - a gentle way to wake up on a winter's morning. Listed under: LED Projects, Security – Safety Projects
669.




Programming the Arduino I/O pins Overview The Arduino Uno is a microcontroller board based on the ATmega328 (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header,..... Listed under: Arduino Programmer Projects, Projects
670.



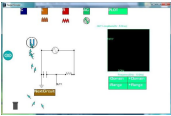
Arduino, Sensors, and MIDI Now that you're up to speed on using Arduino's inputs and outputs, this Instructable will give you everything you need to get started using sensors to trigger MIDI notes from Arduino. This post is the last installment in a series of workshops I led at..... Listed under: Home Automation Projects
671.




Stripboard Arduino In this, my first Instructable I'm going to show you how to make a stripped down Arduino for a fraction of the price, using Stripboard/Veroboard. Material List: 1x Atmel ATmega168 = \$2.65 1x Stipboard = 72p 1x 7805 Voltage regulator = 26p 2x LEDs =..... Listed under: Development Board – Kits Projects, Projects
672.



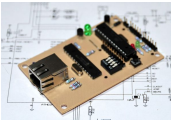
Control an Arduino With a Wristwatch (TI eZ430 Chronos) The watch The Texas Instruments eZ430 Chronos is a cool gadget. It has bidirectional radio communication, and a whole bunch of sensors: temperature, pressure, acceleration. In fact, it is a development kit for the MSP 430 (a low-power microcontroller), that TI packaged as a watch..... Listed under: Clock – Timer Projects
673.




SuperScope: Circuit Simulation through Arduino-Processing Interface nto the program where you can physically manipulate them. Arduino tests for the value of the component (a capacitor, inductor, resistor, or waveform of specific frequency) then sends the data to Processing. Imported components can then be plugged into circuit schematics. SuperScope builds upon the..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
674.



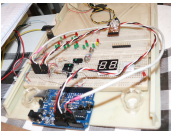
Improved Simple Wing Shield using arduino Not too long ago, I made my own version of the popular Wing Shield out of some spare parts and scraps of perf board I had laying around. Instead of the screw terminals that the regular wing shield uses, I used some female headers that..... Listed under: Home Automation Projects
675.




A credit card sized Ethernet Arduino compatable controller board I love the Arduino as a simple and accessible controller platform for many varied projects. A few months ago, a purchased an Ethernet shield for my Arduino controller to work on some projects with a mate of mine - it was a massive hit -..... Listed under: Development Board – Kits Projects, Internet – Ethernet – LAN Projects, Projects
676.




Make Your Own GRBL CNC Pendant So you just finished your DIY CNC machine, set up GRBL and even cut your first part. Now what? Well, did you know that as of GRBL v0.8 there are pinouts some really useful commands such as Cycle Start, Feed Hold and a Soft Reset?..... Listed under: CNC Machines Projects
677.



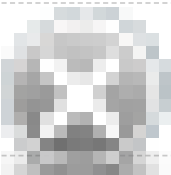
How to access 5 buttons through 1 Arduino input Using this method, I'll show you how you can access 5 (or even more) inputs through 1 Arduino pin. These buttons will only be read correctly if only one is pushed at any time though. As we go through it I'll explain whatever background info..... Listed under: How To – DIY – Project Ideas, LED Projects, Projects
678.



LittleBitty Joe using arduino Say Hello to littleBitty Joe! Joe is my school's mascot! Speak to Joe and watch his eyebrows lift, whiskers vibrate, eyes illuminate, heart spin and hear him ROAR! Not only does his roaring affect work with our project, but it can definitely work with your..... Listed under: Game – Entertainment Projects
679.




Digispark DIY: The smallest USB Arduino Digispark is an ATtiny85 based microcontroller development board come with USB interface. Coding is similar to Arduino, and it use the familiar Arduino IDE for development. Digispark is copyrighted by Digistump LLC (digistump.com) and the full license is here: <http://digistump.com/wiki/digispark/policy> Specification: Support for the Arduino IDE..... Listed under: Development Board – Kits Projects, How To – DIY – Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
680.



3D-Printed Biologically-Inspired Robotics I have been spending the last few months doing research into biologically inspired robotic structures. While my approach may seem formalistic in nature, these devices were simply a means for ultimately conducting social research. This desire stems from my experience building Simple Bots, and their..... Listed under: Robotics – Automation Projects
681.

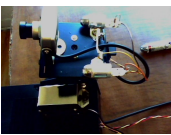
Light Clapper using arduino This is a project that I quickly made one night because I wanted to 'clap' to turn off and on the light in my room! I have a small room for myself, so I basically have no other noise around. So, I was able to..... Listed under: Home Automation Projects



682.  RC Car Anti-Crash System Using Arduino Hi guys! So for my electronics class this year we were tasked with creating some kind of electronic gadget in order to demonstrate what we learned over the semester. Being a car-loving type of guy, I decided to get a cheap RC car and see..... Listed under: Car Projects, Projects, Security – Safety Projects



683. Arduilay Arduilay is an 8 channel AC relay box for use with Arduino, Max/MSP, Processing, etc. I designed this system as an alternative to the USB>DMX 4 channel relay option. While DMX gives you dimming control, the setup is easily 5 times as expensive as this..... Listed under: Development Board – Kits Projects



684. ARDUINO Laser 3D Tracking or Range Finder The idea of using triangulation for distance measurements is well known since Pythagorean time, when his brilliant formula become available for mathematicians. What is new in this design, is lasers power control via “blooming” effect of CMOS camera. Here this “negative” effect was put to..... Listed under: Metering – Instrument Projects, Projects, Sensor – Transducer – Detector Projects



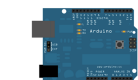
685. Cheap and effective Sous Vide cooker (Arduino powered) Sous-vide cooking is a great new way of cooking food. I will not explain why and how it works here... for great recipes and explanations, you can check out those guys : <http://modernistcuisine.com/2013/01/why-cook-sous-...> Unfortunately, a good (and I mean precise to the half °C) sous-vide..... Listed under: Home Automation Projects



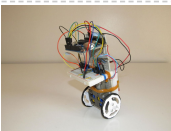
686. 2 player Pong using Arduino I started with the Instructable from Kyle Brinckerhoff; <http://www.instructables.com/id/Ardu-pong-the-Arduino-based-pong-console/> Thanks Kyle! and the following at Make magazine <http://blog.makezine.com/archive/2007/08/arduino-pong.html> and I see the original code is attributed to Pete Lamonica Thanks Pete!! I am using the paddles instead of the joy stick and I have made..... Listed under: Game – Entertainment Projects, Projects



687. Arduino Step Sequencer I was wondering about on making a sequencer, a big 16 step sequencer was what I wanted to make. To it's full extension with lots of features including single leds for each step, midi input and output, etc. Then I realised that I should start from a..... Listed under: Sound – Audio Projects



688. ASCII Table using Arduino Demonstrates the advanced serial printing functions by generating a table of characters and their ASCII values in decimal, hexadecimal, octal, and binary. For more on ASCII, see asciitable.com Circuit image developed using Fritzing. For more circuit examples, see the Fritzing project page None, but the Arduino has to..... Listed under: How To – DIY – Projects, Projects



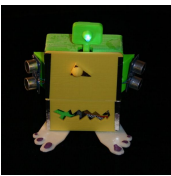
689. A Simple and Very Easy Inverted Pendulum Balancing Robot Let's make a simple inverted balancing robot, and operate it. You need only half a day to do them, if you have an arduino and some materials. [a video of a robot you would make] introduction: After a few work with arduino, I have thought..... Listed under: Robotics – Automation Projects



690. Wii Nunchuck Arduino Spirit Level Thanks to: <http://jeonlab.wordpress.com/> Since I have read an article on todbot blog, I bought a couple of Wii Nunchucks from ebay. I don't remember how much I paid for them, but it was much cheaper than buying the accelerometer breakout boards. With the nunchuck data reading..... Listed under: Development Board – Kits Projects, Projects



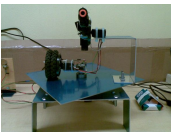
691. Nama Instrument 1.0 A motion sensing soft-circuit interface. The following instructable will guide you through the construction of your own personalized Nama Instrument. I'd love to hear some feedback. Hope you like it and it serves you somehow! :) Access <http://www.viraseres.com/nama> to download the project's open source files..... Listed under: Game – Entertainment Projects, Home Automation Projects



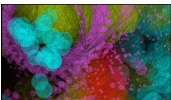
692. Wex, the One Eyed Watcher using an Arduino Wex detects your location with ultrasonic sensors then follows you with his one flashing eye. His red "heartbeat" can be seen through his mouth. Step 1: Parts needed include: Arduino Two ping ultrasonic sensors Futaba s3103 servo Radio Shack 276-0016 7 color led Radio Shack Listed under: Projects, Robotics – Automation Projects



693. OpenSquare – Write big with a RC car Hi there, You're going to transform any RC toy car into a big message writer that can be used to transform your city squares into witty messages, political statements or beautiful drawings, and for less than 20\$. The idea is to drop a trail of..... Listed under: Car Projects



694. Building a Sentry Gun with Laser Trip Wire System and Arduino *NOTE* THIS PROJECT IS DONE BY A GROUP OF STUDENTS FROM SINGAPORE POLYTECHNIC. Concept: Trigger gun when laser is blocked by intruding object. Note: Tilting is included for expandability but not used in this project. Skill Level: Basic soldering and basic metal works Things You..... Listed under: Home Automation Projects, Projects, Security – Safety Projects




695. I just wanna hold your hand Conducting energy through people to stimulate tangible public interactions <http://ijustwannaholdyourhand.com/> <http://vimeo.com/56350598> What did we do? We put together an Arduino, some wire, a Mac mini and a DLP Projector, then created a pair of hands out of aluminum. We additionally 3D printed some wall plates..... Listed under: Game – Entertainment Projects

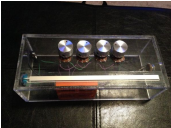


696. How to Control a Ton of RGB LEDs with Arduino & TLC5940 This video explains how to use the 16 channel PWM controller TLC5940 The CODE: `//Texas Instruments TLC 5940 with Arduino //www.kevindarrah.com #include <SPI.h> //Serial Peripheral Interface Library byte ch=0, chbit=0, spibit=0, spibyte=0; // variables used by tlc sub routine int SINData; //variable used to shift data to the.....` Listed under: LED Projects, Projects, PWM Projects


697.




Forget Me Not- Remote Flower Watering Hi everyone, Lucy Matchett, Nicole Yi Messier, and Joselyn McDonald (Snax_and_Macs) made a remote flower-watering device so you can water your loved ones' plants when you water your own. We used Arduinos, a photoresistor, a servo, Arduino and Processing sketches, Spacebrew, and a little elbow..... Listed under: Home Automation Projects
698.



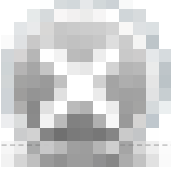
How to build an Arduino synth This is a super simple and easily customizable little synthesizer. This is my first time using the Arduino and also with acrylic, both I found very fun to work with though. This is also my first Instructables so hopefully I have explained this well enough..... Listed under: How To – DIY – Projects, Projects
699.



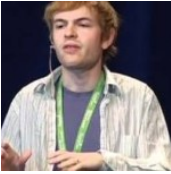
Palm Arduino V3 I design and create this Palm Arduino V3 prototype PCB, as I was tired of recreating Arduino Compatible on perf board every time I prototyping a new project, especially when I had to spend a lot of time tracing the wiring to see that I..... Listed under: Development Board – Kits Projects
700.




Smart Distance Measuring Tape v2 After posting up the v1 of my project many people requested an more detailed instructable. So i decided to start with a new one with a little upgrades to my previous instructable. What does this thing do? Well its quite simple it is just an..... Listed under: Metering – Instrument Projects
701.



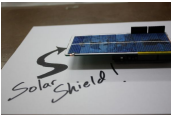
2 Ways to Papercraft Stopmotion Good morning, please take a seat and watch that tofu wobble. This is not CGI, it is honest work of a papercraftsman. These are, in fact, 16 different papercubes that switch places in each frame. That technique is commonly known as replacement stopmotion. Problem: It only..... Listed under: Game – Entertainment Projects
702.




Building an Open Archival Scanning Robot Using Python and Arduino Project Gado is an initiative which aims to create an open-source archival scanning robot which small archives can purchase for \$500 and use to autonomously scan their photographic collections. This talk presents the Gado 2, a prototype... Listed under: Internet – Ethernet – LAN Projects, Projects, Robotics – Automation Projects
703.



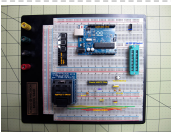
Bird cage LED daylight simulation system Sometimes you get a chance to combine helping out your family with a nice hobby project.. In this case my father in law was looking for a lighting system for his bird breeding cages. A daylight simulation system to be exact. He asked me to..... Listed under: Home Automation Projects, LED Projects
704.



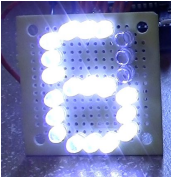
Arduino Solar Shield – A DIY solar source for your projects without waiting for PCBs This instructable is a basic version of Bley Joel's ("It's nine o'clock on a Saturday, the regular crowd shuffles in") Solar Shield, and it should work for most arduinos. I've tested it with SparkFun's Arduino Pro, and the new Leonardo. Myself and the other Solar..... Listed under: How To – DIY – Projects, Projects, Solar energy projects
705.



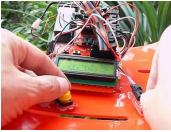
Audio Input to Arduino The easiest way to connect an audio signal to your arduino, is to build a simple 3 components (2 resistors plus cap) circuitry shown on the first drawings on right side. Disadvantage: there is no amplifier, and consequently sensitivity would be low, hardly enough to..... Listed under: Projects, Sound – Audio Projects
706.



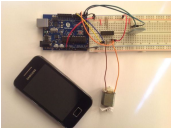
Burn Arduino Bootloader on Atmega-328 TQFP and DIP chips on Breadboard Parts required (Hardware) Arduino Uno Board (1) TQFP 32 to DIP 28 Adapter (1) Link Atmega TQFP 32 pin chip (1) Atmega DIP 28 pin chip (1) 10K resistor (1) 16MHz crystal (1) 18pf - 22pf capacitor (2) Tact Switch (1) Jumper wires (few) LED..... Listed under: Development Board – Kits Projects, Interfacing(USB – RS232 – I2c -ISP) Projects
707.




How to make a LED 7-segment display with or without Arduino I'm going to show you how to make a 7 segment display with LEDS. Combine with Arduino to create countdown timers, simple text, and more. I like to make original projects. I searched the whole of instructables and didn't find one like this. In fact,..... Listed under: LED Projects
708.



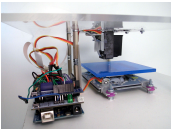
Ariadne – a 1st person maze on a 16×2 LCD using Arduino This game is a homage to Ariadne, the maze-generator from Inception 😊 If you haven't seen the movie yet - watch this video again after you do (you can also watch it now - it's not a spoiler, it's just funnier for inception-vets). The nice thing about..... Listed under: Game – Entertainment Project Ideas, LCD Projects, Projects
709.




Arduino Control DC Motor via Bluetooth Hi guys, In this project we will control a DC motor with a smartphone via bluetooth. This project is great to learn more about: -DC motor -Interfacing Arduino with your smartphone -Bluetooth module -L293D you can visit my website for more electronic projects, interesting news..... Listed under: Internet – Ethernet – LAN Projects, Motor Projects, Phone Projects, Projects
710.



Arduino Powered 3-zone thermostat I was looking at all those swoopy-zoomy internet connected and controllable thermostats. "Self," I told myself, "we should make one of those." He didn't seem all that excited about that - I mean, what do we know about hardware, firmware, electronics or HVAC? Well, now's..... Listed under: Temperature Measurement Projects
711.

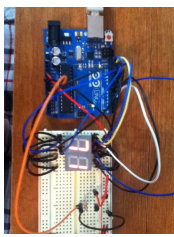



DIY BioPrinter Bioprinting is printing with biological materials. Think of it as 3D printing, but with squishier ingredients! There's a lot of work being done at research labs and big companies like Organovo on print human tissues and human organs, with an eye towards drug testing, and..... Listed under: How To – DIY – Projects
712.

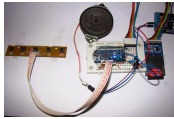


Simple RC car for beginners (Android control over Bluetooth) This is a simple project of Android Bluetooth Car with Bluetooth control. Arduino controller is used To control the car used Android-device with a built-in accelerometer. Tilt forward - car goes forward, tilt to the left - car turns to the left, tilt back - car..... Listed under: Car Projects, Game – Entertainment Projects, Internet – Ethernet – LAN Projects
713.

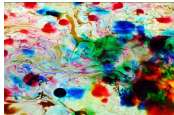
Arduino Digital 7-Segment Thermometer This a guide for an Arduino version, but I am working on a mini ATtiny84 version. Once I get that working, I will post another Instructable on how to make it. I'm sure you could make this same thermometer with an LM35 also, if that's..... Listed under: Temperature Measurement Projects



714.  Wi-Fi Body Scale with Arduino Board In this post we present the design of a scale that connects to the Internet and automatically sends weight info on a Google Document. The project is composed of Arduino Uno board Wi-Fi shield additional shield that we used to manage data collection and I/O with..... Listed under: Internet – Ethernet – LAN Projects, Medical – Health based Projects, Projects



715. Playing Wave file using arduino This is a simple circuit to play wav files using arduino Nano V3.0 ,it consist from 4 buttons ,each one play specific wav file loaded to SD card. Step 1: Parts 1- Arduino Nano V3.0 (I used the chines version called Funduino Nano). 2- SD..... Listed under: Sound – Audio Projects



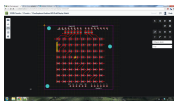
716. Paint Pulse: Digital Water Marbling Paint Pulse is a project which seeks to build upon the water marbling crafts of Ebru and Suminagashi with digital behavioral additions. The idea is to design intricate, flowing patterns of paint directly on the surface of water which you can capture on the surface of paper. Expert..... Listed under: Other Projects



717. Bubblesteen Bubble Machine using an Arduino Is it a 3D Spherical Atmosphere Encapsulated Phosphorous Printer? YES! Is it a CNC Anti Gravity transparent Orb Machine! YES! Its The Bubblesteen Bubble Machine! The spherical miracle that kids and cats have been waiting for. It comes complete with robotic edge detection(when a bubble hits an..... Listed under: Game – Entertainment Projects, Projects



718. Cheap and Easy MP3 Shield for Arduino This is a follow up to an earlier Instructable for attaching the guts of a cheap clip MP3 player to an Arduino. <http://www.instructables.com/id/MP3-Interface-for-Arduino-Cheap-and-Easy/> The previous Instuctable showed how to use the Arduino to control all of the functions of the MP3 player: volume increase and decrease,..... Listed under: Projects, Sound – Audio Projects



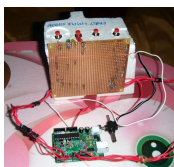
719. Charlieplexed Arduino 8×8 LED Grid Display Shield made and simulated in 123D Circuits edit: Wow, this won an awesome prize! Very many thanks guys! Charlieplexing (<http://wealoneonearth.blogspot.nl/2013/03/design-note-charlieplexing-led-matrices.html>) is a powerful method for driving a large number of LEDs from a relatively small amount of IO pin and without using any extra components. The technique makes use of the fact..... Listed under: LED Projects



720. How to make a multi-layered acrylic and LED sculpture with variable lighting levels using Arduino Here you can find out how to make you very own n as made for the exhibition www.laplandscape.co.uk curated by art/design group Lapland. More images can be seen at flickr This exhibition runs from Wednesday 26 November - Friday 12 December 2008 inclusive, and had..... Listed under: LED Projects, Projects



721. Remote control via GPRS/GSM SMS(Arduino) Remote control, especially when this no ethernet or Wifi in the outdoor, has been a very profound things in the past. When I was a child, I always image that I have an equipment which can control all home appliances. Now, this becomes a reality,with..... Listed under: Home Automation Projects, Phone Projects



722. Fairly Simple Simon – the evolution of an Arduino game Important notice: Final (i.e. relevant) version is at the last step of this instructable. If you want to build a Simon, that is the recommended version. The rest of the steps show how this evolved from a bare-bones game for LED 13 and Serial (i.e..... Listed under: Game – Entertainment Projects, Projects



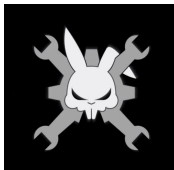
723. LilyPad Arduino Totoro Plush with Umbrella Materials: For Totoro: Felt: 1 black, 3 grey, 1 white, 1 beige Needle Black Thread Poly-fil stuffing Cardstock Scissors Pins Pen or chalk DIY Totoro Plush Tutorial HERE Totoro Pattern HERE For Umbrella: 3 or 4 different types of fabric Felt: 1 grey, 1 black..... Listed under: Game – Entertainment Projects, Home Automation Projects



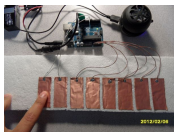
724. Arduino GSM shield This is a very low cost and simple Arduino GSM and GPRS shield. We use the module SIMCom SIM900 . It's the cheaper module now available in the market. The module is not simple to mount by an hobbyist, so we use the Breakboard TDGGSM_900..... Listed under: Development Board – Kits Projects, Phone Projects



725. Dogduino:The Automatic Dog Feeder using Arduino Tired of having to find the dog food to feed the dog? Tired of having to get up early so your dog doesn't attack you f food? Are just plain lazy? If you answered yes to any of these questions, this instructable is for..... Listed under: Arduino Programmer Projects, Projects, Sound – Audio Project Ideas



726. Easy Programmable EL-Wire Wall Art Project with Cool-Neon using arduino Blank space, what to do?, what to do? Our hackerspace has a blank brick wall above the fireplace. It's been a cold winter so we've had a fair number of fires, but there is just something wrong about a blank brick wall. Well in this..... Listed under: Home Automation Projects

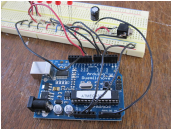


727. The Arduino OctoSynth What is the OctoSynth you may ask? The octosynth is a polyphonic synthesizer that is able to produce eight Pulse Width Modulated tones that form together a musical scale. In English terms, it is a 8 key electronic organ that can play more than one..... Listed under: Projects, Sound – Audio Projects

728. Microcontrolled AC switch using arduino Always wanted to take total control of your electric appliances even without being at home? Well, thanks to this instructable you will be able to do that and much more. Some friendly suggestions before starting: Electricity is very dangerous, read and follow the "DANGER:" advices..... Listed under: Home Automation Projects



729. Representing audio through vibration with Arduino This project functions to display sound using vibration. You plug your iPod, computer, or TV into it and get tactile feedback representing the loudness of the audio. It can help deaf people to experience sound. Stuff you need: Arduino USB Cable Computer running Arduino software..... Listed under: Sound – Audio Projects



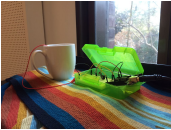
730. How to Build a Robot – The BeetleBot Welcome! I have been in robotics since I was a kid and I am very passionate by robotics. I learn BEAM robotics around 1997-98 and started building robots for a science faire project call "Insectroides" in 2001. <http://robomaniac.solarbotics.net> (they change server and the website..... Listed under: Robotics – Automation Projects



731. Psycho Scooter Scramble using an Arduino Psycho Scooter Scramble is a blind-driving electric wheelchair game. It consists of two riders, strapped into electric wheelchairs, and two blindfolded pilots, who remotely control the wheelchairs from the sidelines based on information given over headset by their driver. The basic mechanic is simple: players..... Listed under: Game – Entertainment Projects, Projects



732. Mug Music: Turn Water Into an Instrument with Arduino and ChuckK What if you could turn any conductive surface into an instrument? Like, say...a mug of water? Best of all, it's cheap; you'll only need \$1 worth of extra electrical components (not including the Arduino). For this project, my friend Harvest and I combined Disney's Touché..... Listed under: Home Automation Projects



733. Making Robots Using Android and Arduino udar Muthu gives a talk on Making Robots Using Android and Arduino at Droidcon India 2011 by HasGeek. ... Listed under: Arduino Android, Projects, Robotics – Automation Projects



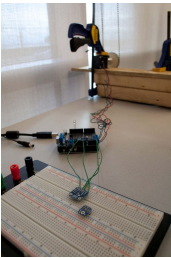
734. PORTABLE FORCED-AIR COOLING UNIT here is growing interest in the commercial production of high-value specialty fruit such as strawberries, blackberries, raspberries, and blueberries. Much of the small fruit grown in North Carolina is currently marketed through pick-your-own establishments or roadside stands. A strong demand for these small fruit items..... Listed under: Home Automation Projects



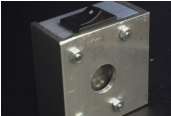
735. Perfboard Hackduino Arduino-compatible circuit Never again will you have to dismantle a finished project just to reuse an Arduino board! This tutorial will go through the steps involved in fabricating your own Arduino-compatible circuit using just ~\$8 of parts (this includes the ATmega chip!). This is perfect for installing and embedding..... Listed under: Development Board – Kits Projects, Projects



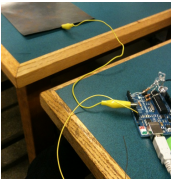
736. A solar tracking automatic motorized window blind retrofit using Arduino Buildings account for 20-40% of total energy use in developed countries. Window shades (or blinds) can help to reduce building energy use and improve visual comfort (i.e., reducing glare and increasing daylighting). A recent study showed that occupants are fairly inactive when operating manual roller..... Listed under: Motor Projects



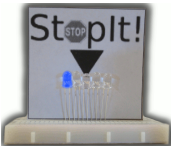
737. Flashlight tag using an Arduino board You probably know the game of flashlight-tag. You just run around in the dark on a campsite. You hold your flashlight and try to shine it on one of the other kids, without the other kids shining their lights on you. I wanted to make..... Listed under: Game – Entertainment Projects, Projects



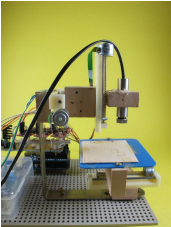
738. Fish Sensing Overview Once again, my project was motivated by my curiosity to explore interesting and unfamiliar territory. I decided to see if I could make my own capacitive sensor and then use it in a project of some sort. After numerous fiascoes with Arduino and computers, I was..... Listed under: Sensor – Transducer – Detector Projects



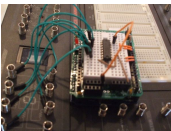
739. StopIt! LED Game (powered by arduino) This project was inspired by this video from YouTube and the Pendulum Challenge Kit from Makershed.com. Its a simple game consisting of five LED lights and one pushbutton switch. The LEDs flash in a sequence and the player must press the button when the middle..... Listed under: Game – Entertainment Projects, LED Projects



740. Arduino 3-axis Mini Lazer Paper-Cutter Updated : 16/3 Add step 4, about using the stage. Updated : 18/3 Add photos (cutting vinyl adhesive sheet) Updated : 19/3 Add step 5, acting as pen plotter Updated : 20/3 Add laser engraving video (Wood) and photo Updated : 22/3 Add 2 drawings..... Listed under: Home Automation Projects

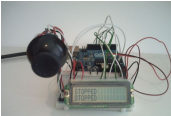


741. Arduino: an easier way to work with seven segment displays Ever have trouble programming code for seven segment displays? Well they made the 4511 to make things a whole lot easier. What the 4511 does is takes a 4 digit binary input value (ones and zeros), and converts it to a decimal value on a..... Listed under: LCD Projects, Projects



742. Buddy the on-screen seal Robot I've made a video documentation of my midterm project for my 544 class. To keep it shorter, I didn't detail in the video that this is only a completed phase of a larger project: an autonomous robot seal. I was originally going to incorporate a..... Listed under: Robotics – Automation Projects



743.  Arduino Joystick Breadboard with LCD Output Want to be able to control a couple of servos with a thumb-joystick? But don't know where to start? I don't have servos, but I can put you on the right track on how to do stuff when you move the thumbstick around. This instructable..... Listed under: Game – Entertainment Projects, LCD Projects, Projects



744. LilyPad Arduino Stuffed Fox Toy For a class on technology in libraries, I had to create a project that used the LilyPad Arduino, and I chose to create a stuffed animal that sings "Jesus Loves Me" while lights flash with the notes. I made a fox, but the pattern to..... Listed under: Home Automation Projects



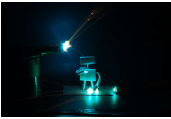
745. PCB on a Box using Arduino Board Sorry, but I hate cleaning windows, is one of my unfinished business as usual, but I had to do (at least) every time I wanted to etch a circuit board printed by traditional (and perhaps unorthodox) of stick it in cellophane and let natural light..... Listed under: Development Board – Kits Project Ideas, Projects



746. Arduino Candygrabber I've seen a lot of ways to communicate to arduino over the net, but none of them could handle pushing back the messages from arduino to the client(you) in real time and vice versa. In this instructable you will learn how to connect to your..... Listed under: Game – Entertainment Projects, Projects



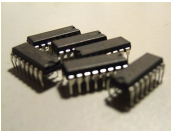
747. Arduino Hardware PWM for stepper motor drives With our new project, JustAddSharks, we are very keen to support the development of open source control software for laser cutters. We are more than happy for people to modify our laser cutters, replace the control system with something suitably open source and then let..... Listed under: Motor Projects



748. How to build your very own Time Fountain using Arduino We have all seen the sweet videos on the tube! You know the magical water fountains that seems to "freeze" the water droplets in mid air, or even make them go backwards! I've been fascinated by these "magical" thingamabobs for quite some while now, and a..... Listed under: Clock – Timer Projects, How To – DIY – Projects




749. MMAE Graduate Robotics This page provides general information to students enrolled in the EML 6808 course, Analysis and Control of Robot Manipulators. Prerequisites for the course are: EML 4312C, EML 5271, or C.I. Kinematics and dynamics of multibody systems. The topics to be covered include: basic components of..... Listed under: Robotics – Automation Projects



750. Control your motors with L293D and Arduino After long research and trial and error, I have came up to a new walkthrough regarding this nice chip, the L293D. Each project is one project and each one has its own unique power configurations, so you must be aware of the best battery choice..... Listed under: Motor Projects, Projects

751. Barista championship brewing stopwatch • Introduction using arduino Upon the needs of the (2014) World Barista Championship Rules and Regulations, an adequate and precise time measuring is needed during the competition. These measurements are usually done by regular stopwatches with all the benefits (ease of use, common availability) and drawbacks (two stopwatches needed..... Listed under: Home Automation Projects



752.  Arduino browser based remote control (linux) We have kids. I love them to bits but they keep hiding the remote control for the satellite and TV when they put the children's channels on. After this happening on a daily basis for several years, and after my darling wife allowing me to..... Listed under: Home Automation Projects, Projects



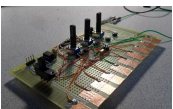
753. Tiich System – Prototype Final Report Introduction: Our main goal with the Tiich system is to design a teaching aid/tool which would replace the conventional whiteboard in a classroom environment. We want our system to be used as an electronic based white board, having all the written information easily be saved..... Listed under: Sensor – Transducer – Detector Projects




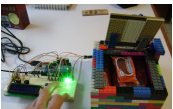
754. Lilypad Arduino Rocket Ship Cape I am taking a Children and Technology course for my MLS this semester, and one of our assignments is to create a toy using the LilyPad Arduino development board. The LilyPad Arduino is used to create e-textiles that you can program to do various things..... Listed under: Home Automation Projects





755. Web-controlled Twittering Roomba using an Arduino I wanted to see if I could operate my Roomba remotely and get it to report its status via Twitter while I was away from home. I also wanted to make the device independent of a computer. This is the solution I came up with..... Listed under: Internet – Ethernet – LAN Project Ideas, Projects, Robotics – Automation Projects


756.  DIY Arduino Nebulophone Synth I originally wanted to purchase a Nebulophone but, my El-Cheapo price range didn't like the tag. I realized that I could program my own AtMega 328 by using ArduinoISP Then I found out that if the code was Arduino compatible, why not just use the..... Listed under: How To – DIY – Projects, Phone Projects, Projects

757.  Social Alarm Clock What it is: Sometimes we want to send special messages to the ones we love but they are sleeping. Soci Alarm Clock allows you to record a message from your browser and send to your beloved's alarm clock. They just have to put it near..... Listed under: Clock – Timer Projects, Home Automation Projects

758.  Cookies adminitrator box [Electronics only] using arduino At home the cookies disappear relatively fast. ¿Why? Well, principally because of me and my father. That's why my mother and my sister have to hide some to eat them later. It's embarrassing, I know, but it's because we are like "Oh, I want to..... Listed under: Home Automation Projects


759.  Arduino Fart-O-Meter OH NO! He didn't! Yes I did! My project is simple: Farting in a chair and sending the signal wirelessly to a panel that shows the intensity of the fart! Words of caution: Please do not force yourself to fart, you might shit in your..... Listed under: Metering – Instrument Projects, Projects

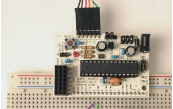
760.  One Touch Wardrobe using an Arduino I use Arduino Duemilanove With Motor Driver Shield Microcontroller ATmega168 Operating Voltage 5V Input Voltage (recommended) 7-12V Input Voltage (limits) 6-20V Digital I/O Pins 14 (of which 6 provide PWM output) Analog Input Pins 6 DC Current per I/O Pin 40 mA DC Current for..... Listed under: Home Automation Projects, Projects, Sensor – Transducer – Detector Projects


761.  Controlling an LED using a switch Concepts So you know what a switch is, but what can you do with it? One of the uses of a switch is to tell the controller to activate/deactivate different components. In this case we are going to use the switch to turn on and..... Listed under: LED Projects


762. Nursery Rhyme Hat using arduino I created the Nursery Rhyme Hat for a class on youth and technology. I'm new to instructables and e-textiles, so please bear with me! This is the first time I have used the Lilypad Arduino or any kind of soft circuit technology, so my coding..... Listed under: Home Automation Projects

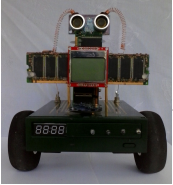



763.  Rainbow Mega Pong Clock using Arduino This is my take on the clasic Pong clock with an RGB back light that changes every time the date is displayed. A big thanks to mrnick1234567 and his <http://www.instructables.com/id/Pong-Word-Clock/> I did want the light to change randomly through the day but it made a mess of..... Listed under: Clock – Timer Projects, Projects

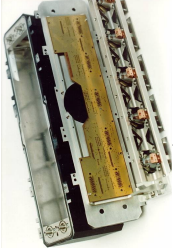
764.  Artist's Machine Tutorial 1 Part One Materials needed for tutorial Working BBB, RBBB, Arduino, or other Arduino compatible (BBB shown in photos) Solderless breadboard 22 gauge solid wire for use with breadboard 3 6mm momentary switches 8 LED's, any color 8 1k resistors, (470 ohm or 220..... Listed under: Video – Camera – Imaging Projects

765.  LilyPad Arduino e-Reader Case For a youth and technology class, we were assigned the creation of an Arduino LilyPad project. I liked the idea of connecting the LilyPad project to literacy, so I chose to make a Kindle case that would play music [Hedwig's Theme from the Harry Potter..... Listed under: How To – DIY – Projects

766.  NESBot: Arduino Powered Robot beating Super Mario Bros for the NES This guide will take you through the steps to build an NES playing robot You will need: An Arduino Duemilanove (other boards will probably work, but you will have to adjust the steps for your device) Working NES Console Super Mario Bros. (Note: this must..... Listed under: Game – Entertainment Projects, Projects, Robotics – Automation Projects

767.  Arduino V-Twin Flux Capacitor I SHALL CALL HIM " PEE-WEE " Personal Electronics Entertainment With Embedded Education. Basically a project that is fun and I learn a hole lot of stuff from it. . This project started out as just a small robot so I could learn more about..... Listed under: Robotics – Automation Projects

768.  Tweeting Cat Door using an Arduino Note: to see everything on one page, please go to: www.tweetingcatdoor.com After receiving many emails requesting Instructions and Kits for building the "Tweeting Cat Door ", I decided to make a version that is stand-alone and doesn't need a computer to be run and that..... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects

769.  The Photometric Camera and the CCDs The Photometric System The photometric camera for the SDSS consists of two TDI scanning CCD arrays, one, using 30 Tektronix/SITe 2048 x 2048 CCDs in a 5 by 6 array for five-color photometry, and the other using 24 2048 x 400 chips for astrometry and..... Listed under: Video – Camera – Imaging Projects

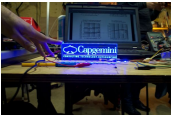
770. Mechanical Led Matrix Display First of all we would like to thank everybody that helped organizing the 2nd edition of Arduino Jam, and especially the Jo3ri, who supplied us with some quite cool goodies and kept us safe during the weekend. (Video will come soon!) This project is a..... Listed under: LCD Projects



771. Simple and Impressive Business Card Printer At some point most tinkerers and makers have to take the plunge into the real world - the world of suits and dividends and business cards. Without going completely "American Psycho" on your asses: business cards are important. In many ways they are our keys..... Listed under: How To – DIY – Projects



772. Interactive Logo using an Arduino first of all we would like to thank the organisation and especially the main sponsor, Capgemini, which made all of this possible. This project is a contribution to the first belgian Arduino Jam (2012). During the Arduino Jam 2012, me and two other colleagues put our heads together..... Listed under: LED Projects, Projects



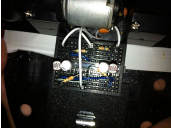
773. Vacuum form an Arduino If you have access to a vacuum former, or have constructed a DIY one to use, simply vacuum form a compact case to house your standalone electronics or arduino project. I made this at techshop! www.techshop.ws Step 1: Bill of materials Material to vacuum form..... Listed under: How To – DIY – Projects, Projects



774. Scratch 4 Arduino and Cybot Control (Rover basics) I've had a couple of Cybots as well as the Tom robots for a number of years - every so often they get dragged out and tinkered with. Now is this years turn. I have decided to try my hand at Arduino control of the..... Listed under: Robotics – Automation Projects



775. [Arduino] Linefollower with photoresistors I built a linefollower robot that could be used in many different ways, and I summed up my project in some steps. To begin w you need is the following parts: Step 1: Robot frame Parts List: -Robot frame -Two wheels -Two DC motors..... Listed under: Robotics – Automation Projects, Sensor – Transducer – Detector Projects



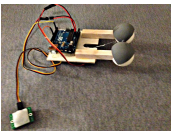
776. Gas Cap using an Arduino board Since you've gotten into electronics, haven't you wondered if there is a fart sensor out there? I sure did. I discovered that if you use a methane sensor, especially the MQ-4, even at very low concentrations, it reads farts. What if you combined that into..... Listed under: Game – Entertainment Projects, Home Automation Projects, Projects



777. CrEST Let's Set Up Your Arduino and Breadboard! Yep, for real: Let's Set Up Your Arduino and Breadboard! (use the instructions here, or flip to page 12 in your book) Step one: Dig through your kit and pull out your: Arduino Wooden Base Breadboard and Jumper..... Listed under: Other Projects



778. New animatronic Eyes: Rock On! Someone had seen Peter Penguin or my Instructables on Animatronic Penguin Torso or Animatronic Eyes, and was working on a sculpture. He wanted to animate the sculpture when someone walked into the room and asked if I could do it. I thought about it for..... Listed under: Game – Entertainment Projects



779. Multifunction Digital Thermometer using an Arduino This instructable will show you how to create a multifunction platform with a thermometer, chronograph (count up timer), count down timer, and light display. It is also intended to be a platform for other analog sensors or any other functions you can think of. Multifunction_Digital_Thermometer.zip71..... Listed under: Projects, Temperature Measurement Projects




780. Twitter Controlled Pet Feeder using an Arduino A great project for busy pet owners. This Twitter-Controlled pet feeder automatically dispenses food in response to activity on your Twitter account. The project is controlled by an Arduino and uses the Arduino Ethernet shield to receive data from Twitter. I hacked this automatic Pet..... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects, Projects



781. Bedtime Board using LilyPad Arduino For a class on youth and technology, we were assigned to a project using the LilyPad Arduino, a microcontroller board for making e-textiles. I decided to make a hanging board with a starscape that would light up and play a lullaby. I used cardboard, black cotton..... Listed under: Game – Entertainment Project Ideas



782.  Singing Olaf Bag (Frozen) For my children and technology class, we were challenged to make a product using a Lilypad Arduino. I am currently obsessed with the movie Frozen, so I decided to create something using one of the most iconic characters of the movie, Olaf. I used a..... Listed under: Game – Entertainment Projects, Sound – Audio Projects

783. Arduino MicroControllers, Card Readers, 3D Printing, GS4, Flip Camera! Episode 3 of AndroidTec, Formed by members thamind (Jon) chaotic (Lewis) & Computer Whiz (Jim) and introducing GuyCothal, who discusses about the amazing abilities of Arduino micro controller boards and how they can be used with Androids! Jason also made a guest appearance!... Listed under: CNC Machines Projects, Development Board – Kits Projects, Memory – Storage Projects, Projects, Video – Camera – Imaging Projects



784. Randomized Arduino Drum Machine I like drum machines. However they are not always the easiest to build. I wanted one that is: A. Simple, Yet Powerful-If it uses lots of components then it is too complicated B. Sound-It's not a a drum machine if it "beeps" C. Easily Modifiable-If..... Listed under: Projects, Sound – Audio Projects

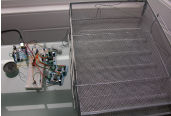


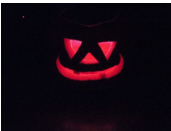
785. Arduino Automatic Temperature& Humidity Controller for Pets Jack and Jose, a pair of beautiful hamster, has accompanied me over 100 days and nights. Their soft white fur makes me quiet and warm, especially when I coding in the winner. But the very tragic things happened in the last week. As the cold..... Listed under: Temperature Measurement Projects



786. 9 Volt battery adapter for Arduino This is super simple but very useful if you are in a hurry or just like to do things yourself and on the off chance you didn't know, this is about the easiest way to add mobile power to your Arduino. After looking at a..... Listed under: Battery Projects



787.  Touch Sensitive Audio Desk Trays- Arduino After having completed my first Arduino project (which can be found here) I wanted to try and create something that had more of a practical use. My idea behind this project was a way of aiding the visually impaired. By the end of this project..... Listed under: Sensor – Transducer – Detector Projects



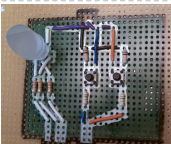
788. RGB lamp with Custom Moodlamp Library using Arduino I wanted to have an easily programmable RGB light to toss into a Jack 'O Lantern for Halloween. Who really wants a dull pumpkin in these days of pumpkin pimping madness. So I set to work building a pocket tin sized RGB lamp that could..... Listed under: Game – Entertainment Projects, LED Projects, Projects



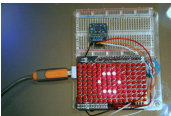
789. Homemade Magic Lamp Card Box using an Arduino A robot is a virtual or mechanical artificial agent. In practice, it is usually an electro-mechanical machine which is guided by computer or electronic programming, and is thus able to do tasks on its own (<http://en.wikipedia.org/wiki/Robot>). Well, today you will learn exactly how to build..... Listed under: Home Automation Project Ideas, How To – DIY – Projects, Projects



790. High Five Camera Can I tell you a secret? I don't like handshakes. I really don't. Handshakes just make me feel dirty. It's too impersonal. It's a gesture with no soul and reeks of a corporate entity. Why must we limit ourselves to this one boring interaction? Of..... Listed under: Game – Entertainment Projects, Video – Camera – Imaging Projects



791. Twitter Mention Mood Light using Arduino Twitter Mention Mood Light -- a mood light that alerts you when @username is mentioned on Twitter. This is a simple intro in how to control your Arduino from Twitter. If you are new to Arduino Twitter / Arduino Processing Twitter / Arduino Python Twitter..... Listed under: Internet – Ethernet – LAN Projects



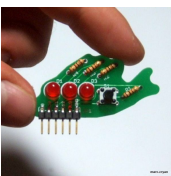
792. Arduino makes 2D Level This is a project for Arduino to make a 2D Level, aimed at beginners. Arduino draws a circle on an LED Matrix that moves around according to readings from a 2D Accelerometer. Objectives: * Learn how to draw a circle using simple Maths * Learn..... Listed under: CNC Machines Projects, LED Projects, Projects



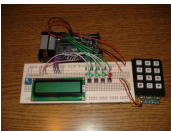
793. CSCE 236 Embedded Systems 1 Instructions This is a group assignment for you to work on during class. You only need to hand in one copy of this, but make sure that the names of all of your group members are on this sheet to receive credit. Complete all of..... Listed under: Other Projects



794. Arduino Etch-A-Sketch Clock I've seen various Arduino driven Etch-A-Sketch clocks on the web , but none with instructions (is it some kind of secret? Is someone planning on making it rich in the Etch-A-Sketch Clock global market?). I've used Arduino, but never used stepper motors, real time clocks,..... Listed under: Clock – Timer Projects



795. Blinky Fish using an Arduino Assembly instructions for an add-on board for the Arduino. **** FOR INSTRUCTIONS FOR MARCH 2013, KICKSTARTER PROJECT GO HERE <http://www.instructables.com/id/Blinky-Fish-Kickstarter-Project/> ***** It has some LED's and a button. It connects to digital pins 9-13 and ground. My hope is that this will be useful to people that want to..... Listed under: Game – Entertainment Projects, LED Projects, Projects



796. Second degree equation solver with Arduino This instuctable is about making sort of a calculator that enables the user by using an analog 12-digit keyboard and 4 buttons to input the a,b,c variables into a equation and get the solution for it if there is any.(well if u don't know what..... Listed under: Calculator Projects, LCD Projects, Projects



797. Home Alert: Arduino + Cloud Messaging On A Large Display In the age of mobile phones, you would expect that people would be responsive to your call 24/7. Or... not. Once my wife gets home, the phone stays buried in her hand bag, or its battery is flat. We don't have a land line. Calling..... Listed under: Home Automation Projects, Internet – Ethernet – LAN Projects



798. Simple Arduino Book clock This book clock was inspired by florinc and the impressive selection of clocks like the wise clock3 etc <http://www.instructables.com/member/florinc/> My girlfriend likes reading books and there is always a pile of them around the house, however to be able to build this for her birthday..... Listed under: Clock – Timer Projects, Projects



799. DNA Melting Part 2: Lock-in Amplifier and Temperature Control In Part 2 of the DNA Melting Lab you will make revisions to allow greater control of your instrument and to reduce the effects of noise. You will add a pulse-width modulation (PWM) heater controller to enable careful control of the heating and cooling rates..... Listed under: Temperature Measurement Projects



800. Control Any Circuit With a TV Remote (and an Arduino) Most of the buttons on a remote control are never used. So why not use them to control appliances and other electronics around your house. In this project, I am going to show you how to use an Arduino to decode the signal from your..... Listed under: Home Automation Projects, How To – DIY – Projects