

Advanced View Arduino Projects List

List of Projects using arduino with advance view:

1.



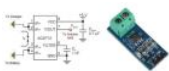
Arduino car LCD display Here is a project I made a couple of years ago for my father's car. The original dashboard's info-panel which displayed current time, date and temperature was working only partly – and that only after a good cleaning and connector fastening. In other words –..... Listed under: Car Projects, LCD Projects
2.



Automatic Home surveillance system using arduino(simple and cheap) The goal of my project is to achieve Automatic home surveillance system without any manual interference. In general other surveillance system it is necessary to power ON TV and camera receiver every time. And also it needs to any user input to view who is..... Listed under: Home Automation Projects
3.



GESTURE VOCALIZER FOR DUMB PEOPLE INTERACTIn ION To establish a communication or interaction with Deaf and Mute people is of utter importance nowadays. These people interact through hand gestures or signs. Gestures are basically the physical action form performed by a person to convey some meaningful information. Gestures are a powerful means..... Listed under: Other Projects
4.



Solar Panel Battery Charge Controller Using Arduino This is an updated version of Solar Panel Charge Controller Using Arduino. Solar Panel Battery Charge Controller Using Arduino Pictures of Power box and Arduino solar charge regulator: Charge Regulator with Power Box Connections to Regulator Inside the Box The output voltage of the ACS712..... Listed under: Solar energy projects
5.



LED firefly Jars There's a nice charm to fireflies in a jar—except for, you know, all the dead bugs afterwards. I decided to make a bunch of fake fireflies in real jars for decoration at an outdoor event. The fireflies are yellow LEDs controlled by a small ATtiny45..... Listed under: LED Projects
6.



Accelerometer Controlled Robot Most of industrial robots are still programmed using the typical teaching process, through the use of the robot teach pendant. In this paper is proposed an accelerometer-based system to control an industrial robot using two low-cost and small 3-axis wireless accelerometers. These accelerometers are attached..... Listed under: Robotics – Automation Projects
7.



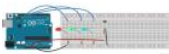
Bluetooth Controlled Robot In this proposed system we going to construct a basic DC motored robot which we are going to control with android app easily available on google play store named bluecontrol. With Basic mobility of robot like forward, Reverse, left, right we try to implement four..... Listed under: Bluetooth Projects, Robotics – Automation Projects
8.



Arduino Project: Intervalometer for Fuji cameras This post is about an arduino-based intervalometer I built for my camera, a Fuji S9600 dSLR. I decided to go for a very simple interface: a rotary switch in the middle of a plastic box which would allow me to select 12 pre-defined intervals. I..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Video – Camera – Imaging Projects
9.



Automatic Garden Watering Device – Arduino As part of the Content Creation course for my MLIS degree (Our class blog: <http://scumakers.wordpress.com/>), I needed to come up with a final project and wanted to learn to use an Arduino. In the end I came up with this device to automatically sense..... Listed under: Home Automation Projects
10.



Arduino Hygrometer I am building an automated irrigation system for my vegetable patch. This will be a system that monitors the soil moisture level and then turns on a pump to send water to my garden according to the detected moisture level. The water is coming from..... Listed under: LED Projects
11.



Make a Web Connected Robot (for about \$500) (using an Arduino and Netbook) This Instructable will show you how to build your own Web Connected Robot (using an Arduino micro-controller and Asus eee pc). Why would you want a Web Connected Robot? To play with of course. Drive your robot from across the room or across the country,..... Listed under: Robotics – Automation Projects
12.



Arduino Motor Party In this instructable I will show you how to throw an Arduino motor party. I will also be giving away an Arduino Mega, Arduino Uno, and an Arduino Pro Mini. (Details at the end) Step 1: Assembly + Code You'll need a handful of motors..... Listed under: Motor Projects
13.



Send SMS from Arduino over the Internet using ENC28J60 and Thingspeak This Instructable explains how to send an SMS from an Arduino using the Internet. There are many ways to approach this and I will explain one of the different methods used to accomplish this task. Some major points needed for my project: I have a..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
14.



Washer Dryer Laundry Alarm using Arudino & SMS Text Messaging Alerts Have you ever wished there was a better way to be notified when your laundry was done? Have you ever forgotten a load in the washer because you couldn't hear the buzzer and your clothes became smelly and moldy from sitting there for too long?..... Listed under: Home Automation Projects, Wireless Projects
15.



Converting infrared to RF signals with Arduino In this project we will show you how to switch on and off the power sockets box with an IR remote. Not only the power sockets box, but other RF receivers can be switched on and off with the same IR remote as well. We..... Listed under: Wireless Projects
16.



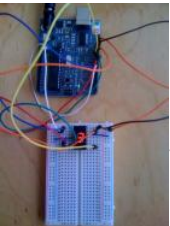
How to Make a Wireless Path Tracking System Using Mouse, XBee and Arduino The applications of microcontroller are not limited to control simple electrical or electronic device but they are widely used in robotics and automotive industries nowadays. From simple rear view mirror control to complex engine control functions are done by the microcontroller. The microcontroller can even..... Listed under: Wireless Projects

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17.

How to Transmit Mouse Data Using Xbee with Arduino The PS2 mouse is an input device which can communicate with a host device using the PS2 protocol. It can be connected to a host device using the 6 pin mini DIN connector. The mouse will continuously give output which can be decoded to get..... Listed under: Development Board – Kits Projects
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18.

How To Save a Text In The EEPROM of The Arduino A microcontroller might need to store its data like sensor value, or a particular count or image data for a long period of time. The most common type of memory used with the microcontroller based systems is EEPROM. The EEPROM stands for Electrically Erasable Programmable..... Listed under: LED Projects
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19.

Drawing an Arduino Circuit Diagram I've had an Arduino Duemilanove now for a couple of weeks. If you're not familiar with the Arduino, it is "an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software". It has a small microcontroller, a USB port to connect to your computer..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
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20.

Generate Random Number using Arduino A random number generation is very important in computing devices which helps them to do task in random manner. The applications of random number generation can be found in shuffling the audio files in an audio player, in almost all kind of digital games, generating..... Listed under: Development Board – Kits Projects
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21.

Augment a Moog Etherwave Theremin I'm going to go through my process of hacking a Moog Etherwave Theremin. I created a new acrylic top, partially sanded to be translucent in certain areas, and created my own circuit around an ATmega168 Arduino Bootloaded microcontroller which is stealing a control voltage from..... Listed under: LED Projects
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22.

Project Suite Bros: Voice Activated LED Friendship Photoset (Arduino, Bluetooth, Crafts) (and partner-in-crime, Abbie). Now, I'm off to the next stage of my life, so I decided to build this friendship photoset for Kevin and Briton to remember our golden era. We called ourselves: "The Suite Bros". This project is actually an extension of the "Voice..... Listed under: LED Projects
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23.

Arduino Garage Controller Although there are many garage door projects on Instructables using Arduinos, I needed/wanted something different. Last year, we had a warm summer and when I would come home after work, I would leave the garage door open about 1 foot so it could cool off..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
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24.

Arduino based Drone Quadricopter [gallery ids="19920,19921,19922,19923,19924,19925,19926,19927"] arduino based Drone Quadricopter It's a tiny quadrotor helicopter! Update Feb 25 2012: Warning, I may have discovered a bug inside the CadSoft EAGLE 6.1.0 software that may make the PCB look slightly different. My design files are meant for 5.11 so use..... Listed under: Drone
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25.

Project: Cleaner robot using Magician Chassis, Arduino, distance sensor and hand sweeper This is a cleaner robot so you can give to your mommy or just use to clean your bedroom =P. Material List: 1x Arduino UNO R3 1x Magician Chassis 1x Shield Motor Driver (Shield 4Power) 1x Distance Sensor 1x Servomotor 1x Hand Sweeper 1x Battery 1..... Listed under: Robotics – Automation Projects
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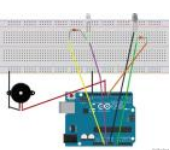
26.

Arduino-Based Shadow Alarm Shadow alarms are usually used for protection against theft. A shadow alarm is a device that sounds an alarm when a shadow falls on it.Described here is a simple circuit of an arduino based shadow alarm.This compact shadow alarm unit is capable of sensing a..... Listed under: Security – Safety Projects
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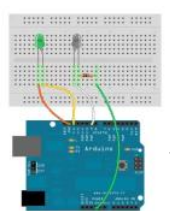
27.

Arduino Bicycle Alarm and Lights This alarm is a good way to alert you if somebody messes with your bike. I had a bicycle stolen a while back and decided there had to be a better way to keep my bike secure. When I searched for bicycle alarms, all I..... Listed under: Security – Safety Projects
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28.

How to Use IR Remotes with Arduino (Current and Updated) I'm tired of these complicated tutorials on how to use certain things. I like simple, easy to understand, step b instructions. My biggest problem was with IR and POV*. I've finally mastered how to control my project with any TV remote in a few..... Listed under: Wireless Projects
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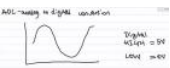
29.

ARDUINO Burglar Alarm Using Infrared Emitter-Detector pair In this tutorial i will show you , how to make a simple Inexpensive Intrusion Detection(Burglar alarm) using an Arduino Uno board . This project uses the Infrared Emitter-Detector pair to detect intrusion and triggers an alarm as soon as the object crosses the infrared..... Listed under: Wireless Projects
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30.

Arduino for Photographers: Building a Universal Intervalometer Practicing the art of time-lapse photography without an intervalometer is doable, but not particularly efficient. And while any decent photo equipment store will be happy to sell you one, you can go the DIY way and build your own intervalometer based on the excellent Arduino platform. Theoretically, building..... Listed under: LED Projects
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31.

Connecting the ADXL337 to the Arduino Today I'll write about the ADXL337 accelerometer. The ADXL337 measures the acceleration of the x, y and z axis. This means it measures the force acting on any of the axes at a specific moment in time. Because it's an analog device the measurement intervals are as short..... Listed under: Other Projects
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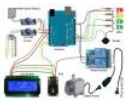
32.

Arduino Accelerometer mma7361 Hey guys, I am a teaching assistant for an introduction to engineering class for biomedical engineering majors at Vanderbilt University this semester. I created this video to explain analog-to-digital conversion to them because time ran out during class and I did not get to this..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Sensor – Transducer – Detector Projects



33.

Arduino Automatic Watering System INTRODUCTION & OBJECTIVES: I is a simple system, using Arduino to automate the irrigation and watering of small potted plants or crops. This system does the control of soil moisture, doing indications via LEDs and in case of dry soil emitting a alarm beep. In..... Listed under: Home Automation Projects, Projects



34.



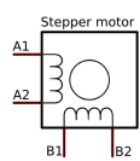
Arduino Compatible apc220 Wireless rf Module with Graphics LCD 16 node mesh, up to 1000m between nodes, sample two analog voltages per node, link any node to any other node, display data on any node with either graphics or text display, turn on relays based on data at any node, fault tolerant with data..... Listed under: RFID - NFC projects, Wireless Projects
35.



Arduino DS1307 Clock 1) Introduction and Images Hello friends, today I am going to build a Digital Clock using Arduino UNO and famous DS1307 Real Time Clock IC. Before we begin, here are some images of the completed project. You can find the YouTube video at the bottom..... Listed under: Clock – Timer Projects, LCD Projects
36.



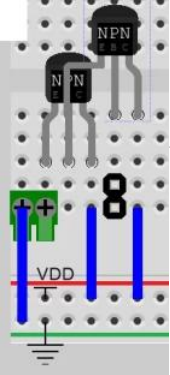
MCP41100 an Arduino Controlled Potentiometer We know the analog potentiometer , is a three-terminal resistor with a sliding contact that forms an adjustable voltage divider . MCP41100 an Arduino Controlled Potentiometer: 1)volume controls on audio equipment. 2) Control the amplifier Gain and offset . 3) Transducer " displacement transducers " Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Sensor – Transducer – Detector Projects
37.



Arduino Bipolar Stepper Motor It is a well known fact that Stepper motors are awesome! The only downside is that they can be a bit trickier to get going than servos and plain old DC motors. If you are interested in the inner mechanics and theory of stepper motors, check this..... Listed under: Motor Projects
38.



How To Generate Square Wave Using Arduino Any AVR microcontroller based board which follows the standard Arduino schematic and is flashed with the Arduino bootloader can be called an Arduino board. The Arduino is referred to as open source hardware and the Arduino IDE is also open source and anybody can contribute..... Listed under: Development Board – Kits Projects
39.



Arduino and Transistors Question – RE: School Musical Production One of the directors has asked me to create a special backdrop for our college musical. This particular backdrop has a particular design (see below) that includes LED strip lighting to give the feel of a 1920s casino sign – similar to what is seen..... Listed under: LED Projects
40.



Build Arduino Based Home Security System Using PIR Motion Sensor PIR sensors are widely applied in wireless residential security systems, home alarms systems and many more security circuits as motion detector sensors. A typical PIR sensor detects the infrared red (IR) waves from human body and so it is also known as ‘human sensor’. It..... Listed under: Home Automation Projects, Security – Safety Projects
41.



Temperature Sensing with Arduino As part of the CanSat Primary Mission, we need to measure temperature. For this our starter kit has given us an Arduino Uno R3 micro-controller, as well as some resistors and an NTCLE101E3 NTC Thermistor. The thermistor is a special kind of resistor that changes..... Listed under: Sensor – Transducer – Detector Projects, Temperature Measurement Projects
42.



Arduino Basics #5 – Add SD storage to Arduino Arduino Uno’s microcontroller board is great, but the one thing it’s not overly generous with is storage. Having 32KB of program flash storage, 2KB of RAM and 1KB of programmable EEPROM space at your disposal is fine for many Arduino projects, but it’s not enough..... Listed under: Arduino Programmer Projects
43.



GSM Based Wireless Notice Board ABSTRACT: There are several places which require vital notice to be displayed like colleges, railway stations, share-market, restaurants, hospitals etc. Looking into the present trend of information transfer, it is seen that vital notice take time to be displayed on the displaying boards. This latency..... Listed under: Wireless Projects
44.



How to Make Phonecall From GSM Module Using Arduino One can use a cell phone with any cellular networks around the globe if the proper SIM card is inserted in it. This is possible because there is some device inside the cell phone which follows a global standard enabling them to connect with different..... Listed under: Phone Projects
45.



Sinewave Inverter Circuit Using Arduino The post explains how to build a simple sinewave inverter circuit using PWM feed from an Arduino Uno board, the article also discusses a sinewave 3 phase inverter using the same input from an Arduino. The idea was requested by Mr. Raju Visshwanath Technical Specifications..... Listed under: PWM Projects
46.



Arduino Digital Voltmeter 0V to 30V Here is a useful circuit for Arduino lovers and experimenters. It is a simple digital voltmeter, which can safely measure input dc voltages in 0 to 30V range. The Arduino board can be powered from a standard 9V battery pack, as usual. As you may..... Listed under: Metering – Instrument Projects
47.



Pololu Dual VNH5019 Motor Driver Shield for Arduino (ash02a) Get your Arduino moving! This shield makes it easy to control two high-power DC motors with your Arduino or Arduino-compatible board. Its dual robust VNH5019 motor drivers operate from 5.5 to 24 V and can deliver a continuous 12 A (30 A peak) per motor, or a continuous..... Listed under: Motor Projects
48.



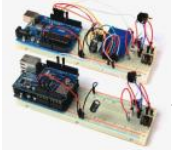
Arduino Programming For Beginners: The Traffic Light Controller Last week, we learnt about the basic structure of an Arduino program and took a closer look at the ‘blink’ example. Hopefully you took the opportunity to experiment with code, adjusting the timings. This time, we’ll be writing something from scratch. In fact, let’s make..... Listed under: LED Projects



49.



Tutorial 14: Arduino LCD Thermometer In this tutorial, a temperature sensor (MCP9700 linear active thermistor IC) and LCD are connected to the Arduino. The Arduino reads the temperature from the MCP9700 on analog pin A0 and displays the temperature on the LCD. This video shows the circuit operating. When touched..... Listed under: LCD Projects
50.



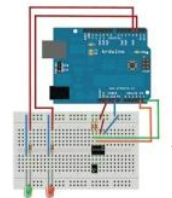
Arduino Project 5: Digital audio player So far in this series we've had a diverse look at how Arduino can interact with a range of real-world devices from servo motors to ultrasonic range finders TVs to humidity sensors. Now we'll see if we could get the Arduino to make a few..... Listed under: Sound – Audio Projects
51.



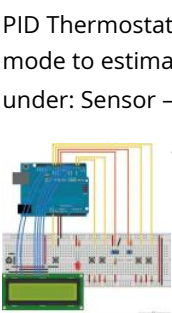
Arduino Project # 1 – Make an Ultrasonic Distance Calculator Arduino Project – The distance calculator I have been playing with Arduino (micro-controller) for about 2 years now and I am becoming more and more passionate about circuits. For those who are not aware of Arduino, check out my article “Arduino – A Guide for..... Listed under: Calculator Projects
52.



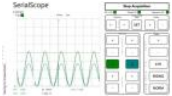
Arduino Project 4: Enhancing your mini robot You'll need these: HC-SR04 – Get this ultrasonic sensor from eBay.com.au for \$2. SG90 Servo Motor – We've seen this servo selling for around \$4 on ebay. Motor drive shield – You can get this expansion board for \$5 online. If you're new to APC..... Listed under: Robotics – Automation Projects
53.



Capacitive Touch Sensor on Arduino If you ever wanted to integrate touch sensitivity into your project, this board could just do the trick. It's a capacitive touch sensor. These sensors are used in our everyday consumer electronics like notebook trackpads, video game consoles, touchscreens...just to name a few. They work..... Listed under: Sensor – Transducer – Detector Projects
54.



PID Thermostat PID Thermostat This is a PID thermostat for the arduino. It supports independent tuning parameters for multiple hardware 'profiles', and includes an autotune mode to estimate the PID parameters for a given setpoint. Installation Hardware DS18-series (I'm using the DS18B20) temperature sensor Solid-state relay rated..... Listed under: Sensor – Transducer – Detector Projects
55.



Wireless Arduino Oscilloscope In this guide I will explain how to use a Windows 8.1 phone, Arduino Uno board, and HC-05 Bluetooth module to build a wireless oscilloscope. The phone application has the critical functions of an oscilloscope, although the bandwidth is a measly 300 Hz. Still, if..... Listed under: Wireless Projects
56.



Simple Arduino Wireless Mesh Build a low cost simple wireless mesh using arduinos and long range APC220 radio modules. Wireless mesh networks can handle individual nodes not working and are tolerant to environments such as forests and hills where data may not be able to go directly from one..... Listed under: Wireless Projects
57.



Arduino 3.3V This Lazy Old Geek (L.O.G.) loves Arduinos. I have noticed that a lot of sensors, like GPS, LCDs, magnetometers are 3.3Vdc sensors. But the standard Arduinos, Uno, RBBB are 5Vdc modules. So I decided I'm going to make more of my Arduino projects with 3.3Vdc..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
58.



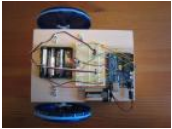
Arduino Fridge Magnet Do you have a habit of leaving notes on the fridge, now take it digital and add an Arduino to it. In this instructable I'm going to show you how to do just that. All you need is an Arduino, an LCD screen and a..... Listed under: LCD Projects
59.



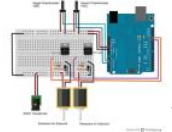
Ultrasonic Range detector using Arduino and the SR04 Ultrasonic sensor his is a preliminary instructable that will take you through the steps I took to get the SR04 ULTRASONIC SENSOR connected and working to the Arduino. It will then be incorporated to my mini environment monitor. Eventually, if it all fits, it will end up..... Listed under: Sensor – Transducer – Detector Projects
60.



Kid-friendly PuppyDuino 0.31 OK, this is not a fully autonomous "get you a beer, open it for you and then tweet about it" robodog (yet 😊 but if you're itching to get past the blinky lights on a breadboard stage with your Arduino and you're ten or know..... Listed under: LED Projects
61.



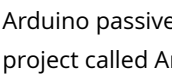
The Arduino Mothbot The purpose of this project is to design and build a simple light-following robot using an Arduino Duemilanove microcontroller board. I really wanted to share a robot project that was cheap, simple to build, and had a complete set of instructions for all of the..... Listed under: Robotics – Automation Projects
62.



David Bynoe works in progress For an upcoming project I needed a pneumatic ram with a closed loop control system so I could position it accurately. Didn't have the budget for an off the shelf solution, so I bodged one together with an arduino, a couple air solenoid valves, and..... Listed under: Other Projects
63.



How to Build an H-bridge Circuit with an Arduino Microcontroller An h-bridge is a chip that allows DC motors to be run versatile, with bidirectional capability. With an H-bridge, motors can go forward or backward, left or right, up or down, etc, depending on the use of the motor(s) in the circuit. Without a microcontroller,..... Listed under: Motor Projects
64.



Arduino passive IR trigger for Canon EOS The other day I wanted to experiment with external triggers for my Canon EOS 550D camera. I stumbled upon a nice open source project called Arduino Camera Control from Oleg Mazurov, the creator of the USB Host Shield library for Arduino. The Arduino Camera Control..... Listed under: Interfacing(USB –
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RS232 – I2c -ISP) Projects



65. ARDUINO RF power & SWR meter This sketch will readout RF power and SWR from any SWR bridge (for example 'monimatch' type). As this 'monimatch' type of bridge is frequency dependant, the meter must be calibrated for every band. Because my primary interest was for VHF/UHF/SHF, I have foreseen positions for..... Listed under: Metering – Instrument Projects



66. Internet connection indicator box with restart button THE SETUP For an interface I thought 3 LEDs would be simple enough: Blue for everything is fine (as blue LEDs are cooler than green ones); red for something is wrong; and yellow for the modem and router are being restarted. I added a button..... Listed under: Internet – Ethernet – LAN Projects



67. Arduino Security Alarm with Reed Switch How does the security alarm circuit works? When power is turned on, the circuit goes into standby mode, and this condition is indicated by "SECURITY ALARM" in the LCD screen.Note that here a N/O reedswitch + bar magnet combination is used to detect any mishaps,..... Listed under: Security – Safety Projects

Input parameters	High precision output	Self precision output
Input voltage (V)	5.000	5.000
Input current (mA)	0.000	0.000
Input power (W)	0.000	0.000
Input resistance (Ω)	0.000	0.000
Input capacitance (F)	0.000	0.000
Input inductance (H)	0.000	0.000

68. Line Follower Robot using Arduino A line follower robot using 8051 microcontroller is already published here and this time the same thing is done using arduino. This line follower robot is basically designed to follow a black line on a white surface. Any way the same project can be used..... Listed under: Robotics – Automation Projects



69. HOW TO MAKE CUSTOM GEAR FOR LINEAR MOTION In the manufacturing industry, a wide variety of devices used at home or in the garden has been experiencing challenges in automating linear displacement of any of the items used. For instance, For example, an automatic opening of gates, automatic unlocking and changing positions of..... Listed under: Metering – Instrument Projects



70. Arduino Platform – SIMON Game Implementation Introduction Having been a CodeProject member for several years, and not having got round to ever publishing an article, left me feeling a bit disappointed in myself. I have thought many a time on what kind of article I can produce. Then after coming across..... Listed under: Game – Entertainment Projects



71. Arduino Based Security System using GSM & PIR Sensor In present time Home/Office and many other place security is most important. In our absence these places are not secure. For make these palaces secure many peoples keep guards and many people prefer electronic security systems. In present time many types of security systems are..... Listed under: Security – Safety Projects



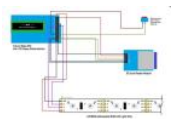
72. Interface single and Dual IR Infrared sensor with Arduino and LCD Interface single and Dual IR Infrared sensor with Arduino and LCD Introduction- Multiple Sensor Interface to Arduino In this another tutorial on sensors for beginners, we are going to interface single and multiple Infrared IR sensors with Arduino Uno development board, working simultaneously and have the..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Sensor – Transducer – Detector Projects



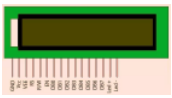
73. Getting Started with Arduino – LED Blinking Arduino Uno is the best development board for beginners in the field of embedded systems. We can program Arduino board with less technical knowledge and programming skills. This tutorial is intended to beginners in the field of Arduino. Hope you already have an Arduino board. Then..... Listed under: LED Projects



74. 26-Way MIDI DRUMS his design is a 26-way MIDI/USB drum pad system with the velocity byte fixed for 10 input drum switches and a 16-way velocity sensitive circuit, providing a full (0-127) velocity range using piezo sensors. The drums are pre-selected to the MIDI outputs 35-50 for the..... Listed under: Other Projects



75. LPD8806 SD/LCD Digital Light Wand! (Last Update – 20 September 2014) I have gathered the information from the HL1606 Digital Light Wand Blog and brought it all over to this new page so that there would be a page dedicated to the LPD8806 Digital Light Wand created by ISO-MICK. Mick took my original design and turned..... Listed under: LCD Projects



76. Interfacing LCD with Arduino Uno 16x2 character LCD display is a very basic LCD module which is commonly used in electronic projects. 16x2 means it can display 2 rows of 16 characters (columns). Its other variants such as 16x1, 16x4 etc are also available. These LCDs are usually made using..... Listed under: LCD Projects



77. Analog to Digital Conversion in ARDUINO Analog to digital conversion module of ARDUINO UNO has 6 input ports. The number of the port varies with your ARDUINO model but the coding remains the same. The analog reading in the analog inputs are converted into corresponding 10bit(0-1023). ARDUINO developers have made such an option that you..... Listed under: Other Projects



78. How to Convert an Arduino into an AVR Flash Programmer In case you don't have an AVR programmer but you do have an arduino, the arduino can be converted into an AVR flash programmer, meaning it can program bare AVR microcontroller chips. Say if you have an AVR chip and you want to program the..... Listed under: Arduino Programmer Projects, How To – DIY – Projects



79. How to Build an Infrared Distance Sensor Circuit An infrared (IR) distance sensor is a sensor that can measure distance from a solid or physical object. An infrared distance sensor does this through light waves. It sends out infrared light and waits to receive it back at the receiver end. If it receives..... Listed under: How To – DIY – Projects



80. How to Build an HC-SR04 Distance Sensor Circuit An ultrasonic distance sensor is a sensor that can measure distance from a solid or physical object. An ultrasonic range finder does this through sound waves. It sends out high-frequency sound waves and then waits to listen back for these sound waves. If it has..... Listed under: Sensor – Transducer – Detector Projects

81. How to Build a Servo Motor Circuit (with Arduino) In this project, we will go over how to build a servo motor circuit using an arduino. This is a circuit which can control and rotate a servo motor to rotate a certain amount of degrees. Specifically, in our circuit, we will make it so..... Listed under: Motor Projects



82.  How to Build an Ohmmeter Using an Arduino In this project, we will show how you can build an ohmmeter using an arduino. An ohmmeter is a device that can measure resistance. Most of the times now, ohmmeters aren't standalone devices but appear as one of type of measuring device amongst many in..... Listed under: Metering – Instrument Projects

83. 
1 = GND
2 = DOUT
3 = AOUT
4 = Vcc
(bottom view)

MQ-7 Carbon Monoxide Sensor Circuit Built with an Arduino In this project, we will go over how to build a carbon monoxide sensor circuit with an arduino. The carbon monoxide sensor we will use is the MQ-7 sensor. This is a sensor that is sensitive to effects of CO. Carbon monoxide (CO) is a..... Listed under: Sensor – Transducer – Detector Projects

84. 

MQ-3 Alcohol Sensor Circuit Built with an Arduino In this project, we will go over how to build an alcohol sensor with an arduino. The alcohol sensor we will use is the MQ-3 sensor. This is a sensor that is not only sensitive to alcohol, particularly ethanol, which is the type of alcohol..... Listed under: Sensor – Transducer – Detector Projects

85. 

MQ-2 Smoke Sensor Circuit Built with an Arduino In this project, we will go over how to build a smoke sensor circuit with an arduino board. The smoke sensor we will use is the MQ-2. This is a sensor that is not only sensitive to smoke, but also to flammable gas. The MQ-2..... Listed under: Sensor – Transducer – Detector Projects

86. 

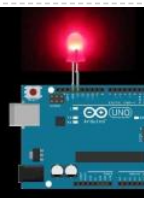
How to Build a Liquid Level Gauge Circuit with an Arduino In this project, we will build a liquid level gauge circuit with an arduino. This is a circuit in which a liquid level can be monitored through a gauge. We read the liquid level from the gauge (low, medium, or high), just as you see..... Listed under: How To – DIY – Projects, Metering – Instrument Projects

87. 

Arduino Light Meter Circuit In this project, we will go over how to connect an analog volt panel meter to an arduino so that it can measure and give us a readout of light striking the circuit. In this way, the circuit will function as a light meter. When..... Listed under: Metering – Instrument Projects

88. 

How to Build a Soil Moisture Sensor Circuit with an Arduino In this project, we are going to build a soil moisture sensor with an Arduino microcontroller. A soil moisture sensor, also called a hygrometer, measures the amount of moisture, or water, in the soil. Therefore, we can tell whether the soil has enough moisture or..... Listed under: How To – DIY – Projects, Sensor – Transducer – Detector Projects

89. 

How to Build a Night Light Circuit Using an Arduino In this project, we will go over how to build a night light circuit using an arduino. A night light circuit is a circuit which will turn on when nighttime comes, which is when it gets dark and the place could use some illumination. It..... Listed under: How To – DIY – Projects, LED Projects

90. 

How to Build a Heat Detector Circuit Using an Arduino In this project, we will go over how to build a heat detector circuit using an Arduino. A heat detector circuit is a circuit, of course, which can detect the presence or absence of heat. This could be useful for a wide range of circuits..... Listed under: Sensor – Transducer – Detector Projects

91. 

How to Build a Color Sensor Circuit In this project, we are going to build a color sensor circuit with an Arduino microcontroller. A color sensor is a device that can detect and differentiate between certain primary colors. This sensor can detect and differentiate between the colors white, blue, green, and red..... Listed under: How To – DIY – Projects, Sensor – Transducer – Detector Projects

92. 

Visual / Aural Guitar Tuner “The Tune Trainer” using arduino Build a strobe tuner with an integrated tone generator to teach tuning by ear. --Background= I have always dabbled in instruments. Over the course of my life, I've attempted (with varying success) Piano, Guitar, Banjo, Penny Whistle, Ocarina, Panpipes, Great Highland Bagpipes, Smallpipes, and Didgeridoo..... Listed under: Sound – Audio Projects

93. 

How to Build a Light Detector Circuit Using an Arduino In this project, we will go over how to build a light detector circuit using an arduino. A light detector circuit is a circuit which can detect the presence or absence of light, depending on how we write our code to respond to the varying..... Listed under: How To – DIY – Projects

94. 

Arduino-Based Optical Tachometer using arduino Over ten years ago, I put up a web page with detailed instructions on building a simple electric motor based on one from the Beakman's World TV show. I called it the "Beakman's Electric Motor" page and over the years it has had hundreds of..... Listed under: Metering – Instrument Projects

95. 

How to Build an Infrared Proximity Switch Circuit Using an Arduino In this project, we will build an infrared proximity switch circuit using an arduino. This is a circuit in which a switch activates when the infrared sensor detects an object in its proximity. The infrared proximity switch sensor is a reflection-type photoelectric snesor which sends..... Listed under: How To – DIY – Projects



96.  Ultrasonic Batgoggles Wish you were bat? Want to Experience Echolocation? Want to try to "see" with your ears? For my first Instructable, I will show you how to build your own ultrasonic batgoggles using an Arduino microcontroller clone, Devantech ultrasonic sensor and welding goggles for around \$60..... Listed under: Game – Entertainment Projects



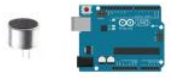
97.  How to Build a Simple Force Sensing Resistor (FSR) Circuit In this article, we will go over how to connect a force sensing resistor, or force sensitive resistor, (FSR) to a circuit to build many different types of useful circuits with them. Force sensing resistors are variable resistors which change resistance according to the pressure..... Listed under: How To – DIY – Projects



98.  How to Install the Arduino to the Lithium Backpack using arduino The Arduino is an open source hardware input and output circuit and the Lithium Backpack is a Arduino accessory that will power the Arduino when it is away from a computer or a wall power. These products are sold at Liquidware for under \$34 each.....
Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects



99.  How to Connect a Microphone to an Arduino In this project, we will go over how to connect a microphone to an arduino so that the arduino can detect whether there is sound in the environment or not. This circuit is only capable of detecting whether there is sound in the environment or..... Listed under: How To – DIY – Projects



100.  Spectrographic Auroral Indicator – A Northern Lights Warning Device using arduino 3/16/2011 EDIT: The Wing Kp Predicted Geomagnetic Activity Index model is now deployed and operational. Costello is now considered non-operational and will be discontinued on 23 Mar 2011. Comments and questions are welcomed at SWPC.CustomerSupport@noaa.gov The Wing Kp Predicted Geomagnetic Activity Index model is known..... Listed under: Security – Safety Projects



101.  How to Integrate a Temperature Sensor Circuit to an LCD In this project, we will go over how we can build a temperature sensor circuit and integrate it to an LCD so that we can get a readout of the temperature on the LCD. In previous projects with temperature sensor circuits, we built the circuit..... Listed under: LCD Projects, Sensor – Transducer – Detector Projects



102.  How to Build a LM335 Temperature Sensor Circuit In this project, we will demonstrate how to build temperature sensor circuit using a LM335 sensor. As a temperature sensor, the circuit will read the temperature of the surrounding environment and relay this temperature to us back in degrees Kelvin. The difference between an LM335..... Listed under: Sensor – Transducer – Detector Projects



103.  How to Build a TMP36 Temperature Sensor Circuit In this project, we will demonstrate how to build temperature sensor circuit using a TMP36 sensor. As a temperature sensor, the circuit will read the temperature of the surrounding environment and relay the temperature to us back in degrees fahrenheit. The IC we will use..... Listed under: Sensor – Transducer – Detector Projects



104.  Hard Drive Persistence of Vision (HDPOV) using arduino The platter of a hard drive spins well over sixty times a second. If a narrow slot was cut into the platter to allow LEDs to shine through, we can achieve flicker fusion and trick the eye into seeing a stable image. This phenomenon is..... Listed under: Memory – Storage Projects



105. How to Drive a 7 Segment LED Display with an Arduino In this project, we will show how to drive a single 7 segment LED display with an arduino microcontroller. A 7 Segment LED Display is an electronic device housing 8 individual LEDs. Using this device, we can display all numerals and many alphabetical characters and many more..... Listed under: LED Projects



106.  Low Cost Water Flow Sensor and Ambient Display using arduino Water is a precious resource. Millions of people do not have access to clean drinking water, and as many as 4000 children die from water contaminated illnesses every day. Yet, we continue to be wasteful with our resources. The overarching goal of this project is..... Listed under: Home Automation Projects



107.  How to Build an RGB Full Color LED Module Circuit In this project, we are going to build an RGB Full Color LED module circuit. A full color LED module is a circuit in which an LED can be lit to any color. This is why it is called a full color LED module. By..... Listed under: LED Projects 



108.



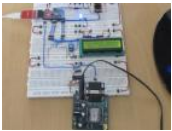
Control Your Robot Using a Wii Nunchuck (and an Arduino) using arduino After wearing myself out playing Wii Boxing I got to thinking wouldn't it be great if I could use this to control my robot, (looking to my left hand). Looking around the internet I found a bevy of people doing similar things, (links to everyone..... Listed under: Robotics – Automation Projects
109.



How to Connect and Read a Keypad with an Arduino n this project, we will go over how to integrate a keyboard with an arduino board so that the arduino can read the keys being pressed by a user. Keypads are used in all types of devices, including cell phones, fax machines, microwaves, ovens, door..... Listed under: Development Board – Kits Projects
110.



Super Simple Beginners Robot! using arduino I created this Instructable for the absolute n00by robot wannabe. I have noticed a huge jump in the number of beginners getting into the hobby and the number of "how do I" questions seem to be mounting. Maybe this humble little Instructable will help one..... Listed under: Robotics – Automation Projects
111.



How to Interface GPS with Arduino Every single location in the entire globe can be specified in terms of geographical coordinates. The geographical coordinate is a system which specifies any given location on the earth surface as latitude and longitude. There are devices which can read the geographical coordinates of a..... Listed under: GPS Based Projects
112.



Touch-less Switch Arduino Project – Touch Me Not I modified the Arduino project from the Arduino Starter Kit (Touch Sensor Lamp). Now it lights up an LED when your hand is close on the aluminium foil (without even touching it). This can be used as a 'Touch-less..... Listed under: Sensor – Transducer – Detector Projects
113.



Create an Applescript/Arduino Alert flag. using arduino Have you ever felt like the mail sound on your Mac just wasn't enough? Simple sounds and alerts just don't cut it for you? You want something more apparent and rewarding? If so, this is the Instructable you've been looking for. In this Instructable, I'll..... Listed under: How To – DIY – Projects
114.



How to Build a Motion Sensor Light Circuit with an Arduino In this project, we will go over how to build a motion sensor light circuit with an arduino. A motion sensor light circuit is a circuit in which a light turns on when motion is detected. With a PIR motion sensor integrated with an arduino,..... Listed under: Sensor – Transducer – Detector Projects
115.



Time Sensing Bracelet using arduino The Time Sensing Bracelet is a fabric potentiometer. You select your desired time of day by making contact in the corresponding position on your wrist - where your watch would normally be. There is no point to it but fun. Update: Using some wire wrapped..... Listed under: Sensor – Transducer – Detector Projects
116.



YAHMS: Temperature Probes My wireless temperature probes work by using an Xbee module to transmit readings from a TMP36 down to the Arduino base station. The XBees aren't too cheap, coming in around £19 or \$23 so I tried to be cheap and ordered mine from Sparkfun, I..... Listed under: Temperature Measurement Projects
117.



Simple mass storage for your microcontroller project using arduino Do you want gigabytes of storage for your microcontroller? Would you like a simple way to tranfer files from your PC to your picaxe or arduino or other micro project? This little projects demonstrates the uDrive that can be set up as an extra drive..... Listed under: Memory – Storage Projects
118.



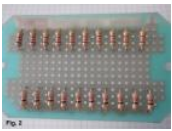
How to make a solar iPod/iPhone charger -aka MightyMintyBoost using arduino I wanted a charger for my iPodTouch and the MintyBoost was definitely my first choice. I wanted to take it a bit further and make it not only rechargeable but also solar powered. The other issue is that the iPhone and iPodTouch have large batteries..... Listed under: Solar energy projects
119.



Make an Ultrasonic Distance Calculator Arduino Project – The distance calculator I have been playing with Arduino (micro-controller) for about 2 years now and I am becoming more and more passionate about circuits. For those who are not aware of Arduino, check out my article “Arduino – A Guide for..... Listed under: Calculator Projects
120.



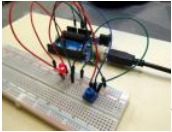
TV-B-Gone Kit using arduino Tired of all those LCD TVs everywhere? Want a break from advertisements while you're trying to eat? Want to zap screens from across the street? The TV-B-Gone kit is what you need! This ultra-high-power version of the popular TV-B-Gone is fun to make and even..... Listed under: Video – Camera – Imaging Projects
121.



Arduino Police Flasher Kit After reading about the famous Arduino programmable microcontroller using the "Getting Started with Arduino Kit (Jameco P/N 2121121) I was eager to try my hand at some real live electronic programming. The Arduino platform is a great place to start for a novice like me. After learning..... Listed under: LED Projects
122.



Tweet-a-watt – How to make a twittering power meter... using arduino Tweet-a-watt - How to make a twittering power meter... This project documents my adventures in learning how to wire up my home for wireless power monitoring. I live in a rented apartment so I don't have hacking-access to a meter or breaker panel. Since I'm..... Listed under: Metering – Instrument Projects
123.



Arduino Circuit to Dim LED with Potentiometer In Lesson 8 you learned to write analog voltages on the Arduiono, and in Lesson 10 you learned to read analog voltages from the arduino. In this lesson we will combine what you did in lessons 8, 9, and 10 to create an LED with..... Listed under: LED Projects



124. LED Sunrise Alarm Clock with Customizable Song Alarm using arduino My Motivation This winter my girlfriend had a lot of trouble waking up in the morning and seemed to be suffering from SAD (Seasonal Affective Disorder). I even notice how much harder it is to wake up in the winter since the sun hasn't come..... Listed under: Clock – Timer Projects



125. Arduino Lab 2 – Morse Code Generator Introduction An excerpt from OmniGlot.com about the origin of Morse Code: Morse Code was invented by Samuel F. B. Morse (1791-1872), a painter and founder of the National Academy of Design. He conceived the basic idea of an electromagnetic telegraph in 1832, and produced the..... Listed under: Development Board – Kits Projects



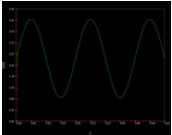
126. Arduino robot kit – Wiring Diagram I have created this wiring diagram for the connections between the motor controller, motors, and sensor shield. I'll update it later to include other components. And here is an update that includes the servo motor and the range sensor. And here are the detailed pin..... Listed under: Robotics – Automation Projects



127. How To Communicate With An Alien Artifact or using arduino Close Encounters of the Curiously Minty Kind. This Instructable will show you how to build an Altoids version of the 'Close Encounters' mothership, and how to interact with it. This may be vital training for that day when the Bright White Beam comes to suck..... Listed under: Game – Entertainment Projects



128. Isolated mains power monitoring (Arduino) All about power today.. For a while now, I've been looking around for a mains (220-240VAC) power monitoring circuit that I might be able to interface with an Arduino. There is of course the OpenEnergyMonitor solution, but they seem to use a transformer to isolate and measure..... Listed under: Metering – Instrument Projects



129. How to build an 8x8x8 LED cube and control it with an Arduino using arduino There are a lot of LED cubes on Instructables, so why do another? Most are for small cubes consisting of 27 or 64 LEDs, rarely larger since they are limited to the number of outputs available on the microcontroller. This cube will be 512 LEDs,..... Listed under: LED Projects



130. Arduino automatic watering system [caption id="attachment_19540" align="alignright" width="210"] Fig. 1: Author's prototype[/caption] During summers, most people are too lazy to water the potted plants on their rooftop gardens every day. Explained in this section is a simple and exciting plant watering system that you can build yourself in just..... Listed under: Home Automation Projects



131. Bar Graph Introduction This project explores a couple of ways of simulating and using a bar graph with the Arduino. Bar graph components like the following one can be used, This type of bar graph is basically just 10 LEDs in a row with anodes on one..... Listed under: Other Projects



132. Solderless Breadboard Layout Sheets (plug and play electronics) using arduino Here's a fun system designed to take care of some of the headaches involved in breadboarding a circuit. It is a simple set of template files drawn to scale with real world electronic components. Using a vector drawing program you simply move the components..... Listed under: Development Board – Kits Projects



133. Arduino-Based Optical Tachometer Over ten years ago, I put up a web page with detailed instructions on building a simple electric motor based on one from the Beakman's World TV show. I called it the "Beakman's Electric Motor" page and over the years it has had hundreds of thousands, if..... Listed under: Metering – Instrument Projects



134. USB NES controller with an arduino! using arduino UPDATE 22-12-2014 Instructables user mattpbooth has updated the code and is hosting it on github: <https://github.com/mattpbooth/ArduinoNESController...> Thanks Matt! UPDATE 03-12-2011 Replaced a println with print (derp). UPDATE 01-12-2011 Remade all code from scratch. Remade 'ible code section; Now includes a 'Processing COM port config for..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects



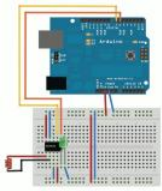
135. How to Build a LM35 Temperature Sensor Circuit In this project, we will demonstrate how to build temperature sensor circuit using a LM35 sensor. As a temperature sensor, the circuit will read the temperature of the surrounding environment and relay thi temperature to us back in degrees celsius. The IC we will use..... Listed under: How To – DIY – Projects, Temperature Measurement Projects



136. Tilt Sensor Tutorial using arduino What is a tilt sensor? Tilt sensors allow you to detect orientation or inclination. They are small, inexpensive, low-power and easy-to-use. If used properly, they will not wear out. Their simplicity makes them popular for toys, gadgets and appliances. Sometimes they are referred to as..... Listed under: Sensor – Transducer – Detector Projects



137.



RFID with Arduino If you ever wanted to integrate RFID functionality into your project, this small tutorial might help you accomplish that. I used the RDM630 module from seeedstudio in its UART version. It comes on a small board with presoldered connectors which fits perfectly on a breadboard. You only..... Listed under: RFID - NFC projects
138.



Ceiling Fan LED Display using arduino Seeing so many persistence of vision ideas on the web was too tempting not to try one. After considering several different motors to drive a display, a ceiling fan seemed to run at just the right speed, is out of the way, and very quiet..... Listed under: Home Automation Projects
139.



Home Automation using Arduino and MATLAB n present time home office appliance controlling is common thing. Today for controlling home/offices appliances, machineries in companies/industries uses different types of automation systems like DTMF controlled, GSM controlled and many others. So here this project is made for interfacing MATLAB (Graphic User Interfacing) and Home/office/industries..... Listed under: Home Automation Projects
140.



AVRSH: A Command Interpreter Shell for Arduino/AVR. using arduino Ever wanted to be "logged in" to your AVR microcontroller? Ever thought it would be cool to "cat" a register to see its contents? Have you always wanted a way to power up and power down individual peripheral sub-systems of your AVR or Arduino in..... Listed under: Arduino Programmer Projects
141.



How to Build a Vibration Motor Circuit In this project, we will show how to build a vibration motor circuit. A vibration motor is a motor which vibrates when given sufficient power. It is a motor that literally shakes. It is very good for vibrating objects. It can be used in a..... Listed under: How To – DIY – Projects, Motor Projects
142.



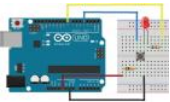
Acorn Chime using arduino By: Charlie DeTar, Christina Xu, Boris Kizelshteyn, Hannah Perner-Wilson A digital wind chime with hanging acorns. Sound is produced by a remote speaker, and data about chime strikes is uploaded to Pachube. Step 1: Brainstorming for a device that would represent ourselves Our goal was..... Listed under: Game – Entertainment Projects
143.



Arduino Chandelier from Jars E-Edit: Thank you very very much for voting for me in Featured Author, Glue and Battery Powered Contests! Cheer up and wait for my project so special is coming... Edit: If you really like this project, you can vote for me on the top right corner, forFeatured..... Listed under: LED Projects
144.



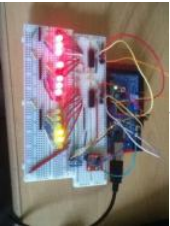
Bedazzler: DIY non-lethal weaponry using arduino Our first open source Homeland Security non-lethal weapon project - The "THE BEDAZZLER: A Do-it-yourself Handheld LED-Incapacitator". After attending a conference where the \$1 million "sea-sick flashlight" (named "THE DAZZLER") was demonstrated by the US Dept. of Homeland Security, we decided to create our own..... Listed under: Home Automation Project Ideas
145.



Using Push Button Switch with Arduino Uno In this tutorial you will learn how to read the status of a digital pin of Arduino. I hope that you already go through our first tutorial, Getting Started with Arduino Uno – LED Blinking. In this example, a push button switch and an LED is connected to Arduino..... Listed under: LED Projects
146.



Control a RepStrap with Processing using arduino This instructable shows how you can use many openly available projects together to build an interesting and complex system. It draws on several community projects including: RepRap, Arduino, Processing, Linux and, of course, Instructables! More specifically this intructable shows how to draw the path of..... Listed under: CNC Machines Project Ideas
147.



Binary Clock Introduction In this project, 16 LEDs are used to represent the time in binary. The time is read from a Real Time Clock breakout board - the same one used in the Digital Clock page. The binary clock uses 4 place values for the hour..... Listed under: Clock – Timer Project Ideas
148.



Build an Arduino-powered talking robot head using arduino This robot head was originally built as a end of the year project for my physical computing class, but over the summer it has "learned" how to talk. The head is powered by two Freeduinos, 3 TLC5940NT chips and an Adafruit Industries Wave Shield found here: www.ladyada.net/make/waveshield/..... Listed under: Robotics – Automation Project Ideas
149.



Use Arduino to Interface with a Remote Controlled Power Switch Update: check out the RFToy — an easy-to-use standalone gadget to control remote power sockets. Also, support for remote power sockets have been added to OpenSprinkler firmware 2.1.1. For a while I've been looking for a way to switch household power line (110V) devices. One of the simplest..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
150.



3x3x3 LED Cube with Arduino Lib using arduino There are other Instructables about building LED cubes, this one is different for several reasons: 1. It's built with a low number of off-the-shelf components and hooks up directly to the Arduino. 2. A clear, easy to reproduce circuit diagram is provided with plenty of..... Listed under: Arduino LED Project Ideas
151.



Easy DIY Home Automation (using servo switches) using arduino This Instructable is all about one of life's simple actions, flipping a light switch on and off. At oomlout we do it many times a day, so many in fact it came to a point where we asked ourselves "Can't we get an Arduino to..... Listed under: Home Automation Project Ideas
152.

DIY Arduino Pulse Sensor So I mentioned in an earlier Instructable that I am a teaching assistant (TA) for an introductory engineering course for biomedical engineering majors at Vanderbilt University. My main task as a TA is to re-write a few laboratory exercises that the students will be performed..... Listed under: How To – DIY – Project Ideas, Sensor – Transducer – Detector Project Ideas





153.



Two Wire Arduino Knight Rider This tutorial shows how to interface eight LEDs to an Arduino using only two Arduino pins. This is made possible by using a PCF8574 I/O expander IC. A "Knight Rider" display is shown on the LEDs. Prerequisites Complete tutorial 4 – Arduino Knight Rider. Be able..... Listed under: LED Projects
154.



Arduino Lilypad Interactive Passion Sensing Scarf using arduino This was my first time working with an Arduino Lilypad. I have been wanting to try something that dealt with soft circuits for awhile now. This project is what I came up with. The concept is based off my friend Ethan Dicks from theFusefactory.org's emergent..... Listed under: Game – Entertainment Project Ideas
155.



Arduino Serial Thermometer The Arduino reads temperature from a MCP9700 temperature sensor IC and displays the temperature in the Arduino IDE serial monitor window. Also see the Arduino LCD thermometer tutorial (tutorial 14). Prerequisites Complete Tutorial 9: Using the Arduino Serial Port before attempting this tutorial. Components Besides an Arduino Uno board,..... Listed under: Metering – Instrument Projects
156.



The Ardweeny: the little friend of the Arduino (and how to beef it up) using arduino Open-source hardware? Arduino(tm) is the first name to come to mind! As great as it is, sometimes we need a small microcontroller solution for a project, or a stripped-down version for cost-effectiveness. The Ardweeny is the solution. These small kits are 100% compatible with the..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas
157.



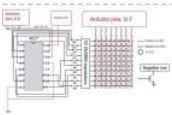
Using the Arduino Serial Port The Arduino Uno can send data (such as a text message) to the PC over the USB cable. The Arduino IDE has a serial monitor window that can be opened and will receive and display the data sent from the Arduino board. Data can also..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
158.



Core3duino using arduino This is an addon shield to an addon shield. That's right, you have to have the Core2duino on your Arduino to be able to understand why you would want this in the first place. So once you have your Core2duino saddled up, give this one..... Listed under: Development Board – Kits Project Ideas
159.



Dual LED Flasher A two transistor circuit that flashes two LEDs on and off alternately. Prerequisites Complete tutorial two - Transistor Timer before attempting this tutorial. Components In addition to an electronic breadboard, wire links, a 9V battery and a battery clip, you will need: QTY PART DESIGNATOR NOTES TYPE..... Listed under: LED Projects
160.



Building IllyClock – Arduino-based alarm clock in a coffee can using arduino Updated Aug 4, 2011 A streamlined version is now described here. Beside the enclosure, the original feature of IllyClock is showing the time in colors: 3 hours before wake-up time, color changes from green to orange; 1 hour before wake-up, the time is shown in red. One..... Listed under: Clock – Timer Project Ideas
161.



Arduino Melody A very easy tutorial that uses only two components. The Arduino plays a short melody on a loudspeaker. The program to load to the Arduino is one of the programs that is built into the Arduino IDE. Prerequisites Complete tutorial 3 - Starting with Arduino..... Listed under: Sound – Audio Projects
162.



Twitter Mood Light – The World's Mood in a Box using arduino How's the world feeling right now? This box tells you. Powered by: an Arduino, a WiFly wireless module, an RGB LED, Twitter.com and a 9v battery. I'm a news junkie. I want to know everything that is going on in the world as soon as..... Listed under: Game – Entertainment Projects
163.



Arduino Knight Rider In this tutorial, eight LEDs are interfaced to the Arduino Uno board. This is not complicated – it is just like interfacing a single LED to the Arduino as done in tutorial 3, but eight times over. A program is then loaded to the Arduino..... Listed under: LED Projects
164.



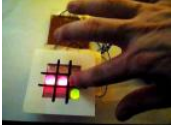
Make a wall avoiding Robot! using arduino Objective: To create from scratch a working robot that is able to avoid walls and obstacles. Ever wanted to make a robot that could actually do something, but never had the time or knowledge to do it? Fear no more, this instructable is just for..... Listed under: Robotics – Automation Project Ideas
165.



Arduino LCD In this tutorial you will connect a LCD (Liquid Crystal Display) to the Arduino Uno and then run the Arduino LCD example programs that are built into the Arduino IDE. Prerequisites It is recommended for beginners to complete all the Arduino tutorials up to and..... Listed under: LCD Projects
166.



Let's make an Arduino real time clock shield Today we are going to make a real time clock Arduino shield. Doing so will give you a simple way of adding ... real time capability to your projects such as time, date, alarms and so on. We will use the inexpensive Maxim DS1307 real-time..... Listed under: Clock – Timer Projects
167.



Arduino and Touchpad Tic Tac Toe using arduino Or, an exercise in input and output multiplexing, and working with bits. And a submission for the Arduino contest. This is an implementation of a tic tac toe game using a 3x3 array of bicoloured LEDs for a display, a simple resistive touchpad, and an..... Listed under: Game – Entertainment Project Ideas
168.

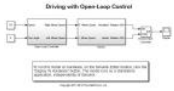


Arduino LCD Thermometer In this tutorial, a temperature sensor (MCP9700 linear active thermistor IC) and LCD are connected to the Arduino. The Arduino reads the temperature from the MCP9700 on analog pin A0 and displays the temperature on the LCD. This video shows the circuit operating. When touched..... Listed under: LCD Projects
169.

How to wire an arduino-based 3-axis CNC machine using arduino I've seen a number of tutorials about how to build the platform for a 3-axis CNC milling machine. I have not seen anyone tackle the tricky subject of the electronics. Here now is my attempt to do so. Step 1: Parts You'll need: - an..... Listed under: CNC Machines Project Ideas





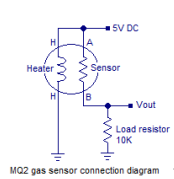
170.  Drive with PID Control on an Arduino Mega 2560 This example shows how to simulate a simple closed-loop control algorithm in Simulink and how to run it on an Arduino Mega 2560 board. Contents Introduction Prerequisites Required Hardware Task 1 – Build the Vehicle Task 2 – Build the Motor Controller Task 3 –..... Listed under: Other Projects

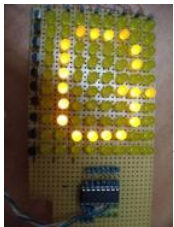
171. Musical MIDI Shoes using arduino Like many people, I often find myself unconsciously tapping my feet, whether it's along to a song or out of some nervous habit. As fun as that is though, I've always felt as if something has been missing. If only I could trigger the sounds..... Listed under: Sound – Audio Projects



172.  MIDI Linear Actuator This project uses relays to control a Firgelli Automations linear actuator without feedback. The relays are controlled by the MIDI Volume (Control Change number CC7) command which is read by the microcontroller and converted into one of the only 3 states of operation: 1) The..... Listed under: Other Projects

173.  Wallbots: Autonomous Magnetic Robots that Traverse Vertical Surfaces using arduino This Instructable will teach you how to create magnetic robots that traverse vertical surfaces. These robots can move on any metallic walls, including elevators, whiteboards, refrigerators or metal doors. The robots are outfitted with several light sensors, allowing them to respond to simple user interactions..... Listed under: Robotics – Automation Project Ideas

174.  LPG sensor using arduino LPG sensor using arduino with alarm and cutoff. A simple LPG sensor using arduino is shown in this article. This circuit indicates the amount of LPG in the air. The circuit sounds an alarm and trips a relay when the concentration is above a predetermined..... Listed under: Sensor – Transducer – Detector Projects

175.  Make a 8×10 L.E.D Matrix using arduino UPDATE 1: I HAVE ADDED THE CODE FOR CONWAY'S GAME OF LIFE UPDATE 2: NOW YOU CAN SAVE SOME ARDUINO PINS WITH THE HELP OF 1 SHIFT REGISTER. In this instructable I will show you how to build a quite fancy 8 by 10 L.E.D matrix(with scrolling text and animations) using the Arduino and 4017 decade..... Listed under: LED Projects

176.  IR Remote Controlled Home Appliances using Arduino In present times there are many types of Home Automation Systems which are available in the market. Most of these are simple Home Appliances Controlling Systems like DTMF controlled Home Appliances, GSM based Home Appliances Controlling, RF based Home Appliances Controlling. Here we are going..... Listed under: Home Automation Project Ideas

177.  Arduino Controlled Servo Robot (SERB) using arduino What better way to start experimenting with open source micro-controllers (Arduino) then by building your very own open source robot (CC (SA -BY))? What to do with your SERB? (here) - How to connect your SERB to the internet and drive..... Listed under: Robotics – Automation Project Ideas

178.  Simple Robotics Breadboard This Instructable shows you how to build a simple, inexpensive breadboard for robotics experiments. It is a companion to Cheap, Easy Robotics for the Non-Programmer. Here we'll learn how to build a Babuino robot to use for experiments with the Babuino/Blocos software environment. Using a..... Listed under: Robotics – Automation Project Ideas

179.  An easy way to send your heartbeat to the Cloud using arduino This cool (and very low price) sensor is attached on your ear and can detect your heart's pulse through transmitting infrared light and checking the absorption variation caused by the blood flow on your ear lobe. The site of the products provides also the Arduino..... Listed under: Medical – Health based Project Ideas

180.  PIR Motion Sensor Tutorial using arduino Pyroelectric ("Passive") InfraRed sensors: ""What is a PIR sensor?"" PIR sensors allow you to sense motion, almost always used to detect whether a human has moved in or out of the sensors range. They are small, inexpensive, low-power, easy to use and don't wear out..... Listed under: Sensor – Transducer – Detector Project Ideas

181.  A DIY photoplethysmographic sensor for measuring heart rate Meet Easy Pulse: A kit that includes all it needs to make a DIY heart rate sensor. Although it is not built using an Arduino, it is still open and easy to build. From the site: “This project is based on the principle of photoplethysmography..... Listed under: Sensor – Transducer – Detector Project Ideas

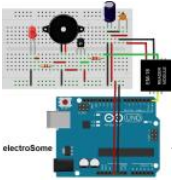
182.  The Smuggie: Tweet straight from your Snuggie using arduino Want to tweet how satisfied you are cuddled up in your Snuggie? The Smuggie is a modified Snuggie, designed specifically for those who feel the need to express their smug satisfaction with a Snuggie to their friends on Twitter. Here's a list of everything you'll..... Listed under: Internet – Ethernet – LAN Project Ideas

183.  Very simple ECG + Pulse Oximeter using arduino Scott W Harden has built an updated version of his ECG circuit for tracking his heartbeat. The main goal of the update is to provide a hack for collecting heartbeat with minimal h/w cost and circuit complexity. As you can see from the project photo above, the..... Listed under: Medical – Health based Project Ideas

184.



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
185.



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
186.



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
187.



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
188.



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
189.



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
190.



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
191.



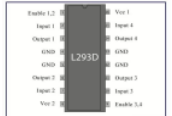
PUPPET CONTROLLER using arduino Three kinds of motion: Human, Mechanical, Animation. Blend them together to build a puppet controller for the real and virtual world. Or, Pacman - three ways. This Instructable includes: - Using an adjustable resistor as input to the Arduino Micro-controller - Controlling two servo motors from..... Listed under: Game – Entertainment Project Ideas
192.



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
193.



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
194.



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
195.



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
196.



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
197.



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 whc 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
198.



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
199.

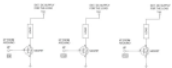
A simple DIY spectrophotometer using raduino What's all this? This instructable will explain how to build a fairly basic but working spectrophotometer out of easily sourceable parts. Of course, this device is nothing compared to a commercial spectrophotometer, but it will allow the builder to understand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



200.  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



201. 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



202. 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



203. 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



204. 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



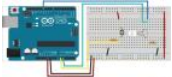
205. Simple Animatronics with Servos and Arduino using arduino Servos are surprisingly easy to use. Even more so than simple DC motors and steppers when you have a microcontroller. In this instructable we'll use a 'duino to drive five servos which will control a doll's limbs and neck. I bought the servos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



206. 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



207. 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



208. 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



209. 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



210. 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



211. 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



212. 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



213. 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

214. 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



215. 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



216. 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



217. 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



218. 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



219. 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



220. Yet Another Daft Punk Coffee Table (5x5 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



221. 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



222. 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



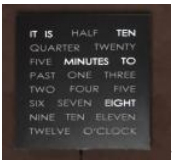
223. Brushless DC (BLDC) motor with Arduino. Part 3 – The Stroboscope Project It has been all dry theory in the Brushless DC (BLDC) motor with Arduino series up to this pair is where it gets to be more fun. If you've just arrived, please check out the previous two installments: Driving a three-phase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



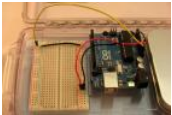
224. Arduino Basics: Rctime using arduino Rctime is a function for the Arduino that finds its roots in Basic-based micro controller programming languages (such as the Basic Stamp). This function basically counts the amount of time it takes to charge a capacitor through a resistor and returns a digital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



225. 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



226. 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



227. 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



228. 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



229. 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

230.



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
231.



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
232.



Lampduino – an 8x8 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
233.



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
234.



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
235.

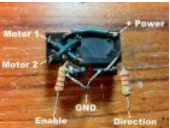
Make a simple platform and give mobility to your computer using arduino A computer is a very handy thing to use in your robots. If you start listing all the features that can be used for robotic purposes you'll find that it is cheaper to buy a netbook than buying LCD, wifi and bluetooth modules, cameras, speech synthesizer..... Listed under: RTOS – OS Projects
236.



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
237.



(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
238.



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
239.



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
240.



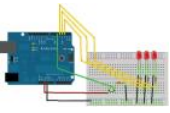
Tutorial – Arduino and the MAX7219 LED Display Driver IC using arduino Use the Maxim MAX7219 LED display driver with Arduino in Chapter 56 of our Arduino Tutorials. The first chapter is here, the complete series is detailed here. Update – 4/1/15 – This article is pending a re-write, please refrain from comments and questions until the new version is published. Introduction..... Listed under: LED Projects
241.



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
242.



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
243.



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
244.

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



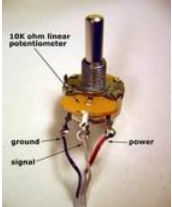
245.



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
246.



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
247.



247. 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
248.



248. 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
249.



249. 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
250.



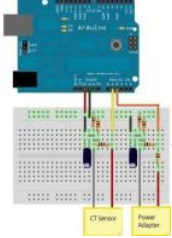
250. TROBOT: A Miniature Articulated Robot using arduino The TROBOT is a miniature six-axis articulated robot, modeled after large industrial & assembly line robots. The prototype versions were developed to be interfaced with ABB's Robot Studio software. Robot Studio was designed to program, simulate, and debug real industrial robots in an offline virtual environment..... Listed under: Robotics – Automation Project Ideas
251.



251. 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
252.



252. 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
253.



253. 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
254.



254. 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
255.



255. 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. Fritzting Rotary Encoder Part: Rotary Encoder with Knob bth.fzpz Fritzting Project: RotaryEncoderDemo.fzz Arduino (1.5) project: RotaryEncoderDemo.ino 1 2 3 4 5 6 7 8..... Listed under: Sound – Audio Projects
256.



256. 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
257.



257. 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



258.



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 continuos sampling..... Listed under: Temperature Measurement Project Ideas
259.



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
260.

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
261.



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
262.



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
263.



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
264.



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
265.



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
266.



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
267.



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
268.



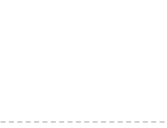
Thermocouple Sensor 1.0 using arduino Overview Jump to the Table of Contents This is a simple board for measuring temperature. It uses an AD595 chip to make thermocouple measurements easy. The AD595 amplifies the thermocouple signal and conditions it for easy use. Thermocouples are great due to their linearity over..... Listed under: Temperature Measurement Project Ideas
269.



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
270.



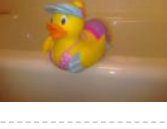
Arduino: measuring the Earth's magnetic field with the magnetometer HMC5883L using arduino The HMC5883L magnetometer This component (a small chip) HMC5883L, produced by Honeywell, bases its operation on AMR (Anisotropic Magnetoresistive) technology and allows you to be able to measure both the direction and the magnitude of the earth's magnetic field. This magnetometer HMC5883L has within 3 magneto-resistive..... Listed under: Temperature Measurement Project Ideas
271.



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
272.



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
273.



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

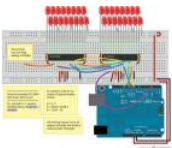
274. Arduino powered Haunted Pumpkin using arduino This is a cute little project that takes a pumpkin, motion sensor, and some parts from Radio Shack. It was fun to create and build. This project was sponsored by the Radio Shack Great Create and I was able to make the whole thing with..... Listed under: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



275. 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



276. 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



277. 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



278. 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



279. 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



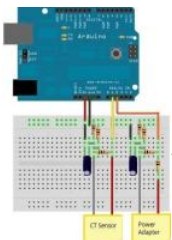
280. 1RE45 Non contact digital thermometer using arduino Contents 1 Introduction 2 Components Used 3 Description 4 Idea 5 Plan Of Action 6 1st week: 7 2nd week: 8 3rd week: 9 4th week 10 5th week 11 Expenses(In Rupees) 12 Videos, Photos 13 Code 14 Team Members 15 Resources: Introduction Temperature is..... Listed under: Temperature Measurement Projects



281. 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



282. 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



283. 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



284. 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

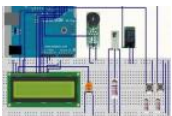


285.  A new board for the 3Drag: there's more than Sanguinololu using arduino When we first released our 3D printer, we tried to use some parts that were already available and tested, in full respect of the open source philosophy. In particular, we decided to use the electronic card Sanguinololu. The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

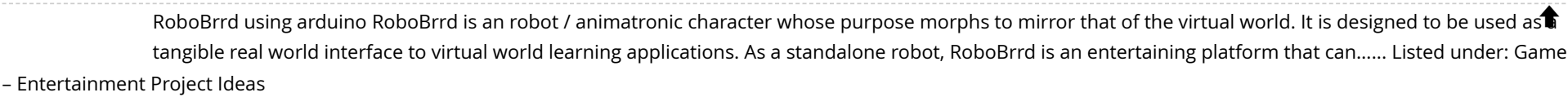
286. Serial Communications with Arduino using arduino At this point you should have a robot that can think on its own, we need to be able to tap into its thought process. See what he sees. Make some of his decisions for him. in essence, we need to be able to guage..... Listed under: Internet – Ethernet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



287. 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

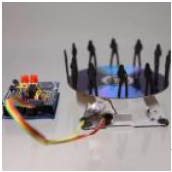


288. RoboBrrd using arduino RoboBrrd is an robot / animatronic character whose purpose morphs to mirror that of the virtual world. It is designed to be used as a tangible real world interface to virtual world learning applications. As a standalone robot, RoboBrrd is an entertaining platform that can.....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





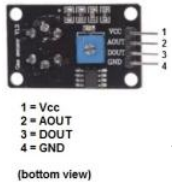
289.  Camera and flash trigger module using arduino Here we go again, here is a picture of the camera and flash trigger module I made for my arduino photographic projects: It includes three 4N26 optocouplers. One (first one from the left side) to trigger a flash, as I did in the arduino controlled.....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



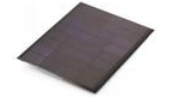
290. Stroboscope (zoetrope) using Arduino and a broken Xbox 360 DVD drive using arduino Stroboscope (AKA zoetrope) is a device that creates an illusion of a moving picture by showing a rapid successions of frames "stopped" for a fraction of a second due to the persistence-of-vision (POV) effect. It is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



291. 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



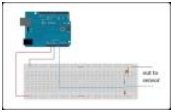
292. MQ-8 Hydrogen Gas Sensor Circuit Built with an Arduino In this project, we will go over how to build a hydrogen gas sensor circuit with an arduino. The hydrogen gas sensor we will use is the MQ-8 sensor. This is a sensor that is sensitive to effects of hydrogen gas. Hydrogen gas (H2), at..... Listed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



293. 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



294. 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



295. 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



296. 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 Friends 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



297. 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



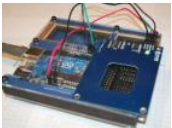
298. Using an RGB LED to Detect Colours using arduino I am going to show you how you can use an RGB LED and a Cds photocell as a colour sensor for a micro-controller. I will illustrate the method to retrieve a colour using Arduino, and I will show you a how you can verify the..... Listed under: LED Projects



299. 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



300. 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



301. 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



302. 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



303. 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

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304. 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
- 

305. 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
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306. 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
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307. 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
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308. 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
- 

309. 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
- 

310. 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
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311. 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
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312. 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
313. 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
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314. 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
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315. 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
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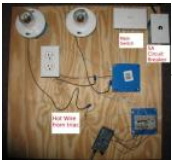
316. Arduino Chiptunes usnig arduino I am not a big fan of programming. I may like it but, I try to keep it down to a 555 timer like in this ible. However, when it comes to synths, well, I just NEED programming. One day, while exploring Synthesizers, I came..... Listed under: Sound – Audio Project Ideas
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317. 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
- 

318. 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
- 

319. 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
320. 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

321.



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
322.



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
323.



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
324.



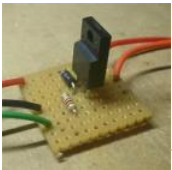
CT sensors – Interfacing with an Arduino To connect up a CT sensor to an Arduino, the output signal from the CT sensor needs to be conditioned so that it meets the input requirements of the Arduino analog inputs: a positive voltage between 0V and the ADC reference voltage. Note: This page give the..... Listed under: Sensor – Transducer – Detector Project Ideas
325.



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
326.



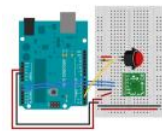
The party starter using arduino A desktop motorized musical disco ball. Great for holiday parties, impromptu dance-offs, and Tuesday afternoons. Bling, Music, Arduino, and glitter covered styrofoam; this Instructable has got what you need to get your boogie on. Fires need help go get going, so do parties. I recently..... Listed under: Game – Entertainment Project Ideas
327.



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
328.



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
329.



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
330.



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
331.



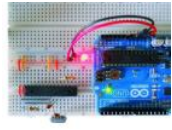
Sensing color with the ADJD-S371 + Arduino About 2 years ago I picked up a ADJD-S371 color sensor from Sparkfun to work with my arduino. I spent a few days getting it to work, but finally got it going pretty well. I still get a few emails here and there asking for..... Listed under: How To – DIY – Project Ideas, Sensor – Transducer – Detector Project Ideas
332.



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
333.



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
334.



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
335.

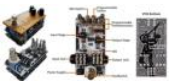


Introducing PETBOT: A node.js Telepresence Robot using arduino It's a telepresence robot I built for our office, consisting of an iPad mounted on a lightweight chassis powered by an RC car. To operate it, you open up a video chat session with the iPad, then control the robot from your browser using the.....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



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336. 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
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337. 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
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338. 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
- 

339. 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
- 

340. 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
- 

341. 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
- 

342. 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
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343. 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
- 

344. 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
- 

345. 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
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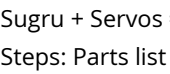
346. 0 to 99 Light display this circuit will take a light reading then display a number between zero and 99 please leave constructive comments Step 1: Parts you will need [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14 " radius="20 " border="#985D12" float="right" head="Major Components in Project" headbg="#FFEB70" headcolor="#985D00"] to make the 0-99..... Listed under: LED Projects
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347. 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
- 

348. 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
- 

349. 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
- 

350. 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
- 

351. 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
- 

352. 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

353. 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



354.  [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

355.  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 priciples of robotics without spending an arm and a leg, and getting them excited about the..... Listed under: Robotics – Automation Project Ideas



356.  [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

357.  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



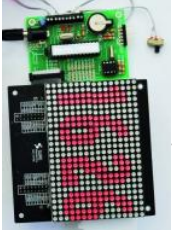
358.  5x5 rgb lpd6803-led matrix arduino controlled what: a 5*5 rgb led matrix, made with arduino and lpd6803 based leds from adafruit. with an pir sensor, it goes on if it detects movements and a ir distace sensor, 1 animation shows the distance you have from the sensor :). why: because its..... Listed under: LED Projects, Projects



359.  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



360.  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



361.  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



362.  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



363.  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



364.  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



365. 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



366.



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
367.



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
368.



[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
369.



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 SseedStudio.com friends. The project consists in modifying an..... Listed under: Robotics – Automation Project Ideas
370.



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
371.



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
372.



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
373.



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
374.



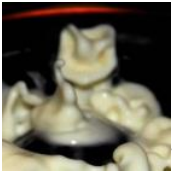
Wireless Glove-Controlled Electric Mountainboard: An Analysis Hey guys! So I finally decided to make a page that has everything you could possibly know about my project. Even though I had previously answered everyone's questions, they were usually through a message. Because of that, I was usually asked the same questions and..... Listed under: Radio Project Ideas
375.



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
376.



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
377.



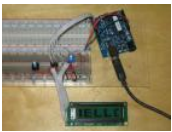
Bleeber – A physical layer between data and action. using arduino This project is a contribution to the first belgian Arduino Jam (2012). First of all we would like to thank the organisation and especially the main sponsor, Capgemini, which made all of this possible. Bleeber is a physical way of interacting with data trough oobleck. In..... Listed under: Development Board – Kits Project Ideas
378.



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 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
379.



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
380.

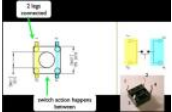


Custom Large Font For 16x2 LCDs using arduino A couple of years ago i was learning to use the Ardiuno and started playing around with an Hitachi HD44780 based 16x2 LCD screen. I soon learned that the screen has 8 customizable character slots. I had found a project where someone used those slots..... Listed under: LCD Projects
381.

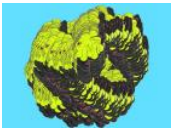
General Instruments SP0256-AL2 English Phoneme Speech chip & an Arduino The GI SP0256 chip is an early 1980s bit of technology. It's a 5V (to 7V) NMOS chip which is compatible enough with the 5V TTL circuitry common in that era. 5V TTL disappeared for a while, then came back with the Atmel _28-based Arduino..... Listed under: Home Automation Project Ideas, Sound – Audio Project Ideas



382.  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



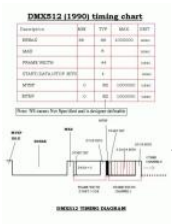
383. Momentary Switch as Digital Sensor using arduino many cases switches are just switches. They directly control the flow of electricity to an appliance, flashlight or mains-voltage lamp. An example of this is the switch on the wall in your living room. In many cases nowadays however, switches are digital sensors, meaning that..... Listed under: Sensor – Transducer – Detector Project Ideas



384. 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



385. 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



386. 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



387. 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



388. 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



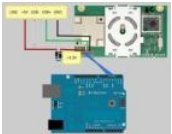
389. Mouse Control With Pushbuttons using arduino Overview In this lab, you'll build an alternative computer mouse using an Arduino Leonardo using pushbuttons to move the mouse left, right, up and down. You'll see the difference between reading a digital input continually and reading for a change of state. (:toc Table of..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects



390. 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



391. 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



392. 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



393. **ROBOT TURRET** 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



394. 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



395. 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



396.  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 buttom 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

397.  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

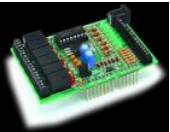
398.  Arduino Morse Code Flaher using arduino I am a big fan of programming but I like to keep it down to 555 timer but when it comes to complex functions like flashing a LED in a certain pattern programming is necessary.One day while surfing through the I came across something known as Morse code.I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

399.  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

400.  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

401.  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

402.  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

403.  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

404.  StorageBot – voice controlled robotic parts finder using arduino Introduction I created the StorageBot to help solve a problem experienced by most Makers. After many y 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

405.  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

406.  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

407.  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

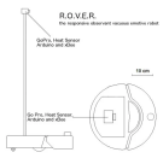
408.  Solar Powered LED/Ultracapacitor Arduino Regulated Light This instructable primarily shows how to control the charging voltage from a solar panel to an energy storage device (capacitors in this case). I showed how to construct the light previously <http://www.instructables.com/id/Human-Powered-Light-from-my-book-Doable-Renewab/> Step 1: This solar panel can produce up to 18 volts, but my..... Listed under: LED Projects, Projects

409.  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

410.  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

411. 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





412.  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



413. **gramming Arduino in C++11 - ROM dumping** 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



414. 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



415. 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



416. 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



417. 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



418. 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



419. 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



420. 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



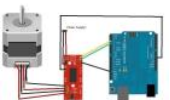
421. BUILD YOUR OWN LASER HARP using Arduino The laser harp is a musical instrument made of light. A fan of beams shoots up from the floor into the night sky. The performer can create music by placing their hands in the beams. Not only does “breaking” the beam produce notes, but sliding..... Listed under: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



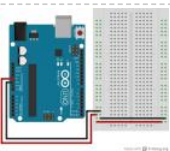
422. Touch Control Panel using Arduino Small 4-wire resistive touchscreens are now amazingly cheap: they are produced in such enormous quantities for mobile phones, PDAs, and particularly handheld games such as the Nintendo DS that they can be bought brand new for under US\$10. Larger touchscreens are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



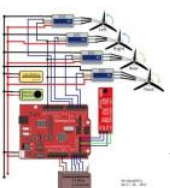
423. Arduino + 2 Servos + Thumbstick (joystick) using arduino In my other 2 Arduino tutorials I have help new users to play tones and making 2 servos move with a mouse. This time I will help you move the same 2 servos with a thumbstick. And again I have surf the internet to see If there..... Listed under: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



424. 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



425. 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



426. 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



427. 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

428.



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
429.



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
430.



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
431.



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
432.



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
433.



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
434.



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
435.



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
436.



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
437.



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
438.



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
439.



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
440.



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
441.



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

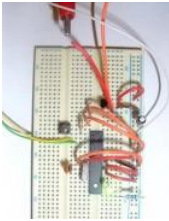


442.



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

443.



Arduino ATmega328 – Hardcore Ok, you've completed your prototype using an Arduino Uno board, perhaps using a shield or a breadboard for any additional componen 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

444.



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

445.



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

446.



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

447.



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

448.



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

449.



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

450.



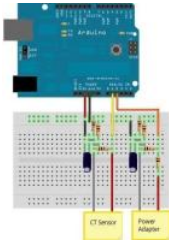
Arduino controlled animatronic wooden head (reading lamp) usnig arduino This head is a reading lamp which can be adjusted for direction of lighting, and dimmed as required. This Instructable combines Arduino programming, some simple electronics, carving with hand and power tools, mechanical control and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

451.



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

452.



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

453.



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

454.



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



455.



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
456.



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
457.



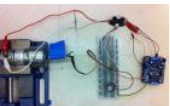
Precision Fermentation: Arduino-Controlled Crock Pot Yogurt Maker A homemade thermostat attachment for a crock pot (or other electric heating device). It can be used to precisely control the temperature of the crock pot for things like yogurt fermentation. Why Making yogurt is fun. It is also way cheaper than buying it. You..... Listed under: Home Automation Projects
458.



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
459.



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
460.



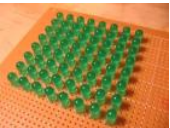
Group 9 – Prototype I Final Report: Remote Piano Pedal Controller using arduino Introduction: As a group, we feel that everyone should be able to enjoy the things they love to do despite their limitations. Our project is designed to enable people who are unable to use their legs to operate the pedals of a piano and..... Listed under: Sound – Audio Project Ideas
461.



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
462.



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
463.



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
464.



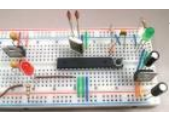
Athena: The Global Car Tracking System(3D Images) Bring out your 3D glasses and enjoy viewing in a novel way! I have added a new dimension to my instructable. If you do not have 3D glasses, then you can make one yourself. The following link explains how to make 3D glasses ([link](#)). Please..... Listed under: Car Projects, Sensor – Transducer – Detector Projects
465.



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
466.



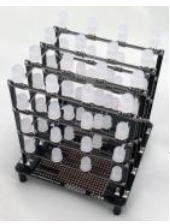
Addressable Milk Bottles (LED Lighting + Arduino) using arduino Make PPE milk bottles into good looking LED lights, and use an Arduino to control them. This recycles a number of things, mainly the milk bottles, and uses a very low amount of power: the LEDs apparently dissipate less than 3 watts but are bright.....
Listed under: LED Projects
467.



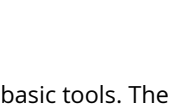
How to Build an Arduino Circuit on a Breadboard Small Kit with Big Functionality By Ryan Winters Product Manager There are many reasons to build your own Arduino circuit on a breadboard or PCB. It takes less space, projects don't always require every pin to be used on the I/O headers, or maybe you..... Listed under: Development Board – Kits Project Ideas
468.



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
469.



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
470.



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





471.



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
472.



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
473.



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
474.



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
475.



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
476.



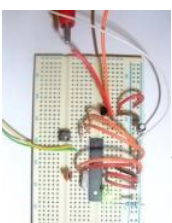
Arduino Laser Engraver I started this project because I wanted to make something that had mechanical, electrical and software components. After looking around on Instructables, I figured that an Arduino based laser engraver would be an interesting machine to make, and that the machine itself could make interesting..... Listed under: Other Projects
477.



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
478.



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
479.



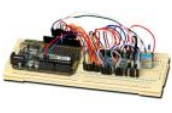
Arduino ATmega328 – Hardcore using arduino Ok, you've completed your prototype using an Arduino Uno board, perhaps using a shield or a breadboard for any additional components, but now you want to finalise your design and construct it using your own pcb. Well, that is fairly straightforward, as we have made..... Listed under: Development Board – Kits Project Ideas
480.



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
481.



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
482.



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
483.



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
484.



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
485.



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
486.



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
487.

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

488.



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

489.



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

490.



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

491.



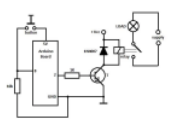
Color changing display Custom made Multiple color display. Have you ever wanted a display that is a little larger then one you can buy? Have you ever wanted to make a display the way you wanted it? Me too! This is how I made a custom multiple color..... Listed under: LED Projects

492.



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

493.



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

494.



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

495.



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 thi we needed a timer, so this is what we have done so far, and what we..... Listed under: Clock – Timer Projects, Projects

496.



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

497.



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

498.



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

499.



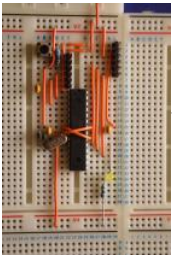
Robot arm from a desk lamp (IKEA Tertial hack) This project answers to a need I had: a third hand that holds a camera while I perform a test and takes photos/videos (useful when you're stuck at the lab late at night, and suddenly need a photographer). The downside to a robotic arm was..... Listed under: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

500.



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

501.



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

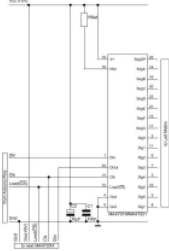
502.



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



503.



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
504.



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
505.



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'm 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
506.



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
507.



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
508.



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
509.



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
510.



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
511.



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
512.



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
513.



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
514.

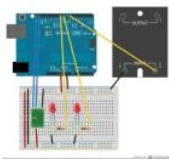


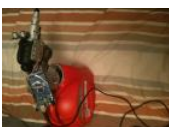
My Arduino Binary Clock Hi from Italy Although many watches are created binary, my project was inspired mainly to this: <http://www.instructables.com/id/LED-Binary-Clock-1/>, very smart and funny. I tried to improve the design and to add something personal. I think it's a good result at the end. The project is..... Listed under: Clock – Timer Projects, Projects
515.



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
516.

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



517.  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
518.  Cheap Arduino Controlled 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
519. 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
520.  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
521.  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
522.  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
523.  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
524.  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
525.  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
526.  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
527. 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
528.  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
529.  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 usable 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
530.  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



531. 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



532. 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



533. 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 call 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



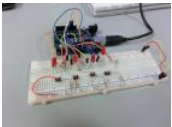
534. Arduino BlinkyBall Project I frequent a blog called hackaday.com which featured a project by "Nikolai", it was a 10cm LED ball that used shift registers. It seems like a really fun project to attempt but the cost of having the boards made & not having any experience sending..... Listed under: LED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



535. 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



536. 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



537. 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



538. 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



539. 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



540. 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



541. 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



542. 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



543. 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



544. 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



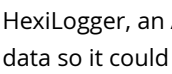
545. 4X4X4 LED Cube w/ Arduino Un As someone who is very new to digital electronics this LED cube was fun to make, challenging and a great lesson in soldering. If you have some patience (64 LED's to solder!) and steady hands, this project will be well worth it in the end!..... Listed under: LED Projects



546. 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 an 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



547. 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



548. 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



549. 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



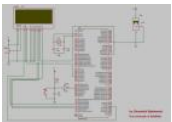
550. The UCube: Design & Print 3D Objects by flipping switches This instructable goes through how to design and print a variety of 3D models using a system called the 'UCube'. Note: I would love to eventually publish detailed instructions on how to make your own UCube, but since the design is still changing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



551. 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



552. 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



553. 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



554. 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



555. 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



556. 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



557. 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



558. 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



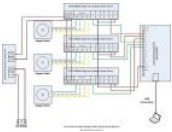
559. Arduino Color Sensor Here we will be learning how to make a color sensor. my model consists of three cardboard compartments containing an LED - one red, one blue, and one green - and an OP550B phototransistor. The LED's shine simultaneously on a solid colored card. The phototransistors..... Listed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



560. 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



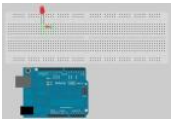
561. Arduino MIDI Volume Pedal I'm playing keyboards this fall in another rock concert to benefit the high school robotics team, and for some of the tunes I need to be able to fade an organ in and out over a period of a measure or two. My keyboards are..... Listed under: Projects, Sound – Audio Projects



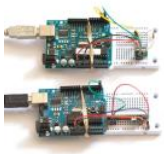
562. Arduino Stepper Motor Control Hardware Preparation Stepper Motor Driver Board Arduino Board (UNO) If you have purchased the Arduino Board from ZTW, we have already uploaded the g-code library for you. If you are using your own Arduino Board, you can doownload grbl Arduino library online and load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

563. 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



564.  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
565.  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
566.  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
567.  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 explains how to create..... Listed under: LED Projects, Projects
568.  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
569.  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
570.  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
571.  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
572.  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
573.  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
574. 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
575.  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
576.  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
577.  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
578.  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
579. 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)

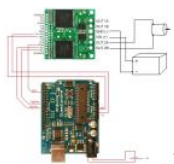




Projects, Projects, Radio Projects

- 580.

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

- 581.

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

- 582.

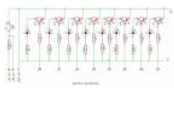
Webster: A Geometric Pattern Weaving Machine We are three students from California College of the Arts in San Francisco in the Architecture program. This studio is called Creative Architecture Machines and is taught by Jason Johnson and Michael Shiloh. Webster is a geometric pattern weaving machine that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

- 583.

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

- 584.

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

- 585.

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

586. 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

- 587.

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

- 588.

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

- 589.

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

- 590.

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

- 591.

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

- 592.

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

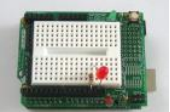
- 593.

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

- 594.

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

595.  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

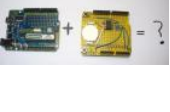
596.  Breadboard and LEDs (lesson 3) Introduction You've started modifying sketches, and played a bit with the onboard LED (or if you have an NG, an LED you added). The next step is to start adding onto the hardware component of the Arduino. We will do this by adding a solderless breadboard..... Listed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

597.  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

598.  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

599.  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

600.  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

601.  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

602.  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

603.  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

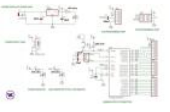
604.  The Arduino Synthesizer The Arduino is able to output sound through a library that has been developed called the Tone Library. By creating an interface and a program that can call certain values to be output to an audio out, the Arduino Synthesizer is a robust tool for..... Listed under: Sound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

605.  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

606.  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

607.  Arduino Powered Binary Clock This instructable will help you to build an Arduino Binary Clock. The orignal 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

608.  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

609.  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

610.  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

611.  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



612.



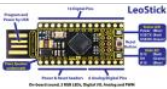
Arduino Uno – Programming With A Serial Port I’m working on an Arduino clone. The Arduino is essentially an ATMEGA328P development board with a bootloader pre-loaded. There are a lot of custom macros built into the programming interface that make it really easy to use, and even easy to build some powerful applications. Listed under: Arduino Programmer Projects
613.



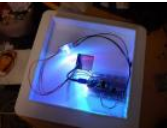
Arduino from Scratch Digital Thermometer I have loved making projects with Arduinos, but at \$30 a piece your projects can get expensive. So I want to show you how you can make your own Arduino from scratch and save money doing it. Make your own Arduino for around \$8. For..... Listed under: Projects, Temperature Measurement Projects
614.



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
615.



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
616.



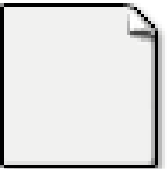
Arduino Wall Lamp So, I have always wanted a nice lamp by the side of my bed, Something simple with out any buttons. Of course this would mean it had to be wireless.I also wanted to use it from my bed but not getting out of my bed to turn it off..... Listed under: Home Automation Projects, LED Projects
617.



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
618.



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
619.



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
620.



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
621.



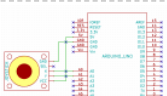
UltraSonic Arduino Video instructions How To – Parking your car with an Arduino How To - Parking your car with an Arduino Code: // Back up Helper, by Kevin Darrah v4 #include <SoftwareSerial.h>// to read the data from the range finder on any digital pin SoftwareSerial sonar(5, 6); // RX, TX //we're only using the RX pin (5),..... Listed under: Car Projects, Projects
622.



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
623.



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
624.



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
625.



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
626.



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
627.



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
- 

628.



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
629.



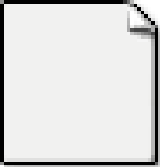
Touche for Arduino: Advanced touch sensing Update: New interface - look at the last step. Credits: Arduino sensing done by DZL, Processing sketch and Instructable done by Mads Hoby. Disney Research lab designed a novel way to detect touch. You can see a video of their demo here: I had the honor to meet..... Listed under: Sensor – Transducer – Detector Projects
630.



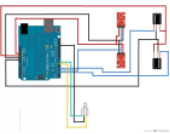
Clock Three – A pillow clock using Arduino Time for another instalment in my irregular series of irregular clock projects. In contrast with the minimalism of Clock Two, in this article we describe how to build a different type of clock – using the “lilypad” style of Arduino-compatible board and components designed for use in e-textiles..... Listed under: Clock – Timer Projects, Home Automation Projects, Projects
631.



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
632.



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
633.



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
634.



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
635.



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
636.



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
637.



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
638.



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
639.



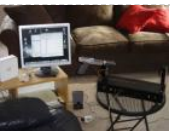
Arduino Esplora Accelerometer This sketch shows you how to read the values from the accelerometer. To see it in action, open the Arduino serial monitor on your computer and tilt the board. You'll see the accelerometer values for each axis change as you tilt the board. Circuit Only..... Listed under: Metering – Instrument Projects, Projects
640.



Arduino hardware hacking: Part 2 In part 1 of our Arduino tutorial seres 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
641.



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
642.



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
643.



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
- ↑

644.



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 Johnsonand Michael Shiloh at the California College of the Arts, in San Francisco..... Listed under: CNC Machines Projects
645.



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
646.



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
647.



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
648.



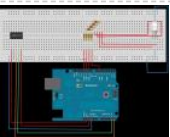
Arduino Online Thermometer Project I have been researching a project which will help me with my understanding of electronics, networking, and programming. I decided to build an online thermometer which could be used in applications that need temperature monitoring. I currently work in a lab environment where I test, troubleshoot,..... Listed under: Medical – Health based Projects, Temperature Measurement Projects
649.



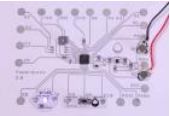
Pachube Client using Arduino This example shows you how to answer a HTTP request using an Ethernet shield. Specifically, it connects to pachube.com, a free datalogging site. The example requires that you set up a pachube.com account, as well as a pachube feed (for more information on setting up..... Listed under: Ideas, Internet – Ethernet – LAN Project Ideas
650.



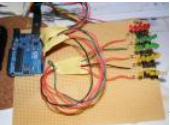
Graphing values in Arduino Sometimes when you're testing a sensor or debugging a value in an Arduino project, you want to see something other than numbers flying by in the Serial Monitor. However, you want to get the sensor working quickly, and you don't want to take the time..... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects
651.



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
652.



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
653.



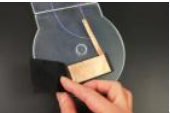
Daft Punk LED Matrix Breakout Board I was always impressed by the Daft Punk Coffee Table. Being able to light up a bunch of LEDs and flash them in patterns has so many applications. It was one of the reasons why I bought an Arduino seeing how it could control a..... Listed under: LED Projects
654.



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
655.



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
656.



The Clamshell Stompbox This is a DIY variable resistor I created as an interface for live performance-- like astomp 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
657.



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
658.



Domotic arduino In this introduction I will show you a overview of this project whit 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
659.



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
660.



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
661.



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



662.  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



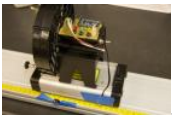
663. Arduino DDNS (Dynamic DNS) by Open-Electronics.org This device captures the IP address of your network and it publish on site DynDNS.com. All without PC. It allow a remote access to your LAN even if the IP address of the connections changes. For logistics reasons the provider can not assign a IP.....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



664. 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 Instructables using a sonar sensor (XL Max Sonar..... Listed under: Sensor – Transducer – Detector Projects



665. 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



666. 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



667. Singing plant. Make your plant sing with Arduino, touche 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



668. 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



669. 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



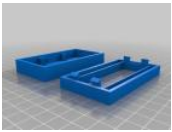
670. Connecting a 12V relay to Arduino To connect a 12V relay to the Arduino you need the following things: - 1 Arduino - 1 diode for example 1N4007 - 1 NPN transistor for example 2N2222 (in the US) or BC548 (in Europe) - 1 relay for example one with coil voltage..... Listed under: Interfacing(USB –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



671. 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



672. 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



673. 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



674. 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



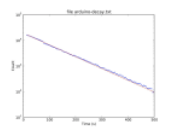
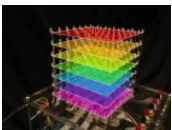
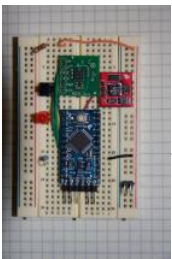
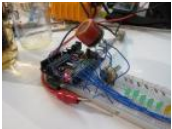
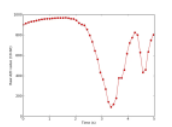
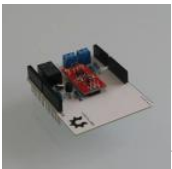
675. Wrap Beats – Capsense Arduino Instrument Wrap Beats is an instrument that lets you string together notes in order to create different melodies and visual patterns. I constructed it using the Capacitive sensing library for Arduino and combining that with the music abilities of processing to create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



676. 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

677. 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



678.  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
679.  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
680.  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
681.  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
682.  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
683.  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
684. 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
685.  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
686.  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
687.  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
688.  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
689.  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
690.  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
691.  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 could tweet and..... Listed under:  Sensor – Transducer – Detector Projects

692.



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
693.



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
694.



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
695.



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
696.



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
697.

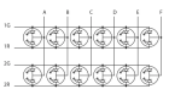
How To Make an Obstacle Avoiding Arduino Robot Hello all! In this Instructable I'll be showing you how to make a robot similar to the "Mobile Arduino Experimental Platform" (MAEP) that I made. It is equipped with two motors that can steer the robot and the ability to see obstacles in front of..... Listed under: Robotics – Automation Projects
698.



“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
699.



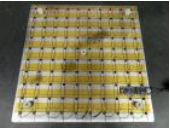
Fijibot Fijibot is an autonomous, self-charging photovore. I built him using a 1.5 liter Fiji Water bottle, an Arduino Uno, 6v solar panel (plus various other parts) from Radio Shack, an Arduino Proto Shield (plus various other parts) from Adafruit, and the wheels and steering arrangement..... Listed under: Robotics – Automation Projects
700.



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
701.



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
702.



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
703.



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
704.



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
705.



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
706.



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
707.



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



708.



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
709.



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
710.



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
711.



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
712.



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
713.



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
714.



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
715.



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
716.



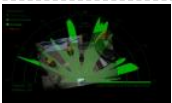
LED Cylinder using Arduino This is a little art project I made with 95 RGB LEDs arranged in a 3D cylinder shape, sitting atop a microcontroller-based driver circuit. The LEDs are individually addressable, and when you power it on, the software cycles through a series of animations, e.g. various..... Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects
717.



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
718.



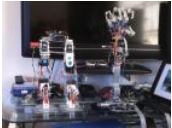
How To Interface a CDV 700 Geiger Counter to a PC Using an Arduino Video instrucitons How To Interface a CDV 700 Geiger Counter to a PC Using an Arduino (Part 1) The second part of our video series of our project to interface to a CDV-700 radiation meter using an Arduino Uno! How To Interface a CDV 700 Geiger Counter..... Listed under: Calculator Projects, Interfacing(USB – RS232 – I2c -ISP) Projects, Projects
719.



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
720.



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
721.



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
722.



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
723.



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
724.

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





725. 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



726.  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 an 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

727.  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

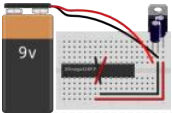


728. Vibration Foam Speaker Concept: Very simple, using an arduino and the play melody basic program, create a music playing speaker out of a vibration motor and a piece of flexible foam. Instead of pulsing signal to a speaker, signal is pulsed to a motor varying how fast it..... Listed under: Sound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

729.  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



730. 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



731. 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



732. 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

733.  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



734. 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



735. 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

736.  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



737. 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



738. 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

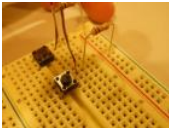


739. How to build your own sugru robot – Fixbot So you saw our video and you've fallen in love with Fixbot, have you? That's okay, it's understandable. We've fallen in love with it too. We have some great news! You can build your own Fixbot too, provided that you're okay with getting your hands.....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

740. 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





741.  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



742. 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



743. BOXZ BOXZ is 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



744. Arduino – Getting my LCD Screen to work I've gotten hold of what I assumed was a compatible 16×2 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



745. 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



746. 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



747. 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



748. 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



749. 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



750. 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



751. 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

752. 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



753. 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



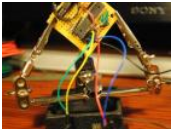
754. Tissue Box Guitar – Light Strings using Arduino the idea of anything can be an instrumental music has been always in my mind so i made a wooden tissue box that i installed inside it a guitar of light strings Step 1: Building Box i made this wooden tissue box Step 2: Wiring..... Listed under: Game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



755. 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



756.  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



757. 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



758. 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



759. 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



760. 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



761. 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



762. 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



763. 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



764. 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



765. 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



766. 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



767. 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



768. 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



769. 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



770. 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



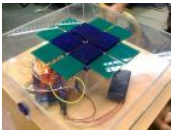
771. Arduino Analog Inputs This week is all about analog inputs for the arduino. I'll show you how you can use a voltage divider circuit (see episode 3) and a variable resistor to make an analog sensor. [box type="note" color=" #202020 " bg=" #ffbb00 " font="verdana" fontsize="14" radius="20 " border="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

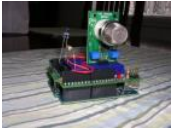




772.  Intervalometer for Sony NEX 5n This intervalometer used infrared LED To built intervalometer you need: Arduino Nano (or Arduino-compability). I used Nano V3 Serial LCD Joystick Module IR Led and resistor ~200 Ohm Switch Push Button Plastic enclosure Battery 9V Schematic is very simple Step 2: Connection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

773.  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

774.  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

775.  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

776.  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

777.  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

778.  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

779. 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



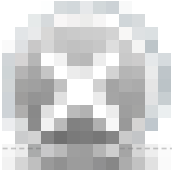
780.  Making a 9v Battery DC power supply Rather than use the USB to power my Arduino board with a handy trip to the electronics store with some more knowledgeable people than I, I have constructed a 9Volt DC power supply. Taking a 9 volt battery, a 9v battery holder and a 2.1mm..... Listed under: Battery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

781.  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

782.  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

783.  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

784.  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

785.  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

786.  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



787.



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
788.



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
789.



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
790.



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
791.



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
792.

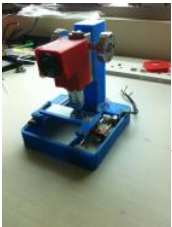
A DVD Player Hack This is a description of an open source/open hardware project of a remotely controlled Arduino (Freeduino) based clock/thermometer utilising power supply and VFD panel from a broken DVD player in a custom made acrylic enclosure. The aim of the project was to demonstrate what could..... Listed under: Video – Camera – Imaging Projects
793.



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
794.



The KITT-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
795.



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
796.



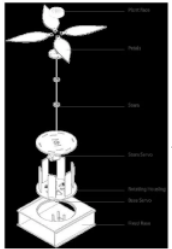
Obstacle avoidance Arduino robot – build your own larryBot So after 5 previous versions that had various flaws, I now have an Arduino robot that actually works and although basic is very cheap – although there a probably a few more flaws so please point them out to me but this is a good..... Listed under: Robotics – Automation Projects
797.



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
798.



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
799.



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
800.

Rabbit Ears on a Cap using Arduino We are students from Singapore Polytechnic. After looking at the famous Necomimi 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

