



List of Projects using Raspberry with advance view:

- 

Lumenati Hookup Guide Introduction The Lumenati line of LED boards is designed to give your projects an edge in their lighting capacity. Based on the APA102C addressable LED, these LEDs employ a 2-wire communication protocol consisting of a clock line and a data line. While this requires one more wire than..... Listed under: LED Projects
- 

Qwiic HAT for Raspberry Pi Hookup Guide Introduction This Qwiic HAT for Raspberry Pi is the quickest and easiest way to utilize SparkFun's Qwiic ecosystem while still using that Raspberry Pi that you've come to know and love. This Qwiic HAT connects the I2C bus (GND, 3.3V, SDA, and SCL) on your Raspberry Pi..... Listed under: Development Board - Kits Projects
- 

Getting Started with TJBot Introduction TJBot is a kit developed at IBM to help people get started with their Watson AI service. It comes with a friendly little robot that you build yourself, a Raspberry Pi 3, and all the parts you need to make your robot wave, blink, talk,..... Listed under: Development Board - Kits Projects, Robotics - Automation Projects
- 

Using the PSoC 6 Pioneer Board with the Pioneer IoT Add-on Shield Introduction The PSoC 6 is the latest addition to Cypress's powerful PSoC series of processors. The PSoC 6 Pioneer IoT Add-On Shield is the development tool associated with this processor line, sporting an onboard debugger, Arduino compatible headers, CapSense widgets, and more, all tied to a PSoC..... Listed under: Development Board - Kits Projects
- 

Raspberry Pi Stand-Alone Programmer Introduction With the power of Raspberry Pi, Python, avrdude, a custom HAT with cable adapter, we developed our own spin on AVR programming that turned out pretty darn robust. In addition to creating a stand alone solution, it was a great experiment to learn more..... Listed under: Raspberry Programmer Projects
- 

Remote Monitoring of Weather Using Raspberry Pi In this Project I am going to show you how to make a Remote Weather monitoring system using Raspberry Pi3 I am using PubNub Cloud service for this,Free...which is PubNub is a global Data Stream Network (DSN) and realtime infrastructure-as-a-service (IaaS) company based in San..... Listed under: Metering - Instrument Projects, Phone Projects, Sensor - Transducer - Detector Projects, Temperature Measurement Projects
- 

Telemonitoring System With Raspberry Pi Telemonitoring Telemonitoring is defined as the use of information technology to monitor patients at a distance. Telemonitoring allows reduction of chronic disease complications thanks to a better follow-up; provides health care services without using hospital beds; and reduces patient travel, time off from work, and overall costs. Telemonitoring can help..... Listed under: Home Automation Projects
- 

Raspberry Pi Wireless Display Receiver In industrial automation & other areas most of the time, we want data to be viewed at control room or head office with far distance, Thats why i made Raspberry Pi Wireless Display Receiver ,As RPi made its 10th Million sale this year on its Birthday..... Listed under: LCD Projects, Video - Camera - Imaging Projects, Wifi / Wlan Projects, Wireless projects
- 

Raspberry Pi Zero Helmet Impact Force Monitor How much impact can the human body handle? Whether it's football, rock climbing, or a bicycle accident, knowing when to seek immediate medical attention after a collision is incredibly important, especially if there are no obvious signs of trauma. This tutorial will teach you how..... Listed under: Security - Safety Projects
- 


Setting up a Raspberry Pi 3 as an Access Point Introduction Note: This tutorial was based on instructions found on this blog. The Raspberry Pi 3 comes with a built-in wireless adapter, which makes it easy to configure it as a WiFi hotspot to share Internet or host your own internal web site. The first part of this guide..... Listed under: Wireless projects
- 


Headless Raspberry Pi Setup Introduction A "headless" computer is one that operates without a monitor, keyboard, or mouse. The Raspberry Pi works great as an inexpensive computer that can help people learn to program and create fun, interesting projects (without many repercussions if you break something—just reflash the SD card!). The..... Listed under: Other Projects
- 


How to Use Remote Desktop on the Raspberry Pi with VNC Introduction If you like the idea of a headless computer setup for your Raspberry Pi (i.e. one without a keyboard, mouse, or monitor) but want access to the full graphical desktop, then you're in luck! By using a Virtual Network Computing (VNC) program, you can access a..... Listed under: Wireless projects
- 

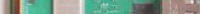
Python GUI Guide: Introduction to Tkinter Introduction Python is generally more popular as a sequential programming language that is called from the command line interface (CLI). However, several frameworks exist that offer the ability to create slick graphical user interfaces (GUI) with Python. Combined with a single board computer, like the Raspberry..... Listed under: Other Projects
- Using the A111 Pulsed Radar Sensor with a Raspberry Pi Introduction Experimental Products: SparkX products are rapidly produced to bring you the most cutting edge technology as it becomes available. These products are tested but come with no guarantees. Live technical support is not available for SparkX


products. Does your project require high-precision, cutting-edge distance, speed,..... Listed under: Sensor - Transducer - Detector Projects


15.  Using Wemos D1 mini to control a brushless motor with ESC and servo signals I've recently become interested in making "machines" of various sorts. I was sorting through some of my RC (radio control) plane "stash" the other day and came across various brushless motors and electronic speed controllers (ESC) like these. In RC, Brushless ESCs are usually connected..... Listed under: Motor Projects


16.  Run a K40 Laser Cutter from Your Raspberry Pi with K40 Whisperer I bought a Chinese K40-style laser cutter about three weeks ago and I've been spending quite a bit of time playing with it learning how best to use it. It's an eminently hackable design, and while mine could cut 3mm acrylic OK 'straight out of the box',..... Listed under: CNC Machines Projects


17.  How to tap a thread in acrylic Perspex, Lucite, Plexiglass using your cordless drill driver I recently bought a laser cutter (running on a Pi) and started working with acrylic (Perspex). I've sawn, routed and drilled Perspex before. It machines beautifully as long as you're not too 'greedy' with your cuts (and if you're too greedy, it cracks). In exploring the material..... Listed under: CNC Machines Projects


18.  New Raspberry Pi model 3B+ 1.4 GHz, 330Mbit Ethernet, 802.11ac, PoE It's Pi day (if you do dates in the illogical MM/DD/YY format) so Raspberry Pi is releasing a new version of the Pi 3B. It's called the 3B+, which is logical because it has more to offer than the 3B and is also in keeping with previous..... Listed under: Internet - Ethernet - LAN Projects


9.  How Much Power Does Raspberry Pi 3B+ Use? Power Measurements Since the original Pi came out I've been interested in how much power it consumes. It's become something of a launch week tradition to publish a new chart and some data. So much so that several people ask for it on launch day. This time..... Listed under: Battery Projects

0.  Octopod: Smart IoT Home/Industry Automation Project Octopod, a uniquely shaped full automation system that allows you to monitor your industry and keep security with AI and smart RFID locks. Things used in this project Hardware components Arduino UNO & Genuino UNO Anduino Arduino MKR WiFi 1010 Either this or any other..... Listed under: Home Automation Projects


1.  LoRa gateway and node boards run on Raspberry Pi power Pi Supply is Kickstartering lot LoRa Gateway and IoT LoRa Node pHAT add-on for the Raspberry Pi, as well as a LoRa Node that works with the Micro:bit. An Arduino node is also in the works. Pi Supply, which has produced a variety of Raspberry..... Listed under: Wireless projects


22.  **Raspbian Desktop OS on an Old Netbook** Old Netbook with Windows XP Home is likely something you have forgotten about. Breathe new life into the hardware with Raspbian OS desktop. Things used in this project Hardware components Intel Netbook PC (various manufacturers) For this article, I am referencing the HP Mini 110..... Listed under: Raspberry Programmer Projects


23.  Smart Home Hub With Raspberry Pi + Homebridge + Resin OS Want to use a device that HomeKit doesn't support? Get Raspberry Pi running with Homebridge using Resin OS and change you home forever. Things used in this project Hardware components Raspberry Pi Zero Wireless Pimoroni Red/White Raspberry Pi Zero Case AC/DC Micro-B USB Adapter 2A..... Listed under: Wireless projects


24.  How to Build a Raspberry Pi FM Transmitter Be it a boring afternoon, a monotonous job or a lonely long drive FM radio stations have always kept us entertained. While on the contradictory it should also be agreed that sometimes these FM stations get very boring with the RJ blabbering irrelevant stuff or..... Listed under: Radio Projects

25.  Voice controlled Home automation using Amazon Alexa on Raspberry Pi Have you ever thought about a speaker which can be controlled by your voice!!! What if we can control our home appliances this way and make these appliances smarter? Voice assistants becoming more popular as we are heading towards an era of AI and IoT based systems. Listed under: Sound - Audio Projects

26.  ZeroPhone is "Coming Soon": A Raspberry Pi-Based, Linux-Powered Phone For Just \$50 ZeroPhone is an open source, Linux-powered, \$50 smartphone. It has no carrier locks, bloated apps, or data mining, and it doesn't depend on big companies - instead, its open source hardware and software give you as much control over your phone as possible. ZeroPhone is..... Listed under: Phone Projects

27.  Raspberry Pi Car HUD Objective The goal of our project is to use the Raspberry Pi and create a touchscreen enabled Heads Up Display (HUD) for an automobile. The HUD would display useful, real time information through an easy-to-ready GUI onto a PiTFT screen. Some example information includes the..... Listed under: Car Projects

28.  WarpPI Calculator, Step-by-step algebra calculator for Raspberry Pi. WarpPI Calculator Step-by-step algebra calculator for Raspberry Pi. This project is experimental and strictly related to my calculator, designed to run on an embedded hardware. It works but many fundamental features aren't complete. If you really want to build and test it on your computer..... Listed under: Calculator Projects

29.  Getting started with Embedded Linux Single board computers (SBCs) have been credited with rekindling an interest in electronics across all age groups, young and old. SBCs themselves have been around for a very long time and can be found in many industrial automation systems, but it was the advent of..... Listed under: Internet - Ethernet - LAN Projects

30. M3 Pi: Raspberry Pi OBD-II Touchscreen Car Computer Abstract There are a wide range of off-the-shelf OBD-II car computers available for purchase, but the majority of them are either prohibitively expensive or simply unreliable. Furthermore, almost all of these devices are closed-box systems that cannot be

- 49.14 g/s
MAF

14 %
Load

31 %
Throttle

3
Gear

2756
RPM

36 mph
Speed

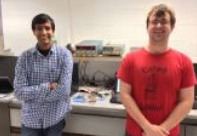
74 °C
Coolant




43 °C
Intake




























expanded or modified. As such, this project..... Listed under: Car Projects

Autonomous Quadcopter for Target Tracking Objective There is a wide range of applications for Unmanned Aerial Vehicles that have been made possible through recent advancements in technology. One application uses a quadcopter for surveillance of a region. In this project, we attempted to automate a quadcopter for tracking targets. The..... Listed under: Radio Projects

Face Recognition System Introduction Using the Raspberry Pi and some additional peripherals, we have designed and built a face recognition system. In this system there is a camera which will detect the faces presented before it and if shown one face at a time, it will track that..... Listed under: Featured, Video - Camera - Imaging Projects

Goodnight Pi: Reducing Raspberry Pi Power Consumption Introduction The Raspberry Pi is a powerful platform to build a variety of projects on. Its full Linux operating system and large variety of peripherals make it extremely useful for a large range of applications that a traditional microcontroller could not handle. However, the Raspberry..... Listed under: Clock - Timer Projects

Smart Pen: Final Project for ECE5725 Introduction Nowadays, in order to gain the handwriting results, people often rely on the capacitive touch screen, stylus pen, or other similar devices. They are functional and precise, but not always flexible. Our project combines Raspberry Pi with IMU to build a product that can..... Listed under: Robotics - Automation Projects

Raspberry Pi Car HUD Objective The goal of our project is to use the Raspberry Pi and create a touchscreen enabled Heads Up Display (HUD) for an automobile. The HUD would display useful, real time information through an easy-to-ready GUI onto a PiTFT screen. Some example information includes the..... Listed under: Car Projects

N5DUX Raspberry Pi Ku-Band Outernet Receiver Project Description Outernet is a service intended for providing web-based information to individuals without access to the web. It is a startup computer and still going through much revision. The service will surely morph over time as interest and finances grow, but for now it's an..... Listed under: Wireless projects

Raspberry Pi Controlled Health Monitor System Introduction Health is always an important concern. However, the health of modern people is always interfered by various potential but dangerous factors, such as high blood pressure, and abnormal heart rate. High blood pressure, also called hypertension, increases the burden of the heart to pump..... Listed under: Medical - Health based Projects

N5DUX Raspberry Pi ISS iGate Project Description This project is an APRS iGate for ARISS program's digipeater aboard the International Space Station. I have a 2m FM radio tuned to 145.825 MHz. As the ISS passes over my location, the radio passes the received signal from the ISS to a Terminal..... Listed under: Radio Projects

Voice Controlled Car Objective The main objective of this project is to exploit the “IoT” potential of Raspberry Pi computer to control a Remote Car using the Voice Commands. The Raspberry Pi with a Microphone connected to it will receive the Voice Commands and will control the Remote..... Listed under: Car Projects

N5DUX Raspberry Pi WebSDR Receiver Project Description I created my first Raspberry Pi WebSDR receiver in the Fall 2014. I had long intended to setup a WebSDR station, but grad school and work can really keep you busy. The first receiver on the air worked well until a suprise electrical storm..... Listed under: Radio Projects

Raspberry Pi gets its own app store with latest OS update The latest release of the official Raspbian OS will make it easier to find the best software for the credit card-sized board. A large factor in the runaway success of the \$35 Raspberry Pi is how easy it is to get started with the tiny..... Listed under: Raspberry Android

N5DUX Raspberry Pi Generic Setup Description This is a howto document created as a basis for all my other Raspberry Pi Progjects. Here, I list the basic hardware needed as well as the steps necessary to create your own basic Raspberry Pi setup. This is just the beginning of several..... Listed under: Memory - Storage Projects

Physical Computing – Scratch 2.0 for Raspberry Pi Story This is my 3rd tutorial with a focus on Scratch and Physical Computing. Regarding this topic, I have already published: Physical Computing - Scratch for Arduino, where as the name says, I explored how to use Scratch and Arduino to interact with the physical..... Listed under: LED Projects



59.



Candy Dispenser with Google Assistant 3d Hardware components: Particle Photon × 1 Arduino Mega 2560 & Genuino Mega 2560 × 1 Raspberry Pi 3 Model B × 1 Speaker: 3W, 4 ohms × 1 Voice HAT for Raspberry Pi × 1 Mic Array × 1 Arcade Button and Micro Switch.....
Listed under: Other Projects

60.



Pi Camera Doorbell with Notifications! Hardware components: Raspberry Pi Zero Wireless x 1 Raspberry Pi Camera module x 1 RF receiver x 1 Wireless doorbell (RF) x 1 Software apps and online services: Home Assistant Rpi-rf python module MQTT Telegram STORY Introduction There are some pretty cool smart doorbells..... Listed under: Video - Camera - Imaging Projects

61.



Smart Mirror with Home Automation using chats Hardware components: Raspberry Pi 2 Model B × 1 PC Monitor with VGA Cable × 1 Wifi Receiver × 1 Two way mirror acrylic sheet × 1 5v Relay Module × 1 Jumper wires (generic) × 1 Software apps and online services: Raspbian OS Telegram..... Listed under: Home Automation Projects



2.



Pigeon: A 3D-Printed, Pi Zero W-Powered Cloud Camera Hardware components: Raspberry Pi Zero Wireless x 1 Raspberry Pi Camera module x 1 STORY Pigeon is a simple cloud home surveillance camera project that uses the new Raspberry Pi Zero W single board computer (\$10). It also uses a custom designed 3D printed..... Listed under: Video - Camera - Imaging Projects

3.



Connected Studio Warning Light In this Instructable, we're going to build a very modern take on an iconic piece of studio equipment: a smart on-air warning light that responds to the Robin room reservation system. This project started life as a practical solution to our occasional need for quiet..... Listed under: Wifi / Wlan Projects

64.



Nabaztag Gets a New Life With Google AIY Hardware components: Nabaztag Not sold anymore, but maybe on Graigslist or eBay? × 1
Raspberry Pi 3 Model B × 1 Google AIY Voice HAT They come as a free gift with The MagPi #57, or you can subscribe to get a notification when they..... Listed under: LED Projects

65.



A LoRaWAN "The Things Network" Gateway for Windows IoT Core Hardware components: Dragino LoRa/GPS HAT x 1 Dragino LoRa Shield x 1 Dragino LoRa/GPS Shield x 1 Raspberry Pi 3 Model B x 1 Software apps and online services: Microsoft Windows 10 IoT Core STORY This tutorial describes how to build, install and..... Listed under: Internet - Ethernet - LAN Projects

66.



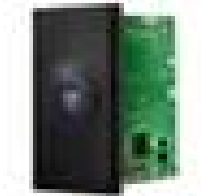
Internet Streaming Radio with Google AIY Hardware components: Raspberry Pi 3 Model B x 1 Software apps and online services: Google AIY Projects STORY The Google AIY Voice Kit is a great way to get started with using voice commands to control a Raspberry Pi. As of 5/13/2017, the Google..... Listed under: Sound - Audio Projects

67.



AssistantPi: Bring both Google Assistant and Alexa to your Raspberry Pi Hardware components: Raspberry Pi 3 Model B x 1 Generic Aux Speaker x 1 USB Microphone x 1 Software apps and online services: Amazon Alexa Alexa Voice Service Google AIY Projects Hand tools and fabrication machines: Generic USB Keyboard for Setup STORY Meet AssistantPi!..... Listed under: Sound - Audio Projects

68.



Pre-Collision Assist with Pedestrian Detection – Honda Civic Hardware components: Walabot × 1 Raspberry Pi 2 Model B For Walabot, RPi v3 is preferable. × 1 Android device Samsung Galaxy A3 or better. × 1 Intocircuit 26000mAh High Capacity Power Castle can use any way to power the RPIs on the move. ×..... Listed under: Car Projects

69.



FabDoc – Version Control Tool for Makers Hardware components: Raspberry Pi Zero × 1 Raspberry Pi Camera module v2 × 1 Goggle × 1 Small Power Bank × 1 USB cable Electronic Components / Misc. Electronic Components × 1 STORY Description We are all facing a lot of work of documentation beyond..... Listed under: Video - Camera - Imaging Projects

70. Tracking TV Stand Hardware components: Raspberry Pi 3 Model B x 1 Walabot x 1 Unitek USB3.0 4-Port Hub x 1 Power Sonic Model PS-640 F1 6 Volt 4.5 AmpH Battery Supply x 1 Servo (generic) Personally modified Futaba S3003 for continuous rotation. If using a different brand..... Listed under: LED Projects



71.



Windows 10 IoT Core – Reading Heart Rate Pulses Hardware components: Microchip MCP3008 × 1 Raspberry Pi 3 Model B × 1 SparkFun Heart Rate Pulse Sensor × 1 Breadboard (generic) × 1 Jumper wires (generic) × 15 Software apps and online services: Microsoft Windows 10 IoT Core Microsoft Visual Studio 2015 STORY..... Listed under: Sensor - Transducer - Detector Projects

72.



Baby Room Watcher Hardware components: Cypress PSoC Analog Coprocessor Pioneer Kit x 1 Raspberry Pi 3 Model B x 1 ElecFreaks ECom Pro module x 1 Raspberry Pi Camera module x 1 Software apps and online services: Cypress PSoC Creator openHAB STORY Project Description The purpose of..... Listed under: Security - Safety Projects

73.



Antique Radio into an Airplay Speaker My father-in-law is a musician and a lover of mid-century modern design. I have an obsession with tinkering. Somewhere in that mix lies the perfect gift and the perfect challenge. After taking a couple of trips to antique stores and reading a few Instructables, I..... Listed under: Radio Projects

4.



Pulse Train HAT for Raspberry Pi Mecanum Bot Example Hardware components: Raspberry Pi 3 Model B Tested with Raspberry Pi 3 × 1 Pulse Train Hat × 1 Xbox Controller × 1 Software apps and online services: Microsoft Windows 10 IoT Core STORY PTHAT Mecanum Bot Example using Instant Commands With this example,..... Listed under: Internet - Ethernet - LAN Projects

5.



DHT Tiny Breakout for the Raspberry Pi Hardware components: Atmel ATTiny85 × 1 DHT22 Temperature Sensor × 1 DHT11 Temperature & Humidity Sensor × 1 SparkFun Tiny AVR Programmer × 1 Adafruit 4.7K Ω Resistor × 3 Adafruit 10K Ω Resistor × 1 Adafruit 100 Ω Resistor × 1 Adafruit Diffused Blue..... Listed under: Temperature Measurement Projects

76.



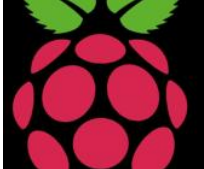
Raspberry pi wifi router prank Introduction Do your neighbors leech off your wifi? Got a raspberry pi? We're going to build a wifi router that redirects users to a website of our choice regardless of what URL they request. In our case, we're going to redirrect users to People of..... Listed under: Wifi / Wlan Projects

77.



How To Hack An Apple Time Capsule With A Raspberry Pi Introducing the "Pi Capsule." It's currently the only Apple Time Capsule you can plug into your TV...does this make it an Apple TV? 😊 Ok, ok, let's say you have an old Apple Time Capsule laying around that doesn't work anymore... (there's quite a few..... Listed under: Wifi / WLAN Projects

78.



Transfer MP3 songs in Raspberry Pi to Android Phone using Bluetooth Introduction Chances are you have lots of mp3 files stuck in a PC like I do. I wanted to listen to the songs when I am out. So that's my motivation for making this instructable. Scope This instructable will show: How to install Bluetooth in..... Listed under: Bluetooth Projects

79.



High-End Sound with 7 Inch Touchscreen Control Based on Raspberry Pi and Max2Play With the arrival of the new official Raspberry Pi Touchscreen, we were excited to find applications for it in our Max2Play system. Since audio applications have been one of our main focuses from the start, we immediately thought of a combination of sound card and..... Listed under: Sound - Audio Projects

80.



Ambilight TV I have been always amazed by Philips Ambilight TV. Unfortunately they were pretty expensive, and this is why I have looked for an easy cheap solution to be able to create the same user experience. This was my first Raspberry Pi project, and it's pretty..... Listen under: LED Projects

81.



Raspberry with cam in birdhouse First of all, I'm French and I apologize for my bad English. Before to start, I drew a plan for my birdhouse in order to build it. First, you can see my youtube video here: <https://youtu.be/S3MB3YABeRU> After, I decided to add a camera to see.....

Listed under: Development Board - Kits Projects

82.



Cheap 5 volt power adapter Every want to make a portable Pi and all you have is a 12 volt battery? Or have you made a project using a LCD with a 12 volt battery and another then another 5 volt battery for the Raspberry Pi? This instructable will show..... Listed under: Battery Projects

83. Raspberry Pi IoT ticket printer for online stores Do you have an online store? Are you a maker? Do you want to optimize the selling process? If you answer yes to all the questions, please keep reading because this is the instructable you are looking for. Also if you say no to one..... Listed under: Internet - Ethernet - LAN



Projects



Raspberry Pi Bluetooth LE Controller for WS2812B (NeoPixels) Bluetooth Low Energy (aka BLE/Bluetooth 4.0/Bluetooth Smart) is the most recent incarnation of Bluetooth technology developed by the Bluetooth SIG (the organization that maintains the specification). This communication protocol is designed for applications where data needs to be transferred in small amounts at relatively low..... Listed under: Bluetooth Projects, LED Projects



Raspberry Pi Home Automation – Control lights, computers, CCTV and more! Hey guys, first of all I'd like to introduce myself to everyone. My name is Jack, commonly known as Jackk or JackkTutorials over on YouTube where I do technology tutorials but mainly cover Hacking & Security and other useful things that you wouldn't normally know..... Listed under: Home Automation Projects



The Drone Pi NOTE: THIS INSTRUCTABLE IS BEING WRITTEN This project is a quadcopter powered by a Multiwii and controlled with a Raspberry Pi 2 B. This quadcopter has a particularity because he's using 2 differents controller and he could be pilot with 2 differents devices : a..... Listed under: Robotics - Automation Projects



Raspberry Pi Based Wireless FM Microphone A wireless microphone is a microphone without a physical cable connecting it directly to the sound recording or amplifying equipment with which it is associated. Also known as a radio microphone, it has a small, battery-powered radio transmitter in the microphone body, which transmits the..... Listed under: Sound - Audio Projects



ARUPi – A Low-Cost Automated Recording Unit for Soundscape Ecologists This instructable was written by Anthony Turner. The project was developed with lots of help from the Shed in the School of Computing, University of Kent (Mr Daniel Knox was a great help!). It will show you how to build an Automated Audio Recording Unit..... Listed under: Sound - Audio Projects



Analog sensor input raspberry pi using a MCP3008: wiring/installing/basic program So now that we bought the MCP3008 ADC lets get it up and running! Note: This is my first instructables submission so if something is wrong just tell me so and if you like my style leave a comment, also I'm from the Netherlands so..... Listed under: Sensor - Transducer - Detector Projects



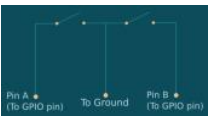
Raspberry Pi I/O Breakout cable and plugboard adaptor This is the second is a series of Instructables aimed at documenting all the electronics-related activities that go on at So Make It; Southampton Makerspace (on the South coast, UK) Requests are more than welcome! This simple Instructable intentionally goes into way too much detail,..... Listed under: Development Board - Kits Projects



Toy Truck Powered by Raspberry Pi Here is a great way to impress your fiends when your out an' about at the park, by modifying a broken toy Truck/Car with a Raspberry Pi and Adafruit's DC & Stepper Motor Pi HAT , to existing electronics . And for the controller to..... Listed under: Robotics - Automation Projects



DIY cheap glove controller and propeller car HI there, In this instructable I'll show you how to make the cheapest glove for controlling your robots or any other Arduino or raspberry pi based projects and for demonstration example I'll also include how a little tutorial how I made car controlled by this..... Listed under: Robotics - Automation Projects



Reading a Rotary Encoder from a Raspberry Pi I wanted to attach a knob to my Raspberry Pi to act as a volume control for my MPD based jukebox. Traditionally volume control devices are implemented with potentiometers acting as inputs for amplifiers. A potentiometer is a hardware device with a knob or a..... Listed under: Other Projects



Build your Internet Controlled Video-Streaming Robot with Arduino and Raspberry Pi <The Instructable and the code are ready. Enjoy! Leave a comment with you feedback!> I'm @RedPhantom (aka LiquidCrystalDisplay / Itay), a 14 years old student from Israel learning in the Max Shein Junior High School for Advanced Science and Mathematics. I'm making this project for..... Listed under: Robotics - Automation Projects



Neon A Shop Open/Closed Makerspace Sign on Raspberry Pi 2 (El Paso, TX) Neon is the name we gave to the open/closed sign we have at the entrance of our makerspace. This sign is not only an open/closed sign but it does a whole lot of things. At the makerspace we currently have access keys so this lets..... Listed under: Temperature Measurement Projects



Netbook Laptop Build for \$ 160 – Raspberry Pi Powered. Hey Everyone! I'm 13, and I was inspired by online projects and cool computer builds to see if I could build a laptop. This may not be the greatest tutorial ever, but this laptop has 512 mb of ram, a 1ghz processor, with wifi, around..... Listed under: LCD Projects

97. Raspberry Pi based answering Ganesha This project is about using Raspberry pi with USB microphone and Speaker for interactive answering machine. We are calling it Talking Ganesha. In Hindu Culture , God Ganesha is called as God of Knowledge. We have created this project just to create Talking Ganesha in..... Listed under: Sound - Audio Projects





99. 

2. 

3. 

4. 

05.



06. 

07. 

08.

A collection of electronic components and cables on a wooden surface. Visible items include a Raspberry Pi, a USB drive, a power supply, various wires, and other small electronic components.

09. 

10. 

11. Internet of Things (IoT) Extension Lead Hi Makers! Intro It's about time I shared this one with you all. This project has been going so long, you would not believe. I started this before our Hack Space existed [2011 ish?], and has continued to be in a transient 'not finished, might..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



112. **RaspiTrap V1.0** Hi all, I want to present my Raspberry Pi project. An animal friendly mousetrap with photo, video and email function. You may ask, why somebody would build such a mousetrap? Why not? Video on Youtube Step 1: C.A.D. Design First of all I tried the..... Listed under: Video - Camera - Imaging Projects



113. **Minimal RaspberryPI base** This is a plan for immobilising a Raspberry PI in a domestic environment, without children or pets, in order to run it without killing it with static. I have no idea whether this level of precaution is required, but it's been about two weeks, and..... Listed under: Temperature Measurement Projects



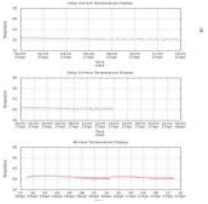
114. **Home automation with node js , raspberry pi and heimcontrol** In tutorial will make overview of using heimcontrol platform (is NodeJs application for home automation Open Source under MIT license) Some of there features: Responsive :The responsive design allows you comfortable control of your home devices using your smartphone or tablet. Everywhere : Open your..... Listed under: Home Automation Projects



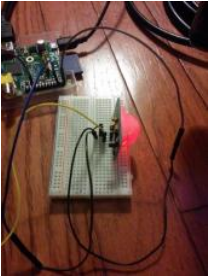
5. **Home Monitoring – Support A Loved One Remotely** We cannot be around the ones we love as much as we would wish. It is hard enough being there for your children but what about parents who might live hours away up the motorway or just across town. I know from my personal situation..... Listed under: Home Automation Projects



6. **Raspberry Pi controlled room temperature monitoring with Gnuplot image output and email alert ability** Where I work, there is a very important room which houses lots of computers. The ambient temperature of this room has to be very cool to optimize performance of these systems. I was asked to come up with a monitoring system which has the ability..... Listed under: Temperature Measurement Projects



117. **Motion Detected Music-Raspberry Pi** The end result of this project is for someone to walk by the Raspberry pi and have Pandora auto play automatically. Step 1: Installing Pianobar Run the following commands in the Lxterminal which can be accessed from the home screen When copying command make sure their..... Listed under: Sound - Audio Projects



118. **Build an arcade machine powered by raspberry pi for a low budget** So I was inspired by the projects I saw online like the NaCade and the Porta-Pi, and wanted to build somthing similar. Problem was, as a 13 year old kid, I don't really have that much money to spend, apart from gift cards. So instead..... Listed under: Game - Entertainment Projects, Memory - Storage Projects



119. **Adding a Real Clock Calendar to your Raspberry PI** The Raspberry Pi doesn't have a little coin-battery-powered ‘Real Time Clock’ (RTC) module, which keeps time even when the power is off, or the battery removed. To keep costs low and the size small, an RTC is not included with the Raspberry Pi. If your..... Listed under: Clock - Timer Projects



120. **Updated People Counter with Raspberry Pi** This is an updated version of UbiMaker's Open Source People Counter with new scripts. Where I have made mistakes, I will note them, in the hopes that you don't have to do the same! People Counters are an especially useful tool for libraries, and one..... Listed under: Memory - Storage Projects



121. **Reuse Unwanted Infrared Remote Control to Launch Graphical Application in Raspberry Pi Introduction** This is an extension to my instructable "Shutting down and Restarting" Raspberry Pi using a remote control unit. This time, I want to launch graphical (GUI) applications such a a terminal emulator and a browser in addition to shutting down and restarting the RPI..... Listed under: Raspberry Programmer Projects



122. **Host your own blog from a \$25 Raspberry Pi computer** Now everybody knows it's way smarter to just pay someone to host your website. But what not everybody knows is that it's way more punk rock to Do it Yourself. So what follows are some tips / pointers / instructions for setting up your own..... Listed under: Other Projects



123.



PiTank – A web controlled tank with cannon and live video stream The PiTank is a web controller tank built for a competition at my school's robotics club. The project took about two weeks to complete with all 5 team members participating in various aspects. Its main projectile are ping pong balls (up to 3).The firing mechanism..... Listed under: Video - Camera - Imaging Projects

124.



DIY Portable Mini Monitor In this project I will show you how I used a 1280x800 LCD Kit to build a battery powered portable mini monitor which is useful for your DSLR camera, your Raspberry Pi or to extend the viewing field of your computer. Let's get started! Step..... Listed under: LCD Projects

125.



RainBerry: Compact, Weatherproof Case for Raspberry Pi A+ and Pi Camera RainBerry case is a compact, aesthetically designed, weatherproof case for Raspberry Pi and Pi camera. This project was born out of a need to monitor and protect the garden using a smart Pi camera with computer vision. Step 1: Features of RainBerry Case For most..... Listed under: Video - Camera - Imaging Projects

126.



Battery Operated Cardboard HDMI Retro TV Stand for your Raspberry Pi Your Raspberry Pi deserves its own screen and stand! Why share your Raspberry Pi with the living room TV? Give your Pi its own stand and battery so you can operate it anywhere in the house or in your office. Imagine having your own retro..... Listed under: Battery Projects

f

g+

t

in

p

r

s

w

e

+

t

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

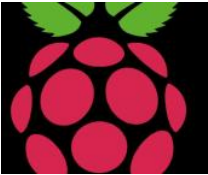
+

+

+

+

+



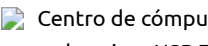
Make Raspberry Pi into a LDAP Server to Store User Account Data and Password Introduction An LDAP server provide the following benefits: Authenticate for all the users of Raspberry Pis and computers in your network Store files stored /etc directory Store contact details that can be useful for email clients My personal reason of running an LDAP server is..... Listed under: Memory - Storage Projects

127.



How to create a Scratch game with Makey Makey controller on a Raspberry Pi In this instructable you'll learn how to make a simple game in Scratch on a Raspberry Pi; to make the game more fun you will be controlling it using real world objects (fruit and vegetables) via a Makey Makey. You will need: A Raspberry Pi..... Listed under: Game - Entertainment Projects

128.



Centro de cómputo para Niños con Raspberry Pi Estos serán los primeros pasos de la Raspberry Pi y para ello necesitaremos: Raspberry Pi 2 Adaptador de red a micro USB Tarjeta micro SD(de 8 gb) Cable HDMI Cargador Ratón Teclado para computadora En caso de contar con un Kit de inicio no necesitas..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

129.



Raspberry pi NAS/UPNP MP3 Streaming Torrent Box headless Raspberry pi NAS/UPNP MP3 Streaming Torrent Box headless I have a Raspberry Pi model B and a desktop HDD and wanted to host all my music and videos, Todo this I will be using raspbian wheezy for the Pi, mediatomb for the upnp streaming for..... Listed under: Sound - Audio Projects

130.



Using IR Remote with Raspberry Pi without LIRC I wanted get an IR remote input to Raspberry Pi. I manged to get LIRC installed and tested. Everything was ok, except the very last step. When I wanted pass the IR remote Key value to Python program it doesn't pass it correctly. It passes..... Listed under: Sensor - Transducer - Detector Projects

131.



Reuse Unwanted Infrared Remote Control to Shutdown and Reboot Raspberry Pi Introduction This remote control in the picture used to control a fan until the fan stopped working. I threw away the fan and saved the remote control unit. This is definitely my personal favourite instructable because it is is useful for lazy people like me..... Listed under: Robotics - Automation Projects

132.



How to Install and configure Raspbian on Raspberry Pi 2 (Linux/windows/mac) Watch the YouTube Video Here The raspberry pi 2 was announced in February 2015 with a awesome tag of it being "6 times faster". With a 900 MHz quad core broadcom processor and a GB of ram, the performance is evident. With faster boot times,..... Listed under: Raspberry Programmer Projects

133.



Wall Mounted SqueezePlayer with Raspberry Pi Build a wall-mounted "SqueezePlayer"-based network music player using Squeezelite, Jivelite and a Raspberry Pi. I built this project because Logitech has stopped making its "Squeeze" line of networked music players. Since the server software is open source, and because I continue to have several network..... Listed under: Sound - Audio Projects

134.



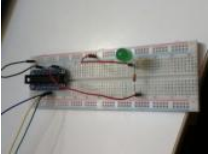
Wall Mounted SqueezePlayer with Raspberry Pi Build a wall-mounted "SqueezePlayer"-based network music player using Squeezelite, Jivelite and a Raspberry Pi. I built this project because Logitech has stopped making its "Squeeze" line of networked music players. Since the server software is open source, and because I continue to have several network..... Listed under: Sound - Audio Projects

135.



How to Make a Raspberry Pi Case From an Altoids Tin If you have a Raspberry Pi computer board, you can make a great case for it out of an Altoids mint tin. You'll need: 1 Raspberry Pi computer board 1 Altoids mint tin 1 Plastic gift card 1 Dremel or Small drill 1 Tin snips..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

136.



A Raspberry Pi-based Truly Random Number Generator Random numbers are essential for all kinds of things, especially cryptography. Computers, however, can only produce pseudorandom numbers, which can be "guessed" by using sophisticated software. Truly random numbers are hard to come by. Luckily, with a few wires and a Ras Pi, one can..... Listed under: LED Projects

- [illegible]

Figure 1: Schematic representation of the experimental design. The top panel shows a timeline of the experiment with two blocks of 10 trials each. The bottom panel shows a sample trial with four conditions: 1) Fixation (200 ms), 2) Fixation (200 ms), 3) Fixation (200 ms), and 4) Fixation (200 ms). The trial duration is 1000 ms.

[illegible][illegible]

A custom-built robot on a white base. It features a Raspberry Pi 4 board with a camera module and a speaker attached. The robot has two large black wheels and a smaller red wheel. A black cable is connected to the side. The text "diYhacking.com" is visible in the top left corner.

A custom-built robotic car chassis. It features a large yellow wheel on the left side. A black DC motor is mounted on the right side, connected to a breadboard. The breadboard contains various electronic components, including a microcontroller, resistors, and jumper wires. A small black sensor module is mounted on top of the breadboard. The entire assembly is built on a clear plastic base.

Autoadvent: Raspberry Pi controlled LED Advent candles A couple weeks ago my Dad mentioned to me it would be cool if advent candles automatically lit themselves according to the date. (One candle is lit starting the 4th Sunday before Christmas with an additional candle being lit for each of following Sundays). I..... Listed under: LED Projects

- Bluetooth settings

Bluetooth pairing request

Type PIN to pair with "Raspberry Pi". (Try 0000 or 1234.)

OK Cancel

Scan for devices

Bluetooth devices
166.



The best Raspberry Pi power supply Ok, since we already documented a little about the importance of a good PSU (Power Supply Unit) when audio quality is your main concern. As stated earlier, the raspberry pi power supply is also responsible for proper functioning of our tiny device, as a poor..... Listed under: Other Projects
167.



How to Build a Handheld, Raspberry Pi-Powered Game Console The Raspberry Pi is a great little mini-computer for playing classic video games from your childhood. But, thanks to its small size, it's also possible to turn it into a portable handheld game console that plays your favorite titles, from NES to N64. I call..... Listed under: Game - Entertainment Projects
168.



Raspberry Pi chats to Arduino Well I got the Pi working, so what next? After a tiny amount of pondering I decided to get it chatting to an Arduino using the serial interface. I'll try and note down everything relevant so this'll be as much a guide to doing it as..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
- f

g+

t

in

p

r

s

w

e

169.



Raspberry Pi Web-Enabled Irrigation Bypass Project A Better Solution The problem with rain sensors lies within how they are engineered. My particular rain sensor works by using absorbent cork discs to detect moisture. When it rains, the discs swell-up with water, depressing a switch which disables the watering. The watering is..... Listed under: Internet - Ethernet - LAN Projects
0.



Best Voice Recognition Software for Raspberry Pi This tutorial is about the best voice recognition software for Raspberry Pi and how to use it. I was able to install and test three different voice recognition systems for Raspberry Pi. Two of these softwares were dependent on the internet and were online ,..... Listed under: Video - Camera - Imaging Projects
- 1

2

3

4

5

6

7

8

9

0

1.



Raspberry pi touchscreen LCD: The Best LCD Tutorial Touchscreen displays are always one of the coolest things that you can add to a raspberry pi. Having a neat display always boosts the overall funk of your project. You can build upon a prolific number of applications using portable TFT LCD displays. Maybe create..... Listed under: LCD Projects
172.



Raspberry Pi – Head Mounted Display Tutorial Head mounted displays are definitely the latest fad that’s going around town now. You might have seen several wearable displays such as the google glass, and many others including virtual reality systems like the oculus rift. Head mounted displays are primarily used for video sharing,..... Listed under: How To - DIY - Projects
173.



Raspberry Pi GPIO with PIR motion sensor: Best tutorial This tutorial, based on the latest Raspberry Pi B+/model 2, will show you to interface a PIR motion sensor with the Raspberry Pi. And also guides you to use the GPIO pins on it. The GPIO pins on the raspberry pi are critical when it..... Listed under: Sensor - Transducer - Detector Projects
174.



The Best way to Connect Raspberry Pi to Laptop display What are the stuff required to do this? Raspberry Pi. Ethernet Cable. Laptop. SD Card with Raspbian. Micro USB Cable. (Optional) Components required for setting it up the first time: HDMI/ AV Display. Keyboard and Mouse. How does it work? To connect raspberry pi to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
175.



Solar Power, Weather and the Raspberry Pi Solar Power, Weather and the Raspberry Pi SwitchDoc Labs is in the process of building a Solar Powered Raspberry Pi Weather Station. The design will be released as a SwitchDoc Appnote, an Instructable and a series of posts on SwitchDoc.com. We are right in..... Listed under: Solar energy projects
176.



USB MIDI interface The RPC is a MIDI controller and implements the age-old 1980s serial MIDI bus, and the Protosynth must be capable of interfacing with it. But in general use a USB device port is much more practical than the three ubiquitous MIDI ports; it allows connecting..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
177.



Raspberry Pi – MSP 430 – LCD DEM16101 LCD unusable No matter how hard I tried, I couldn't figure out how to use it. I think I managed to talk to the KS066 controller correctly (I reliably reset the controller using the initialization sequence) but I could not figure out the voltage..... Listed under: LCD Projects
178.



Nokia 5110 graphics tutorial Okay, here's the deal. There are some tutorials on youtube showing how to get graphics to show on the nokia 5110 and that's great. If you just want a simple way to do that, go and watch them instead but there are a few problems..... Listed under: Phone Projects
179.



Use RPi, Azure, and Cortana to Automate your Home! Introduction There is new technology all around us and only more coming every day. Our micro controllers are getting faster, are phones getting smarter, and the cloud is becoming stronger. With all this new technology everyone is asking themselves: How can I utilize it all?..... Listed under: Home Automation Projects



IOT: iPhone Controlled Mini Fan Step 1: Materials iPhone Mac with xcode RFduino RFduino Battery Shield RFduino USB Shield Batteries W resistor Diode DC Motor Fan blade for DC Motor Step 2: Circuitry Setup the circuitry as shown in the diagram. (If the servo is small enough, we..... Listed under: Phone Projects



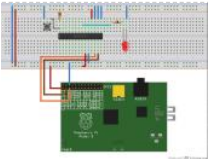
181.

WS4E – Ham Radio And Other Stuff The Arduino Fox Hunt Transmitter will be documented in another post, in this post I want to document the Raspberry Pi SSTV Field Day Beacon. The one thing that I don't like about the Raspberry Pi is that it only has digital input/output logic lines..... Listed under: Radio Projects



182.

Reading analogue data on a Raspberry Pi using MCP3002 I got a bit disappointed with my little bus pirate yesterday. I'll investigate how to update it to fix the odd SPI behaviour another time, but for now, its on to trying to read the MCP3002 SPI ADC chip directly using the Raspberry Pi. However,..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



183.

Interfacing an I2C GPIO expander (MCP23017) to the Raspberry Pi using C++ (i2cdev) The I2C Bus The I2C bus is a two wire bus developed by Phillips/NXP (4-wire if you want to include power and ground), that is used to connect a single master device to up to 120+ slave peripheral devices. The master device is typically a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



184.

Raspberry pi as an nrf24l01 base station with python for smart home or internet of anything projects Internet connectivity in an integral part of various micro-controller projects, specifically those using the atmega328p with arduino ide/avr-gcc. NRF24L01 modules provide an inexpensive and reliable wireless link. In many projects, an additional avr/arduino is hooked up to a computer with internet connection for linking the..... Listed under: Internet - Ethernet - LAN Projects



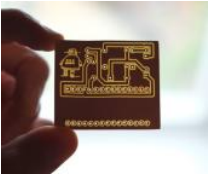
185.

Configuration Utilities for XBee Radios Xbee Radios I purchased two XBee Series 1 Module (Freescale 802.15.4 firmware) from Adafruit. These are manufactured by Digi and are low-power module with wire antenna (XB24-AWI-001). They have a 250 kbps RF data rates and operate at 2.4 GHz. These radios use the IEEE 802.15.4 networking protocol and can perform point-to-multi-point or peer-to-peer networking ,..... Listed under: Radio Projects



186.

NetWorker – an advanced web server with a microcontroller An Internet connection would be a valuable addition to many projects, but often designers are put off by the complexities involved. The 'NetWorker', which consists of a small printed circuit board, a free software library and a ready-to-use microcontroller-based web server, solves these problems and..... Listed under: Internet - Ethernet - LAN Projects



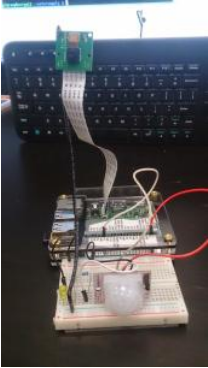
187.

PCB designing and isolation milling using only free Software In this Instructable I will show you how to design and fabricate your own PCBs, exclusively using free software that runs on Windows as well as on a Mac. Things you need: computer with internet connection cnc mill/router, the more accurate the better 45°/20° V-Bit..... Listed under: Development Board - Kits Projects



188.

Solar Phone Charging Back Pack Step 1: Materials and Tools Materials (1) backpack. There are 2 requirements when choosing a good backpack for this project: room to install your solar panels and a pocket to store your cell phone. The Drifter square backpack is perfect for this project. (1) portable..... Listed under: Phone Projects, Solar energy projects



189.

Build an Intruder detector with Raspberry Pi and robomq.io Device, sensors and systems connecting together are driving the next generation of applications creating the Internet of Things (IoT). robomq.io provides an open standard based platform to connect your devices and sensors to the back end applications, systems, processes and people, enabling you to build..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



190.

Analogue Sensors On The Raspberry Pi Using An MCP3008 inputs which means it is a bit of a pain to use many of the available sensors. I wanted to update my garage security system with the ability to use more sensors so I decided to investigate an easy and cheap way to do it..... Listed under: Sensor - Transducer - Detector Projects






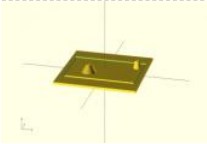






191.

LED Rubik's Cube With Arduino In this instructable I'll show you how you can build your own LED Rubik's cube. This project was done for an introductory electronics course at Pomona College. Groups were given approximately two months to complete a project of their choosing, the only requirement being that..... Listed under: LED Projects



192.

Access Control of Door and Home Security by Raspberry Pi Through Internet 1 INTRODUCTION In this modern world crime has become ultra modern too! In this current time a lot of incident occurs like robbery, stealing unwanted entrance happens abruptly. So the security does matters in this daily life. People always remain busy in their day to..... Listed under: Home Automation Projects, Security - Safety Projects

193.		Model Railway Automation This note introduces my experiences of using the Raspberry Pi to automate a model railway. Two aspects are covered: •Sending commands to a DCC controller •Detecting a train’s position. Sending commands to a DCC controller The RPi is connected to a Hornby Elite DCC controller. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
194.		Raspberry Pi GPIO and LED Flash an LED - Works Remotely In this exercise you update your Pi, install the GPIO tools, and write a program to flash an LED ten times. If you use PuTTY to log in remotely, you could flash LEDs on another continent. I have tried..... Listed under: LED Projects
195.		Solar Powering My Home! My home has been solar powered since June 2013 and the power system has proven its reliability. I'm a proud owner of an OFF GRID solar power system. I decided to publish this instructable to let fellow DIYers know the basics to design and install..... Listed under: Home Automation Projects, Solar energy projects
196.		On/Off Project – Switch a light on/off using your smart phone f you found this article after doing a search on Google, welcome! On this website you will find plenty of content around DIY home automation using open-source hardware. Enjoy the article! I have been asked a lot about writing tutorials using the Raspberry Pi for home automation, as well..... Listed under: Phone Projects
197.		Solar powering a Raspberry Pi for Bitcoin mining Introduction: As a simple one-GPU bitcoin miner, the recent growth in ASIC (Application specific integrated circuit) bitcoin mining hardware has been a real gamechanger. In my case, there are some disadvantages to the change, namely having to spend the few bitcoins I have mined on..... Listed under: Solar energy projects
198.		Air Pollution Detector This device is intended to provide the user with a cost-efficient means of determining air quality. Our sensor focuses on the five components of the Environmental Protection Agency's Air Quality Index: ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrous oxide. This device detects all..... Listed under: Sensor - Transducer - Detector Projects
199.		Home automation with Raspberry Pi 2 and Node-RED Node-RED is a visual tool for wiring the Internet of Things that can be run on a Raspberry Pi and allows for rapid prototyping of projects. In this tutorial we will first set up Node-RED on a Raspberry Pi 2, before creating a flow that..... Listed under: Home Automation Projects
200.		Raspberry Pi in a NES Case – Part 1 – Wiring up the front panel and external connectors Raspberry Pi is a great project computer, it's cheap (\$35), runs Linux (or Risc OS) and has lots of resources available around it. When mine arrived, I didn't really know what to use it for, but then it hit me: I can build an emulator..... Listed under: Game - Entertainment Projects
201.		Resources – Computing Club Sessions – Raspberry Pi 2 – Python Overview This is an opportunity to look at another language (Python), another IDE (IDLE) and have another go at Scissors, Paper, Stone. Hardware This is going to use the GPIO pins (the two rows of 13 pins - 26 in total) on the Pi. We'll..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
202.		Talking to a ZWave Switch using open-zwave Z-Wave is a wireless communications protocol designed for home automation, specifically to remotely control applications in residential and light commercial environments. The technology uses a low-power RF radio embedded or retrofitted into electronics devices and systems, such as lighting, home access control, entertainment systems and..... Listed under: Home Automation Projects
203.		Raspberry Pi Garage Door Opener with GaragePi Introduction When I was little, I used to push the garage door button from inside the garage and then run out the garage while it's closing... carefully jumping over the sensor so I don't trip the safety mechanism. It was easy back then and a..... Listed under: Home Automation Projects
204.		How To Use GPIO Pins On Raspberry Pi – Buttons And LED Tutorial What Are The GPIO Pins on Raspberry Pi? A great feature on the Raspberry Pi is the GPIO pins (stands for General Purpose Input Output). These GPIO pins on Raspberry Pi can be found in 2×13 header pins which can perform tasks include SPI, I2C, serial UART, 3V3..... Listed under: LED Projects
205.		Design Your Home with Autodesk Homestyler Autodesk Homestyler is a free online home design software, where you can create and share your dream home designs in 2D and 3D. The online tool allows you to either upload your existing floor plan or create a new one with simple drag and drop..... Listed under: Home Automation Projects
206.		Announcing OpenSprinkler Beagle (OSBo) v1.0 Following the sneak-peak preview, I am excited to announce that OpenSprinkler Beagle (OSBo) v1.0 is now officially released! OpenSprinkler Beagle is an open-source sprinkler / irrigation extension board for the BeagleBone Black. It uses four GPIO pins to control an unlimited number of sprinkler valves..... Listed under: Wireless projects
207.		beakn v0.3 : DIY Lync Status Light with a RaspberryPi, .NET, Mono and MQTT I’m continuing to build out “beakn” my DIY Lync Status light. This is what I’m calling a “maker experience” project. I want to know what a maker goes through to build things so I’m building it with as many different platforms as possible. I’ve built..... Listed under: How To - DIY - Projects
208.		Raspberry Pi OpenCV Pan & Tilt Face Tracker Create your own face tracking, pan and tilt camera on the Raspberry Pi! This tutorial will demonstrate use of the OpenCV (computer vision) library to identify and track faces on the raspberry pi using two servos and a USB webcam. For the interested, I previously..... Listed under: Video - Camera - Imaging Projects

- f

g+

t

in

p

r

s

w

e

x

g

t

l


217.



209.



210.



211.



212.



213.



214.



215.



216.



217.



218.



219.



220.



221.



222.



223.



224.



225.

1: A single LED Before we even get started with the GPIO, lets make an LED light up by simply wiring it to the +3.3v supply and 0v. So... W from the Pi's +3.3v supply to the breadboard and this connects to an LED then..... Listed under: LED Projects

Morse Code on an LED Difficulty: beginner This tutorial will guide you through safely connecting up an LED to your Raspberry Pi and being able to turn it on and off from Python. Then you will write a program to take input from the keyboard and send it out in..... Listed under: LED Projects

Connecting a 16×32 RGB LED Matrix Panel to a Raspberry Pi Overview Everyone loves a colorful LED screen! Our 16x32 RGB LED display is a low cost, and easy-to-use arrangement of bright LEDs - just like the ones used in Times Square! This display makes a fantastic addition to your Raspberry Pi. It is pretty easy..... Listed under: LED Projects

How to make a Raspberry Pi surveillance and alarm It's the 1st of July, and hopefully you are lucky enough to go on holiday soon, this is a great way to make a useful project right before leaving home alone! This is a cheap but powerful system of surveillance and alarm, we know it's..... Listed under: How To - DIY - Projects

Using A Joystick On The Raspberry Pi Using An MCP3008 While browsing eBay looking at electronics stuff I found a few interesting items to connect to the Pi. The first item was a small 2-axis analogue joystick. They are similar to the thumb-sticks you would find on a modern games console controller. These modules are cheap and..... Listed under: Game - Entertainment Projects

A cheap Bluetooth serial port for your Raspberry Pi While working on my Arduino based robot vehicle project the idea came to me that the Bluetooth module that I'm using as a remote control receiver for my robot would make a great addition to my Raspberry Pi. In this article I describe how to..... Listed under: Bluetooth Projects

Gertboard-Pi Potentiometer Controlled Motor In the potmot (for potentiometer-motor) test we use a potentiometer ("pot") connected to the analogue to digital converter (A/D) to get an input value, and this value is used to control the speed and direction of the motor. It is set up so that at one extreme, the..... Listed under: Motor Projects

Expanding the Raspberry Pi with PiFace and Pi Rack The marvellous Raspberry Pi, essentially a cheap, small PC, is a great device for education or home projects like media streaming. Out of the box though, it is not ideal for controlling other devices other than by USB or ethernet. What if you wanted to..... Listed under: Home Automation Projects

Build Raspberry Pi robots: Best Tutorial for beginners If you are a beginner to Raspberry Pi and were looking for a simple hardware project, then look no further. This tutorial will show you to develop a python based robot which avoids obstacles and navigates freely. Obstacle avoiding robots are fairly common and easy..... Listed under: Robotics - Automation Projects

Raspberry Pi Control Motor Speed Controlling a motor is one of the most exciting things you can do with your Raspberry Pi. Motors are power-hungry components. They often require more power than the 3V3 your Raspberry can provide. That's the reason we will connect the motor to a external power..... Listed under: Motor Projects

 Research: Raspberry Pi – Pins, Buttons and Circuits In a previous post I wrote about how you can control the function of the Raspberry Pi's software through writing scripts, but one of the remarkable things about the Pi is that it is also capable of interacting with the physical world through its GPIO pins. GPIO stands..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Raspberry Pi STL in a Box I promised more details in the future about the Raspberry Pi STL build. Well, against all odds, I'm going to deliver! The project exists purely to solve a problem with getting audio between two sites for a hospital radio station. They currently use a costly..... Listed under: Radio Projects

A Raspberry Pi Interface Board The Raspberry Pi computer is eminently suitable for interfacing. It has 17 GPIO lines which can be programmed to be either inputs or outputs as well as various other functions. They are very low power lines however, and on their own can only drive tiny LEDs..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Building a segway with Raspberry Pi Step 1: Materials Raspberry Pi, AC-to-DC 5V power adapter, plastic enclosure I am using Raspberry Pi 2, with Raspbian installed. Cost \$45.0 USB WiFi adaptor, I'm using Edimax Wifi adaptor. Cost \$10.0 DC motors x2, wheels x2, car frame, acrylic sheet x2, motor bracket x2,..... Listed under: Robotics - Automation Projects

Raspberry Pi:- USB, Ethernet, crashing and other problems Do you have frustrating issues with your Raspberry PI Are you experiencing problems with your PI, you can't explain or figure out why? You bought what you thought where good accessories (Keyboard, Mouse, WIFI adapter and cables), well read on, you may discover your problem..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Internet - Ethernet - LAN Projects

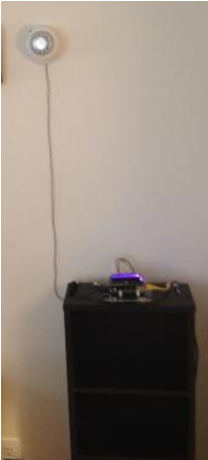
 Cedarville University builds RoboBoat vehicle with 4 Raspberry Pi's, MATLAB and Simulink In Part 1, Sergio described the RoboBoat Competition and introduced our entry, the Cedarville University RoboBoat team. In this article, we will go into depth with regards to how we programmed our autonomous aquatic vehicle's PC and five Raspberry Pi's using MATLAB and Simulink. Last..... Listed under: How To - DIY - Projects

 Tutorial – sPiRobot : Control & See what your Robot is seeing from Anywhere Why sPiRobot ? If you are following my blog I always use Arduino Board to make my projects, but for this I use Raspberry Pi as a brain of my Robot. That's the reason I called this "PiRobot". aterials ? 1x Raspberry Pi 1x Webcam..... Listed under: Robotics - Automation Projects

226. Remote Logic The Raspberry Pi is often hailed for its incredibly cheap price. Other low-cost development and educational boards are available (e.g., the Beaglebone), but for some of these systems, the additional peripherals that are required can quickly amplify the cost. The Raspberry Pi, however, is designed..... Listed under: Wireless projects



227. Aaron's piHouse Monitor ntroduction I have been using microcontrollers for a long time now. I started in college as part of the program and have never stopped. Professionally, educationally, hobby, I've done projects of all types. Recently I decided to try something with a Raspberry Pi. It is..... Listed under: Home Automation Projects



228. Home Automation with Raspberry Pi The Surveillance System this year I planned to travel with my family to China for a few weeks, so we had to leave alone our house. While being on vacation, I wanted to check sometimes if everything was alright at home. So I decided to..... Listed under: Home Automation Projects



229. Part 2: How to build a High-Definition FPV UAV using a Rasperry PI with HD camera, using a high speed WiFi link This is the second part of a 2-part series on 'How to build a High-Definition FPV UAV using a Rasperry PI with HD camera, using a high speed WiFi link. In my first post on the subject (located here), I discussed the parts I used, and..... Listed under: Video - Camera - Imaging Projects, Wireless projects



230. 3D Printing MouseAir V2 – Part 1 / Rasperry Pi Project The Mouse Air project has been around in various stages since April of 2014. The goal of the project (conceived in a bar, the Fedora in Coeur d'Alene Idaho and named by Sarah, the most excellent bartender there. And some BlueMoon Beer.) was to be able..... Listed under: How To - DIY - Projects



231. Gertboard Open Collector Drivers: ULN2803APG If you were wondering how to use the open collector drivers on the Gertboard version 1, then you have come to the right place. As shown in the diagram, the red area marked out is the open collector driver section. The ULN2803APG is a Darlington..... Listed under: Development Board - Kits Projects



232. Raspberry Pi – homemade level converter for serial communication rs232 3.3 volts to 5 volts TTL for AVR microcontroller I found that the Raspberry Pi serial interface rs232, described in a older post by myself, was too bulky. Pi and AVR should be connected through a less amount of wires. So I’ve searched the best hints to solder a cheap and uncomplicated level converter,..... Listed under: Home Automation Projects



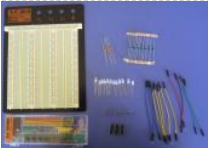
233. PIE1 – Raspberry Pi Sends Live Images from Near Space HAB (High Altitude Ballooning) is a growing hobby where enthusiasts use standard weather balloons to put small payloads typically 100g-1kg into “near space” at altitudes of around 30km or so, carrying a tracking device (so the balloon position is known throughout the flight) and usually..... Listed under: Video - Camera - Imaging Projects



234. Raspberry Pi – RGB LED conversion I was looking at the cost of an Arduino and Ethernet shield and thinking that they are quite expensive compared with a Raspberry Pi. So time to update my Arduino RGB LEDs project to run on a RPi. As noted all over the web the..... Listed under: LED Projects



235. Section 3: Building the Turing Machine Introduction In this project, we shall build a 3-symbol Turing machine using 11 bicoloured LEDs to represent the cells on the tape. Green represents a 1, red represents a 0 and a blank is represented when the LED is off. We shall call these the..... Listed under: LED Projects



236. Pi Ball – A Spherical and Interactive Rasperry Pi 2 Case Here were my requirements - Use a Pi (Raspberry Pi 2 in the case) - Spherical case, that can be bounced, kicked, thrown - Accelerometer onboard to monitor the motion of the ball - Wireless everything! Wireless keyboard/mouse, networking, sound and video (Pi Ball in..... Listed under: Game - Entertainment Projects



237. Temperature Measurement for Lab and Science Projects Introduction Every lab (home, office, school) needs temperature measurement capabilities. Measuring temperature for science experiments is hard – all sorts of materials, liquids, and chemicals may be involved or a large temperature range may need to be covered. The sensor used for this (a thermocouple)..... Listed under: Temperature Measurement Projects



238. A GSM/GPRS & GPS Expansion Shield for Raspberry Pi Today we present an expansion shield for Raspberry Pi to control the very effective GSM/GPRS SIM900 and SIM908 (with GPS) modules: in this way it is possible to extend the functionality of Raspberry Pi for mobile applications (eg: remote control) and, by employing the SIM908..... Listed under: Wireless projects




239. Solar Power on the Raspberry Pi – SunAir designed to charge LiPo batteries from Solar Panels and power your Pi. First SunAir Kickstarter Update (Dec 7, 2014) Published here. An earlier generation of this project was used in Project Curacao. You also can track the sun, detect low power conditions and more.



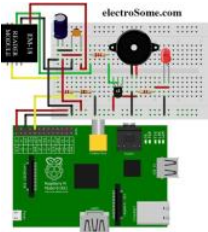
240.



Project Coffee: Es(pi)resso Machine ome time ago, I embarked on a project to control my Gaggia Classic Espresso machine with a Raspberry Pi. Obviously, you can buy a fully automatic “bean to cup” machine... but where’s the fun in that! This project started out with the simple idea of..... Listed under: Home Automation Projects
241.




G0MRP 29.45 MHz Receiver Project In 2007/8 AMSAT-UK put considerable work into a proposal to the European Space Agency (ESA) to place an Amateur Radio payload on the mass dummy on the maiden flight of the VEGA launcher. Known as iSTAR (Integrated Suite for Teaching and Amateur Radio) it was..... Listed under: Wireless projects
242.




Interfacing EM-18 RFID reader with Raspberry Pi RFID (Radio Frequency Identification) uses electromagnetic fields to read, monitor and transfer data from tags attached to different objects. It is not necessary that the cards are to be in visibility of the reader, it can be embedded in the tracked object. The tags can..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
243.




Controlling Domestic Hot Water Supply with Raspberry Pi Contents Background Hardware Pi Wiring Heating System Wiring Software Remote Access Gas Consumption Impact Background I want to implement a Raspberry Pi controlled heating and hot water system. On the hot water side, the objectives are Primary Always ensure there is sufficient hot water available..... Listed under: Home Automation Projects
244.



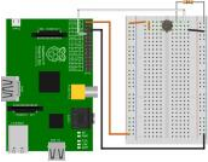
Dual DC motor control using pwm with the Raspberry Pi This project uses two IRF 630 MOS-FET transistors for pulse width modulation and two relays to change the direction of the two motors. . The circuit diagram is below. The two IRF 630 MOS-FETs are connected to the GPIO 15 and 18 pins of the..... Listed under: Motor Projects
245.




Home Weather Display In this project, we use a Grove DHT (Digital Humidity and Temperature) sensor as a Raspberry Pi temperature sensor. This project uses a Grove OLED display, connected to the Raspberry Pi, to show the temperature and humidity. You can use this project as designed: a simple weather station for..... Listed under: Home Automation Projects
246.




Home Energy Monitoring System The Purpose (Mission) Monitor, archive and analyze energy consumption in the house Visualize historical consumption data Access data remotely from Web Eventually include data from other sensors, like temperature, pressure, humidity, motion, light, security, etc. UPDATE: Temperature/Pressure sensors added: Additional Sensors for Home Energy Monitor..... Listed under: Home Automation Projects
247.




Connect a sensor to your Raspberry Pi to warn you when there are noxious gases about! o detect a fart with the Raspberry Pi, we need to use a sensor that is responsive to one or more of the volatile sulphuric compounds which make up 1% of flatulence (i.e. the compounds which make farts smell). Essentially, we need to give the..... Listed under: Sensor - Transducer - Detector Projects
248.



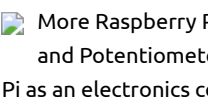
XMOS startKIT: Building an XMOS and Raspberry Pi Robot XMP-1 Introduction The XMOS startKIT from Farnell (or Newark) is a very low cost (£12 including VAT) processor platform that works well with the Raspberry Pi. Together is possible to construct robotics applications with almost no soldering required. The XMOS startKIT is a near-credit-card sized board..... Listed under: Robotics - Automation Projects
249.




Control an LED from your web browser or smartphone using Raspberry Pi A first project – Internet controlled LED In this simple, inexpensive project you can connect a light emitting diode to your Raspberry Pi, and turn it on and off using any web browser. There’s even an app for Apple, Android and Windows smartphones. Prerequisites To run this..... Listed under: LED Projects
250.




Usb Hub Schematic Cy7c65632, cy7c65634 hx2vl™ very low power usb 2.0 hub controller cypress semiconductor corporation • 198 champion court • san jose, ca 95134-1709 • 408-943-2600. Click here to receive the iogear newsletter and / or discounts: stay connected; facebook; twitter - iogear news; twitter - iogear..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
251.




More Raspberry Pi Electronics Experiments – Gertboard and Potentiometer-Controlled LED Cluster More Raspberry Pi Electronics Experiments – Gertboard and Potentiometer-Controlled LED Cluster Posted on February 3, 2013 by rakanalysis One of the things which alerted me to the potential of the Raspberry Pi as an electronics control system was the announcement of the Gertboard before the Raspberry..... Listed under: LED Projects
252.



Interfacing HC-SR04 Ultrasonic Sensor with Raspberry Pi Ultrasonic distance sensors are designed to measure distance between the source and target using ultrasonic waves. We use ultrasonic waves because they are relatively accurate across short distances and don’t cause disturbances as they are inaudible to human ear. HC-SR04 is a commonly used module..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
253.



My Raspberry Pi Powered Garage Monitor Update #1: Garage Monitor Memory Leak: Part 1. Update #2: I should point out that the arm on the switch I ended up using bent so it stopped working after about a month of use. I really need to figure out a way to mount..... Listed under: Home Automation Projects
254.

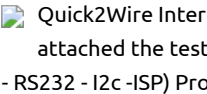


8 Interesting DIY Raspberry Pi Case Ideas The Raspberry Pi is a small, credit-card sized ARM computer that costs a measly \$25. For the money you’ll get a full system-on-chip computer capable of running a variety of ARM-optimised operating systems, USB and Ethernet connectivity but no case. Future versions of the unit..... Listed under: How To - DIY - Projects

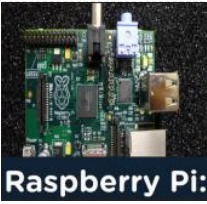
-



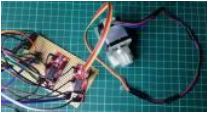
271. Touch Pi: Portable Raspberry Pi Overview In this project we're building a portable Raspberry Pi using the model A+, PiTFT 3.5" display, Powerboost 500C and a 2500mAh lithium polymer battery. We designed this very simple case in CAD - It's a two part enclosure that's fasten together with screws. All the..... Listed under: Development Board - Kits Projects



272. Quick2Wire Interface Board – Assembly and Troubleshooting TESTS (1) On the Quick2Wire boards there is a 3-pin male header with pins for 5V, 3.3V, GND. I attached the test circuit to 5V and GND — it glowed as it should. Same for 3.3V and GND. So I decided that the board was..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



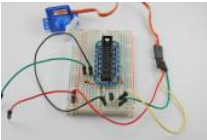
273. Know all about Raspberry Pi Board Technology The Raspberry pi is a single computer board with credit card size, that can be used for many tasks that your computer does, like games, word processing, spreadsheets and also to play HD video. It was established by the Raspberry pi foundation from the UK..... Listed under: Development Board - Kits Projects



274. Control stepper motors with Raspberry Pi and node.js Continuing the journey on how to control things with node.js on the Raspberry Pi I set up 2 stepper motors and controlled them in real time with Hydna. You can can read futher on how to install Hydna on Raspberry Pi here. The to pins..... Listed under: Motor Projects



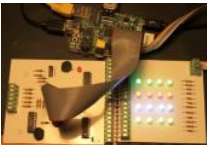
275. Interface I2C with the Raspberry Pi Note: Full source (still not finished) is available github.com/drcrane/raspberryrfid. The Raspberry Pi has a few different interfaces available to it, one is I2C (a protocol created by Philips and used in many places, it is the basis of VESA DDC!). I had the opportunity recently..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



276. Raspberry Pi GPIO driving Servo I have experimented with GPIO on the Raspberry Pi, just turning an LED on and off here. But since then Ben Croston has improved the RPi GPIO Python library to do most of the work in C and I can confirm that it is a..... Listed under: How To - DIY - Projects



277. Raspberry Pi B+ for Sound source Still I need good PC for ripping and have to buy source from internet(online). if do you have Good DAC probably reproduce good sound from Raspberry Pi B+ Music server.Raspberry Pi B+ is very small PCB actually small PC for kids in UK.but for Audiophile..... Listed under: Sound - Audio Projects



278. Some fun with 16 RGB LEDs and a Raspberry 3.14159 RGB LEDs consist of a red, a green and a blue LED conveniently encapsulated in one package. Theoretically one such should be able to produce any colour of the rainbow, but I have restricted my project - for reasons explained later - to just red,..... Listed under: LED Projects



279. Lunchbox Internet Radio Guide What I've made is a radio with 6 buttons and a 20x4 LCD screen. There is an "ON" button, and "OFF", "BACK", "PLAY", "STOP" and "NEXT". It is connected to the internet via WiFi, and it powered by a USB hub connected through a Pi-Supply..... Listed under: Radio Projects



280. Connecting SNES sockets to the Raspberry Pi: An assembly guide In a previous post, I described my idea of a universal console with the Raspberry Pi. I presented, what I called, the SNESDev-RPi, which is an SNES-controller interface for the Raspberry Pi. A core element of this interface is a SNES-adaptor PCB that I recently..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



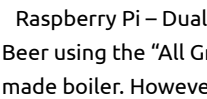
281. Raspberry Pi Serial Port and Breakout Board erial port to the Raspberry Pi and breaks out some of the Pi's pins for experimentation. The interface board was designed to be simple and used for initial experimentation. It can be built on a single-sided PCB using home-made PCB fabrication methods. KiCad source files..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



282. TNC-X for Raspberry Pi (Packet radio) AX25 TNC-Pi is a special version of TNC-X designed to interface directly with the Raspberry Pi computer. It can connect to the Pi either via the Pi's serial port, or via the I2C protocol. In the latter case, a single Pi can support multiple TNC-Pi's at..... Listed under: Radio Projects



283. Using the Raspberry Pi GPIO with Python So you got your Raspberry Pi, installed an OS and using it just like your computer. Great! Now what? You didn't buy a Raspberry Pi just to replace your computer, did you? Well, Raspberry Pi can do a lot more... much more than your computer..... Listed under: Development Board - Kits Projects



284. Raspberry Pi – Dual Element Homebrew Boiler/HLT and Fermentation Fridge Controller The purpose of this device is to allow someone who makes Homebrew Beer using the “All Grain” method, to control the temperature and timings of various parts of the beer making process when used in conjunction with a home made boiler. However, the physical device,..... Listed under: Home Automation Projects




285. NES Controller on the Raspberry Pi Part 1: The Hardware & Driver Some time back, I joked that the Raspberry Pi's GPIO port really stood for Game Port IO... So to make that joke come true, I present a way of interfacing the NES Joysticks to the Raspberry Pi. First you..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




286. Banana Pi BPiDuino UNO Board Module, compatible with for Arduino UNO, available for Raspberry Pi Quick Details Package: plastic bag sealed; carton box packed; Model Number: BPI UNO Type: Drive IC Brand Name: BPI Place of Origin: Guangdong, China (Mainland) Dissipation Power: 3W Operating Temperature: -10 ~ 65°C Supply Voltage: DC 5V Application: Computer Specifications Banana Pi BPiDuino UNO Board..... Listed under: Development Board - Kits Projects

287. Expansion Shield for RaspberryPi compatible with Arduino Let's expand RaspberryPi functionalities with a shield that is compatible with the Arduino pinout and with an onboard analog to digital converter with 16-bit resolution. Further expansions that we will present in the future will allow you to add a DAC, a number of additional..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




288.  ICStation 16 Music BOX DIY Kit Sound Module 1.Features 16-tone box under your control, arbitrarily issued 16 kinds of interesting analog sound, both an electronic toy can also be used as a doorbell or alarm. 2.A suite of profiles: Kit Model: BOX-16 Operating voltage :4.5-5V PCB size: 48mm (length) * 42mm (wide) Control..... Listed under: How To - DIY - Projects




289.  Switching mains electricity with a Raspberry Pi and a remote control Home electronics can open up a new dimension in home automation especially when used with an Arduino or Raspberry Pi. There is however a very real danger when using mains electricity, including risk of electricution and danger of electrical fires if the components are not..... Listed under: Home Automation Projects




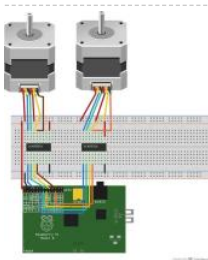
290.  Make a torch and burglar alarm in Scratch with the CamJam EduKit and ScratchGPIO First steps Like many projects, this one began with Lego. To stop the breadboard sliding all over the place, I created a Lego housing for it and the Raspberry Pi that would keep them conveniently together. My Raspberry Pi is in a PiBow case, which..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




291.  What is a serial-to-parallel shift register? A serial-to-parallel shift register (or SIPO: Serial In Parallel Out) lets you take a sequence of signals on one output, and split them up into several separate outputs. For example, if you don't have enough GPIO pins on your Raspberry Pi, Arduino, or other computer/microcontroller,..... Listed under: [How To - DIY - Projects](#)




2.  Raspberry Pi Motor Controller Overview An AVR, typically an ATmega168P, is controlled from the Pi via the 3.3V UART, and provides the PWM signals to the Motor Driver. Features Controlled via the UART on the Pi GPIO Header. Up to 2A bi-directional current per channel at up to 46V..... Listed under: Motor Projects




3.  Lighting an LED using a Breadboard & a Raspberry Pi Lights, Jumpers & the Resistance – Jumper wires are typically 22 gauge solid-core wires with insulation pre-stripped and readied for insertion in or out. Resistors resist the flow of electrical current, thereby controlling WHERE and HOW FAST it flows. [Thought experiment: If controlling water, using..... Listed under: LED Projects




294.  Make an alarm clock with a Raspberry Pi Breadboard If you're new to electronics and the Raspberry Pi (RPI), you might not be familiar with the breadboard. The idea of the breadboard is to allow you to connect up electrical components without needing to solder wires or any other elaborate procedure. It's basically..... Listed under: Clock - Timer Projects




295.  AngelBlocks – Maker Kit Introduction AngelBlocks is an open source smart home building block system that is suitable for a wide range of users. Homeowners with little or no technical skills will find AngelBlocks intuitive and easy to use. Makers, hackers, and developers will love AngelBlocks because they can..... Listed under: Home Automation Projects




296.  Super Mega Ultra Pi Boy 64 Thingy Build Getting Started! I had recently bought an original Gameboy DMG from Good Will for a whopping \$5.00, condition unknown. Taking a gamble, I purchased it and took it home to find that it had severe damage caused by a battery that exploded and leaked all..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




297.  Raspberry Pi gains Wolfson HD audio card Newark Element14 and Wolfson have launched an HD-ready Wolfson Audio Card for the Raspberry Pi with 192kHz sampling, MEMS mics, and I/O including S/PDIF. The Wolfson Audio Card extends and enhances the Linux-ready Raspberry Pi's audio features beyond its native HDMI output with onboard HD..... Listed under: Sound - Audio Projects




298.  ULN2803 8-channel RC Servo Port for Raspberry Pi Bring in some muscle to your output pins with 8 mighty Darlington's! This driver chip contains 8 drivers that can sink 500mA from a selectable 5V or DC input voltage supply and has kickback diodes included inside for driving coils. This will let your little..... Listed under: Motor Projects




299.  Monitoring Room Temperatures with Moteino's and Raspberry Pi Introduction Following on from using a Raspberry Pi to capture the electricity consumption of my home, I have over the last 2 years installed Solar Thermal Hot Water panels and very recently Solar PV. This meant that I had an opportunity to create something I..... Listed under: Temperature Measurement Projects



300.  Send Raspberry Pi Data to COSM The combination of connecting a Raspberry Pi to COSM makes creating a internet of things much easier than it has been in the past. The Pi with it's easy access to ethernet / WiFi and COSM's drop dead simple usability will graph all sensor data..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



301.  Fish Feed Time – Wireless Socket Control with the Raspberry Pi Overview Being a bit of an unnecessary geek, I've decided to pimp out my fishtank with a Feeding Time button! "What's one of those?" I hear you ask! Well... As it's a Marine Reef tank, it's a bit fiddly to feed some of the corals..... Listed under: Wireless projects



302. Motor Protection against Single Phasing and Overheating The rise in temperature level of a motor during its operation beyond a permissible limit is known as overheating. The causes of motor overheating are motor overloading, distortion in the supply voltage, impaired cooling capability, unbalanced supply voltages



etc. Because of overheating, we can face..... Listed under: Motor Projects

303.



Quick2Wire Analogue Board – Connecting to Raspberry Pi This is a short report on how to connect Quick2Wire’s analogue board directly to a Raspberry Pi. The key is the pinout for for the six-pin boxed headers on the Q2W board. I ignored the 5V and Int lines, running lines only for 3.3V, GND,..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

304.



Piezo Ring Tones with Raspberry Pi The ringtone text transfer language (RTTTL) is a way to represent music data for play on older mobile phones. The format was created by Nokia for thier phones, but it also works with GPIO pins and a piezo buzzer. This project shows how to use..... Listed under: Sound - Audio Projects

305.



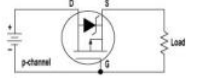
Hooked on Arduino & Raspberry Pi Infrared Fan Speed Control This project demonstrates using an infrared light beam to measure the speed of a fan, and PWM to adjust the speed to a preset value. I used a small 12 Vdc fan from a PC CPU heat sink. It will run..... Listed under: Wireless projects

306.



Raspberry Pi Launches New Model B+ The Raspberry Pi Foundation today announced the final revision of the original Raspberry Pi development board. The Raspberry Pi development board since its introduction has actually sold over 3 million units globally, indicating the undoubtable success of the hardware platform. One of the major reasons..... Listed under: Development Board - Kits Projects

307.



Raspberry Pi B+ Power Protection Circuit The circuit functionality is mostly obvious. There is polyswitch F1, a self-resetting fuse which protects the RPI from overcurrent condition. There is the Transient Voltage Suppressor (TVS) diode D5 which protects the RPI against static discharge and possibly overvoltage condition. However, the function of mosfet..... Listed under: Other Projects

308.



DIY диммер: guidebook to components n the recent past we shar the complete set of gerber-files with our expensive readers. That all interested persons ha possibility to order to themselves printed-circuit boards. As it are inexpensive, as it were ma by us. Today we taken the following step. We published..... Listed under: How To - DIY - Projects

309.



Solder Pen, PCB Circuit, Python Programming Solder Pen I had some color Sharpies, which never worked very well, even when I first got them. I just tried them, and all but one, would not even write. I threw them in the trash. Later, I got them out of the trash because..... Listed under: Development Board - Kits Projects

310.



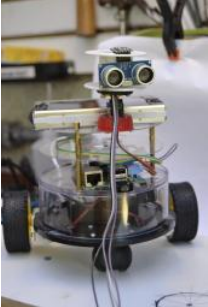
IO Pi Introduction: The I2C address bits are selectable using the on-board jumpers. The MCP23017 supports up to 8 different I2C addresses so with two MCP23017 devices on each IO Pi you can stack up to 4 IO Pi boards on a single Raspberry Pi giving a..... Listed under: Development Board - Kits Projects

311.



Controlling a Servo Motor Assembly The servo motors have three pins, two for power: red(+) and black (-), and one for control. Because the servo motor draws too much energy, we need to use the batteries to power the servo (the Raspberry Pi doesn't have so much power. if..... Listed under: Motor Projects

312.



Raspberry Pi CD Box Robot English: This project is a work that is taking on many weekends. My son, Gabriel, watched the movie "Wall-E" and proposed that we built a similar robot. I see this model in Dx.com and get inspired by it. We use some scraps we find here..... Listed under: Robotics - Automation Projects

313.



Raspberry PI Safe Breakout I have always wanted to access the Rapsberry PI Gpio pins in a safer manner. Those are not 5V tolerant, and need a level shifter. I came across this really nice level translator chip from TXB0108 from Texas Instruments. It is a bidirectional 3.3 to..... Listed under: Security - Safety Projects

314.



Physical computing with Raspberry Pi Difficulty: beginner This tutorial will help you to receive input to your Pi from physical switches and buttons and to debounce if necessary. It will show you how to automatically run a program when a button is pressed (a GO button for a robot, for..... Listed under: Calculator Projects

315.



Easy Temperature and Humidity on Raspberry Pi Step 1: Connection EzTemp uses the serial port on your Raspberry Pi to communicate. Identify the serial pins on your Raspberry Pi. Then connect: RPi GND to EzTemp GND. RPi Tx to EzTemp Rx. RPi Rx to EzTemp Tx. RPi 3.3V to EzTemp 3.3V. Notice..... Listed under: Temperature Measurement Projects

316.



Arduino-Based Blue Box (Phone Phreaking) Step 1: Arduino IDE and Library Setup The advent of the Arduino put power into the hands of the same type of folks who originally designed the first blue boxes. We can write our own micro-controller code, use easily obtainable Radio Shack parts to design..... Listed under: Phone Projects

- f

g+

t

in

p

r

s

w

m

y


+

s

t


g

317.




Tweeting coffee machine using Raspberry Pi Observing that LED will give us knowledge if it is being used or not. I am using a Light Dependent Resistor (LDR) to detect the presence of light. The LDRs change their resistance as per the intensity of light falling upon them. Our goal is..... Listed under: Home Automation Projects

318.



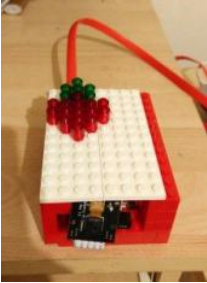
ramanPi – The 3D Printable Raspberry Pi Raman Spectrometer ramanPi is looking for developers!!! ****If you have Python, PyQt4, matplotlib, signal processing, optics, raman spectroscopy or FPGA experience contact dev @ ramapi .org! Or go to dev . ramanPi . org and sign up to the developer forums! What I want to do: Build..... Listed under: Metering - Instrument Projects

319.




Raspberry Pirate Radio This simple hack turns your Raspberry Pi into a powerful FM transmitter! It has enough range to cover your home, DIY drive-in movie, a high school ball game, or even a bike parade (depending on the stragglers). PiFM software not only boldly enhances the capability of..... Listed under: Radio Projects

320.



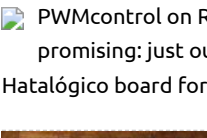
[Project] Raspberry Pi Powered WiFi Streaming Camera Scope: To build a Raspberry Pi powered video camera, capable of streaming over a home wireless network. BOM: – Raspberry Pi (With Raspbian OS) – RPi compatible Wifi Dongle (List here) – Camera Module (Here) – Wifi enabled PC with VLC media player Instructions: Connect..... Listed under: Video - Camera - Imaging Projects

321.




Browse Anonymously with a DIY Raspberry Pi VPN/TOR Router Surf the Internet securely with your very own portable WiFi VPN/TOR router. You can configure a Raspberry Pi with Linux and some extra software to connect to a VPN server of your choice. The VPN connection encrypts your internet traffic so that hackers and spies..... Listed under: How To - DIY - Projects

322.




PWMcontrol on Raspberry Pi: installation and first test on Hatalógico board Vendor's Description: Finally I got my first test with Hatalógico and it looks promising: just out of the box PWM working. That means servos working right in the same platform as a powerful linux board! If you don't know the Hatalógico board for Raspberry Pi,..... Listed under: PWM Projects

323.



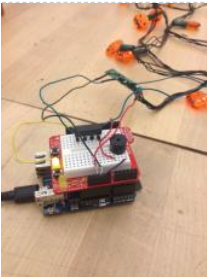
"beet box" raspberry pi style Step 1: Thing you need the thing's you will need, Any vegetable that is able to fit inside a hole raspberry pi power supply audio amplifier capacitive sensing board wooden enclosure (like on the image above) Step 2: Image if components these are all the..... Listed under: Home Automation Projects

324.




Getting Started with Phidgets on the Raspberry Pi This instructable is an adaptation of one of our blog posts. Before beginning, you'll want to have a few things in place. You'll need: A functioning Raspberry Pi (obviously). A separately powered USB hub, since the Raspberry Pi isn't capable of delivering enough power on..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

325.




Controlling your Christmas lights with Text Messages Step 1: Components needed An Arduino Yun (Wifi Enabled!) - You could use another Arduino with a Wifi Shield though. A Protoshield with (or without) a tiny breadboard a regular breadboard will work as well, but will be less compact. If you want to solder..... Listed under: LED Projects, Wireless projects

326.




How to drive Dynamixel AX-12A servos (with a RaspberryPi) I decided to use some Dynamixel AX-12A motors for a project, and ended up having to code a library for them, so I figured I would share what I learned. Despite being a bit more expensive, this motor has a couple of advantages over the..... Listed under: How To - DIY - Projects

327.




WiFi Enabled Arduino – Interfacing with web APIs Are you familiar with Arduino, but are looking for a little more connectivity in your projects? This Instructable goes over a new (and cheap) wireless module that has hit the embedded world hard - the ESP8266. This little module is a perfect way to hook..... Listed under: Wireless projects

328.




Knit an LED Cuff This instructable uses circuit knitting and is written specifically for knitters. We'll cover how to create a circuit that uses blue and yellow LEDs, with instructions for hand and machine knitting. Electronic machine users can download the pattern file below to CNC print the knitting..... Listed under: LED Projects

329.



Raspberry Pi remote webcam This will allow you to create a remote webcam for your Raspberry Pi so that you can view it from any computer on the local network. For this instructable you will need: • Raspberry Pi with an Wheezy Raspbian installed and internet connection established •..... Listed under: Video - Camera - Imaging Projects

330.



Adding an external power supply to a cheap USB hub One day I found myself in the need for a USB hub with an eternal power supply but when I went to a shop I verified they can be quite more expensive than the ones that don't have external power supply. No big deal, "I'll..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

- LOGI Pi Quick Start Guide Overview This is an out of the box quick start guide that will give you the essentials of preparing and running th

on your LOGI-Pi and Raspberry Pi. The guide will guide you through the following items to get you up and running..... Listed under:
Raspberry Programmer Projects

Controlling a RGB LED attached to a Raspberry Pi through Android Project Description I need to be able to control turning on and off an
RGB LED utilizing the Raspberry Pi. I also should be able to turn it on and off using an Android device. Design The design is made up to
utilize three different..... Listed under: LED Projects

Raspberry Pi 2 Kraft Case I received my long-expected Raspberry Pi a few days ago. I just couldn't wait to try out my crazy ideas on it. But
wait, what if Pi can go portable. What if Pi can still rock on when a power source is unavailable. Problems to..... Listed under: LCD
Projects

MBusConnector Introduction IoTsyS is an integration middleware for the Internet of Things. It provides a communication stack for
embedded devices based on IPv6, Web services and oBIX to provide interoperable interfaces for smart objects. The IoTsyS middleware
aims providing a gateway concept for existing sensor and..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Tripod Camera Mount for Raspberry Pi This may seem like it already exists, but I couldn't find it anywhere. So, I made it myself: a camera
mount for the Raspberry Pi that you can easily mount onto any standard tripod. Step 1: Create the 3D Model I looked around for an.....
Listed under: Video - Camera - Imaging Projects

e-Health Sensor Platform V2.0 for Arduino and Raspberry Pi [Biometric / Medical Applications] The e-Health Sensor Shield V2.0 allows
Arduino and Raspberry Pi users to perform biometric and medical applications where body monitoring is needed by using 10 different
sensors: pulse, oxygen in blood (SPO2), airflow (breathing), body temperature, electrocardiogram (ECG), glucometer, galvanic skin
response (GSR - sweating),..... Listed under: Medical - Health based Projects

How to Configure Raspberry Pi The Raspberry pi is a low cost single board minicomputer which can be used for learning the computer
basics, programming and easy to interface with the embedded systems. The Raspberry pi is a mini computer which is designed in a single
board with all the..... Listed under: How To - DIY - Projects

How to drive a Character LCD display using the Raspberry Pi In this tutorial we'll take you through how to connect a 16x2 LCD display up
to your Raspberry Pi using GPIO pins. Being able to display a message on the LCD is not only very cool but can be pretty useful too, for
example in..... Listed under: LCD Projects

Raspberry Pi and Arduino Serial Communication Setup and Connections Connect the output of the Arduino TX pin to a voltage divider.
The output of the voltage divider is then connected to the RPi GPIO pin # 10 (GPIO 15). The voltage divider drops Arduino TX voltage
from 5V to 3.3V. In..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Named Pipe Example Using Raspberry Pi The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on
Chip). This SoC has the ARM11 processor which runs on 700 MHz at its core. The operating systems like Archlinux ARM, OpenELEC,
Pidora, Raspbmc, RISC OS and..... Listed under: Blog, Other Projects

JTAGulating the Raspberry Pi 2 This instructable will cover how to get a root recovery console on a Raspberry Pi 2 with a NOOBS SD card
using a Jtagulator, PuTTY, and three wires. It is thanks to the Instructables Raspberry Pi Build Night sponsored by Instructables and the
Rabbit Hole..... Listed under: Raspberry Programmer Projects

Voice– and SMS–Enabled Light Sensor Using Raspberry Pi and Twilio Overview The Hacker School space for our batch had two restrooms: one attached to
the main work area, and one downstairs. We thought it would nice to know if the bathroom is occupied before taking the time to walk down. Our project
makes it possible..... Listed under: Sensor - Transducer - Detector Projects

Using a keypad with Raspberry Pi I got two keypads from Jameco.com that I wanted to use with my Raspberry Pi. Turns out it's quite
easy, as long as you know what the pinout structure is for the keypad. This instructable will take you through the steps I had to go.....
Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Using a shift register with Raspberry Pi This instructable will attempt to explain, in simple terms, what a shift register is, and how you can
use it with the Raspberry Pi to expand the GPIO port by running eight outputs with just four GPIO ports. To start with, what is a shift.....
Listed under: LED Projects

Raspberry Pi & Soundmodem – It works!! (Part 01) Many months ago I was working on getting a Raspberry Pi working for APRS work. I was experiencing a
ton of issues with getting soundmodem to decode aprs signals that were known to be good (ie. ideal recording played back as an MP3..... Listed under:
Interfacing(USB - RS232 - I2c -ISP) Projects

Raspberry Pi Fridge Minder: receive an email when the door is opened The kit comes with project cards and a link to download the
accompanying Python scripts. And projects already include a light meter and email notifier, so I decided to combine these two projects
into one and make something that will send an email whenever the..... Listed under: Home Automation Projects



RasTherm – A Smart Thermostat built on the Raspberry Pi This page presents my implementation of a smart thermostat using the Raspber controller, with an added Pi Plate expansion board. This thermostat is controlled using a web page interface, so it can be controlled via any personal computer, smart phone or..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



1. The Pi Plane Project summary for the curious Commercial aircraft in Australia (and a lot of the world) periodically transmit their location and the altitude. Aircraft with ADS-B determine their position using GPS; and broadcast that position along with identity string, altitude (plus other useful information such as speed). Using some..... Listed under: Video - Camera - Imaging Projects



Raspberry Pi 3x3 LED Cube About a month ago my dad bought a soldering iron and we both learnt to solder by making an LED cube controlled by an Arduino. It was a cool project to show my friends and really easy to build so I have decided to make..... Listed under: LED Projects



Raspberry Pi & Arduino: a laser pointer communication and a LDR voltage sigmoid Plugging the laser module on Arduino Isn't easy to plug a module when you have no datasheet or some wiring schemes, the chances are that you'll probably burn it if you provide a current greater than the supported. The module I have was bought on..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



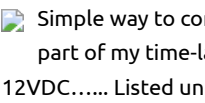
Raspberry Pi Controls LEGO Power Functions Train Project Description LEGO Power Functions RC infrared control is specified in LEGO Power Functions RC v120.pdf But I wanted to know what my controller (8879 LEGO Power Functions IR Speed Remote Control) was actually sending. So I hooked it up to a scope. Right STOP..... Listed under: Wireless projects



Raspberry Pi AirPlay Tube Radio Vintage tube radios are nostalgic. The crackle of the game on the after dark high powered AM station from 500 miles away. The smell of the tubes and the warmth of the tones. They remind us of simpler times. Times when families sat together -..... Listed under: Radio Projects



Raspberry Pi Mobile Media Center with Smartphone Control Our main ideas of a perfect mobile media center are: - watch videos or listen to your music anywhere (only power supply and a monitor/projector for videos required) - easy control with your smartphone - simple setup for non-programmers - great sound and video quality..... Listed under: Phone Projects



Simple way to control 12V DC Motor using Raspberry Pi's GPIO port and NPN transistor I needed to control a DC motor from my Raspberry Pi's GPIO port as part of my time-lapse dolly project. I had to be able to turn the motor on for approximately 150ms which would in turn move the dolly along by 3mm. Parts 12VDC..... Listed under: Motor Projects



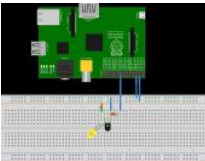
Best Raspberry Pi home automation tutorial: Web based The Internet Of Things is the most trending technology today that stands alongside wearables and robotics. It is a very simple concept where devices in our home or wherever they are , have the capability to communicate with each other via the internet.Usually sensors are..... Listed under: Home Automation Projects



Digital Music Stand: Raspberry Pi + Touchscreen IMSLP is one of the greatest things to happen in the classical music world in recent memory. For those who don't know, IMSLP.org is an online library of any and all sheet music that is no longer under copyright protection. You can find pretty much..... Listed under: Sound - Audio Projects



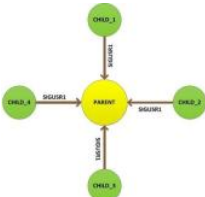
Hello World Program using Qt in Raspberry Pi Installing the QT in Raspberry pi is very easy using the command line, but it will take 30 minutes to 4 hours to finish the installation depending upon the speed of the internet connection. Downloading and installing the fourth version, QT4 using commands are already..... Listed under: Raspberry Programmer Projects



Debug GPIO with LED During the daily device driver development routine, we often need to understand the behavior of the GPIO pins to understand if there is I2C traffic or if our driver is handling the coming interrupts and so on. Sometimes is not enough to mount the debugfs..... Listed under: LED Projects



Raspberry Pi RetroPie Gaming Station (Optimized for N64) Do you want to relive your N64 childhood days or like older games and want to play Zork? How are we going to do this you say? Well, this tutorial is for you! We are going to build a RetroPie Gaming station using a Raspberry..... Listed under: Game - Entertainment Projects



How to Read Inputs Using Signal in Raspberry Pi The Raspberry pi is a mini computer which is designed in a single board with all the essential components required for running an operating system. The Raspberypi board is powerful enough to run large operating systems like Linux, Mac and Windows. Linux operating systems especially..... Listed under: How To - DIY - Projects



Python Web Server for your Raspberry Pi You know some basic Python or you want to learn some and you want to make a website, a web server, a web crawler, etc. - But where do you start? Services like Heliohost or Vlexofree are great for free Python website hosting, but they..... Listed under: Raspberry Programmer Projects

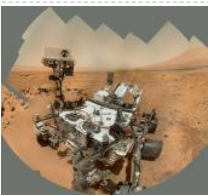
378. How to Use Timer in Raspberry Pi The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the powerful ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers,..... Listed under: Clock - Timer Projects



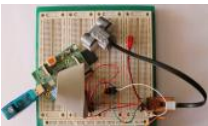
379. Connect Raspberry Pi to Projector or TV When we have a meeting in a meeting room, we need to connect our laptop to a projector to show our desktop. But sometimes, several persons need to show their desktop, they need to change their laptop. This is complex and waste some time. Currently,..... Listed under: Wireless projects



380. Raspberry Pi Sensor and Actuator Control Typically as a programmer you will work with data on disk, and if you are lucky you will draw pictures on the screen. This is in contrast to physical computing which allows you as a programmer to work with data sensed in from the real..... Listed under: Sensor - Transducer - Detector Projects



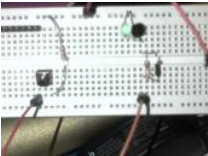
381. How to connect a Lego Mindstorms NXT Ultrasonic Sensor to the Raspberry Pi Abstract Directly connect a Lego Mindstorms NXT Ultrasonic Sensor to a Raspberry Pi. A TCA9517 I2C bus buffer and an additional GPIO pin for SCL is necessary. A short C++ program to read the measured distance is provided. Introduction Raspberry Pi (Pi), despite some shortcomings,..... Listed under: Sensor - Transducer - Detector Projects



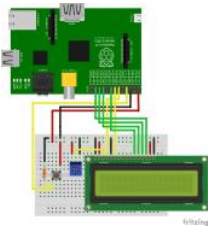
382. Bartop Mini Retro Arcade – Raspberry Pi and Customised Icade "Approaching" middle age, wanting an excuse to play with a Raspberry Pi, and having great memories of 80s games (mainly spectrum, sega master system, neo geo, and Atari ST) i decided to build a mini arcade machine / retro emulator. Hopefully some of the things..... Listed under: Game - Entertainment Projects



383. Servo Motor with Raspberry Pi and PWM After my dad and I got an LED to dim using Pulse Width Modulation on my Raspberry Pi, we decided to try to spin a servo motor. We had a bunch of old servo motors on my robotics team at school so I used one..... Listed under: Motor Projects



384. Social Alarm Clock Authors: Alexandru Radovici, Ioana Culic, Maria Tudor - Wylodrin Bogdan Doinea - Cisco Networking Academy This document describes how to build a Social Alarm Clock by a team of five people: a manager, a product designer, two engineers and a programmer. Introduction We are going..... Listed under: Clock - Timer Projects



385. Cubieboard/Raspberry Pi case from old external drive This is the case I made for my Cubieboard/Raspberry Pi which, back in the day, was an external cd writer drive. This case includes: Power supply Silent HDD mount Fan with speed control The first step (for which I, unfortunately, don't have any pictures) is..... Listed under: Other Projects



386. Running an Nginx, PHP, and MySQL Webserver on the Raspberry Pi For my project, I am going to be hosting a website on the Raspberry Pi. I want to be able to set the alarm on the alarm clock through the website and have the C++ program interact with the MySQL database to get alarm times..... Listed under: Clock - Timer Projects

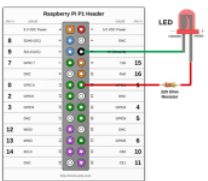
387. Raspberry Pi Scoreboard This is a simple project that tries to use the Raspberry Pi as a Scoreboard.. on a character LCD What we will do in this project is write a python script that will use http lib and rplcd to connect to the internet and display the..... Listed under: LCD Projects



388. Controlling Raspberry Pi with Pi Buddy This is a short tutorial to exhibit the abilities of the Pi Buddy app Step 1: Setting up the Pi In order for the Pi to receive command from the device you must have the necessary files and dependancies installed. Pi Buddy runs off of..... Listed under: Raspberry Programmer Projects





389. Simple GPIO Control using Pi4J The following example demonstrates the simple control of a GPIO pin on the Raspberry Pi. Source Code The source code for this example is included in the github repository: <https://github.com/Pi4J/pi4j/tree/master/pi4j-example/src/main/java/ControlGpioExample.java> /* * #%L * ***** ORGANIZATION : Pi4J * PROJECT : Pi4J :: Java..... Listed under: LED Projects

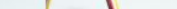



390. Connect Remotely to the Raspberry Pi Picture this: We are excited about hosting a Raspberry Pi build night at our maker space in San Francisco. We have keyboards ready, mice, power adapters, SD cards loaded with operating systems, refreshments, and a room full of creative technical folk. But....uh-oh....we are 1 monitor..... Listed under: Raspberry Programmer Projects





391.  PSoC 4 Pioneer Kit Community Project#051 – Music Player Today we are expanding on the SD card example that we posted last week. In that earlier example we showed you the new customer SD component used to interface with the SD card. In this example we want to expand on that example to play..... Listed under: Sound - Audio Projects


392.  DIY Raspberry Pi Connection Board Featured The PCB I did the project in eagle cad placing one Raspberry Pi 2x13 femal connector (step 2.54mm - 0,01") and then placing 4 pin header strip 1x13 with enlarged pads. I need these pads only for soldering the wires to the pcb. After this..... Listed under: Development Board - Kits Projects


393.  Adding a Joystick to the Raspberry Pi Joysticks are really fun to use. They are also much more intuitive than other input devices. Adding a joystick to your Raspberry Pi opens a lot of new doors. You can now use the Raspberry Pi and the joystick to control a robot, a camera, Listed under: Development Board - Kits Projects


394.  Internet Radio with Raspberry Pi Since long past times, when Guglielmo Marconi has amazed the entire World broadcasting his radio signals from the Elettra ship, a subject held dear by electronic engineers has been radio transmission. After these years, the scenario has changed a lot, firstly with the appering of..... Listed under: Radio Projects


395.  Raspberry Pi Picture Frame the picture frame has come a long way since the last post. I now have the wooden frame for it built and almost done but we will come back to that in a minute. Since the last update I have completely remade some of the..... Listed under: Video - Camera - Imaging Projects


6.  Raspberry Pi Sous Vide WIP This project is to build a Raspberry Pi sous vide machine that can be controlled via the web or via a walk up GUI interface. The main goal is to get something fully functional for cheaper than most commercially available solutions, which start at about..... Listed under: Internet - Ethernet - LAN Projects


7.  I2C + Raspberry Pi + Arduino Uno + RPi Camera Board UPDATE: I've revised the circuit design. I no longer recommend connecting the Arduino Uno to the Raspberry Pi's I2C pins together without the use of a logic level shifter. The revised design uses one from www.adafruit.com. As part of a larger project I'm doing right..... Listed under: Video - Camera - Imaging Projects


398.  Raspberry Pi Arcade Game High Score Display for Multiple Locations This Instructable will show you how to use a Raspberry Pi board with an existing computer monitor to create an arcade game high score display for your home or office. You and your family or your co-workers can keep an eye on the latest high..... Listed under: Game - Entertainment Projects

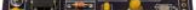
399.  Using both ownCloud and Adafruit's WebIDE on the Raspberry Pi Long story short, I installed both of the aforementioned programs on my Raspberry Pi but, in doing so, I was able to navigate to only ownCloud. After doing some digging around the internets, I found the solution. As smithg400 on Raspberry Pi's forums pointed-out, both WebIDE..... Listed under: Internet - Ethernet - LAN Projects


400.  HC-SR04 Ultrasonic Range Sensor on the Raspberry Pi In previous tutorials we've outlined temperature sensing, PIR motion controllers and buttons and switches, all of which can plug directly into the Raspberry Pi's GPIO ports. The HC-SR04 ultrasonic range finder is very simple to use, however the signal it outputs needs to be converted..... Listed under: Sensor - Transducer - Detector Projects

401.  Build Your First IOT with a Raspberry Pi, DHT11 sensor, and Thingspeak. IOT or Internet of Things is a hot topic! According to the experts everything will be connected to the internet and all our devices and their data will soon be just an IP address away from us. So where do you start if you want..... Listed under: Sensor - Transducer - Detector Projects

402.  Internet controlled SCALEXTRIC Race the Raspberry Pi! We wanted to see if we could control the speed of a car via the internet. When we looked for tips on where to start we found that quite a few people had had a crack at it, but the documentation was all..... Listed under: Internet - Ethernet - LAN Projects

403.  Raspberry Pi Bluetooth+Airplay Audio Receiver combo Let's make a bluetooth audio receiver allowing you hook up your R-Pi to your stereo and use your phone as the sound source. To be honest, this is not a unique project. Plenty of people have attempted to get a bluetooth receiver working, some (less)..... Listed under: Wireless projects

404.  Cloud-based Electronic-Design Tools Gain Traction Suppose you want to create an electronic circuit and a corresponding printed-circuit board for it. What software will you use? Unless you already have a favorite, it might be hard to decide: There's a dizzying array of options, ranging from free software typically targeted at..... Listed under: Other Projects

405.  Raspberry Pi I2c Interfacing and Programming I2C is a multi-device bus used to connect low-speed peripherals to computers and embedded systems. The Raspberry Pi supports this interface on its GPIO header and it is a great way to connect sensors and devices. Once configured you can connect more than one device without..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

- f

g+

t

in

p

r

j

w
406.



Raspberry Pi Prototyping Kit This is a basic prototyping kit for the Raspberry Pi. It will allow you to quickly and easily prototype your hardware the needing to buy new kit each time. It is also compact, portable, and a lot more durable than most prototyping kits..... Listed under: Development Board - Kits Projects
407.



Single 3.7V Li-ion cell power back-up for Raspberry Pi I have a small application continuously running on Raspberry Pi board. Sometimes, in my country, we have (short time) mains power failures. In such situation, my Raspberry board, powered by the wall adapter, turns off immediatly, without any attention for open files, transmissions in act,..... Listed under: Other Projects
408.



PiGI – Raspberry Pi Geiger-Müller Interface Geiger counters are basically just devices which enable us to measure ionizing radiation. In the context of human activity we have to deal with natural radiation sources and artificial ones. Some of the materials emitting ionizing radiation are used to create electricity, others were used..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
409.



An Illustrated Introduction to the Raspberry Pi The Raspberry Pi was originally designed to be a tool for hands-on learning about how computers work. It is also a tool that can be used to make all sorts of creative programming projects. The point of the Pi is to be accessible, and I..... Listed under: Raspberry Programmer Projects
410.



Raspberry Pi / Lego Ball Machine In previous posts I detailed how to: Build a Lego marble pump Use C# and Pulse Width Modulation to control motors with the Raspberry Pi Use C# and OpenCV with the Raspberry Pi Camera Module Each one of those projects are pretty interesting in their..... Listed under: Game - Entertainment Projects
411.



LapPi – A Raspberry Pi Netbook The Raspberry Pi is a remarkable machine. Lightweight, powerful, and until now it was completely tethered to a wall socket. The LapPi is built to free the Pi! It's made from a mixture of spare parts, unallocated electronics, and scrapped components & cables I have..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
412.



Monitor your home temperature using your Raspberry Pi At the end of the project you will have a WWW dashboard that looks similar to this: Multiple Sensors Display a temperature history graph per sensor What you need: Raspberry Pi Model A or B The following parts are available through the PrivateEyePi Store:..... Listed under: Sensor - Transducer - Detector Projects
413.



Build a Raspberry Pi-Based Cable Shutter Release for Sony Cameras Replacing a simple and inexpensive remote cable release for your camera with Raspberry Pi may seem like a classic case of over-engineering, but using the tiny machine to control the camera opens up a whole new world of photographic opportunities. Using a simple Python script, you..... Listed under: Video - Camera - Imaging Projects
414.



Controlling DC Motors Using Python With a Raspberry Pi Objective What we plan to do is safely connect one or two motors to the Raspberry Pi with as few components as possible. Once we have the electronics put together on the breadboard, I will show you how to control them easily using Python to..... Listed under: Motor Projects
415.



The “Raspberry Pi” Pie For the "Pi/E Day Contest" on instructables, I wanted to make a pie which I have not made before. I kept thinking what to do and as I saw a few Raspberry Pi Science projects on Instructable, I got an idea of making a Raspberry..... Listed under: Other Projects
416.



MBeat USB-M7HUB 7 port hub The Raspberry Pi is often not able to supply enough power to USB peripherals through it’s own power supply and a USB hub is recommended to ensure power drops don’t cause problems in the processor. This means you will need two plug packs. One to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
417.




Raspicase: Caja para Raspberry Pi (English version here) Bueno, despues de investigar para que podía usar mi Raspberry Pi comprada en raspipc.es , me di cuenta que gracias al sistema operativo Xbian podía conseguir un media center con acceso a los ficheros de mi NAS, a los de un disco..... Listed under: Other Projects
418.



Use Itead SDK to Drive a 1602 LED Itead Studio made an SDK for linux system of Allwinner A10/20 chip before, which provided users with the underlying hardware driver interface for quick development of upper software, thus those who are not familiar with hardware can easily make a variety of creative applications combined..... Listed under: LED Projects
419.

Department of Redundancy Department: Raspberry Pi Raspberry Pie Pi, is, of course, a useful tool in math - but a Raspberry Pi is a useful tool in all kinds of ways. We are delighted to own a Raspberry Pi - which is sort of like the Naked Mole Rat of computers: it's a credit-card..... Listed under: Other Projects



420.  Using 20×4 RGB LCD over i2c with a Raspberry Pi Recently, I’ve been dabbling with electronics to fill the void of spare time I’ve found myself with while I’m between jobs. I’m currently working on a half-baked idea to create some sort of digital assistant who will take instructions in some form, and then read..... Listed under: LCD Projects



421. Adding Webmin to manage a Raspberry Pi My preferred method to work with a Raspberry Pi is via SSH. When one installs Raspian from the Raspberry Pi website, SSH is active and available on port 22 (default SSH port number). All one needs is an ethernet connection, a DHCP server and a..... Listed under: Internet - Ethernet - LAN Projects



422. The Minnow Board – A New Small Form Factor We attended an "Internet of Things" meeting here this week, and Scott Garman introduced us to a new small form factor, the MinnowBoard. The MinnowBoard is very high performance single board computer (SBC) using a 1Ghz Intel Atom processor, but unlike most SBC's it has..... Listed under: Development Board - Kits Projects



423. Arduino watches for a kitchen catastrophe I guess I should start by admitting that this article was inspired by my own stupidity. When I was a kid, I left a frying pan on a lit stove. I was probably confused by the tactile controls on the vitroceramic hob. Unfortunately, I unwittingly..... Listed under: Home Automation Projects



424. Aeroponics with Raspberry Pi and humidity sensor This instructable will teach you how to install an Aeroponics system that is controlled by Raspberry Pi. Aeroponics is plant-cultivation technique that has the roots hanging and is suspended in the air. Nutrient solution is sent to them in form of a fine mist. Aeroponics..... Listed under: Sensor - Transducer - Detector Projects



425. Raspberry Pi Meet Arduino Shield SKU:DFR0311 Introduction What happens when a Pi meets an Arduino? A simple example would be, when building a mobile robot, we use the Raspberry Pi to extend its vision and get a nice tiny monitor. Meanwhile, Arduino handle nicely with the motor driving part and delivers..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



426. Remaking MSR206 RS232 magnetic card reader to USB As you might have noticed, sometimes I work as freelancer in electronics =) It applies not only to fixing PC electronics and mobile phones, but also to repairing, modifying and designing my own solutions in consumer electronics. One of the projects I worked on yesterday..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



427. Simple Raspberry Pi Shutdown Button Since the Raspberry Pi foundation decided to leave out an off button to safely shutdown the Raspberry pi, I'll show you a simple method I came up with to build one, so there are no more excuses for yanking the power cable out of your..... Listed under: Development Board - Kits Projects



428. Intermission Sound Control with Raspberry Pi A few times a year I volunteer to an arts organization and serve as their “house sound and light guy.” I usually run sound and do the lights for the traveling acts if they don’t have a tech with them. The auditorium is in a..... Listed under: Sound - Audio Projects



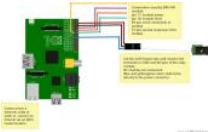
429. Analog Sensors Reading with Raspberry Pi and Zabbix Supervisor Analog Sensors Reading with Raspberry Pi as Interface The Raspberry Pi has no built in analogue inputs which means it is a bit of a pain to use many of the available sensors. We need a A/D interface easy to configure in the RPi and..... Listed under: Sensor - Transducer - Detector Projects



430. Raspberry Pi Android App communication Hello everyone Because app's are being used almost everywhere, I decided to make my own tutorial on how to make an app and connect to a MySQL database hosted on a raspberry pi. For exchanging the data between the server and the client, I'm going..... Listed under: Raspberry Android



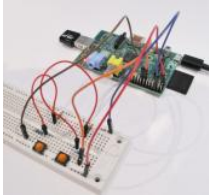
431. Talking to the Formula AllCode robot using the Raspberry Pi The Formula AllCode robotics course is great for makers to test their skills and capabilities or for introducing learners to programming and robotics in a fun and motivating way. The robot is compatible with hardware from Raspberry Pi to Android to iPhone, Windows PC’s, MAC..... Listed under: Car Projects

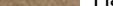


432. RasPI-Surv: a Raspberry-based scalable SMS remote controlled video surveillance system RasPI-Surv, based on: A system controller based on Raspberry PI A practical (and modifications-friendly) command/telemetry interface via SMS messages, using the very well known SIM-900 module from ITEAD. A set of wireless video cameras with good motion detection feature A internet router/modem with wireless access..... Listed under: Wireless projects


433. Arm/Disarm Using a Switch Project Description In this project I will show you how to arm/disarm an alarm zone using a tactile switch connected to your Raspberry Pi. Software Edit the globals.py file by typing the following command at the command prompt: Configure the arm/disarm variables as per figure.....

Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




434.  Boot the Raspberry Pi from USB Hello world, time for me to gift some raspberry pi to the people. So here's my story, I recently graduated high school and I've been working with the school's IT guy for my senior year. When I graduated, he decided to get me the latest.....
Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




435.  Raspberry Pi – Network Spy Energy Saver The subwoofer we had in our home cinema setup died a few weeks ago, so I did my research and found a nice replacement. The only thing I didn't spot was the fact it never goes into standby if there's no signal (unlike the old.....
Listed under: Internet - Ethernet - LAN Projects




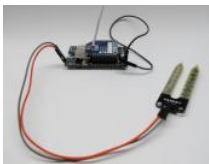
436.  Raspberry Pi Audio Player A minimalistic music player based on Raspberry Pi model B with HifiBerry DAC and ATXRaspi power controller I made this with the help (also economical) of my father. Inspired by: <http://www.hifiberry.com/forums/topic/small-media-...> and <http://www.crazy-audio.com/2014/03/a-standalone-st...> Here's my first instructable! Step 1: What I used 1. A Raspberry..... Listed under: Sound - Audio Projects




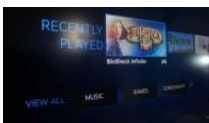
437.  A 50 year-old Teletype Powered by a Raspberry Pi I've been a nerd for a very long time; As a teenager in the 1970's I drove up to the Western Union office in my hometown of Buffalo, New York and asked if they had any old teletypes they'd like to get rid of; The.....
Listed under: Development Board - Kits Projects



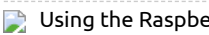
8.  Flood/Water Presence Sensor How it works This sensor has strips of metal plated probes that when in the presence of liquids change the resistance that will activate the internal switch. It can be mounted for example on a skirting board, with the the wireless sensor or Raspberry..... Listed under: Sensor - Transducer - Detector Projects

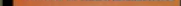


9.  Stream games to your Raspberry Pi 2 Moonlight is an open source implementation of NVIDIA's GameStream protocol. Moonlight allows you to stream your full collection of Steam games (and other applications) from your GeForce Experience compatible PC to any supported device and play them. These instructions will help you build your own..... Listed under: Game - Entertainment Projects




440. Using the Raspberry Pi's GPIO Pins to Drive an LED Scope: To use the Raspberry Pi's GPIO Pins to turn an LED on and off, and to introduce the basic GPIO functionality of the pi. BOM: – 1 raspberry pi (I'm using rev B) with Raspbian OS installed – 1 LED – 1 1kohm current..... Listed under: LED Projects




441.  Raspberry Pi Wall Display Without X-Windows This Instructable will walk through using a Raspberry Pi and a monitor or television to create a digital sign or display. A digital display like this can be used at home, at a company, or at any organization to display upcoming events, notices, calendars, photos,..... Listed under: LCD Projects




442.  Raspberry Pi Time Clock This build combines a Raspberry Pi with a rotary-encoder, an RGB LED and an OLED character display to create a time clock that logs my time on tasks directly to a Google Docs spreadsheet. Motivation Whenever I have to record time against projects, I find..... Listed under: Clock - Timer Projects




443.  Build a network-attached storage (NAS) with your Raspberry Pi and an external USB hard drive. As with all DIY projects, one of the main hassles is the enclosure to put all of the hardware in. I wanted a quick solution - didn't have the time to make something fancy. After a while I remembered that I've saved my Amazon Kindle..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




444.  Kids Build – Raspberry Pi Arcade Cabinet We wanted to create an arcade cabinet as a fun project for the kids at our (Coventry) Makerspace, as a group project that could encompass many different skills and techniques, give them a 'big build' to be proud of as a talking point in our..... Listed under: Game - Entertainment Projects




445.  Raspberry Pi and Arduino: Building Reliable Systems with WatchDog Timers Summary: In this Instructable we look at how to build more reliable computer systems using WatchDog timers. We show how to set up and use the Raspberry Pi and Arduino internal watchdog timers. We also explain why an external WatchDog Timer is a better choice..... Listed under: Clock - Timer Projects













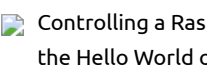


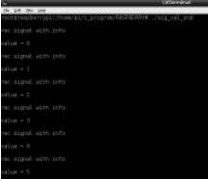
446.  Raspberry Pi I2C Analog-to-Digital Converter The original plan for the Analog-to-Digital Converter was to use the Dallas 1-Wire system and use the DS2450 1-Wire Quad A/D Converter which was advertised as being a 16 bit device but after buying two of the chips which are around £5 each I found..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



447.  Raspberry Pi Home Arcade Play all your favorite 8-bit video games with MAME and an Arduino Esplora controller. The Raspberry Pi is great for all sorts of small computing applications — 3D printing servers, in-car computing, and more. But the Pi can also be the beating heart of a..... Listed under: Home Automation Projects



448.		Home media center using raspberry pi Using Raspberry pi and a hdmi/vga display from a old desktop monitor, you can create you own home media center. This project is a very simple project and requires minimum prerequisite knowledge of programming/embedded systems design. All components used are off the shelf ! Here are..... Listed under: Home Automation Projects
449.		Raspberry Pi – TESLA BT-100 printer program using GPIO Raspberry Pi BT-100 printer program v0.1 (May 2013) Usage: bt100-tlc [options] SIGNAL GPIO -h print help -D turn debug on OUT_LEFT: 17 -B bidirectional print OUT_RIGHT: 27 -t file input text file Listed under: Other Projects
450.		Serial hookup JeeNode to Raspberry Pi One way to connect an RFM12B to a Raspberry Pi is to simply plug in a JeeLink, using the built-in USB capabilities of the RPi. But that’s a bit of a detour – why go through USB? Since the JeeNode’s FTDI connector can use 5V..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
451.		Raspberry Pi Christmas Tree Light Show This project involves using a Raspberry Pi to drive 8 AC outlets which are connected to Christmas Tree light sets. The AC lights are simple one color strands of lights, but to give a more dynamic range to the light show there is also a..... Listed under: LED Projects
452.		Control raspberry from twitter OBJECTIVE: Use the Raspberry Pi to monitor a Twitter feed and control a mechanical device.If you are not interested in the details of the build and just want to see the result you can watch the vid below. RESULT: Success!!! You can control the "The..... Listed under: Internet - Ethernet - LAN Projects
453.		STLs and Raspberry Pis It’s a weird one. When it first came out, people were struggling to figure out what to do with it. A surprising feature for something that sold out very quickly – the Raspberry Pi. Well, we’ve now come up with another use for them –..... Listed under: Radio Projects
454.		How to turn an USB camera with Raspberry Pi into an Onvif IP Camera? Introduction At this instructable, we will make a new interesting Camera solution, which have never seen before! I would like to show you how can you make connection your USB camera and Raspberry Pi with Camera SDK. The goal is to turn your webcam to..... Listed under: Video - Camera - Imaging Projects
455.		Raspberry Pi 2 Weather Station Our hackerspace (Bloominglabs) recently received an ADS-WS1 weather station from a generous benefactor. Additionally, we were selected by Instructables for the Raspberry Pi 2 hackathon so we got some RPi2’s to hack on. For my project, I decided to use an RPi2 to put our..... Listed under: Temperature Measurement Projects
456.		Raspberry Pi as IR Remote (LIRC) If you are like me and hate to look for TV/projector/speakers remote, you will be happy to know that you can use your Raspberry Pi and your computer or phone to act as IR remote. What you need? Raspberry Pi 940nm IR diode (preferable super..... Listed under: Wireless projects
457.		Raspberry Pi Weather Station Build a personal weather station with Raspberry Pi that emails you the temperature, humidity, and rainfall. *In a couple of weeks I will be adding a barometric pressure sensor to calculate chance of rain. Step 1: Supplies You will need: Raspberry Pi b and power..... Listed under: Temperature Measurement Projects
458.		Vertical Hydroponic Farm We call our project RUFs, for Robotic Urban Farm System A vertical hydroponic garden Allowing for high density yields and shorter growth cycles Reducing resource consumption - water, fertilizer and space Labor saving - no weeds or soil to till Higher consistency of crops with..... Listed under: Other Projects
459.		Raspberry Pi enclosure (The inlay for this is...really beautiful, and a bit tough to see at the resolution of this instructable. Check here: http://www.flickr.com/photos/hslphotosync/7438625092/sizes/o/in/photostream/ For a full resolution picture) I've been really excited about the raspberry pi for quite a while now, and have been eagerly waiting for the..... Listed under: Other Projects
460.		Controlling a Raspberry Pi’s GPIO over the network The first step in playing with a Raspberry Pi’s GPIO interface is to turn an LED on and off on command, the Hello World of digital electronics. As fun as that is, it would be more fun to do from my mobile phone using my..... Listed under: Wireless projects
461.		How to Send Value Between Processes Using Signal Developed By: Ajish Alfred Linux operating systems especially Ubuntu is preferred for all kind of programming and development. In a multi-tasking environment of the Operating System several processes executes at the same time and the Signals provide an Inter-Process Communication (IPC) method. The Operating System..... Listed under: How To - DIY - Projects



462.



Raspberry Pi Tor relay Tor (short for The Onion Router) is a system intended to enable online anonymity. The Tor client software directs internet traffic through a worldwide volunteer network of servers to conceal a user's location or usage from anyone conducting network surveillance or traffic analysis. Using Tor..... Listed under: Internet - Ethernet - LAN Projects

463.



GardenPi: Garden Care with Raspberry Pi Like any good “lazy programmer,” I’m always looking for ways to automate. This spring’s project: monitoring and watering my garden. I had a wifi-enabled Raspberry Pi laying around and decided to put it to good use. For this project I wanted to do better than..... Listed under: Home Automation Projects

464.



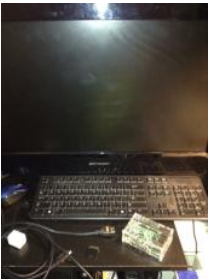
Raspberry Pi as webserver. This instructable will only briefly show a way to enable webtraffic to your Raspberry Pi. In the last step you'll find a guide to add the content. You'll need: 1 Raspberry Pi 1 Router 1 Micro USB cable 1 Ethernet cable (and of course an..... Listed under: Internet - Ethernet - LAN Projects

465.



Getting to know Raspberry Pi This is a very simple instructable for those of you who got a new Raspberry PI and a Pi Face and is wondering what can they do. This instructable is also documented on Makeystreet.com - Makey : Getting to know Raspberry PI Parts used :..... Listed under: Raspberry Programmer Projects

466.



Raspberry Pi – Model B+ Setup The Raspberry Pi Model B+ is a credit card sized computer with a Micro SD Card as a hard drive and 512MB of RAM. You install a Linux based software onto the SD Card and insert it to the bottom of the Pi. There are..... Listed under: LED Projects

467.



My Raspberry Pi Pool Timer — Electronic Assembly I used to do many projects like this as a teenager, an eternity ago as it seems. One thing I learned the hard way is to always, always, assemble projects gradually, starting with the power. If the power is wrong, in the best case, you..... Listed under: Clock - Timer Projects

468.



Raspberry Pi and Custard for Schools Raspberry Pi is a low cost credit card sized ARM/GNU based single board computer that runs on a Linux Platform and plugs into your TV, just add a mouse and keyboard and a little imagination. It will be available to buy soon at around £22..... Listed under: How To - DIY - Projects

469.



How to Read Multiple Inputs Using Raspberry Pi The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers, interrupt..... Listed under: How To - DIY - Projects

470.



Setup Weaved and the Raspberry Pi If you’ve ever tried to setup your Raspberry Pi as an Internet of Things device, you’ll know that unless you jump through some massive hoops, you’re stuck serving web pages and data on your local network. Getting information from your Pi on your phone, or..... Listed under: Internet - Ethernet - LAN Projects

471.



Attendance system using Raspberry Pi and NFC Tag reader With my new toy Raspberry pi I've done several testing projects from instructables, adafruit etc. But after a while it became boring and I've started looking for something actually useful for me. My previous playground was my new phone several weeks ago which came with..... Listed under: LED Projects

472.



16x2 LCD Module Control Using Python LCD Module Hardware The pinout of the module is : Ground VCC (Usually +5V) Contrast adjustment (VO) Register Select (RS). RS=0: Command, RS=1: Data Read/Write (R/W). R/W=0: Write, R/W=1: Read Enable Bit 0 (Not required in 4-bit operation) Bit 1 (Not required in 4-bit operation)..... Listed under: LCD Projects

473.



Raspberry Pi GPIO game You will need... -Raspberry pi model b+ with raspbian and Python 2(which should come with raspbian) -HDMI monitor and cable -3 tactile push switches -Breadboard(you can get by without it be connecting straight to the buttons, but this also works as a stand for the..... Listed under: Game - Entertainment Projects

474.



Raspberry Pi controlled power bar. A latching relay is used in this power bar. With this special relay you can switch on and off a lamp, your PC, your Hard-disk or any other devise with a little python program on your Raspberry Pi Advantage and disadvantage of the Latching Relay..... Listed under: Development Board - Kits Projects

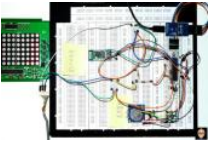
475.



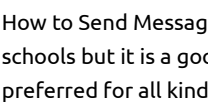
“Interface Keyboard Or Rs 232 With Or Without Lcd Display”. Sabrent sbt-usc1k usb serial (9-pin) db-9 rs-232, General brand sabrent model sbt-usc1k type usb to db9 (rs-232) spec length 1 ft. connector number 2 features features converts a standard 9-pin serial port to usb. Line interactive sine wave ups system 3kva snmp 2u rack, Smartpro..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

476.

NFC with Raspberry Pi and Arduberry The Arduberry is a simple and inexpensive way to bring Arduino shields to the Raspberry Pi. The device is a shield that slides over the Raspberry Pi and allows you to stack and use Arduino shields. The Arduberry requires no physical configuration to work with..... Listed under:



Pin	Label	Function	Pin	Label	Function
1	GND	Ground	21	SDA	I2C Data
2	5V	5V	22	SCL	I2C Clock
3	GND	Ground	23	NC	No Connection
4	5V	5V	24	NC	No Connection
5	GND	Ground	25	NC	No Connection
6	5V	5V	26	NC	No Connection
7	GND	Ground	27	NC	No Connection
8	5V	5V	28	NC	No Connection
9	GND	Ground	29	NC	No Connection
10	5V	5V	30	NC	No Connection
11	GND	Ground	31	NC	No Connection
12	5V	5V	32	NC	No Connection
13	GND	Ground	33	NC	No Connection
14	5V	5V	34	NC	No Connection
15	GND	Ground	35	NC	No Connection
16	5V	5V	36	NC	No Connection
17	GND	Ground	37	NC	No Connection
18	5V	5V	38	NC	No Connection
19	GND	Ground	39	NC	No Connection
20	5V	5V	40	NC	No Connection



Raspberry Pi: Airplay Reciever Today I am going to show you how to setup your Raspberry P (Model B or A (With Ethernet adapter) as an Airplay receiver. It is very simple to do and will not take much time at all. Step 1: Materials (Sorry for the bad..... Listed under: Internet - Ethernet - LAN Projects

AM03127 LED marquee + Arduino + Bluetooth = RaspberryPi remote control After some days of soldering, testing and coding I am now able to control my LED marquee remotely via bluetooth from my Raspberry Pi. Using an Arduino Pro Mini (5V model) and the HC-05 module mentioned in my last blog post, I was able to..... Listed under: Bluetooth Projects, LED Projects

Adding More Temp Sensor Since my previous post I have added a couple additional temperature sensors to my piHouse project. One is an outdoor temperature sensor that I previously programmed but never installed outside, and the other is a new sensor in my bedroom. This involved some hardware planning..... Listed under: Sensor - Transducer - Detector Projects

Raspberry Pi Media Panel I wanted a simple yet elegant panel that would display the current weather, my photostream from Flickr, The time and my iCal feeds Step 1: Configuring the Raspberry pi First we'll setup the Raspberry Pi, to do this you'll need to have Raspbian installed. You..... Listed under: Other Projects

Raspberry Pi Pandora Streamer I recently finished a project to turn the Raspberry Pi into a music streamer. I had seen a couple of other projects here and here that were the same basic concept, so I knew it was possible (this is nothing new...just new for me), and..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Clap Switch Suite/Electronic Production/DIY Kits Description Package name: clap switch kit Kit Model: PSK-1 Operating voltage: 5V PCB size: 28 * 49mm How it works: Q1 and Q2 composed of two audio amplifier circuit, the audio signal is accepted by the MK1 C1 is coupled to the base of Q1..... Listed under: How To - DIY - Projects

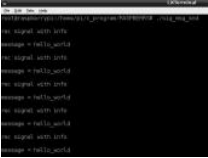
Raspberry pi “Power” case I am big fan of Raspberry pi and i am using it as NAS and torrent box among other things. I hate wire clutterers and i only use my raspberry pi with putty, so i decided to make a little mod, so you can plug..... Listed under: Development Board - Kits Projects


Webcam over 3G with Raspberry PI Description This project was about a personal challenge that my Dad asked me to do it. Everything started more than one year ago when I was trying to do it with Arduino but I lost a lot of time because I couldn't make everything works..... Listed under: Video - Camera - Imaging Projects, Wireless projects

RaspberryPi Universal Expansion Board Introduction Raspberry Pi is a widely used Arm development board and the Digilent Pmod interface is used to connect low frequency, low I/O pin count peripheral modules to host controller boards. This expansion board is a bridge to connect all kinds of Pmods to the..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects


Sugru Raspberry Pi corners This instructable will show you how to quickly add Sugru Pi corners. Sugru molds like play-doh, then hardens into rubber. It sticks to most surfaces as it dries. We want to identify our placements to avoid closing off ports and add enough clearance so that..... Listed under: Other Projects

How to Send Message between Processes using Signal in Raspberry Pi The Raspberrypi is a board actually designed for helping computer education for remote schools but it is a good platform for programmers especially beginners to explore various coding techniques. Linux operating systems especially Ubuntu is preferred for all kind of programming and development. The Raspberrypi..... Listed under: How To - DIY - Projects




502.  Raspberry pi gone vintage The project is a vintage radio shell with a raspberry pi and external speakers inside of it. This project came from my need to have a tasteful raspberry pi enclosure without it looking like a raspberry pi case. I also had the need for some..... Listed under: Radio Projects




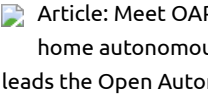
503.  ANDY: A Multi-Purpose “Humanoid” Robot How the Software Works Here is a quick overview of how the current software works from startup to shutdown. All the code is open source, so you can browse through it here. Below is a basic flowchart. Step One: Startup Andy To start Andy, flip the..... Listed under: Robotics - Automation Projects

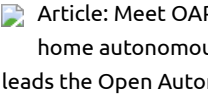


504.  Raspberry Pi Emulation Station Have you got a Raspberry Pi but not sure what to do with it? Well, I'm going to show how to turn it in to a 'console' doing this will allow you to play any game you like from the older platforms. I would recommend..... Listed under: Game - Entertainment Projects




505.  Motivational Bathroom Scale Introducing the latest and greatest in health technology: the Motivational Bathroom Scale. Getting unwanted family comments about your recent weight gain? Now you can get criticized by both your family and your bathroom scale! Simply enter your goal weight with the keypad and step onto..... Listed under: Medical - Health based Projects




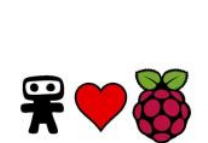
506.  Article: Meet OAP — an open robot reference design project Have you ever dreamed of building your own Linux-based droid [that could] roam around your home autonomously, intelligently obeying your commands?” asks Dafydd Walters. “You may now be able to finally fulfill your dream.” Walters founded and leads the Open Automaton Project (OAP), which aims..... Listed under: Robotics - Automation Projects




507.  Willy the Self-Driving Toy Car For our final project, we built a self-driving car that takes in inputs for a final destination and drives itself from its initial location to the final destination. The idea for this final project requires an LCD to display the location that the car is..... Listed under: Game - Entertainment Projects




508.  Raspberry Pi Hard Case The other day I finally received my Raspberry Pi Model B in the mail!!!! It only took 6 months.... but at least it arrived. Regardless, I now have it in hand an am happily projecting away. Of course I could spend 30-50\$ odd dollars online..... Listed under: LCD Projects




509.  Raspberry Pi Thief Detector What is a Raspberry Pi ? The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore..... Listed under: Sensor - Transducer - Detector Projects




510.  Monitoring Temperature With Raspberry Pi The Problem: I recently remodeled my home office and I now have a dedicated closet for my electronics (Server, NAS, AV Receiver, etc.) During the build I planned for heat remediation by installing an exhaust fan that dumps air from the closet into my adjoining..... Listed under: Temperature Measurement Projects




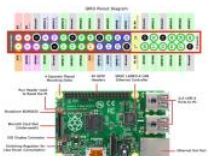
511.  Raspberry Pi B+ Shark Fin Lego Case Looking for a Lego Raspberry Pi B+ case ? Then you have come to the right place. I made this Instructable as I could not find a Lego case tutorial for the RPi B+. *This case was designed before I received my RPi (So if..... Listed under: Other Projects

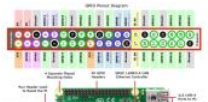


512.  Raspberry Pi Radio Transmitter The Raspberry Pi is a very useful computer that can be used for many different things. The people over at Imperial College Robotics Society have a new way to use your favorite treat. They designed a program that turns the Pi into an FM radio..... Listed under: Radio Projects




513.  Raspberry Pi Ipad This is a completely awesome project. It is a home made Ipad That costs less the \$100! You need very little programming skills. If you want a cheap Ipad and you love making things this is the project for you! Please vote for me in..... Listed under: Home Automation Projects




514.  Circuit Note: Raspberry Pi Pinout Diagram If you build it, they will program. The genesis of the Raspberry Pi came from a few college students concerned about the dwindling number and skills of students applying to study Computer Science. Newer computers and game consoles have replaced the old machines where most..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



515.  Using the Raspberry Pi Wobbulator to test the G6LBQ Multiband Bandpass Filter Finally, I decided to use the Raspberry Pi Wobbulator to test the frequency response characteristics of the G6LBQ multiband bandpass filter which I had built as part of a homebrew transceiver project. The fully assembled Filter board is shown below (it is part of a..... Listed under: Metering - Instrument Projects



516.  Simple Raspberry Pi Portable This is a very simple instructable that will show you how to put together a little portable Raspberry Pi. Watch the video for visual instructions:Video Step 1: Parts and Tools A Raspberry Pi This could be any raspberry pi, but I chose the Raspberry Pi..... Listed under: LCD Projects

- f

g+

0.

in

p

r

u

w

e


x

s


t

g

517. Raspberry Pi Portable Today I will show you how to make a portable and compact raspberry pi portable computer. All pictures were taken with my new Oneplus One phone so all of the pictures should be clearer than in my older photos that were taken with an iphone..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




518.




Test DS18B20 sensor sudo modprobe w1-gpio sudo modprobe w1-therm cd /sys/bus/w1/devices ls cd 28-xxxx (change this to match what serial number pops up) cat w1_slave The interface is a little unreliable, but fortunately it tells us if there is a valid temperature to read. It's like a file,..... Listed under: Sensor - Transducer - Detector Projects

519.



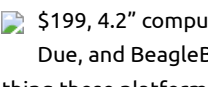
Hardware button and LED to control association in wireless networks Almost all wireless technologies use some kind of association process to enable devices to join the network. Such a process is typically initiated by pressing a button on the network controller and by subsequently pressing another button on the device to associate. Software gateways, like..... Listed under: LED Projects

520.




Home Security Email Alert System using Raspberry Pi In this tutorial we will look at how to setup up your raspberry pi to take picture of the intruder who enters your home and send an email to you whenever you are not at your home. Step 1: What You'll Need Raspberry Pi running..... Listed under: Security - Safety Projects

521.




\$199, 4.2" computer is Intel's first Raspberry Pi competitor The Minnowboard: More expensive, more powerful, more open. With the Raspberry Pi, Arduino Due, and BeagleBone, the world is full of cheap, tiny computers that can be used by creative developers in everything from robots to space flight. One thing these platforms have in common is an..... Listed under: Development Board - Kits Projects

522.



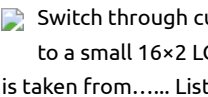
Pi on / off PSU relay switch As everyone is aware the Pi has no on / off power supply switch the only way to turn it off is to physically remove the micro USB cable or to turn off the main adapter / pull plug from the wall. Turning off from..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

523.




PiPlay a raspberry pi aplay server Hello, In this instruct able, I will be showing you how to make a raspberry pi airplay server.To start off, you will need to get a raspberry pi. The model A, B or B+ will work.To allow the raspberry pi to run, you will need..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

524.



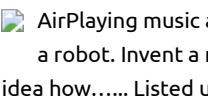
Switch through custom data with 16x2 LCD screen and Raspberry Pi Introduction After starting my circuit testing with some LEDs and switches I moved up to a small 16x2 LCD screen (HD44780 controller) with the Raspberry Pi. The configuration of the LCD pins and base code for output to the 16x2 LCD screen is taken from..... Listed under: LCD Projects

525.




Wooden Raspberry Pi Handheld Hello, this is a step-by-step instruction on how to make a wooden raspberry pi handheld. Step 1: Things you need First you need a raspberry pi, no matter if you are using a model A or B. I used a raspberry pi model B because..... Listed under: LCD Projects

526.




AirPlaying music and video from iPad to Raspberry Pi—it's as easy as... There are so many incredible things you can do with a Raspberry Pi. You could build a robot. Invent a new kind of musical instrument. Or send the tiny computer nearly into outer space on a picture-taking balloon adventure. Sadly, I have no idea how..... Listed under: Sound - Audio Projects

527.



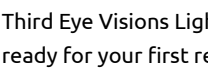
Raspberry Pi Garage Door Opener with streaming video of door status. This Instructable modifies two other guides. Just got a Magnetic Sensor hooked up with door status on page. Step 1: Do these Instructables First You need do this Instructable @http://www.instructables.com/id/Raspberry-Pi-Garage-Door-Opener Then do this one @ http://pimylifeup.com/raspberry-pi-webcam-server/ Next I will show what I changed to make..... Listed under: Sensor - Transducer - Detector Projects

528.

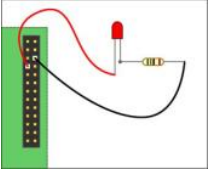



Interfacing Digital Compass (HMC5883L) with Raspberry Pi 2 using Python3 Initially, I was working on a maze solving robot. Instead of using ultrasonic and infrared on Arduino Mega for wall following like my friends did, I try to do something different using the digital compass and Raspberry Pi 2. This experience is totally new for..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

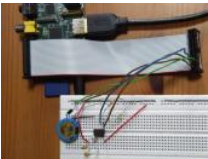
529.



Third Eye Visions Lighting Up An Led Using Your Raspberry Pi and Python Once you've setup your Raspberry Pi according to my getting started tutorial, you are ready for your first real project. Let's light up an led using the Python programming language and the GPIO pins on..... Listed under: LED Projects



530.  Wooden Raspberry Pi picture frame The Raspberry Pi is an interesting, versatile and powerful low cost computer that can be used for various applications. I have one dedicated as an entertainment center running OpenELEC. It was quite easy to set the system up, integrate it into my network and hook..... Listed under: Other Projects



531. Raspberry Pi PCF8563 Real Time Clock (RTC) Having recently received my Raspberry Pi, one of the first things I wanted to do was hook up a real-time clock chip I had lying around (a NXP PCF8563) and learn how to drive I2C from the BCM2835 hardware registers. Turns out it's quite easy..... Listed under: Clock - Timer Projects



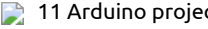
532. ICStation DIY Kit 5V to 12V Step-up Power Converter Module DIY K Description 5V to 12V booster module is based on MC34063 chip booster module, can realize the input 5V voltage, stable output of 12 v voltage. A, Principle that This circuit mainly include filter capacitance, booster chip MC34063 and resistance, lose Into the voltage through the..... Listed under: How To - DIY - Projects



533. Portable Raspberry Pi (V4) The Raspberry Pi. Its a \$35 computer the size of a credit card. Being very small, its great for its portability. However, this is usually the problem as it is hard to make it portable. Over the past year and a half, I have worked..... Listed under: LCD Projects



534. Raspberry Pi driven 128x32 LED sign This is a 128x32 pixel LED display built from 8 "P10" LED Panels and a Raspberry Pi board. The code its running is takes UDP data from another computer and displays the pixels in either one or two bits per pixel. The sign is pictured..... Listed under: LED Projects



535. 11 Arduino projects that require major hacking skills—or a bit of insanity Raspberry Pi has received the lion's share of attention devoted to cheap, single-board computers in the past year. But long before the Pi was a gleam in its creators' eyes, there was the Arduino. Unveiled in 2005, Arduino boards don't have the CPU horsepower of..... Listed under: Development Board - Kits Projects



536. DIY: Temperature Monitoring and Regulation for HomeBrew Beer brewing is a fun hobby, whether you wanna just brew something easy from a kit, or take the time to fine-tune your preferred style. With every batch, there are always two things that weigh heavy on a brewer's mind: risk of contamination or, depending..... Listed under: How To - DIY - Projects, Temperature Measurement Projects



537. Turn the Raspberry Pi into a Bluetooth Device Introduction I have a Bluetooth Radio USB device that was gathering dust when I stumbled upon it. So I thought I should put it to use with Raspberry Pi. This instructable is about my learning journey of adding a bluetooth interface to Raspberry Pi. Target..... Listed under: Bluetooth Projects



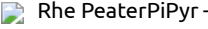
538. A Raspberry Pi controlled mini CNC Laser engraver [last update Jan 18,2014] About the capability of the engraver Due to the size limit of DVD drives, the machine can only engrave within an area of 36 mm by 36 mm.. So it can do little pieces of wood, plastic board or part of iPhone cases, but not..... Listed under: How To - DIY - Projects



539. DIY Social Integration Kit- Raspberry Pi A number of sensor applications in recent years collect data which can be directly associated with human interactions. one can use the sensor data in order to model the underlying relationships and interactions. It also leads to a number of challenges, since such data may..... Listed under: How To - DIY - Projects



540. The Raspberry Pi – Lapdock Connection Now that you have your nifty new Raspberry Pi, you'll need a display for it. Teensy analog monitors are pretty cheap, but what you really want is a decent HDMI display. Unfortunately, they're expensive, running from \$150 on up into the thousands for the huge..... Listed under: LCD Projects



541. Rhe PeaterPiPyr – a simplex repeater using the Raspberry Pi This page describes how to use at \$25-\$35 Raspberry Pi single board computer, a USB sound card, some Python code, and a two-way radio to create a simplex repeater. A simplex repeater is also known as a store-and-forward voice repeater. Unlike a traditional duplex repeater..... Listed under: Radio Projects



542. Creating a \$99 parallel computing machine is just as hard as it sounds Ten months ago, the chipmaker Adapteva unveiled a bold quest—to create a Raspberry Pi-sized computer that can perform the same types of tasks typically reserved for supercomputers. And... they wanted to sell it for only \$99. A successful Kickstarter project raised nearly \$900,000 for the..... Listed under: Development Board - Kits Projects



543. Setting up phpMyAdmin and MySQL on Raspberry Pi As part of my ongoing efforts to create a really awesome alarm clock with my Raspberry Pi, I had to set up some MySQL databases. I have very little experience with MySQL, and the idea of setting up tables, users, and all that jazz via..... Listed under: Raspberry Programmer Projects

544. Raspberry Pi Heat Sink Project Difficulty: Easy Project Time: Less than 5 minutes Materials Needed: Thermal compound Small heat sink (I got mine from an on-board graphics processor on an old computer) Tools Needed: Hack saw (With metal cutting blade) Vice File (Optional) Screw Driver (Optional) Knife (Optional) Step..... Listed under: Development Board - Kits Projects



545.



Solar Driveway Light to MSP430 Wireless Sensor Node The basic idea of this project is to convert a \$3-4 solar light found at Lowes and Home Depot hardware store (here in the US) into a wireless remote sensor node. The node will utilize an MSP430G2553 MCU and a nRF24L01+(w/ spirilis library) wireless module..... Listed under: Sensor - Transducer - Detector Projects, Wireless projects

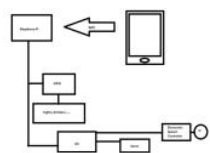
546.



1979 Bang & Olufsen Raspberry Pi Internet Radio This is a 1979 Bang & Olufsen Beocord 1500 cassette recorder that I've converted into a standalone Raspberry Pi internet radio. The analogue VU meters are driven by the Pi via a DAC (Digital to Analogue Converter) circuit, with the current time, station and track..... Listed under: Radio Projects

f
g+
t
in
p
r
s
w
e
t
d

547.



PiRacerX – Android controlled RC car using Raspberry Pi Short description: We made a car, which acts as a wifi access point. Users connect to our car and then, they are able to access our webpage. There you'll be able to download application. After the application is installed, the phone makes an UDP session with..... Listed under: Car Projects, Raspberry Android

548.



Raspberry Pi and ZenMINER Heatsink and Fan I wanted to overclock my ZenMINER which is a Raspberry Pi booting from a custom Raspbian image. The device is normally warm to the touch after it has been running for 30 minutes. This unit will be in service 24/7, so it definitely needed extra..... Listed under: Other Projects

549.



Raspberry Pi Analog to Digital Conversion Experiments and Howto The Raspberry Pi is a great little educational computer, but all models of the Raspberry Pi miss a critical ingredient for electronics experiments – an Analog to Digital converter. I am constantly working on upgrading my lab, and one of my needs is to measure..... Listed under: How To - DIY - Projects

550.



Control Stepper Motors With Raspberry Pi: Tutorials and Resources The title of the article can be as well as 'Let's build robots using stepper motors and the Raspberry Pi,' because everything you need is a good example of where you can learn how to control the spin direction, speed, and the rotation of a..... Listed under: Motor Projects

551.



HY28B Touch Display with Raspberry Pi There are quite a few displays out there that can be used with the RPi. Apart from those having an HDMI adapter or being connected via the composite output most bare bones displays have a parallel or serial data interface. Both of these last two..... Listed under: LCD Projects

552.



An LCD Expansion Shield for your RaspberryPi Today we introduce a great LCD expansion shield for Raspberry Pi that allows you to create an interface to control applications without the need to constantly keep a monitor, keyboard and mouse connected. Cool! Isn't it? The enhanced value of a micro PC as Raspberry..... Listed under: LCD Projects

553.



DIY Stripboard/Veroboard Enclosure for Raspberry Pi (Part 2) 16-LED Stripboard Top Schematics, Soldering, and Testing I had decided to design the top board of the enclosure with several LEDs, 3 LEDs on both side, and a Raspberry fruit (6 red LED) and 2 leaves (4 green LED) in the middle. Before getting started,..... Listed under: LED Projects

554.



Raspberry Pi Internet Weather Station This Instructable will show you how to build a really cool Raspberry Pi Internet-based weather station. Actually, to call this build a "weather station" is a bit of an understatement. This build could easily be extended to provide much more than simply the weather..... Listed under: Internet - Ethernet - LAN Projects

555.



Raspberry Pi and Breadboard (Raspberry Leaf) If you are using your Raspberry Pi with Breadboard, and you have lots of connections to make, then the Pi Cobbler from Adafruit is pretty neat. However, sometimes you only need to make a couple of connections and the Cobbler is overkill and a few..... Listed under: Development Board - Kits Projects

556.



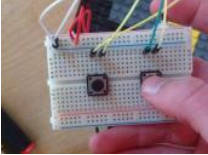
X100/105/200/300 Function Expansion Board for Raspberry Pi B/B+ The X100 expansion board designed for use on the Raspberry Pi (RPi) computer platform. The board supplies RPi with a regulated +5V from a wide-range voltage source and also contains a real-time clock, a RS232 master port, a HDMI to VGA converter, 3-port USB hub,..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects

557.



Microcontrollers: The Basics Overview Different kinds of computers are designed for different purposes. The computer at the heart of your laptop is optimized for different purposes than the one in your phone or the one in your mouse. The simplest computers are those that are designed to take..... Listed under: Development Board - Kits Projects

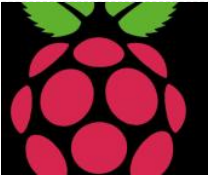
558. Simple Handheld controller for Raspberry Pi So I recently programmed a small game with python that was completely controlled by a few GPIO buttons. Over the past few days, I've been messing around with it, finding ways to make it better, when I decided, with my small breadboard, it would be..... Listed under:



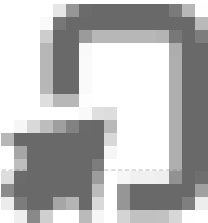
Game - Entertainment Projects



559. Control a Relay From Anywhere Using the Raspberry Pi If you found this article after doing a search on Google, welcome! On this website you will find plenty of content around DIY home automation using open-source hardware. Enjoy the article! I have been asked a lot about writing tutorials using the Raspberry Pi for home automation, as well..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, LED Projects



560. Make Raspberry Pi a Multi-User Desktop Introduction I want my daughter to use the Raspberry Pi for her school work and learn programming. I could buy her a Raspberry Pi or I could share my Raspberry Pi with her. I chose to share the Raspberry Pi with her. After completing this..... Listed under: Raspberry Programmer Projects



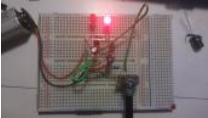
561. Web control four rotator, fifteen relays and many other features that come from Raspberry Pi RemoteQTH server. Main functions: Control the four rotators using the light buttons, rotary encoder and with a two-line display for each rotor. Same control remoted via web interface or telnet - only click to map and confirm rotating. Rotator module can directly control the motor of the..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Wireless projects



562. Real Time Clock for RaspberryPi I bought a Real Time Clock module (RTC) about 6 months ago and I've only just taken it out of its anti-static bag. With two potential projects in mind that may require an RTC, I opened the packet, wired it to my RaspberryPi and then.....not..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



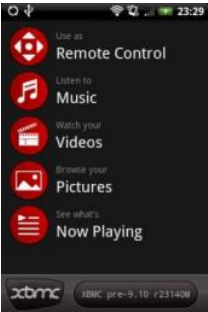
3. Raspberry pi Tracer interface Everything started with the fact that the MT-5 display wasn't what I really needed. I was in the need of checking the charging from the device using the battery: my trusty Raspberry pi (1 B at the time). I managed to stumble over this instructable..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



4. Circuit for Photodiode-Pi Interface Here's a diagram I did today for the interface between the photodiode and the Raspberry Pi. First, the photodiode allows small amounts of current to flow when light is shone on the device. this current is amplified by the BJT (so, just a normal transistor..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



5. Mini Arcade Cabinet Project Cabinet is made from 6mm mdf with 12mm mdf base. My own design inspired by full size cabs and other designs ive seen around. Parts - Raspberry pi model B with 8gb sd running retropie 2.3 7" lcd and control board removed from an old..... Listed under: Game - Entertainment Projects



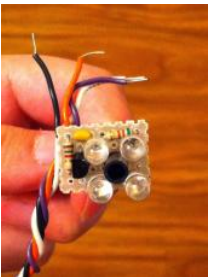
566. XBMC Media Center with Raspberry Pi Media Centers are useful tools that allow users to organize and play their media, including videos, music, and pictures. Media Centers make it possible to stream content from multiple computers to a home entertainment system or other central location. In this tutorial, we will show..... Listed under: Sound - Audio Projects



567. Read analog data, in Java Raspberry Pi mportant: This document goes along with the code at <https://github.com/OlivierLD/raspberry-pi4j-samples/>. In the sources, refer to ADC The goal here is to read analog data from a Java program running on a Raspberry Pi. For this example, we will be using a potentiometer like this one..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

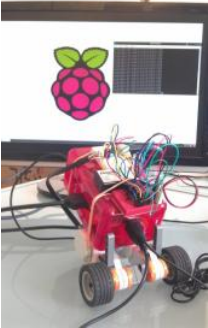


568. How to Use Signal Values and Messages to Read Multiple Inputs Those who have worked on simple microcontrollers know how difficult it is to continuously check for an input pin status without affecting the other task of the microcontroller like displaying and SSD, playing a music etc. In a Multitasking environment of an Operating system like..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



569. A simple analog proximity sensor with digital interface (for Raspberry Pi) [last update: Feb 7, 2014] Raspberry Pi has a Broadcom BCM2835 chip, which controls 26 GPIO (general purpose input/output) pins. There are C library or RPi.GPIO python package available online that can be used to control the pins. The RPi.GPIO package is by default included in most Raspberry Pi system, such..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Sensor - Transducer - Detector Projects

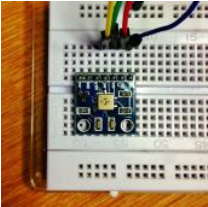
570. LEGO MINDSTORMS Motors with Raspberry Pi (BrickPi 0.1) Since we first got the Raspberry Pi, we have wanted to make a robot out of it. There aren't many kits out there yet that let you do that (yet). This HowTo Raspberry Pi Project shows you how we hacked together a motor controller from..... Listed under: Motor Projects



571.



Raspberry Pi Home CCTV System Hello, In this instructable, I will be showing you how to make a small CCTV system using the raspberry pi. I have wanting to do this for a while and have now got round to doing it! For this build, you will need the following:..... Listed under: Security - Safety Projects



572.

Raspberry Pi reading BMP085 Temperature & Pressure Another fun little i2c device acquired cheaply via eBay. It reads barometric pressure and temperature. There's some relatively simple maths to convert the outputs to something readable. Once again, ADaFruit provide a fantastic guide and library for using the device in their Using the BMP085 with Raspberry..... Listed under: Temperature Measurement Projects



3.

Raspberry Pi Gate Opener This is a raspberry pi project that enables you to open your garage/gate with any kind of web browser! Step 1: Gather those supplies. Raspberry Pi - 35\$ Relay Board - 5\$ Your Gate Opener - (You will be sacrificing the gate opener) Great. Now..... Listed under: Internet - Ethernet - LAN Projects



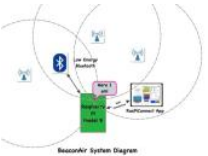
4.

Raspberry Pi I/O Expander Board To simplify using the the MCP23017 I/O Expander on the Raspberry Pi I've made a little plug in board using a Slice of Pi from Ciseco. The Slice of Pi is a handy little PCB that plugs directly onto the Raspberry Pi's GPIO pins and gives a..... Listed under: Development Board - Kits Projects



5.

PiPhone - A Raspberry Pi based Cellphone Overview Ever wanted to build you own cellphone? Well now you can with this guide that uses a Raspberry Pi, PiTFT, and a FONA to make a functional cellphone that you can call your friends with! Things You'll Need: Raspberry Pi computer, the Model B or Model B+ is..... Listed under: Phone Projects



576.

BeaconAir On Raspberry Pi / iBeacons BeaconAir is a Raspberry Pi based project that reads the advertising packets coming from iBeacons and roughly calculates the physical position of BeaconAir by Trilateration. This is an application that uses my new iBeacon Python library that READS iBeacons on your Raspberry Pi. It does not turn..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Wireless projects



577.

Raspberry Pi B+ boot from SD Card The new Raspberry Pi model B+ uses Micro SD cards(WOOHOO!!!), wait what if I have SD cards from my old Pi's I want to use? That is what this instructables was created to help you do. Thanks to the Raspberry Pi foundation and the community..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



578.

Linux-powered quadcopter has three cameras A startup called Pleiades is over a third the way to its Kickstarter goal for funding a hackable Linux quadcopter that starts at \$520. Spiri, which runs Ubuntu Linux with Robot Operating System (ROS) extensions on a dual-core Freescale ARM SoC, is an airborne craft..... Listed under: Video - Camera - Imaging Projects



579.

Raspberry Pi based Motor Speed Control The main objective of this project is to develop a speed-control system, for a DC motor, that alters voltages applied to the armature by using a Raspberry Pi board.The speed of the DC motor is directly proportional to the voltage applied across its terminals. Hence,..... Listed under: Development Board - Kits Projects



580.

Raspberry Pi Firewall and Intrusion Detection System Maybe you think "Why should I protect my private network? I've got no critical information on my computer, no sensitive data". Are your emails really public? Don't you have some photos you don't want to upload to Facebook, because they're private. Do you really don't..... Listed under: Security - Safety Projects



581.

3D camera (with Raspberry Pi) Although 3D camera's are usually said to be really intricate, hence their price, it turned out the basic principles aren't really that difficult to replicate. Granted it is troublesome to get the quality of professional products, compared to their cost, this is a neat homebuilt..... Listed under: Video - Camera - Imaging Projects



582.

Raspberry Pi: 3x3x3 LED Cube If you do a web search for LED cubes, you will notice that they have been built so many times and anything less than 8x8x8 is a bit of a waste of time. Knowing all of this, and basically because I am bored out of..... Listed under: LED Projects



583. PiLarm: Portable Raspberry Pi Room Alarm I’m always on the lookout for those teachable moments. Inspiration struck me when my 5-year-old asked for help in keeping his little brother from sneaking into his room. I spotted the perfect time to teach him about inputs, outputs, and programming. Learning is easier when……. Listed under: Home Automation Projects



584. Raspberry Pi supercapacitor micro-UPS seeks funding Nelectra is crowdfunding a supercapacitor based micro-UPS for Raspberry models B and B+, enabling brownout protection and “last gasp” shutdown sequences. Bratislava, Slovakia based Nelectra’s first product was a generic “Juice4Halt” supercapacitor based micro-UPS (uninterrupted power supply) module aimed at single board computers used in……. Listed under: Solar energy projects



585. Simple Raspberry Pi Input Output. Tricopter This is a simple input output switch/LED for a Raspberry Pi, What this allows is for the user to tell the raspberry Pi to do a selection of tasks without the Raspberry Pi being connected to a TV/Monitor or Keyboard/Mouse. WHY?? Well I wanted to……. Listed under: Development Board - Kits Projects



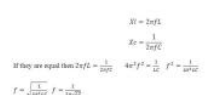
586. How to build your own Quadcopter Autopilot / Flight Controller Contents Introduction Reading the Radio Inputs Controlling the motors Determining Orientation Acrobatic / Rate mode control Stabilised Control Final Product - video and full code Other ideas: Safety Optional: Raspberry Pi Optional: Autonomous Flight Introduction This article will walk you through building your own controller……. Listed under: Game - Entertainment Projects



587. Raspberry Pi Lamp LAMP Server I was using a Raspberry Pi as a LAMP server. I also needed a new lamp for more lighting. My brain then decided I should combine the two, thus creating a Lamp LAMP server. Fun and completely nerdy at the same time. Here is how……. Listed under: LED Projects



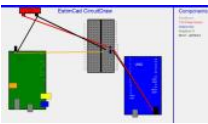
588. Geolocation Tracker (GPRS + GPS) with SIM908 over Arduino and Raspberry Pi The new shield designed for Arduino and Raspberry Pi integrates the SIM908 module which counts with both GPRS and GPS technologies what allows to easily perform realtime tracking applications. The idea is simple: read the GPS coordinates (longitude and latitude) and send them by using……. Listed under: GPS Based Projects



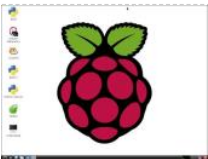
589. Pi in the Sky transceiver – Raspberry Pi Frequency Synthesiser (Part 1) Method 1 The simplest way to generate a frequency is to apply a voltage to a crystal, the piezo-electric effect will take over and the crystal with resonant at a particular frequency. However, as this was going to be a multiband, multimode transceiver; crystals could……. Listed under: Radio Projects



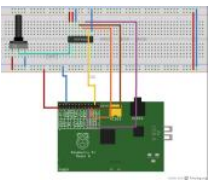
590. Cardboard Raspberry Pi Wifi Internet Radio What to do with the small cardboard box full of Raspberry Pi related junk, besides watch it sit slowly collecting dust. Surely it should be doing something interesting? Failing that it could be a wifi radio, I suppose. Notes on how I converted a cardboard……. Listed under: Radio Projects, Wifi / Wlan Projects



591. Using CircuitDraw to create electronics diagrams Today I will show you how to use Estimcad CircuitDraw to create diagrams for electronics and robotics projects. This is the second article in a series outlining the installation and use of CircuitDraw.Other Articles: Introduction to CircuitDraw Using CircuitDraw to create electronics diagrams Adding secondary……. Listed under: RFID - NFC Projects



592. Complete tutorial for a raspberry pi beginners . This instructable helps you to setup raspberry pi for the first time without hdmi monitor .By the end of this tutorial you can see the raspberry pi desktop screen from your server laptop. difficulty level:- 1/5 Not required any technical knowledge My current project: (Check……. Listed under: Raspberry Programmer Projects



593. Interfacing an SPI ADC (MCP3008) chip to the Raspberry Pi using C++ (spidev) In this entry I will demonstrate how to interface the MCP3008; an SPI-based analog to digital converter (ADC) integrated chip, to the Raspberry Pi. This enables the Raspberry Pi to interpret analog voltages that are in turn typically emitted by analog-based sensors to reflect a……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



594. Raspberry Pi 2 (Model B+) Setup This is awesome: the newest version of Raspberry Pi (as of 2/25/15) has come out. It's called the Raspberry Pi 2 Model B+. This little board is 6X faster than a Raspberry Pi Model B+ and has 1GB of RAM, which the B+ didn't have……. Listed under: Development Board - Kits Projects



595. raspberry-pi-home-automation A node.js based home automation system based around the Raspberry Pi. For background around this project: Installation To get started, clone the repository and install the required dependencies. git clone https://github.com/anders94/raspberrypi-home-automation.git cd raspberrypi-home-automation npm install Hardware The Raspberr Pi needs a little bit of circuitry……. Listed under: Motor Projects



596. Add a \$15 Display to the Raspberry Pi The Raspberry Pi is a great little board and packs a lot of punch. But many times you just need a small display to show some information from your project. It can be the local weather, system status, an interactive menu or anything that you……. Listed under: LCD Projects



597. Arduino/Raspberry Pi 2 LED Matrices Does anyone know if I can use a single Arduino or Raspberry Pi to control two 32x32 LED matrices as sold on the Adafruit website? Here is a tutorial where you can wire the 32x32 matrix. Ideally, I'd like to be able to control them……. Listed under: LED Projects

- f

g+

t

in

p

r

s

w

e

x

y


o

s

t


g

598.




Raspberry Pi GPIO Protection After damaging the GPIO port on our raspberry pi while designing a new solar monitoring system we decided on a good idea to build a buffer/level translator to protect the GPIO pins from over voltage and ESD spikes. The board would need..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

599.




Home-Made Raspberry Pi Cobbler Looking at the Raspberry Pi Cobbler in Adafruit's wonderful collection of RPi accessories, I decided that it would be a much better method of connecting the the RPi GPIO to a breadboard than an old IDE cable with wires stuck in the end. I didn't..... Listed under: Home Automation Projects

600.




MoPi is mobile, hot-swap and 24/7 power for the Raspberry Pi. I want one! (how to order) Something not working? Raise an issue. (In early 2014 we ran a Kickstarter campaign to fund the first production version, which is due for delivery in June 2014. If you missed it, you can get one from Pimoroni.)1 Contents..... Listed under: Solar energy projects

601.



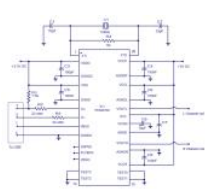
Setting up a VNC Server on your Raspberry Pi If your Raspberry Pi is purposed to do a task that normally does not require a monitor, mouse and keyboard (or any human interaction for that matter), sometimes it is useful to access your Raspberry Pi's operating system without having to connect a monitor, mouse..... Listed under: Development Board - Kits Projects

602.




DIY Alarm Monitoring System w/ Raspberry Pi + Foscam + Sensors The Raspberry Pi is an amazing device. Although not the most powerful mini computer out there, it bolsters a tremendous support community, tons of hardware add-ons and coding libraries to your heart's desire. The Raspberry Pi also makes an affordable media player but so much..... Listed under: How To - DIY - Projects

603.



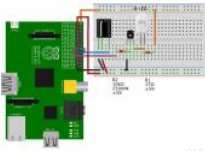
USB sound card Description. Designing and building a USB sound card is no longer a head ache because we have got the PCM 2702 integrated circuit from Texas Instruments. The PCM2702 is an integrated 16 bit digital to analog converter that has two digital to analog output channels..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

604.




Lego Dashboard Mount for Raspberry Pi When I got my Raspberry I've decided to develop an algorithm of real time lane and vehicle detection. I got it done. Now it's time to put the Raspberry Pi on my car's dashboard. However, I would not like to leave it fixed on the..... Listed under: Car Projects

605.




Controlling your TV or any infrared device with a Raspberry Pi Although the Internet of Things is relatively new, controlling devices remotely is as old as sin; devices have been using IR remotes for ages. There is a lot of untapped potential from the infrared devices sitting in your home. Besides the raspberry pi, you can..... Listed under: Wireless projects

606.



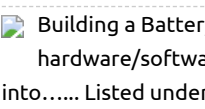
Customize and build your own smartphone using a Raspberry Pi and 3D printing For anybody who can remember when the first smartphones came out such as the original BlackBerry, the technology was groundbreaking and changed the way we interact with each other and the world-at-large. Over the years, the various iPhone models have updated to make living in..... Listed under: Other Projects

607.




Turning your Raspberry Pi into an HTPC In this instructable, I will show you how to turn your Raspberry Pi into an HTPC with a Linux distribution called Raspbmc. From the About section of Raspbmc's website: Raspbmc is a minimal Linux distribution based on Debian that brings XBMC to your Raspberry Pi..... Listed under: Raspberry Programmer Projects

608.




Building a Battery Board for the Raspberry Pi – Battery Board V0 Two big features of the Raspberry Pi development board are its versatility (due to open hardware/software) and its compact size. I had read a couple of different project articles on the web on how to use a USB Wi-Fi adapter to convert the Pi into..... Listed under: Phone Projects

609.



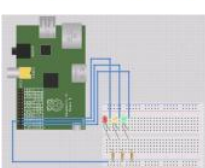
How much power can be provided through USB? We can see that the 5 volt line (+5V0) is powered directly from the USB input power, through a 1.1A, 6V Polyfuse (miniSMD). I believe this means that the 5V input is current limited to 1.1A (maximum hold current, not peak). Let's assume that you're..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

610.




Raspberry Pi OLED Internet Bandwidth Display This is a bandwidth monitor using a Raspberry Pi and an OLED display to graphically show the internet bandwidth into and out of our house. A video showing it working is above. Sometimes if the internet is slow or not working very well it can..... Listed under: LCD Projects

611.




A Raspberry Pi Build Light for TeamCity in Mono Some Background... After I bought my Raspberry Pi I went through a little period of uncertainty that most other owners have, asking myself “how do I make this thing useful?” It didn't take long before one of my colleagues created a GitHub repository for a..... Listed under: LED Projects


612.




Controlling LIRC From the Web In this post I will cover how to create a web interface + API for LIRC, the Linux Infrared Remote Control project. I will be using NodeJS and a RaspberryPi in this post, but the ideas generalize to other languages and hardware. This post will..... Listed under: Wireless projects

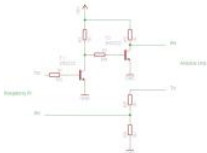
613.  Raspberry Pi B+ Getting Started Guide This is a tutorial on getting started with raspberry pi b+ model.If you like it please vote and follow s
Noobs Google raspberry pi noobs download it will be the first result.You can download network or offline I recommend the offline one
it..... Listed under: Development Board - Kits Projects

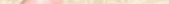


614.  Display and Control Section for AD9835 project Now that the power supply and filter section for the function generator have been designed and realised it is time to concentrate on the control section. We need a way of controlling the signal generator. Lets discuss buttons! We need buttons on the front panel..... Listed under: LCD Projects




615.  Communicating over serial between Raspberry Pi and Arduino. Now that my robot has a Raspberry Pi on board I wanted to be able to send commands from the Raspberry Pi to the Arduino telling the robot what to do. In the future I also want the Arduino to be able to send sensor..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Robotics - Automation Projects




616.  How To Boot Raspberry Pi With NOOBS In case you don't know, the raspberry Pi is a credit card sized computer. It was originally created to help youngsters learn how to program. Since the projects launch this tiny board has come a long way. There are several models of the Pi..... Listed under: Development Board - Kits Projects




7.  PDC8544 LCD python bindings for the Raspberry Pi Documentation and Python library module for interfacing a PCD8544 LCD screen to a Raspberry Pi. Cheap Nokia 5110 modules can be picked up on ebay with a breakout board for a few pounds. Further technical details for the LCD screen can be found in the..... Listed under: LCD Projects




8.  RKPTmdc Prototype PCB with Header for use with Raspberry PI Version 2 available with a DS3231 RTC circuit Main Features A low cost and simple method of prototyping Raspberry PI projects Includes a 26 way dual row breakout header for interfacing to Raspberry PI Manufactured using a double sided professional double sided PCB Incorporates a..... Listed under: Phone Projects




619.  Raspberry Pi (low level I/O electronics control) Topic Discussion Overview Installation from scratch Hardware Pin Out Raspberry Pi, HelloWorld for I/O pins Understanding UART, SPI, I2C port on Raspberry Pi Networking on Raspberry Pi Accessing Raspberry Pi through the network C Programming Python Programming Java Programming List of frequent used Commands Add..... Listed under: Other Projects




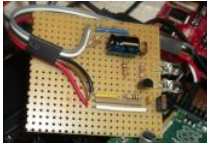
620.  PiCy – The Tiny Raspberry Pi Powered Robot! Build your own tiny Raspberry Pi based robot out of a few easy to obtain bits! You will need: A Raspberry Pi. A PiCy pack kit, which contains: Two motors and two wheels. A battery holder for two AA batteries with battery clip. Two 40mm..... Listed under: Robotics - Automation Projects




621.  Prototyping Circuit Boards Someone recently turned me onto prototyping circuit boards from dipmicro.com and wow! Awesome! (So you know, I am in no way affiliated with dipmicro, I was just really impressed) Yes, that's right, I'm excited about prototyping circuit boards. Let me tell you why, then let..... Listed under: [Blog](#), [Development Board - Kits Projects](#)




622.  Raspberry Pi lirc_pi – (IR Remote control) LIRC GPIO driver The driver: The driver is actually a modification of the lirc_serial module. I decided to create a new one separately because I couldn't hack it into the serial nor the gpio driver. The serial driver uses the DCD of the serial port, which is not..... Listed under: Development Board - Kits Projects




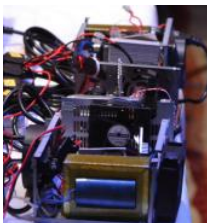
623.  WhatsApp on Raspberry Pi In this tutorial we will see how to use WhatsApp with Raspberry Pi. We will use the Yowsup library we had already used in these tutorials: WhatsApp message from Phidgets SBC , Phidgets WhatsApp - ask the status of your sensors. These days the library..... Listed under: Other Projects




624.  DDR DIMM SPD Adapter for Raspberry Pi All computer DDR memory today have little I2C EEPROMs to store vendor, configuration and module spec information. This is done to allow computer to detect memory type, and configure memory interface to correct speeds and voltages according to module spec. This mechanism is based on..... Listed under: Other Projects



625.  Building a Raspberry Pi Cluster – Part 2 The Grand Finale In a previous post on Building a Raspberry Pi Cluster, I wrote about how we built a cluster using several Raspberry Pis. This cluster was used for hosting the WSO2Con App. In this post we will take a look at the finishing touches..... Listed under: LED Projects



626.  IoT 101 Project: Stream Temperature from your Raspberry Pi “Hello World!” – This is likely the output of the first program you ever wrote when learning how to code. Setting up a device to stream temperature data is quickly becoming the de facto Internet of Things (IoT) “Hello World!” project. If printing “Hello World!”..... Listed under: Temperature Measurement Projects



627. ICStation Heart-shaped Colourful Dazzle Light DIY Kit 1. The circuit description This circuit is consist of the STC89C52 minimum main system and 32 colourful LED display components. It uses the STC89C52 Microcontrollers as the control chip and drives 32 I/O to control the 32 F5 colourful LED.(We have finished the

		Microcontroller program for the DIY..... Listed under: LED Projects
628.		Biosignal PI, an Affordable Open-Source ECG and Respiration Measurement System Farhad Abtahi 1,*; Jonatan Snäll 1, Benjamin Aslamy 1, Shirin Abtahi 1, Fernando Seoane 1,2 and Kaj Lindecrantz 1,3 1 School of Technology and Health, Royal Institute of Technology, Alfred Nobels Allé 10, Stockholm SE-141 52, Sweden; E-Mails: jsnall@kth.se (J.S.); aslamy@kth.se (B.A.); shirin.abtahi@gmail.com (S.A.); fsm@kth.se..... Listed under: Temperature Measurement Projects
629.		Geiger Counter – Radiation Sensor Board for Raspberry Pi tutorial Contents Manifesto The Board The Geiger Tube Types of radiation Supported Geiger Tubes Testing Sources Actuators From CPM to Sieverts Source Code Schematic Participate Buy Links and Documentation NOTE: All the code examples in this tutorial use the arduPi library. You can see the documentation..... Listed under: Sensor - Transducer - Detector Projects
630.		Use Raspberry Pi to Create Obstacle Avoiding Robot Chassis Raspberry Pi is quite suitable for robot creation. Its GPIO pins could be used to control the motors and sensors, and itself could work as a server, and get controlled via Internet. The Plan I am going to create a robot chassis, which could automatically..... Listed under: Motor Projects
631.		Raspberry Pi – Jack of all trades. Raspberry Pi is a sort of jack of all trades when it comes to being a single board computer based on the Arm processor. It can be a desktop, media player/streamer, web server, forensics machine, and do most of what all linux based machines can..... Listed under: LCD Projects
632.		Jig To Load a Bootloader and Upload Sketches To ATmega328P Note: I only write about what I know. Although there are many Arduinos and Arduino type products, I only have experience with the Arduino Uno Rev3. Likewise, the only Atmel microcontroller I know is the ATmega328P. A Little Background (well not so little) I have..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
633.		Bluetooth Speakers using Raspberry Pi hi guys long time since i wrote a tutorial, this tutorial tells you how you can use any old speaker lying around your house into a wireless bluetooth speaker, this can also be an cheap bluetooth audio device receiver for your car. This is not..... Listed under: Bluetooth Projects
634.		Raspberry Pi Powered Lego Car Two things have happened recently that have contributed to my tinkering hobby. Firstly - My Raspberry Pi arrived after a long (but worth it) wait. Secondly - My two girls (8 and 5) have got in to Lego and so slowly but surely I've been..... Listed under: Game - Entertainment Projects
635.		Raspberry Pi PC remote power switch control board The default I/O port of SD card is 8081, you can change it. Use putty, ID pi, password 5585, key “sudo nano /etc/apache2/ports.conf”, find out 8081 to change your desired port. Features: Plugs directly onto the Raspberry Pi GPIO socket Fits Directly over the Raspberry..... Listed under: Development Board - Kits Projects
636.		Raspberry pi print server A print server that tastes of pi. This project assumes that you have the latest version of raspbian (which can be downloaded at) https://www.raspberrypi.org/downloads/raspbian/. And an active internet connection. (When imaging the SD card be careful to select the right device otherwise BOOM! There goes..... Listed under: Other Projects
637.		rpp – Raspberry Pi PIC Programmer using GPIO Introduction Microchip PIC® 8-bit microcontrollers are quite popular amongst hobbyists, and I've used them for a long time in several of my projects. They are very cheap, use only 35 assembly instructions that are easy to learn, and most importantly they use flash memory, which..... Listed under: Raspberry Programmer Projects
638.		Control Android from Raspberry Pi Have you ever wanted to control your android smartphone or tablet directly from your Raspberry Pi? No? Me neither. I just thought it would be interesting to see if you actually could. You could use this feature to display your android screen during a presentation..... Listed under: Raspberry Android
639.		Raspberry Pi – Driving a Relay using GPIO There's something exciting about crossing the boundary between the abstract world of software and the physical 'real world', and a relay driven from a GPIO pin seemed like a good example of this. Although a simple project, I still learned some new things about the..... Listed under: How To - DIY - Projects
640.		Raspberry Pi and Arduino via GPIO UART In an attempt to get my Raspberry Pi talking to my Arduino I'm exploring various different options. The first was to just use the USB connection, but that was too simple. So, here is how to connect the two using the UART on the GPIO..... Listed under: Development Board - Kits Projects
641.		Medicine Reminder using Arduino Sometimes patients forget to take the medicine at the required time of medicines. And sometimes patient also forgets which medicine He/She have to take at required time. And it is difficult for Doctor/Compounder to monitor patients around the clock. To avoid this problem, we have..... Listed under: Medical - Health based Projects
642.		Web Based, Raspberry pi controlled, 2 channel relay mains control box. Using some off the shelf relays and some basic electronics components coupled with a Raspberry pi with basic HTML, PHP and javascript programming, this Web Based relay control box can be used to turn on or off devices that are connected to the box's plugs..... Listed under: Internet - Ethernet - LAN Projects
643.		Tank Day 23: Range and Bearing Step 1: Choose Sensors Two sensors were chosen for the Raspberry Tank's first foray into detecting its environment: An ultrasound rangefinder (SRF02) and a 3-axis compass (CMPS10), both ordered from robot-electronics.co.uk. Beyond their I2C interface, these devices were chosen largely for cost reasons, though they..... Listed under: Game - Entertainment Projects, Robotics - Automation Projects

- f

g+

in


p

r

w

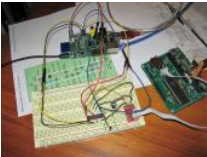
t

659.




PiPoE – powering a Raspberry Pi over Ethernet This project enables a Raspberry Pi, Beaglebone, or other small computer to be powered over an Ethernet cable. This very handy if you have a Pi somewhere where getting mains power to it is difficult, or if you want to run several devices from one..... Listed under: Internet - Ethernet - LAN Projects

660.




AVR/Arduino ISP programmer using the Raspberry Pi GPIOs Introduction As a fully-featured Linux computer there are many external programmers that can be used with your Raspberry Pi to program the Atmel AVR range of microprocessors. It's also possible to use the general purpose input/output lines (GPIOs) found on the Raspberry Pi to implement..... Listed under: GPS Based Projects

661.




Introducing the Raspberry Pi Model B+ Power Supply LADY ADA One of the most exciting updates/upgrades of the new Model B+ is a fancy new power supply. The power supply of a computer is terribly boring sounding, but its really important. A good power supply makes everything hum along cleanly. A..... Listed under: Phone Projects

662.



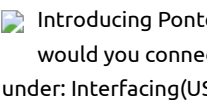
DIY SPY BOT PI Kit- Raspberry PI Spy robots are remotely controlled robots, equipped with a camera, transmitting video data to the remote area. A movable spy robot with a remote controller by using raspberry pi. The spy robot is made up of a USB camera, Wi-Fi adaptor, batteries and movable wheels..... Listed under: How To - DIY - Projects

663.




Setting up and running NOOBS on a Raspberry Pi In this instruction I will go over how to set up the Raspberry Pi and boot it into NOOBS for the first time. It is important to understand how to set up all of the hardware and how to set up the actual operating system..... Listed under: Development Board - Kits Projects

664.




Introducing Ponte: Arduino – Raspberry Pi Bridge (This is a collaboration between myself and my friend and purveyor of fine electronic bits, S.K. Pang) How would you connect an Arduino to a Raspberry Pi? Just plug it in via USB as you would normally do with an ordinary computer, right? That takes..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

665.




Raspberry Pi Website Hit Tracker You just made a funky neon sign flash in my living room. How? I have just completed my latest project which is a neon lamp which lights up every time someone visits my website. It's controlled by a little relay board I built out on..... Listed under: Development Board - Kits Projects

666.




Raspberry Pi Spectrum Analyzer with RGB LED Strip and Python Looking for a first project to try out on a Raspberry Pi, I though what better than a Spectrum Analyzer? (Sometimes this display is erroneously referred to as a graphic equalizer--that let's you change the sound, not display it) I was able to get it..... Listed under: LED Projects

667.




Raspberry PI: Connecting a HD44780 Display over I2C Bus some application, i.e. XBMC can show informations on a display by using LCDproc as driver. This post describes a way to connect a HD44780 display to a Raspberry PI by i2c bus. Let's start with the physical layer. This is the overview schematic on how..... Listed under: Video - Camera - Imaging Projects

668.




An MSF Atomic Clock for the Raspberry Pi The project is connected to GPIO 15 input pin 1 of my Raspberry Pi interface board. There is nothing special about this pin, its location is simply convenient with my layout.. Please be aware that this project will only work in the British Isles, because the transmitter..... Listed under: Clock - Timer Projects

669.




Use a bare Arduino as an RF signal processor for Raspberry PI 433mhz RF transmitters and receivers are really cheap, so you might be tempted to add a RF receiver to your Raspberry PI. But there is one problem: the Raspberry PI may not be fast enough, or may be blocked totally while it tries to keep..... Listed under: Development Board - Kits Projects

670.



Raspberry Pi Power Controller This article is a work in progress to create a power-controller for the Raspberry Pi based on a PIC microcontroller and MOSFET. The PIC implements an I2C slave to allow power control, and also to approximate the registers of a PCF8563 Real Time Clock (RTC)..... Listed under: Other Projects

671.



Open brain wave interface hardware you can go directly to Section 9 also. make high quality brain wave interface as low cost and small size is my over 20 years of dream. To do so need mass production, need work with investor to realize that way. not just only my..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

672.

Headless Raspberry PI WiFi setup (for mobiles) So you successfully confiured your RaspberryPi in a fully headless fashion, maybe with WiFi too, and you are very happy using it at home in your robotic projects... But when you go outside, at work or on any foreign network, once powered and connected to..... Listed



under: Wifi / WLAN Projects



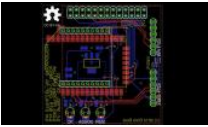
673. Creating a “Blinking LED” project for Raspberry PI This tutorial demonstrates how to attach a LED to the expansion connector on your Raspberry PI and to make it blink with a simple C++ program. First of all, in order to programmatically switch a LED on and off we need to connect it between..... Listed under: LED Projects



674. Airplay Multiroom radio with the Raspberry Pi, no additional hardware needed. Most ways to stream music to multiple sets of speakers cost more than it is worth. I don't think I have to say much about it, you probably wanted to do this in the past but it just seemed stupid to spend that much money..... Listed under: Wifi / WLAN Projects



675. AVC: Serial to I2C Bridge I finished designing, etching and silkscreening a new board last night and started populating it. It's a slight redesign of a board I did before last year's AVC. What's it for? Not telling yet. ☺ I can say this. It's an Arduino clone that will..... Listed under: Development Board - Kits Projects



676. Raspberry Pi XBee SMT backpack One of the earliest motivations for my work on the Raspberry Pi SPI driver was so that I could use some Digi XBee ZB SMT modules. These are basically the same as the normal XBee ZB modules for doing ZigBee with but are on little..... Listed under: Development Board - Kits Projects



677. Turn an old CRT Television into a Raspberry Pi Powered MAME Cocktail Cabinet Here I will show you how I went about building my arcade machine that uses a Raspberry Pi running MAME to emulate games. As everyones setup will be different this will be general in nature but will hopefully supply enough information so you can get started yourself..... Listed under: Game - Entertainment Projects



678. TiddlyWiki 5 on Raspberry Pi Server in 15 minutes Introduction Raspberry Pi's are inexpensive credit card sized computers conceived by Eben Upton and designed by the Raspberry Pi Foundation Team in the UK. They are now built in the UK as well. TiddlyWiki 5 is the latest version of TiddlyWiki which was created by..... Listed under: Other Projects



679. Get Started With Raspberry Pi Hello everyone. Welcome to my First Instrucatble. You may be asking yourself "I want a Raspberrry Pi, but I don't know how to start." If you have ever asked yourself this thought, than this is the right Instrucatble for you. In this guide you will..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



680. Powering a Raspberry Pi with a 5W solar panel My plan was to make a solar powered raspberry pi. To run a Facebook AIML chat bot written in c#. (In the daytime) What you will need: 1 x Raspberry pi (we used model B) 1 x 5 Watt solar panel with USB connector 2..... Listed under: Other Projects



681. Mapillary en Raspberry Pi Desde hace poco tiempo me he hecho fan de la comunidad Mapillary y su proyecto, he visto personas usar su smartphone, GoPro y algunos otros tipo de camaras para mapear su ciudad, es por eso que he realizado este proyecto para mapear mi ciudad con..... Listed under: Phone Projects



682. LED Blinking with Raspberry Pi One of the classic electronic analogy to "Hello World" is to make an LED blink. Raspberry Pi has 8 General Purpose Input/Output pins(4,17,18,21,22,23,24,25) which can be configured as input/output and turned on/off via software.In this Instructable I will be using python to control the..... Listed under: LED Projects



683. Turn Raspberry Pi ON w/ Remote Control I'm loving using my Pi with Openelec for my media center, but the need to pull the cord to cut power was just keeping it below the WAF(Wife Acceptance Factor). So I sat down and came up with this. In the future, the arduino will..... Listed under: Wireless projects



684. Raspberry Portable Pi Laptop Portability would generally be the main challenge with projects such as this; it can be difficult to get power off grid. However, in my case this is one hurdle which I am able to easily overcome; as with all of my other projects I have..... Listed under: Development Board - Kits Projects



685. Home Automation using Raspberry Pi, Arduino, Domoticz, MySensors. Hi Fellow makers, This is my first Instructable on Home Automation. The idea is to build a controller and wireless nodes to control and monitor. After a lot of hit and trial with many different controllers like OpenHab, DomotiGa, Ago Control, finally I decided to..... Listed under: Home Automation Projects



686. Make a Portable Computer Using a Raspberry Pi Have you ever wanted a portable computer you can take with you? This is the easiest way to build your own. For those of you who do not know what a Raspberry Pi is, it is a complete computer about the size of deck of..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



687. Easiest Raspberry Pi Camera Mount Ever I bought the camera for the Raspberry Pi, and the after market mount just didn't suit my taste. At the same time I also bought a clam-shell case (~\$6) I was padding the bill for free delivery, looking at the case it seemed that it..... Listed under: Video - Camera - Imaging Projects

688. A DIY Power Supply For Hi-Fi USB Audio With Your Raspberry Pi Overview This is a guide for building a DIY power supply/regulator for powering a Raspberry Pi and a USB audio output interface. The objective is to create a pure, regulated 5.0v power supply that allows the Raspberry Pi to run stably but also, more importantly,..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



689.



Raspberry Pi Bluetooth Hello, I'll teach you how to successfully install and use Bluetooth on your Raspberry pi. Just a heads up I'm assuming you have a version B and you've setup your raspberry pi already (for system preferences and ect.) Step 1: Hardware 1. You'll need a..... Listed under: Bluetooth Projects

690.



Raspberry Pi Robot controlled over Bluetooth This tutorial is based on a previous Instructable - Building robots with Raspberry Pi and Python The aim is to present an example of how to setup a Bluetooth serial connection with Arduino to control a Raspberry Pi robot. But lets take it one step further..... Listed under: Robotics - Automation Projects

691.



Raspberry Pi Water Cooler Hello, this is a step-by-step guide to building a water cooling system for the Raspberry Pi's ARM processor. It all started when I say this project. I was instantly captivated, the thought of water cooling a pi had never occurred to me but once I..... Listed under: Other Projects

692.



Raspberry Pi Case I made this case before my school offered 3d printing but i still decided to post it anyway. Step 1: Materials These are the materials youll need .• A block of wood • Acrylic • Raspberry pi • Screws • Nuts • Spacers Tools • Caliper •..... Listed under: Home Automation Projects

693.



Water Tank Overflow Alarm Wastage of water is quite prominent in urban as well as rural areas and overflowing of water tanks is a major reason for that. This water tank overflow circuit described here starts ringing as soon as the water tank becomes full. Thus, by warning the..... Listed under: Home Automation Projects

694.



How to use a kindle fire as a monitor for raspberry pi In this intractable i will show you how to use a kindle fire as a monitor for a raspberry pi. I had an old kindle fire that i got a few years back that i no longer use and i thought, why not use it..... Listed under: LCD Projects

695.



Raspberry Pi + Motorola Lapdock A few months ago I found through a MOOC at Universidad Galileo, that was possible to convert a Raspberry Pi in "almost" a laptop. This idea caught my attention, by turning this "micro" in an independent computer. I investigate how to do it and I..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

696.



Raspberry media player casing Look at this Raspberry board. Its is a good choice if you want to make your own internet and multimedia station to play HD movies, browse on the web watch Youtube trailers listen your MP3 collections for literally peanuts. All you need to do, plug all..... Listed under: Video - Camera - Imaging Projects

697.



Simple, scalable Raspberry pi garden irrogation This is one of the projects I'm currently working on. The idea behind the project is to build a simple yet scalable and eficiant garden irrogation, using as little resources as posible. The end product will be a IOT garden project, but I'll update you..... Listed under: Other Projects

698.



Open Source Home Automation Project using Arduino UNO + Ethernet Shield How Does it Work The main brain for this project is Arduino UNO Board along with Arduino Ethernet Shield to give it a wireless connectivity.Arduino runs a code to control a Relay board according to the input and also serves a web page through which..... Listed under: Home Automation Projects

699.



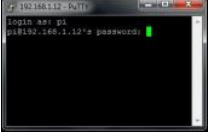
Raspberry Pi + Arduino Serial with LCD Screen Intro This is my Raspberry Pi info LCD, I wanted to try and get the Arduino and Raspberry Pi talking to each other through USB serial and I made this little project. The Raspberry Pi uses a python script to get the data and then..... Listed under: LCD Projects

700.



Raspberry Pi Internet Monitor In my house, you can often hear someone shouting "Is the Internet down?" Sometimes it is but most of the time it's a "user problem". I decided to build a gizmo that would make it easy to tell whether the internet connection was working or..... Listed under: Internet - Ethernet - LAN Projects

701.



Use ssh to talk with your Raspberry Pi. This brief guide explains how to use ssh to talk with your Raspberry Pi. You will need: 1 Raspberry Pi connected to your router (Monitor and keyboard.) If you are looking for a guide to access your Raspberry Pi from the internet look here: <http://www.instructables.com/id/Raspberry-Pi-as-webserver/>..... Listed under: Other Projects

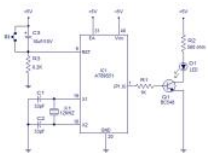
702.



Floppy Drive music /w Raspberry Pi Use your Raspberry Pi to control a floppy drive to make music! Step 1: Materials Raspberry Pi ATX power supply (can be found in old computers) Floppy drive Breadboard Wires (9 female to male and 1 male to male) Step 2: Connect the floppy drive..... Listed under: Sound - Audio Projects



Wireless projects



717.
- Blinking LED using 8051 This is the first project regarding 8051 and of course one of the simplest, blinking LED using 8051. The microcontroller used here is AT89S51 In the circuit, push button switch S1, capacitor C3 and resistor R3 forms the reset circuitry. When S1 is pressed, voltage..... Listed under: LED Projects



718.
- Piulator Portable Game System via Raspberry Pi This project was a lot of fun to put together. I was looking for a good Christmas present for my nephew, and decided that a Raspberry Pi influenced project would be cool. He likes gaming and computers, so this made sense. I made an identical..... Listed under: Game - Entertainment Projects



719.
- Shrink Your Raspberry Pi With MicroSD Card Slot The Raspberry Pi itself is about the size of a credit card, but it only has a standard full sized SD card slot. When you plug in a standard full sized SD card into it, the card sticks out of the outline of the Raspberry..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



720.
- Low Power Raspberry Pi Fileserver This is a low power home file server I built from a raspberry pi and two USB drive cases. I've mapped it as a network drive on all of my home computers, so we have one common repository for files, documents, and pictures. It's set..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



721.
- How to use and Arduino shield with the Raspberry Pi Adding Arduino shields to the Raspberry Pi can be a very big pain. You end up having a mess of wires running around and setting up the software is a challenge in it's own right. Here is a simple solution to start using your own..... Listed under: Other Projects



722.
- MCP3008 Raspberry Pi Breakout hat Howdy Y'all Back when I was working on the Raspberry Pi portable emulator that became the backseat system. I thought that I would want to use an analog joystick like several of the other builds. However I was trying to get it to work via..... Listed under: Development Board - Kits Projects



723.
- ThingSpeak Temperature Monitor with Raspberry Pi Step 1: What You'll Need A RaspberryPi BrickPi 9 V battery – for powering the BrickPi board and sensor Dexter Industries Thermometer Step 2: Signup for Thingspeak First signup for the new account in thingspeak at https://www.thingspeak.com Step 3: Login to Thingspeak Login to your..... Listed under: Sensor - Transducer - Detector Projects



724.
- Itreaduino Plus – ARM Cortex-A8 Dev-Platform ITEAD studio is based in Shenzhen, China, which is located with China's biggest electronics market as well as one of the most integrated electronic supply chains in the world. A vast number of exciting and innovative products are designed, sourced and manufactured around us every..... Listed under: Other Projects



725.
- AirPlay Radio with Raspberry Pi and WiFi Before I started working for Pelagicore I won two Raspberry Pi's (short RP) which they sponsored. One because I was one of the first people on the foss-gbg mailinglist which they started. It is for people from Gothenburg and surroundings who would like to join..... Listed under: Wifi / WLan Projects, Wireless projects



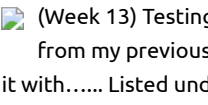
726.
- Raspberry Pi FPV on RC TerraDrone My progeny loves operating our Nerf TerraDrone named James. He is able to animate James while trying to stay out of sight so I got the idea of using the Pi Surveillance Project by Michael Castor from the April/May 2015 edition of Make Magazine to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Video - Camera - Imaging Projects




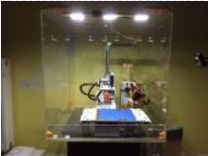
727.
- How to Make a Arduino+Raspberry Pi Robot Platform This is not the definitive story on Pi and Arduino orchestration. Just my version. Step 1: Berryboot 1. Get Berryboot. Berryboot will allow you to download several Raspberry Pi images. Step 2: SD Card Preperation Now extract the zip files to a blank SD card..... Listed under: Robotics - Automation Projects



728.
- Raspberry Pi 2 Media Center: Kodi on XBian Overview This guide walks through the construction and configuration of a home media center from parts to running system. After following these steps, you will have a running Kodi media server on a Raspberry Pi 2 in an Altoids tin case, ready for you to..... Listed under: Video - Camera - Imaging Projects



729.
-  (Week 13) Testing with 16x2 LCD screen and Raspberry Pi using Fritzing Here, i want to testing between 16x2 LCD screen with Raspberry Pi. As you can see from my previous blog, the circuit have been construct based on this connection. If there had no problem with all the connection, I will proceed to combine it with..... Listed under: LCD Projects



730.
- Using the Raspberry Pi to control an ATX power supply I'm really enjoying my new 3d printer, but I just can't leave my laptop connected to the printer all the time. I know that i could simply use SD cards or use another host computer, but there are better options. In order to untether myself..... Listed under: Other Projects



731.
- Simple Snap Together Raspberry Pi Wood Case This is a simple low cost wood case for the Raspberry Pi version 1 rev B that I built based off the Adafruit Pi Box (<http://www.adafruit.com/products/859>). Assembly is simple, all the pieces snap together so no glue or nails are needed. I used this project..... Listed under: Other Projects

732.
- Raspberry Pi Colored Server Case Mod The purpose of this mod is to create a case for the Raspberry Pi, based on Adafruit's case created by Mike Doell. It will have a better airflow and be easily identifiable by color. For this project you'll need: Heatsink Heatsink compound A Mike Doell..... Listed under: Other Projects



733.

Interfacing a VFD display to the raspberry pi I’m in the process of building a home automation controller using my Raspberry Pi, and I figured it would be cool if it could display the current song and artist on my Pandora player. There were many options for a display — I could go……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



734.

Modelling a Raspberry Pi case – from Cardboard 2. Light Pipes This is a very common technique used in design - where for economy you want the lights (LEDs) mounted on a circuit board, but the board is positioned away from the case or user-interface. By taking a piece of clear plastic, one……. Listed under: Development Board - Kits Projects



735.

Raspberry Pi: Launch Python script on startup As I've been working on my own Pi projects, I've been discovering many little tricks and tips by scouring various websites and assembling information, testing and optimizing. So, here is another one of my "meat-and-potatoes" Raspberry Pi Instructables. This Instructable will show you how to……. Listed under: Development Board - Kits Projects



736.

Raspberry Pi online SSH (easy way) Raspberry pi is a mini computer that can be carried easily. Usually people use Raspberry Pi as an embedded platform. And mostly people control or developing something with their Raspberry Pi using SSH protocol. because it much more simple and doesn't take many space. Some……. Listed under: Wireless projects



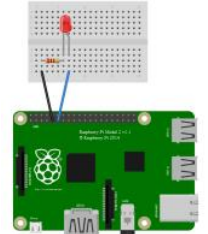
737.

Dedicated Automobile Traffic Monitor with Raspberry Pi Step 1: The screen The screen I have found a nice screen on ebay for ~18€, a 3.2" TFT LCD Touch Screen, cheap and small is ideal. - Installing raspbian-DVK512-12040725.img To use the touch screen, we run under a Raspbian distribution, you can download the……. Listed under: Phone Projects



738.

Wireless monitor tank robot based on raspberry pi Diy a wireless monitor tank is not difficult based on the raspberry pi, shown in the following picture. Step 1: Materials for the rc tank raspberry pi based monitor 1. Raspberry pi board: http://www.smartarduino.com/original-rpi-raspberry-pi-pie-512m-2-generation_p93783.html 2. Full-functional raspberry pi shield http://www.smartarduino.com/raspberry-pi-pie-rpi-shield-enhanced-v2-release-fully_p94186.html description: All the features include: …… Listed under: Wireless projects



739.

Let’s get physical with Docker on the Raspberry Pi With Docker on the Raspberry Pi we are able to connect cloud tools with IoT devices. So how can we interact with the real world from inside a Docker container? Let’s see and get physical… To keep the tutorial simple we will use the binary……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



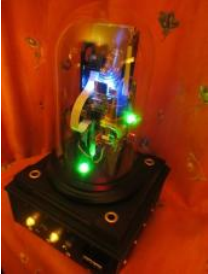
740.

Raspberry Pi Dedicated Internet Radio and Music Player Have you ever wanted something to fill your day with lovely sounds but didn't want to dedicate a PC to this purpose? The Raspberry Pi provides exactly what we need, and with a few component parts laying around, you can control it with a few……. Listed under: Internet - Ethernet - LAN Projects



741.

Raspberry Pi DropCam Alternative I was looking for a way to check in on my house while away as well as have any motion captured and uploaded to the internet as a security camera. Doing a little research online and realizing that I had a raspberry pi and a……. Listed under: Video - Camera - Imaging Projects



742.

A Raspberry Pi or Mr. Clock-workers server Part list: Picture No. 1 Raspberry PI model B with 512 MByte ram Raspberry PI camera 16 GByte SD card WLAN USB stick (TP-LINK TL-WN722N) Freecom 500 GByte USB hard disk 4 - Port USB - HUB (Typhoon) Glasdome 11" high / 6,3" diameter Picture……. Listed under: Clock - Timer Projects



743.

How to get aMule on Raspberry Pi In this instructable I'll show all the steps to get a nice, web managed, aMule node on a Raspberry Pi. The idea born from the need to have a low-cost and low-consuming aMule node always running and connected to internet. I don't like to use……. Listed under: Internet - Ethernet - LAN Projects















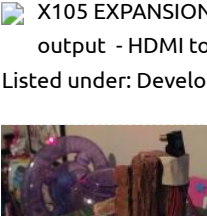

744.

The best Raspberry Pi 2 starter kits compared and reviewed The Raspberry Pi is an amazing low-cost computer. Unlike the ever-popular Arduino microcontroller, the Raspberry Pi was designed to be a full-blown computer from the start. It can run various flavors of Linux/Unix, act as a Media Center, and even moonlight as a Microcontroller. First……. Listed under: Other Projects



745.

Bitcoin Mining using Raspberry Pi Want to mine some bitcoins? Want to earn for free? Have a pi not being used? Then lets mine some bitcoins! Step 1: What is BitCoin? If you don't know already, Bitcoin is a virtual currency set up in 2009. Bitcoin has grown in reputation……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

746.		Welcome! rSense "Makashitakun" is the automated vegetable cultivation system which is built up with Arduino and Raspberry Pi. Arduino is used for collecting sensors data and handling actuators. Raspberry Pi is used for controller which manage all Arduino units to work properly and hooked up..... Listed under: Other Projects
747.		Raspberry Pi L298N Dual H Bridge DC Motor There are not any examples that I could find that properly show how to get a simple DC motor working with RaspberryPi. This is a simple tutorial for "How to make a motor turn." Robots, wheels, conveyors, and all sorts of stuff can be made..... Listed under: Motor Projects
748.		Raspberry Pi Soil Moisture Sensor Agriculture consumes between 80 - 90% of all freshwater in the United States. An easy way to conserve water in the agricultural sector is to install a soil moisture sensor. Soil moisture sensors measure the amount of water in the soil to maintain consistent and..... Listed under: Sensor - Transducer - Detector Projects
749.		Interfacing hex keypad to 8051 Hex keypad. In an 8051 microcontroller, it requires 12 cycles of the processor clock for executing a single instruction cycle. For an 8051 microcontroller clocked by a 12MHz crystal, the time taken for executing one instruction cycle is 1µs and it is according to the..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
750.		Raspberry Pi “Google Glass” – simple and sleek I have had this completed for a while now, but haven't spent the time to make this Instructable which is actually the crux of my project. At the release of the Raspberry Pi, I immediately thought how amazing this would be as a wearable computer..... Listed under: Internet - Ethernet - LAN Projects
751.		Raspberry Pi Portable Games Console Building this Portable Games Console is possibly the most fun I've had using a Raspberry Pi. And it's not just the build that's fun; I've now got a fully functioning games console, so I can play all my favourite old arcade games, on-the-go! There's a..... Listed under: Game - Entertainment Projects, How To - DIY - Projects
752.		Touch Display for Raspberry Pi We add to Raspberry Pi a TFT touch screen to display the system console, movies and favorite photos or control a relay board ... at your fingertips, literally! To avoid using an HDMI monitor the cost well above that of Raspberry Pi, in previous articles we..... Listed under: LED Projects
753.		Turn your Raspberry Pi into a desktop PC How to turn a credit card sized, \$35 computer into a fully functional Desktop PC with surprising good performance. Step 1: Installation 1. download NOOBS LITE from www.raspberrypi.org/downloads. 2. copy contents of zip folder onto root of SD card. 3. Connect Pi to monitor, keyboard,..... Listed under: LCD Projects
754.		Ultimate Raspberry Pi Configuration Guide The Raspberry Pi is a great thing: it is real computer, it is cheap (\$40), it can interface with electronics, talk to the web and has full HDMI support. However it runs on Linux, which I have a love-hate relationship with. I love the idea of..... Listed under: Wireless projects
755.		Connect-Program Raspberry Pi and a MM5451 LED Display Driver The subject here is connecting the Raspberry Pi to a MM5451 LED display driver. This is written in Python to demonstrate bitwise programming and shift register operation. Using only two input pins (clock and data) for serial date input produces 35 open drain outputs. The..... Listed under: LED Projects
756.		Raspberry Pi Temperature Logger via Radio This project makes use of a raspberry pi, to read the temperature of several radio sensors, and store them on a Sqlite database. The same raspberry pi is used to serve webpages with the graph of the acquired temperatures. See live demo here. Step 1:..... Listed under: Radio Projects
757.		X105 EXPANSION BOARD KEY FEATURES Input Voltage - 6V to 23Vdc converted to 5V, 3A via step-down DC/DC converter to power the Raspberry Pi VGA output - HDMI to VGA converter supporting up to UXGA (1600×1200) and 1080p with 10-bit DAC RS232 serial communication - Control the Raspberry..... Listed under: Development Board - Kits Projects
758.		Turn your Raspberry Pi into a Hamster Fitness Tracker Have you ever wondered just how much your hamster runs throughout the day/night? How far? How fast? My 9 year old daughter did, and we decided to find out. Turns out, it was pretty easy, and the results were unbelievable. Here are the supplies you..... Listed under: Sensor - Transducer - Detector Projects
759.		ICStation Electronic Dice DIY Kit 7pcs 5mm Red LEDs Description Electronic Dice Kit Instructions Electronic dice kit is based on the NE555 oscillator circuit and fun circuit CD4017 counter display kit. Can simulate the dice, make fun of the game. One. Kit parameters: Supply voltage: 4.5-5V Dimensions: 74 * 35mm Two. Function play: When..... Listed under: How To - DIY - Projects, LED Projects



774.



Autonomous, Cardboard, Raspberry Pi Controlled QuadCopter Step 1: Materials Cardboard from the recycling bin, The sheet we we used was 32"x20" with a thickness off around 4.1mm. A large clean box should do. Motors from Hobby King, 4x + Propeller clamps, We used Turnigy D3530/14 1100KV Brushless Outrunner Motor at \$14.56 each..... Listed under: Development Board - Kits Projects

775.



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

776.



Setting up a PiFace with your Raspberry Pi This is a basic guide aimed at beginners who have just received a Raspberry Pi / Pi-face and want to know how to set it up, I felt the need to write this up after receiving a PiFace and not be able to find any..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

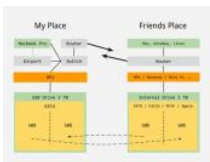


777.



How to Make a Raspberry Pi Media Panel (fka Digital Photo Frame) The goal of this project was to create a low cost Raspberry Pi Media Panel--a nice looking screen that could stand in the living room or attach to the refrigerator with the primary purpose of streaming personal photo and video content full time, but also..... Listed under: LCD Projects

778.



Redundant cloud storage with a friend and a Raspberry Pi Do you enjoy the many benefits of cloud services but do you also like to be in full control of your own data? Maybe you are worried about privacy or maybe you just want a little more flexibility. In my case I wanted to have..... Listed under: Other Projects

779.



Smartphone Garage Door Opener I had an extra Raspberry Pi laying around from when I ordered two of them a few months ago. I used the first one for a media center and it runs XBMC flawlessly allowing me to watch downloaded movies on my television. I pretty much..... Listed under: GPS Based Projects

780.



Coffee Table Pi The purpose of this project is to create a modern slimline version of an arcade cocktail cabinet. Also to do other tasks such as browse web or write emails with the use of a wireless keyboard and mouse. The 24 inch LCD screen mounted in..... Listed under: Home Automation Projects

781.



Raspberry Pi Playstation Mod I've always been a gamer so but was more a C64 person back in the day so we never really had a console as a kid. I always loved popping around to friends and playing things such as Mario Kart as well as a host..... Listed under: Game - Entertainment Projects

782.



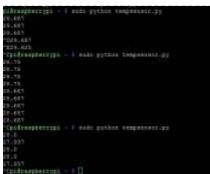
Port a Raspberry Pi Project: The eventual result of this instructable is, a portable (self powered) raspberry pi system to run field experiments. Part 1 Small inexpensive portable system that includes, Computer (RPI), Monitor with Audio speakers (Secondary screen from refurbished Auto DVD player \$29 including the DVD player to be..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

783.



Raspberry Pi moving timelapse Step 1: Connect the Camera So to connect the camera is quite simple and there is a lot of help online. The official help video is here: <https://www.raspberrypi.org/help/camera-module-set...> but I found this to be more helpful <http://thepihut.com/blogs/raspberry-pi-tutorials/1...> once installed and you have enabled the camera..... Listed under: Video - Camera - Imaging Projects

784.



Read temperature with DS18B20 | Raspberry Pi 2 Hello! This is my first instructable project, so it won't be as professional as others! We are using DS18B20 temperature sensor to get the temperature of your room. Enjoy! Step 1: Supply You will need: The sensor itself DS18B20 <http://www.ebay.com/itm/Waterproof-Digital-Thermal...> Resistor (I'm using 4,7k Ohm)..... Listed under: Temperature Measurement Projects


785.



Solar Powered Raspberry Pi Step 1: What You need A raspberry pi A solar panel (with built in charger controller or a Solar Charging Regulator) A car power socket A usb car power adapter A battery and some wire Step 2: Connecting the Battery First off we need to connect the..... Listed under: Solar energy projects

786. Model Railway Automation with Raspberry Pi. The popular and inexpensive Raspberry Pi1) tiny PC offers some interesting I/O like I2C and GPIO. Because the I2C bus is a common and standard one, the idea to use it for Model Railway automation was born in 2013. Together with Peter Giling, who lives..... Listed under: Other Projects



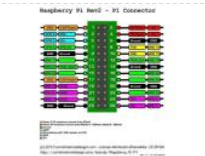
787.  DIY Home Security and Automation with Raspberry Pi 2 In this instructable I will detail my methods for creating a fully custom Home Security and Automation System. This is a work in progress, and as I will be adding to it as I go. For now I will provide a breakdown of the goals..... Listed under: Security - Safety Projects



788. Raspberry Pi, Internet Radio Step 1: You Will Need... Depending on the radio you are going to install your Raspberry Pi into, your design will vary and thus the parts and equipment required will also. Below is a generic list based on what we used, it is not complete..... Listed under: Radio Projects, Wireless projects



789. Raspberry Pi Controlled Aquaponics Aquaponics /ˈækwəˈpɒnɪks/, is a food production system that combines conventional aquaculture (raising aquatic animals such as snails, fish, crayfish or prawns in tanks) with hydroponics (cultivating plants in water) in a symbiotic environment. In normal aquaculture, excretions from the animals being raised can accumulate..... Listed under: Temperature Measurement Projects



790. Introduction to controlling GPIO pins with Python Setting up your Pi for GPIO programming You need to install a few things to get Python to talk to the GPIO pins and control them. If you're using the standard Raspian OS, it's an easy affair. Fire up your terminal if you're in the..... Listed under: LED Projects



1. WiFi – Access Point out of a Raspberry Pi (Repeater) What do you need? A Raspberry Pi, model B. A boot SD card for the Raspberry Pi. A USB WiFi device that supports "Access Point" mode. An Ethernet cable to connect to the local network. How does it work? The Raspberry Pi is configured as..... Listed under: Wifi / WLAN Projects



2. Radio Caroline on the RaspberryPi The Swinging 60's This is an appropriate label for the 1960's for 2 reasons: (1) it was a decade of great change, especially regarding popular music & fashion, (2) You have to now be in your 60's to have experienced it as a 1960's teenager..... Listed under: Radio Projects



793. Play Music on Raspberry Pi Using XMMS2 Introduction I installed and trialled the following music/media players in my Raspberry Pi: rhythmbox - Crashed every time I clicked on a song audacious - Did not respond every time I clicked on a song mplayer - Worked as expected clementine - Did not respond..... Listed under: Sound - Audio Projects



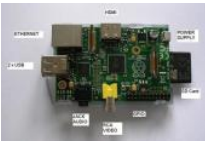
794. Raspberry Pi Irrigation Controller Gardening improves health and quality of life, connecting us to our local environment. Plus, you can eat organic fruits and veggies at very little cost. Yet for all these fantastic benefits, remembering to water can still take a backseat to our busy lives. Fortunately, home..... Listed under: Home Automation Projects



795. Build your own Raspberry Pi Mini 3D printing monitor While Adafruit's builders have built up a reputation for constructing very cool and original 3D printed toys, perhaps the most impressive of all their designs was the 3D printed Raspberry Pi Mini Computer, an actually working and customizable pc housed in a 3D printed structure..... Listed under: LED Projects



796. Laser Harp with Tah and Raspberry-Pi This valentines we made this wooden Harp and used Laser and Light Dependent Resistors (LDR's) to play music. I will not be showing you how to make the wooden structure, but you can find the images with exact dimensions if you want to use them..... Listed under: How To - DIY - Projects, Sound - Audio Projects



797. Installing and Using Pidora OS on Raspberry Pi WHAT IS RASPBERRY? Raspberry is a new (one year old), ultra small (credit card size), and cheap (35USD), Linux computer. The CPU is an ARM processor at 700MHz with 256 Mb (type A) or 500Mb (typeB) of RAM. The flavors of Linux for Raspberry..... Listed under: Development Board - Kits Projects



798. Turn a keyboard into a Raspberry Pi case for around \$20 or less. My first published instructable. I wanted to have a cover for my RPi, but didn't want to spend a lot to get one. I remember seeing one online and thought I could do something like this: <http://www.howtogeek.com/121814/turning-a-keyboard-into-a-computer-with-raspberry-pi/> on the cheap. Sure, mine didn't turn out as..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

799. Raspberry Pi: Minecraft Server These instructions will provide you with a list of requirements and steps for configuring your own Minecraft server using the Raspberry Pi. Once complete, you will be able to access and play with your friends from across the world on your Raspberry Pi. Step 1:..... Listed under:



Internet - Ethernet - LAN Projects



800. Raspberry Pi and GPIO pin: Controlling an LED with Bash and Python To this effect a LED, resistor 330 ohmios, Wire, and protoboard, or tin and a soldering. Also need our Raspberry tenga yes Raspbian preinstalled, if not your case, you can see how to do it in the following link directory. Mounting the circuit You can..... Listed under: LED Projects



801. OBD-Pi Step 1: Hardware Required: Raspberry Pi Model B or B+ Aftermarket head unit (Note: Must support Auxiliary input) Plugable USB Bluetooth 4.0 Low Energy Micro Adapter 2A Car Supply / Switch or Micro USB Car Charger ELM327 Bluetooth Adapter or ELM327 USB Cable RCA cable..... Listed under: Bluetooth Projects



802. Robot Using Raspberry Pi & Bridge Shield The Bridge Shield is a board for students, hackers & researchers. You can use it along with a Pi or Arduino Uno to create cool DIY projects with ease. This will be an open source board and we are presently designing the second generation. We..... Listed under: Robotics - Automation Projects



803. Arduino & Raspberry Pi Camera Interface Yes,we learned that we can take mobile phone camera modules from almost all mobile phones to inteface them with our advanced hobby electronics projects just as with any other standard add-on modules. Since this calls for an appropriate microcontroller, it is better to use Arduino..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



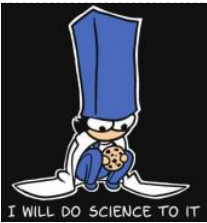
804. Mechanical Pi As part of the semester topic „Techno Legacy“ David and I decided to focus on pocket calculators. These devices become more and more irrelevant due to the universal integration of their functionality into major digital devices, primarily smartphones. While doing some research on calculators and..... Listed under: Calculator Projects



805. Raspberry Pi Wi-Fi Media Server These instructions will provide you with a list of requirements and steps for configuring your own local Wi-Fi media server using the Raspberry Pi. Once complete, you will be able to plug a USB drive into your Raspberry Pi and provide the drive's content across..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



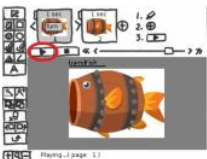
806. Raspberry Pi to Go: How to Wire 18v Portable Pi Power The versatile system-on-a-chip Raspberry Pi board seems to have something for everyone: plenty of ports for display, sound, and USB peripherals; a pin header for relaying inputs and outputs from the physical world; and space for a dedicated camera module, which makes it great platform..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



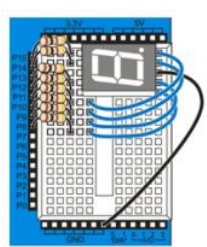
807. IBeacon Entry System with the Raspberry Pi and Azure In late March I went to a hackathon at Universal Studios. We created a system where guests could bypass the queue line by completing a series of tasks that would lead them around the land the ride is in where the average completion time was..... Listed under: Other Projects



808. DTRONIXS Mini PiIO Protoboard Hot on the heels of the PiFace, to add to my collection of Raspberry Pi interface boards comes the Mini PiIO Protoboard from DTRONIXS. Top photo is the base board sitting on a Raspberry Pi, the 2nd one is the board made up with a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



809. Make animation from Openclipart's SVG with Raspberry Pi This is an Instructable which describes the process of making an animation from Openclipart's SVG. Openclipart library is a collection of 100% license-free art that you can use for any purpose. I will explain this Instructable for the Raspberry Pi user. If you are a..... Listed under: Other Projects



810. Seven-Segment Display A 7-segment display is a great way to display numbers using your Propeller. You can find these in many products that need to display numbers in a simple way, like clocks, kitchen appliances, or digital scales. This display uses seven LEDs arranged in a special..... Listed under: LED Projects



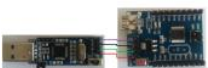
811. Installing RetroPie/EmulationStation onto Raspberry Pi 2 Model B+ (Playstation 1 Emulator Included!) Goal Installing RetroPie through Raspberry Pi's OS (Raspbian) and also enabling Playstation 1 Emulator in RetroPie. I'll also teach you how to write images on your Mac or Windows PC as well (no worries :D). This tutorial is for Raspberry Pi 2 B+ Models. Any..... Listed under: Other Projects



812. Control your old film camera with a Raspberry Pi Vintage Pi Recipe Using the techniques provided here, you can control a film SLR camera and a USB GPS receiver with a Raspberry Pi. Using Raspberry Pi to control motors, LEDs, digital cameras, and other sorts of modern peripherals is nothing new. However, you can..... Listed under: Video - Camera - Imaging Projects

813. Make a secret IR-camera security raspberry pi unit Did you ever wanted to know what's going on in your room, when you're not at home? Did you ever wanted to know who's entering your room and grubbing around in your things? Did you want to have a robot friend you can send messages..... Listed under: Video - Camera - Imaging Projects



814.  ICStation STM8 Minimum System Board 1.Features 1.Control chip is STM8S003F3P6 2.All pins can be available,and mark pins,but male pins should be welded by customers in person(Customers should provide your own male pins) 3.Support SWIM debug mode 4.There be two power supply mode,USB MINI wire and 2.54 male pin 5.You can..... Listed under: Development Board - Kits Projects



815. All Weather Solar Powered Raspberry Pi Here I am going to show you how to set up a solar panel, buck convertors and batteries to create a solar power solution that will keep your pi powered 24/7. A great idea for your personal server or timelapse projects. The solar panel is..... Listed under: Solar energy projects



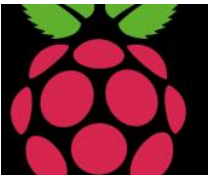
816. Red Heart-Shaped Flash LED DIY Kit 18pcs LEDs Description Red Heart-Shaped Flash LED DIY Kit 18pcs LEDs Circuit board with 1.5mm high-quality all-glass plate processing technology, the pad large, thick wire, fly line rarely (only 3), component layout and beautiful, copper surface using environmentally friendly antioxidant treatment. Using 9 SMD components, easy welding..... Listed under: How To - DIY - Projects



817. Raspberry Pi Sega Mega Drive/Genesis II Case I received my Raspberry Pi and decided I needed a case. I didn't have much available to me in terms of laser cutters, 3D printers or woodwork skills etc. so I thought laterally. I'd previously had the idea of using the Pi as an emulator so I thought,..... Listed under: Other Projects



818. How to Send a Temperature Emergency SMS Using Tracking Kit (GPRS + GPS) Contents Introduction Step 1: Connection Step 2: The code Links and Documentation 1. Introduction Go to index This tutorial allows the user to measure the temperature of an object. When the temperature is 0°C or less, a text message is sent to a mobile phone..... Listed under: GPS Based Projects



819. Reduce overhead due to network drive on Raspberry Pi Problem We add a line entry to /etc/fstab when Raspberry Pi needs to automatically mount a network drive. The problem with this approach is that: Raspberry Pi needs to mount the network drive from the point of when booting up to shutting down. In other..... Listed under: Raspberry Programmer Projects



820. Make An Auto-Locking Office Door with Smartphone Proximity Sensor Psst – want some high tech protection for your home office, or a secret lock for your “workshop” (ok, you got me, it’s actually a dungeon/gaming room) that the kids won’t be able to figure out? We’ve got you covered. Let’s build a DIY smart lock that..... Listed under: Sensor - Transducer - Detector Projects



821. Weather station based on Raspberry Pi This is a simple project for a weather station. Initially it reads temperature, pressure and humidity. Next step is to measure wind direction and after that wind speed. The base of the project is a Raspberry Pi A+ which was chosen by its small consumption,..... Listed under: Temperature Measurement Projects



822. Raspberry Pi digital Hall sensor in JAVA All right this is the review on the next two lessons on linear hall sensors. Lesson 02 uses an analog linear hall sensor and an analog to digital conver IC ADC0832. The lesson 03 uses a linear hall sensor with added comparator, which allows some..... Listed under: Sensor - Transducer - Detector Projects



823. How to Repair a Broken Raspberry Pi SD Card Slot It's pretty easy to break the SD card slot on a Raspberry Pi (I broke mine by dropping it on the SD card). If you break yours, there's no need to cry over spilled Pi. Replace the disappointing SD card slot with a new one..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



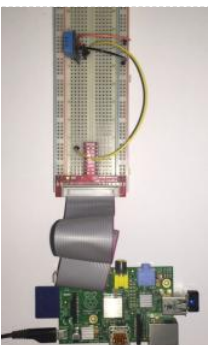
824. Easy DIY baby crying detector with Raspberry Pi In this instructable we will learn how to make a simple yet effective baby monitor that detects and alerts you whenever the baby is crying. We used Philips Hue as an alert system but you can choose a different item or channel to get notified..... Listed under: Sensor - Transducer - Detector Projects



825. Raspberry Pi world web cam Concept: The broadband Internet that you use in your house for 24*7 might be costing you around \$9 to \$35 per month , add another \$150 (one time) to it and you have your own home surveillance system which will monitor your home 24*7..... Listed under: Video - Camera - Imaging Projects






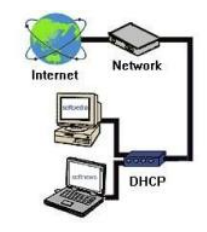
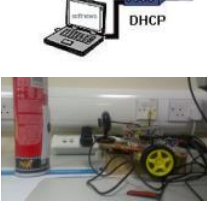








826. How to make a Raspberry Pi Arcade with no programming Setting up a Raspberry Pi arcade is actually really easy, thanks to a Linux distribution called RetroPie. You don't need to do any programming or setup, just install the image on an SD card. This will allow you to use the arcade with a keyboard..... Listed under: Game - Entertainment Projects



827. Home (Room) Temprature and Humidity Monitor with Web Based Chart – Raspberry Pi Simple way to monitor your, Home ,room, garage small factory or any other places Temperature and Humidity from anywhere in the world via internet. It very fun and very simple. Step 1: The Concept The Raspberry Pi will get the Home(Room) Temperature and the Humidity..... Listed under: Temperature Measurement Projects

828.	 <p>GPS Module for Arduino and Raspberry Pi Introduction Ingredients: 1 x GPS module 1 x Antenna 1 x Arduino Uno or 1 x Starter Kit for Raspberry Pi 1 x Two small wires (Red and Black) 1 x PC Preparation Time: The GPS module for Arduino and Raspberry Pi..... Listed under: GPS Based Projects</p>
829.	 <p>Raspberry Pi GPIO Expansion Cable from a Used IDE Cable Rev B of the Raspberry Pi ships with a 26 pin GPIO port and my first dilemma after bringing up my Pi was, how was I going to break out the Pi's GPIO pins so that I could easily access them for design work? I..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects</p>
830.	 <p>Breadboard One A typical Mixed Signal Circuit. We designed Breadboard One as the first BitScope Ed project because it's a simple mixed signal circuit which explains the key elements of modern mixed signal systems. A Mixed Signal Circuit is one which has both analog and digital components. In analog circuits the currents..... Listed under: Development Board - Kits Projects</p>
831.	 <p>Setup a Raspberry Pi PHP web server Lighttpd is a lightweight web server, with all the essential functions of a web server, PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. This is a tutorial on how to install Lighttpd and PHP on..... Listed under: Internet - Ethernet - LAN Projects</p>
832.	 <p>Raspberry Pi and Arduino Connected Over Serial GPIO Raspberry Pi Serial GPIO Configuration 0. If you have not seen my article on how to remote access your Raspberry Pi, take a look here: http://blog.oscarliang.net/setup-raspberry-pi-for-remote-access/ 1. In order to use the Raspberry Pi's serial port, we need to disable getty (the program that displays..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects</p>
833.	 <p>Raspberry Pi based wall avoiding robot – FabLab NerveCentre Please note: This instructable is not complete - but may be helpful Published to allow the excellent people at Derry's NerveCentre to take the code out to schools I hope to get back to this but my current job is keeping me from it for..... Listed under: Robotics - Automation Projects</p>
834.	 <p>Power over Ethernet for Raspberry Pi I recently purchased a Cisco Catalyst 3560 48 port PoE Switch and soon realized that I didn't need 48 ports. I soon started thinking of ways of using that power for other needs like charging phones or running devices. It then hit me that I..... Listed under: Internet - Ethernet - LAN Projects</p>
835.	 <p>Raspberry Pi Kodi network media player for less than \$60! Kodi (also known as XBMC) is a great network media player that can access not just the files on your USB and network, but great internet content such as Youtube, Syfy, HGTV and more. Kodi is a piece of software that you can download and..... Listed under: Sound - Audio Projects</p>
836.	 <p>Multichannel Professional Data Logger on Raspberry Pi – Part 1 See the Part 2 for the hardware and Part 3 for the software implementation. In this series of articles I'll explain how to build a multichannel Data Logger, capable of collecting voltage, current and temperature measurements over the specified intervals of time. Our alternate goal..... Listed under: Temperature Measurement Projects</p>
837.	 <p>USB relay module for Windows, Linux, Raspberry Pi USB is a very well documented and reliable interface. Nearly every computer system today is equipped with one or more USB host connectors. Sometimes you need some inputs and outputs for tasks surrounding your PC or you have a cool idea for an automation with..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects</p>
838.	 <p>Back-of-Monitor Raspberry Pi Mount As Raspberry Pi computers begin to appear all over the world, people start wondering what to do with them. The first thing I wondered (after I got it up and running) was "how the heck am I going to get this mess of cables off..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects</p>
839.	 <p>Remote control with Raspberry Pi and Phidget WebService Enable your Raspberry to control relay, led, sensor and digital input remotely with Phidget WebService. "The Phidget WebService is a background process that broadcasts all events and data from a USB Phidget over the network: It uses link local addressing which allows you to use..... Listed under: Interfacing(USB - RS232 - I2C -ISP) Projects</p>
840.	 <p>Temperature Monitoring on the Raspberry Pi Overview The Raspberry Pi is a small single-board computer (SBC) developed here in the UK, by Raspberry Pi Foundation. It runs various versions of Linux on ARM and has a set of I/O pins which you can use to attach external components such as sensors,..... Listed under: Temperature Measurement Projects</p>

841.	 <p>Adafruit ProtoPlate for the Rasbperry Pi As part of my Big Trak refurbishment (not going as well as I wanted it to), I decided to use the Adafruit ProtoPlate to mount the additional electronics on. If you're not familiar with it, then this is it: So it's a double-sided..... Listed under: LED Projects</p>
842.	 <p>MAME gaming table with Raspberry Pi Inspired by similar projects online, I've been working with a neighbour to build a pair of coffee-table MAME-based retro gaming tables. The more compact one is mine; the larger with two sets of controls is his. Photos of both are used in this instructable. These use..... Listed under: Game - Entertainment Projects</p>
843.	 <p>Driving the Max7219 with the Raspberry Pi The max7219 lets us control lots and lots of LEDs using just a few Raspberry Pi pin-outs. No hassles with multiplexing, latching, refreshing or using up all your outputs – it handles everything for us. We just send commands to the max7219 and we can..... Listed under: LED Projects</p>
844.	 <p>An elegant, stacking, Real Time Clock for Raspberry Pi If you want to build a good Real Time Clock for your Raspberry here's the tutorial you were looking for! This is a revised and simplified version for Instructables made out of this article at my personal blog. Difference is mainly in the structure and..... Listed under: Clock - Timer Projects</p>
845.	 <p>How to connect a Raspberry Pi to a Wi-Fi network So you want to connect a Raspberry Pi to the internet, but your computer lacks an ethernet connection, or you lack an ethernet cable. What to do? What you need: Raspberry Pi microSD card HDMI cable USB power adapter (that can provide at least 600mA..... Listed under: Wireless projects</p>
846.	 <p>Raspberry Pi as a 3g (Huawei E303) wireless (Edimax EW-7811Un) router Aim: Set up the Raspberry Pi as a wireless router using the Raspbian OS. The internet connection will be provided by a Huawei E303 USB 3g dongle on the safaricom network in Kenya, though the setup should be similar on most Huawei dongles and 3g..... Listed under: Wireless projects</p>
847.	 <p>A Mobile Robot with Vision Based Obstacle Avoidance Abstract: The purpose of this report is to discuss and demonstrate the concept of designing and implementing a mobile robot capable of visually detecting and avoiding obstacles using a USB webcam. The system was ported to the Raspberry Pi hardware, a Linux based US\$35 computer.This..... Listed under: Phone Projects, Robotics - Automation Projects</p>
848.	 <p>GPIO for Raspberry Pi B, B+, Pi 2 running PROTA Pi OS (HTML5) Some of us believe greater can be fulfilled when technology upbuilds and completes the great, prior products of our efforts. It's the basic fundamentals how all of us evolved. GPIO I've experienced is in a way a shortcut that trims down to the simple core..... Listed under: Wireless projects</p>
849.	 <p>Pan / Tilt face tracking with the raspberry pi With some effort I have found that controlling two servo motors to allow a webcam to pan/tilt while tracking a face in real time using the raspberry pi not as impossible as it may at first seem. With some careful tweaking and code optimization I was..... Listed under: Sensor - Transducer - Detector Projects</p>
850.	 <p>Lightning! The Lightning Detector for Raspberry Pi Weather Station In this Instructable you will learn: How to a connect a Lightning Detector to a Solar Powered Weather Station How to design and position the lightning detector for best performance How to gather data to see the Lightning story as it happens How to wire..... Listed under: Solar energy projects</p>
851.	 <p>Raspberry Pi case with built in surface mount for less than \$2 I own two RPI's one is a media server for my prerecorded TV shows; the other is hooked up to a Motorola Lapdock to run experiments and for educational purposes. I am an engineer who volunteers for the Boy Scouts of America I teach computers..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects</p>
852.	 <p>Raspberry Pi based Solar Street Light PROJECT DESCRIPTION The project is designed for LED based street lights with auto intensity control using solar power from photovoltaic cells interfaced to a Raspberry Pi board. As awareness for solar energy is increasing, more and more individuals and institutions are opting for solar energy..... Listed under: Solar energy projects</p>
853.	 <p>Raspberry Pi 2 DIY LED LAN device counter Do you know how many devices are on your local network? That is what we where wondering at our hackerspace HackBergen. Yes, there are available programs and Apps to scan your network, but we can also scan with the Raspberry Pi (RPi) and show the..... Listed under: LED Projects</p>



completed in phases and..... Listed under: Development Board - Kits Projects



869.
- Create a video player with Dolby Digital/DTS output You have an older home theater receiver with an S/PDIF input (optical or RCA) and want to play movies with DTS or Dolby Digital soundtracks? This guide shows how you can get 5.1 sound output from a Raspberry Pi even if your AV receiver does..... Listed under: Video - Camera - Imaging Projects



870.
- Raspberry Pi Motion Sensitive Camera Using a Raspberry Pi, a Raspberry Pi camera module, a PIR motion sensor, a USB WiFi adapter, a handful of parts, and a couple of Python programs, you can construct a camera that will automatically snap photos or record short videos when something moves in..... Listed under: Video - Camera - Imaging Projects



871.
- Turning your Raspberry Pi into a personal web server LAMP is an acronym that stands for LinuxApacheMySQLPHP and are components required to run a Dynamic HTML webpage. This instructable will demonstrate how you can turn your Raspberry Pi into a personal web server. The steps to install all of the components are relatively straight..... Listed under: Other Projects



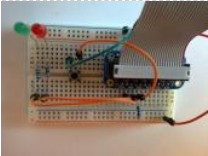
872.
- Raspberry Pi Temperature and Light Sensor Design Required 2 x DS18B20, 2 x 4.7k resistor The DS18B20 is a rather useful sensor because you can read more than one of them using the same GPIO pin. The Raspberry Pi is able to recognise the input from each separate sensor. This system..... Listed under: Sensor - Transducer - Detector Projects



873.
- Dual Project: AirPlay-Pi and new life for an old radio Hey, Welcome to my first ever post on Instructables! The Project you're about to read over is setting up a Raspberry Pi to use 'AirPlay' and how I used it, which clashes with the second part, the new life for my old radio. Step 1:..... Listed under: Radio Projects



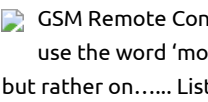
874.
- Raspberry Pi Internet Radio / Music Player Introduction In the March 2012 issue of Nuts and Volts I wrote an article entitled "Build Your Own Wifi Internet Radio" about how to build an Internet radio using a repurposed wireless router. While this project worked fine (and still does) it had limitations driven..... Listed under: Internet - Ethernet - LAN Projects




875.
- Detecting a button press through GPIO using Raspberry pi If you want to build electronic devices, at some point you're going to need to read data through GPIO. In this exercise, we're going to read the value of a push button on a breadboard. Set up the circuit as shown in the pictures on..... Listed under: Sensor - Transducer - Detector Projects



876.
- engravR: Build a Pi-Powered Laser Engraver using Raspberry pi, engravR is a Raspberry Pi-powered laser engraver built primarily from two old DVD-RW drives. The idea of using DVD drives to make a laser engraver is not particularly new, but most systems use an Arduino and external stepper drivers. The advantage of using the Pi..... Listed under: Interfacing(USB - RS232 - I2c - ISP) Projects



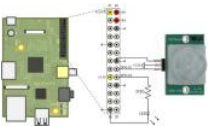
877.
-  GSM Remote Control – GSM Module Raspberry Pi, This GSM Mobile is used for our Remote Control (for example Gate Control, Temperature Control....). We use the word ‘module’ because, unlike what we did in our remote control projects, this time around the mobile phone is not mounted on a printed board, but rather on..... Listed under: GPS Based Projects



878.
- Raspberry Pi – Stepper Motor Control & Breakout Board Overview Many of the previous Raspberry Pi projects I had been working on were based on fairly simple GPIO logic to turn things on and off. Today I wanted a little more of a challenge so I started working to control a stepper motor from..... Listed under: Motor Projects

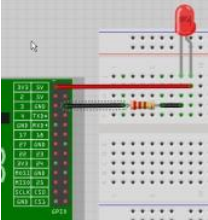



879.
- LCD Library (HD44780U) The wiringPi LCD devLib allows you to drive most of the popular 1, 2 and 4-line LCD displays that are based on the Hitachi HD44780U or compatible controllers. It allows you to connect multiple displays to a single Raspberry Pi. The displays can be connected..... Listed under: LCD Projects



880.
- Motion Sensor using Raspberry Pi This example shows how to use Raspberry Pi® hardware to interface to a motion sensor and control an external LED. Introduction Raspberry Pi target enables you to create and run Simulink® models on Raspberry Pi hardware. The target includes a library of Simulink blocks for..... Listed under: Sensor - Transducer - Detector Projects

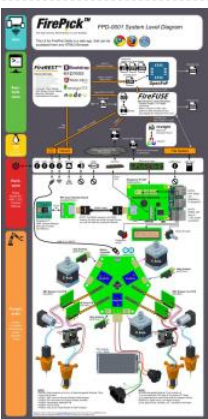
881.
- How to Connect an LED to your Raspberry Pi The easiest way to turn on an LED using the Raspberry Pi is to wire it up to the +3.3v or +5v pins of the General Purpose Input Output (GPIO) header and ground (0v), making sure to place a resistor in series with the LED..... Listed under: LED Projects



882.  Analog Gauges Using I²C on the Raspberry Pi I've been intending to try driving Switec X25.168 motors using the MCP23008 I²C I/O port expander chip from an Arduino, but it occurs to me that it might be more interesting to try this on a Raspberry Pi. If it works, it will demonstrate a..... Listed under: Clock - Timer Projects



883. A Slice of Raspberry Pi Adding an Envelope Detector to convert an RF input to a DC output I connected the ADC Pi module to the GPIO header and stacked the DDS module on top. PCB support spacers were used to hold the modules together and to take the strain..... Listed under: Sensor - Transducer - Detector Projects



884. A project log for FirePick Delta, the Open Source MicroFactory Software Topology and Theory of Operation OpenPnP is the high-level brains of the machine, that does the seemingly-simple stuff like "pick up that part" and "put it over there". Lots of libraries and sub-systems feed information to it, and it passes information to the various..... Listed under: Sensor - Transducer - Detector Projects



5. An introduction to GPIO and physical computing on the Raspberry Pi One powerful feature of the Raspberry Pi is the row of GPIO (general purpose input/output) pins along the edge of the board, next to the yellow video out socket. These pins are a physical interface between the Pi and the outside world. At the simplest..... Listed under: LED Projects



6. Raspberry Pi Shutdown Circuit with Sleep mode Raspberry Pi is a great platform to be used in a robot project, but it has a severe limitation: by default it does not have a built-in power button. As a Linux-based system Raspberry Pi requires to be shut down gracefully before switchin off power..... Listed under: Robotics - Automation Projects



7. Portable Raspberry pi with battery pack 2.0 This was my second project I have worked on for Instructables. I think I did a great job and I hope you do too. For this project you will need: Where I got them: -Raspberry pie (with a case if possible) Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



888. Raspberry Pi with the IO Expander A month ago my Raspberry Pi arrived and since then I have been wanting to control external devices with it. Like any other newbie, I was eager to do something with it as soon as possible and spent hours and hours reading and trying out..... Listed under: LED Projects



889. Internet of Things Toilet Uploads Events to the Cloud (Raspberry PI) Internet of Things Toilet uploads flush events and toilet paper roll change out events to Google Drive spreadsheet. How does it work? – An aquarium liquid level sensor float switch detects toilet tank level; flushing lowers the level closing the switch. A photo cell located..... Listed under: Internet - Ethernet - LAN Projects



890. Raspberry Pi Twitter Monitor The Twittiverse Like it or not, Twitter is a force to be reckoned with. Millions of people use Twitter to talk about general happenings in the world and their lives. Large events like conventions, elections, and uprisings have a habit of crashing the Twitter servers..... Listed under: Internet - Ethernet - LAN Projects



891. Raspberry Pi – John Jay's 8 LED & Button Breakout Board Overview In a previous article I demonstrated how to build your own Raspberry Pi GPIO testing board that included buttons, slide switches, and LEDs. Since that time, I learned about a retired engineer in Georgia named John Jay who is producing awesome little companion electronic boards..... Listed under: LED Projects



892. RPi 5V PSU construction using Raspberry pi A 5V power supply for the Raspberry Pi - Construction How To Due to various problems with the power supply for the RaspberryPi, a home made PSU might be a solution for some of you. You will need some experience with construction of electronic circuits,..... Listed under: Battery Projects



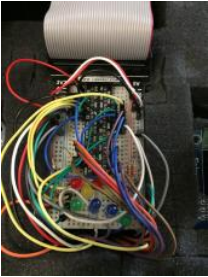
893. Measuring temperature with RASPBERRY PI One of the main characteristics of the environment in which we live is the temperature and therefore its measurement is quite important. The easiest way to measure it is by using Maxim integrated 1-Wire sensors. This way you can connect up to 10 sensor to..... Listed under: Temperature Measurement Projects



894. TFT LCD display with 320×240 resolution for RASPBERRY PI RASPBERRY PI is credit card size computer, which price is only about 35Euro. This makes it accessible to a wide range of people. Despite its low price it is equipped with Broadcom's SoC BCM2835, it contains very powerful ARM1176JZF5 CPU running at 700MHz, with floating..... Listed under: LCD Projects



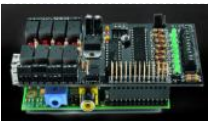
List of required material using raspberry pi Raspberry Pi 8GB SDHC Class 10 Card Nano Wifi-Stick Flytron Navigatron I2C GPS 4channel I2C Logic Level Converter ADS1015 ADC Suppo A2212/13 1000KV Brushless Motor 10"x4.5 GF Propeller Set Orange 4 Stück 2 CW 2 CCW Flyduino HEXFET 20A Motor Controller Drotek IMU 10DOF:..... Listed under: Game - Entertainment Projects



Control home devices with Bluemix Internet of Things (Part 2) Part 2: Configuring the Raspberry Pi This is a continuation of Part 1 of Controlling home devices with Bluemix Internet Of Things If you haven't read Part 1, please do that first... In Part 1 we got the electrical work out of the way. We..... Listed under: Home Automation Projects



Build your own internet radio This Instructables shows you how to build an internet radio (listen to jazz, house music, rock, salsa...) in less than 30 minutes without any technical knowledge nor soldering. The radio uses a raspberry Pi as hardware, a ready to flash file to write a SDCard:..... Listed under: Internet - Ethernet - LAN Projects



A Great I/O expansion Shield for RaspberryPi based on I2C Today we introduce a I/O expansion shield for Raspberry Pi which allows you to extend the number of digital inputs and outputs available for our applications. [See also our previous I/O expander for Arduino] After having published the LCD display and GSM expansion shield we..... Listed under: LCD Projects



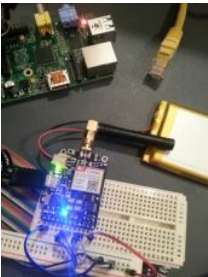
Trigger a Webcam with a button and Raspberry Pi This instructable will show how to trigger a webcam using Raspberry and a push button. A bash script run at startup and it launch a Python script that survey the GPIO port. When the button is pressed, a "fswebcam" command runs. Step 1: Materials -..... Listed under: Video - Camera - Imaging Projects



Adafruit Ultimate GPS on the Raspberry Pi How easy is it to get your Raspberry Pi eavesdropping on satellites 20,000 km up in the sky? Wonderfully easy thanks to Linux, and affordable thanks to Adafruit's Ultimate GPS Breakout! This quick learning guide will show you everything you need to do to add..... Listed under: GPS Based Projects



Adafruit FONA using raspberry pi, Ring, Ring! Who's that callin'? It's your breadboard! Introducing Adafruit FONA MiniGSM, an adorable all-in-one cellular phone module that lets you add voice, text, SMS and data to your project in an adorable little package. This module measure only 1.75"x1.25" but packs a surprising amount:..... Listed under: Phone Projects



Network Interface Failover using FONA Do you hate it when the internet goes down in your area? Do you want to be notified when your internet goes down when you are away from home? Do you have a project that needs 100% internet availability where you would need to be notified:..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



Raspberry Pi orchestration In this Instructable I would like to share my personal work-flow for working with headless Raspberry Pi. If you are interested in automating the setup and deployment process for one Pi or many this is the post for you. All the code is available on:..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



Web Enabled PIXEL on Raspberry Pi The PIXEL kit from LED:ART consists of an RGB LED matrix, a IOIO Mint Bluetooth microcontroller to drive the matix, and some software to give instructions to the IOIO for what to display. Originally, only an Android and PC based software was available. Now, web:..... Listed under: Internet - Ethernet - LAN Projects



TMP006 Temperature Sensor Python Library using Raspberry pi, Are you looking for an easy way to measure the temperature of something without having to attach a sensor directly to it? Consider using a non-contact temperature sensor like the TMP006! This sensor reads the infra-red radiation, or heat, emitted from an object and can:..... Listed under: Sensor - Transducer - Detector Projects, Temperature Measurement Projects



Running OpenGL-based Games & Emulators on Adafruit PiTFT Displays using Raspberry pi The Ideal: Adafruit's PiTFT displays are razor sharp. Whereas small composite screens on the Raspberry Pi usually require some video scaling (resulting in blurriness), PiTFT uses the GPIO header, digitally controlled pixel-by-pixel for a rock steady image. Though not a lot of pixels, it works:..... Listed under: Game - Entertainment Projects, LCD Projects



Debugging with the Raspberry Pi WebIDE The Raspberry Pi WebIDE includes an advanced, yet easy to use tool, to help you work through code that you've downloaded or written in Python. If you haven't used a debugger, either on the command line or in an Integrated Development Environment (IDE), hopefully this guide:..... Listed under: LED Projects




Adafruit PowerBoost 500 + Charger PowerBoost 500C is the perfect power supply for your portable project! With a built-in battery charger circuit, you'll be able to keep your project running even while recharging the battery! This little DC/DC boost converter module can be powered by any 3.7V Lilon/LiPoly battery, and:..... Listed under: Battery Projects




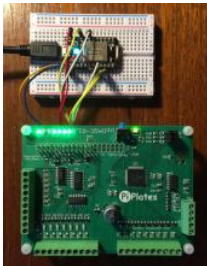
SSD1306 OLED Displays with Raspberry Pi and BeagleBone Black Are you looking for a bright graphical display to use with you Raspberry Pi or BeagleBone Black project? Consider using one of the SSD1306-based OLED displays, with the SSD1306 Python library! Although they're small (only an inch or so in size), these displays produce a:..... Listed under: LCD Projects




910.  How To Setup A Web Server On Your Raspberry Pi This page aims to summarise the steps required to install a webserver with PHP support on Pi. This will allow the Pi to server HTML and PHP pages to users on the same network. This is a useful mechanism to view images and/or..... Listed under: Internet - Ethernet - LAN Projects, News & Updates




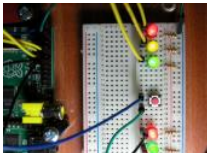
911.  Control Pi-Plate with Spark Core The ppDAQC board from Pi-Plates.com is an inexpensive yet powerful solution for expanding the input/output capabilities of the Spark Core. And since Pi-Plates are stackable, it is a simple task to scale up the I/O capabilities of a single Core. All that is required for..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




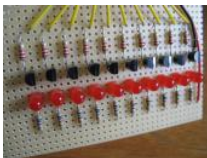
912.  Invisible dog trainer With a pressure sensor, led and speaker you can turn your Pi into an invisible dog trainer that trains your dog to get off the couch. When the dog sits on the couch, the led blinks and the dog receives the command "Get off the..... Listed under: Sensor - Transducer - Detector Projects




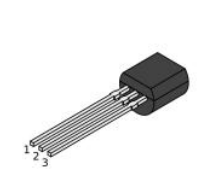
913.  3: More LEDs and a Button So we now have a traffic light/pelican (Tux!) crossing simulator. The 2nd Red LED is connected to wiringPi pin 3, (GPIO-22), and the 2nd Green LED is connected to wiringPi pin 4, (GPIO-23). Test them as before with the gpio command, e.g. for i in..... Listed under: LED Projects




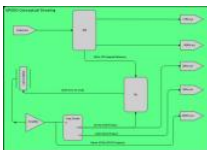
914.  Knight Rider & Cylon Lights for the Raspberry Pi The most obvious application for a Raspberry Pi is re-creating the sliding red lights found on "KITT" from Knight Rider or the Cylons in Battestar Galactica. This can all be done with pure electronics but that doesn't involve any programming and therefore isn't as cool..... Listed under: LED Projects




5.  Raspberry Pi 1-Wire Digital Thermometer Sensor (DS18B20) While searching for a simple way to measure temperature using my Raspberry Pi I came across the DS18B20 1-wire digital temperature sensor. This promised an accurate way of measuring temperature with a few wires and almost no external components. The device only cost a few pounds..... Listed under: Sensor - Transducer - Detector Projects




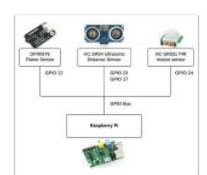
6.  My GPS disciplined Rubidium OCXO Frequency Standard and NTP server project Part 1 he Doctor: People assume that time is a strict progression of cause to effect, but actually from a non-linear, non-subjective viewpoint—it's more like a big ball of wibbly wobbly... timey-wimey... stuff. Amy Pond: It's spacey-wacey, isn't it? —Dr. Who? Though delightfully silly, there is..... Listed under: GPS Based Projects




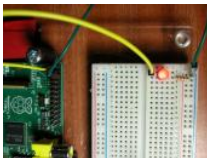
917.  Drive a 16x2 LCD with the Raspberry Pi Overview Adding a LCD to any project immediately kicks it up a notch. This tutorial explains how to connect a inexpensive HDD44780 compatible LCD to the raspberry pi using 6 GPIOs. While there are other ways to connect using I2C or the UART this is..... Listed under: LCD Projects




918.  Java ME 8 + Raspberry Pi + Sensors = IoT World (Part 1) Learn how to connect sensors to the Raspberry Pi and control them with Java. Published September 2014 The latest release of Java ME 8 includes a powerful API for controlling devices such as LEDs, relays, LCDs, sensors, motors, and switches. This article is the first..... Listed under: Sensor - Transducer - Detector Projects

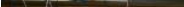


919.  Controlling an LED For this part of the tutorial you will need: Usb to Micro USB cable. Ethernet Cable. A computer. An SD card (4GB or bigger). A breadboard Female to male jumper cables or the Adafruit Assembled Pi Cobbler Breakout. 330 Ohm resistor. A bit of Electronics A..... Listed under: LED Projects

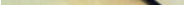


920.  BeagleBone and Raspberry Pi gain FPGA add-ons At the Maker Faire in New York City, ValentFX showed off two open source FPGA boards that stack with BeagleBone and Raspberry Pi SBCs, and also unveiled BBot, a BeagleBone-based drink serving robot built with an earlier FPGA board version. The FPGA add-on boards use..... Listed under: Robotics - Automation Projects




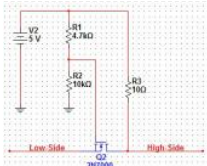
921.  Totally Wireless Bird House Making of DIY bird house project with Raspberry Pi and Arduino Here is a detailed explanation how to make a totally wireless surveillance style bird house. About the design The main advantage of this device is that it is completely wireless, so you can hang..... Listed under: Wireless projects




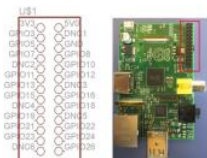
922.  Tank Day 9: Power to the Pi Last time around, we proved that the Raspberry Pi could indeed be integrated into a Heng Long Tiger I RC tank, and so control its functions. That's a significant achievement, but there's plenty more to do. Firstly and most importantly, we can't yet drive the..... Listed under: Other Projects



923.  Connecting an Arduino and Raspberry Pi The use case of the GPIO pins on the Raspberry Pi are rather limited and since I have an Arduino Mega 2560 lying around I can easily connect the two. In the next couple of weeks I'll explain my process of connecting the Arduino with..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



924.  Operating a Simple Switch and LED on the Raspberry Pi GPIO, as may have been explained in other tutorials, stands for General Purpose Input/Output and a GPIO pin can be set high (taking the value 1) by connecting it to a voltage supply, or set low (taking the value 0) by connecting it to ground..... Listed under: LED Projects



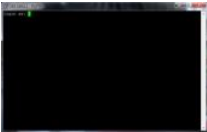
925. Adding a Real Clock Time to your Raspberry Pi The Raspberry Pi doesn't have a little coin-battery-powered 'Real Time Clock' (RTC) module, which keeps time even when the power is off, or the battery removed. To keep costs low and the size small, an RTC is not included with the Raspberry Pi. If your..... Listed under:



Clock - Timer Projects



926. Control your Pi’s Desktop from any Mobile Device One of the great things about a Raspberry Pi is that it can fit in your shirt pocket, but out of the box if you want to use it you need to hook it to a keyboard, mouse, bulky monitor, etc... nearly defeating the Pi’s..... Listed under: Phone Projects



927. How to Access Raspberry Pi Directly through the Ethernet Port of PC The Raspberry pi is a single board minicomputer which has only the essential hardware included so as to meet the goal of low cost. The board is Raspberry pi board runs on ARM11 processor but is available at extremely cheap price. The board is designed..... Listed under: Development Board - Kits Projects



928. PiHub Hello! Welcome to another Instructable from NextFab. In this Instructable we will be showing you how to construct your very own PiHub. What is a PiHub you ask? The PiHub is a free standing, desktop information center that uses a simple LCD screen and 5..... Listed under: LCD Projects



929. Adding shutdown/restart pushbutton for Raspberry Pi This article deals with adding a push button on the Raspberry Pi’s GPIO pins and writing a daemon that handles push button events. If we press the push button for less than 2 seconds, we want the daemon to shutdown the system and if the push button is..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



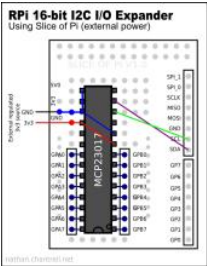
930. Raspberry pi 2 water alarm with t cobbler plus This is our first try with the raspberry pi 2 We wanted to create an headless water alarm Parts used: Raspberry Pi 2 Funduino water sensor 1k resistor Red Led Adafruit T-cobbler Plus Large breadboard (too large ;-p) Step 1: Setup of the PI 2..... Listed under: Sensor - Transducer - Detector Projects



931. Self Signalled Process System Using Raspberry Pi The Raspberry pi is a mini computer which is designed in a single board with all the essential components required for running an operating system. The Raspberry pi board runs on the Broadcom controller chip which is a SoC (System on Chip). This SoC has..... Listed under: Development Board - Kits Projects



932. MrRobot – Ubuntu Mobile app enabled Robotics(Raspberry Pi and arduino involved) Project MrRobot is an Ubuntu Mobile app enabled Robotics which has the feature of voice, touch and shake control to interact with the Rapiro robot. This project is done within 28 hrs in Ubuntu Shenzhen Hackathon by our team E-minors. All the code is onpensourced..... Listed under: Robotics - Automation Projects



933. Raspberry Pi and I2C devices of different voltage After my recent posts on using the MCP23017 I/O expander with the Raspberry Pi several people have queried the connection of an I2C device running at 5v to the Raspberry Pi’s 3v3 I/O. The reason why this is safe in this case is that on..... Listed under: Other Projects



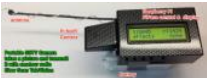
934. AUTOMATIC DOOR OPENER CONTROLLED THROUGH SLACK The post was originally posted on http://www.visuality.pl/posts NodeJS Based Office Door Opener with using Raspberry Pi and Slack. Sesame At one of the hackathons we decided to automate our door opening process. It was a pain to do this manually because lots of clients and..... Listed under: Other Projects



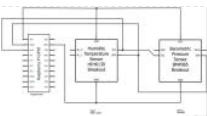
935. Build up a vehicle Week 01 January 9, 2013 (1 hour): Meet as a team after class to discuss preliminary project proposal.it is decided that we are going to build up a vehicle like a Google street car. January 10, 2013 (2 hours): Met as a team after class..... Listed under: Car Projects



936. Cycle Chaser Project animations from the rear of your bicycle. The framerate depends on the speed you are moving at. A couple years ago, I created a dynamic bike headlight with a Raspberry Pi and a small, battery-operated projector. I’ve been eager to explore what else I..... Listed under: Sensor - Transducer - Detector Projects



937. Long-Range Wireless Broadcasts: Raspberry Pi Slow Scan Television (SSTV) Camera In this project the Raspberry Pi with the PiCam is used as a wireless camera which can transmit images over long distances, usually hundreds of meters! Images are transmitted by amateur radio (ham radio) using slow scan television (SSTV) on the 2 meter band (144.5MHz)..... Listed under: Wireless projects

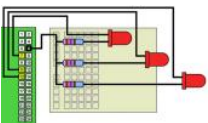
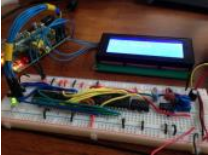


938. Laboratory ‘Weather Station’ This article describes how to make a network enabled weather station that may be used to monitor ambient air temperature, humidity, and barometric pressure in the laboratory. Usage Example When conducting experiments on the rotating turntable in the GFD laboratory it is often desirable to..... Listed under: Sensor - Transducer - Detector Projects



939. How to build a RaspberryPi Cluster RaspberryPi was invented as educational device to inspire children to study computer science. Nevertheless, in a couple of years it has become the toy of computer scientists, engineers and curious of every age. This project is our successful attempt to build an educational RaspberryPi Cluster composed by..... Listed under: How To - DIY - Projects

940. Raspberry Pi SID Player Project overview: The Raspberry Pi SID player is a device which allows you to play music from the Commodore 64 computer using original audio hardware (the "SID" chip) through the Raspberry Pi. In addition to supporting the vast library of classic game music from the..... Listed under: LCD Projects



Controlling an Effect with Real Sensors For this lab you need your Satellite CCRMA kit, a laptop computer with Ethernet adaptor to program it, and some headphones with a mini 1/8" (2.54mm) stereo jack. You are also invited to bring the following optional items, but they are by no means required:..... Listed under: Sensor - Transducer - Detector Projects

How to send SMS from a PHP website through HTTP by using Raspberry Pi Background of sending SMS from website with Raspberry Pi Are you curious about the most easiest way to send SMS from your website? Nowadays, I have become really interested in the field of Internet of Things (IoT), therefore I thought it would be cool to..... Listed under: Internet - Ethernet - LAN Projects

Pi-Rex – Bark Activated Door Opening System with Raspberry Pi (DISCLAIMER: Not meant as a security solution or a lesson in good dog behavior. It's an experimental proof of concept to play with the application of embedded computing to solve particular use cases) Sleep deprivation has been driving me mad recently. And it's all down..... Listed under: Home Automation Projects

Macro Pi – Focus Stacking using Raspberry Pi Here's another in the series of articles of photographic uses for the Raspberry Pi SBC (Single Board Computer). This time, it's re-purposing an old flatbed scanner as a macro rail for focus stacking images in macro photography. The Plan There's a common issue with shooting..... Listed under: Video - Camera - Imaging Projects

Atlas Scientific and Raspberry Pi This Instructable will you show you how to interface with Atlas Scientificsensors using a Raspberry Pi. There are 3 main ways to do this: By hooking a keyboard, monitor, and mouse up to the Pi and using it as a stand alone computer. By connecting..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

RPi Garage Door Opener for Rentals The problem with renting a unit, is that we are unable to modify much of the furniture in the house without upsetting our landlords. But we would still like to do it, and it is possible to do a few things. Our particular rental unit..... Listed under: Home Automation Projects

Raspberry Pi Cloud IP Camera with POE I was inspired by scavix's work with the instructable Raspberry Pi as low-cost HD surveillance camera so I decided to make my own Raspberry PI based IP camera that also features POE and supports integration with the Google Drive. The video streaming can be simply..... Listed under: Video - Camera - Imaging Projects

Reading Analogue Sensors With One GPIO Pin Unlike some other devices the Raspberry Pi does not have any analogue inputs. All 17 of its GPIO pins are digital. They can output high and low levels or read high and low levels. This is great for sensors that provide a digital input to..... Listed under: Sensor - Transducer - Detector Projects

Audio Solution with Control and Visualization on a Raspberry Pi with Touchscreen (Squeezebox Touch functionality) We present you a possibility to select and control your Raspberry Pi audio player directly through a touch display. Our setup is based on the Squeezebox technology and therefore also enables multi-room audio solutions. Our idea was to find a simple and affordable way to..... Listed under: Sound - Audio Projects

London Underground line status with Neopixels In this quick tutorial, we'll put together a snazzy London Underground tube line status checker using a Raspberry Pi and Adafruit's awesome Neopixel LED rings, to recreate the classic Underground roundel! We'll light up the Neopixel LEDs using the official colours of the Tube lines,..... Listed under: LED Projects

Raspberry Pi Music Fingers Creating music is always fun, but making it with your own DIY musical instrument is much better !! Whether you are a professional musician looking for that next new instrument to try or an amateur enthusiast who has basic knowledge of electronics, use the Raspberry..... Listed under: Development Board - Kits Projects, Sound - Audio Projects

Making a datalogger for a Kamstrup electricity / gas meter with Raspberry Pi! About Raspberry Pi So finally I received my new Raspberry Pi. This is a small, low power ARM linux board featuring a ethernet adapter, 2 USB ports and even a full-HD HDMI port for a mere \$30!. Check out www.raspberrypi.org for more information. After running..... Listed under: Other Projects

Honda Accord Raspberry Pi based onboard computer Intro So I had this crazy idea about fitting onboard computer to my 04' Honda Accord Tourer (Exec trim with premium speaker system – non-navi version). Been googling this and digesting available information, finally stumbled upon this excellent Engineering(DIY) project, blog and associated forum –..... Listed under: Car Projects

Raspberry Pi Robotics #1: GPIO Control This video explains how to connect LEDs to a Raspberry Pi's general purpose input-output (GPIO) pins, and how to write Python code to turn them on and off. This video shows how to construct a Pololu Zumo robot chassis, how interface it to a Raspberry..... Listed under: LED Projects

Plant Micro Climate Some plants require pretty specific environments to thrive. Many beautiful plants grow best in a climate that is nothing like the climate where you live. Orchids are a perfect example of this. They require cool temperatures and very high humidity, nothing like the environment where..... Listed under: Development Board - Kits Projects



956. Front door bolt unlocker Opens your front door! see video of the end result (<http://www.youtube.com/watch?v=9qZrc6Llg1o>) Parts: - 4xAA Switchable Battery Pack + case - Continuous Rotation Servo. (You can also a regular servo, with some modifications to the software) I used - Futaba S148 - Bread board -..... Listed under: Home Automation Projects



957. DIY Infrared Motion Sensor System for Raspberry Pi During the month of July 2015, I completed a high school internship at Colorado State University, and one of the projects that I worked on was that of a infrared proximity sensor for Raspberry Pi. This short range infrared sensor can be attributed to a..... Listed under: Sensor - Transducer - Detector Projects



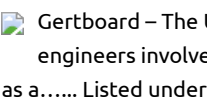
958. Lunch Box Computer with Raspberry Pi This is a quick and easy project to build a portable Raspberry Pi computer that fits right in a lunch box. It's a good first Pi project since it requires no coding, soldering or tooling of any kind. All you have to do it acquire..... Listed under: Development Board - Kits Projects




959. Breakout RaspberryPi This instructable is video game of breakout on RaspberryPi. It is easy to make this video game. Let's make and fun!! Step 1: Materials 1. RaspberryPi (I used RasberryPi rev2) ※include keyboard,mause,monitor,SDcard 2. Tact switch × 4 3. Electrical resistor × 4 4. Some jumper..... Listed under: Game - Entertainment Projects



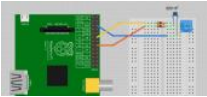
960. Building the MonkMakes Raspberry Pi Robot Kit The latest product from MonkMakes is a robot kit that I have designed using the RaspiRobot Board v2 (RRB2). The kit is available from MonkMakes. Overview The kit comprises: * a robot chassis, including two gearmotors and a 6 x AA battery holder. * a..... Listed under: Robotics - Automation Projects



961.  Gertboard – The Ultimate Raspberry Pi Add-on Board The Gertboard is an add-on board designed by Gert van Loo who is also one of the hardware engineers involved in the original design of the Raspberry Pi. The board was originally sold by Farnell/Element14 in kit form but has just been re-launched as a..... Listed under: Development Board - Kits Projects



962. Picture – The 3D Printed Raspberry Pi Camera. Way back at the beginning of 2014 I published an Instructable camera called the SnapPiCam. The camera was designed in response to the newly released Adafruit PiTFT. It's been well over a year now and with my recent foray into 3D printing I thought now..... Listed under: Video - Camera - Imaging Projects



963. Analog Sensors without Analog Inputs on the Raspberry Pi The Raspberry Pi does not have any analog inputs, but that does not mean that you can't use some types of analog sensors. Using a couple of resistors and a capacitor, you can use a "step response" method to measure resistance. Which is just great..... Listed under: Sensor - Transducer - Detector Projects



964. Internet controlled SCALEXTRIC with Raspberry Pi! With this project I can use dataplicity (dataplicity.com) and a Raspberry Pi to control the speed of a car on a SCALEXTRIC system from the internet. I had a look around for tips on where to start and found a few people had had a..... Listed under: Internet - Ethernet - LAN Projects



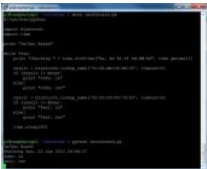
965. Configuring the Raspberry Pi ethernet port for remote control This instructable will show how to quickly configure the Raspberry Pi ethernet port and run it remotely. This eliminates the need to connect a monitor, keyboard and mouse to use the device. This is a very basic Instructable for PC/Windows users or other not familiar..... Listed under: Internet - Ethernet - LAN Projects



966. Beaglebone Black Web Control Using WebPy Ever wanted to create a way to control your garage door using your phone maybe collect data and view it from your laptop. There is a single board computer called the Beaglebone Black which is an extremely powerful device that allows you to control its..... Listed under: LED Projects



967. Pulse Width Motor Control My last project had me digging through old robotics parts to find an H-Bridge Motor Controller. I found one that had several TTL chips on the circuit as well and it reminded me of a trick some of you may find useful. First, lets define..... Listed under: Motor Projects



968. Raspberry Pi Bluetooth In/Out Board or “Who’s Home” I wanted to create an electronic In/Out Board. The type you may have to record who is present or not in a company or home. It is usually placed by the front entrance so anyone can see who is in or out. I also wanted..... Listed under: Bluetooth Projects







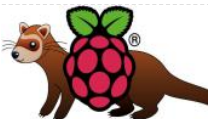



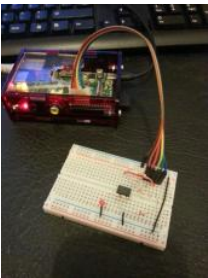

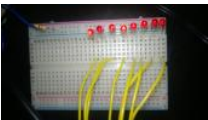
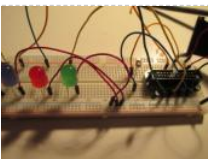


969. All-in-One Raspberry Pi Getting Started Guide Raspberry Pi, one of the most ingenious invention for makers and hackers. Before we get started into the nitty gritty details of getting it setup, we first must ponder over the question that what the Raspberry Pi actually is? Raspberry Pi is a linux based..... Listed under: Development Board - Kits Projects








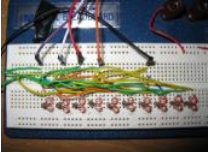




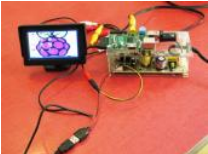




970. How to make a DIY home alarm system with a raspberry pi and a webcam Traditional wireless CCTV cameras are cheap but anyone with a wireless receiver can view your signal. On the other hand, IP cameras are secure but they can be quite expensive and usually the video quality is poor—unless you go for a really expensive model. Lately..... Listed under: Home Automation Projects, How To - DIY - Projects



971. Raspoulette Prototype Hi guys, When i see a raspberry pi contest i decide to make a prototype of an idea i had for few time, let me present my Raspoulette! I will try to explain how to make an amazing Raspoulette! Raspoulette is an autonomous solar powered..... Listed under: Robotics - Automation Projects

		be..... Listed under: Game - Entertainment Projects
998.		Transfer file from Computer to Raspberry Pi Using USB-Serial Cable Introduction This short tutorial extends on Adafruit's excellent tutorial on using Serial Cable(also known as Serial Console) to remote control the Raspberry Pi (RPi). Adafruit's tutorial demonstrates how to connect the correct USB-Serial cable to the correct GPIO pins. However, the tutorial ended with no..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
999.		BrickPi Bookreader: Digitize Books With Mindstorms and Raspberry Pi A few months ago, we made a Book reader powered by the BrickPi which had the ability to read pages from your Kindle. There was a huge response to the project. But what everyone really wanted was a bookreader that could read a real paper..... Listed under: Other Projects
1000.		Automatic USB HDD power control for a Raspberry Pi based NAS The Raspberry Pi board is widely used to build home-servers by the Do It Yourself (DIY) community, so it seemed a good choice to be the base for my home Network Attached Server (NAS). This NAS should have two main types of storage: Solid State..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1001.		FerretPi: Using Raspberry Pi as a Secure FTP Server I know what you're thinking: "How cool would it be if I had my own Google Drive/SkyDrive/Dropbox that I can use whenever I like?" Or maybe you are just getting into the Maker movement and you think it's the greatest thing since canned bread. You've probably..... Listed under: Internet - Ethernet - LAN Projects
1002.		RaspiBoy, Raspberry Pi Gameboy, SuperPiBoy: A RaspberryPi inside a Gameboy Do you have a Gameboy case? Do you have RaspberryPi? Now let's build a RaspiBoy. It's a RaspberryPi inside Gameboy running multiple emulators. It makes you feel back the old days and one of the best gadgets for Retrogaming. My RaspiBoy features: 3.5" TFT display..... Listed under: Game - Entertainment Projects
1003.		TweeToy by Raspberry pi using Python I created a Toy which Talks somebody's tweets using Raspberry Pi. This Toy catches object by distance sensor and then make sound (Tweet). The architecture is very simple. For getting Tweets, just using twitter api for python. And playing sound with "AquesTalk Pi" (free) which..... Listed under: Game - Entertainment Projects
1004.		How to build a People Counter with Raspberry Pi and Ubidots In this simple project we'll use a motion sensor to detect if an object is passing in front of our Raspberry Pi. Then we'll count how many times that happens, and send this value to Ubidots. People counters are typically expensive devices used in the..... Listed under: Calculator Projects
1005.		Raspberry Pi controlled Red Car Trolley Now the train around your Christmas tree or your favorite remote controlled toy can be controllable from the web or any mobile device. Why would you do that if you already have a remote? You do this just because you can! I used a Red..... Listed under: Car Projects
1006.		Programming the ATtiny85 from Raspberry Pi These instructions tell you how to setup and program the ATtiny85 microcontroller from a Raspberry Pi via the SPI interface. Lots of people use the Ardduino to do this (then you can use the Arduino IDE and simplified C commands), or you can use a..... Listed under: Raspberry Programmer Projects
1007.		DIY iPhone controller for Raspberry-Pi (OSC) To start off this project I would like to explain how all this will work. We will be using a form of communication called OSC (Open Sound Control) and an app called "TouchOSC" which is available on the Google Play and Apple app store, along..... Listed under: How To - DIY - Projects, Phone Projects
1008.		PiFace LED Chasing Lights Raspberry Pi This instructable will allow you to use your PiFace to control 8 LEDs in a chasing flashing pattern. This will help you get to grips with basic use of python to control the PiFace as well a basic electronics, I'm writing this up in full..... Listed under: LED Projects
1009.		Raspberry Pi Photocell log and alert system This is a simple instructable for making a RasPi-based photosensor-triggered alert and logging system which can easily be extended to show possible entries into a room like a closet or equipment locker that's usually dark, or to monitor light levels for any other reason. In..... Listed under: Sensor - Transducer - Detector Projects
1010.		Power to your Living room via Raspberry Pi The Idea is to create a controlled living room/entertainment station using the raspberry Pi as a media center, torrent down-loader,file storage and to operate electrical switches. Please use caution and diligence as components use live AC and hence is dangerous. Step 1: Items you will..... Listed under: Home Automation Projects
1011.		Environmental Monitoring with BaeagleBone or RaspberryPI and Arduinio This is a project I've been working on for a while, and still have ways to go, but I have enough success right now that I can I share what I've got. This covers connecting a Beaglebone and an Arduino via TTL serial and I2C,..... Listed under: Metering - Instrument Projects

1012.		Door (Raspberry Pi) Goal to create a web based garage door opener that should retrofit to most standard openers. Tested with circa 1990s Chamberlain 1/2 hp opener. Once completed your garage door could be opened from your cellphone or computer. Raspberry Pi - Raspbian (Rev B used for..... Listed under: Internet - Ethernet - LAN Projects
1013.		Raspberry Pi and Wiimote controlled Robot Arm I received a robot arm as a birthday present, but after about the first day the controller that came with it became a bit dull to use. Later I bought the usb controller that was made for the robot, but once again the canned software..... Listed under: Robotics - Automation Projects
1014.		Raspberry Pi Arcade Game Emulator in an Atari Lynx This project is the summation of various similar tasks to use a Raspberry Pi as a portable games emulator. It's heavily indebted to the excellent and funAdafruit PiGrrl project and DDG's great work to add sound to that project here. Whilst I was happy with..... Listed under: Game - Entertainment Projects
1015.		Raspberry Pi – Revision 2 DIY Add-On Board On the Raspberry Pi, there are several connections which can be used for expansion: 1, The Rpi GPIO (General Purpose Input/Output) pins are exposed, that means that expansion boards are able to talk directly to the CPU. 2, The DSI connector will allow low-level interfacing..... Listed under: Development Board - Kits Projects, How To - DIY - Projects
1016.		How to make your own portable Raspberry pi This tutorial show you how to make your own portable rapsberry pi, with a screen, access to USB, Ethernet and HDMI ports open to access on the side of the case. This is by no means a good tutorial, it is simply a way of..... Listed under: How To - DIY - Projects
1017.		Raspberry Pi Media Server – MiniDLNA Hey. In this instructable I will be showing you how to make a raspberry pi media server using MiniDLNA. This will allow you to stream your photos, videos and music around your network. This is my first instructable so sorry if it isn't very good..... Listed under: Raspberry Programmer Projects
1018.		Raspberry Pi (security) Slow Scan Television Camera For project updates, visit: AgriVision - Raspberry Pi SSTV Camera. The goal of this project is to use the Raspberry Pi with the PiCam as a wireless camera which can transmit images over long distances, usually tenths of kilometers. Images will be transmitted by amateur..... Listed under: Video - Camera - Imaging Projects
1019.		Controlling a Raspberry Pi RC Car With a Keyboard In this intermediate tutorial you will learn how to operate a hacked RC car with a keyboard using a model B Raspberry Pi device using Python. The key points in this tutorial include: • Configuring the virtual Pulse Width Modulation (PWM) For the GPIO pins..... Listed under: Car Projects
1020.		Raspberry Pi Smartphone Controlled Rc Car Use your raspberry pi to control a 1/10 scale RC car via a web page hosted wirelessly on your PI. All you need to do is set up your PI to use your mobile as a hotspot then log onto the appropriate web page (hosted..... Listed under: Car Projects
1021.		Raspberry Pi water alarm system Instructions for employing a Raspberry PI as a water alarm system Version 1.0, published in Jan 2015 The Raspberry Pi reads the status of one or two water sensor device(s) on one or two of its GPIO pins. When water is detected the Raspberry Pi..... Listed under: Clock - Timer Projects
1022.		Python and Raspberry Pi Temperature Sensor It's been quite a long time, when I'd first posted this RPi sample. Time passed, I'd gathered some feedback form the community, took into account the comments, and this sample is ready to be published at Instructables for the public interested in microcontrollers and the..... Listed under: Sensor - Transducer - Detector Projects, Temperature Measurement Projects
1023.		Vintage DAC for RaspberryPi audio Idea... I was curios about some old school R2R DACs namely the BurrBrown PCM56P. They where used in the late 80's in some of the better CD players like SonyES222/DenonDCD1500/MaranzXY whatsoever. There is some discussion in certain forums about their more or less superior sound..... Listed under: Sound - Audio Projects
1024.		LOG Raspberry Pi with car monitor So this Lazy Old Geek (LOG) decided to buy a Raspberry Pi. Now the Pi itself is really small (see picture) but the first problem I found was that with the all the cables connected, it's not very stable. The cables, especially my HDMI cable..... Listed under: Car Projects
1025.		Arc Software Consultancy using the Raspberry Pi I know it has been ages since I posted here so I thought I would put something up for Halloween. I have a brilliant and simple project here. It's easy to understand and, more importantly, it actually does work. I accidentally scared myself with it..... Listed under: Development Board - Kits Projects
1026.		Making Your Apartment Buzzer Party Friendly With Raspberry Pi and Twilio Amy Ciavolino's friends were stuck outside of her apartment waiting to be let in to the party. They repeatedly pressed Amy's apartment buzzer with no luck. The buzzer was too quiet, and Amy's party was too loud. Throughout the night, the cycle repeated: Amy's friends..... Listed under: LED Projects
1027.		Wireless Raspberry Pi Radio: Pianobar * This entire process should take about 20 minutes Pianobar is a free/open-source, console-based client for the personalized online radio Pandora. Feature: play and manage (create, add more music, delete, rename, ...) stations rate songs and explain why they have been

selected upcoming songs/song history..... Listed under: Radio Projects



1028.



Raspberry Pi Garage Door Opener Hello Everyone! This instructable explains how I setup a Raspberry Pi to open my garage door using a smarthphone. While this has been done before, I thought I'd post my solution. This was my first hardware project and instructable ever and I'm sure I made..... Listed under: Home Automation Projects

1029.



Home Automation Raspberry and Phidgets In previous tutorials we used Raspberry Pi to drive Phidgets InterfaceKit. We have also set up a web server on Raspberry. In this tutorial we will use the information gathered to create an Home Automation System managed with a Web Application. You need: a Raspberry..... Listed under: Home Automation Projects

1030.



Raspberry PI auto-boot Ever want your Raspberry pi project to have a script that interfaces with I2C to start automatically after a power cycle? Would you like the vnc session to start at power up as well? This instructable will show how to make a perl script that..... Listed under: Interfacing(USB - RS232 - I2c - ISP) Projects, Raspberry Programmer Projects

1031.



DIY tACS: Hardware for machine-human telepathy experiments These are instructions for building a computer-controlled tACS device. Transcranial alternating current stimulation (tACS) is a form of neuronal stimulation that operates by running an alternating current through the human brain. This current can be any waveform from random noise (tRNS is the official research term..... Listed under: How To - DIY - Projects



Intel Edison Spectrophotometer This instructable will explain how to build a fairly basic. Of course, this device is nothing compared to a commercial spectrophotometer, but it will allow the builder to understand how such a device works to using it for DIYbio. Know-how The spectrophotometry is the quantitative..... Listed under: Metering - Instrument Projects

3.



Raspberry PI Camera Spinner 3D Print This Instructable is for a 3D printed camera-spinner module for the Raspberry PI Camera board. As part of a larger project (a portable Raspberry PI computer), I needed a way to implement a front and rear facing Raspberry PI Camera board. Fitting two camera boards..... Listed under: Video - Camera - Imaging Projects

t₄



Mho PlayGround Circuit Scribe Siempre he querido jugar el juego de Adafruit Industries de "Mho Playground" pero solo esta para iOS y yo tengo Android, así que decidí hacer mi propia versión en el mundo real, les presento "Mho Playground Circuit Scribe" Beta, con arduino UNO, processing y circuit..... Listed under: Game - Entertainment Projects

1035.



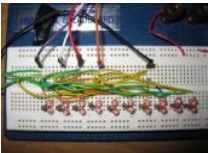
BristleSwarm: Explorations into Swarm Robotics A growing branch of robotics research is the study of swarm organization, emergent behavior and artificial intelligence through the use of autonomous robotic agents. In this Instructable, I'm going to walk you through a one week project that I created as part of my Masters..... Listed under: Robotics - Automation Projects

1036.



Raspberry Pi Medal Light You love the Olympics but you don't have time to check if your country has won any medals. Using IFTTT and Ledborg on the Raspberry Pi, you can know get notified of any medal just by looking at your Pi (and then tell the whole..... Listed under: LED Projects

1037.



Charlieplexing with the Raspberry Pi I've always been interested in Charlieplexing, but never had any means to get into it. When I got my Raspberry Pi, I figured it would make a great platform to learn how to Charlieplex. There are already a ton of Instructables on Charlieplexing out there,..... Listed under: LED Projects

1038.



Raspberry pi arcade project Hello their "young" follower, in this projects of mine I've will be telling you about one of my little inventions and in return i would like you to hit the vote button for me in the "contents" tab for more interesting projects and ideas. "my..... Listed under: Game - Entertainment Projects

1039.



How to connect Stepper motors to a Raspberry Pi The page demos how to connect 28BYJ-48 stepper motors to a Raspberry Pi. These small stepper motors are available on ebay for £3.99 + p+p. They're not very powerful, but they make for convenient testing with a Raspberry Pi, as they will run straight off..... Listed under: Motor Projects

1040.



Raspberry Pi Doorbell (Python) Raspberry Pi Along came the Raspberry Pi and I noticed that it had a GPIO (General Purpose Input Output) interface. Ok I have to admit – I didn't really know what that was until I read up on the Raspberry Pi and reports were saying.....
Listed under: Home Automation Projects



1057. Interface to Wireless Driveway Sensor I have a driveway that is over 300 feet long and it is nice to have some advance notice that someone is driving or walking in. Previously, I have used a very expensive IR beam-break detector. It gave a lot of false alarms and eventually..... Listed under: Sensor - Transducer - Detector Projects, Wireless projects



1058. Making an autonomous boat using a Raspberry Pi (WiP) The wave of enthusiasm for the Raspberry Pi has driven many people to wonder at the possibilities, and marvel at it's simplicity. The credit card sized SBC is perfect for just about anything. Maybe even for crossing the Atlantic Ocean. FishPi is a project with the goal of..... Listed under: Game - Entertainment Projects



1059. Pulse Oximeter Data Capture with Raspberry Pi My daughter has some health issues that requires her to be hooked up to a pulse oximeter at night that monitors her oxygen level and heart rate. We have night nurses so we can sleep, but sometimes we wake up at night and want to..... Listed under: Video - Camera - Imaging Projects



1060. RaspberryPi Pulse Width Modulation Demonstration This instructable is a demonstration of the settings used to control the hardware Pulse Width Modulation (PWM) on a RaspberryPi. If you are just fading an LED the default settings are good enough, but if you are trying to control a servo, a stepping motor,..... Listed under: PWM Projects



1. RaspbAIRy – the RaspberryPi-based Airplay speaker With the delivery of my second RaspberryPi I finally got the chance to start this long-planned project: I wanted to replace my old bathroom radio with a more contemporary device by building a network-enabled speaker. Because I'm a user of several iDevices, the idea of making..... Listed under: Sound - Audio Projects



2. Robot for the Office Tele-Presence (sort of) robot for the office. Work from home and yet attend the boring meetings. Scare vendors into telling the truth about their products. Chase tiny children when they come to the office for the Hallowe'en or Christmas parties. Step 1: Gather Tools and..... Listed under: Robotics - Automation Projects



1063. iPhone remote controlled lamp This project uses the iPhone and a raspberry pi to remote control the lamp. Both the iPhone and the raspberry pi are connected to the wifi router. The lamp on/off commands are sent from iPhone and received by the raspberry pi embedded system. Then the..... Listed under: Phone Projects



1064. Raspberry pi – simple 2x2x2 led cube I built this pretty simple 2x2x2 led cube for my raspberry pi, and wanted to share what i learnt. This is my first time using transistors so the circuit is probably not perfect, but it works as i intended it to. Here is what you..... Listed under: LED Projects



1065. Raspberry Pi Web Server — Nginx – PHP – MySQL This tutorial will describe how to install and set up a light web server on Raspberry Pi that supports PHP and MySQL. Apache is the most widely used server, but Raspberry has limited resources so it is better to opt for a system that uses..... Listed under: Raspberry Programmer Projects



1066. LiPo to MicroUSB adapter In anticipation of my Raspberry Pi arriving I have created a LiPo (Lithium Polymer) to Micro USB adapter. This adapter converts the power from a 2s – 4s LiPo to a regular 5v. This is then outputted through a Micro USB to be plugged into a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



1067. The RR.O.P. – RaspRobot OpenCV Project FIRST: I used a translator to help me , because I 'm not fluent in English ,I apologize for the bad english . My intention really is to collaborate . SECOND: My thanks to you I got an award in the "MICROCONTROLLER CONTEST SPONSORED BY..... Listed under: Robotics - Automation Projects



1068. PICAXE Raspberry Pi ADC In this instructable I will show you how to use a cheap PICAXE micro-controller as a multiple channel analogue to digital converter. We will be using I2C to access the PICAXE, which will be writing the adc values into the memory registers. The Raspberry Pi..... Listed under: Development Board - Kits Projects



1069. RaspiRover Hello! I have done a little wifi robot with a Raspberry Pi and other components. Let me present it! Ps: be indulgent, it's my first instructable! Step 1: Things You'll Need You will need: - a Raspberry Pi (35 Eur) - raspberry cam (17,50 Eur)..... Listed under: Game - Entertainment Projects



1070. Portable raspberry pi (the easy way) Today I will be showing you another project you can do with a raspberry pi. i've seen some people doing this project in a really complex way and i was basically just wasting money on screens and additional components, i decided to come up with..... Listed under: LCD Projects

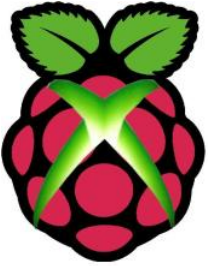


1071. External device control (i.e. coffee machine) Note: Try any or all of these at your own risk. I will not be responsible for any issues. Get a professional to help if you are unsure. The concept is that we take a controlling voltage from the computer or a micro-controller, which drives..... Listed under: Home Automation



Projects

1072.



NASBOX314 : make a NAS with xbox360's case and raspberry pi ***update 04.dec.2014*** by syrus77 ****The howto file for system's configuration is now downloadable at below of this page*** *****please comment here if you think i have made a mistake*** Hello from France, I want to share with you my NAS project pi based. I use..... Listed under: Game - Entertainment Projects

1073.



Raspberry Pi powered time lapse dolly (RasPiLapse) Here's my instructable for a home build timelapse dolly. The pro rigs for this are pretty pricey, so I made my own ☺ Please vote if you like this project! Step 1: Software The heart of this machine is a Raspberry Pi, a low cost..... Listed under: Video - Camera - Imaging Projects

1074.



MAMEFrame – The battery-powered MAME system I love MAME . What I don't love is moving MAME cabinets. This project outlines the steps involved with building a MAME cabinet in a controller box, allowing it to be moved or stored. In this project we will build a MAME controller that is..... Listed under: Game - Entertainment Projects

1075.



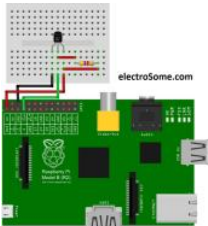
GPRS/GSM Quadband Module for Arduino and Raspberry Pi Tutorial (SIM900) Introduction Step 1: The shield (hardware) Step 2: Using GSM/GPRS module with AT commands Step 3: Powering the board Step 4: Using the shield in standalone mode - Calls Originating and receiving voice calls Command summary Step 5: Using the shield in standalone mode -..... Listed under: GPS Based Projects

1076.



Record Infrared Codes of Any Remote Control Unit for Usage with Linux Infrared Remote Control (LIRC) on Raspberry Pi Introduction The remote controls that are orphaned when the device they control stopped working are reusable on your Raspberry Pi. After completing this instructable, you may be interested in trying out the following instructables: Reuse Unwanted Remote Control to Shutdown and Reboot Raspberry Pi Reuse..... Listed under: Other Projects

1077.



Interfacing DS18B20 Temperature sensor with Raspberry Pi DS18B20 is a commonly used temperature temperature sensor providing 9 bit to 12 bit digital Celsius temperature measurements. The sensor communicates over one wire bus. Each sensor has a 64 bit serial code enabling multiple sensors to be connected to the same one wire bus..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Sensor - Transducer - Detector Projects

1078.



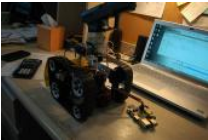
NaCade – The Naked Raspberry Pi Arcade Machine The brains of this setup is the Raspberry Pi computer. It's not overly powerful by today's standards but it can run early style games and systems pretty well. It's small size and low power consumption makes it ideal for many different uses. Best of all..... Listed under: Game - Entertainment Projects

1079.



Salvaging Liquid Crystal Displays (LCDs) Almost all electronics have some sort of human interface, from blinking lights and beeping speakers to seven segment alphanumeric and Liquid Crystal Displays. This Instructable is about salvaging and testing Liquid Crystal Displays, and a couple tricks I know to make salvaging them more successful..... Listed under: LCD Projects

1080.



Counter-Strike Robot DISCLAIMER: Don't do anything silly with this instructables because this is purely for ejudimucation and science. It was November 2013. On Thanksgiving day, my cousin and my brother's friend came over and we were enjoying the break by playing Left 4 Dead and CS:GO. My..... Listed under: Game - Entertainment Projects

1081.



Raspberry Pi Powered Bar-top Arcade Machine I was browsing Instructables when i came across rbates4 and his Raspberry Pi powered arcade machine. <http://www.instructables.com/id/Build-your-own-Min...> I figured hey I have a spare DVI monitor, an X-arcade stick and a desire to tinker with the Raspberry Pi microcomputer. I am going to have to..... Listed under: Game - Entertainment Projects

1082.



Raspberry Pi Emulator Console for the Backseat Scope of project: After building a Bar-Top Raspberry Pi retro gaming machine I determined that while cool I cant take it around easily as it weighs about 40 lbs and is the size of a large microwave. And while fun for the basement perhaps Arthur..... Listed under: Game - Entertainment Projects

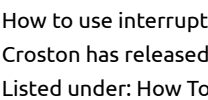
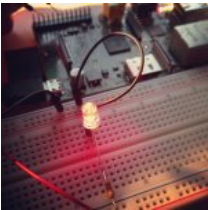
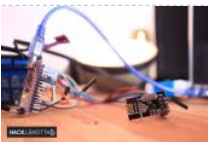
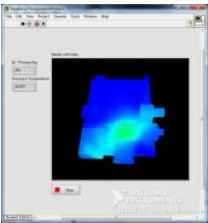
1083.



Fairytale Phone using raspberry pi The Fairytale Phone is one of my first Raspberry Pi Projects I have made. I had already published this on my Blog makerblog.ch, but now this will be a more in depth instruction to build the Phone. The finished phone will be able to play..... Listed under: Phone Projects

1084.

Donkey Kong Bartop Arcade Powered By RPi This New Year's Eve we were in the basement of my friend's house. My 15 year old son and I had brought the 16 inch tall Donkey Kong Bartop Arcade machine we made together to share it. While the kids played the classics for the..... Listed under: Game - Entertainment Projects



IT – RaspberryPi alarm clock Hello guys In this instructable i'll show an alarm clock project based on RaspberryPi and GrovePi+ Starter Kit. Its name is "IT", that's the shortening of "It's Time". Version instructabled is 1.3, youtube video shows 1.0 . It's a standard alarm clock that can be..... Listed under: Clock - Timer Projects

16 Channel relay board for your Arduino or Raspberry Pi – 24V A general purpose 16 SPDT channel relay board (power supply 24VDC) for switching high-current electrical loads (both AC and DC) siuch as motors, lights, pumps, contactors and more. With this relay board, any logic-level signal from 3V up to 30V can be used to activate..... Listed under: Development Board - Kits Projects

Raspberry Pi temperature profile using LabVIEW Connected to my Raspberry Pi is a DS18B20 temperature sensor which I have mounted inside the case roughly above the processor. I wanted to map the temperature profile inside the case and have a visual representation of it. To do this I joined up a Python..... Listed under: Temperature Measurement Projects

Raspberry pi Controller Automatic Drink Dispensing Robotic Bartender This bartender uses pressurized bottles and solenoid valves controlled by a raspberry pi to dispense the beverages. The user can interact with the GUI on the pi to select their drink of choice, they will be prompted to add any required garnish, then they can..... Listed under: Robotics - Automation Projects

Measure temperatures with a 1-wire DS18B20 sensor and Raspberry Pi In our article DS18B20 Temperature Sensor with Raspberry Pi we detailed how the Raspberry Pi can be used to take temperature readings from a ds18b20 temperature sensor via the i2c protocol. Here we will expand that article to explain how multiple temperature sensors can be..... Listed under: Temperature Measurement Projects

WiFi based home automation by Intel Edison and Banana Pi M1 #IntelIoT#2015HackNTU Hi! People, This is the project I done alone during the period of National Taiwan Univ. Hackthon, since August 21, 2015 to August 23, 2015 in Taipei. I tried to make something could be helpful to those Taiwaness whose age is old. So, I..... Listed under: Home Automation Projects

[ARDUINO + RASPBERRY PI] Switching light with NRF24l01+ Hardware: To test the wiring we suggest you to use the ping/pong test you can find in the RF24 libraries (both, of the raspberry and the arduino). Raspberry Pi The connection between the Raspberry Pi and the NRF24l01+ module was a little bit tricky, so..... Listed under: Wireless projects

Bluetit Monitor The box is made from scraps of wood I had in the garage. The hole is 25mm and 10cm from the bottom of the box. Internal dimensions are about 12cm by 10cm. The roof is covered with some old bits of lead flashing and the..... Listed under: LED Projects

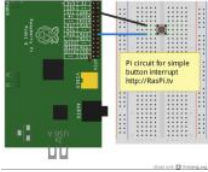
Raspberry Web server sending GET data to Arduino Nano driving 6 servos This is a small project I did for a colleague who is building a 1/48 scale RC model of a Fletcher class Destroyer (yup...that makes the "model" about 8 feet long!) He asked if I could animate the 5 x MKIII 5"/38 gun turrets, complete..... Listed under: Internet - Ethernet - LAN Projects

Raspberry Pi with Relay I/O Board Relay I/O Board is widely used in applications of smart home project. In this article, I will detail how to control the Relay I/O board using Raspberry Pi with Raspberry Pi Universal Expansion Board via internet. The codes and schematic diagrams used in this article..... Listed under: Home Automation Projects

How To: Control LED using Raspberry PI GPIO In this post I will take you through the fairly simple task of getting your Raspberry PI to control an LED via the GPIO interface, the task is simple however it lays a great foundation of knowledge for any further projects where you want to interface with..... Listed under: LED Projects

Recessed Wall Mount for Rasberry Pi Google Calendar This 'able takes Piney's "Rasberry Pi Wall Mounted Google Calendar" and shows steps to mount the screen recessed in the wall. I found that any mount - even a low-profile mount - put the monitor too far out into the walking space. Since I wanted..... Listed under: LCD Projects

How to use interrupts with Python on the Raspberry Pi and RPi.GPIO The latest big news in the world of Raspberry Pi Python GPIO programming is that Ben Croston has released an update for RPi.GPIO. Why is that a big deal? Because this version has interrupts. "What's an interrupt?" I hear you say. It's a way of..... Listed under: How To - DIY - Projects



1098.



Energy Saving in a Convenient Store The basic idea of this project was to turn off a number of lights in a convenient store when the ambient sunlight is sufficient to keep the brightness level above the store's minimum brightness standard. Here's a diagram of the system The main compenents of this..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1099.



Connect an ESP8266 to your RaspberryPi ESP8266 boards are pretty neat, but if you just bought one (And why wouldn't you for only \$5?) and have realized that you don't have any obvious means (3.3V TTL USB serial device) to communicate with it, you can talk to it directly with a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1100.



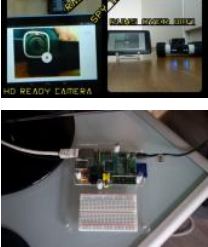
The Raspberry Pi Powered Speaking Doorbell – Part 1: The Input Circuit The first step of building the Raspberry Pi-powered speaking doorbell is building a simple input circuit. The purpose of the input circuit is to protect the Pi from damage by electrically isolating the doorbell and its power supply from the Raspberry Pi itself. The circuit..... Listed under: Home Automation Projects

1101.



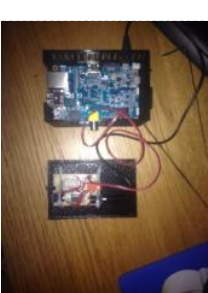
Raspberry Pi Spy Tank I got a first prize from PI/E day contest. (yaayyy. Thanks for all the awesome voters!!!) I would like to reward the first 10 people to contact me. I have 10 pieces of 3 month PRO membership codes to giveaway. Write a comment to this..... Listed under: Development Board - Kits Projects

1102.



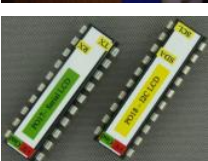
Electronic circuits for your Raspberry Pi : useful tools f you want to make some simple electronic circuits for your Raspberry Pi, you may need some useful (software and hardware) tools. Hardware tools Breadboard The breadboard (aka prototyping board, or plugboard) allows you to prototype your electronic circuits without the need to solder components..... Listed under: Development Board - Kits Projects

1103.



Automatic Reset Switch For Pi In this instructable I describe a method for automatically resetting a Banana Pi when it freezes, or looses power and does not restart. This method will also work for the Raspberry Pi as long as the correct GPIO pins are used (which I believe are..... Listed under: Development Board - Kits Projects

1104.



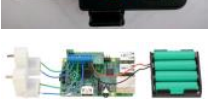
LCD Chip P017(serial) & P018(I2C) Contents Windows Serial Windows I2C Raspberry Pi Serial Raspberry Pi I2C Arduino Mini Project Additional resources FAQ Purchase <Byvac Shop> <eBay shop> This is a 20 pin IC that will take either a serial or I2C input and convert this to suitable signals for a..... Listed under: LCD Projects

1105.



Simple home automation. RaspberryPi + Android Control relays connected to you RaspberryPi using Android app. Setup multiple RaspberryPi devices around your house. Single device can operate up to 8 relays and all of them are self-discoverable using lightweight network protocol. No complicated setup. Name each relay, give its type (button, switch)..... Listed under: Home Automation Projects

1106.



Pololu DRV8835 Dual Motor Driver Kit for Raspberry Pi B+ This compact expansion board plugs directly into the GPIO header on a Raspberry Pi B+ and provides an easy and low-cost solution for driving a pair of small brushed DC motors. Its integrated DRV8835 dual motor driver allows it to operate from 1.5 V to..... Listed under: Motor Projects

1107.



Developing the Rogue Pi Developing the Rogue Pi for my final project at BCIT was a great experience. It provided me the opportunity to play around with the Raspberry Pi and build something of valuable use. Instead of copying and pasting my final report into here, I will instead..... Listed under: Wireless projects

1108.



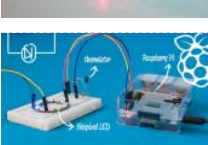
Home Automation Raspberry and Phidgets part 2 In the previous tutorial we saw how you can drive the digital outputs of the Phidgets 1018 remotely, in this tutorial instead we will check the status of the digital inputs, which can be connected to magnetic contacts, push buttons, switches, etc. You need: a..... Listed under: Home Automation Projects

1109.




Driving a LED array from a BeagleBone Black Sticking with "BoneScript" in the Cloud 9 IDE, I began by copying the single LED code and generalising it to also flash the next seven pins. I worked out From the same diagram where I found the name "P8_12", that the next few pins on..... Listed under: LED Projects

1110.



Neopixel LED temperature gauge with Raspberry Pi In this tutorial we'll be creating a circular temperature gauge using Adafruit's Neopixel LEDs, a Raspberry Pi and components from Monk Makes Starter Kit! No Arduino required! And to make it even more better, we'll be using Plot.ly to plot the data in real time,..... Listed under: LED Projects

1128.



1130.

A photograph of a Raspberry Pi computer with a green screen. The screen displays the text "System is halted." in white. The Pi is connected to various cables and is sitting on a wooden surface. In the bottom left corner, there are social media icons for Facebook and Google+.

2. 

1134.

1136.

[illegible]

1140.

A yellow LEGO Technic car with a small figure on top. The car is built with yellow Technic beams and has black wheels. It is shown from a side-on perspective, facing left. The figure on top is a small, light-colored figure with a green head. The car is on a light-colored surface.

How to use Kernel GPIO interrupts on the Raspberry Pi Presumably everyone knows what the Raspberry Pi is, by now, so I'll not start there. You may or may not know that the RasPi has General Purpose Input/Output (GPIO) pins as standard. Some of these provide 3.3v power, some provide 5v power, some are grounded..... Listed under: Development Board - Kits Projects

Step 4 – Connecting the H-Bridge & Motors For this project we will be using four of the Raspberry Pi's GPIO pins, two per motor. In the next step you will see a diagram of a L298N (hopefully yours will look the same or very similar). Each motor will have two wires running from.....

Raspberry Pi, I2C LCD screen and Safe Power Down button The Raspberry Pi, just sitting there, asking to be played with... As I looked over my existing projects I noticed this sad little lone R-Pi sitting on my desk. Some time ago I bought it. Played with it a bit, installed NOOB image on the..... Listed under: LCD Projects

ot – Flashing LEDs – The Circuit In this brief guide we will show you how to connect up two LEDs to the GPIO ports on your Raspberry Pi via Python Script. From this point onwards I will assume that your Raspberry Pi has a fully working install of Raspbian..... Listed under:

Build a remotely activated sprinkler using PiFace and Ubidots This is a cool example that teaches you how to use a Raspberry Pi, a PiFace and Ubidots to water your garden from far away. You'll be able to control an electro-valve remotely to water your plants from any place, just using your phone. Step..... Listed under: Development Board - Kits Projects

Controlling a servo using Raspberry Pi and WiringPi software based PWM Controlling a servo using raspberry pi PWM generator is not a trivial task since PWM period cannot be defined by the user. To overcome this issue we will use wiringPi C library in order to create a software generated pulse. Of course the generated pulse..... Listed under: PWM Projects

RaspberryPi: Multiple Buttons On One Digital Pin If you ever find yourself running out of GPIO pins on a RaspberryPi you can put multiple pushbutton switches on a single pin using this method. It sets a variable by timing the charging of a capacitor through a series of resistors with the switches..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

Evade georestrictions with the Raspberry Pi In this article I will talk about the use of a professional VPN service called Hide My Ass (I have no affiliation with them). This allows you to send and receive data online while appearing (to everyone else on the Internet) as though you are from another country. This is useful for accessing content that is restricted to certain countries.

Arduino weds Raspberry. The "Freeboard" project "If you imagine it's possible, someone else is already trying to doing it, or has already done it." The Installer. This was how I left my musing on the fictitious open source Celestronic M1 chart plotter system. I wasn't aware at the time how extensive the efforts..... Listed under: Development Board - Kits Projects

Control LED via website Hello! In this project you will learn how to control an LED via your phone or desktop computer threw apache server! Step 1: What are we going to do in this project I've been working with the Raspberry Pi 2 for about a month now,..... Listed under: LED Projects

Child Safety: How to sandbox your children's web traffic cheaply using a Raspberry Pi You can pick up one of these for under £30 Heavy Disclaimer Although the Raspberry Pi described here is super cheap, you will have to have some slightly specialized network equipment to do this. In particular you will need a VLAN aware network switch and..... Listed under: Internet - Ethernet - LAN Projects

Detecting Lightning with a Raspberry Pi rious methods can be used to detect lightning. Commonly it involves sensing the electromagnetic radiation generated by a strike. Most people have probably heard this at some point as static, crackles, and popping sounds on an AM radio. Some detectors are capable of picking up the flashes of..... Listed under: Sensor - Transducer - Detector Projects

PC racing set controlled RC car with video streaming Project overview The project aims to equip standard remote control (RC) car with improved control. Commonly used RC car control joystick is replaced with PC racing set. This improvement ensures more precise driving and exceptional user experience. Moreover camera attached to car enables view from perspective..... Listed under: Car Projects

to move parts of a robot or control anything that can rotate Servos are similar to motors, but can typically only move from 0 to 180 degrees rather than rotate continuously. Unlike a motor, you send a servo a signal that makes it go to a specific position (eg 30 degrees), making applications such..... Listed under: Robotics - Automation Projects



1142.



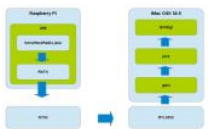
Construct a wireless switch or motion sensor Project Description This project assumes you already have a Model A or B Raspberry Pi, power supply, HD card, screen, keyboard, network etc. Raspbian Wheezy OS. In this project I will show you how to construct a wireless switch. This project can be..... Listed under: Wireless projects

1143.



Installing and running PICPgm on Raspberry Pi Installation Steps The following commands download and install PICPgm on your Raspberry Pi: `cd ~ mkdir picpgm_install cd picpgm_install wget http://picpgm.picprojects.net/download/picpgm_v2810.tar.gz tar xzvf picpgm_v2810.tar.gz sudo ./install.sh cp pgmifcfg.xml ~` Note: For PICPgm versions till 2.8.1.0, a copy of pgmifcfg.xml has to be in your home..... Listed under: Other Projects

1144.

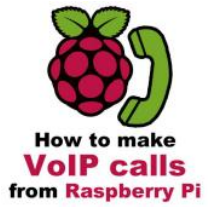


Raspberry Pi + Java + NTX2 Radio Transmitter Introduction For the past 12 months or so after reading about the exploits of Dave Akerman and his first launching of a Raspberry Pi into near space I've been tinkering with the idea of launching a balloon myself. Although there isn't a huge HAB community..... Listed under: Radio Projects

1145.



SNESDev-RPi: A SNES-Adapter for the Raspberry Pi You already might have heard of the Raspberry Pi. It is a credit-card sized PC from the Raspberry Pi Foundation and is going into mass production and distribution these days. There is a huge demand for "the Pi" and the first orders are limited to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



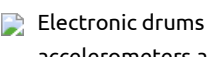
How to make VoIP calls from Raspberry Pi Introduction Have you ever thought about using your Raspberry Pi for VoIP telephony purposes? It sounds interesting, isn't it? If so, but you did not find out yet how to implement this VoIP-SIP solution, this tutorial helps you to achieve your goals. This is the..... Listed under: Raspberry Programmer Projects

1146.



GPS Module for Raspberry Pi Tutorial Ingredients: 1 x Raspberry Pi 1 x GPS shield for Raspberry Pi 1 x Antenna 1 x Two small wires (Red an Black) NOTE: If you don't have a Raspberry Pi you can get one buying a Raspberry Pi Starter Kit. Difficulty: Medium - Preparation..... Listed under: GPS Based Projects

1147.



Electronic drums using a Raspberry Pi and ±200g accelerometers. Introduction As it was mentioned on my website in my previous article, using accelerometers as drum triggers is deadly easy. So why not pushing it further, and try to develop a full drum kit? A few months have passed since I first had the idea..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1149.



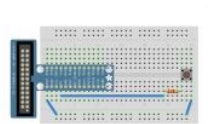
Design Project: Control a Pan-Tilt Platform with Raspberry Pi and Smartphone This is purely the design for the projected. Presented is a detailed paper design of a smartphone controlled pan-tilt camera platform for exploring telepresence and POV drone and robot interaction and control. Introduction A pan-tilt platform can be used to position various instruments and tools,..... Listed under: Phone Projects

1150.



Raspberry Pi Birdbox Camera Hi there! This is a step-by-step guide to creating a Raspberry Pi Birdbox Camera that features real-time video streaming, motion detection, infra-red LEDs for night vision and has a cheap Power-over-Ethernet solution. I starting making this with my 11 year old son for his Primary..... Listed under: Video - Camera - Imaging Projects

1151.



Reading and writing from GPIO ports from Python This tutorial covers the setup software and hardware to read and write the GPIO pins on a Raspberry Pi running the latest Raspbian operating system. We will showing how to read from a physical push-button from Python code, and control an LED. Related categories: Tutorial..... Listed under: Development Board - Kits Projects

1152.



PiMiDi: A Raspberry Pi Midi Box, or How I Learned to Stop Worrying and Love MIDI This is my second instructable on using the Raspberry Pi for digital audio, check out my first instructable for how to set up and control custom audio effects on a Raspberry Pi. If you like them, please vote for me!! If you like messing with..... Listed under: Sound - Audio Projects

1153.



Durio BASIC + Raspberry Pi B+ (Assembled) This is a Durio Sound BASIC and Raspberry Pi B+ (Assembled). Includes: • Durio Sound BASIC board x1 • Raspberry Pi B+ x1 • M3 Nylon Screws 5mm x8 • M3 Nylon Standoffs 18mm x4 • 0.1" Jumper x2 • Fully assembled, ready to use!..... Listed under: Sound - Audio Projects

1154.


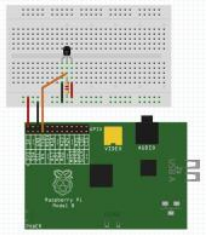

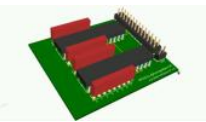






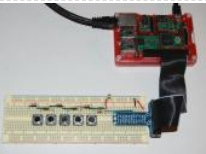

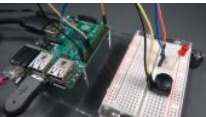



Raspberry Pi Network Time Server ~ GpsNtp-Pi GpsNtp-Pi is a network time server that uses the Network Time Protocol, a GNSS receiver and the Raspberry Pi (Rpi) computer platform. It will operate in standalone mode without any other time servers or in pooled mode with other time servers. GpsNtp-Pi can operate with..... Listed under: GPS Based Projects

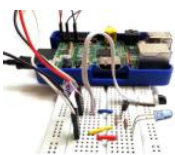
1155.




Raspberry Pi Java Tutorial In this tutorial I will show you how to flash a LED light with Raspberry Pi and Java. This will be a complete step by step tutorial starting with connecting the cables, trough GPIO explanation and finally writing the java code. At the end of this tutorial..... Listed under: LED Projects

1156.		Raspberry Pi Cheap DIY ATX-Power Switch. Ok, so it doesn't look like much.... But why would you need one? Well you don't, it is helpful if your pi is powered by a supply that also powers other things. A 3D Printer in my case. Also included is a separate shutdown button..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1157.		Warming to the Pi and Python I've had a Raspberry Pi since Christmas, but haven't done much with it up till now. That's all changed since I moved house. Getting to grips with a new central heating system, I find that (for reasons too dull to list here) I need to..... Listed under: Other Projects
1158.		Pololu Dual MC33926 Motor Driver for Raspberry Pi (Partial Kit) This add-on board enables a Raspberry Pi B+, A+, or Pi 2 to drive a pair of brushed DC motors. Its dual MC33926 motor drivers operate from 5 V to 28 V and can deliver a continuous 3 A (5 A peak) per motor. The default pin mappings make..... Listed under: Development Board - Kits Projects
1159.		How To Design a Printed Circuit Board with DesignSpark PCB A couple of months ago I got curious about PCB manufacturing, and ended up using Joe Walnes' open-source PiCrust PCB design to test the process. I sent the 'Gerber' files off to a little cheap board house in China, and a few weeks later my boards..... Listed under: How To - DIY - Projects
1160.		Remote Control Autonomous Lawn Mower using RaspberryPi Have you heard of #twitchPlaysPokemon? Well that was some of the inspiration behind this project #googleMowsMyLawn. This project was an idea that my brothers and I had and wanted to do for a little while. When StartFest had a hackathon, we were provided with the..... Listed under: Robotics - Automation Projects
1161.		BMP180 I2C Digital Barometric Pressure Sensor The BMP180 device is a digital barometric pressure sensor. This is available on a small module which provides access to the sensor via the I2C interface. This allows us to easily connect it to the Raspberry Pi with a minimum of wiring. My module is..... Listed under: Sensor - Transducer - Detector Projects
1162.		Driving a 7-segment display with a Raspberry Pi (I) This post will be the first of a series of posts that will describe how to drive a 7-segment display from a Raspberry Pi, without any OS running in it. Today, I will talk about some important characteristics about 7-segment displays, how to wire things..... Listed under: LED Projects
1163.		Make Your Own Nokia 5110 Raspberry Pi Add-on Board Who remembers the Nokia 5110? If you're too young to have had one, it was a great phone - a bit of a game changer some might say. The battery lasted a decade, it was tough as nails and one of the first mobiles to..... Listed under: Phone Projects
1164.		Raspberry Pi Breadboard Shield Arduino has multiple shields and multiple expansion boards, the shields make prototyping with the Arduino a lot easier. A lot of people design custom shields to match their requirements. But in a raspberry pi has a very few number of shields, and a raspberry pi..... Listed under: Development Board - Kits Projects
1165.		Wireless Multi-Channel Voice-Controlled Electrical Outlets with Raspberry Pi This project is a combination of several difference resources: My single-outlet control project with Raspberry Pi and Python, originally inspired by user wilq44's Raspberry Pi GPIO home automation WiringPi, software written by Gordon Henderson that allows "Arduino style" control of the GPIO pins from the..... Listed under: Radio Projects
1166.		RaspberryPi Multiple Buttons On One Digital Pin If you ever find yourself running out of GPIO pins on a RaspberryPi you can put multiple pushbutton switches on a single pin using this method. It sets a variable by timing the charging of a capacitor through a series of resistors with the switches..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1167.		Python based spy robot controlled over Ethernet using Raspberry pi Aim of the project: In this project we have developed a platform to remotely control surveillance robot controlled over Ethernet. It will enable us to monitor the activities in the remote and sensitive areas such as naxalite areas and etc. In traditional security systems, monitoring..... Listed under: Robotics - Automation Projects
1168.		Push Button Sample In this sample, we connect a push button to your Raspberry Pi 2/MinnowBoard Max and use it to control an LED. We use GPIO interrupts to detect when the button is pressed and toggle the LED in response. This is a headed sample, so please..... Listed under: LED Projects
1169.		Turn a Raspberry Pi into a CCTV Security System A few weeks ago I received the new version of the Nwazet Camera Box Bundle, re-designed to fit the B+ Raspberry Pi. It reminded me that I had promised my dad that I would fit a Pi camera system into his porch so he could..... Listed under: Security - Safety Projects

Read emulate remotes with Arduino and Raspberry Pi Remotes are everywhere. They are the interface to your TVs, music systems and what-not. You probably have a few spare ones lying around, devastated at the demise of their better halves. Cheer them up and put them back into use! (Skynet approves...) Here are some..... Listed under: Wireless projects




1183.  Raspberry Pi Infrared Game Camera I've just started exploring the Raspberry Pi and was intrigued with the Pi infrared camera module. I live in a somewhat remote area and have seen signs of various wild critters exploring around the house at night. I had an idea of creating a night..... Listed under: Game - Entertainment Projects




1184. How to Enable SPI on your Raspberry Pi What is SPI? SPI stands for Serial Peripheral Interface (SPI). It is made up of 4 wires normally and it was a standard designed by Motorola for use with their microcontrollers. SPI is easy to use and fast. The bus is fully duplex, meaning devices can transmit and receive..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




1185.  Single User Multi Tasking on Raspberry Pi The Raspberry pi is a mini computer which is designed in a single board with all the essential components required for running an operating system. The Raspberry pi board runs on ARM11 processor but is available at extremely cheap price. The board is provided with..... Listed under: Internet - Ethernet - LAN Projects, LED Projects




1186.  SainSmart 7 inch 800*480 TFT LCD Touchscreen Display for Raspberry Pi B+/Pi 2 For Sale SainSmart 7 inch 800*480 TFT LCD Touchscreen Display for Raspberry Pi B+/Pi 2: \$39 Trade_Spotting is a well-known online brand specialized on development board and professional test equipments. As a professional and reliable seller, we source from SainSmart's manufactory directly before testing and packing..... Listed under: LCD Projects



7.  Driving a Unipolar Stepper Motor with a ppDAQC Pi Plate Stepper motors are versatile devices that allow precise and repeatable angular control. They are used in disk drives, translation tables, and 3D printers to name just a few applications. They typically come with two different wiring arrangements. The most common arrangement is four wires that..... Listed under: Motor Projects




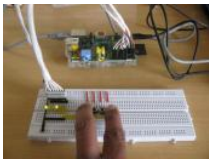
8.  Instant Photo Printer Instant Photo Printer is an instant camera. But it's not a normal instant camera. It takes a picture when you scream or laugh loudly. Materials: Raspberry pi Power adapter Pi Camera Color printer Sound sensor Step 1: Step 1: Setting up the raspberry pi The very first..... Listed under: Video - Camera - Imaging Projects




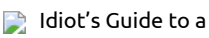
9. Development Process: Technical Deliverables and Progress Report For the third and final part in this series, I'll focus on discussing the progress the LASS project made up until December 2013, which was the mark of the 75% point of our project. In particular, some of the milestones we achieved were defining the..... Listed under: Other Projects




1190.  How to Add Sound to Raspberry Pi Game Pad The Raspberry pi is a single board computer that is designed with an aim of providing help in the computer education to students at school. This is a nice platform to try different programming techniques and learn software tools also. The board is provided with..... Listed under: Game - Entertainment Projects




1191.  [Idiot's Guide to a Raspberry Pi Garage Door Opener](#) It has become apparent that WebIOPi is not yet compatible with the Raspberry Pi v2. If you are following this tutorial, you must be using the first-generation Pi. The link below for the B+ model is still valid, and this model will still work for..... Listed under: Home Automation Projects




1192.  Another (larger) Raspberry Pi Interface Board Here is another somewhat larger interface shown connected to a switch unit and a 16 LED output board. As the Pi connector does not have 20 GPIO pins, three of the pins are shared and can be connected to be either input or output via..... Listed under: Development Board - Kits Projects




1193.  Playing Snake Game using Raspberry Pi Game Pad This article discusses about how to develop simple game pad hardware and interface it with the Raspberrypi board and also about the technique of interfacing a game code written in HTML5 with the game pad. Here a Snake game written in HTML5 and JavaScript is..... Listed under: Game - Entertainment Projects




1194.  USB PowerControl for Raspberry Pi and Arduino Within United States: [SwitchDoc Labs Store](#) – Powered by Amazon (Now with Amazon Prime!) Outside of United States: [Tindie.com](#) The USB PowerControl board is a USB to USB solid state relay. It is a digitally controlled power switch for your Arduino or Raspberry Pi. It is..... Listed under: [Interfacing\(USB - RS232 - I2c -ISP\) Projects](#)




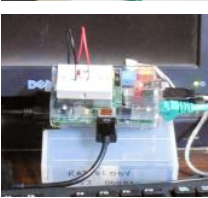


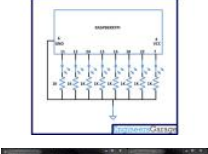




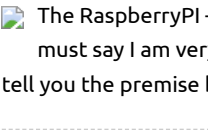

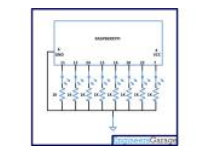


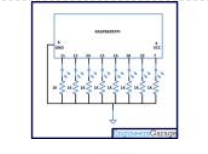

1195.  Smart Elex Raspberry Pi components review. I recently purchased the smart-elex Raspberry pi GPIO starter kit. I placed the order on Saturday 10th August and it was delivered on the following Tuesday. So following the speedy delivery what did I receive? Kit Includes 1x Smart Elex Pi-Cobbler equivalent GPIO Breakout kit..... Listed under: LED Projects




1196.  How to Control Hardware using Named Pipe In a Linux operating system all each hardware device is represented as a file. The device can be controlled by simply reading and writing into that file. The hardware of an operating system is on the one side and the user trying to access the..... Listed under: How To - DIY - Projects




1197. On USB latency Every so often someone mentions the dreaded USB latency. MIDI is MIDI, and USB is USB, do we need to mix both, and can that work reliably?
So let's say we want to provide a Raspberry Pi with some USB MIDI connectivity, and run a..... Listed under: Interfacing(USB - RS232 - I2C - ISP) Projects

		
1198.		<p>Raspberry Pi GPIO Pinout I found these awesome Raspberry Pi pinout diagrams by Pighixxx at Flickr. When I am trying to learn something new, I make my own diagrams. I have been doing some reading about safely connecting things to the GPIO pins of the Raspberry Pi, especially regarding..... Listed under: LED Projects</p>
1199.		<p>Run HummingBoard Raspberry Pi-Like Board is Now Available for \$45 and Up HummingBoard is a board made by SolidRun that's mechanically compatible with the Raspberry Pi, and offering the same expansions connectors, and a few extras. The board is comprised of a baseboard and a microSoM powered by Freescale i.MX6 Solo, Dual Lite or Dual. At first..... Listed under: Development Board - Kits Projects</p>
1200.		<p>Raspberry Pi Roboat Raspberry pi roboat is an internet controlled water robot using an RC boat as it chassis. This will be use to check an unreachable sewer by giving a live picture stream to the web browser. This thing is also could be another option to learn..... Listed under: Robotics - Automation Projects</p>
1201.		<p>Multitasking on Raspberry Pi using Single C Code The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the powerful ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers,..... Listed under: Development Board - Kits Projects</p>
1202.		<p>LabVIEW and Raspberry Pi TCP/IP Communications A few months ago I did the LabVIEW Connectivity course at National Instruments UK. I really enjoyed it but haven't got around to trying any of the concepts out yet. Last week I decided to write a TCP/IP chat program working between LabVIEW running on..... Listed under: Internet - Ethernet - LAN Projects</p>
1203.		<p>Remote receiver to Raspberry Pi via GPIO Assalamualaikum, Hi. I would love to share my recent project, connecting an IR receiver to Raspberry Pi's GPIO. Warning! Playing around with Rpi's GPIO is dangerous if you didn't know what you're doing. I'll not hold any responsibility on any failure of your device while..... Listed under: Wireless projects</p>
1204.		<p>Raspberry Pi based RFID Music Robot A couple of weeks ago, I saw this really cool Raspberry Pi based RFID-enabled cassette player. It ran PiMusicbox and the maker created a module to control PiMusicbox via RFID. This would be perfect for my three year old daughter. Ok, as she's clearly not..... Listed under: Robotics - Automation Projects</p>
1205.		<p>Raspberry Pi Serial Console With MAX3232CPE In addition to the audio, video, network and USB connectors, the Raspberry Pi also has 26 GPIO pins. These pins also include an UART serial console, which can be used to log in to the Pi, and many other things. However, normal UART device communicate..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects</p>
1206.		<p>The RaspberryPi – Putting Fun Back Into Computing With A Small Price Tag I recently acquired a Raspberry PI Model B. as a new gadget to toy with and I must say I am very impressed with it. I would recommend visiting the project's website at http://www.raspberrypi.org/ for a more in-depth overview but will tell you the premise behind..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects</p>
1207.		<p>Cheap and Easy Guide to Building a Private Telephone System Due to the proliferation of cellular networks, most homes have abandoned their land line telephone plan. The infrastructure is still there though, hidden in our walls. Why let all that copper go to waste? Let's talk about how inexpensive and easy it is to reclaim..... Listed under: Internet - Ethernet - LAN Projects</p>
1208.		<p>Parallel Programming using Threads An Operating System requires numerous tasks to be performed at the same time. The 'Parallel Processing' is the term which refers to the technique of executing many tasks at the same time. However actual parallel processing is not possible in commonly available computers, but they..... Listed under: Raspberry Programmer Projects</p>
1209.		<p>Power supply for function generator Over the course of developing and testing the function generator I have needed a dual polarity power supply. I have been using a bench power supply that I made some time ago. It has two variable voltage outputs and I am linking the +ve terminal..... Listed under: Development Board - Kits Projects</p>
1210.		<p>Interfacing RaspberryPi with DS1307,I2C based Real Time Clock Introduction RaspberryPi, the popular Open Source Hardware Board operating out of different Linux based flavors like Debian, Fedora, Archlinux ARM and Android, does indeed support a Real Time Clock to be integrated in the form of a Hardware module to it. Here, RaspberryPi Foundation gives..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects</p>
1211.		<p>Executing a File using Execve On Raspberry Pi The Raspberry pi board is a mini-computer which runs on ARM11 processor but is available at extremely cheap price. The device uses the Broadcom controller chip which is a SoC (System on Chip). The Raspberrypi is called a mini-computer because the SoC has the powerful..... Listed under: Raspberry Programmer Projects</p>
1212.		<p>Praxisberry Pi In this instructable we will make a Raspberry Pi-based music player. Me and some friends made this as a group project for school. Supply list: Raspberry Pi SD Card SD Card reader/writer Speakers Power supply for Raspberry Pi Access to the internet (optional) USB DAC..... Listed under: Memory - Storage Projects</p>


1213.




Suptronics X200 Expansion Board Adds Wi-Fi, RTC, VGA, optical S/PDIF, USB ports, Servo Support, and More The Raspberry Pi is a nice little board, but in some cases you may want to add some extra ports. Suptronics released the X100 expansion board for Raspberry Pi Model B last year, and they’ve now come up with a little monster called X200 expansion……. Listed under: Wifi / WLaan Projects
1214.




Waveshare DVK512 Kits For Raspberry Pi Model B+ Include RTC, Sensors, LCD Display, and More Beaglebone (Black) expansion boards are called capes, Minnowboard ones are lures, and Raspberry Pi model B+ add-on boards can be HATs (HARdware on Top). When I found a kit for the Raspberry Pi model B+ on DealExtreme, based on Waveshare DVK512 add-ons board I thought……. Listed under: LCD Projects
1215.




Building a Raspberry Pi IRLP Node NOTE - these nodes are no longer on the air. I leave these pages for reference purposes. I have gone to the better world of Allstar. See my development of Allstar on the Beagle Bone Black See my second Pi IRLP node 8891 in Cape……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1216.




Best Technology Projects of 2012 Before the world comes to an abrupt end, I thought it would be pertinent to look back on the last year, and highlight some of my favorite Tech Instructables. Initially, I was going to make this a top 20 list, but with over 5,600 Technology……. Listed under: Projects
1217.




Raspberry Pi Model B+ with 4 USB Ports, a micro SD Slot, and More GPIOs Coming Soon With over 3 million boards sold, the Raspberry Pi is by far the most popular ARM Linux board on the market, but people are often asking for hardware upgrades with a faster processor, more RAM and so on. The good news is that a new……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1218.




Connecting a Raspberry Pi to an old 15Khz Arcade Monitor “The Raspberry Pi has been used all over the world as an excellent emulator box to resuscitate old arcade machines, but with moderate success. You see, if you’re a truly arcade aficionado like me, then you’ll aim for perfection. And perfection means you’ll use the jamma……. Listed under: How To - DIY - Projects
1219.




Lego Raspberry Pi Case (for A & B model) Before getting my Raspberry Pi B model in the mail I made up my mind to make a case for it (pretty much a necessity). After looking at many very cool designs, I discovered a girl named Biz over at raspberrypi.org had made a case……. Listed under: Other Projects
1220.




A Raspberry Pi Laptop, the easy way. After seeing the brilliant article from the Adafruit Blog describing in detail how to build a Raspberry Pi laptop, I decided I had to have one ! For those that might not have seen the article, take a look here ... Some of the parts are……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1221.




Module turns Raspberry Pi into robot navigation computer Roboteq launched a Kickstarter project to build an I/O add-in card for robotics navigation that stacks atop a Linux-based Raspberry Pi board. The RIO (Raspberry IO) is based on a 32-bit STM32 microcontroller, and includes a 3A DC/DC converter, several serial interfaces, a CAN interface,……. Listed under: Robotics - Automation Projects
1222.




How to Make Your Own Smart AC Remember that late-90s Disney Channel Original Movie Smart House in which a young, motherless, computer-genius boy wins a fully automated robot-house, only to have the house-software come alive as an overbearing 50s-esque mother who locks the boy and his family indoors ‘for their own good’?……. Listed under: How To - DIY - Projects
1223.




Monitoring Room Temperatures with a Raspberry Pi and Nagios Over the past couple months I’ve been implementing and building out a monitoring solution for our development and production systems. Since nagios is the most loved / hated monitoring solution I felt obliged to learn how it works. After fighting with user permissions, firewall rules,……. Listed under: Temperature Measurement Projects
1224.




Mjolnir – The Portable Media Computer I travel a lot and I like to take my media with me. However, I’m rarely end up at places with a strong internet connection and I don’t like having to hook up my laptop to the TV. So a couple months ago I decided……. Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1225.



Raspberry PI connected Wireless Smoke Alarm My Brief Build a smoke alarm that sends an email and text message when it goes off. The Device After a fe w days of investigation into possible solutions, I opted to build one using a Raspberry PI and a cheap smoke alarm, linked by……. Listed under: Wireless projects
1226.

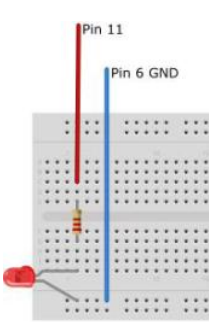


A Raspberry Pi-based State Poster Project At our daughter’s school, all the 2nd graders put together a “state board” project. They are randomly assigned a state (in our daughter’s case, Vermont) and the students work to put together a poster on a tri-fold piece of cardboard. From what I’ve heard, the……. Listed under: Other Projects
1227.




Robot Antenna We are going to make a robot which beeps and has a flashing antenna using a Raspberry Pi. Making an antenna for your robot Let’s get hands-on with electronics! This is where the Raspberry Pi comes in handy. You will program a small light called……. Listed under: Robotics - Automation Projects


1228.



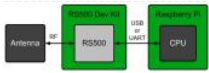
Scratch & Raspberry Pi GPIO: A Great Combination A guest post by Les Pounder, a Freelance IT Consultant and Trainer from the UK who is to many Linux magazines and podcasts. You can find out more about him at about.me/lespounder. Scratch, the well known first step into programming, has been..... Listed under: LED Projects
1229.




Raspberry Pi Coffee Table Arcade Raspberry Pi powered MAME machine in an IKEA coffee table. I probably wouldn't recommend trying to build this unless you have a bit of experience with electronics. This is only a basic run through of how I went about building my Raspberry Pi arcade and..... Listed under: Blog, Other Projects
1230.




Motor Driver DRV8835 (for Raspberry Pi) This motor driver kit and its corresponding Python library make it easy to control a pair of bidirectional, brushed DC motors with a Raspberry Pi Model B+. The expansion board features Texas Instruments' DRV8835 dual H-bridge motor driver IC, which allows it to operate from 1.5 V..... Listed under: Motor Projects
1231.



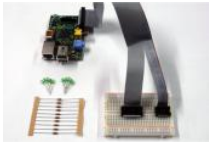
Raspberry Pi IRI Host We've heard plenty of customers asking if the IRI toolkit can be used on Raspberry Pi, so we decided to put together a blog post about it. The answer is, of course, "Yes it can!" The IRI toolkit has already been ported to the Linux..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1232.




Touch free water dispenser with a Raspberry Pi In this quick project, we'll be using Monk Makes' RaspiRobot board (v2) and a peristaltic pump, to build a sort of touch free water or drink dispenser. Our main component here, the RaspiRobot board, is a brilliant motor shield you can buy for the Raspberry Pi, which plugs..... Listed under: Security - Safety Projects
1233.




Raspberry Pi Twitter Candy Bot Video of all steps at a high level Materials Raspberry Pi (If this is your first time you may also need monitor, keyboard, and mouse) Servo WiFi Adapter or Ethernet cable Wires with female plugs for connecting to Raspberry PiCandyPlastic pop-bottle or similar container. Step..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1234.




Using Raspberry Pi GPIO Interface I have a Raspberry Pi - this post is about beginning to explore it's control capabilities using the General Purpose Input Output (GPIO) port and is aimed at total beginners assuming that you have already got your Raspberry Pi up and running as described in..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1235.




DNA flashing LED box with a Raspberry Pi How the idea came about... I've been meaning to do a science oriented project with my Raspberry Pi for a while now, but with the existing components at hand, I was rather limited with what I could do. Most of the sensors in the starter..... Listed under: LED Projects
1236.




Arduino and Raspberry Pi: We need them in classrooms across the ... It is great being introduced to science and technology at a young age. Do you remember that moment you used a computer for the very first time, or the first time you played Tetris or Snake? How fascinating was that? I have fond memories of..... Listed under: Development Board - Kits Projects
1237.



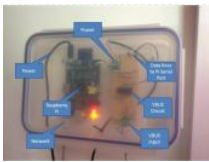
Controlling a stepper motor with the Raspberry Pi and PiFace Updated April 2015 I have made this because I have found no projects using the PiFace. Forum topic at www.raspberrypi.org: <http://www.raspberrypi.org/phpBB3/viewtopic.php?f=37&t=54314&p=413902> Here is a simple project that only needs a Raspberry Pi, PiFace, Python, jumper wires, and a stepper motor - that's it! Step 1:..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1238.




We controlled any AV technique with phone. An IR transceiver for Raspberry On the sly I does the house a little bit more cleverly. At first making control of light with phone by means of a board of the extension of RaZBerry (Z-Wave) for Raspberry, then programming of AVR microcontrollers were fond and collecting the small meteorological..... Listed under: LED Projects
1239.




USB Dial Up Modem for Raspberry Pi For the first time in probably 15 years, I find myself needing to use a modem. This time on a Raspberry Pi. I have a few old modems in the junk bin, but they need an RS232 serial interface which would be a pain to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects
1240.



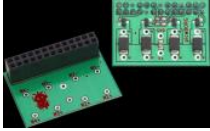
Home Energy Centre using Raspberry Pi and Nook Simple Touch Introduction Following on from using a Raspberry Pi to capture the electricity consumption of my home, I have over the last 2 years installed Solar Thermal Hot Water panels and very recently Solar PV. This meant that I had an opportunity to create something I..... Listed under: Home Automation Projects
1241.

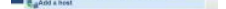


Accessing A Headless Raspberry Pi using SSH and TightVNCServer Scope: To gain access to a terminal on a headless Raspberry Pi and then to display the Pi's desktop remotely using tightvncserver and xtightvncviewer BOM: – WiFi enabled Raspberry Pi with Raspbian OS – WiFi enabled computer on same network as Raspberry Pi. Instructions: To..... Listed under: Wifi / Wlan Projects
1242.




WebRTC Creeper Drone – Browser Controlled RC Car This is an advanced Instructable, which describes the process of building a drone controlled remotely from a browser. The drone uses an Android phone to stream video and audio back to the browser via WebRTC. Since the software used in this project is somewhat complex,..... Listed under: Car Projects




274.  Host your website on Raspberry pi Raspberry pi is a low cost development board by the raspberry foundation,for this tutorial i am using the distro provided by adafruit that can be found at <http://learn.adafruit.com/adafruit-raspberry-pi-educational-linux-distro/occidentalis-v0-dot-2> all you need to do is download the image and use WIN32 disk to burn the image on to the..... Listed under: Internet - Ethernet - LAN Projects

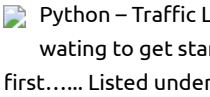



1275.  Raspberry Pi Wifi Internet Radio Player For my first project after getting the Raspberry Pi (\$35 Linux computer) I wanted to extend on a very good blog post I read from MightyOhm about turning a cheap Wifi router into an internet radio:
<http://mightyohm.com/blog/2008/10/building-a-wifi-radio-part-1-introduction/> In that article he also had a cheap..... Listed under: Radio Projects






1276. 3d Printed Raspberry Pi Security Camera Update: If you like my instructable please vote for me in the Raspberry Pi and Epilog challenge. I will also update the 5th step to include how I setup Motion on the first boot. Thank you for your clicks and thank you Instructable.com for the..... Listed under: Security - Safety Projects




277.  Python – Traffic Light Introduction Hopefully now you have received your LED electronics kit and have followed our basic LED tutorials. Now you are eagerly waiting to get started and create some more complex programming using both inputs and outputs. The following tutorial will get you programming your first..... Listed under: LED Projects

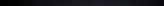


1278.  Raspberry Pi Screenshots Learn how to capture and view screenshots on your Raspberry Pi for project documentation. Use Scrot and ShotWell to do this solely through the command line. Scrot is a command line screen capturing application that's easy to download and use, and Shotwell is a light-weight..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects




9.  A Better Mobile Display for the Raspberry Pi As I described in an earlier post, I run my Raspberry Pi (RPI) as a headless system, using Cygwin/X's xterm for command line interaction with the RPI, with my PC being my X server to support any X Window applications. I can move files between the PC and the RPI..... Listed under: Phone Projects




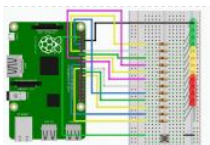
0.  How to use the ADXL345 on Raspberry pi I have found that there is not much out there to actually find out how to use the ADXL345 on the web, but first, what is an ADXL345, well it is a 3-axis accelerometer with high resolution (13-bit) measurement at up to ± 16 g. Digital..... Listed under: Development Board - Kits Projects




1281.  Simple Raspberry Pi Game Pad for Ball Catching Game There are eight general purpose IO pins on the 13*2 pin connectors of the Raspberrypi board and among them four pins has been selected as input and then remaining four pins as output. The input pins are connected to push button and are pulled down..... Listed under: Game - Entertainment Projects

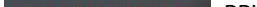


1282.  Raspberry Pi Ball tracking (Note: This is an advanced tutorial, it is not intended for a linux beginner.) In this tutorial, I will demonstrate how to track table tennis balls using OpenCV on Raspberry Pi. It can be used to track any circular object as long as it can..... Listed under: Sensor - Transducer - Detector Projects




1283.  The Ladder Game- Hardware emulated in Python and C Prerequisites: Basic Raspberry setup step by step Refreshing the Software of the Raspberry Pi Hardware: Breadboard and Jumper cables or soldering equipment 12 LEDs of any color and fitting resistors 1 Pushbutton The ladder game is a good project for getting warm with the Raspberry..... Listed under: Game - Entertainment Projects




1284.  RPi: Use GPIO pins and a program to determine TTL gates Lab Outline Download WiringPi libraries Understand the pin layout for the RPi Understand why you must use a voltage converter in this lab, and how to use it Create a program to determine the type of TTL gate being tested DUE BY NEXT LAB Wiring..... Listed under: Other Projects

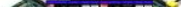


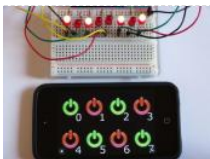
1285.  Making Things Interactive Vicious Cycle – Final Documentation 'Vicious Cycle' is a machine that 'promotes' health and active lifestyle through a portion-controlled diet. Today's obsession with insane workout routines and different types of diets (whether it be no carbs, Paleo, raw food, or an-apple-a-day diet – you name..... Listed under: Feature, How To - DIY - Projects




1286.  Home Automation Framework I. Title and Abstract The Home Automation Framework provides a web interface that allows users to control devices in their home using the browser on a smartphone, tablet, or PC. So far, the system allows for powering outlets on and off, locking and unlocking a..... Listed under: Home Automation Projects




1287.  Raspberry Pi Digital Signage: Exchange Rate Display Boards Raspberry Pi (Model B) is a single-board computer that uses an ARM 11 (ARM1176JZF-S core) processor running at 700MHz (it can overclock up to 1GHz) with 512MB RAM. This article shows you how to turn your Raspberry Pi into a cheap, browser based digital signage..... Listed under: Development Board - Kits Projects













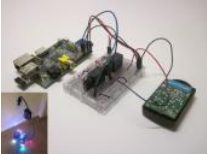



1288.  Simple and intuitive web interface for your Raspberry Pi The Raspberry Pi is an amazing 35 dollars mini-computer. It allows you to do everything you could do with a regular Linux computer (Connecting to the internet, watching videos, launching applications, ...) but also to interact with the world surrounding it, just like an Arduino..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



1289.  Wireless Multi-Channel Voice-Controlled Electrical Outlets This project is a combination of several difference resources: My single-outlet control project with Raspberry Pi and Python, originally inspired by user wilq44's Raspberry Pi GPIO home automation WiringPi, software written by Gordon Henderson that allows "Arduino style" control of the GPIO pins from the..... Listed under: Radio Projects, Sound - Audio Projects


T290. WeggUp – A sleeping cycle and light alarm clock I often have the problem, that I have trouble getting up in the morning, while at the same time, I have trouble falling asleep in the night. I've checked out several possibilities to make both easier. Getting up in the morning Sunrise alarm / light..... Listed under: Clock -

		Timer Projects
1291.		Black Box Timelapse Black Box Timelapse is a simultaneous timelapse recorder and player, which I built using a Raspberry Pi. It is battery-operated and so I can bring it to different places and set it up. Why not use an iPhone? Simple: the iPhone looks like a device..... Listed under: Game - Entertainment Projects
1292.		ISPRESSO: Remote Controlled, Raspberry Pi Powered Espresso Machine iSPRESSO is an appliance modification comprised of Raspberry Pi computer, solid state relays, temp sensor, buttons and a display, a custom Printed Circuit Board, and custom linux shell scripts and a good bit of python code. The instructions to build, including source code, is available..... Listed under: CNC Machines Projects
1293.		Playstation 2 controller with Raspberry Pi This tutorial will show how to use the Playstation 2 Controller (PS2) with the Raspberry Pi. We use the Arduberry to adapt the shield to the Raspberry Pi. Step 1: Hardware Required Raspberry Pi Arduberry Dexter Industries Playstation 2 Controller Shield for Arduino A Playstation..... Listed under: Game - Entertainment Projects
1294.		Raspberry Pi – SMS Garage Door Butler Most Raspberry Pi garage door remotes had open ports, or other features I wasn't too fond of. So I created my own that contains much more security, logging of who opens the garage, video capture, garage status and more. Features: 100% secure garage door operation,..... Listed under: Phone Projects
1295.		Pumpkin PACS/Pumpkin Pi The Pumpkin PACS was constructed for the MGH Radiology Pumpkin Decorating Contest. It is a standalone DICOM workstation capable of displaying many standard types of radiology images. The pumpkin contains a Raspberry Pi which projects images onto a screen using a Microvision SHOWWX+ HDMI pico projector..... Listed under: Game - Entertainment Projects
1296.		Overclocking a Raspberry Pi In this instructables I will show you how to overclock a Raspberry Pi. You don't need a heat sink or a fan, because the temperautre won't go over the 50-60 C (120-140 F). Please vote for me in the Raspberry Pi contest. Good luck with..... Listed under: Clock - Timer Projects
1297.		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 along with my friends Erica Portnoy and Vincent Castaneda, and we won 2nd place in the hardware track..... Listed under: Game - Entertainment Projects, Sound - Audio Projects
1298.		Simple timelapse camera using Raspberry Pi and a coffee tin Whilst developing BerryCam I thought it would be pretty cool to create a timelapse camera that could be left outdoors over a period of time, to capture a sequence of images that could be later joined together into a video clip. From the outset thoughts..... Listed under: Video - Camera - Imaging Projects
1299.		Raspberry Pi Multi-Room Audio (Mobile/Tablet/PC Controlled) I have been lurking on Instructables for a few years but have never posted one myself. Now I have bought a home of my own it's time to undergo some projects and share them with the community. In my first project I'm going to show..... Listed under: Sound - Audio Projects
1300.		Raspberry Pi as low-cost HD surveillance camera This instructable describes how to build a surveillance cam based on a Raspberry Pi micro-computer which records HD video when something moves in the monitored area. Live picture can be viewed from any web browser, even from your mobile while you're on the road. What..... Listed under: Video - Camera - Imaging Projects
1301.		Web Controlled 8-Channel Powerstrip Greetings, fellow Raspberry Pi enthusiasts. We are about to create a multi-purpose gadget that is sure to impress! My primary reason for building this to to control my Christmas lights, but that is only one of many possible uses. Basically you can plug in up..... Listed under: Home Automation Projects
1302.		Wireless Christmas Light Timer with Raspberry Pi and Python Update 1/14/2014: Thanks to everyone who voted for this project in the Hardware Hacking Contest! Looking forward to my new maker pen. Update 12/31/2013: looking for a more advanced version of this project? Check out my new multi-channel voice-controlled version. We all know you could..... Listed under: LED Projects
1303.		Raspberry Pi Temperature & Humidity Network Monitor OK, Instructables is really having some strange issues, Once again the Intro disappeared, now the history is gone, and I've had to recreate the Intro from a PDF download. I had some issues with Kingston SD Cards, but the SanDisk cards I'm using now have..... Listed under: Temperature Measurement Projects


List of Project Ideas using raspberry with advance view:

This list of projects may not be fully mature as the upper one is. but i assume its good to have in this whole pdf book.


1.




Building a Raspberry Pi Cluster Once upon a time... So this is how this story began... The Raspberry Pi has fascinated us geeks from the time it was first announced. We were thrilled to hear that Eben will be presenting at WSO2Con, and even more thrilled when Sanjiva suggested that..... Listed under: Ideas
2.




Smallness über alles: Intel’s tiny, Haswell-based NUC desktop reviewed A couple of months back, Intel sent us the latest version of its "Next Unit of Computing," or NUC for short. The NUC is sort of a side-project for Intel. It's a some-assembly-required desktop computer aimed at hobbyists who like playing with new tech and..... Listed under: Ideas
3.




Raspberry Pi as Hi-Fi player with RuneAudio This Instructable will show you how to turn your Raspberry Pi in a Hi-Fi music player with surprising sound quality when used in combination with an USB DAC. We are going to introduce here RuneAudio, a free and open source software that we developed to..... Listed under: Ideas
4.




Mini Projection-Mapped Landscape This Instructable about creating a simple sculpture that is augmented with projection mapping, designed to run on the Raspberry Pi, built with OpenFrameworks. Projection Mapping is a process that relies on knowledge of the physical space, graphics software, and installation of the hardware necessary to..... Listed under: Ideas
5.



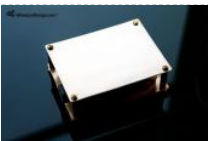
DIY Head Mounted Display In this instructable I will show you how to make a DIY head mounted display (HMD) that uses a raspberry pi and a 7 inch composite or HDMI display. UPDATE: 20 000 views! Please vote for this project in the Formlabs contest, if I won..... Listed under: Ideas
6.



Build your own Mini Arcade Cabinet with Raspberry Pi The Porta-Pi Mini Arcade is a desktop-sized, fully functional, mini arcade cabinet measuring just under 13 x 9 x 10 inches (HxWxD). This Porta-Pi Arcade turns your Raspberry Pi in a mini arcade machine. Of course you could stuff any other retro console inside, but..... Listed under: Ideas
7.



Twin Raspberry Pi B+ Rack “Case” So I have built and bought several Raspberry Pi cases. Before I could get a RasPi I owned several high quality paper cases. Once it came out I graduated to cardboard, leather, Legos, and purchased cases. I would buy a Pi and create or buy..... Listed under: Ideas
8.



Easy \$10 Copper Raspberry Pi Case I wanted to make a nice case for my Raspberry Pi that anyone could easily build using common hand tools and easy to find, cheap materials. The total cost of material was about \$10. The only tools that are needed are a pair of tin..... Listed under: Ideas

