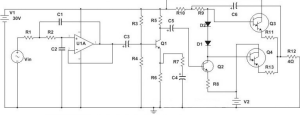
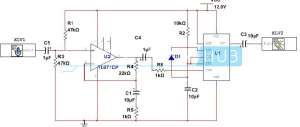


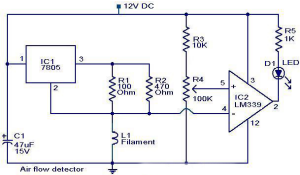
OP AMP Project List



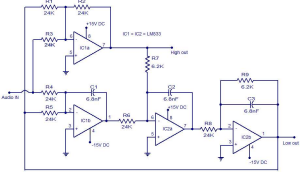
[100W Subwoofer Amplifier Circuit](#) A subwoofer is a loudspeaker that delivers low-frequency audio signals. Ken Kreisler invented the first subwoofer amplifier in 1970. Its primary purpose is to enhance the bass quality of audio...



[Low Power Audio Amplifier using 555 Timer](#) For spaces such as an auditorium or any other hall, traditional audio amplifier methods use high-power circuits to drive a loudspeaker. However, we can meet the requirements for applications involving...



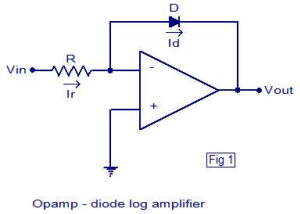
[Air Flow Detector Circuit Diagram](#) The Air Flow Detector Circuit Diagram can provide a visual indicator of airflow rate. It can also be used to determine whether or not there is airflow in a specific...



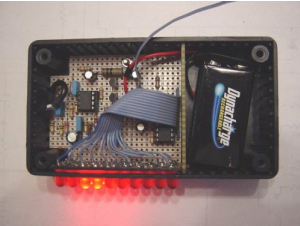
[Active Crossover Schematic Circuit Diagram](#) Given below is an Active crossover circuit suitable for HiFi audio systems using LM833, the dual operational amplifier. Description: Crossover circuits are of two types, active and passive. Passive crossover...



[Audio Amplifier Circuit – 15 Watts Schematic Circuit Diagram](#) The circuit below is of a 15 Watts Class B audio amplifier circuit designed using a dual Op-amp and transistors. Description : The circuit shown here is of a simple Class-B audio...



[Log amplifier Schematic Circuit Diagram](#) Log amplifier is a linear circuit in which the output voltage will be a constant time the natural logarithm of the input. The basic output equation of a log amplifier...



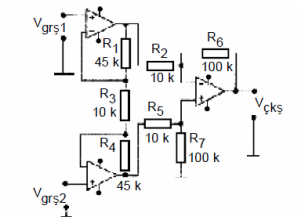
[Sound Level Indicator Schematic Circuit Diagram](#) This project uses an LM3915 bar-graph IC driving two sets of ten LEDs for a 30dB range. The circuit is unique because it has an additional range of 20dB provided...



[SPEAKER DELAY SCHEMATIC CIRCUIT DIAGRAM](#) In order to prevent noise in the first working moments of the amplifiers and to prevent damage to the speaker, the control element is the standard in the sound systems...



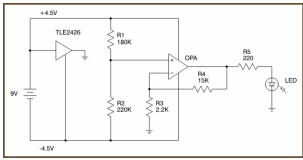
[SOLAR PANEL ROUTER AND DC-DC WELDED REGULATOR SCHEMATIC CIRCUIT DIAGRAM](#) Our forum section i basriacar ular is a very nice sharing and a sample project for people who are interested in solar energy topic in the forum kon Switched Power Supplies I are...



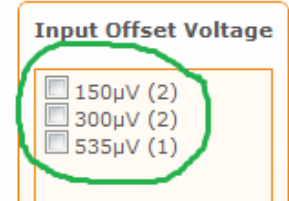
[HIGH COMMON MODE RESPONSE RATE INSTRUMENTATION AMPLIFIER SCHEMATIC CIRCUIT DIAGRAM](#) An example of a common mode response rate (CMRR) instrumentation amplifier is given in the Circuit. The common mode response rate (CMRR) is the ability to reject both of these...

[30 VOLT 10 AMPS TUNED POWER SUPPLY LM337 BUK416 SCHEMATIC CIRCUIT DIAGRAM](#) Power supply circuit 1.2v - 30 volts voltage regulated 0 - 10 amperes current controlled fan control short circuit protection features lm337 buk416 mosfet powered negative regulator designed control layer...

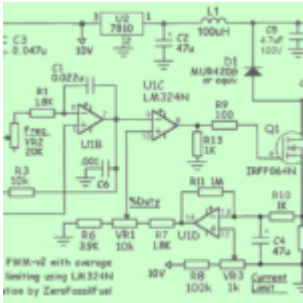




[OP AMP INTEGRATED TEST SCHEMATIC CIRCUIT DIAGRAM](#) You can test op amp integrals with a simple circuit . Usually a lot of op amp's leg connections are the same as the red LED used to show that the circuit is intact when...



[CURRENT MEASUREMENT](#) In many applications it is the current that requires another measurement, such as measuring voltage. Before mentioning the current measurement, it is appropriate to define briefly what the current is. Current: The...



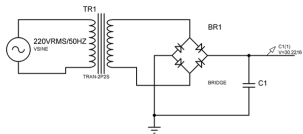
[PWM 150 AMPER HHO ELECTROLYSIS CONTROL](#) The control power of the HHO PWM circuit is very high 150A current limitation and frequency settings can be done PWM control LM324 opamp power transistor is irfp064n circuit diagram, pcb and HHO...



[TDA7294 200W 100W SUBWOOFER AMPLIFIER SCHEMATIC CIRCUITS DIAGRAM](#) TDA7294 There are two different subwoofer bass amphitheater circuits prepared with an integrated amplifier . In the circuit with 100 watts, 1 TDA7294 is simpler than the other circuit used. TDA7294 100W design bass filter circuit For 80-150Hz adjustable...



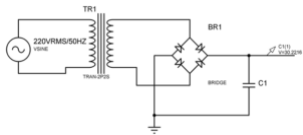
[VOLTAJ REGÜLATÖRLERİ ve UPS – Üretici Firma UYGUN FİYATLAR](#) I found 2 power supply diagrams when mixing my archive. well-prepared, especially for beginners in electronics, easy-to-understand instructions, simple descriptions of circuits, layout drawings. Adjusted symmetrical power supply by HAYDAR AKIN ANADOLU...



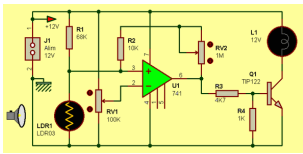
[DESIGN PROJECT!](#) There are two linear regulators in the bag of most people dealing with hobby electronics: LM317. One opamp (LM318) and plenty of resistance, capacitor and so on. Let us ask this; Let us...



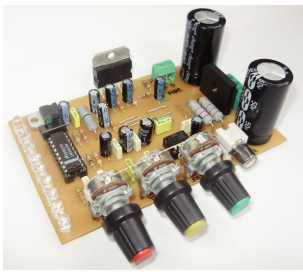
[SIMPLE POWER SUPPLIES WITH LM337 AND LM317 SCHEMATIC CIRCUIT DIAGRAM](#) I found 2 power supply diagrams when mixing my archive. well-prepared, especially for beginners in electronics, easy-to-understand instructions, simple descriptions of circuits, layout drawings. Adjusted symmetrical power supply by HAYDAR AKIN ANADOLU...



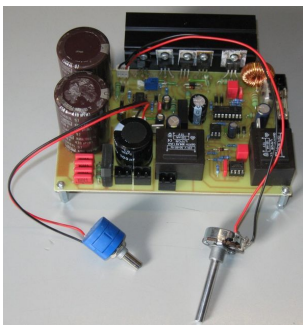
[DESIGN PROJECT SCHEMATIC CIRCUIT DIAGRAM](#) There are two linear regulators in the bag of most people dealing with hobby electronics: LM317. One opamp (LM318) and plenty of resistance, capacitor and so on. Let us ask this; Let us...



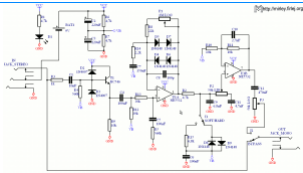
[12V DARK SWITCH WITH 741 OP AMP Schematic Circuit Diagram](#) It works as a dark key with the LDR that you see in the diagram . The circuit consists of four resistors, one opamp, two potentiometers, one LDR, one switching transistor and one lamp. In the circuit,...



[TDA7294 COMPLETE 100W AMPLIFIER VU METER TONE CONTROL Schematic Circuit Diagram](#) 100W Amplifier circuit TDA7294 installed on a single board on the vu meter (Im3914), bass treble sound settings in the tone control circuit (4558 opamp) and has a supply circuit. Tone control circuit...



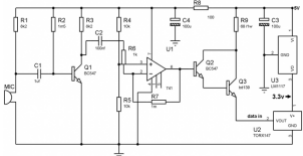
[HIGH VOLTAGE 0-400V 22MA-600MA REGULATED POWER SUPPLY TCA785 Schematic Circuit Diagram](#) Power supply voltage setting 22ma 81 600ma (highest 1a) current setting is not too complicated on the TCA785 phase control integral but because the voltage is high, the DCDC converter used to...



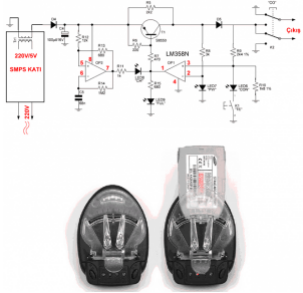
[QUALITY DISTORTION OVERDRIVE EFFECT CIRCUITRY NE5532 SCHEMATIC CIRCUIT DIAGRAM](#) Overdrive Distortion Effect Circuit Designed specifically for use with guitar. Circuit NE5532 There is no critical material on the opamp installed circuit. All of them can be found on the market. Also...



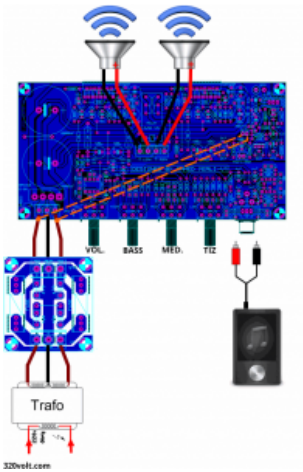
[ENERGY SAVING FLUORESCENT LAMP POWER LED DRIVER MODULE SCHEMATIC CIRCUIT DIAGRAM](#) The purpose of this additional driver board is to run a power LED (EDEX-3LA1-E1) with a solid power card to evaluate the fluorescent light bulb of the energy-saving lamp that is the author of the fluorescent lamp ... For this you have to add...



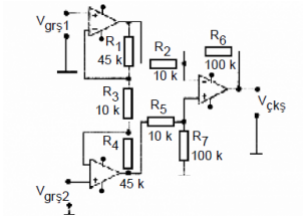
[AUDIO TRANSMISSION WITH FIBER OPTIC CABLE SCHEMATIC CIRCUIT DIAGRAM](#) Operation Principle of the Transmitter Circuit: In this circuit a capacitive microphone is used to convert the audio signal into an electrical signal. The signal at the mV levels at the microphone...



[CHINESE MADE UNIVERSAL CHARGER SCHEMATIC CIRCUIT DIAGRAM](#) A simple but very useful charger that was put on the market many years ago (first seen on a birdcage) .. usually known as a spider charge or insect charge 😊 The...



[TDA7294 STEREO TONE CONTROLLED SPEAKER PROTECTED AMPLIFIER SCHEMATIC CIRCUIT DIAGRAM](#) Hi friends, In the new project, again TDA7294 audio, price performance and a proven amplifier integration ... This project consists of a combination of the " Delayed and Loud Speaker DC Protection Circuit " and " TDA7294...



[HIGH COMMON MODE RESPONSE RATE INSTRUMENTATION AMPLIFIER SCHEMATIC CIRCUIT DIAGRAM](#) In the circuit, a common mode response rate (CMRR) instrumentation amplifier example is given. The common mode response ratio (CMRR) is the ability to reject any signal applied to both...



[TDA7377 TONE CONTROLLED STEREO AMPLIFIER PROJECT SCHEMATIC CIRCUIT DIAGRAM](#) I think that the TDA7377 amplifier has a high performance compared to the price of the amplifier that does not know how to integrate a previously shared @gevv simple application; 2X30W Anfi Circuit with TDA7377 TL074...

[936 SOLDERING CONTROL CIRCUIT 24V 450 DEGREE TEMPERATURE CONTROL SCHEMATIC CIRCUIT DIAGRAM](#) I do not give a definite brand of "936" because I have a lot of varieties, because there are many kinds of cyber 936 beb 936 and so on 936 etc

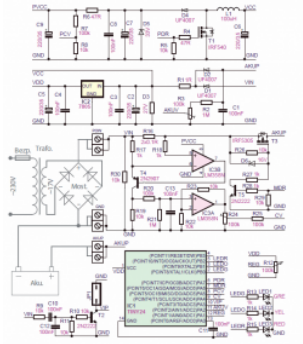


$$I_{0MAX} = \frac{V_{BE4}}{R_6} = \frac{0.6V}{5mA}$$

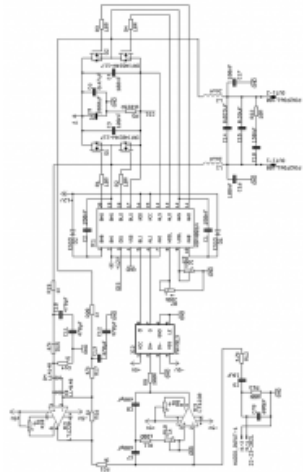
[OVERCURRENT PROTECTION SCHEMATIC CIRCUIT DIAGRAM](#) Another desirable feature of regulated voltage supplies is overcurrent protection. When overcurrent is drawn from the output of a regulated current source, or when there is a short circuit, an overcurrent...



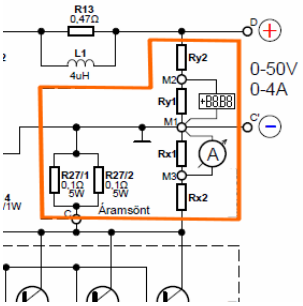
[LM3886 STEREO COMPLEX ANFI PROJECT SCHEMATIC CIRCUIT DIAGRAM](#) The LM3886 Anfi integration is very popular and I have made a special design. First of all there are differences between photos and pcb, some because of the material values...



[10AH 100AH BATTERY CHARGING CIRCUIT \(1A-10A ADJUSTABLE\) SCHEMATIC CIRCUIT DIAGRAM](#) With an automatic battery charging circuit built on the ATTINY24 microcontroller, you can charge 12v acoustics with different powers (10A, 20Ah, 30Ah, 40Ah, 50Ah, 60Ah, 70Ah, 80Ah, 90Ah and max. 100Ah capacitive 12V lead acid can...

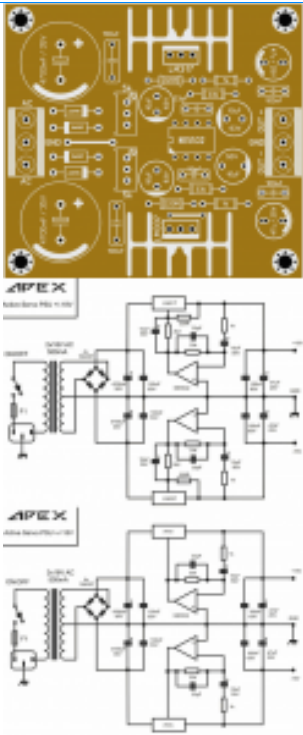


[HIP4081A 2X100W CLASS D AMPLIFIER CIRCUIT \(SMPS POWER SUPPLY\) SCHEMATIC CIRCUIT DIAGRAM](#) There are not as many Class D amp projects as the IR2110, but there are beautiful Class D amp designs made with the HIP4081A driver. This design also provides 100 watts per channel with 8-ohm speakers, mostly with SMD...

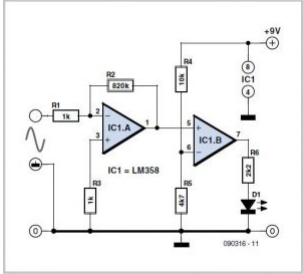


[0-50V 0-4A LABORATORY TYPE POWER SUPPLY TL081 BD249 Schematic Circuit Diagram](#) Laboratory Type 0-50V 0-4A Adjustable power supply circuit The TL081 is a classic design based on the opamp .. I think I can remember the misconstrued diagram in the electrical or electronic...

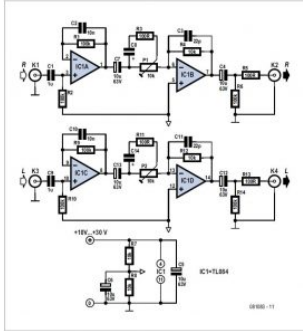
[AMPLIFIER POWER SUPPLY AND PROTECTION CIRCUITS Schematic Circuit Diagram](#) Power supply circuits that you can use in various power circuits such as an amphibious, preamplified, etc. circuits are available in low power designs as well as high power ones. Generally PCB...



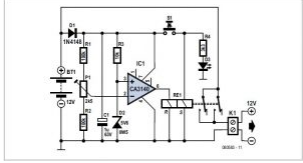
[Tester for Inductive Sensors Schematic Circuit Diagram](#) This tester uses a LED to indicate whether an inductive sensor is generating a signal. It can be used to test the inductive sensors used in ABS and EBS systems...



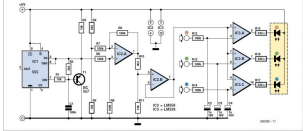
[Audio Source Enhancer Schematic Circuit Diagram](#) Vinyl or CD: which has the better sound? It’s a question still hotly debated among audiophiles everywhere. We will try to shed a little light on what lies behind the...



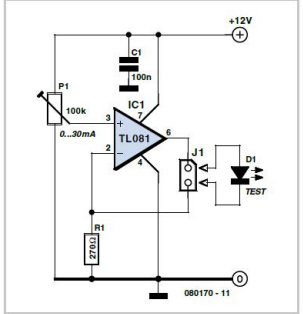
[Lead Acid Battery Protector Schematic Circuit Diagram](#) The circuit described here can be used to ensure that a 12 V sealed lead acid (SLA) gel battery isn’t discharged too deeply. The principal part of the circuit is...



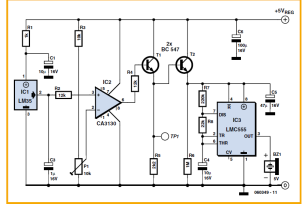
[VGA Background Lighting Schematic Circuit Diagram](#) More and more people are using a PC (conventional or notebook) to view films. The VGA output can be used to provide a matching ‘Ambilight’ effect for this. If you restrict...



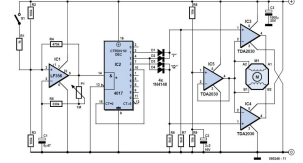
[LED TV Backlight Tester Schematic Circuit Diagram](#) This circuit can be used to test up to three LEDs at once, connected in series. You can easily increase that number by using a higher supply voltage. This simple...



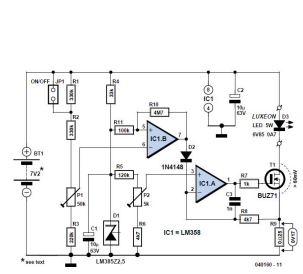
[Overheat Detector Alarm/Switch Schematic Circuit Diagram](#) At the heart of this circuit is a precision integrated temperature sensor type LM35 (IC1), which provides an accurately linear and directly proportional output in mV, over the zero to...



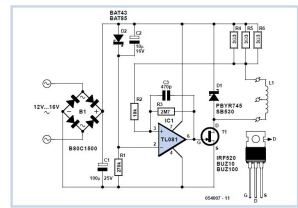
[Stepper Motor Controller Schematic Circuit Diagram](#) Stepper motors are available in several versions and sizes with a variety of operating voltages. The advantage of this general-purpose controller is that is can be used with a wide...



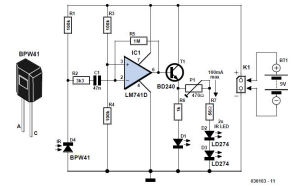
[Efficient Current Source for High-power LEDs Schematic Circuit Diagram](#) To get the maximum brightness and working life out of a high-power LED, it needs to be driven at the optimum specified current. Allowing the current to exceed the permitted...



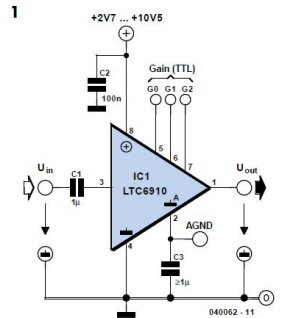
DCM motor was...



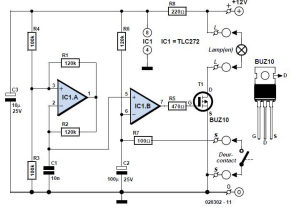
[Converting a DCM Motor Schematic Circuit Diagram](#) We recently bought a train set made by a renowned company and just couldn't resist looking inside the locomotive. Although it did have an electronic decoder, the



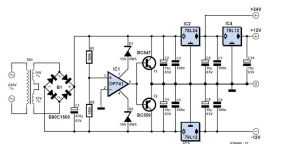
[Simple Infrared Control Extender Schematic Circuit Diagram](#) Lots of consumer electronic equipment like TV sets, VCRs, CD and DVD players employs infrared remote control. In some cases, it is desirable to extend the range of the available...



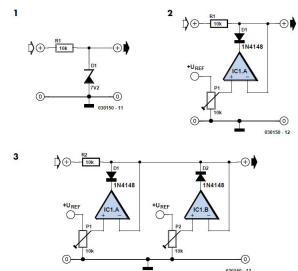
[Programmable- Gain Amplifier Schematic Circuit Diagram](#) The gain of an operational amplifier is usually set using two external resistors. If you wish to have adjustable gain, you can use a digitally controlled multiplexer to select several...



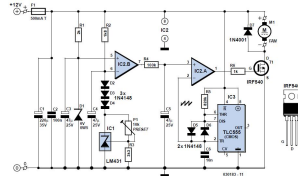
[Luxury Car Interior Light Schematic Circuit Diagram](#) This circuit belongs to the 'car modding' category. This is similar to the popular case modding in the computer world and has found its way into a substantial proportion of...



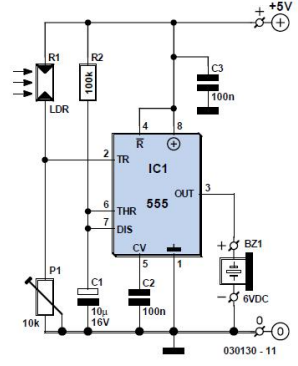
[Triple Power Supply Schematic Circuit Diagram](#) Inexpensive miniature transformers normally provide one or two secondary voltages, which is sufficient for generating a set of positive and negative supply voltages, such as are needed for operational amplifier...



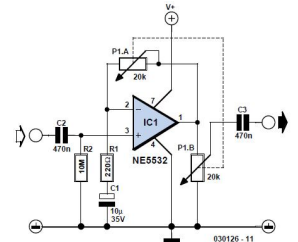
[Adjustable Zener Diode Schematic Circuit Diagram](#) A Zener diode is the simplest known type of voltage limiter (Figure 1) As soon as the voltage exceeds the rated voltage of the Zener diode, a current can flow...



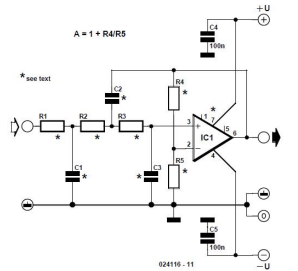
[Monitor Life Xtender Schematic Circuit Diagram](#) This circuit was designed to protect a computer monitor from overheating. It is recommended to attach this circuit to power users' monitors! Most computer monitors of the CRT type fail...



[Simple Darkness Activated Alarm Schematic Circuit Diagram](#) Most darkness activated alarms employ opamps and some logic ICs. Here, a less expensive approach is shown based on the eternal 555, this time in monostable multivibrator mode. Components R2...



[Zero Gain Mod for Non-Inverting Opamp Schematic Circuit Diagram](#) Electronics textbooks will tell you that a non-inverting opamp normally cannot be regulated down to 0 dB gain. If zero output is needed then it is usual to employ an...



[3-dB Chebyshev Filter/Amplifier Schematic Circuit Diagram](#) Elsewhere in this collection of small circuits, a 1-dB version of a third-order Chebyshev filter can be found. This 3-dB version is a bit steeper after the corner frequency. The...

[Audio Combiner Schematic Circuit Diagram](#) This circuit arose from the need to couple the outputs of two CDROM drives to the input of a single sound card. Simply 'stacking' the connectors is possible but not...



Low-Drop Current Source Schematic Circuit Diagram

Overvoltage Protection Schematic Circuit Diagram

AM modulator for Intercom Schematic Circuit Diagram

AM Demodulator for Intercom Schematic Circuit Diagram

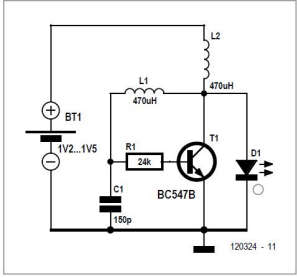
Mains Remote Transmitter Schematic Circuit Diagram

Wideband Wien Oscillator 4 Amps Photovoltaic Charge Controller Schematic Circuit Diagram

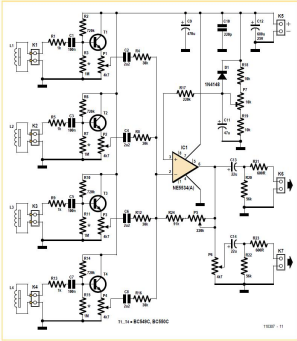
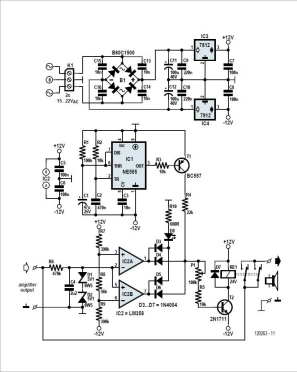
Universal Measurement Amplifier/Attenuator Schematic Circuit Diagram

[Universal Measurement Amplifier/Attenuator Schematic Circuit Diagram](#) A computer is very suitable for making (audio) measurements thanks to the sound card that is usually built in. Unfortunately, the audio input on laptops is usually too sensitive to...

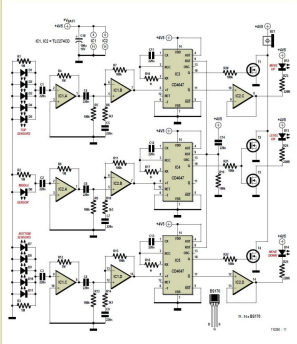
[One-transistor Voltage Converter Schematic Circuit Diagram](#) Taking apart a solar-powered lamp revealed a single-transistor voltage converter circuit that allowed an LED to be driven from a 1.2 V cell. The I/h diagram shows the circuit (with...



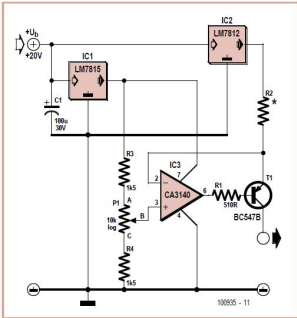
[DC Protection for Speakers Schematic Circuit Diagram](#) I'm in the process of building myself a single-ended class A MOSFET amplifier consisting of two monoblocks, and I don't want to use a coupling capacitor between the amplifier and...



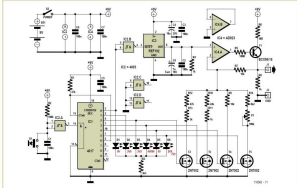
[Electric Guitar Preamp, Mixer and Line Driver Schematic Circuit Diagram](#) Depending on its design an electric guitar may have anything from one to six pickup elements. Classic (acoustic) guitars could also benefit from one or more retrofitted pickups. Each pickup...



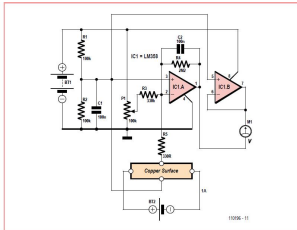
[Laser Level Detector Schematic Circuit Diagram](#) Rotating laser levels, which are very handy for setting objects in a room or garden at the same height, are available at prices of a few dozen pounds. At relatively...



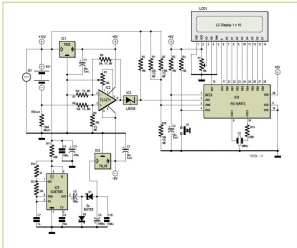
[Constant Current Source Schematic Circuit Diagram](#) The simplest way to make an adjustable constant current source is to use a voltage regulator in a suitable configuration: an example of what is needed is given in the...



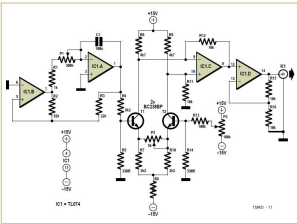
[Variable Voltage Injector Schematic Circuit Diagram](#) When testing circuits and fault finding there is often a need to inject a defined DC voltage level at some point on the circuit. It may, for example, be necessary to...



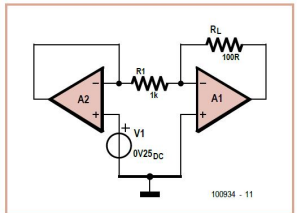
[Experimental Hall Sensor Schematic Circuit Diagram](#) Hall sensors can of course be purchased but making them yourself is far more interesting (and satisfying)! According to the theory the crucial thing is to use a touch layer...



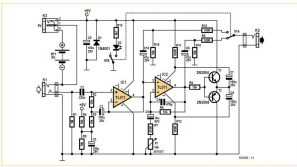
[Battery Charge Monitor Schematic Circuit Diagram](#) The circuit described here provides monitoring of the charge status of a battery by the continuous measurement of charge and discharge currents. The battery current is integrated over time (respecting...



[Triangular Wave Oscillator with Sine Wave Converter Schematic Circuit Diagram](#) This design resulted from the need for a partial replacement of the well-known 8038 chip, which is no longer in production and therefore hardly obtainable. An existing design for driving...

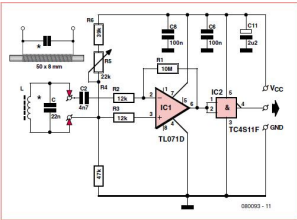


[Current Source for Grounded Load Schematic Circuit Diagram](#) Creating a current source (as opposed to current sink) for driving a grounded load can be a bit awkward. Admittedly the suggested circuit cheats a little in that the load...

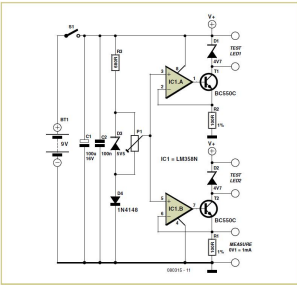


[Glass Blower Schematic Circuit Diagram](#) Most guitar pedals obtain a high input impedance simply by using a large resistor at the input of the first opamp, but this generates a good deal of noise due...

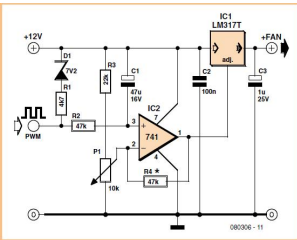
[Pulse Receiver Schematic Circuit Diagram](#) The compact circuit presented here is perfect for receiving the signals from pulsed fixed frequency transmitters. Chest straps from several well-known brands (Polar, Huger, Kettler, Crane, Outbreaker, ...) transmit a...



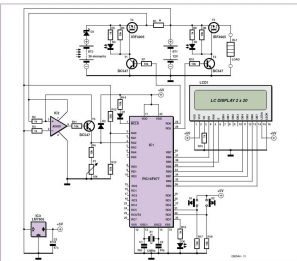
[Voltage Difference Magnifier Schematic Circuit Diagram](#) This circuit was designed for monitoring the charge- and discharge process of a 6-V lead-acid battery. This process takes place between 6.2 V and 6.8 V. The author used a...



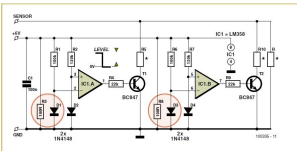
[LED Tester Schematic Circuit Diagram](#) In some circumstances, it may be necessary to select LEDs with closely matched characteristics. This design makes the job a whole lot easier. It uses two tracking current sources to...



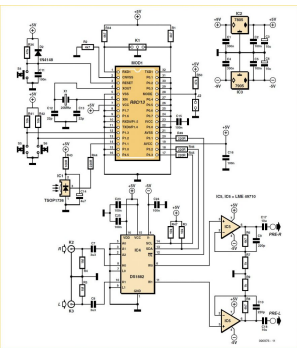
[3-Pin Fan in 4-Pin Socket Schematic Circuit Diagram](#) The most recent PC motherboards provide four-pin connectors for cooling fans, especially for the CPU fan. The older three pin fans are controlled by varying their DC voltage. The fourth...



[Solar Cell Battery Charger/Monitor Schematic Circuit Diagram](#) During the past year, the author has built a standalone solar panel system, which included the construction of the panels themselves. Such a system stores the generated energy in a...

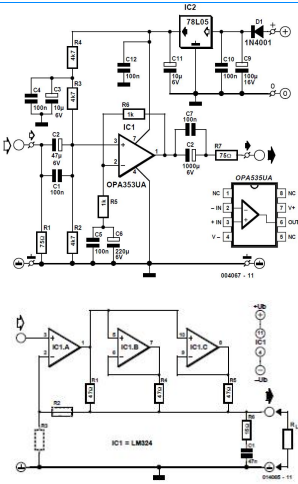


[Petrol/Diesel Level Sensor Schematic Circuit Diagram](#) This sensor is particularly suitable for use in small spaces, such as the petrol tank of a motorbike. It has the advantage of not having any moving parts, unlike a...

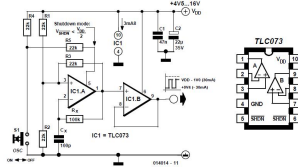


[Remote-controlled Preamp with Digital Pot Schematic Circuit Diagram](#) This circuit is a simple but high-quality preamplifier using a DS1882 digital potentiometer, a device specially designed for audio applications. The potentiometer is controlled over an I2C interface by an R8C/13...

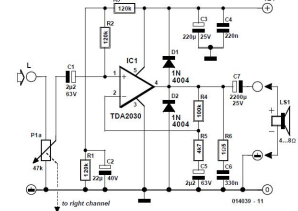
[Video Line Driver Schematic Circuit Diagram](#) This circuit is a video line driver specifically intended for use with a single-ended power supply. As a matter of fact, the synchronized outputs of a line driver for composite-video...



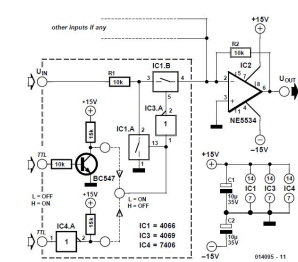
[Parallel Opamps Schematic Circuit Diagram](#) Some applications notes are real evergreens. This one originally dates from 1979(!) but has lost nothing of its relevance and is always very interesting when you're looking for something like...



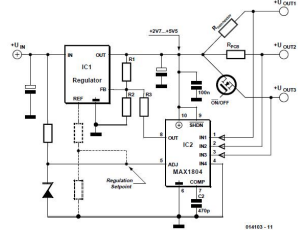
[Squarewave Oscillator Using TLC073 Schematic Circuit Diagram](#) The new range of low-noise, highspeed, and low-distortion BiMOS opamps from Texas Instruments, type TLC070 to TLC075, is intended for use in instrumentation, audio, and automotive applications. This oscillator is...



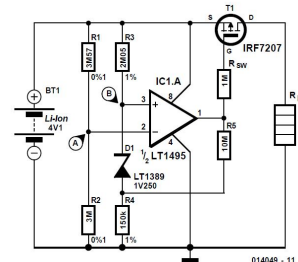
[Active PC Loudspeaker Schematic Circuit Diagram](#) With the well-known TDA2030V integrated power amplifier in the Pentawatt package, it is easy to 'activate' a PC loudspeaker or upgrade the quality of an inexpensive active loudspeaker. The TDA2030...



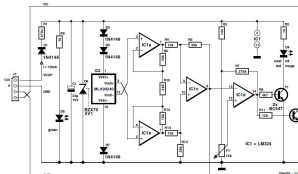
[Switching Amplifier for Analogue Signals Schematic Circuit Diagram](#) If analogue signals have to be switched, a bilater the 4066 is often utilized. Because this IC can be powered from single-ended supply only, all the associated...



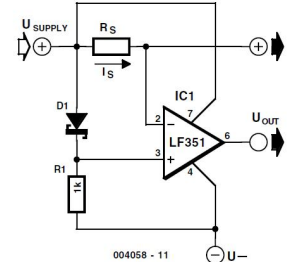
[Ammeter Schematic Circuit Diagram](#) From the feedback from our readers, we have learned that the measurement of currents in the positive lead of a power supply is often fraught with practical difficulties. The circuit...



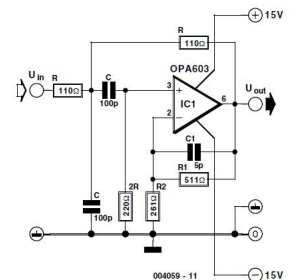
[Li-Ion Protection Circuit Schematic Circuit Diagram](#) When a lithium-ion battery is discharged below the minimum recommended cell voltage its life expectancy is dramatically reduced. The circuit described here can avoid this by disconnecting the load from...



[Pressure Switch Schematic Circuit Diagram](#) A simple pressure switch with a range of 50 to 350 bar can be made using a pressure sensor. If you can accept somewhat reduced linearity, the sensor can even...



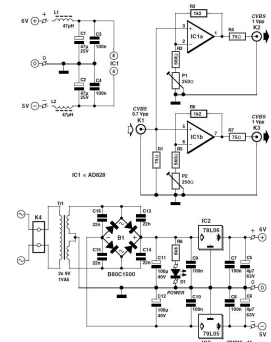
[Sensitive Overload Sensor Schematic Circuit Diagram](#) The best way to measure the current in a circuit is to place a sense resistor in the current path. The higher the resistance, the more exact the measurement will...



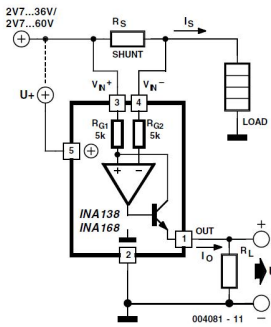
[Single-Opamp 10-MHz Bandpass Filter Schematic Circuit Diagram](#) A bandpass filter is usually used to pass frequencies within a certain frequency range. If a high-performance opamp is used, such a filter can also be used at relatively high...



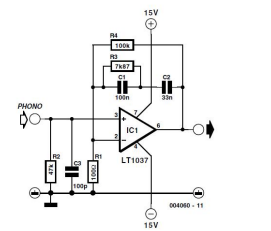
[2 x Dual = 1 x Quad Schematic Circuit Diagram](#) This is a sort of sequel to the article '2 x single = 1 x dual'. In this case, two dual opamps are combined to make one new quad opamp....



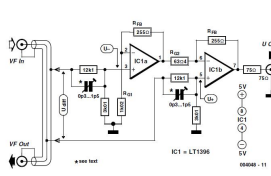
[Video Correction for Pinnacle Studio MP10 Schematic Circuit Diagram](#) T. Giesberts The Pinnacle Studio MP10 is an external real-time MPEG1 codec that includes composite video input and output. The output provides only 0.7 V, which is too low for...



[High-Side Current Measurements Schematic Circuit Diagram](#) It's always a bit difficult to measure the current in the positive lead of a power supply, such as a battery charger. Fortunately, special ICs have been developed for this...



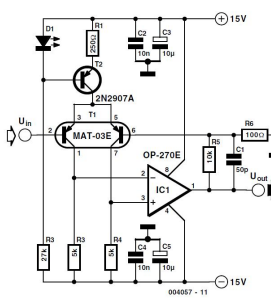
[Simple MD Cartridge Preamplifier Schematic Circuit Diagram](#) Phonographs are gradually becoming a rarity. Most of them have had to yield to more advanced systems, such as CD players and recorders or (portable) MiniDisc player/recorders. This trend is...



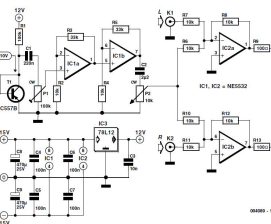
[Video-Out Coupling Schematic Circuit Diagram](#) If you want to connect a video signal to several destinations, you need an amplifier to match the 75-ohm video cable. A distribution amplifier terminates the incoming cable in...



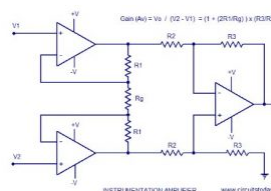
[2 × single = 1 × dual Schematic Circuit Diagram](#) There are many more types of single opamps available than dual or quad versions. Not only can it sometimes be interesting to replace a dual opamp with two equivalent single...



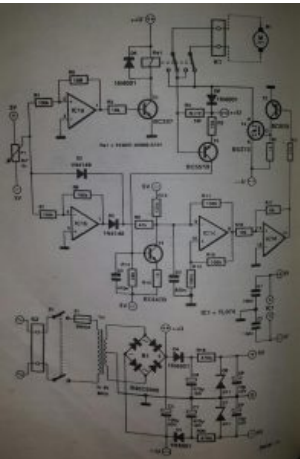
[Low-Noise Microphone Amplifier Schematic Circuit Diagram](#) The signal from a microphone is too weak for a standard line input. This low-noise DC-coupled microphone amplifier provides a solution for anyone who wants to connect a microphone to...



[Noise Injector Schematic Circuit Diagram](#) This circuit is primarily intended to be used by persons who want to experiment with audio. For example, you can determine whether your own audible threshold for noise is different...

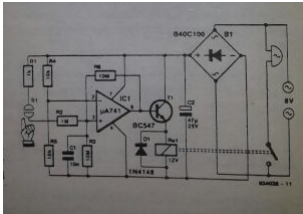
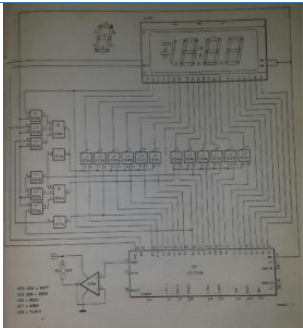


[ECG amplifier circuit using ic 741 Schematic Circuit Diagram](#) Instrumentation amplifier using an opamp An instrumentation amplifier is a kind of differential amplifier with additional input buffer stages. The addition of input buffer stages makes it easy to match...

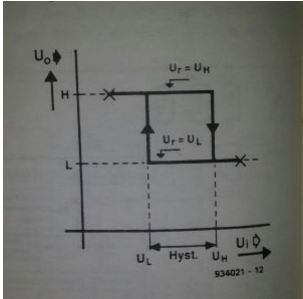


[PCB drill control](#) The design presented PCB enables the PCB drill to be controlled with only one preset. as an aside. the rotary direction of the drill may be reversed. When the preset...

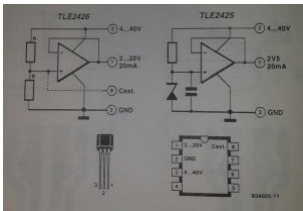
[Zero suppressor for IC17106](#) Many people are irritated by the superfluous zero that precedes a number on, for instance, a liquid crystal (Lc) display. To them '1' is clearer than '001'. In systems where...



[Electronic bell-push](#) A solid-state bell-push is far more robust than the usual mechanical type. The touch contact may be made from an audio socket, which has a high insulation resistance and is...

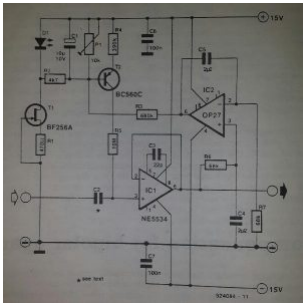
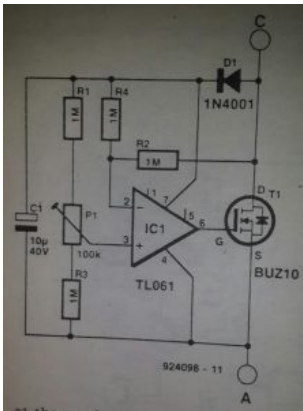


[General purpose Schmitt trigger](#) The thresholds voltages, and thus 21 7 1 the hysteresis, of the Schmitt trigger described can be set independently. The circuit is based on opamp 1C1, which has been connected...

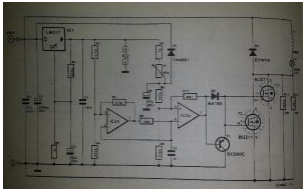


[Virtual ground](#) Virtual ground: Often only a single power supply is available for an opamp circuit. Since such circuits normally require a double supply, this means that in some way the available...

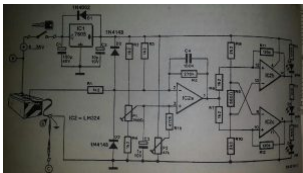
[Low-drop diode](#) At high currents, many silicon diode has a forward voltage of 1 V or more. There are types whose drop at currents of up to 2-3 A is limited to...



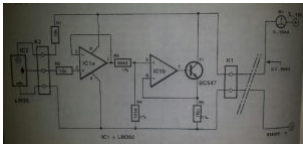
[Bias compensation for opamps](#) One advantage bipolar opamps have over FET types is that their input noise level is appreciably lower. However, when a bipolar opamp is used in a high-impedance circuit. its bias...



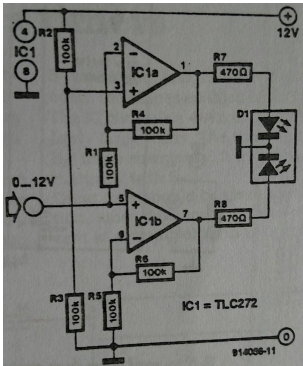
[Halogen lamp protector](#) Halogen lamps, particularly high wattage ones, tend to draw very high currents when they are cold because they then have a very low resistance: of the order of 0.1 Ω or...



[Car battery monitor](#) THE charge-discharge-idle (C-D-I) monitor described here is suitable for all vehicles with a 12- V or 24-V battery of which the negative terminal is connected to the chassis (point B...

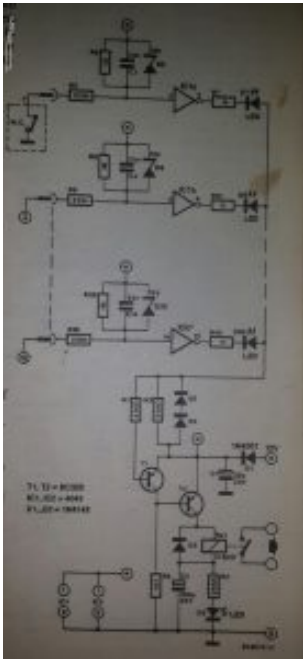


[Active two-wire temperature sensor](#) When a physical quantity measured has to be measured at a distance, it is normally necessary to provide the sensor proper with an amplifier. This amplifier needs a power supply,...

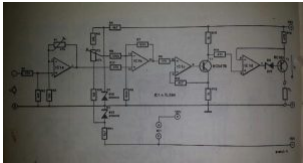


[Variegating LED](#) When the control voltage at the input of the circuit is varied from 0 V to +12 V, the LED will first light up green and then gradually, via orange...

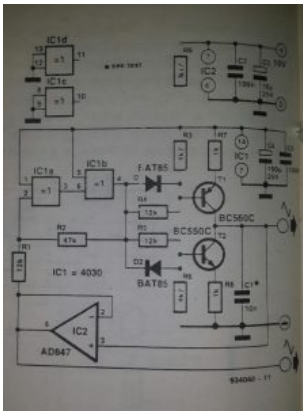
[Fault signalling circuit](#) Fault signalling circuit: The present circuit was developed to make it possible for different sensors to be added to an existing alarm installation. These sensors may be gas or smoke...



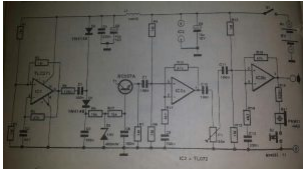
[Voltage-controlled current source](#) The source, based on a Type TL084 quadruple opamp, is intended to convert an input signal of 0-5 V into a current of 0-20 mA. This type of circuit is...



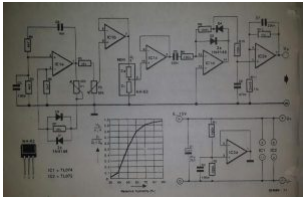
[Triangular-signal generator](#) Pulse duration modulators 19%; a perfect triangular signal, that is, one that is absolutely symmetrical with straight sides. Any deviation from this results in distortion. The design is the usual...



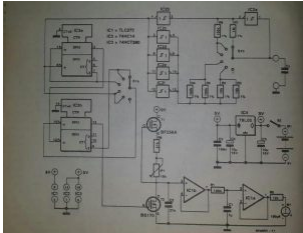
[Noise generator](#) Noise generators are used for measuring the self-noise of amplifiers and receivers and for some acoustic measurements. The noise of traditional low-frequency noise generators is based on the stochastic properties...



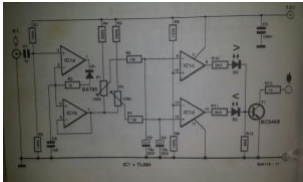
[Relative humidity sensor](#) The Type NH-02 humidity sensor from Figaro consists of a capacitive humidity sensor, Zs, in series with a thermistor,Z, on an aluminum substrate. The parameters of the thermistor ensure that...



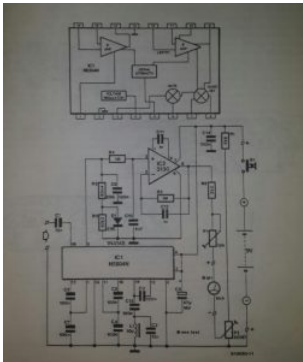
[Capacitance meter](#) The simple capacitance meter all described here is able to measure capacitances between 100 pF and 1 pF over five ranges. The circuit consists of a variable oscillator, a scaler,...

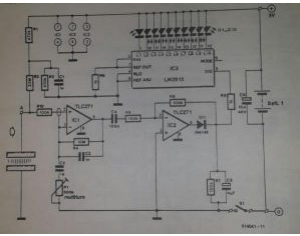


[Video data change detector](#) The circuit detects a change in video information and uses this to switch on an alarm in a closed-circuit television guard system or a video recorder. The circuit is usable...

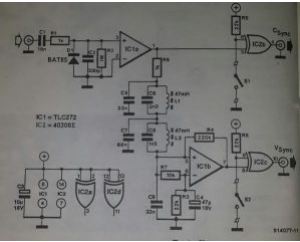


[S-meter for short-wave receivers](#) Some radio amateurs are very keen on accurate RST reports, others (mostly the VHF/UHF fraternity) never look at the S-meter on the receiver, and are satisfied as long as they...

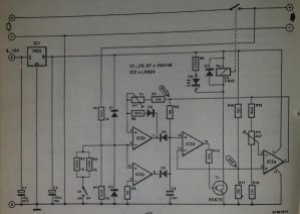




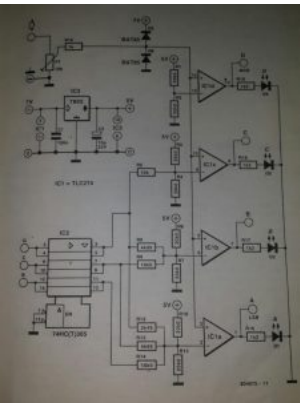
[Field-strength meter](#) Field-strength meter: The unit discussed here indicates, by means of a chain of LEDs, in logarithmic ratios the strength of an electric field surrounding the unit. The inputs signal across...



[Synchronization separator](#) Synchronization separator: This circuit forms the missing link between various video sources and, say, a multisync monitor. Based on discrete parts only, it extracts the composite synchronization (i.e., a mix...

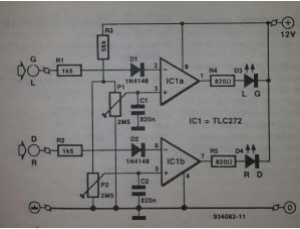


[Automatic battery charger 1](#) The charger described switches off the charging voltage when the battery reaches its full nominal voltage and switches it on again when the battery voltage drops below a predetermined level....

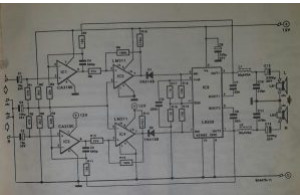


[Compact A-D converter](#) Although good and inexpensive integrated analogue to digital (A-D) converters are now readily available, it may be instructive to build one from discrete components. The present converter is based on...

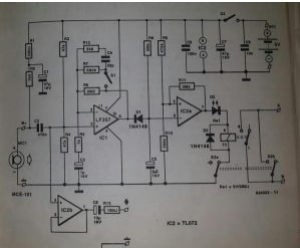
[Peak level indicator](#) Peak level indicator: The indicator shows by means of two LEDs when the signal level in either channel of a stereo audio system exceeds a preset value. In the diagram. IC1...



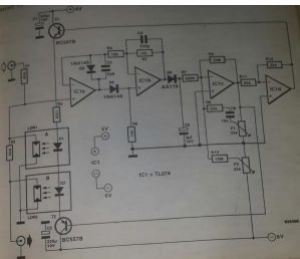
[3 Watt PWM stereo amplifier](#) The most remarkable feature of this small stereo amplifier is the use of a stepper motor bridge driver IC as a stereo power output stage. The circuit diagram shows a...



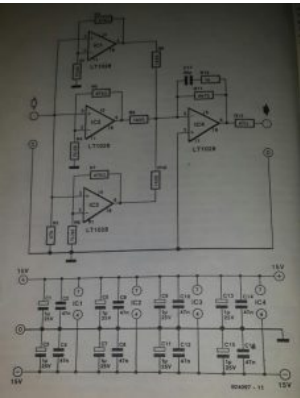
[Voice operated recording](#) Voice operated recording (VOR) is 411 a feature found on most handheld memo-recorders. The function of the VOR control is to start the recorder's tape on detection of a speech...



[Compressor or limiter](#) Compressor or limiter: The compressor is based on two series connected attenuator networks, whose attenuation is obtained by means of light dependent resistors (LDRs) that are illuminated by light emitting...

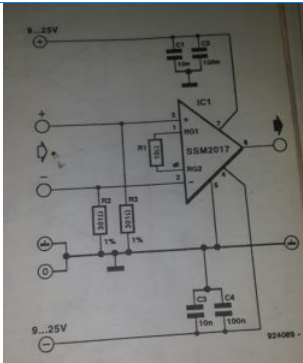


[Low-noise amplifier 2](#) One of the available choices in the ' design of a low-noise amplifier is the shunting of several input stages. This reduces the overall noise, $U_n = U_{in-1/2}$, where $u_n...$

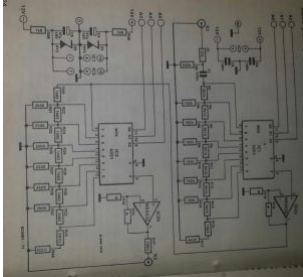


[Low-noise amplifier 1](#) Opamp Type SSM2017 from PMI is eminently suitable for designing very-low-noise microphone nen According to the manufacturer's don sheet• the input noise is only PV Hzi/2. The amplification

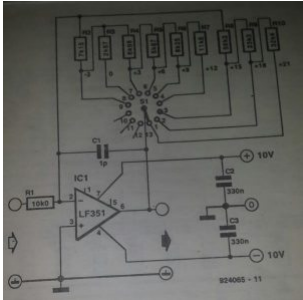
(a 1 +...



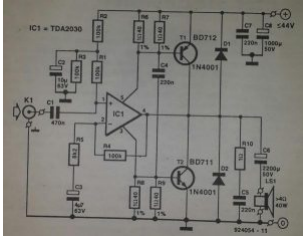
[Digital volume control](#) Digital volume control, Two ladder networks and a buffer each from a volume control with a range of 63 dB. Network R3-R17 provides fine control in steps of 1 dB,...



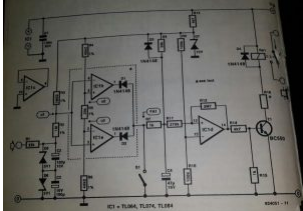
[Decibel stepper](#) Decibel stepper, The stepper presented here makes use of nine positions of a 12-position rotary switch. It is, of course, possible to add the three steps. As usual, the amplification...



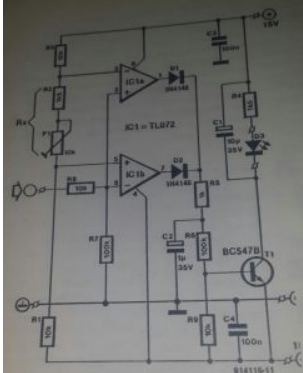
[40 W output amplifier](#) Output amplifier, Although there are a number of hybrid output modules on the market, very few of them combine compactness with reasonable price and good performance. One of these few is...



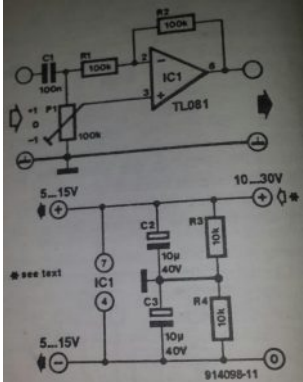
[Stereo protector against d.c.](#) Stereo protector , If a d.c. coupled output amplifier breaks down during operation, the loudspeakers, particularly the bass units, are at risk. The bass particularly so is not decoupled for...



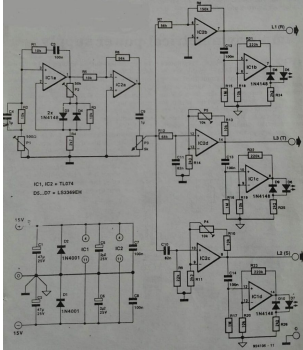
[Overload Indicator](#) The overload indicator consists of a window comparator that measures the magnitude of an a.f signal. Two of the opamps contained in a TL072 is supplied with a reference voltage...



[Amplification/attenuation selector](#) A Type TL081 opamp and some passive components are sufficient to construct a small amplifier whose amplification can be varied between +1 to -1 with a potentiometer - see the...

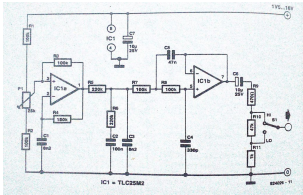
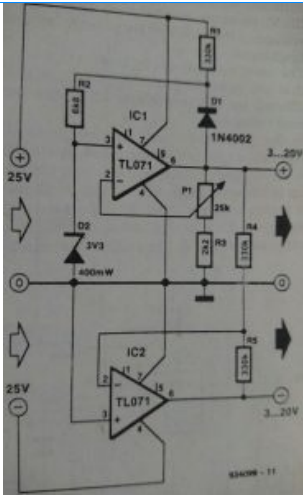


[Three-phase simulator](#) Most domestic consumers (in the UK) are provided with a single-phase supply unless exceptionally heavy loading is foreseen. It may, however, occur that a low-voltage three-phase supply is required for experimental...



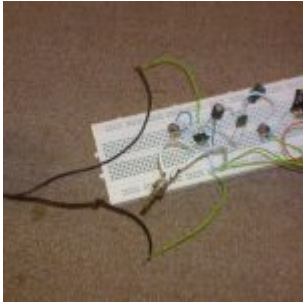
[Symmetrical power supply](#) A symmetrical power supply may be designed from two standard optional amplifiers if only a small (of the order of a few mA) is required. In the diagram, the upper...



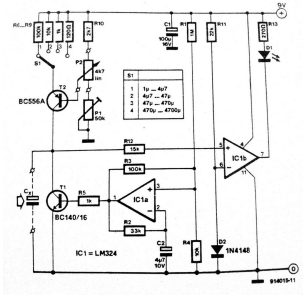


[Simple Signal Generator](#) This signal generator provides a 440 Hz sine wave output at two levels. The power supply may be 1.5-16V, so that even a single 1.5 V battery can do. Opamp...

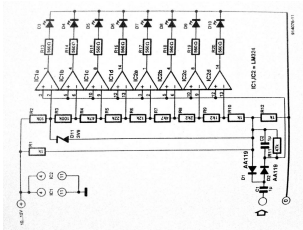
[Precision Rectifier for Digital Voltmeter\(DVM\)](#) This simple circuit, based on a single opamp in non-inverting mode, is a precision rectifier extension for digital voltmeters. The circuit can be connected to a high-impedance voltage divider without...



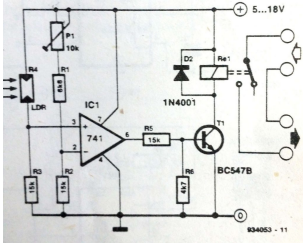
[Latest mini projects in electronics with circuit diagram](#) 1. Circuit Diagram Of High Power Audio Amplifier In this tutorial "Circuit Diagram Of High Power Audio Amplifier" you will how to make an audio amplifier which you can utilize...



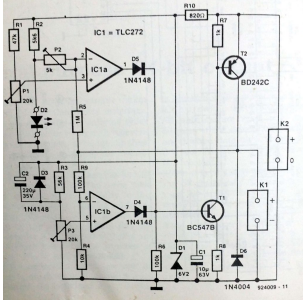
[Measuring Electrolytic Capacitors](#) Most capacitance meters have no facility for measuring large electrolytic capacitors. The circuit described here makes it possible for such capacitors to be measured with some degree of accuracy, in...



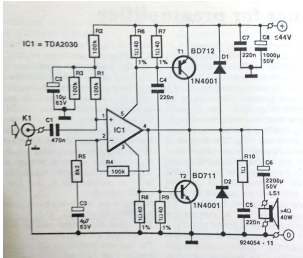
[LED VU Meter](#) Although there are several ICs on the market with which it is quite simple to construct an LED VU meter, still interest in building such a...



[Optical squelch](#) Many of the less expensive short. Wave receivers have no squelch circuit and continue to emanate noise when no usable signal is coming in. Fortunately, they normally have an LE...

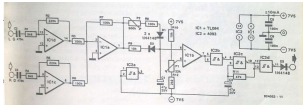
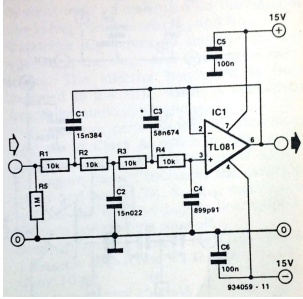


[PC fan control Circuit](#) It is an unfortunate and well-known fact that most PCs of IBM and compatible type make a lot of noise. which is both undesirable lots of noise in the both...

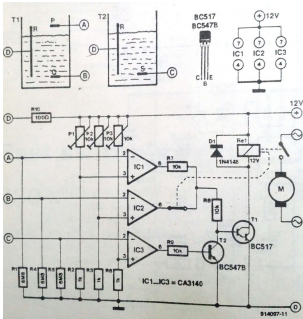


[40 W output amplifier](#) Although there are a number of hybrid output modules on the market, very few of them combine compactness with reasonable price and good performance. one of these few is SGS's...

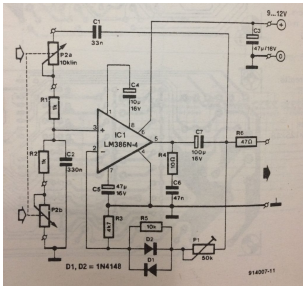
[4th order single chip filter](#) High-order filters are normally designed by using two or more 2nd-order sections in series. That means that a 4th-order filter needs at least two opamps. The present filter, however, uses...



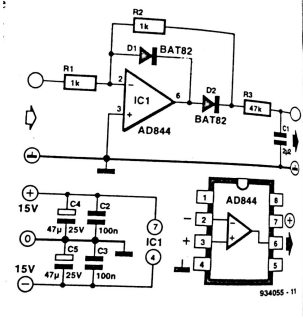
[Scanner for Preamplifier](#) The scanner is an extension for 0 1 1 the 'All-solid-state preamplifier' published in Elektor Electronics* As its name implies, it scans all inputs of the preamplifier to ascertain where...



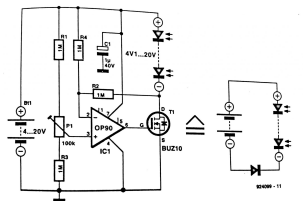
[Water Level Control](#) In some countries, the water supply Ad is irregular at most times; in many other countries only during a drought. A means of making this less inconvenient is offered by...



[Wien Bridge with asymmetrical power supply](#) Normally, a Wien bridge oscillator contains two identical capacitors and two identical (variable) resistors. That being the case, the transfer factor of the bridge in Fig. 1 is 1:3. For...



[Fast Active Rectifier Circuit Diagram](#) Purpose of Fast Active Rectifier: The fast active rectifier is intended to improve the bandwidth of most digital multi-meters. It is based on a half-wave rectifier in a traditional set-up....



[Solar Cell Power Supply System Circuit Diagram](#) The simplest solar cell power supply system consists of three parts; a diode, a solar cell panel and a rechargeable battery. The diode prevents the battery being discharged through the...

[Auto Power off for Audio Equipment Circuit Diagram](#) This small circuit switch off the equipment in the audio rack when sound has not produced for some time. The circuit is actuated by pressing S1 which causes the capacitor...

