Zener Diode Meter 1V to 50V

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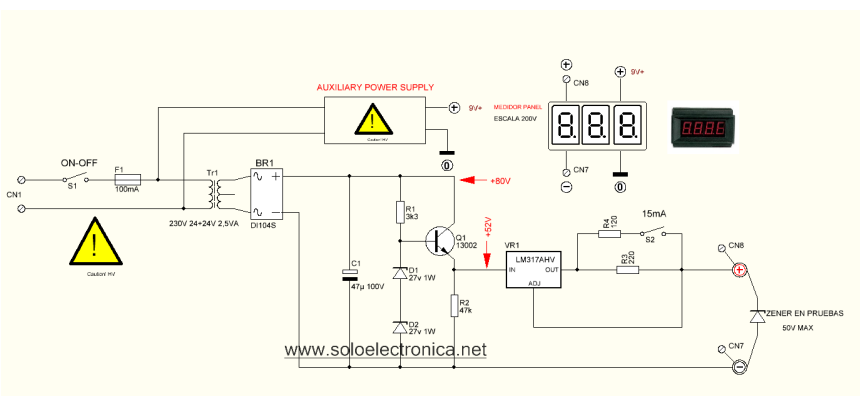
Presented here is zener diode meter for testing voltage value of an unknown zener diode. The zener diode or diode voltage regulator is a special diode, Unlike normal diodes these diodes are intended to work in the breakdown voltage and an essential part of the voltage regulator circuits. These components maintain constant voltage at its terminals suffer variations even when substantial current, its connection with reverse bias is normal also to work in the zener voltage of the source Vs must be greater than the rupture Vz, as always condition using a resistance Rs in series to limit current to a value always less than its maximum power.



ZENER DIODES DIFFERENT TYPES OF ENCAPSULATED AND POWER BASIS.

D and all who walk with electronics is known that the task of finding out the characteristics of certain components is at best boring, with the zener diodes happens that the quantity of values is very large and to find their Vz we have to spend some time looking a component that most of the time is very small, needing the help of the magnifying glass and learned patience and the marks of the body of the component, if not the Vz value printed on the body we can see its features and at the end as it passes almost always not the courage it takes.

Checking the status of the zener diode is usually done with a normal multimeter scale to measure diodes, this test gives us a precise idea of the state of the component, but does not give us the value Vz the zener, the zener diode tester is truly practical when we want to find out quickly the value of the zener Vz measured.
zener tester

PHOTO MOUNTED CIRCUIT BOARD FOR A PROTOTYPE

FEATURES

Mounting plate prototypes.

Supply without batteries, 230V .

Read value Digital Vz

Zener diode tester 1V to 50V

Two scales 5mA and 15mA test

ZENER TEST

As can be seen the circuit is simple, starting with a transformer with two secondary 24V are rectified and filtered to obtain a voltage of approximately 80V, followed by a voltage regulator circuit formed by (R1, R2, D1, D2 and Q1) which reduces the voltage to about 52V to avoid spending the maximum voltage limit LM317AHV integrated controller.

The LM317AHV is a high voltage version LM317T can reach a maximum of 57V. The 37V LM317T can only reach a maximum at this point where we can not confuse the component otherwise it may not last long circuit.

The setup is mounted on LM317AHV constant current generator has been added to a switch circuit (S2) in series with resistor (R4) to choose two test scales (5mA and 15mA) as power zener diode to be tested.

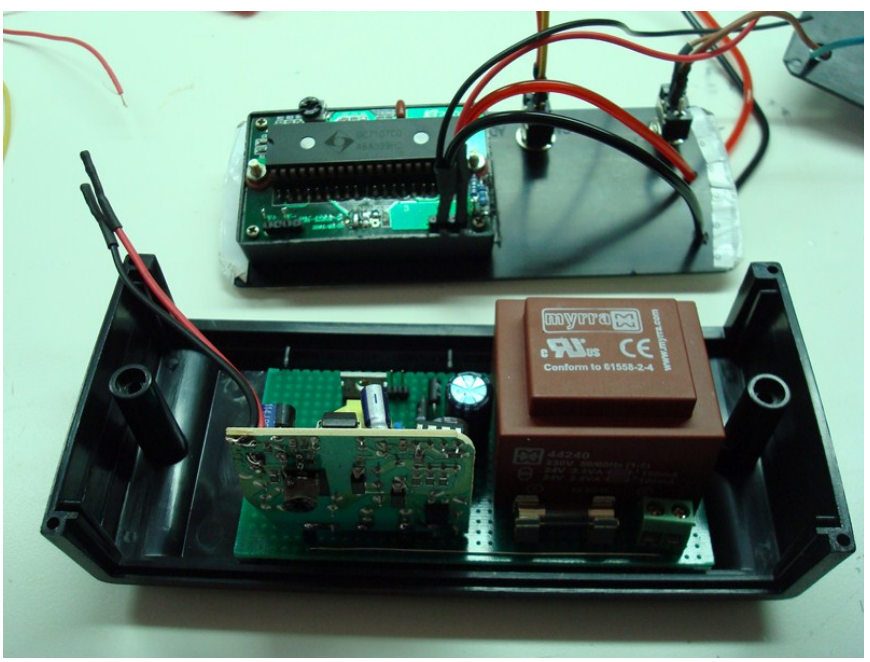
As usual in practical circuit design and all that really can be easily assembled with standard components, and if it can be recovered from all types of devices to reduce as far as possible the cost and environmental degradation.

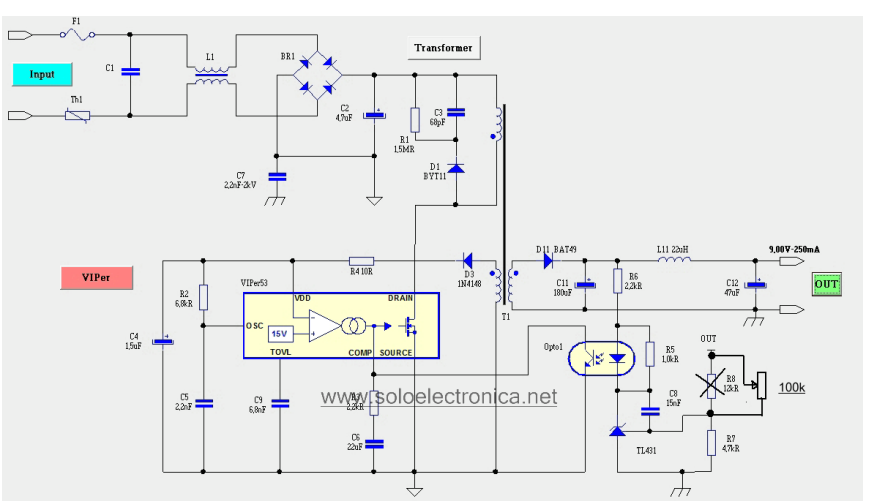
The recovery of electronic components is not difficult but it is a bit laborious, but nevertheless is quite rewarding and the way we learn many things from the apparatus for which they try to recover the components.

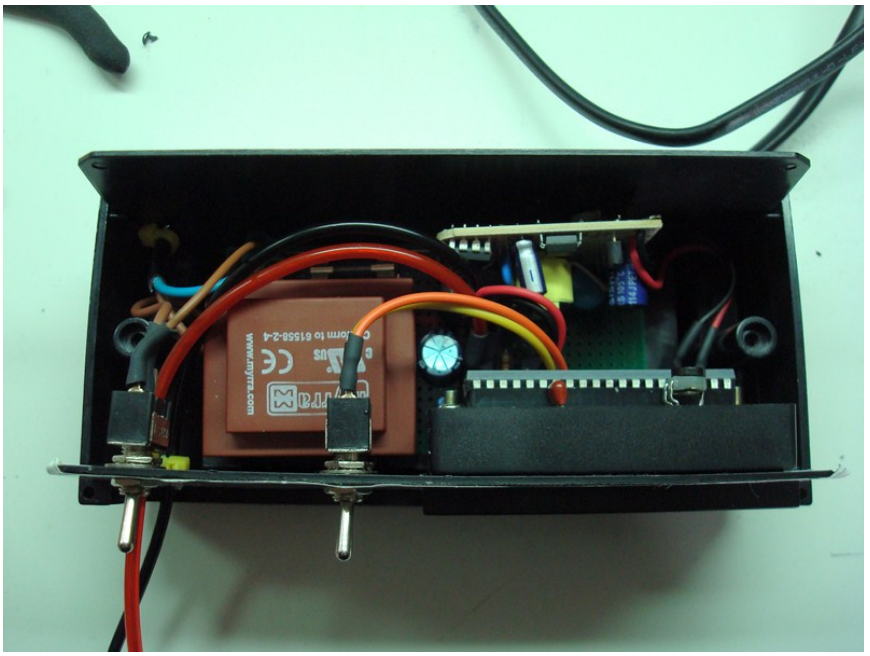
PHOTOS OF AMENDMENTS TO SWITCHED ADAPTOR 12V, 9V FOR FEEDING THE DIGITAL PANEL METER

I have changed the voltage from 12V to 9V to power the panel meter with a small supply 0.2 A adapter-switched and it really is very easy, only needs to modify the value of the voltage divider circuit TL431 pre regulator.

resistance to replace is the one directly connected output + terminal and the source of the TL431 RFE I have put 100K LIN because the resistance to calculate the new value out 9V rare and in this way is only fair and ready.





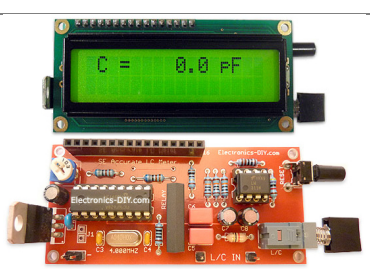


Related Links

- Accurate LC Meter
- ESR Meter / Transistor Tester / LC Meter
- BA1404 HI-FI Stereo FM Transmitter
- 500mW FM / VHF Transmitter Amplifier / Booster
- USB IO Board
- 60MHz Frequency Meter / Counter
- 1Hz - 2MHz Function Generator
- Voltmeter Ammeter
- USB Voltmeter
- Accurate 0-500MHz RF Power Meter
- Audiophile OPA2132 Headphone Amplifier Kit
- DS18S20 Dual Temperature Meter
- BH1417 Stereo PLL FM Transmitter
- 50mW BH1417 Stereo PLL FM Transmitter
- Phone FM Transmitter
- TV Transmitter with Audio
- 5 Watt FM Amplifier
- TDA7000 FM Receiver / TV Tuner / Aircraft Receiver
- NJM2035 HI-FI Stereo Encoder / Multiplexer

Downloads

Zener Diode Meter 1V to 50V - Link



Accurate LC Meter

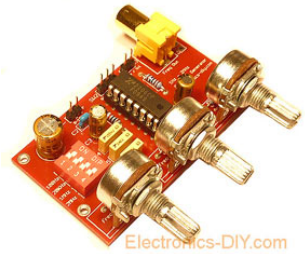
Build your own Accurate LC Meter (Capacitance Inductance Meter) and start making your own coils and inductors. This LC Meter allows to measure incredibly small inductances making it perfect tool for making all types of RF coils and inductors. LC Meter can measure inductances starting from 10nH - 1000nH, 1uH - 1000uH, 1mH - 100mH and capacitances from 0.1pF up to 900nF. The circuit includes an auto ranging as well as reset switch and produces very accurate and stable readings.

PIC Volt Ampere Meter

Volt Ampere Meter measures voltage of 0-70V or 0-500V with 100mV resolution and current consumption 0-10A or more with 10mA resolution. The meter is a perfect addition to any power supply, battery chargers and other electronic projects where voltage and current must be monitored. The meter uses PIC16F876A microcontroller with 16x2 backlighted LCD.

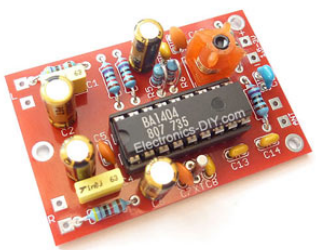
60MHz Frequency Meter / Counter

Frequency Meter / Counter measures frequency from 10Hz to 60MHz with 10Hz resolution. It is a very useful bench test equipment for testing and finding out the frequency of various devices with unknown frequency such as oscillators, radio receivers, transmitters, function generators, crystals, etc.



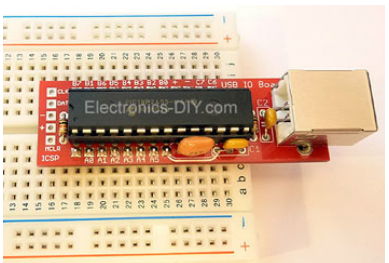
1Hz - 2MHz XR2206 Function Generator

1Hz - 2MHz XR2206 Function Generator produces high quality sine, square and triangle waveforms of high-stability and accuracy. The output waveforms can be both amplitude and frequency modulated. Output of 1Hz - 2MHz XR2206 Function Generator can be connected directly to 60MHz Counter for setting precise frequency output.



BA1404 HI-FI Stereo FM Transmitter

Be "On Air" with your own radio station! BA1404 HI-FI Stereo FM Transmitter broadcasts high quality stereo signal in 88MHz - 108MHz FM band. It can be connected to any type of stereo audio source such as iPod, Computer, Laptop, CD Player, Walkman, Television, Satellite Receiver, Tape Deck or other stereo system to transmit stereo sound with excellent clarity throughout your home, office, yard or camp ground.

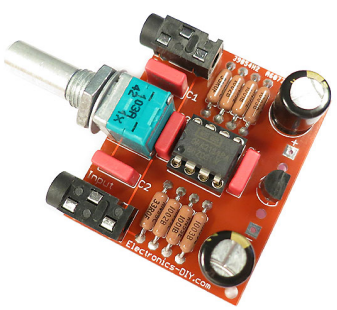


USB IO Board

USB IO Board is a tiny spectacular little development board / parallel port replacement featuring PIC18F2455/PIC18F2550 microcontroller. USB IO Board is compatible with Windows / Mac OSX / Linux computers. When attached to Windows IO board will show up as RS232 COM port. You can control 16 individual microcontroller I/O pins by sending simple serial commands. USB IO Board is self-powered by USB port and can provide up to 500mA for electronic projects. USB IO Board is breadboard compatible.

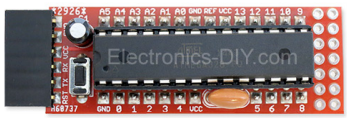
ESR Meter / Capacitance / Inductance / Transistor Tester Kit

ESR Meter kit is an amazing multimeter that measures ESR values, capacitance (100pF - 20,000uF), inductance, resistance (0.1 Ohm - 20 MOhm), tests many different types of transistors such as NPN, PNP, FETs, MOSFETs, Thyristors, SCRs, Triacs and many types of diodes. It also analyzes transistor's characteristics such as voltage and gain. It is an irreplaceable tool for troubleshooting and repairing electronic equipment by determining performance and health of electrolytic capacitors. Unlike other ESR Meters that only measure ESR value this one measures capacitor's ESR value as well as its capacitance all at the same time.



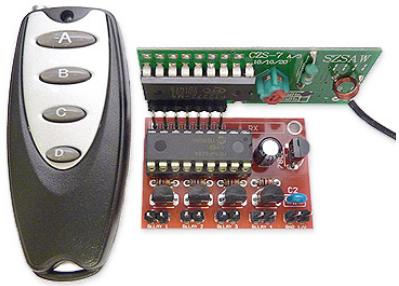
Audiophile Headphone Amplifier Kit

Audiophile headphone amplifier kit includes high quality audio grade components such as Burr Brown OPA2134 opamp, ALPS volume control potentiometer, Ti TLE2426 rail splitter, Ultra-Low ESR 220uF/25V Panasonic FM filtering capacitors, High quality WIMA input and decoupling capacitors and Vishay Dale resistors. 8-DIP machined IC socket allows to swap OPA2134 with many other dual opamp chips such as OPA2132, OPA2227, OPA2228, dual OPA132, OPA627, etc. Headphone amplifier is small enough to fit in Altoids tin box, and thanks to low power consumption may be supplied from a single 9V battery.



Arduino Prototype Kit

Arduino Prototype is a spectacular development board fully compatible with Arduino Pro. It's breadboard compatible so it can be plugged into a breadboard for quick prototyping, and it has VCC & GND power pins available on both sides of PCB. It's small, power efficient, yet customizable through onboard 2 x 7 perfboard that can be used for connecting various sensors and connectors. Arduino Prototype uses all standard through-hole components for easy construction, two of which are hidden underneath IC socket. Board features 28-PIN DIP IC socket, user replaceable ATmega328 microcontroller flashed with Arduino bootloader, 16MHz crystal resonator and a reset switch. It has 14 digital input/output pins (0-13) of which 6 can be used as PWM outputs and 6 analog inputs (A0-A5). Arduino sketches are uploaded through any USB-Serial adapter connected to 6-PIN ICSP female header. Board is supplied by 2-5V voltage and may be powered by a battery such as Lithium Ion cell, two AA cells, external power supply or USB power adapter.



200m 4-Channel 433MHz Wireless RF Remote Control

Having the ability to control various appliances inside or outside of your house wirelessly is a huge convenience, and can make your life much easier and fun. RF remote control provides long range of up to 200m / 650ft and can find many uses for controlling different devices, and it works even through the walls. You can control lights, fans, AC system, computer, printer, amplifier, robots, garage door, security systems, motor-driven curtains, motorized window blinds, door locks, sprinklers, motorized projection screens and anything else you can think of.