



# HIGHVELD AMATEUR RADIO CLUB

## SHACKNEWS

PO Box 19937 Sunward Park 1470      **OCTOBER 2007**

**Website**    <http://www.qsl.net/zs6hvb/>    **e-mail**    zs6hvbinfo@zs6ro.co.za  
<http://www.qsl.net/zs6ssc/>

**Sunday morning BULLETINS - 145.7875 MHz & 7062 KHz @ ±08h45.**

### COMMUNICATION IS THE NAME OF THE GAME

**Meeting** At the meeting held on Saturday 6<sup>th</sup> October Chris, ZS6VB, gave a talk on IRLP and a practical demonstration of ECHOLINK. Most interesting and thanks to Chris. The next meeting will again be held at the Wits Rifles HQ in Germiston on 3<sup>rd</sup> November. Members from the Antique Wireless Association will be visiting and giving a talk. See you there.

**SSC Meeting** The meeting held at Doug and Merle's QTH on 13<sup>th</sup> October was not well attended due to a number of the members being sick. Thanks to Doug and Merle for the use of their home and all the nice eats.

The last meeting of the year will be held at the QTH of Errol and Betty. Remember that the end-of-year social will be held at Rex's QTH on SUNDAY 2<sup>nd</sup> of December. More about it in the next issue.

---oooOOOooo---

Free drinks for everyone

One night, a drunk comes stumbling into a bar and says to the bartender: "Drinks for all on me including you, bartender." So the bartender follows the mans orders and says: "That will be \$36.50 please." The drunk says he has no money so the bartender slaps him around and throws him out.

The next night the same drunk comes in again and orders a drink for everyone in the bar including the bartender. Again the bartender follows instructions and again the drunk says he has no money. So the bartender slaps him around and throws him out.

On the third night he comes in, the drunk orders drinks for all except the bartender. "What, no drink for me?" replies the bartender. "Oh, no. You get violent when you drink."

---oooOOOooo---

Chairman:	Doug Wetton	ZS6BXU	011-680-4906
Vice Chairman	Frank van Wensveen	ZS6TMV	
Secretary / Treasurer:	Berridge Emmett	ZS6BFL	011-893-1291
Repeater/Packet Radio/Technical	Ton Van Dijk	ZS6ANA	011-942-3657
Shacknews Editor:	Berridge Emmett	ZS6BFL	011-893-1291
Shacknews-Print & Posting:	Harry Lautenbach	ZS6LT	011-888-5362
Website Manager	Yvonne Van Dijk	ZR6TBL	011-942-3657

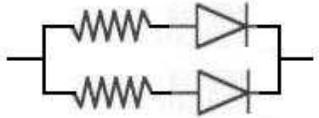
## Diodes in Parallel to Increase Current Rating

Some people believe two diodes in parallel Doubles the Current Rating. However just putting two diodes in parallel may or may not increase the current rating at all.

All diodes have a forward voltage drop and if you measure a bunch of a particular diode, (even all being in the same batch) you will find each is slightly different at a given current. And this can change in a Non-Linear way for other currents. When diodes are placed in parallel, the diode with the Lowest Voltage drop will conduct the most Current.

This could result in No Advantage, Partial advantage or High Advantage. But extremely doubtful it will ever Double the current.

One way to help fix this is to put a Low Value, Series Resistor in front of Each Diode. The voltage drop across this series resistor tends to equal out the differences in the diodes. The resistance of each series resistor should provide a voltage drop; somewhere around 0.3 to 0.6 volts at the current draw of the particular circuit it is used in.



---oooOOOooo---

### SMART ANSWER #1

A lady was picking through the frozen turkeys at the grocery store but she couldn't find one big enough for her family.

She asked a stock boy, "Do these turkeys get any bigger?"

The stock boy replied, "No ma'am, they're dead."

### SMART ANSWER #2

The cop got out of his car and the kid who was stopped for speeding rolled down his window. "I've been waiting for you all day," the cop said.

The kid replied, "Yeah, well I got here as fast as I could."

When the cop finally stopped laughing, he sent the kid on his way without a ticket.

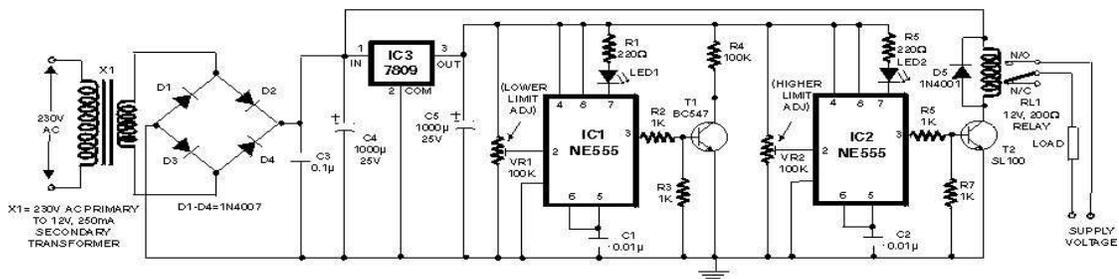
### SMART AS ANSWER #3

A truck driver was driving along on the freeway. A sign comes up that Reads, " Low Bridge Ahead." Before he knows it, the bridge is right ahead of him and he gets stuck under the bridge. Cars are backed up for miles. Finally, a police car comes up. The cop gets out of his car and walks to the truck driver, puts his hands on his hips and says, "Got stuck, huh?" The truck driver says, "No, I was delivering this bridge and ran out of gas."

Chairman:	Doug Wetton	ZS6BXU	011-680-4906
Vice Chairman	Frank van Wensveen	ZS6TMV	
Secretary / Treasurer:	Berridge Emmett	ZS6BFL	011-893-1291
Repeater/Packet Radio/Technical	Ton Van Dijk	ZS6ANA	011-942-3657
Shacknews Editor:	Berridge Emmett	ZS6BFL	011-893-1291
Shacknews-Print & Posting:	Harry Lautenbach	ZS6LT	011-888-5362
Website Manager	Yvonne Van Dijk	ZR6TBL	011-942-3657

## Over / Under Voltage Cut-Out

This over/under voltage cutout will save your costly electrical and electronic appliances from the adverse effects of very high and very low mains voltages. The circuit features auto reset and utilises easily available components. It makes use of the comparators available inside 555 timer ICs. Supply is tapped from different points of the power supply circuit for relay and control circuit operation to achieve reliability. The circuit utilises comparator 2 for control while comparator 1 output (connected to reset pin R) is kept low by shorting pins 5 and 6 of 555 IC. The positive input pin of comparator 2 is at 1/3rd of Vcc voltage. Thus as long as negative input pin 2 is less positive than 1/3 Vcc, comparator 2 output is high and the internal flip-flop is set, i.e. its Q output (pin 3) is high. At the same time pin 7 is in high impedance state and LED connected to pin 7 is therefore off. The output (at pin 3) reverses (goes low) when pin 2 is taken more positive than 1/3 Vcc. At the same time pin 7 goes low (as Q output of internal flip-flop is high) and the LED connected to pin 7 is lit. Both timers (IC1 and IC2) are configured to function in the same fashion. Preset VR1 is adjusted for under voltage (say 160 volts) cutout by observing that LED1 just lights up when mains voltage is slightly greater than 160V AC. At this setting the output at pin 3 of IC1 is low and transistor T1 is in cut-off state. As a result RESET pin 4 of IC2 is held high since it is connected to Vcc via 100 kilo-ohm resistor R4. Preset VR2 is adjusted for over voltage (say 270V AC) cutout by observing that LED2 just extinguishes when the mains voltage is slightly less than 270V AC. With RESET pin 4 of IC2 high, the output pin 3 is also high. As a result transistor T2 conducts and energises relay RL1, connecting load to power supply via its N/O contacts. This is the situation as long as mains voltage is greater than 160V AC but less than 270V AC. When mains voltage goes beyond 270V AC, it causes output pin 3 of IC2 to go low and cut-off transistor T2 and de-energise relay RL1, in spite of RESET pin 4 still being high. When mains voltage goes below 160V AC, IC1's pin 3 goes high and LED1 is extinguished. The high output at pin 3 results in conduction of transistor T1. As a result collector of transistor T1 as also RESET pin 4 of IC2 are pulled low. Thus output of IC2 goes low and transistor T2 does not conduct. As a result relay RL1 is de-energised, which causes load to be disconnected from the supply. When mains voltage again goes beyond 160V AC (but less than 270V AC) the relay again energises to connect the load to power supply



Chairman:  
Vice Chairman  
Secretary / Treasurer:  
Repeater/Packet Radio/Technical  
Shacknews Editor:  
Shacknews-Print & Posting:  
Website Manager

Doug Wetton  
Frank van Wensveen  
Berridge Emmett  
Ton Van Dijk  
Berridge Emmett  
Harry Lautenbach  
Yvonne Van Dijk

ZS6BXU  
ZS6TMV  
ZS6BFL  
ZS6ANA  
ZS6BFL  
ZS6LT  
ZR6TBL

011-680-4906  
011-893-1291  
011-942-3657  
011-893-1291  
011-888-5362  
011-942-3657

## Weird aircraft



Apparently these were test aircraft (no engines) dropped from highflying transport planes during the 1980s

## Berridge ZS6BFL

Chairman:	Doug Wetton	ZS6BXU	011-680-4906
Vice Chairman	Frank van Wensveen	ZS6TMV	
Secretary / Treasurer:	Berridge Emmett	ZS6BFL	011-893-1291
Repeater/Packet Radio/Technical	Ton Van Dijk	ZS6ANA	011-942-3657
Shacknews Editor:	Berridge Emmett	ZS6BFL	011-893-1291
Shacknews-Print & Posting:	Harry Lautenbach	ZS6LT	011-888-5362
Website Manager	Yvonne Van Dijk	ZR6TBL	011-942-3657