



ZS6HVB

Affiliated to the
SARL

SHACKNEWS

HIGHVELD AMATEUR RADIO CLUB

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Season's Greetings

COMMUNICATION IS THE NAME OF THE GAME

The September social meeting which took place on the 19th September at the home of Doug & Merle was reasonably well attended and a good time was had by all.

The last meeting of the year (21 Nov) was poorly attended.

It was decided at the meeting to hold the annual Xmas event at the home of Rex and open it to all amateurs. This will take the form of a "Bring and Braai" and will take place on the 13th December from 12:00.

Another decision taken was to hold the first meeting of 2016 on the 20th March. Future meetings at the church has become a no go as far as security is concerned. The venue will be at the home of ZS6BFL

Sitting on the edge of the highway waiting to catch speeders, a state police officer saw a car driving along at 22 mph. He thinks to himself, that car is just as dangerous as a speeder. So, he turns his lights on and pulls the car over. Approaching the car, he notices there are 5 old ladies, two in the front and 3 in the back, wide eyed and looking like ghosts.
police car

The driver, obviously confused, said, "Officer, I don't understand, I wasn't going over the speed limit! What did you pull me over for?" "Ma'am," the officer said, "You should know that driving slower than the speed limit can also be dangerous".

"Slower than the speed limit? No sir! I was doing exactly 22 miles an hour", the old woman said proudly.

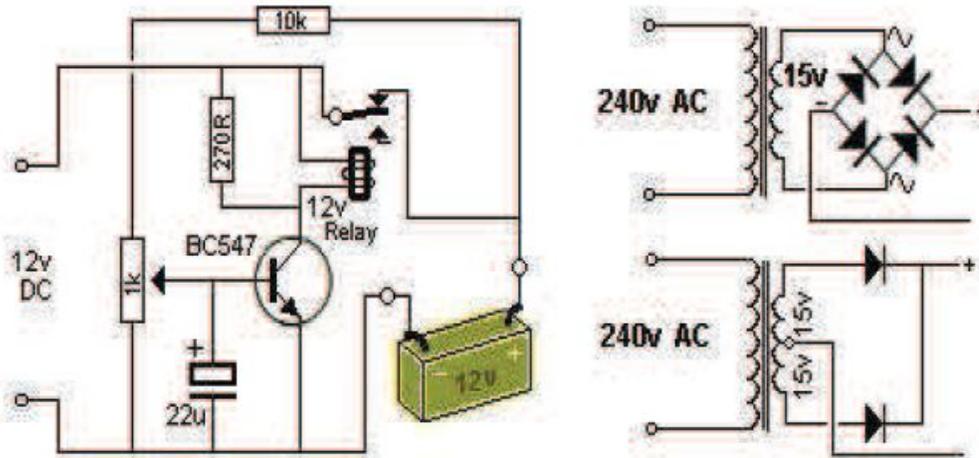
The officer, trying not to laugh, explains that 22 is the route number, not the speed limit. A little embarrassed, the woman smiled and thanked the officer for pointing out her error.

"Before I go Ma'am, I have to ask, is everyone ok? These women seem badly shaken and haven't said a word since I pulled you over."

"Oh! they'll be all right in a minute, officer. We just got off Route 142".



BATTERY CHARGER - A simple automatic charger for gel type batteries eg. Alarm



This is the world's simplest automatic battery charger.

It consists of 6 components, when connected to a 12v DC supply. The psu must produce more than 15v on no-load. An alternative 15v transformer and a centre-tapped transformer is also shown. A centre-tapped transformer is referred to as: 15v-CT-15v or 15-0-15. The relay and transistor are not critical as the 1k pot is adjusted so the relay drops-out at 13.7v.

The psu can be 300mA, 500mA or 1A and its current rating will depend on the size of the 12v battery you are charging.

For a 1.2AH gel cell, the charging current should be 100mA. However, this charger is designed to keep the battery topped-up and it will deliver current in such short bursts, that the charging current is not important.

This applies if you are keeping the battery connected while it is being used. In this case the charger will add to the output and deliver some current to the load while charging the battery. If you are charging a flat cell, the current should not be more than 100mA.

For a 7AH battery, the current can be 500mA. And for a larger battery, the current can be 1Amp.

SETTING UP

Connect the charger to a battery and place a digital meter across the battery. Adjust the 1k pot so the relay drops out as soon as the voltage rises to 13.7v.

Place a 100R 2watt resistor across the battery and watch the voltage drop.

The charger should turn on when the voltage drops to about 12.5v. This voltage is not important.

The 22uF capacitor stops the relay "squealing" or "hunting" when a load is connected to the battery and the charger is charging. As the battery voltage rises, the charging current reduces and just before the relay drops out, it squeals as the voltage rises and falls due to the action of the relay. The

22uF capacitor prevents this "chattering".

To increase the Hysteresis: In other words, decrease the voltage where the circuit cuts-in, add a 270R across the coil of the relay. This will increase the current required by the transistor to activate the relay and thus increase the gap between the two activation points. The pull-in point on the pot will be higher and you will have to re-adjust the pot, but the drop-out point will be the same and thus the gap will be wider.

In this circuit, the cut-in voltage was 11.5v with a 270R across the relay.

Note: No diode is needed across the relay because the transistor is never fully turned off and no back EMF (spike) is produced by the relay.





Club Information

Postal address PO Box 19937 Sunward Park 1470

Website <http://www.zs6hvb.za.net>

Back Issues of Shacknews available on the club website

e-mail zs6hvb@zs6hvb.za.net

Repeater 145.1875 MHz input - 145.7875 MHz output

Bulletins Sunday morning - 145.7875 MHz & 7162 KHz @ 08h45.

Monthly meeting venue
 Germiston Methodist Church
 Room at back of the offices
 Lady Duncan Rd
 Germiston
3rd Saturday of the month at 14:30

Committee

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