



# SHACKNEWS

## HIGHVELD AMATEUR RADIO CLUB

Last Quarter 2016

We're on



ZS6HVB  
Affiliated to the  
SARL

### COMMUNICATION IS THE NAME OF THE GAME

Another year is coming to an end.  
Where does the time go.

On the 4<sup>th</sup> December 2016 the club will be holding its end of year do at the QTH of Rex.  
This will take the form of a **bring and braai**. Fires will be provided. From 12:00 onwards.

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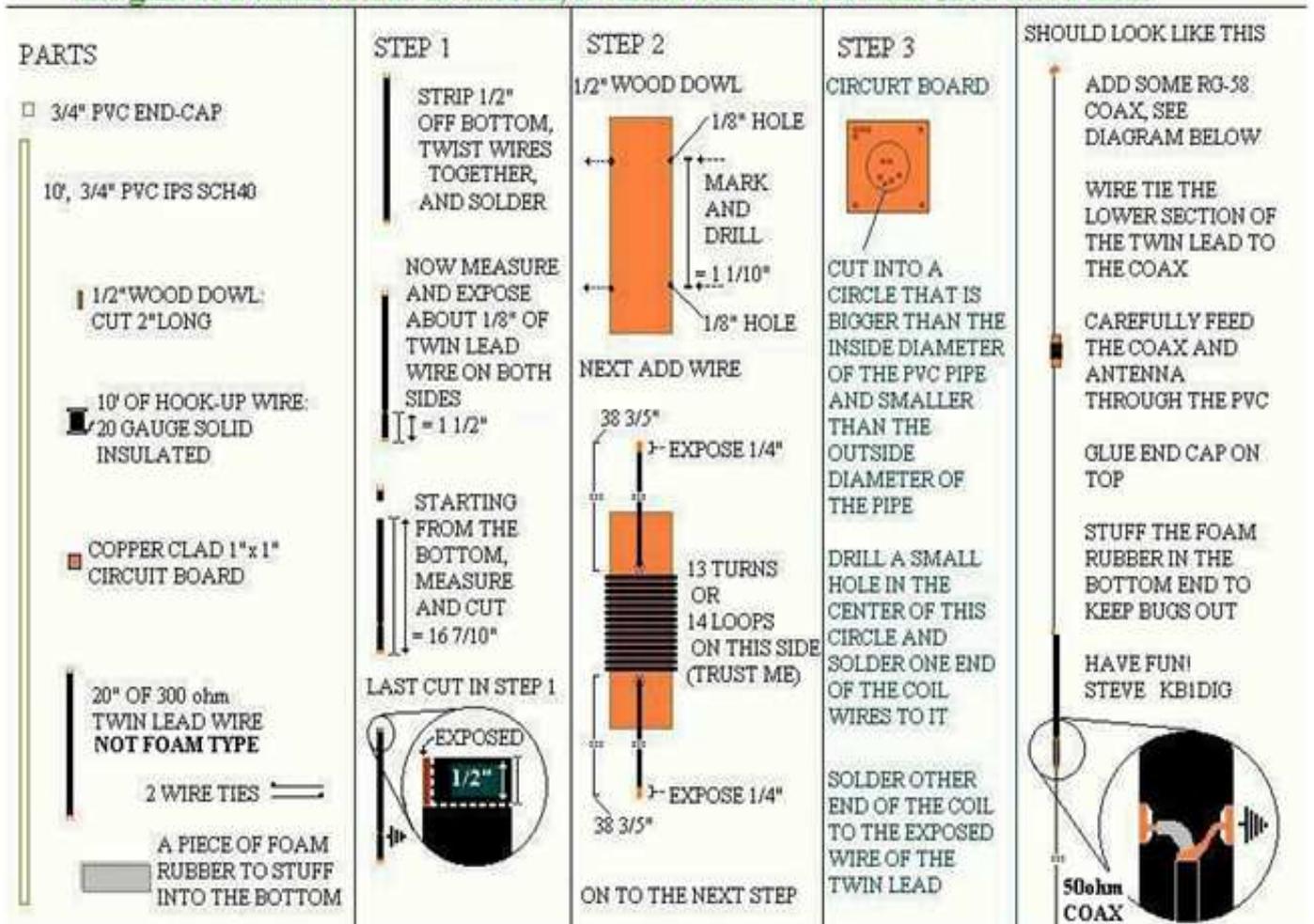
Repeater site

Platberg, South of Joburg.

Very close to Rex's QTH



**2 Meter Homebrew Vertical Antenna: This antenna is a 1/2 wave co-linear design and is built inside a 10 foot piece of 3/4 inch PVC water pipe. It is omnidirectional and has the gain of a small beam. Best of all, it can be built for less than \$10. Good luck!**



**EVER WONDER**

- Why the sun lightens our hair, but darkens our skin?
- Why women can't put on mascara with their mouth closed?
- Why don't you ever see the headline "Psychic Wins Lottery"?
- Why is "abbreviated" such a long word?
- Why is it that doctors call what they do "practice"?
- Why is lemon juice made with artificial flavour and dishwashing liquid made with real lemons?
- Why is the man who invests all your money called a broker?
- Why is the time of day with the slowest traffic called rush hour?
- Why isn't there mouse-flavoured cat food?
- When dog food is new and improved tasting, who tests it?
- Why didn't Noah swat those two mosquitoes?
- Why do they sterilise the needle for lethal injections?
- You know that indestructible black box that is used on airplanes? Why don't they make the whole plane out of that stuff?
- Why don't sheep shrink when it rains?
- Why are they called apartments when they are all stuck together?
- If con is the opposite of pro, is Congress the opposite of progress?
- If flying is so safe, why do they call the airport the terminal?

## Cheap Lightning Detector

Most digital multimeters have a sensitivity of 200 mV and an input impedance of 10 M $\Omega$ .

With this information you can calculate that at full scale there will be a current of 20 nA (nano-ampères). In reality you have a very sensitive ammeter in your hand. Now that we know this, it becomes a mission to do something with that knowledge. In other words, here is a solution that requires a problem...

For example, try the following: Connect the 'COM' of the voltmeter to ground (safety earth from a power point, central heating, plumbing, etc.). Connect an old bicycle wheel spoke or a length of thin copper wire to the 'V' socket so that you get a kind of antenna.



When you place this impressive looking apparatus looking apparatus on a windowsill during a thunderstorm and set the meter to the 200 mV range, you will, with a bit of luck, see nice deflections during lightning strikes. A nice thing is that you will see a build-up of static charge long before the flash, and immediately after the lightning flash the charge is gone.

Be aware of your own safety and those of others: Don't walk out-side with the thing or surreptitiously lead the 'antenna' to the outside. This is really dangerous. In these modern times people still die from lightning strikes! According to theory it is possible to improve the lightning detector somewhat. A sharp point or edge collects more than a rounded one. You probably have a razor blade somewhere. Attach this razor blade at the top of the antenna. And again, be careful: keep children and pets away. In the picture you can see an assembly where the top of the antenna has one turn.

The razor blade is clamped in this and in addition it is a lot harder to injure yourself this way. The 'reception' can be improved a lot more by ionising the air in the region of the antenna with the aid of radioactivity. Most of the mantles used in gas and petroleum lamps contain a small amount of radioactive material and also smoke detectors that work with an ionisation chamber are (lightly) radioactive. It is better to leave the smoke detectors alone, because they often contain very poisonous substances, but a piece of lamp mantle could be secured to the razor blade with some two-component epoxy glue.



## Reminder - Testing a TV/video remote control

Obtain a remote control with a visible LED on it. Make sure it has batteries in it and that they are not out of power

Grab a digital camera, video camera, camera phone, web cam or any other piece of camera equipment with an LCD screen.

Turn the camera on, making sure it is in capture mode, and look through the LCD screen.

Point the LED on the remote directly at the camera lens.

Hit any button on the remote, except for mode-change buttons such as TV, as those do not send an infra-red signal.

You should now see a bluish-white light emitting from the dark panel of the remote, as in the image below. This is infra-red light

## Understanding Engineers

Two engineering students were walking across a university campus when one said, "Where did you get such a great bike?"

The second engineer replied, "Well, I was walking along yesterday, minding my own business, when a beautiful woman rode up on this bike, threw it to the ground, took off all her clothes and said, "Take what you want."

The first engineer nodded approvingly and said, "Good choice; the clothes probably wouldn't have fitted you anyway."

### 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](mailto: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  
Every Third month  
On the *3rd Saturday of the month*  
at 14:30.  
@ various venues

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