



# SHACKNEWS

## HIGHVELD AMATEUR RADIO CLUB

### Third Quarter 2018

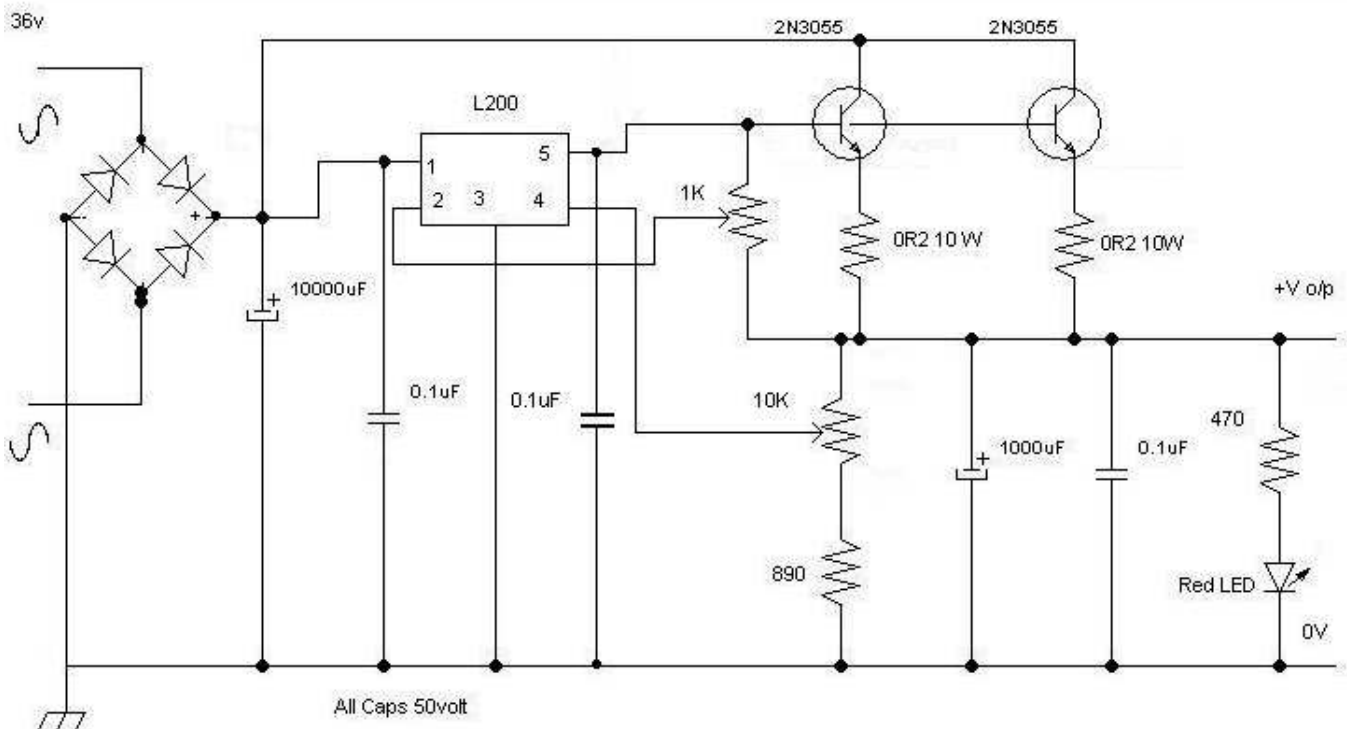


ZS6HVB  
Affiliated to the  
SARL

### COMMUNICATION IS THE NAME OF THE GAME

The September meeting will take place at Rex's qth on Sunday 16. This will be a **Bring and Braai**. Also up for discussion is the repeater and Echolink. Need your input. Don't forget subs are still due - R50.00. Start braaing at 13:00.

I have built three PSUs using this circuit and they work very well. It has variable voltage and current controls



#### Construction details:

This circuit and project is simple and to the point.

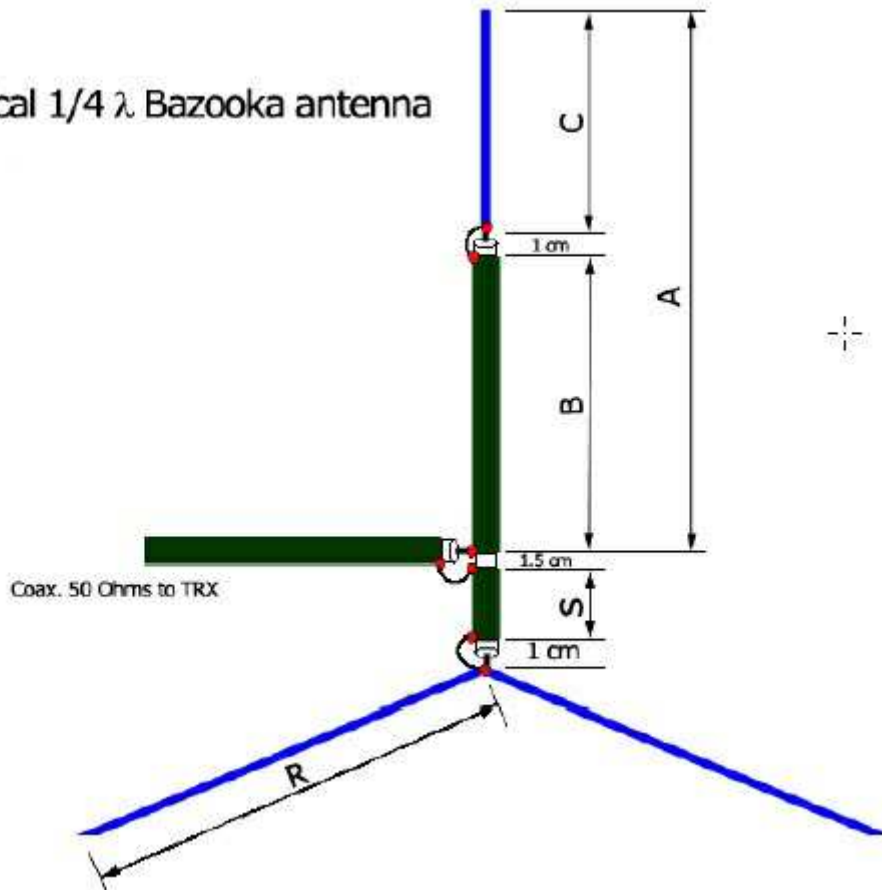
The two emitter resistors must be able to handle 10 amps max. The L200 and pass transistors must be mounted on substantial heatsinks. The transformer, bridge rectifier and smoothing capacitor may be chosen for the voltage/current required.

Appropriate meters can be added for Voltage and Ampere measurement.

Transistors, 2N3055, must be fitted with TO3 thermal mounting kits. Use heat sink paste to give good thermal contact. Check that the collectors, emitters and bases have a very high resistance to ground i.e. not short circuited.

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## Vertical 1/4 λ Bazooka antenna



### Dimensions in feet

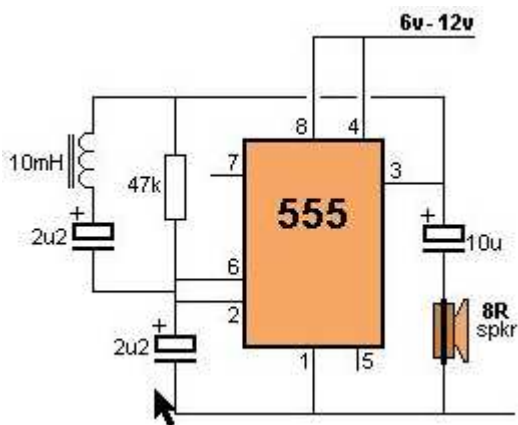
- A = 230/F (feet)
- B = A \* Vf
- C = (A - B)
- S = 4"
- R = A \* 1.05

### Dimensions in meters

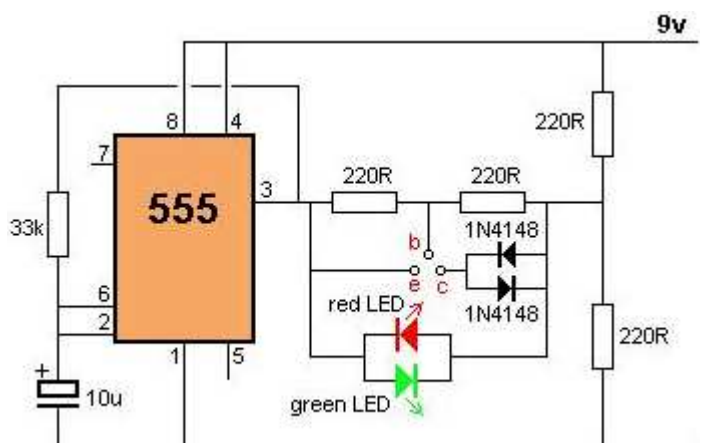
- A = (230/F)\*0.305 (meters)
- B = A \* Vf
- C = (A - B)
- S = +/- 10cm
- R = A \* 1.05

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### Metal detector



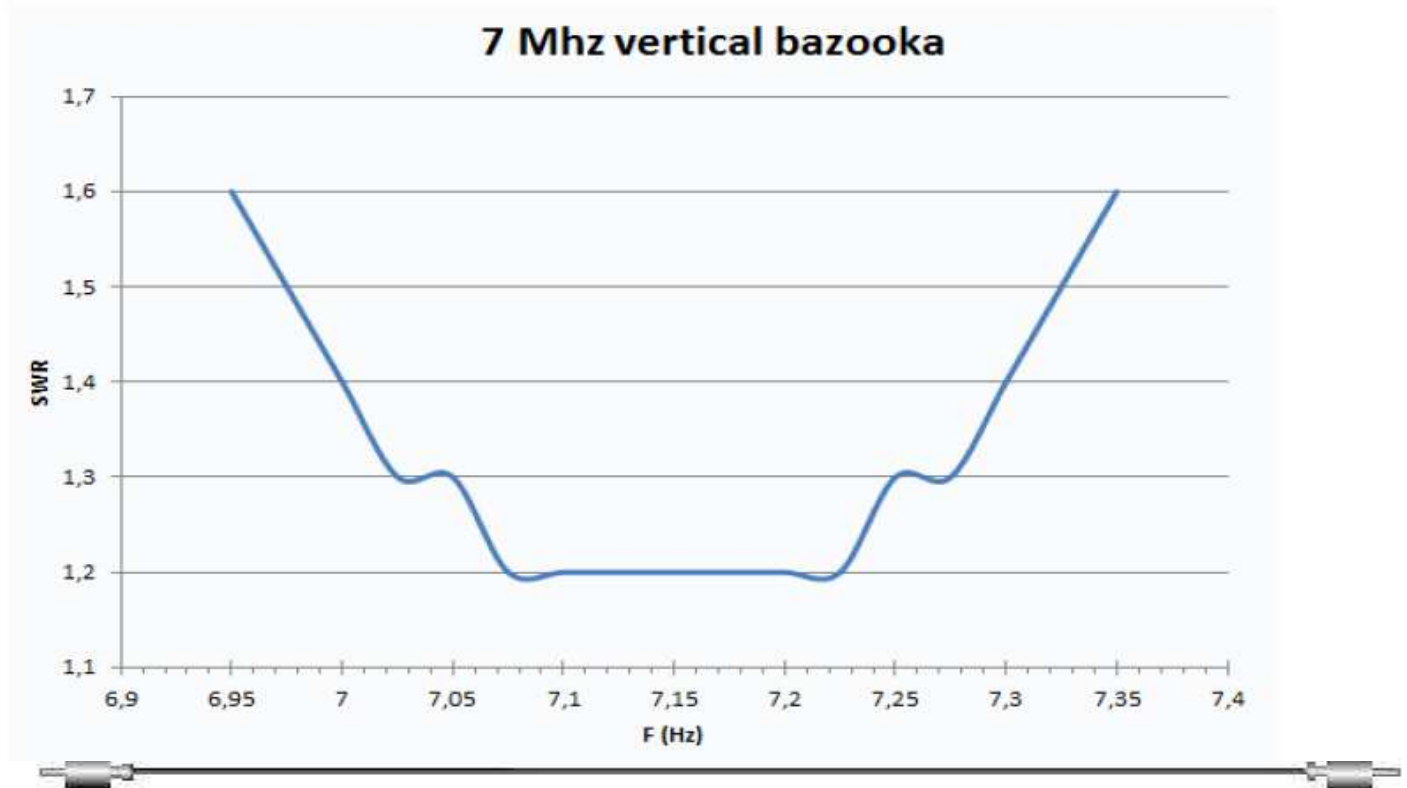
### Simple transistor tester



The angle of the radials will be ideally between 35° and 45°

Vf (velocity factor of used coax) depends of the type of cable. Don't trust to much the classic 0.66 value : the best is to mesure the Vf with a antenna analyser, results are some surprising (espacialy when you use old coax cables).

Applied as there are, those formulas gived me results close to what theoretically expected.



From page 1

Before switching on the power supply check your work thoroughly. Make sure there are no short circuits. Once you are convinced that everything is OK, you can switch on, wait a few seconds, search for smoke and if none then good show.

### Parts List:

L200 IC Regulator

Bridge Rectifier 15 Amp

10 000uF 40v Electrolytic Capacitor x 1

0.1uF 50v Ceramic Capacitor x 3

1000uF 50v Electrolytic Capacitor x 1

1K Variable Potentiometer 0.4 Watt

0R2 10 Watt Resistor

0R2 10 Watt Resistor

10K Variable Potentiometer 0.4 Watt

890 Ohm 5 Watt Resistor

470 Ohm 1 Watt Resistor

Red Led

2N3055 NPN Transistor x 2

0 - 36 Volt 10 Ampere Transformer

Heatsink for 2N3055 Transistors

Heatsink for L200 IC Regulator

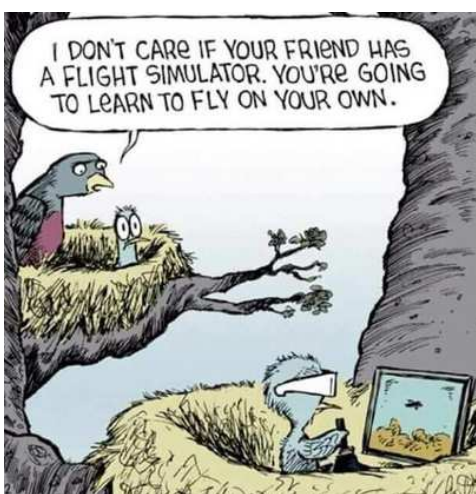
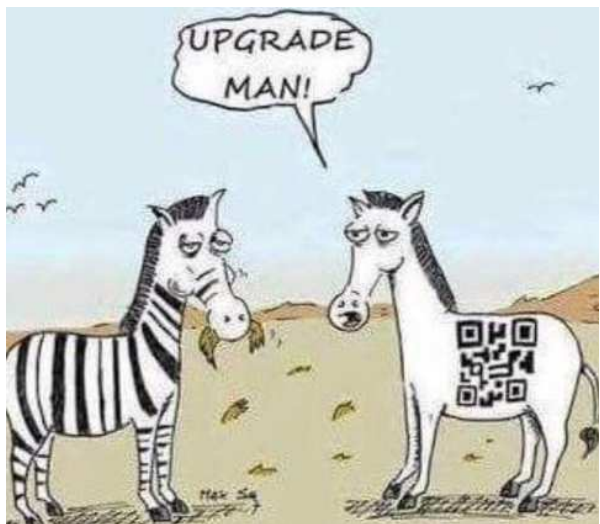
4mm Red Binding Post 20 Amp

4mm Black Binding Post 20 Amp

Amp and Volt meters to choice

**CAMPING:**  
 where you spend  
 a small fortune,  
 to live like  
 a homeless person.

I am a Seenager. (Senior teenager)  
 I have everything that I wanted as a teenager, only 60 years later.  
 I don't have to go to school or work.  
 I get an allowance every month.  
 I have my own pad.  
 I don't have a curfew.  
 I have a driver's license and my own car.  
 The people I hang around with are not scared of getting pregnant and they do not use drugs.  
 And I don't have acne.  
**Life is great.**



### 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

	Chairman	Vacant	Committee	
Secretary/Treasurer	Berridge Emmett	ZS6BFL	011-893-1291	
Shacknews Editor	Berridge Emmett	ZS6BFL	011-893-1291	
Shacknews Printing	Harry Lautenbach	ZS6LT	011-888-5362	