



# SHACKNEWS

## HIGHVELD AMATEUR RADIO CLUB

### JULY 2010

### COMMUNICATION IS THE NAME OF THE GAME

**Meeting** Not a big turnout at the meeting. Not the warmest day either. On demonstration was a device shown on page 2. Also demonstrated was the pocket beep function that some of the handie-talkies have e.g the Icom IC2GXET.

Just a reminder that the AGM takes place on Saturday 18 September

**SSC Meeting** The next meeting is to be held at the home of Doug and Merle on Saturday 21 August 2010

---oooOOOooo---

At a nearby restaurant we stopped for a quick meal and the waiter brought the ordered bowl of soup.

As the waiter turned away to return to the kitchen Pa stopped him, calling: "Waiter!"

"Yes, sir, is there something wrong?"

"The soup. Taste it," replied Pa.

"I beg your pardon, Sir?"

"Taste it."

"But, Sir, I can assure you that the soup is excellent."

"Taste it," Pa persisted.

"Sir, the soup was made this morning of the finest ingredients."

"Taste it!"

The exasperated waiter finally relented. "All right, Sir, I'll taste it." Then after a pause he said, "Where is the spoon?"

To which Pa replied triumphantly, "Ah ha ..."

### Witness to childbirth.....

Due to a power outage, only one paramedic responded to the call. No one else around and the house was dark, so the paramedic asked Kathleen, a 3-yr old to hold a flashlight high over her mommy so he could see while he helped to deliver the baby.

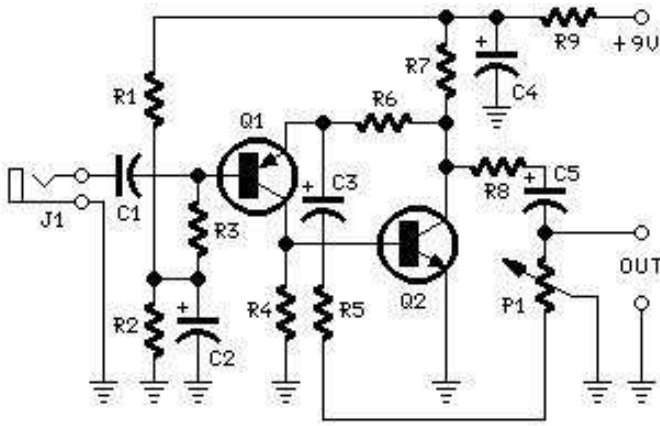
Very diligently, Kathleen did as she was asked. Heidi pushed and pushed and after a little while, Connor was born. The paramedic lifted him by his little feet and spanked him on his bottom. Connor began to cry.

The paramedic then thanked Kathleen for her help and asked the wide-eyed 3-yr old what she thought about what she had just witnessed.

Kathleen quickly responded, "He shouldn't have crawled in there in the first place ..... Smack him again!"

(tnx BA)

## Microphone Amplifier



- P1 2K2 Linear
- R1,R2,R3 100K 1/4W Resistors
- R4 8K2 1/4W Resistor
- R5 68R 1/4W Resistor
- R6 6K8 1/4W Resistor
- R7,R8 1K 1/4W Resistors
- R9 150R 1/4W Resistor
- C1 1 $\mu$ F 63V Polyester Capacitor
- C2,C3,C4 100 $\mu$ F 25V Electrolytic Capacitors
- C5 22 $\mu$ F 25V Electrolytic Capacitor
- Q1 BC560C
- Q2 BC550C

### Circuit operation:

The circuit is based on a low noise, high gain two stage PNP and NPN transistor amplifier, using DC negative feedback through R6 to stabilize the working conditions quite precisely. Output level is attenuated by P1 but, at the same time, the stage gain is lowered due to the increased value of R5. This unusual connection of P1, helps in obtaining a high headroom input, allowing to cope with a wide range of input sources (0.2 to 200mV RMS for 1V RMS output).

Low current drawing (about 2mA) ensures a long battery life.

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### An idea

Ever had a problem listening to a hand held in a mobile.

You can find any number of MP3 FM Stereo modulators available today almost anywhere. Playing music recorded on a SD card or flash drive works well. Also in the package is a cord with a 2.5mm stereo plug on one end and a 3.5 mm plug on the other. All you have to do is plug the cord into your HH and hear favourite repeater through the car stereo system. You may have to change the 3.5mm plug to suit your HH



---oooOOOooo---

### Make your own milliohmmeter, using a voltage-regulator IC

A LM317, configured as a constant-current source, delivers an output voltage equal to the input if the output resistance is too high.

IC1 controls the base of the npn Darlington transistor, Q1. The IC regulates the voltage across the selected resistor to form the constant-current source. The current source delivers either 10 or 100 mA, depending on which emitter resistor is in the circuit. The purpose of S1 is to give longer battery life. You can calibrate the current source by strapping a resistive load between test points A and B and measuring the voltage across the resistor using a DVM (digital voltmeter). Set one S2 position for 10 mA and the other for 100 mA. To measure a small resistance, you attach test points A and B across the resistance. You set the DVM on a millivolt range.

The DVM reads a voltage that is proportional to the resistance under test. If you calibrate the circuit as suggested, then the reading is 10 ohm/V on the 100-mA range and 100 ohm/V on the 10-mA range. (to page 4)

## A 70Cm SlimJim By ZS6BFL

A simple to make SlimJim is shown in the two pictures.

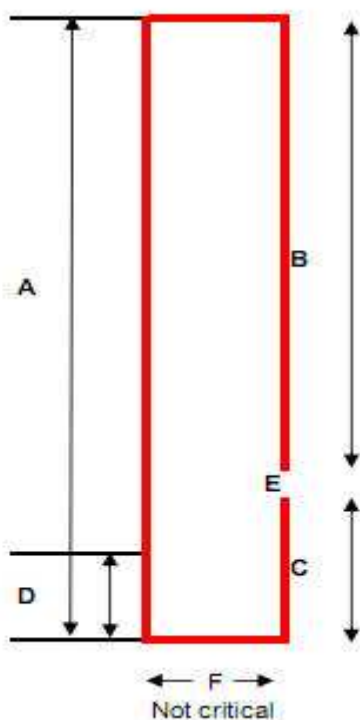
Material required is a 3 way electrical box with cover, a length of 20 mm plastic conduit, 3 plastic white plastic end caps. PVC pipe adhesive is also needed.

The antenna itself is a length of scrap 300 ohm tape 517 mm long.

Strip 5mm of insulation at each end. Solder the ends to form a loop so you end up with something that looks the red bit below. A length of string is fed through the ends and fastened with the end caps. Make sure the ribbon tape is pulled tight with the string.

Coax is fed in from the left side. Weather proof the antenna before mounting.

The antenna is mounted vertically.

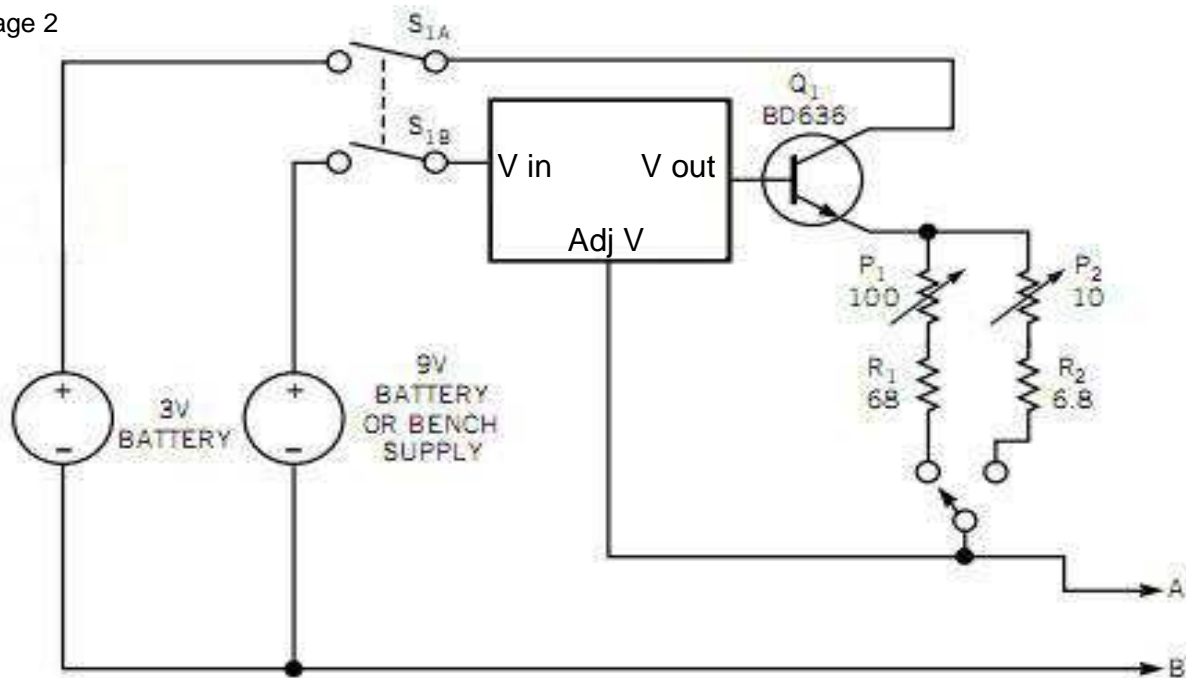


432.0MHz in mm	145.2MHz in mm
A=506.709	1508.264
B=333.179	991.735
C=166.589	495.87
D=34.70	103.3
E=7	20.67
F=15.1	44.9

Point where coax is connected
Coax centre to the long side
Braid to to short side

You can use the same construction methods for a 2M SlimJim. Measurements above.

From page 2



To track down pc-board short circuits, attach the unit with test points A and B across the suspected shorted signals. Attach one DVM probe to test point A and use the other to probe the circuit. Constant voltage along a trace indicates that no current is flowing and that the trace is not the source of the short circuit. Look for high readings on the trace with the low reading and low readings on the trace with the high reading, to locate the source of the short circuit. Has other uses as well like dry joints, relay contacts etc.

### CLUB INFORMATION

**Postal address** PO Box 19937 Sunward Park 1470

**Website** <http://www.qsl.net/zs6hvb/>

**e-mail** [zs6hvb@gmail.com](mailto:zs6hvb@gmail.com)

**Repeater** 145.1875 MHz input - 145.7875 MHz output

**Linked** to 70 cm - 438.850 Mhz (Sunday bulletins)

**Bulletins** Sunday morning - 145.7875 MHz & 7062 KHz @ 08h45.  
Relay - 80M - 3662KHz

#### Monthly meeting venue

Germiston Methodist Church  
Hall  
Lady Duncan Rd  
Germiston

*3rd Saturday of the month at 14:30*

#### Committee

Chairman	Vacant		
Vice Chairman	Frank Mercier	ZS6MER	011-845-1146
Secretary/Treasurer	Berridge Emmett	ZS6BFL	011-893-1291
Assistant Secretary	Marianne Treyvellan	ZR6JMT	084-403-3355
Repeater/Packet/Technical	Ton van Dijk	ZS6ANA	011-432-5494
Shacknews Editor	Berridge Emmett	ZS6BFL	011-893-1291
Shacknews Printing	Harry Lautenbach	ZS6LT	011-888-5362
Webmaster	Yvonne van Dijk	ZR6TBL	011-432-5494
Assistant Webmaster	Marianne Treyvellan	ZR6JMT	084-403-3355

#### Club bank details

First National Bank - Current Account 62116557309  
Branch Code 201209 - Sunward Park