



# SHACKNEWS

## HIGHVELD AMATEUR RADIO CLUB

SEPTEMBER 2009

### COMMUNICATION IS THE NAME OF THE GAME

**Meeting** The AGM was held at this meeting and the office bearers remain the same for the forthcoming financial year. See last page. It was decided to keep the annual subs at R100.00 this year. What is uncertain is what will the new proposed annual licence and repeater fees be. I have arranged with ZS6COG to give us a talk at the next club meeting on the SCIBONA and APRS.

**SSC Meeting** Next meeting, 10 October 2009, will be at the home of Doug and Merle. Usual catering arrangements apply.

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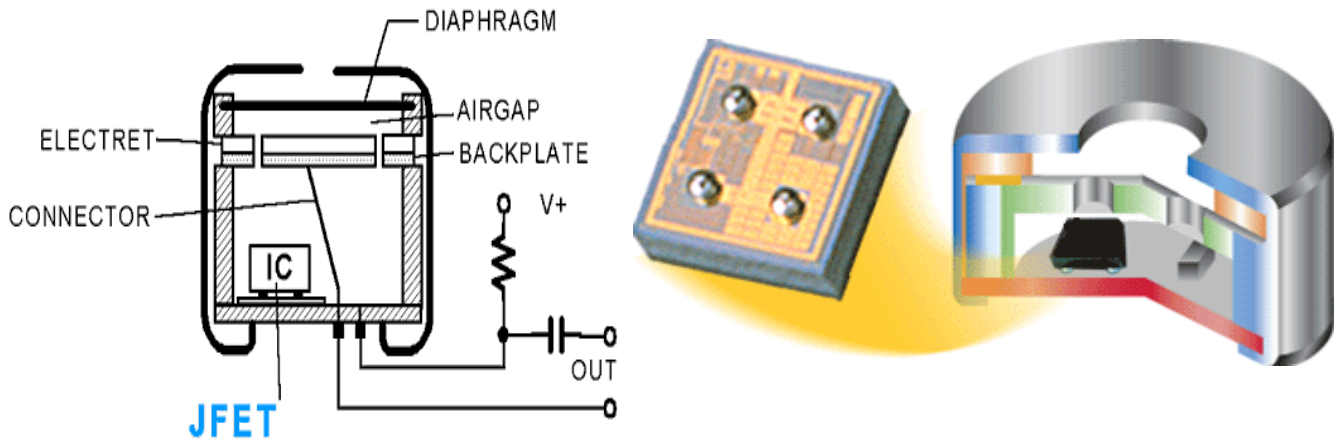
#### One liners

1. **Marriage is one of the chief causes of divorce.**
2. *Work is fine if it doesn't take too much of your time.*
3. **When everything comes in your way you're in the wrong lane.**
4. *The light at the end of the tunnel may be an incoming train..*
5. **Born free, taxed to death.**
6. *Everyone has a photographic memory, some just don't have film.*
7. **Life is unsure; always eat your dessert first.**
8. *Smile, it makes people wonder what you are thinking.*
9. **If you keep your feet firmly on the ground, you'll have trouble putting on your pants.**
10. *It's not hard to meet expenses, they are everywhere.*

#### YOU KNOW YOU ARE LIVING IN 2009 when...

1. **You accidentally enter your password on the microwave.**
2. *You haven't played solitaire with real cards in years.*
3. **You have a list of 15 phone numbers to reach your family of 3.**
4. *You e-mail the person who works at the desk next to you.*
5. **Your reason for not staying in touch with friends and family is that they don't have e-mail addresses / facebook / Myspace / twitter**

## Integrated Circuits for High Performance Electret Microphones

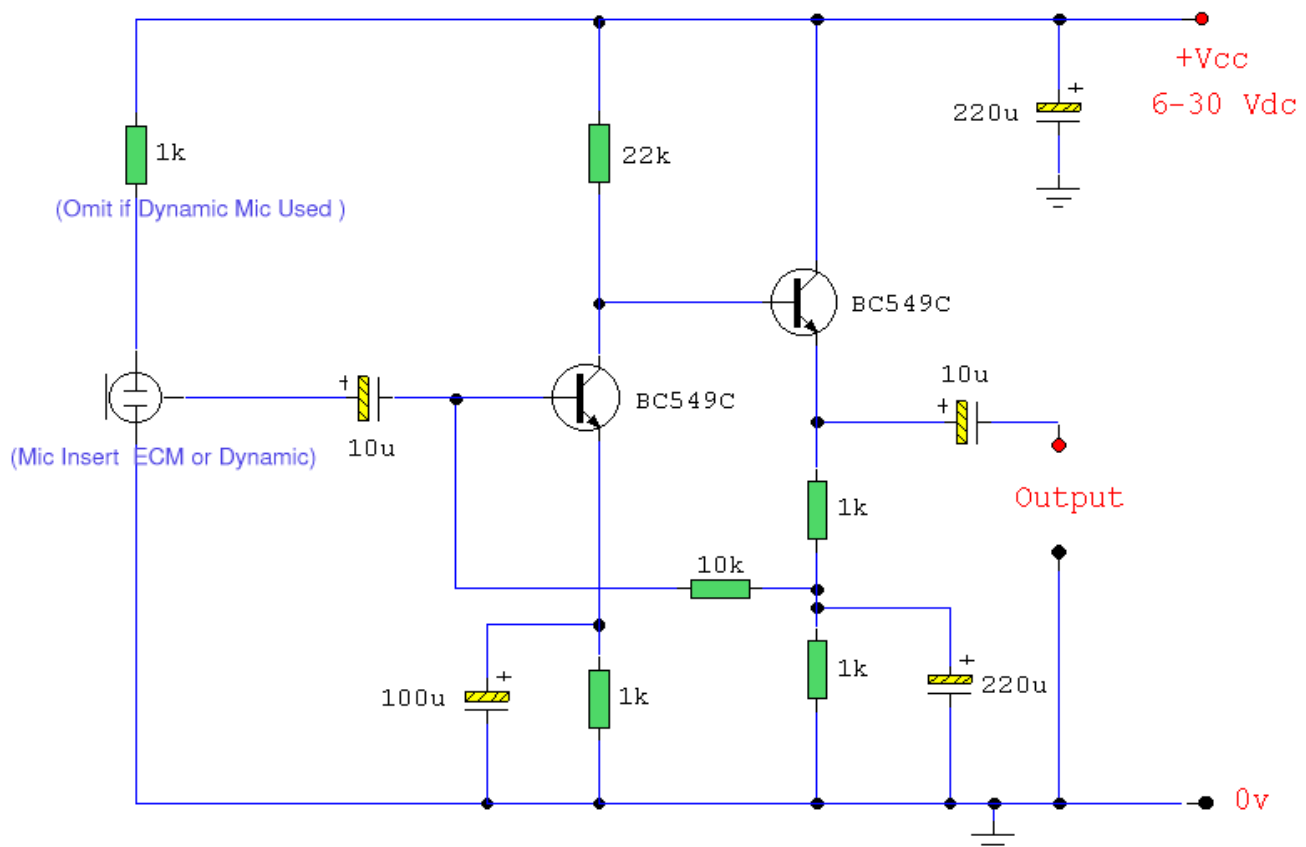


Electret Condenser Microphones (ECM) are used in almost every consumer and communication audio application. The total yearly volume of all ECM's is well over one billion units. Over the years, innovation in ECM's has concentrated mainly on lower cost production and smaller sizes. Other improvements of sensitivity, Signal-to-Noise Ratio (SNR), linearity, and supply current have not been addressed.

The most commonly used ECM's consist of a JFET inside an electret microphone canister, which acts as a buffer between the capacitive sensor and the output. JFET's are small, two or three-terminal devices that have been improved toward very small, low cost plastic packages. This enabled the main innovation of ECM, their increasingly smaller sizes. Currently, ECM's as small as 2mm in height are common. With a stack of condenser microphone plates and spacers, this requires packaged JFET's as small as 0.5mm in thickness.

An Electret microphone consists of a pre-charged, non-conductive membrane between 2 plates that form a capacitor. One of the plates is fixed and the other plate moves with sound pressure. Movement of the plate results in a capacitance change, which in turn results in a change in output voltage due to the non-conductive, pre-charged membrane.

### A suitable circuit



## Wanted Notice

A Reward of 500 microfarads is offered for the information leading to the arrest of Hop-A-Long Capacity. This unrectified criminal escaped from a western primary cell where he had been clamped in ions awaiting the gauss chamber. He is charged with the induction of an 18 turn coil named Milli Henry who was found choked and robbed of valuable joules.

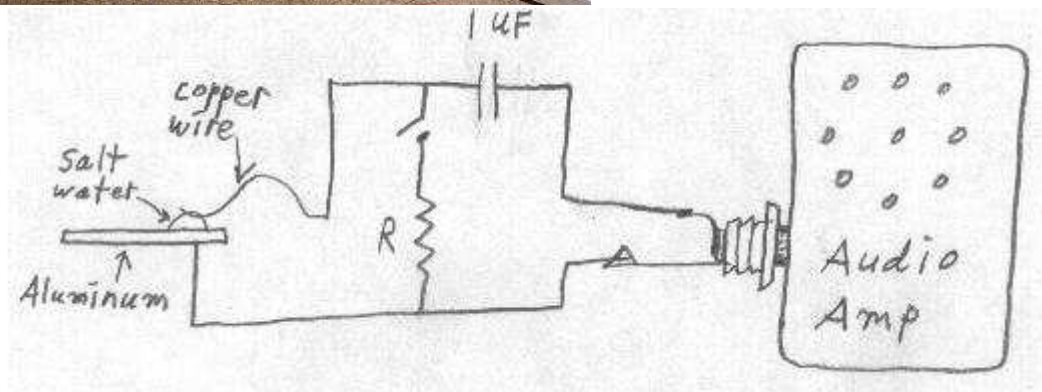
He is armed with a carbon rod and is a potential killer. Capacity is also charged with driving DC motor over a Wheatstone Bridge and refusing to let the band pass. If encountered, he may offer series resistance. The electromotive force spent the night searching for him in a magnetic field, where he had gone to earth. They had no success and believed he had returned home via a short circuit. He was last seen riding a kilocycle with his friend Eddy Current who was playing a harmonic.

## Looking back



## Peculiar Sounds from Aluminum

When the aluminium and contact wire above are connected to an audio amplifier, very strange and interesting sounds can be heard. This cell also produces a small voltage and there is generally more activity when R (100k to 1meg) is in the circuit drawing some current.



### CLUB INFORMATION

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

Monthly meeting venue

**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)

Witwatersrand Rifles HQ  
Cnr Barlow and Cavaleros Str  
Industries West  
Germiston

**Bulletins** Sunday morning - 145.7875 MHz & 7062 KHz @ 08h45. *First Saturday of the month at 14:30*  
Relay - 80M - 3662KHz

#### Committee

Chairman	Frank van Wensveen	ZS6TMV	082-294-2648
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
Public Information Officer			

#### Club bank details

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