



# Q S X P E



**THIS NEWSLETTER IS PUBLISHED BY THE  
PORT ELIZABETH AMATEUR RADIO SOCIETY**

**WEBSITE: [www.qs1.net/zs2pe](http://www.qs1.net/zs2pe)**

**PO BOX 10402  
LINTON GRANGE  
6015**

**FEBRUARY 2005**

# MONTHLY GENERAL MEETING

The monthly general meeting of the PORT ELIZABETH AMATEUR RADIO SOCIETY will be held on **Thursday, 17 February 2005** at the St Hugh's Church Hall, Newton Park, starting at 20:00 (8 pm).

At the bring and buy table there will be a number of items of test equipment from OM Bill Browne ZS2BY, who is leaving PE. Barry Jackson ZS2H has been asked to stick prices on the equipment and offer them for sale at the meeting. Some of the takings will go to Society funds. Al Akers will also advertise some give-away items from Bill's shack. Many thanks, Bill.

The other Bill ZS2ABZ will fix the tea and coffee and the good ol' biscuits. Last time I stuck a couple of rand in the box, so it looks like the raffle has gone for a burton.

## Wrinkly Ravers

There were 10 members and a little visitor at the get-together in February. The saddest part was saying farewell to Bill Browne ZS2BY, who is leaving us shortly for KZN. We will miss that friendly smile.

Let's hope there will be a few more members at the next Rave, which takes place on 3 March 2005 at Barney's, in the shopping complex in Circular Drive.

---

---

## **Get-together at Ashley's Place**

We will meet at Ashley's QTH at Canonville for a bring and braai on **Saturday, 19 February**. This unfortunately coincides with the start of the ZR Welcome to HF QSO Party but cannot be altered, and we hope there will be enough ZRs to make the outing a success.

Everyone brings his/her own goodies to eat and drink as well as plates, cups, chairs etc. Bring your costumes too!

At Colchester, turn coastwards off the N2, then turn right again to Canonville. Carry on until the **stop street** and turn left pass the shops. Then turn right and carry on until you get to Ashley's at 106 Aqua Vista Crescent, Canonville. Be there by about 10h30 or so.

## **ZRs ARE NOW ON HF !!**

At last the modified Regulations have been published, and ZRs can be heard giving it stick across the bands.

**The PEARS "Welcome to HF" QSO Party will take place from 1200 on 19 February to 1200 on the 20th.** See the October issue of QSX for the rules, but note that the 20m segment should read 14,225 to **14,250** (not 350).

Logs should be sent to PEARS QSO Party, PO Box 5277, WALMER 6070 or to [zr2dx@mweb.co.za](mailto:zr2dx@mweb.co.za) by 31 March 2005.

In the meantime, apart from "personal's" and reports of "3 over 3", "9 over 9" etc., some ZRs will need to be guided on the use of phonetics in their call signs. There is also the need for at least three kHz clearance from an existing QSO; correct tuning to "receive" SSB so that they aren't off frequency on "transmit", etc.

But it's all just a matter of time and they should be working as well as the rest on HF. Perhaps even better! 📻



## from *The* *Chairman*

**O**ne month down, and eleven to go, 2005 is well and truly with us.

At the time of writing this column, the new regulations were still to be signed into law and published. This has now finally happened, and those of you with ZR tickets are at last able to operate on many HF bands or on portions of some.

Please try not to acquire some of the operating practices that you may hear, and remember to use your call signs correctly. If there is any chance at all of the letters being misunderstood phonetically, always – and I mean *always* – use the phonetic alphabet. Your call sign is there for the authorities and anyone else to identify your station, not just for those you know.

It was really gratifying to see a decent turn-out at our January meeting. Numbers are what make meetings interesting – let's hope that the rest of the years' meetings will see good turn-outs. YOU are the club, invest in it if you want it to grow and prosper.

We have lined up two socials (apart from the general meetings) for February and March. On the 19<sup>th</sup> of this month, Ashley, ZR2AG will be hosting members at his new QTH for a bring-and-braai.

In March, we will be joining the Mountain Rescue Club for a social "get to know one-another". Look for precise details of both

events elsewhere in this issue of QSX. We hope to see all of you at both events.

Over the past two months, we have been running transmissions of several American amateur radio related news bulletins on the repeater network.

Currently, we are downloading the RAIN Report, Newline, and This Week In Amateur Radio. Your feed back is always encouraged, and appreciated. If you are listening to them, please do call in after these transmissions, which usually take place after 8pm on Monday and Tuesday evenings.

Al, ZS2U is once again gearing up to run RAE preparation classes, so if you know of anyone wanting to sit for the next exam, please let him know.

The SARL has published the new RAE manual on their internet website. Anyone wanting a copy of this Adobe document, please let me know, and I will gladly cut it to CD. Ashley, ZR2AG, has kindly offered to print the 220 page manual at cost for us, and should shortly be available.

The "profit" which PEARS will generate from the sale of these manuals will go towards covering the costs incurred in running the classes.

73

**Rory, ZS2BL**

**Director, ECARES**

The director's term of office expires on 30 June, which means that members will need to elect a director for the following three year period.

Members are requested to forward nominations for this post, together with proposer and seconder's names, to me by not later than 31 March.

Names of nominees will then be published in the April QSX so members can make their choice.

This will need to be completed by 31 May and may be done in writing.

**Social**

It was good to see our old friend

Peter ZS2PF again while on holiday here in PE.

Pat ZS2PJP and Ginny ZS2GIN have moved from Port Alfred to Port Elizabeth. Hope you have a happy stay here.

We welcome new members Eric ZR2ECH and André ZS2AL to ECARES. Good to have you aboard too.

73

**Al Akers, ZS2U**

**Provincial Director:  
Hamnet/ECARES**

**Welcome** to our new members Barto de Koning and Christo Becker, as well as Mitch Rundle ZS2DK and Gerhard Baum ZS2UM, of whom the latter, as I recall, were members previously.

We trust that you will be happy with us and that we will hear you chaps on the air.

## **CHRIS GOES VHF/UHF ... and does it backwards !**

Now you can see what we get up to in our spare time.

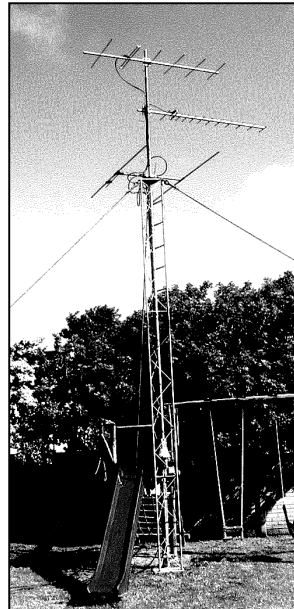
All this effort and not much to speak of as far as contacts go. OK, so at least I made it from PE to EL direct. And up to Adelaide. Probably only 200 km direct line of sight, but from a low site to a low site, that is not too bad...

145 MHz, 434MHz and 50MHz yagi's horizontally polarised and mounted on a temporary "portable" club tower, with a rotator fitted at the bottom.

Don't look too closely - you might notice I had the 50 MHz 2-el yagi pointing the wrong way (backwards) ! Since the front to back ratio is not great, I decided against the effort to swing it around.

Cheers and regards

Chris. 📡



# ***Picnic at The Island Forest Reserve***

PEARS and the Mountain Club of South Africa are jointly holding this event on Sunday, 6 March from 1000 onwards at the Island Forest Reserve picnic site and will braai around 1400.

We have been booked in there at the LAPA at a special rate of R5 per person, thanks to Zanné Olivier ZR2EZO from Nature Conservation.

Braai fires will be provided. Please bring your own eats, drinks, cutlery, crockery etc.

Also bring along a rig or two to demonstrate amateur radio.

---

## **Radio Amateur Examination**

Will all prospective radio amateurs who wish to write the radio amateur examination in May please contact Al Akers at tel. 041 360 2983 as soon as possible.

If there are sufficient applicants who

wish to attend classes and we can find a venue to hold such classes, we will do so. Otherwise I, and I am sure others, will be prepared to assist those who need help.

---

## **PEARS AQ TWO METRE FM CONTEST**

This contest takes place from 1500 to 1800 SAST on Sunday, 13 March 2005. All amateurs in the East Cape are eligible for the contest, but stations outside the East Cape are welcome to give points.

There will be two categories, Fix Station and Field Station. Both categories will be single operator, but two or more amateurs may operate the same station under their own callsigns.

### **Scoring**

Contestant scores one point per kilometre between his station and the station contacted.

There will be two divisions, one relating to the power used and the other to the antenna gain. This is in order to give contestants with low power and/or low antenna gain an equal chance against the better equipped stations.

Main operating frequencies will be 144,400 MHz and 145,500 MHz.


Logs may be submitted to the PEARS address or to Al ZS2U. Logs must contain time, callsign of station contacted, six digit grid locator and signal report. Contestant must also give his callsign, location, power output and antenna gain (or relevant information on antenna).

Closing date for entries will be 30 April 2005.

---

**SARL FIELD DAY CONTEST RULES:** Establishment of Stations:  
*“Any member of the operating team may not have used the site used for a Portable Station operation for a period of at least two weeks prior to the start of the contest.”*

How *big* is a *site*? Can one go to another site on the *other* side of the fence?

How important is this restriction anyway? 

# A bit of PEP talk

from BILL BROWNE, ZS2BY

In the old days radio amateurs were limited to 100 watts DC input power. In those days everybody used either CW or AM and the input power specification gave an easy means of checking an amateur station's power.

There were plenty of radio inspectors and they often made unexpected calls on hams, armed with their trustworthy AVO multimeter. The DC power specification was thus an easy method of regulation.

When a transmitter is fully driven with a sine wave the peak envelope power (PEP) is equal to the average AC power. This meant, in the old days that the effective PEP of a CW transmitter was about 66 watts for an input of 100 watts, allowing for tube and circuit efficiencies. Today the DC power limit is 150 watts which means a PEP of about 100 watts.

In order to obtain the greatest output from an AM transmitter high level modulation was used. In this form of modulation the instantaneous output power was greater than the PEP under steady sine wave conditions. This was because the applied modulation was at high power and effectively increased the instantaneous input power of the final four times ( $2^2 \times I$ ). So with a DC power input of 150 watts the peak input power would be 600 watts leading to a peak output of 400 watts RF.

This magic figure was used to determine the power rating of SSB transmitters and the regulation of 400 watts PEP is quite feasible because RF power measuring devices are freely available. Remember that this refers to sine wave drive.

When we come to real life we are faced with a different set of circumstances because speech waves are not the same as a single sine wave. The average power of human speech is about one tenth of the peak power so if this is used to modulate an SSB transmitter the PEP remains at 400 watts, but the mean power is much less.


Now, some amateurs have resorted to speech compression, also known as speech processing, in order to increase their talk power. Heavy processing can change the average speech power to about one third of maximum power, but it has its drawbacks mainly in the form of very high background noise in such cases. Whatever they do they do not increase their PEP. The only way to increase PEP is to increase the input DC parameters.

In the mistaken belief that more modulation means an increase in PEP many amateurs overdrive the audio section of their transmitter. All this does is to increase distortion. Distortion means that the speech wave generates many unwanted intermodulation products thus increasing bandwidth.

Now the SSB generation process is usually followed by a very selective filter, but if this is subject to overdrive it cannot stop the generation of unwanted intermodulation products. These undesired products find their way into the output bandwidth of the transmitter so that instead of sending out a wave limited to the normal bandwidth of about 3 kHz the output bandwidth is considerably greater and shows up in the form of splatter on the band.

In the early days some SSB operators believed that the SSB signal could not cause splatter. How wrong they were!

To aggravate the splatter problem it must be remembered that if a linear amplifier is overdriven then it will cause distortion and thus considerably widen the necessary bandwidth. There is no way to increase the PEP of your transmitter without increasing the DC parameters. Be warned.

Measurement of the PEP of a transmitter is often done with two equal non harmonically related sine waves. Under this test the measured output is approximately 6 dB lower than the PEP and is quite satisfactory. 

# The FIVE BAND, INVERTED-L ANTENNA of Len Paget GM0ONX

from Johan Terblanche ZS1I

Very few of us these days have gardens that will allow the "traditional" 40m long dipole (for the 80 Meter band) to be erected. Fewer still have space for the double sized dipole for "Top Band". So, essentially, this means for many of us that 80 Meters is totally out of the question. Or such a full sized antenna has to be bent into various contortions to get it to fit into the available space.

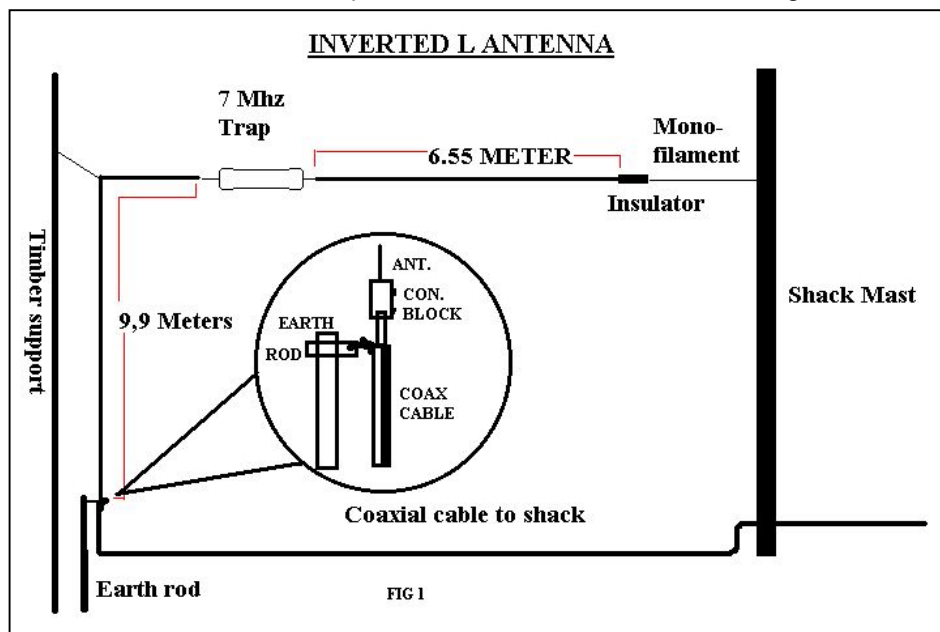
The antenna I am describing here was intended to allow operation on both 80 Meters and 40 Meters in less than half the space of the traditional dipole. However, it will, in most instances, give a performance equal to, or greater than its full size cousin. The antenna will also give a good account of itself on 14, 21 and 28 MHz being electrically similar to the W3DZZ dipole.

The antenna system will almost certainly require some impedance matching to suit rigs with solid state power amplifiers – again, this is just like the W3DZZ antenna. Antenna purists

will often tell you that an antenna of this type requires radials, or a sophisticated earth system for optimum performance. But in practice the antenna works very well with a modest earth system, although this is dependant on soil conditions.

The prototype antenna was constructed from heavy copper earth wire. There is a single 7 MHz resonant trap to make it more efficient on that band.

The general layout of the antenna and the theoretical lengths of the antenna are shown in Fig. 1. The



antenna is fed with 50 ohm coaxial cable, with the coaxial screen connected to the earth rod. This connection is secured using an earth clamp intended for earthing water pipes. The center core of the coaxial cable is connected to the antenna via a single 15A "chocolate block" connector. Cover all connections with a waterproof tape.

No balun or other matching network is needed for 80 Metres and 40 Metres as the antenna's feed point impedance is close to 50 Ohm.

The 7 MHz trap is constructed from 11 turns of RG58 coaxial cable wound on a 100 mm piece of 40mm PVC pipe as shown in Fig. 2. In this type of trap the coaxial cable acts as both capacitor and inductor and is capable of working at power levels in excess of 400 watts.

It is imperative that screen and center cores of the coaxial cable are parted as close to the point the cable passes through the hole in the pipe as possible. This is to ensure the correct value of capacitance and inductance. The center core of one end of the coaxial cable is soldered to the screen at the other end.

As with the feed-point, the ends of the coaxial trap and other joints must be weather proofed. The capillary effects of coaxial cable are legendary and water ingress will totally ruin your trap.

The height at which the antenna folds

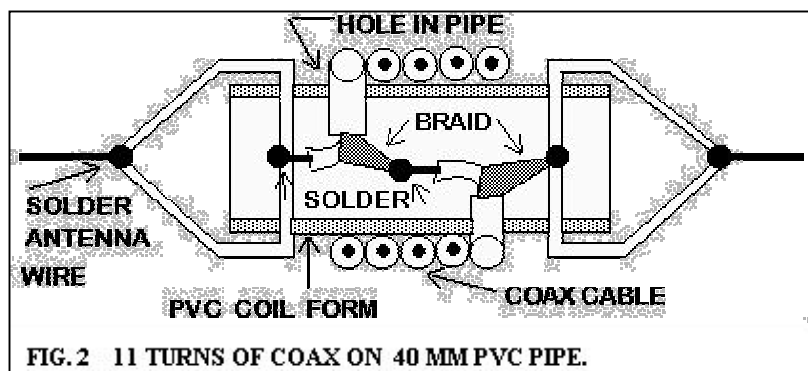
over from vertical to horizontal is not critical but generally the higher it is the better. Extra height not only aids the DX performance of the antenna but also significantly reduces the amount of horizontal space required.

Tuning the antenna is quite simple but it is imperative that it is done in the correct order. Firstly cut both sections of the antenna about a half a metre longer than the dimensions shown in Fig. 1. To start the tuning operation, begin on 7 MHz and trim the wire length at the end nearest the earth connection 50 mm at a time until the lowest s.w.r. is achieved. I managed an indicated s.w.r. of less than 1.2 : 1 over the whole of 40 Metres.

Then move to 80 meters and repeat the process, but this time trimming the side of the antenna furthest away from the earth, i.e the side nearest the shack in Fig. 1.

The s.w.r. on the 3.5 MHz band should be less than 2:1 over the whole of the band falling to about 1.2 to 1 at the point of resonance. So it is worth setting the lowest s.w.r. at the section of the band you normally use, if you have a preference.

I have had a lot of fun using the antenna and thoroughly recommend it to anybody not having enough garden room to erect a full size dipole in the optimum direction. 📡





# 100 YEARS of AMATEUR RADIO in SA

Mike Bosch ZS2FM – from Radio ZS Jul/Sept 2004

*[Mike has given us permission to publish his article. Many of our members are not members of the SARL and do not receive Radio ZS, but there is something to be learned from the history of Amateur Radio – Ed.]*

Amateur Radio has a very rich heritage and amateurs should be proud of the contributions made by their peers to radio science and technology. We are commemorating the centenary of Amateur Radio in this country and pay homage to our early pioneers in South Africa.

In 1888 Heinrich Hertz, a young German professor, discovered how to generate electromagnetic waves by means of electric sparks. He detected them and proved that they possessed all the properties of light and radiant heat. In 1893, Nikola Tesla demonstrated the first wireless transmission before the National Electric Light Association in St. Louis USA over a distance of 30 feet (9 metres) and detected the radio waves with a Geissler tube.

Around this time, Professor Popoff, of Kronstadt in Russia, also experimented with spark transmission. It was in 1895 that Guglielmo Marconi in Italy, first heard about the discoveries made by Hertz. It fired up his imagination and he started his own spark experiments. He soon succeeded to transmit Morse code signals over several kilometres and could detect it with the aid of a coherer type receiver.

At about this time Jennings, an electrical engineer in Port Elizabeth, Union of South Africa, discovered that electric sparks emitted by passing trams also caused sparking in a bottle of iron filings kept in his office. He later constructed a spark transmitter and a receiver that featured his iron filings discovery, and eventually could send radio signals from the Donkin to a ship in Algoa Bay. Being encouraged by this success, he approached the Prime Minister, John X. Merriman, for government assistance to

develop his wireless system further. The minister was not the least interested. Disillusioned, Jennings stopped his research altogether.

Marconi had a similar problem. He could not get any backing from his government either and so in 1896 he left for England where he received full support from the Post Office Department. Marconi rapidly developed his wireless telegraph system and signaled over greater and greater distances.

On 12 December 1901, Marconi spanned the Atlantic Ocean on long waves, by transmitting the letter “s” from Poldhu Cornwall to St. Johns in Newfoundland. This historic event was headlined in newspapers world wide and it made many people believe that he was the real inventor of radio. It also inspired electrical enthusiasts in various parts of the world to experiment with wireless telegraphy.

## **The first licensed radio amateur**

W.E. Dixon Bennett ZS5EG, formerly FO-A3V, FO-A3Y and ZS4W, tells us about his introduction to Amateur Radio in those pioneering days. He says: “It was actually in Maritzburg – during the 1899-1902 Boer War – when I first began to be attracted to wireless when I stumbled across a semi-popular article describing the simple little gadget known as the filings tube coherer. I built up my first complete

receiver and transmitter in 1903, by which time I had made a further move to Pretoria. It was here, in 1904, I obtained my first licence. In point of fact however, the receiver had been completed and the transmitter half built before I discovered the necessity for a licence at all."

Dixon Bennett was granted an experimental licence by the Postmaster General and he was allocated the official call sign of FO-A3V. There were no enforced restrictions on either power or wavelength, but he was not permitted to receive or transmit any message for delivery in Pretoria.

Of course, a spark transmitter could not be bought off the shelf and had to be constructed from scratch. Amateur handbooks and radio dealers were unheard of, so every single component of the receiver and transmitter had to be laboriously built up of raw materials or whatever the amateur could lay his hands on. Most experimenters started off with a model T Ford car ignition coil and a large umbrella antenna or even a Marconi type, to cover a distance of 100 miles (160 km) on a wavelength of 600 metres. The receiver consisted of a variometer tuning circuit, a detector such as the Branley coherer and a set of high impedance headphones. The insensitive coherer, a small glass tube filled with iron filings, was later replaced with the more sensitive galena crystal and cat's whisker, or the very reliable carborundum type of detector.

#### **The first radio amateur QSO**

In those days, the airwaves were pristine and clear of all radio signals except for occasional static. That was of course the problem: the aspirant amateur was alone and isolated and could not hear any fellow hams nor did he even know of their existence. Dixon Bennett comments further: "The amateur's life was one of long search for signals from the blue, hours and hours were spent in the almost vain hope of hearing a station calling CQ or replying

to one's own general call. Actually, it was not until 1905 that I first met a fellow enthusiast, a chap named Ensor by the way, who was an electrician in the Railway Workshops at Pretoria. I can assure that the first time we succeeded in establishing communication gave us both a thrill, which, as far as I am concerned, was as great, if not actually unsurpassed by any experience since!"

In 1906, Dixon Bennett was back in Johannesburg. He says: "I failed to find another fellow enthusiast, heartily sick of getting nowhere single-handed. There were times when I was tempted to abandon wireless for a more sociable hobby. I still used my gear for demonstrations as I have originally done in Pretoria. As it happened, an unexpected outcome of one of these demonstrations revived the flagging interest, which was further accentuated by a visit to the Marconi Headquarters in London a little later."

Dixon Bennett increased his transmitting power by changing his Watson spark coil, originally used in an X-ray plant, to a 1 kilowatt power transformer and rotary spark gap. The sensitivity of his receiver was further improved with a galena and carborundum type detectors. He now possessed the most efficient amateur station in the country. Dixon Bennett received Morse code signals from official stations located on the Bluff in Durban, and the German and Portuguese stations at Swakopmund and Delagoa Bay respectively, as well as occasional ship stations in South African waters. These were about all that amateurs could hear outside their own towns. By this time, he was joined by a few more hams in Johannesburg, such as Raymond Coombs the Honorary Organising Secretary of the future SARRL, George Newman and George Lowe A6W (ZT6F). In 1909, J.S. Streeter A4Z (A1A) (ZS1W) in Cape Town also started to experiment with spark transmission.

***To be continued next month.***

**MINUTES OF THE MONTHLY MEETING OF THE PORT ELIZABETH  
AMATEUR RADIO SOCIETY HELD AT THE St HUGH'S CHURCH HALL,  
NEWTON PARK, PORT ELIZABETH ON 20 JANUARY 2005**

**Welcome:**

The Chairman welcomed everyone who had made the effort to attend the meeting. A special welcome was extended to Christo Becker and Barto De Koning who had just signed up as new members and were hoping to write the RAE in May.

**Present and Apologies :**

As noted in the attendance register. Special mention was made of Mike Bosch ZS2FM and Owen Wheeler ZS2HZ, a previous member who now resides in the UK.

**Acceptance of Previous Meetings Minutes:**

Proposed : ZS2EHB Seconded ZS2ABZ.

**Matters Arising:**

Nil

**Correspondence:**

*In:* Various Club Newsletters, Club repeater and special event station licences.

*Out:* None

**Finance:**

The Treasurer reported on the Society's financial position, which was accepted by the meeting.

**Social:**

Ashley ZR2AG has invited the Society members to a social gathering at his QTH on 19 February 2005.

Al ZS2U to organise a bring and braai at the Island resort at Seaview on the 6 March 2005. This would be a "getting to know you" event to welcome the 16 Mountain Club and Search and Rescue members who recently passed the RAE and who had joined PEARS.

**Special Events:**

Kids Day – no action to be taken.

**General:**

a) With reference to the new Mountain Club and Search and Rescue members, the question was raised that they should make an effort to attend the Club's monthly meetings. It

was felt though that seeing that their main idea in writing the RAE was to have access to the Club's repeater system for use in case of emergencies, the club could not force ham radio onto them.

b) Regarding new members in general, it was again raised that long standing members should keep in contact with the new members to keep them from losing interest in the Society. More interesting monthly meetings would also help to attract better attendances. In response it was stated that interesting practical projects and other ham related events could be arranged more easily if the Club had a permanent "home".

c) It was mentioned that the Durban club had acquired a clubhouse building in the Durban harbour. The Chairman would investigate what the PE harbour had to offer.

d) The Chairman would be investigating the acquisition of brochures and other ham related advertising material that could be handed out at special event stations.

e) Al ZS2U suggested a monthly meeting be arranged at the Physics Dept. of UPE. He knows of interesting research underway at the moment on the economic use of solar panels. The meeting unanimously agreed to this proposal.

f) Neil ZR2NT asked the meeting if there were any objections to him applying for and obtaining a private repeater licence for his own experimental use. The meeting had no objections except that an agreed frequency would have to be found.

g) Members present were requested to participate in the PEARS VHF/UHF contest that was being held during the weekend.

The business of the meeting was concluded at 20h45, and tea and refreshments were enjoyed. After the break Al ZS2U gave us a very informative and interesting presentation on HF antennas and transmatters. ☺

# Pearstalk



(Some of these items are from SARL bulletins, ZS4BS Dennis Green's HF Newsletter, etc.)

## EXPERIMENTAL AND EDUCATIONAL REPEATER

Neil Thomas ZR2NT plans to erect a repeater, initially at his address, but later moving it as may be deemed necessary.

The idea behind the repeater is that it will initially be installed at my QTH and will serve mainly as an experimentation and education unit. The frequency will need to be decided upon. The one which suggests itself is 145,775.

The long range plan is to develop switching and interface techniques to enable us to mount all sorts of devices, e.g. video camera, weather station, satellite tracking antenna, telescope etc. and then allow users to dial in using DTMF to connect to the relevant device.

When any of these devices are proven and functions well, it may be transferred to the linked system if so desired. It is pointless to do experimentation and development work using a remote repeater especially if it is coupled to the existing network.

## HOW OLD ARE WE?

*From Richard Seddon, ZS2CLI:* I was prompted to think about this when PARK made a claim late last year of being the oldest Amateur Radio Club in SA, PARK being founded in 1930. I have photo evidence of the East London District Wireless Society's first AGM in 1923. <http://www.sa-eastcape.co.za/brc/HistoryGallery.htm>. I was wondering when PEARS or its forerunner came into existence? Any ideas?

*Rory says:* Perhaps the Wrinklies can shed some light on the club/branch history.

It certainly would be a great project to document it. I think that the likes of Al, who has been in PE all his life, could give some history from when he got involved in ham radio, and that may set a course for working backwards from that point. I've copied Ewalt in so that he can make mention of this on this coming Sunday bulletin.

To all the older members, we would like to suggest that they put down their thoughts, with approximate dates, to be included in a history of Amateur Radio in the Eastern Cape, especially Port Elizabeth and environs. Perhaps you have photographs that could be used. But do it NOW! *Later* may be TOO LATE!

I wonder if we shouldn't have this as a project for a meeting – everyone to give his or her thoughts on their early days in the hobby.

## SOUTH AFRICAN RAE MANUAL AVAILABLE

A very easy to use and well written Radio Amateurs' Exam manual has been created by Andrew Roos, ZS1AN. This 220 plus page manual covers everything you will need to know to get started in Amateur Radio and to study and pass the Radio Amateurs' Exam. The manual, which is 952 kb in size, can be downloaded from the SARL website at [www.sarl.org.za/public/licences/rae.asp#Tutorial](http://www.sarl.org.za/public/licences/rae.asp#Tutorial). It is in PDF format. Printed

copies will soon be available from the SARL bookshop.

### **SUMMITS ON THE AIR (SOTA)**

SOTA is an international programme that encourages amateur radio operation from the summits of hills and mountains. Activators are people who transmit from the summits. Chasers are the people who contact the activators. SWLs can also participate by logging the QSOs between activators and chasers. For each of the three groups there are guidelines and awards. This information can be found at [www.sota.org.uk](http://www.sota.org.uk) and the South African specific information at [www.gsl.net/sotasa](http://www.gsl.net/sotasa). There are more than 300 qualifying summits in the RSA.

The role of the activator, the person who takes the station to the summit, is summed up in this week's bulletin. Choose a qualifying summit, obtain the landowner's permission and use legitimate access routes.

Operation from vehicles is not permitted and the method of final access must be "person powered", e.g. hiking, mountain biking.

The station must be set up within 25 m vertical distance from the summit. You must carry all equipment to the summit. You must operate from a portable power source like batteries, solar cells. Fossil fuel based generators are not allowed, you share the summit with other hikers.

At least four QSOs must be made for you to claim your activator points. You should exchange call signs, reports and the SOTA reference number. QSOs through repeaters do not count. QSOs with others on the same summit do not count.

Activator points can only be claimed by the holder of the call sign used on the summit. You need to send in your log to [www.sota.org.uk](http://www.sota.org.uk) to claim your points. You can only claim each summit once in each calendar year.

You can also contact ZS1AN,

ZS1KG, ZS1PT, ZS4BS, ZS5IAN, ZS6ACT or ZS6DX for more information.

### **ECHOLINK**

Download Echolink software for FREE from [www.echolink.org](http://www.echolink.org) and connect to +/- 2 700 Ham VHF and HF repeaters worldwide. Use a computer microphone or headset into the computer's sound card to contact Hams all over the world when the HF bands are down. If you can Email from your computer, you can use Echolink as well.

Alternatively, find an Echolink node (repeater or link) in your area and connect to the Echolink system via your VHF radio, type in the node number of the distant DX node on the DTMF keys and talk to Hams, VHF to VHF on the other side of the world, using the internet.

South Africa needs more very inexpensive Echolink nodes set up, just a sound card interface between a computer and a VHF set.

### **LONG DISTANCE VHF ATTEMPT**

*Rolf - PY1RO writes:* Well, I just finished the last of my transmissions towards ZS in JT6M mode. No luck this year, yet I, and others still think there is a distinct possibility of occurrences of Multi-hop Sporadic E permitting contacts between our two geographies.

Lets not forget, THERE WERE reports of Es between VK6 and ZL around the projected peak dates, and now get ready for this: On January 7th, at about 02:30Z, OM Caiper, PY3KN in GF49MW heard FK8SIX/B during about 10 minutes at 339 with his beam towards 220°, which is the short path bearing. This is a distance of more than 14.000 Km !

Caiper told me about this in a totally unrelated matter and I "grilled" him extensively to make sure he wasn't hearing a ghost and I can only conclude that it was REALLY the FK8 beacon he

heard. He mentioned the long trace in the message and that he positively copied the call at least three times.

Also that it was on a night with no TEP, hence it could not have been TI2NAV/B who is on about the same frequency, but which he of course recognizes easily, apart from the fact that TI2 comes in from totally different direction.

So, all we need now is to make it click between PY and ZS. If any of you has suggestions of how to improve this experiment for next Summer, please let me know. I would certainly like to try it again. Maybe we should use JT65 instead of JT6M to allow us to dig deeper into the noise?

Thanks to all who participated, and have a great year! vy 73.

### **PETER 1 DXPEDITION RESCHEDULED**

*[From the CQ newsroom]*

Peter I DXpedition team co-leaders Ralph, K0IR and Bob, K4UEE report that they are now hoping to reach the island and begin operating by mid-February. The planned January dates were postponed due to problems with the ship on which the crew was supposed to sail.

"If all things go well, we will arrive at the island about 6 – 7 days after departure, depending on the route, weather, and ice conditions," report W4UEE and K0IR.

"If we sail as planned on 10 February, we will return to Punta Arenas on 10 March. Check our web site, [www.peterone.com](http://www.peterone.com), regularly for updates."

### **KERGUELEN ISLAND DXPEDITION**

The island, part of an archipelago, is situated some 49 degrees south, and 70 degrees east, which puts it midway between Australia, Antarctica and Africa.

The group expects some two weeks

on the island, with sea travel consuming the other two weeks. Vessel Braveheart should carry the expedition team from Durban, South Africa.

The NCDXF-sponsored operation is scheduled to take place between March 10 and April 10 this year, and is being organised by another well-known DXer, James 9V1YC.

If you would like to be in contact with Mirek, VK6DXI, get him at [mirelec@singnet.com.sg](mailto:mirelec@singnet.com.sg)

### **HOW ABOUT SOME IDEAS?**

*Rory Norton ZS2BL writes:* As per the discussion at our last meeting, please let me have your suggestions regarding suitable material for consideration. I have briefly hunted around the ARRL site, but did not find an abundance of material. I'm sure it's there, but will require deeper digging.

My first thought was to download "Ham Radio for Dummies" in pdf format – about \$13. I have downloaded the new SARL RAE manual.

Suggestions please?

### **2005 VHF CHALLENGE**

The *2005 VHF Challenge* is a VHF operating activity developed to promote VHF, UHF and Microwave activity on all authorized amateur bands above 50 MHz during the year with EME and satellite activity also enthusiastically welcomed.

The objective of the activity is to work grid squares on as many bands as possible with one point for each grid worked per band. Satellite contacts will be given credit for both uplink and downlink bands used for the contact so grids worked by satellite will earn two points per grid. Obviously it will be a distinct advantage to be equipped to operate as many VHF/UHF bands as possible.

Only contacts with African countries containing some land mass at least

partly south of the equator may be used for credit. Contacts with wet squares and nearby islands in Africa (5R8, ZS2MI etc) are also acceptable. Only contacts made after 0001 utc on 1 January 2005 may be counted and QSLs must be produced for all contacts. Any operating and propagation mode may be used and each grid can be credited only once per band regardless of mode.

The task is not an easy one and it will take a considerable amount of time, good operating skills and a reasonably well-equipped VHF station to come out on top. A handsome trophy donated in celebration of the 75<sup>th</sup> anniversary of the Pretoria Amateur Radio Club will be awarded to the first operator to reach 100 squares but if no one reaches the target in the allotted time the trophy will go to the highest scorer at the closing date. Certificates will also be awarded to the three highest scorers in each ZS division and each African country from which entries are received. The end date will be 2400 utc on 31 December 2005 and all entries must be submitted to the SARL VHF Manager by 15 January 2006.

During the year several VHF operating activities are planned in addition to the VHF contests that normally provide activity from a number of rare squares. Satellite operators are also encouraged to schedule and advertise operating activities when suitable passes of the low earth-orbiting satellites are available. Remember that all contacts must be confirmed, so start collecting cards for those rare squares you have worked already this year.

#### **ON THE LIGHTER SIDE (taken from HF Happenings)**

Today a lesson in Electricity thanks to Westlakes Life Member Greg Smith VK2CW.

Most electricity is manufactured in power stations, where it is fed into wires, which are then wound around large drums and stored until required. Some electricity however, does not need to go into wires. This kind is used in lightning, or in portable radios, for example. Electricity of this sort is not generated, but is lying around in the air loose.


Electricity makes a low humming noise. This noise can be pitched at different levels for use in doorbells, telephones and electric organs.

Electricity has to be earthed. That is to say, connected to the ground before it can function (except in the case of aeroplanes, which have separate arrangements).

Electricity is made up of two ingredients, negative and positive. With DC, one ingredient travels along a wire covered in red plastic, and the other ingredient along a wire covered in black plastic. When these wires meet at a plug, the ingredients are mixed and form electricity.

With AC, the ingredients are pre-mixed at the power station and come out of the plug ready for use.

A light switch is only a small clamp, which grips the wires hard so the electricity cannot get through. When the switch is on, the clamp is relaxed and the electricity travels to the light bulb. It is here that we first see electricity in the form of a glow. Bulbs have curved glass, which magnify the glow into a bright light.

Fuse wire is very thin and frail and often breaks. The fuse box is where the wires from the power station are joined (fused) to the house wires. It is clear that these wires have to be connected somehow. But what's wrong with a simple knot? 

**Condolences:** We were sorry to learn from Arthur Baynes ZR2ARB that Dave Grunewald ZS2DCG of Boknesstrand passed away during the weekend 15/16th January 2005. Our sympathy goes to his family and friends.

We have also learned of the murder a few weeks ago of John Stiles of Gauteng, previously ZS2BC of Port Elizabeth. To his family and friends our condolences.

**To those celebrating special days (20.1 to 19.3) we say**

**Have a Happy Day...** 

**... on your birthdays**

**February**

- 20 Vic Batt ZR2BBH
- 26 Henry Danielson ZR2HPD
- 26 Charmaine van Rooyen, XYL of Otto ZR2VAN
- 26 Yvonne Rhodes, XYL of Chum ZS2VU
- 28 Basie du Plessis
- 28 Karel Stone ZR2KKK
- 29 Wolf Gerstle ZS2WG

**March**

- 3 Nita Davis, XYL of Roger ZS1J
- 3 Daphne Galpin, XYL of Paul ZR6ACV
- 5 Grant MacGeoghegan
- 10 Neil Bousfield ZR2DR
- 11 André Kruger
- 13 Magret Ras, XYL of Martin ZR2MR
- 14 Ali Mathieson, XYL of Ewan ZS1EM
- 15 Susanna Bosch, XYL of Mike ZS2FM
- 16 Anne Butcher, XYL of ZR2GIB

**... on your anniversaries**

**February**

- 24 Barbara and Bill Hickson ZR2WJA
- 27 Nina and Serge Smetryns ZR2SJE
- 28 Wanda and Jan van Ree ZS2JW

**March**

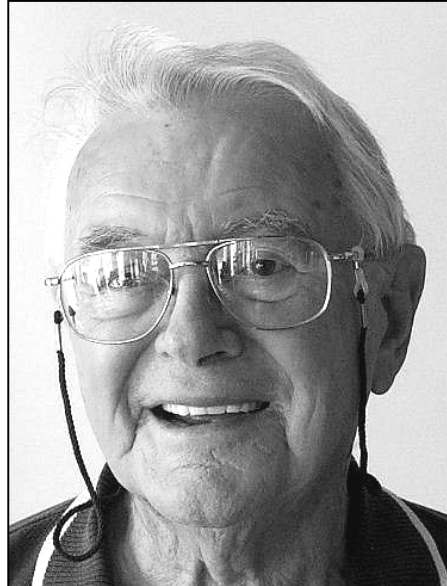
- 3 Anne and Graham Butcher ZR2GIB
- 3 Teresa and Tim Joubert ZR2TW

- 4 Pamela and Jack Koen ZR1JAC
- 15 Cheryl and Arno du Preez ZS2ABT



**Leaving Us** – We are really sorry that Bill Browne, ZS2BY, one of our first Honorary Life Members, will be leaving PE for Pinetown by the end of February.

Bill, we will miss you. We trust that your stay in KZN will be most pleasant, and we will listen out for you on HF. We thank you for all that you have done for Amateur Radio nationwide over the years.





## Your Society's Committee

Chairman, Awards.....	Rory Norton ZS2BL	585-9330	rory@commco.co.za
Vice Chair, .....	Chris Scarr ZS2AAW	368-1344	cvscarr@intekom.co.za
Secretary, Internet Website .....	Barry Murrell ZR2DX	083 717 9210	zr2dx@mnet.co.za
Treasurer; Assets Control.....	Clive Fife ZS2RT	367-3203	cfife@absamail.co.za
Repeaters, packet.....	Chris Scarr ZS2AAW	368-1344	cvscarr@intekom.co.za
Social, Refreshments, .....	Bill Hodges ZS2ABZ	581-2580	whodges@absamail.co.za
Special Events .....	Ewalt Bouwer ZS2EHB	933-3482	ewalt.b@freemail.absa.co.za
QSX printing and info.....	Ashley Goosen ZR2AG	372-2052	ashleygoosen@xsinet.co.za
QSX Editor (ex com).....	Garth Laaks ZS2HB	368-1101	glaaks@iafrica.com
QSX distribution (ex com)....	Trevor Scarr ZS2AE	367-1746	t&j.scarr@intekom.co.za
Technical Classes (ex com)...	Al Akers ZS2U	360-2983	makers@firestone.co.za

## PEARS' VHF/UHF & Other Services

### REPEATERS

Town VHF .....	# 145,050/650	
Town UHF .....	# 431,050/438,650	Knysna .....
Cockscomb .....	145,000/600	Lady's Slipper.....
Colesberg .....	* 431,075/438,675	Noupoort.....
Cradock .....	* 145,050/650	Uitenhage.....
Grahamstown .....	* 145,150/750	

\* These form the PEARS long-range 2-metre repeater system, also linked to which are East London 145,775 MHz, George 145,700, Danabaai 145,600, Stilbaai 145,750, Butterworth 145,725, King Williams Town 145,625 and Umtata (438,725 duplex). It is further extendable to Cape Town via the WCRWG system. # These can also be linked as required.

### OTHER SERVICES

Packet Bulletin Board (ZSØNTP) .....	144,625
Packet Rose Switch ZSØGHT-3,046101 (144,675 in/out) or 046102 (UHF out to BBS).....	144,675
2m Beacon (ZS2VHF CW ID, FSK) (horizontally polarized, 160W ERP,) .....	144,415
6m Beacon (ZS2SIX CW ID) (horizontally polarized, 25W ERP).....	50,005
6m Simplex Link with Lady's Slipper 2m Repeater (vertically polarized) .....	51,400

## Sunday Bulletins

PEARS bulletins are transmitted on Sundays immediately after the SARL English transmission, i.e. at about 08:45, on 7098 kHz as well as the 2 metre linked network that provides coverage from Butterworth to George and up to the Free State and their environs. PEARS' 7098 or 3640 kHz transceive facilities are also remotely linked as needed. In addition, the SARL's 40m operations on 7082 or 7066 kHz or Hamnet's 7070 kHz can be remotely patched to the 2m network, in receive-only mode or with full transceive capability for interactive events.

Date	Prepare and Read on 2m Repeater Link
13 Feb	ZS2BL
20	ZS2EHB
27	ZS2AAW
6 Mar	ZS2RT
13	ZS2ABZ
20	ZR2DX

<u>DIARY DATES</u>
<u>FEBRUARY</u>
12-13 SARL HF Field Day
17 PEARS MONTHLY MEETING
19-20 Welcome to HF QSO Party.
19 Outing to Ashley and Janet
<u>MARCH</u>
3 Wrinkly Rave

\* We like being *your* Society \*