

QSL PE



**Merry
Christmas
everyone!**

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

WEBSITE - www.qsl.net/zs2pe

**PO BOX 10402
LINTON GRANGE
6015**

DECEMBER 2003



This is the time of year when everyone is arranging some or other annual function, to which you may or may not have been invited.

Just in case, we will **NOT** be holding a **GENERAL MEETING** this month, so feel free to do your thing.

Our next monthly meeting will be on **Thursday, 15 JANUARY 2004**



The WRINKLY Rave goes on as usual!!

The Wrinkly Ones will hold their first monthly get-together for the new year, but on **8 January 2004**. See elsewhere in this issue.



PEARS wishes you all, your family and friends, a



**Merry
Christmas
and a
Happy 2004**



from *The* *Chairman*

WOW, *DECEMBER ALREADY* – and so much has happened this past year.

Our year-end social, which took place a few weeks back, was a resounding success. Many thanks must go to our very hospitable hosts Janet and Ashley Goosen (ZR2AG) for making their lovely QTH available once again. Also, special thanks to all of you for participating – it goes to prove that there is “more fun to be had in numbers”.

A hot topic of conversation once again is the matter of “do I, or don’t I” join the SARL. While there are many compelling reasons for us to keep our hard-earned cash in our pockets, there are just as many good reasons for us to “bury the hatchet” one last time and cough up.

During the month-of-plenty, please apply your brain-matter to this subject. The current SARL president, Graham Hartlett, took over the helm of the League after a number of very contentious decisions had already been taken – decisions that have alienated many members.

Graham and his team have promised to get the SARL back on to a financially healthy footing, and then to revisit the matter of subscriptions in the forth-coming year. By my judgment, he is delivering on his promise, and deserves the support of all of us. Remember, you have no influence over League matters if you are not a paid-up member. Buy your ticket, if only in faith, and let’s give them one last opportunity to deliver.

With the vast improvement in the exchange rate, let’s hope that those Christmas stockings will now be filled to the brim with amateur radio related goodies.

Please remember that being December, there is no formal meeting this month – but with so many of us taking vacation, the opportunity exists for many impromptu get-togethers over the air. Tweak up your 2m horizontal antenna and give a listen for the “long-distancers” on 144,400 MHz FM.

To those of you going away on vacation over the Christmas period, take it easy on the road (being an endangered species, we can ill-afford to lose any hams – just think of the consequences!).

To those of you sensible enough to be remaining at home, please keep an ear open for visitors calling on the repeater network – let’s remind them about just why we prefer to be known as the Friendly City and not the Windy City.

Happy Hamming

73,

Rory, ZS2BL

It's Christmas!

Another Christmas and New Year is upon us and I take this opportunity to wish all ECARES members and their families a very merry Christmas and a happy and fruitful new year.

I am pleased with the growth of ECARES membership over the past year. There has been no major disasters where we would have been involved with, but we are nonetheless doing our bit to prepare for such eventuality.

I would like to thank all the ECARES members who have assisted me over the past year in one way or another. Thanks in particular go to Ken ZS2OC, my right-hand man, who has helped in more ways than I can mention here; Garth ZS2HB for printing ECARES News in QSX each month, as also all the other guff I feed him; Des ZS2ABU who so regularly comes up on the 6M net on Wednesdays

and for all the information he passes on to me.

Also to Stoffel ZS2C for the work he does on the 6M sets and regular appearance on the 6M net, as also Graham ZR2GIB.

Thanks to Chris ZS2AAW, Trevor ZS2AE and others who maintain our fine repeater network and Glen ZR2GV for his efforts with the 6M-cum-4M repeater.

Last, but *not* least, thanks to the Assistant Directors, Matt ZS2MW in particular, and to all the members who operate the NEARNET sets.

I am looking forward to another good year for ECARES.

73

**Al, ZS2U,
Director,
ECARES**

Wrinkly Ravers

Well, I guess that's it for 2003! We have danced around a bit, trying this place and that, and around the middle of the year decided Saddles was the best.

But, after a while, we realized that one can not always hear what everyone is saying in spite of the music being turned down reasonably low. The area set aside is enclosed mainly in glass, with no curtains or other material to absorb the noise.

So, we tried Barney's Steak Bar again, which was now running under new management, and everyone seemed happy with their orders as well as the prices.



There was no music whatsoever – apparently Management do not provide it at lunch time – so all was well, and around the large square table we could all hear one another pretty well.

Seventeen members were at the December Rave and we believe, too, that Allan and Vicky Ansell will be back at the next rave after their move.

So remember, it's Barney's Steak Bar, Circular Drive, Lorraine, for our first get-together in 2004! Because the first Thursday is on New Year's Day, it has been decided to **delay** our function **for a week**. See you on **Thursday, 8 January.** 📍

REWARD OFFERED

A reward of 500 microfarads is offered for 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 a 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 ohm via a short circuit

He was last seen riding a kilocycle with his friend Eddy Current, who was playing a harmonic.

[A bit of humour written by Mark Bushnell, director of engineering at CCA Electronics, the transmitter people. Seems a long time back, because I saw it many years ago but remembered only a few passages!]

Remember the **PEARS VHF/UHF/DIGITAL** contest which runs from Friday 18h00 to Sunday 18h00 over the weekend 23 to 25 January 2004. Any amendments to the rules will be published next month.



FOR \$ALE ★ WANTED ★ SWOP

FOR SALE

- * Daiwa model 304; Cobra CA72 amplified desk mic; 20 Amp PSU; 30 Amp PSU. All items brand new. Price negotiable — Johan ZS2Z, tel. 084 500 9051
- * Ranger VHF transceiver with all repeater and commonly used frequencies – R500 — Beavan ZS2RL, tel. 041 360 6968 / 083 445 7647
- * Heathkit SB200 linear amplifier, brand new tubes, completely rebuilt bottom end, input circuits realigned etc, brand new power supply — Barry Jackson, tel. 041 360 3052
- * Hallicrafter HT37 all mode HF transmitter, 100W – R175; Uniden-Bearcat 16 channel VHF receiver model 145XL, covers 10, 6, 2 and 430 programmable – R195; Eddystone RX888 Ham band vintage 1950, working but needs a facelift – R75 — Dudley Forsyth, ZS2AW, tel. 046 622 3985

WANTED

- * Military medals and badges, all types — André Botes ZS2ACP, tel. 041 379 2058
- * Handbook to copy for Heathkit SG8 Signal Generator — Barry Jackson, tel. 041 360 3052

SARL MATTERS

FROM THE PRESIDENT

The current Council, in the first year of its three-year term, has had a strenuous but very productive year to date. Many of the goals as initially set out have been achieved, or are in the process of being achieved: Membership is almost the same as last year's at this time, at just over 75% (for details see document on the SARL web site); Our relationship with ICASA has been developed; Club communication has been improved; Costs have been reduced, and the League's financial situation has been stabilized, to name but a few.

If we are able to continue to manage costs as we are, the League will end this year in the black thanks to the ongoing efforts and determination of the council, who have stood by their beliefs in the reform process in the face of much criticism from members and non-members alike.

It is true that we will never be able to satisfy everyone, and I don't believe that that should be the intent; Our mission was and is to get the League back on its feet financially and build a platform for growth going forward. This has been achieved.

There are unfortunately still a number of issues carried over from the past that continue to cause problems; Things like: the alleged irregularities with proxies at the SGM; discontent with the fees and the fee structure; the unsuccessful motion for councillors to resign as tabled at the SGM; are all examples of where we are still experiencing a huge amount of push back from members. These issues have also led to a few clubs

recommending that their members should not rejoin the league.

We need to put an end to these issues ASAP, and it is for this reason that at the recent Council meeting I put the following rather extreme suggestion to the council:-

"In the interest of free and fair elections, the involvement of all divisions and in the best interests of our hobby it is my recommendation that we, the current council, should STAND DOWN, effective immediately after the next AGM.

"I do not believe that we should continue to run the League for another two years simply because we are there. It must be up to the members to decide on this issue. This course of action, while extreme, will ensure that control of the league is in the hands of its members.

"Those councillors who wish to make themselves available for re-election need to indicate their intent and will need to be nominated and seconded, as would any other candidate."

This action was accepted unanimously. All current councillors will therefore immediately tender their resignations effective the 3rd April 2004, the day of the AGM, and those available for re-election will indicate their intent in this regard.

This means that the entire council will be up for election at the 2003 / 2004 AGM - no carry over baggage, and all 15 positions are open for nominations.

In order to ensure that members have sufficient time to nominate their representatives we are going to move

the closing date for nominations out to the 5th January 2004.

The Constitution states that all nominations must be submitted to the League Secretary not later than 30th November of each year. It is the view of Council that members will agree to this extension, bearing in mind the special circumstances, and the fact that we are publicizing this action as widely as possible at this time.

It is now the time for all those members shouting from the sidelines out there to step up and be counted and get involved in the League's future.

If there are insufficient nominations, then all those councillors who have made themselves available for re-election will be automatically re-elected. If more than 15 nominations are received then the selection of councillors will be done by a vote. Let's hope this will be the case.

The League is stable; membership continues to grow; we are well on the way to correcting the financial situation, and in the interests of our hobby we are prepared to stand aside and put the future Council and direction of the League in the hands of its members.

It is up to the members to identify those people whom they want to run the league going forward. I sincerely hope that members and divisions take this opportunity to ensure that they are suitably represented, and that the members take this opportunity to do the right thing for their hobby.

Upon starting with a clean slate, I trust the continuous raising of past issues will cease. Many lessons have been learned; Let's move forward with a new, motivated team, with the best interests of the hobby at heart.

Thank you for your continued support.

Graham Hartlett, ZS6GJH,
SARL President]

AUDITOR'S REPORT

Council decided at its meeting on 9 July 2003 to instruct the League's auditor to conduct a detailed analysis of the Council Business Travel and Council Meeting Travel expenditure for the 2002/03 financial year. This was done because the over-expenditure on these items by the previous Council had led to speculation amongst some members of the League that Councillors might have abused their travel expenses.

Although Council did not have any prima facie evidence of this it was considered necessary to commission an independent investigation to establish whether any abuse had in fact occurred.

Council is satisfied that the report received from the auditor shows that no Councillor abused either of the Council travel expense allocations or benefited financially or otherwise at the expense of the League.

This does not excuse Council for having overspent its budget without first obtaining authorization from members. However it should allay any concerns that this may have resulted from illegal or dishonest actions by Councillors.

While there may have been legitimate reasons for certain line item over-expenditure at the time, and a genuine efforts on the part of the previous Council, it still remains a very serious breach of the constitution and rules that over expenditure had occurred and for that reason Council was collectively censured by resolution

passed at the Special General Meeting held on the 21st June 2003.

Council trusts that the matter can now be put to rest and that Radio Amateurs can look to the future in a positive light and build the South African Radio League into a strong and representative membership organisation.

PROPOSED CHANGES TO LICENCE REQUIREMENTS AND PRIVILEGES

At the Council meeting on 5 November 2003 it was agreed to recommend the following changes to the requirements for and privileges of amateur radio licences in South Africa.

1. The Morse code requirement for the ZS licence will be reduced from 12 w.p.m. to 5 w.p.m.

2. Applicants for the ZU licence will no longer be tested for proficiency in Morse code.

3. A new licence class will be introduced with the callsign prefix ZT. This licence will not have any Morse code requirement. The holders of ZT licences will have full VHF privileges and will be permitted to transmit with a maximum power output of 100 W on the following HF band segments: 1838-1850 kHz; 3580-3800 kHz; 7035-7100 kHz; 21300-21450 kHz.

Note that the reason for introducing a new licence class, rather than simply extending the privileges of the existing ZR licence, is that we do not want to make any changes to the ZR and ZS licences which are subject to the requirements of the international CEPT and HAREC agreements.

4. Applicants for ZU and ZT licences will be required to pass a practical test of their ability to correctly set up, adjust and operate an HF transceiver.

5. The operating privileges of the ZR, ZS and ZU licences will remain unchanged. However holders of

existing ZR licences will be able to upgrade to a ZT licence on successful completion of the practical operating test.

6. Details of the Practical operating test are still to be finalized.

The Council asked members to submit comments on these proposed changes to Council by 24 November 2003.

Once members comments were considered, the recommendations will be submitted to ICASA who have indicated that they will be subject to a public comment period before they can be submitted for approval and incorporated into the Radio Regulations.

[Barry ZR2DX, after discussing the idea with Al ZS2U, sent in his comments. Al himself will submit his ideas when the matter appears in the Government Gazette.]

RADIO ZS

After the last AGM the Council decided that Radio ZS should be published on-line instead of being printed. This was one of several cost-cutting measures introduced to return the League to a sound financial position.

Council is pleased to announce that these measures are succeeding and it is anticipated that the whole of the deficit from last year will be recovered by the end of the current financial year.

“We will resume the distribution of printed copies of Radio ZS as soon as we have sufficient additional funds to cover the printing and mailing costs while ensuring that we will end the year without a deficit.

“We hope that with additional members joining and renewing every day this will be possible soon. In the meantime we thank members for their understanding and cooperation.”

KNOW YOUR LEAD-ACID BATTERY

by Ron Clayton, First National Batteries, EL

The Lead-acid battery is a device for storing electrical energy in the form of chemical energy.

Before talking about the use and care of the battery, which are probably the aspects of battery technology of greatest interest to you, let's look at the design and construction in a very simple way.

The basic building block of the inner battery is the lead-alloy grid, and it is the development of this alloy which has had the most profound effect on the operation of the battery.

For almost a century, antimony metal was added to the lead to impart properties such as strength and cycling ability. However, antimony also encouraged gassing, which resulted in water loss, so an alternative was sought.

Modern batteries therefore use negative grids in which the antimony has been entirely replaced by calcium, and positive grids in which the antimony has been reduced or replaced by calcium.

Where only the negative grid contains calcium, the battery is referred to as a hybrid battery; where both positive and negative grids utilise calcium-lead alloy, it will be called a calcium battery. The noteworthy properties of these two

batteries are their high gassing voltages, low water loss and long shelf life.

The function of the grid is to conduct electric current and to act as a support for the active material, which is a mixture of lead oxide and sulphuric acid. It is this mixture which stores electrical energy from a charger and delivers it on demand to an external load. The amount of active material in a battery dictates how much energy the battery can deliver.

Once active material has been applied to a grid, the grid is called a plate. A single cell will contain a group of positive plates and an opposing group of negative plates which are prevented from making physical and electrical contact by polyethylene separators which envelope the positive plates.

This so-called element, once it has been electroformed in sulphuric acid, will have a nominal voltage of 2V, irrespective of the number of plates in the element. The battery as you know it will consist of six cells connected in series to provide energy/power at 12V. The actual capacity of the battery will be displayed on the label.

In a later issue we can talk about gassing and charging. 🗨️

Fun with Callsigns,

by Al Akers, ZS2U

No doubt we have all heard and had a laugh at various phonetic versions of callsigns such as ZS2 Heavenly Body. Perhaps not so well known are humorous variations other than phonetics.

Some years ago a non-ham friend of mine asked me what my callsign was and I told him ZS2U. His reply was: "and ZS2U to you too."

Our friend Ken, about the time he settled here in PE, may well have said: "To be 2BWB or not to be 2BWB, *that* is the

question." Bit of a tongue twister that one.

We have our Cyclops friend in Mossel Bay, ZS1I, and then there is Stoffel ZS2C for yourself.

What about the only ham in PE with a four-letter suffix: ZS2AAUU?

Also a shared callsign: according to the callbook, Andries and Petrus from Uitenhage share the callsign of ZS2P.

Up in Gauteng we have Kobus ZS6PAK.

Can you think of any others? 🗨️

AN OSCILLATOR TO CHECK CRYSTALS

From Johan Terblanche, ZS1I

QSX has featured a number of oscillators in past issues. I know you won't really be surprised that we are going to build another form of oscillator this month!

There are many types of oscillators used in radio construction. This time we are to meet the Colpitts Oscillator.

The circuit in Fig. 1 shows a simple but very useful piece of test equipment, the 'Crystal-Checker' – a unit for checking quartz crystals of the type used in radio circuits. These crystals are often used in a variety of radio projects and are to be found very cheaply on flea markets. Our simple checker will show if they are fit for use.

The 'Crystal-Checker' is also provided with an output so that the frequency at which the crystal will oscillate can be checked on a digital frequency meter. It could also be checked by listening for it on a suitable receiver.

BUILDING THE CHECKER

The values of C1 and C2 have been

selected to cover a wide range of frequencies (1 MHz to 21MHz). The output from the oscillator is coupled via C3 into a pair of diodes, D1 and D2.

The diodes, D1 and D2, convert the oscillator signal into a d.c. signal. The d.c. voltage is amplified by Tr2 to a level that can drive an LED.

The power supply, a PP3 battery, is switched on and off by a push button.

The test operation is simplicity itself. A crystal is clipped into the circuit and the button is pressed. If the crystal oscillates, the LED will glow.

A small value capacitor enables some of the signal to be used to drive a frequency counter. The value of Cx will depend upon the counter in use. When choosing a value for Cx, select one which just allows the counter to give a reliable reading. I found that a value of 47pF, seems to do the job with my frequency counter.

The prototype was built on a small p.c.b. as shown in Fig 2 while the layout is illustrated in Fig. 3. It contains all the components except the switch, battery

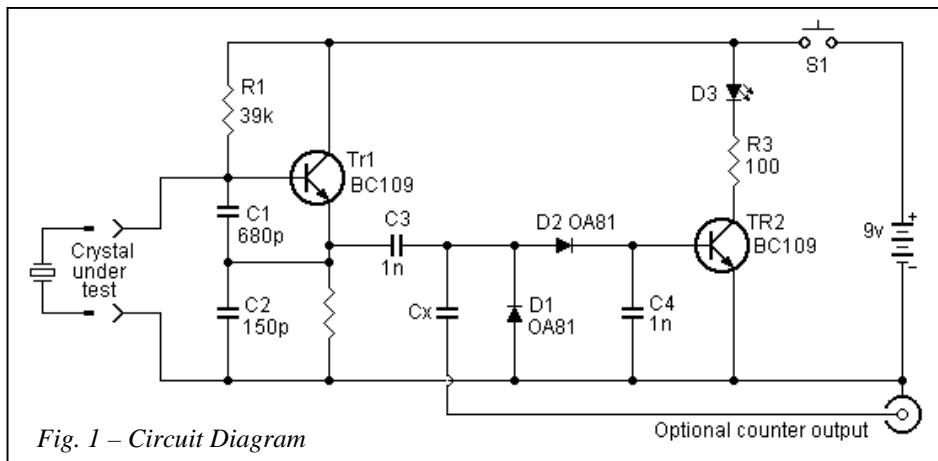


Fig. 1 – Circuit Diagram

and clips.

The 'Crystal-Checker' is easy to build, and cheap. The project makes an ideal companion to test surplus quartz crystals.

REFERENCES:

Practical Wireless June 1992

Rev. George Dobbs G3RJV

Figure 2 (right) – The PC board and overlay

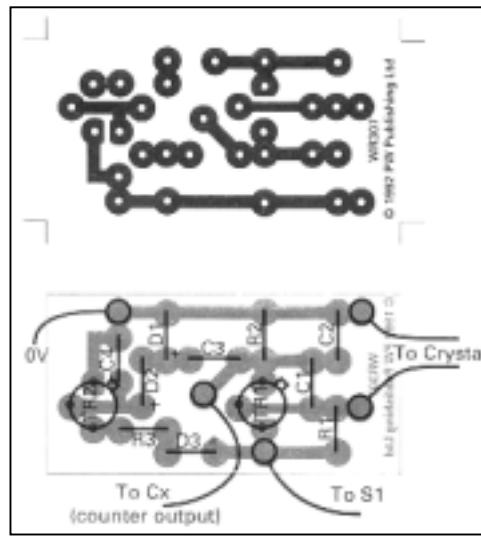
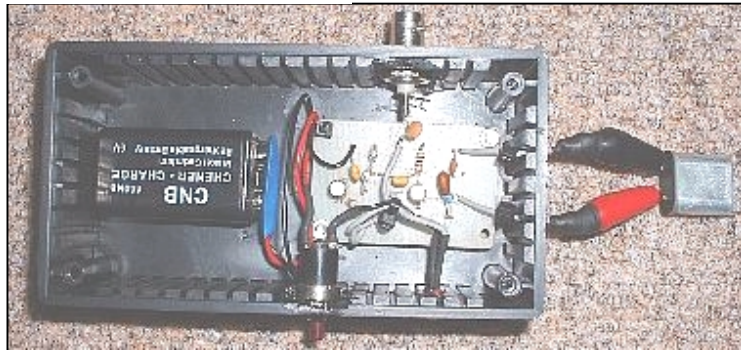



Figure 3 (below) – The finished product



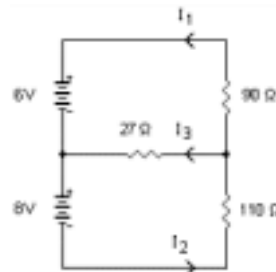
Currents in Last Month's Ammeter Problem

You were asked last month what the current values would be in I1, I2 and I3 in the drawing below. We're not going to tell you now, but simply give the formula for calculating them. Next month we'll give the answer as well as formulae for the previous problems. 

$$I_3 = \frac{V_2 R_1 - V_1 R_2}{R_1 R_2 + R_1 R_3 + R_2 R_3}$$

$$I_1 = \frac{V_1 + I_3 R_3}{R_1}$$

$$I_2 = \frac{V_2 - I_3 R_3}{R_2}$$



HINTS for RADIO AMATEURS

from JOHAN TERBLANCHE, ZS11

EQUALIZE YOUR INCOMING SIGNAL

If you find an inexpensive audio equalizer at a flea market or sale, latch onto it and try inserting it between your transceiver's audio jack and an external speaker. It can make a world of difference in improving the intelligibility of many signals you'll run across on the ham and short-wave bands.

Since the human voice centers around the 1.000 Hz mark, bring the control up first, then adjust the other equalizing bands for the best clarity of overall sound. You can often eliminate much of the noise or other disturbing background, while accentuating the intelligibility of the speech range.

The more bands the unit has, the better. It won't replace a good DSP for noise and heterodyne reduction, but it can make a very worthwhile difference on a minimum budget.

If you do have a DSP, try an audio equalizer after it and you'll probably find that it enhances the DSP's audio as well.

Often too, a second speaker located in another part of the room, will make some signals "pop out of the mud" better than a single speaker alone.


Varying room acoustics, and your own hearing "curve", makes experimenting with

various speakers and equalizer settings an inexpensive and intriguing continuing project.

ANALYZING ... THE PROBLEM!

Using the new MFJ -259B Antenna Analyzer to determine the accuracy of the match for an HF or VHF antenna can sometimes be misleading ... especially if a strong local broadcast station is on the air in the area. Strong RF fields can throw the analyzer off because it can't distinguish between locally strong out-of-band signals, and the signal that the Analyzer itself is developing.

One must also be very careful when connecting the coax connector onto the antenna input of the analyzer. Any twisting of the connector's center pin, during installation or removal, can break connections on the inside of the unit, necessitating time consuming (and perhaps costly) repairs.

Permanently install a UHF right-angle adapter onto the analyzer antenna input socket, and only install the coax cable connector to the right-angle adapter, thus absolutely avoiding any twisting of the instrument's built-in coax fitting during normal usage. 

AFTER EVERY FLIGHT, pilots fill out a form – a gripe sheet – conveying to mechanics the problems that need repair. Mechanics indicate thereon what they have done. Sometimes the answers are quaint:

- P:** Left inside main tyre almost needs replacement.
- M:** Almost replaced left inside main tyre.
- P:** Test flight OK, except auto-land very rough.
- M:** Auto-land not installed on this aircraft.
- P:** Dead bugs on windshield.
- M:** Live bugs on back-order.

- P:** DME volume unbelievably loud
- M:** DME volume set to more believable level.
- P:** Number 3 engine missing
- M:** Engine found on right wing after brief search.
- P:** Target radar hums.
- M:** Reprogrammed target radar with lyrics.

SUMMER TROPO SEASON

The Summer Tropo season is upon us once again, and PE VHF operators are asked to monitor the following frequencies:

144.200 USB, 144.400 FM, 50.200 USB, 50.400 FM

Up-country amateurs have been requested to listen for the 2m and 6m beacons in Port Elizabeth, and to call on these frequencies when the beacons are heard. Please advise either Mike ZS2FM, Al ZS2U or Barry ZR2DX of any long-distance contacts made over the holiday period!

Tropo Season Under Way

The number of VHF tropo openings has begun, and several contacts up the coast to East London have already been experienced. The best of these took place on Monday 17 November, when Richard ZS2CLI and Nick ZR2NB were both copied at S9+ signals in PE, on 144.400MHz FM.

The opening began around 21h00 SAST, and when the net closed down at 22h00 signals were still around S5-S7. VHF enthusiasts are encouraged to listen out on the 144.400MHz FM frequency, as well as on 144.200MHz USB. For those with 6 meter equipment, listen out on 50.200MHz USB and 50.400MHz FM.

Operators around the country have been asked to listen out for the Port Elizabeth beacons, and to call on these frequencies when anything is heard. The 6m frequency has been specifically selected as many of the beams used by the bigger 50Mhz operators up-country only have a bandwidth from 50-51MHz, and several are quite prepared to call on FM too!

144 MHz EME Attempt from Port Elizabeth

On Saturday 15 November, an attempt was made by the writer to contact Dave Blashke, W5UN, via 144MHz EME using the WSJT JT44 mode. Dave had an arranged sked with Hal ZS6WB during the International EME contest during the final 20 degrees before moonset.

Whilst in monitor mode, Dave's signals were copied calling CQ. I then began transmission, but could not establish contact. It transpired that Dave had copied my callsign, and a sked was set up for Sunday 16 November. I began calling Dave at 20 degrees before moonset, and copied traces of signal showing my call and OOO, but was battling a very high noise level. Dave later reported 100% copy on my signals, and feels sure that contact will be completed during the lunar peak in December.

Considering that my station consists of a single 10 element Cushcraft A148-10S yagi (which is optimised for vertical FM use) horizontally polarised at 8m off the ground (no elevation), and an Icom IC910H with an output of 100W fitted with an AG-25 masthead preamp, this proves that EME QSOs can be achieved with a moderate setup.

The secret lies with the station on the other side, and of course K1JT's wonderful software. W5UN runs 36 17 element M2 yagis, and in excess of 1.5kW of power.

NEW VERSION OF WSJT:

There is a new Beta version of K1JT's WSJT software available. WSJT 4.1.1 was released recently, and includes a new mode. JT44 has been replaced by JT65, which is intended primarily for EME operation. The

transmit cycle is now 60 seconds, with some 48 seconds of that being actual transmit. This is obviously quite a strain on the transceiver, and adequate cooling is essential.

This version is a beta, and any bug reports must be reported to the author. Dave W5UN has reported problems with frequency stability, so further updates can be expected soon. Version 3 is required for the installation of the Beta file, and the Version 3 application file is retained after the installation, allowing continued use of JT44.

The applicable Beta updater, as well as the full Version 3 install package and a number of other resources for WSJT (including soundcard interfacing) can be found on the VHF pages of the PEARS website (<http://www.qsl.net/zs2pe>).

WSJT ATTRACTS INTEREST IN EASTERN CAPE

Several Eastern Cape amateurs have begun to show an interest in the WSJT digital modes for VHF operation. For some time now ZS2BWB and ZR2DX have been the sole operators in Port Elizabeth, but at last look to be getting company. Linton ZR2LIN in Uitenhage has recently obtained a Yaesu 2m allmode radio, and is busy preparing an antenna and interface for digital operation.

Neels ZR2ABT has purchased an Icom IC551D 6m allmode radio from Division 6, and plans to get operational on both 6m and 2m in the very near future. Ashley ZR2AG is making plans to get antennas up, and (with help from ZR2DX) will be interfacing his 2m radio and computer shortly. Ashley is also looking for 6m SSB equipment.

Rory ZS2BL plans to get a 6m yagi up over the holidays, and will try a bit of WSJT too. Bill ZS2ABZ has recently acquired 2m allmode capabilities, and should be on the air in the near future.

All that it takes to get going on WSJT

is a computer with soundcard, a simple interface, an allmode VHF radio and a decent antenna. Around 50W and 7 elements should be enough to work Division 6 on 2m, and a 3 or 4 element yagi and 50W should suffice on 6m. Anyone interested in trying WSJT and requiring further information can contact Barry ZR2DX via email at zr2dx@mweb.co.za or on (041) 5813561.

SATELLITE NEWS

SA AMSAT Reconstituted

After several years of inactivity, South African AMSAT was reconstituted during 2003, and is slowly starting to find it's feet. A committee is in place comprising Hans van de Groenendaal ZS6AKV (Chairman), Gerald Klatzko ZS6BTD, Craig Gibson ZR6CG, Dave Long ZS5FR and Philip Van Tonder ZS6PVT.

A monthly e-zine edited by Craig ZR6CG is distributed to members, and a website is under development. Planning has begun for a 2004 Satellite Symposium, and regular countrywide nets using Echolink are also proposed.

SA AMSAT can be contacted by e-mail at saamsat@intekom.co.za or by surface mail at PO Box 90438, Garsfontein, 0042. Faxes can be sent to (012) 991 5651.

AO-40 LATEST

The following announcement was made by Stacey Mills W4SM of the AO-40 Command Team on 25 November 2003: "AO-40 is now at approximately ALON/ALAT = 45/24. As we have reached our desired ALON/ALAT and the sun is in prime position for the move, we have stopped magnetorquing and will begin drifting immediately.

The passbands have been turned off and will remain off for approximately 4 weeks. The middle beacon will remain

on. Drift rate is approximately 16 deg/week. We should be in a position to begin lowering ALAT and restarting the passbands during the 4th week in December.”

The final few weeks of AO-40 operation before the switch-off were very poor, with few stations making the effort to operate. The only highlight was the operation from Benin (TY) by Vladi LZ3XV. He was easily worked in Port Elizabeth.

LEO satellites can be worked very effectively using beam antennas, but due to their short passes (normally 8-12 minutes) and rapid movement automated tracking is virtually essential. Many operators have achieved excellent results using conventional omnidirectional antennas, with a simple quadrifilar helix antenna being very popular.

FORTHCOMING SATELLITES

The next few months should see a couple of new low-orbit satellites being launched: AMSAT India's keenly awaited VUSAT, which had its launch delayed due to a last-minute technical problem, should go up on the next available launch vehicle. A launch date is anticipated soon. VUSAT is an FM satellite, with uplink on 435.250MHz and downlink on 145.900MHz.

AMSAT NA's ECHO project is due to launch in March 2004. This will carry multiple transponders, including FM and Digital operations. Frequencies will be published in QSX as soon as they are available.

AMSAT-DL is currently progressing with work on the next high-orbit satellite, P3E. This will include downlinks on 145Mhz and 2.4Ghz, and uplinks on 435MHz and 1.2GHz. Launch is tentatively scheduled for 2005.

LOW-ORBIT SATELLITES (LEOs)

The temporary switchoff of AO-40 has highlighted the shortage of

alternative satellites, particularly the FM birds. There are however a few active satellites left in the sky: AO-7, FO-29, SO-41 and SO-50. The RS-15 beacon has been heard recently, but it is very weak and no QSOs have taken place on RS-15 for several months. For the digital enthusiasts UO-22 is still operational, and efforts are currently underway to resurrect NO-45. NO-44 (PCSAT) is still hanging in there, but is in very bad shape.

The active voice satellites are summarised below:

AO-7: only operational in sunlight, and is stuck in Mode B (70cm up, 2m down). Passbands are 432.125 – 432.175MHz LSB uplink, and 145.975 – 145.925MHz USB downlink. Launched on 15 November 1974, AO-7 was thought dead for some 20 years before an unexplained return to service on 21 June 2002.

FO-29 : The most useable of the LEO satellites, it has a beacon on 435.795MHz USB (+- Doppler) and a downlink passband of 435.800 – 435.900MHz USB. Uplink is 145.900 – 146.000MHz LSB.

SO-41 and SO-50: The SaudiSats are FM satellites. SO-41 has an uplink on 145.850 and downlink on 436.775 (+- Doppler), but is erratic and difficult to work. SO-50 is currently the most popular LEO, with an uplink on 145.850MHz and downlink on 436.795Mhz (+- Doppler). SO-50 requires a 67Hz PL tone for access. SO-50 is not always switched on, as it requires activation by a ground control station for each pass.

WEBSITE OF INTEREST

A website worth a visit is <http://www.heavens-above.com>. This website offers satellite pass predictions and information on all types of celestial bodies! Thanks to ZS2GMT for the information. 📍

Pearstalk



(Some of these items from SARL bulletins and ZS4BS Dennis Green's HF Newsletter)

CHRISTMAS OUTING

The day out at Ashley's QTH on 22 November was attended by some 45 people. There were cartons of wine and cooldrink, and a little later icecream, and everybody got stuck in to braai their meat and enjoy their meals.

One of the main aspects was the ability to simply enjoy the crowd and get to know who was who. We had Elizabeth and Joe Jasson and his family there as well as others from Uitenhage and Despatch

Paul arrives from Graaff Reinet!

Our recently licensed member Paul van der Merwe came down to PE from Graaff Reinet especially to meet all of us. He spent two nights in PE and came out with



Al Akers on the Saturday.

Paul runs the cinema in Graaff Reinet – which he says is more an expensive toy than a paying proposition!

He hopes to get his antennas sorted out in the near future.

André and Paul too

We also had André and his son, Paul, down from Grahamstown, driving their sports car which drew a lot of attention.

The car was built by Phil Hopper ZS2PP and his son, who were that way inclined. Many at the outing wanted to see and hear the thing perform.

At the end we each received a chocolate Christmas greeting from Janet and Ashley.

THANKS FRED!

Our thanks go to Fred Strutt for his recent contribution to the Antenna Repair Group. He is moving and has sorted out the goods that he no longer wants. We will be able to use them in time to come.

MONDAY EVENING BULL & CHAT

At 20:00 on every Monday evening the Sunday bulletin is repeated, followed by either a talk on a specific subject or else a general chat on anything that comes up.

So far we have had some very interesting discussions on all sorts of things and many stations reporting in. More recently it was a talk on AIDS by Merle Thomas, ZR2MP, who not only covered the situation but sounded really professional doing it.

Listen at 8pm on 145,700 as well as the AM transmission on 3640 – in the hope of catching those youngsters or oldsters using household radios.

SADX CLUB LOOKS FOR EX MEMBERS

Eddie Engelbrecht is looking for ex-members of the SADX Club (South African Short-wave Listeners Club). A number of years ago they used to use the clubhouse of the then Johannesburg Branch of the SARL. Since then the club has “gone to pot for various reasons outside of our control, such as computers, etc.”

Eddie would be pleased if ex-members

would contact him on his cell phone at 072-655-1895 or 011-837-5177 or on his e-mail address finetuner@absamail.co.za, for a re-union.

OUR WEBSITE

Our website can be found at www.qsl.net/zs2pe. Barry says he will be putting QSX on there, about a month after publication. There are also other items for general consumption.

POSSIBLE POWERLINE COMMUNICATION IN THE RSA

If you were under the impression that powerline communication (PLC) was something which is only happening overseas then there is news for you.

In "Sake Beeld" of Thursday 6 November there was a report that PLC is being considered by the Tshwane Municipality (Pretoria) as a so-called metropolitan telecommunication network. "There are areas where the establishment of a conventional telephone network is just too expensive. With PLC the network is already there in the form of powerlines" says Tshwane council member Charles Kuun.

The question arises as to whether the problem of radio interference which is possibly caused by this type of distribution has really been addressed and how it would effect the whole radio communication community.

NEW WSJT AVAILABLE

A new Beta Release of WSJT is available for free download at the WSJT home page, <http://pulsar.princeton.edu/~joe/K1JT>.

It's principal attraction is a new mode called JT65 that includes powerful FEC (forward error correction) and will be able to work with significantly weaker signals than JT44.

A brief list of the features and technical specifications of JT65 is available at <http://pulsar.princeton.edu/~joe/K1JT/WSJ>

T4.TXT and a "Quick Start Guide for JT65" may be found at <http://pulsar.princeton.edu/~joe/K1JT/UPD411.TXT>.

If you try the new JT65 mode, please send me your comments – good or bad, says Joe, K1JT

LOGS FOR SARL CONTESTS

Entrants to SARL contests are reminded that the correct postal address to send logs to is: SARL HQ, PO Box 1721, Strubensvallei, 1735.

Please mark envelopes with the contest name and call sign.

If the log is sent by email then the email address is contests@sarl.org.za. Should you wish to fax logs, the correct fax number is 011-675-2793.

Again please clearly mark the message with the contest name and your call sign.

IOTA 2004

Created back in 1964 by the late Geoff Watts BRS-3129, the IOTA Programme will celebrate its 40th anniversary through an on-air activity event that will run from 1 January to 31 December 2004.

The IOTA's 40th Anniversary Awards Programme (or IOTA 2004) will adopt the same format and rules as the very successful IOTA Millennium Programme (IOTA 2000) and will be administered by the Chiltern DX Club – the UK DX Foundation on behalf of the RSGB IOTA Committee. For full details, please visit www.cdxc.org.uk



To those celebrating special days (21.12 to 17.1) we say

Have a Happy Day...



... on your birthdays

December

- 21 Paul de Vos, ZS2ABY
- 21 Ron Clarke, ZS2MF
- 23 Noel Hislop, XYL of ZR2H
- 24 Bryan Marshall ZS1NQ
- 25 Betty Greeff, XYL of ZS2ZG
- 25 Brian Weller ZS2AB
- 25 Mike Bosch ZS2FM
- 28 Elize Laaks, XYL of ZS2HB
- 28 Allen Lubbe, ZS2AEG
- 30 Lida Ligthelm, XYL of ZS2D

January

- 7 Laurene Stevens, XYL of ZS1AWG
- 9 William Hickson ZR2WJA
- 9 André Greyling ZS2ACG
- 10 Tony Allen
- 12 Bernice Marshall, XYL of ZS1NQ
- 13 Blanka Batt, XYL of ZR2BBH
- 14 Jacques Human ZR2XTC
- 15 Neil Fulton ZS2MG
- 15 Ashley Goosen ZR2AG
- 17 Maxie Crouse, XYL of ZR2A

... on your anniversaries

December

- 23 Noel and Cyril Hislop, ZR2H
- 24 Graze and Nell



Hermanus, ZR2NH
28 Edna and Clive Swanepoel

January

- 1 Nellie and Johan van Zyl, ZS2Z
- 2 Julie ZR2EY and Trevor ZS2AE Scarr
- 2 Chantelle and Linton Rohl ZR2LIN
- 3 Brenda and Allan Whitehead ZS2R
- 9 Pam ZU1PAM and Phil ZS2PP Hopper
- 14 Vicky and Allan Ansell

Congrats on your new son

Libby and Mike Hanslow ZS1RMS.
We trust Joshua Michael, born 28 October, will give you many years of happiness.



Left PE: We are sorry to report that Anthony ZR2AI and Marie have decided to leave PE for Graaff Reinet.

We hope you will find the Graaff Reinet climate to be of great help to your health, Tony. 📺



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 |
| QSO printing and info..... | Ashley Goosen ZR2AG | 372-2052 | ashleygoosen@xsinet.co.za |
| QSO Editor (ex com)..... | Garth Laaks ZS2HB | 368-1101 | glaaks@iafrica.com |
| QSO 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 East London to George as well as Cradock and 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 |
|--------|--------------------------------------|
| 14 Dec | ZR2DX |
| 21 | ZS2BL |
| 28 | ZS2EHB |
| 4 Jan | ZS2AAW |
| 11 | ZS2RT |
| 18 | ZR2AG |

| DIARY DATES |
|-------------------------------------|
| DECEMBER |
| There's no Club meeting this month! |
| 16 Last day for SARL AGM motions |
| JANUARY |
| 5 Nominations for SARL councilors |
| 8 Wrinkly Rave (later than usual) |
| 23-25 PEARS VHF/UHF contest |

* We like being your Society *