

QSL PE



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

WEBSITE: www.qsl.net/zs2pe

**PO BOX 10402
LINTON GRANGE
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NOVEMBER 2004

MONTHLY GENERAL MEETING

The monthly general meeting of the PORT ELIZABETH AMATEUR RADIO SOCIETY will be held on Thursday, 18 November, 2004 at the St Hugh's Church Hall, Newton Park, starting at 20:00 (8 pm).

The NSRI are looking for shore-based radio ops, and I have been in contact with the station commander, Ian Gray, and arranged for him to give a talk and tout for operators at our November meeting.

In spite of this, business will be kept as short as possible, and the rest of the evening will be a **social get-together**, with the Society providing a couple of boxes of wines, cheese, biscuits and whatever else for a **CHEESE AND WINE PARTY.** [Don't forget the ice cream!!]

This will be our last meeting for this year, but QSX will be published as usual before the third Thursday, just in case some of you decide to turn up on the public holiday for a meeting.

Wrinkly Ravers

Only eight members turned up on 4 November and there were something like four apologies. Nevertheless, we all enjoyed ourselves, although Noel was due for a free beer, having ordered something from the special menu, but neither she nor Cyril took them up on it.

Our next get-together will be on Thursday, 2 December, the last one of this year, and it will take place at the usual spot, Barney's Steak Bar, Circular Drive, Lorraine.

See you there? Perhaps we'll be surprised at the numbers that turn up!

FOR \$ALE ★ WANTED ★ SWOP

FOR SALE

* Kenwood **TS450S with integral auto ATU**, complete with all filters and service manual. As new, R5000; **Hustler mobile antenna** complete with resonators for 80m, 40m, 30m, 20m, 15m & 10m bands, R300; Icom **W21ET VHF/UHF handheld** (keypad defective, otherwise OK), R20; **Desktop charger** for Icom W21ET, R50; **Battery packs** (std & hi-power) for Icom W21ET, R10 each; **VHF/UHF 1/4 wavelength telescopic antenna** for handheld (VHF extended, UHF retracted), R20. — Tel. Beavan Gwilt ZS2RL, tel. 041 368 8810 or 083 445 7647.



from *The* *Chairman*

December is just around the corner, and before we knew it, another year has almost passed us by. Your club still continues to be well supported – with membership just slightly down on the previous year.

A challenge facing us next year, is to get PEARS back into positive growth.

Of course, it goes without saying, that our membership mirrors the level of interest there is in our hobby.

Statistically, it would appear that about 40% of licensed radio amateurs in our area are members. We must strive to improve on this AND devise ways of attracting outsiders to the hobby.

I anticipate that once the new regulations come into effect, and ZR's are granted access to the HF bands, many an "old-comer" will once again become active – and hopefully swell our membership numbers.

Many of these ZR's are totally disconnected with amateur radio, and are unaware of the situation. Now is the time to make contact with them, and give them the great news, while simultaneously suggesting that they join the club and perhaps even the SARL!

We are still on the hunt for a more

suitable meeting venue.

The Veteran Car Club has not suited our needs, but we are exploring another option at the moment. I have asked Barry, ZS2H to investigate, on our behalf, the possibility of us making use of the Italian Club. We'll keep you posted on developments. Hopefully, early in the new year, we'll have a great new place to call home.

November's meeting will be the last opportunity for us to all get together this year. It will take place at our regular meeting venue, on Thursday 18th November. Look for details elsewhere in this issue of QSX.

In closing, a special thanks to all of you who have gone-the-extra-mile in promoting amateur radio this past year. Thanks to our editor, Garth, for his exemplary efforts in publishing QSX, Thanks must also go to Al and his team of assistants who have run the RAE course. To Bill, who is always available for whatever needs to be done, to Chris for his sterling work in keeping our multitude of repeaters on the air.

See you all on the 18th!

73

Rory, ZS2BL

HAMNET SIMULATED EMERGENCY CONTEST

I have received two *more* logs from participants who apparently sent in logs earlier, but that did not reach me. Incredibly, the three late logs received from participants whose original logs were not received, have shown all three to be winners in their respective categories.

Derek ZS5VE wins the single operator stationary mobile category. Dennis ZS4BS wins the single operator portable category and Jan ZS4JAN wins the base station category.

SARL HQ has now decided that in future, all contest logs should be sent direct to the appropriate contest committees.

In addition, we in Port Elizabeth who process contest logs will publicize the call signs from all logs received before the final closing date so that participants who sent in logs will be sure their logs have been received and, if not, to send in another one.

73

Al Akers, ZS2U
Provincial Director:
Hamnet/ECARE

ANTENNAS *Part 2*

The new regulations, when signed, will allow restricted licensees (ZRs) access to the HF bands. They will want to operate there and will therefore need antennas for these bands.

This is Part 2 of Al Akers' contribution on antennas that are simple to make, yet perform effectively.

Operation on more than one band increases the antenna problem and the more bands, the bigger the problem becomes.

Of course, you can have a dipole for each band, but this requires a lot of space and materials. If you only want two or three bands, a simple solution is to have two inverted vee dipoles spaced 90 degrees apart and using a common feed line.

If one of the two bands is 40 metres, it is quite likely that it will work on 15 metres as well, where it is three half waves long. You will probably need a transmatch for 15 metre operation.

Adding another dipole and spacing the dipole 60 degrees apart will give you three

or four bands and the dipoles should have negligible effect on one another.

Dipoles could all be run in the same direction, with a bit of spacing between the ends, but then the dipoles affect one another.

The dipole for the lowest frequency band can be cut to the normal half wave dipole formula. The next lowest frequency band dipole will need to be longer than a half wave. Add about 10% to the length, then test for resonance, trim till it is resonant in the band.

Then you can do the next lowest frequency band in the same manner.

A five or more band job should get you fit enough to do the PE train race! 🏁

PEARS 2m FM FIELD DAY

The following are the rules for the PEARS two-metre field day contest that will be run later this month:-

1. Contest to run from 14h00 to 17h00 Sunday 21 November 2004.
2. Contestants to operate field stations only. Use of fixed antennas and support structures is prohibited.
3. Field stations may be operated by one or more operators using a single callsign for the station, or each operator may use his or her own callsign and enter as an individual contestant.
4. Mode : FM Only. No power or antenna restrictions.
5. Frequency : 2m band as per SARL bandplan. 144.400 and 145.500 recommended. Only simplex contacts will count.
6. Exchange : Callsigns, signal report, and 6-digit Maidenhead grid locator.
7. Scoring : 1 point per kilometre
8. Logs to be submitted either by hand to AI ZS2U or Barry ZR2DX, by post to 53 Clarence Street, Westering, Port Elizabeth 6025 or by e-mail to zr2dx@mweb.co.za . Closing date for logs will be 22 December 2004.

Certificates to be awarded to winner and runner-up, as well as to the stations achieving the longest distance.

STATISTICS - the *REAL SAD STORY*

A document circulated to SARL Councillors recently giving a statistical breakdown of amateur licences and SARL membership in South Africa (dated 15 October 2004) provided some very interesting figures.

There are currently 8031 licences issued in South Africa. Of these, 156 are ZSL (listener) licences, 58 are ZU (Class B) licences and 50 are "Other" (special event, unattended stations etc). This leaves 7767 licences issued to Divisions 1 to 6. Of these 1462 are in Division 1, 559 in Division 2, 75 in Division 3, 419 in Division 4, 1003 in Division 5 and 4249 in Division 6.

The ZS to ZR distribution nationally is 4266 to 3501. This means that only 54.92% of our total Ham population consists of ZS licensees. Divisions 1 and 2 are precisely distributed: Division 1 has 803 ZS's to 659 ZR's, whilst Division 2 has 307 ZS's to 252 ZR's. In Division 6

the distribution is somewhat more even: 2215 ZS's to 2034 ZR's!

The sad part of the story comes in the statistics regarding SARL membership: as of mid-October, there were 903 paid-up members of the SARL. This is a mere 11.63% of the membership! Although by time of publication the SARL membership will have topped 1000, it is still very poor indeed. The Eastern Cape is sadly below average – only 61 members (10.91% of licensees). Division 3 currently has the best membership percentage – 11 of their 75 licensees are SARL members, a percentage of 14.67%!

These statistics do not take into account licences issued to clubs or organizations, nor do they take into account cases of multiple licences issued to a single person.

[How about joining the SARL, even if only to ensure that Ham Radio gets – or at least keeps – what's due to it? – Ed.] Ω

SARL MATTERS

AMATEUR RADIO NEEDS YOUR SUPPORT

There are two ways in which you can support Amateur Radio and its future. Firstly by being a member of the South African Radio League and secondly by supporting the South African Amateur Radio Development Trust's fundraising appeal for South Africa's membership of the International Amateur Radio Union.

The question of membership has been debated many times and the question "what do I get from my membership?" is often asked. The answer is quite simple: the protection and future assurance of Amateur Radio. All the other benefits are additional bonuses.

For the SARL to have a strong voice, it needs to represent as many as possible, if not all, radio amateurs. The importance of strong representation in a national society was proved again this week when the American Regulator, the FCC, gave the ARRL assurances regarding interference by Power Line Communication.

If you are a member already, thank you for your support. If you are not a member yet, please join now. Call the SARL Office on Monday at 011 675 2393 or join online by visiting www.sarl.org.za.

[Come on, chaps. The SARL is doing everything the RIGHT way now, doing what you have always asked, using their funds as they should, and are generally getting the League back on track and keeping it there.

Where are all those who said they would rejoin, especially those who first wanted to see that the League was operating correctly?

NOW Is the time to dip the hand into the pocket and give your support to the SARL! – Ed.]

The second way to support Amateur Radio is to donate to the IARU fund. The SA Amateur Radio Development Trust is raising funds for the SARL membership dues. The amount to be collected is

R12 000. The fund currently stands at just over R4000.

You can make your contribution by electronic transfer. The account number is 560 142 722 ABSA Menlyn, branch code 335-645. You may also send a cheque to SA Amateur Radio Development Trust, PO Box 90438, Garsfontein 0042.

If transferring electronically, please send your name and address details by email to saardt@intekom.co.za or by fax to 012 991 5651.

MOTIONS FOR THE LEAGUE'S ANNUAL GENERAL MEETING

Motions for submission and consideration at the Annual General Meeting of the SARL on 9 April 2005 are invited from members.

Each motion must contain the following:

1. A concise description of the motion;
2. A motivation in support of the motion;
3. A proposer and a seconder must sign each motion.


Nominations and motions must reach the Secretary by no later than 30 November 2004. They must be addressed to The Secretary, SARL and mailed to P O Box 1721, Strubensvallei, 1735 or faxed to 011 675 2793.

HAVE YOU PAID YOUR SARL SUBSCRIPTION?

Sunday 31 October 2004 was the cut off date for your SARL subscriptions. According to statistics from the SARL website some 300 members have not yet renewed their subscriptions.

The SARL would like you to think about your membership and get your renewal sorted out early. Your membership fee can be deposited directly into the SARL's Bank account.

The details are: Standard Bank, Killarney branch, Johannesburg. The account number is 001 682 059 and the branch code is 007 205. It is a current account.

It is also possible to renew your membership via the web at www.sarl.org.za 

HISTORY OF BATTERY DEVELOPMENT

from JOHAN TERBLANCHE ZS11

In 1802, Dr. William Cruickshank designed the first electric battery capable of mass production. Cruickshank had arranged square sheets of copper, which he soldered at their ends, together with sheets of zinc of equal size. These sheets were placed into a long rectangular wooden box that was sealed with cement. Grooves in the box held the metal plates in position. The box was then filled with an electrolyte of brine, or watered down acid.

The third method of generating electricity was discovered relatively late – electricity through magnetism. In 1820, André-Marie Ampère (1775-1836) had noticed that wires carrying an electric current were at times attracted to one another, while at other times they were repelled.

In 1831, Michael Faraday (1791-1867) demonstrated how a copper disc was able to provide a constant flow of electricity when revolved in a strong magnetic field. Faraday, assisting Davy and his research team, succeeded in generating an endless electrical force as long as the movement between a coil and magnet continued. The electric generator was invented.

This process was then reversed and the electric motor was discovered. Shortly thereafter, transformers were

developed that could convert electricity to a desired voltage.

In 1833, Faraday established the foundation of electrochemistry with Faraday's Law, which describes the amount of reduction that occurs in an electrolytic cell.

In 1836, John F. Daniell, an English chemist, continued with the research of the electro-chemical battery and developed an improved cell that produced a steadier current than Volta's device.

Until then, all batteries had been composed of primary cells, meaning that they could not be recharged. In 1859, the French physician Gaston Planté invented the first rechargeable battery. This secondary battery was based on lead acid chemistry, a system that is still used today.

History of Battery Development

1600	Gilbert (England)	Establishment electrochemistry study
1791	Galvani (Italy)	Discovery of 'animal electricity'
1800	Volta (Italy)	Invention of the voltaic cell
1802	Cruickshank (England)	First electric battery capable of mass production
1820	Ampère (France)	Electricity through magnetism
1833	Faraday (England)	Announcement of Faraday's Law
1836	Daniell (England)	Invention of the Daniell cell
1859	Planté (France)	Invention of the lead acid battery

1868	Leclanché (France)	Invention of the Leclanché cell
1888	Gassner (USA)	Completion of the dry cell
1899	Jungner (Sweden)	Invention of the nickel-cadmium battery
1901	Edison (USA)	Invention of the nickel-iron battery
1932	Shlecht & Ackermann (Germany)	Invention of the sintered pole plate
1947	Neumann (France)	Successfully sealing the nickel-cadmium battery
Mid 1960	Union Carbide (USA)	Development of primary alkaline battery
Mid 1970		Development of valve regulated lead acid battery
1990		Commercialization nickel-metal hydride battery
1992	Kordesch (Canada)	Commercialization reusable alkaline battery
1999		Commercialization lithium-ion polymer
2001		Anticipated volume production of proton exchange membrane fuel cell

The battery may be much older. It is believed that the Parthians who ruled Baghdad (ca. 250 BC) used batteries to electroplate silver. The Egyptians are said to have electroplated antimony onto copper over 4300 years ago.

In 1899, Waldmar Jungner from Sweden invented the nickel-cadmium battery, which used nickel for the positive electrode and cadmium for the negative. Two years later, Edison produced an alternative design by replacing cadmium with iron. Due to high material costs compared to dry cells or lead acid storage batteries, the practical applications of the nickel-cadmium and nickel-iron batteries were limited.

Toward the end of the 1800s, giant generators and transformers were built. Transmission lines were installed and electricity was made available to humanity to produce light, heat and movement. In the early twentieth century, the invention of the vacuum tube enabled generating controlled signals, amplifications and sound. Soon thereafter, radio was invented, which

made wireless communication possible.

It was not until Shlecht and Ackermann invented the sintered pole plate in 1932 when profound improvements were achieved. These advancements were reflected in higher load currents and improved longevity. The sealed nickel-cadmium battery, as we know it today, became only available when Neumann succeeded in completely sealing the cell in 1947.

Summary

From the early days on, humanity became dependent on electricity, a product without which our technological advancements would not have been possible. With the increased need for mobility, people moved to portable power storage – first for wheeled applications, then for portable and finally wearable use. As awkward and unreliable as the early batteries may have been, our descendants may one day look at today's technology in a similar way to how we view our predecessors' clumsy experiments of 200 years ago. 📌

1:9 MAGNETIC BALUN

A simple Magnetic Balun to connect a random length of wire to an HF radio

from Mike Hanslow, ZS1RMS

Here is a simple but yet effective coupler to connect a random length of wire to a 50 Ω coax input of your HF radio or transceiver.

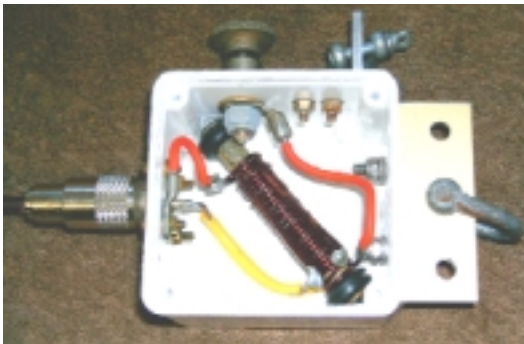
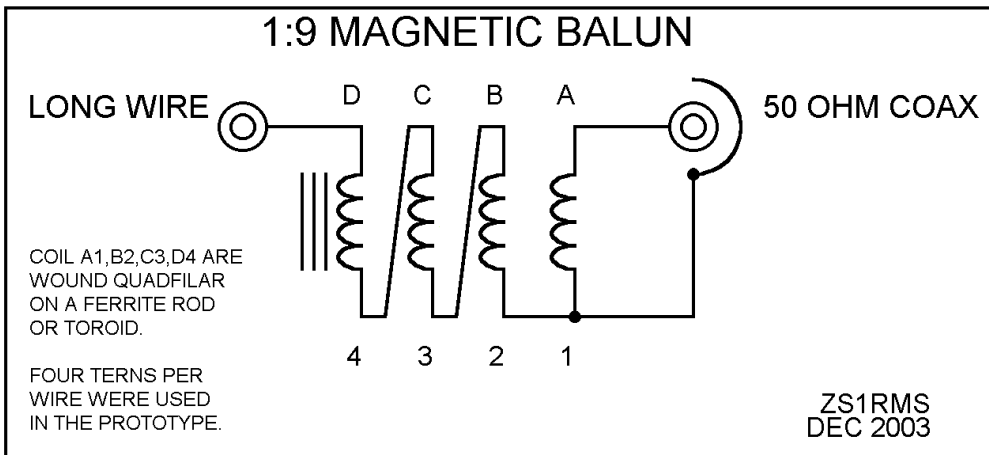
I used a ferrite rod from an old domestic SW receiver to wind the quadfilar winding. The wire used was a heavy gauged enameled copper wire. The whole unit is enclosed in a plastic container suitable for outdoor use.

I placed suitably sized rubber grommets on both sides of the ferrite rod for support and protection to the brittle rod in case the unit should be dropped. I added brackets to mount the

Magnetic BALUN unit with U clamps or via a string. There is also a strain relief for the long wire connected to the terminal.

On final completion for the lid of the unit, a thin film of clear silicon sealer was applied before screwing the lid back on to ensure a water tight seal.

Mike Hanslow, ZS1RMS
P O Box 866
George
6530
South Africa



Above – Circuit diagram of the balun.

Left – Photograph of the completed article.

REVIVING DEAD LEAD-ACID BATTERIES

from JOHAN TERBLANCHE ZS11

We must think SAFETY when we are working around and with batteries. Remove all jewelry. The hydrogen gas that batteries make when charging is very explosive. This is a good time to use those safety goggles that are hanging on the wall. Sulphuric Acid eats up clothing and you may want to select Polyester clothing to wear, as it is naturally acid resistant. Just remember you are messing with corrosive acid, explosive gases and 100's of amps of electrical current.

Very few lead-acid batteries are replaced because they stop working. In almost every case the battery is replaced because it doesn't work well enough any more. What is not generally realized is that something can be done at this stage which may well prolong the useful life of the battery, quite often by many years, and that the same treatment if carried out earlier may well have stopped the symptoms occurring in the first place.

To understand what can be done requires a simple appreciation of how a battery works. All lead-acid batteries are a series of cells; the most common is the 12v battery, which are simply six cells in series. Each cell consists of a plate of lead and a supported plate of lead (IV) oxide, both immersed in fairly concentrated sulphuric acid.

The lead (IV) oxide plate is the positive pole, the lead plate is the negative pole. As the battery discharges, electrons flow from the negative to the positive pole; when we charge the battery, we simply drive electrons back in the opposite direction.

The reason for a battery not to work properly any more is due to the chemical processes, which take place within each cell. As the battery discharges, the positive plate can react with the sulphuric acid to produce some lead ions. The negative plate on dissolving can also form lead ions in the process, which finally leads to the battery's

complete failure.

It is the lead ions, which are incidentally formed in the discharge cycle, which cause problems. They combine with sulphate ions in sulphuric acid to form highly insoluble lead sulphate. When this coats the plates of the battery, it fails to deliver enough power to be of use. The battery may well be thoroughly serviceable in every other way – only the 'sulphating' stops the battery delivering enough power to be useful.

The sulphating can effectively be removed, or prevented, by adding to each cell a chemical called tetrasodium ethylenediaminetetraacetate (often abbreviated to tetrasodium EDTA or just EDTA). This chemical forms co-ordination compounds with many metal ions, including the lead ions formed in the discharge of a battery.

The compound formed by lead ions and EDTA ions is not particularly stable in the acid medium of a battery, but when it breaks down again any lead sulphate regenerated drops to the bottom of the cell where it lays harmlessly since it doesn't conduct electricity. Any regenerated EDTA ions are free to continue their work.

As can be seen from the above, treating a battery with EDTA is likely to be most effective when the battery, for one reason or another, spends periods when it is not fully charged, and so contains too many lead ions. This is

likely to occur if it is used just for short trips, is infrequently used, or suffers from an inefficient charging system. To treat a battery with EDTA you simply add powder to each cell - the exact amount is not critical, but an average size car battery needs about one heaped tablespoon, and smaller batteries proportionally less.

After addition of the powder, the battery needs some form of agitation for a day or two (just using it normally is sufficient), then a thorough charge to build up on the cleaned plate areas.

On the assumption that sulphating has been affecting the performance of the battery, an increased performance will be noted from here on. The electrolyte in a battery is sulphuric acid at a concentration about midway between the dilute and concentrated acids, which you may have met when you were at school. As such, you have to take care when handling it.

The one thing, which you must never do, is getting the acid in contact with your eyes. Don't peer into a cell if you are charging a battery with the caps off, the spray from the fizzing can get into your eyes and will cause permanent damage if it does.

Remember that the gases given off during charging constitute an explosive mixture – if they are as much as sparked even by static electricity, the explosion which occurs can splash acid out of the battery all over your face. If you think that there is ever any possibility of the acid getting into your eyes then wear goggles whilst you work close to, or with, your battery or its acid.

Battery acid spilled on you or your clothes will cause burns if left for very long – the treatment for acid spillages wherever they occur is always the same – wash down with large amounts cold water.

Beware of where you keep old or new

batteries - think of what could happen if one were to fall off a high shelf, split, and deposit acid all over the garage and you.

If you store battery acid do so only in glass or thick polythene screw-topped containers, leaving a space for air at top, label the containers permanently, keep them out of reach of children, and store them where they can't fall upon them.

All this should apply to batteries too. By far the most common problem, which people seem to encounter, is what to do with a battery during a period of inactivity; or if it's superfluous to needs, what needs to be done to store it for future use. If you can't get into the habit of charging it regularly and often, it must be stored and the following procedure can be adopted.

Firstly, the electrolyte must be carefully removed from the battery. The simplest way of removing it is to take off the cell caps, turn the battery on it's side with the terminals uppermost and then completely upside down, over a polythene container. Never do this over a metal container; the acid may react with it – the battery also still works at this stage and any dead short across the terminals may well burn a hole through the container.

The electrolyte will probably be reusable, even if it looks dirty, so if it is caught in a bowl it can be kept for future use and should be stored as described above.

After the battery has been emptied, it should be washed out with copious amounts of cold water. Don't stint on this; keep filling and tipping out until the last trace of sediment emerges. If you don't remove all of the acid at this stage, it will cling to the plates and coat them with lead sulphate, leading to all the familiar problems associated with sulphating. Store the battery on it's side with the cell caps removed.

When the battery is to be used again, the acid can simply be poured straight back in, followed by a re-charge. Before that, the plates can be cleaned of any sulphate deposits, which may build up during its working life by using the EDTA. Divide a third of a tablespoon of the powder between each cell then top up with warm water.

EDTA works slowly in battery acid but extremely quickly in neutral or alkaline solution; so only leave the EDTA solution in the battery for an hour or so, shaking occasionally, and then remove and wash out well with water. If you are short of electrolyte (you shouldn't be if you drained it properly), get a little from your local battery supplier. If he won't co-operate, ask a local chemicals supplier if he will make you up a little 4M (8N) sulphuric acid. (1 part concentrated acid to 4.5 parts water).

Batteries, which are completely dead, or more commonly have one dead cell, can often be rescued, depending on how and why they failed.

Checking the voltage may not tell you very much – a reading in the range 13 to 14 volts is nearly always obtained. Testing the specific gravity with a hydrometer can also be misleading: different manufacturers use slightly different acid concentrations and so interpreting readings can be a problem. As a rough and ready guide, a battery which suddenly and spectacularly failed, or which fails to start a vehicle after a long static charge, might as well be

thrown away.

Those most likely to be resurrected are ones which were in good condition, but which have stood neglected for some time. These need the electrolyte removing and treatment with EDTA as described above. In one, albeit spectacular, case someone recently returned to use a battery, which was fourteen years old and had laid out of use for ten years.


Distilled water is not strictly necessary for topping-up, and it certainly isn't worth the cost if you have to buy it. If you have a refrigerator or a freezer, you can collect the frost, which forms from condensation of water vapour from the air and use that.

Failing that, you can use tap water, which has been boiled and allowed to cool, but it is better to prepare yourself a topping-up solution. To do this, put a very small amount of the tetrasodium salt of EDTA in a jug and add some water, allow it to cool, and carefully decant the water off, leaving behind any sediment, which will fall to the bottom.

Preparing yourself a topping-up solution like this is far more economical than continually buying distilled water for batteries and has the advantage over distilled water in the solution you are adding has something in it to prevent sulphation of the battery plates.

<p>DON'T FORGET — ACID IS DANGEROUS — YOU HAVE BEEN WARNED!</p>
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THINGS TO REMEMBER:

1. Bill Browne ZS2BY has supplied me with a stiffie with his program GRAZMA, which provides Great Circle calculations, Azimuth and Distance from Maidenhead numbers, as well as Maidenhead calculations. Anyone wanting a copy can get it from me.
2. A computer copy of the expected amendments to the Radio Regulations can be obtained from Barry, zr2dx@mweb.co.za 

ZS5 Baker Peter calling CQ 40 !

(taken from *Woman's Value*, September 1981)

Pearl Pearce, ZS5BP, was reportedly the first blind woman in the world to hold an amateur radio licence. She was not born completely blind, but over a fairly lengthy period she became condemned to a world of total darkness.

Not that she was sorry for herself. She had come out fighting – determined in her own way to overcome the disadvantage of her affliction. She started out by refusing to take a back seat in life. Apart from learning to type, operate a switchboard and read braille, she went further. She became the first blind woman in the world to get an amateur radio licence. That happened on 8 December 1948.

The SA Radio League was thrilled about it, and awarded her the ham station that she used until her death.

The real advantage of the ham station was that it kept Pearl in touch with the world. With the hundreds of contacts all over the world, including South Africa, she was more informed about current affairs than many sighted people who can read newspapers.

Her love affair with the airwaves began when she was a little girl living in Mount Frere in the Transkei. "I fell under the spell of the only radio in the town," she admits. "It belonged to the hotel owner and on Saturdays everyone would gather around him to listen. I kept on asking how it was possible for the sound to come out of the box – but no one had an answer that would satisfy me." She decided to find out all she could about the mysterious radio field.

Unfortunately, her curiosity had to wait until the end of the Second World War – and by then she was blind. After the war she contacted her brother in the Post Office and he sent her instructions on learning the morse code – the first step towards her radio amateur licence.

However, when she actually presented herself to the local postmaster for the test,

he said she had been granted an exemption from the morse code because of her blindness. She therefore never used morse in spite of having swotted it all up!

At the age of three years the doctor carried out a test using a doll and realized that, at that stage, Pearl was not entirely blind as previously thought, but that she was able to make out colours. She could still remember the emerald green and bright orange clad doll.

Someone told her father that all blind people are musical, so she landed up with every musical instrument he managed to beg, borrow or steal for her. But Pearl decided on the accordion, and still played the first one she was given back in 1931.

Pearl eventually moved to a residential hotel in Pietermaritzburg, where the manager had installed the aerial on the roof. She never had time to be lonely. With other hobbies, including 20 different organisations and three choirs, she often did not have time to touch the ham station for days. But no matter what her hobbies, it's the ham station from which she derived her main pleasure. She was known from the Cape to Cairo to Timbuctoo.

On Sundays she would talk to her brother, who was a ham in Grootfontein. And then she switched to her niece who is studying medicine in Bloemfontein. Apart from that she had friends all over – you name the country and she would probably have spoken to someone there during her radio ham years.

ZS5 Baker Peter signed off some years ago. The bands have just not been the same ever since! 📻

**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
21 OCTOBER 2004**

Welcome:

Rory ZS2BL welcomed all who had made the effort to attend.

Present and Apologies :

As noted in the attendance register. Mention was made of Lionel ZS2DD and Colin ZS2AO, both of whom have visited hospital.

Acceptance of Previous Meetings Minutes :

Proposed : ZR2AG Seconded ZS2HB.

Matters Arising:

Nil

Correspondence:

Nil

Finance:

The Treasurer presented a report on the finances of the Society.

Special Events:

Nil

General:

Barry ZR2DX advised the meeting that the deadline for nominations for the SARL Council is 30 November 2004. Barry indicated that he would not be standing for Council again this time, and urged members to consider making themselves available for nomination. He stressed how the participation of a PEARS representative benefited the society as a whole, and that a Council representative gave the Society valuable insight into national matters.

Barry ZR2DX outlined a document of statistics regarding the number and geographical breakdown of Amateur licences in South Africa, as well as the percentage breakdowns of SARL membership.


An appeal was made for articles for QSX. The material supplied to Garth is from a small minority of members – more widespread contributions would be appreciated!

Barry ZR2DX advised that there has been a delay in the printing of Radio ZS.

The November meeting will be the final meeting of the year. We hope to get a substantial turnout for this event.

Upon questions from the floor, Barry ZR2DX outlined the current situation with regard to the impending change to the Radio Regulations.

The business of the meeting being concluded, a DVD presentation of the President's address at the recent Hamfest in Johannesburg was displayed, followed by Tony Voorveld ZS6CCD's presentation on 100 years of the diode.. Thanks to Rory ZS2BL for providing the DVD and player, and to Chris ZS2AAW for arranging the projector and sound equipment.

Refreshments were then provided as usual by Bill ZS2ABZ, and the meeting ended with socialising. 

Pearstalk



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

NOVEMBER RAE

The November RAE takes place on 18 November at 19:00 at all centres right across South Africa. There will be about 21 local individuals undergoing the exam, and we wish them all the best.

This will be the same evening as our November meeting, so we will not be able to hear immediately from them if they believe they have passed.

AMERICANS ADOPT POWERLINE COMMUNICATION

As expected by the ARRL, the FCC has approved revised rules to specifically regulate the deployment of broadband over power line (BPL) technology.

At the same time, three members of the Commission, including Chairman Michael Powell, specifically mentioned the concerns of Amateur Radio operators at the open meeting and expressed either assurances or hope that the new BPL rules will adequately address interference to licensed services.

Republican FCC Commissioner Kevin Martin addressed Amateur Radio's and broadcasters' interference concerns in his written statement. ARRL President Jim Haynie, W5JBP, said he was encouraged to see the Commission's shift from the early days of the BPL proceeding, when it followed the lead of the BPL industry in largely ignoring interference to amateurs as a real issue in the proceeding.

He cited the FCC's approval of three major points that the League had been

pushing for: Certification of BPL equipment instead of verification, a requirement for a public BPL database – something the BPL industry did not want – and mechanisms to deal swiftly with interference complaints.

The SARL will be submitting a discussion document to ICASA this week and seek to discuss various concerns about Power Line Communication in South Africa. Currently various companies are testing BPL on a small scale.

"We seek transparency about these trials and assurances that adequate interference testing is being carried out", SARL President, Graham Hartlett, ZS6GJH, said. "The SARL is not opposed to new developments, but these should not be at the cost of Amateur Radio and other radio services.

Under current regulations telecommunication companies may carry out trials for up to six months. We have however not seen any trial results published", he said.

NOMINATIONS FOR SARL COUNCIL MEMBERS

The present SARL Council will retire at the next AGM, which will take place on 9 April 2005, and in preparation for the event, nominations for councillors are invited in terms of Rule 16.2 from members of the SARL to fill these vacancies. Should more than 15 nominations be received a ballot will be held.

Each nomination must contain the following:

1. Full names, call-sign and address of nominee;
2. An amateur radio related CV of not more than 200 words;
3. A signed declaration by the nominee that s/he accepts nomination and will serve on the Council of the SARL if elected;
4. Each nomination must be signed by a proposer and seconder;
5. Only fully paid-up members (Rule 16.3) of the SARL may be nominated, propose and second a nomination.

IARU FUND GROWING SLOWLY

The SA Amateur Radio Development Trust IARU fund is growing slowly but time is running out. The amount to be collected is R12 000. The fund currently stands at just over R4000. Please see the item under SARL Matters elsewhere in this QSX.

Your support will be much appreciated. Last year the full amount was raised and enabled the SARL to rejoin this important organisation. Time is running out to renew, so please contribute now.

HAVE WE REACHED SUNSPOT MINIMUM?

Solar physicist David Hathaway has been checking the sun every day since 1998, and every day for six years there have been sunspots.

Sunspots are planet-sized "islands" on the surface of the sun. They are dark, cool, powerfully magnetised, and fleeting; a typical sunspot lasts only a few days or weeks, before it breaks up. As soon as one disappears, however, another emerges to take its place.

Even during the lowest ebb of solar activity, you can usually find one or two spots on the sun. But when Hathaway

looked on 28 January, 2004, there were none. The sun was utterly blank.

It happened again twice last week, on 11 and 12 October. There were no sunspots. "This is a sign," says Hathaway, "that the solar minimum is coming, and it's coming sooner than we expected."

Could the next solar minimum arrive sooner than previously predicted? American solar physicist David Hathaway thinks so. An article on the 'Science at NASA' website predicts that the next solar minimum could occur in late 2006, about a year earlier than previously thought.

Hathaway bases his prediction on data from the last eight solar cycles, which show that solar minimum follows the first sunspot-free day on the sun by 34 months.

David Hathaway goes on to say that the next solar maximum might also come early.

"Solar activity intensifies rapidly after solar minimum. In recent cycles, Solar Max has followed Solar Min by just four years."

If that is the case, the next solar maximum should be in 2010.

Read the full report on the web at http://science.nasa.gov/headlines/y2004/18oct_solarminimum.htm.

WATCH WHAT YOU SAY ON THE AIR

From the SARL bulletin:

As radio amateurs, we are allowed to talk to other licensed amateur stations, using the permitted amateur frequencies. Our conversations should be restricted to comments on technical investigations, remarks of a personal nature and other items of a common interest. But are they?

Listen on the repeaters and on HF and you will hear many things that are not of a technical or of a personal nature. Some of the remarks and conversations would be classed as insulting and improper, and

there are often sexist and racist remarks made.

Let us play the game, keep the conversations about amateur radio and our hobby.

OUR REPEATER SYSTEM

The following was received from Chris Scarr ZS2AAW in his response to a query re our repeater network.

“As you can see, there is a lot of equipment under the auspices of PEARS, and even more has been prepared and donated to other neighbouring clubs as part of the extended link through to CT and Umtata.

“The latest to be donated is a repeater and link for the Swartberg site, due for installation on the 23/10/2004.

Note that these licences are the responsibility of the Southern Cape Radio Club, Border Radio Club, and Western Cape RWG.

Details of these sites (George, Danabaai, Stilbaai, Riversdale, Jonaskop, Mount Kempt, Butterworth, Umtata) are identical to the Storno equipment found in our part of the network. Their respective representatives will be able to assist with site details etc.

Please note that there are changes envisaged around the Knysna, Plett and George area, hence the reason for the new licence at Brenton (Knysna Heads).

The simplex link between Kareedouw and Buffelsnek will change, and an additional UHF duplex link frequency will be applied for at Buffelsnek.

I have included the new licence details for the Brenton site. Please action this as soon as possible, as the SARL President ZS6GJH is keen to see these changes take place to improve coverage in Knysna itself.

NOTICE TO ALL SHACK VISITORS


On the door of the shack of Saney, ZR1S, one comes across the following notice:

What you are about to witness is an Amateur Radio Station, Licensed as ZR1S by ICASA, South Africa. Before you ask the questions, here are the answers:-

1. The total cost of all this equipment cannot be discussed as it creates marital conflict
2. No, We cannot send a message to your brother in the USA. We suggest you call Optus.
3. This is strictly a hobby. We do not have the facilities or the time to fool around with TV sets, radio's, or HiFi equipment. We suggest you see a serviceman.
4. Yes, The antenna in the back yard is essential to the operation of the equipment.
5. The furthest station we have contacted has been in the Ugandi Land.
6. The cards on the wall are called QSL cards. They are confirmation of contacts we have made with other stations.
7. It is technically impossible for this station to interfere with television reception, telephones or stereo systems. Any interference problems of that nature are caused by design flaws in the home entertainment devices themselves.
8. An amateur radio station may only be operated by a highly qualified, technically skilled electronics expert. It takes dedication, training and intelligence to reach the level of competence that justifies one to be licensed by the South African Government. It is therefore not considered inappropriate to show general awe, respect and obsequiousness when I discuss my hobby or operate the controls.

Furthermore if you are given the extreme honour of speaking into the microphone, please observe the following rules:

1. Speak in a low and soothing tone.
2. Do not disagree with me in any manner, say no bad words, and tell no off colour jokes.
3. It is customary for guests to make complementary remarks about this station and its operator when talking to other hams on the air. Do not touch anything, turn any knobs, sit on equipment etc. I have lost several visitors through electrocution in the past few weeks.

Thank you for your cooperation. 

To those celebrating special days (21.11 to 18.12) we say

Have a Happy Day...



... on your birthdays

November

- 21 Shaunna Laaks, XYL of Gary ZR2ABU
- 24 Gary Robertson
- 26 Fred Strutt, ZS2JS
- 28 André Crouse, ZR2A
- 28 Ed Durrant, ZS2DI
- 28 Nellie van Zyl, XYL of Johan ZS2Z
- 28 Elizabeth Jasson ZR2EJ

- 10 Kathy and Donald McGillivray
- 11 Ingrid and Dawid Petzer, ZR1DJJ
- 11 Marlene ZR2ED and Colin Ashwell, ZS2AO
- 12 Jane and Clive Fife, ZS2RT
- 12 Santie and André Greyling, ZS2ACG
- 15 Dawn and Derek Hislop, ZR2DJH
- 16 Maureen ZS6AVD and Bert von Rahden ZS6LP
- 18 June and Gert Schwarz ZR2GPC

December

- 5 Clive Fife, ZS2RT
- 6 Lionel Coombe-Davis, ZS2DD
- 6 Phil Kauffmann-Sorensen, ZS2NP
- 7 Dawid Petzer, ZR1DJJ
- 7 Natasha Bruyns, ZR2BCS
- 13 Kay Strutt, XYL of Fred ZS2JS
- 13 Paul van der Merwe, ZS2PV
- 15 Derek Hislop, ZR2DJH
- 17 George Pearson, ZR2GLP
- 18 Anne Olivier, ZR2ABC



In and out of Hospital - Colin Ashwell ZS2AO had his heart bypass operation and is recuperating at home. The leg has not been doing too well but we hope it is all under control now.

Vicky Ansell has had another hip replacement on 30 October. Word has it she is doing fine.

Going on holiday - Judy and Ken Tremeer, ZS2BWB, are leaving for Pretoria on 13 December to see their daughter.

Back from holiday - Brian and Marge ZS2AB and ZS2OB have returned from their trip to Australia. Maybe we'll hear from them on the air soon. Brian frequently operates on 3670 kHz in the evenings.

Mel and Bevan Gwilt are both back after their trip around the country and came to the Wrinkly Rave on Thursday. 📍

... on your anniversaries

November

- 27 Maggie and Ian Moore, ZR2IJ
- 30 Elize and Garth Laaks, ZS2HB

December

- 8 Barry and Graham Griggs, ZS2ABK
- 9 Dot and Vic Plumridge, ZS2VP
- 10 June ZS2JJ and Mike Jones, ZS2MJ

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
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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 Nov	ZR2AG
21	ZS2EHB
28	ZS2AAW
5 Dec	ZS2RT
12	ZS2ABZ
19	ZR2DX

<u>DIARY DATES</u>
<u>NOVEMBER</u>
13-14 SARL HF Field Day (2nd leg)
18 Monthly meeting and CHEESE & WINE party
18 RAE
28 SARL President's Net
<u>DECEMBER</u>
2 Wrinkly Rave

* We like being your Society *