

THIS NEWSLETTER IS PUBLISHED BY THE
PORT ELIZABETH AMATEUR RADIO SOCIETY

P.O. BOX 10402
LINTON GRANGE
6015

March 1997

NOTICE of MEETING

The monthly general meeting of the **PORT ELIZABETH AMATEUR RADIO SOCIETY** will be held on **Friday, 21 March 1997**, commencing at 20:00 (8pm) in the Municipal Disaster Management Centre in Westview Drive, Mill Park, Port Elizabeth (Civil Defence Centre), public holiday notwithstanding.

If the urn is fixed, tea, coffee and munchies will be available, for which a reasonable donation in the receptacle provided will be welcome.

Technical Talk

The monthly technical get together will take place on **Wednesday, 26 March** at the clubhouse at 20:00, but the door will be open by 19:30 so you can come early and chat, use the library or whatever. This evening we might have a talk on weather balloons, and will also start planning for the exciting **BACAR** project - *Balloon Carrying Amateur Radio* - which we decided last month to embark upon. A particularly interesting evening is on the cards.

PEARS AGM

Contrary to the statement in **Q5X** last month, it has been decided to hold the **AGM** in **May** to facilitate preparation and auditing of financial documents after the close of the financial year. Details of the date, time and place will be provided in the April issue of **Q5X**.

Meanwhile, any motions for discussion at the **AGM** must reach the **Secretary** in writing not later than **18 April**. A motion must be signed by the proposer and seconder, who must of course both be fully paid-up members of **PEARS**.

Subscriptions due 1 April

The financial year of the Society ends on **31 March 1997**, which means that the time for renewing our subscriptions is upon us. To make it easier to cook the books for the **AGM**, members paying cash are asked to cough up only on or soon after **1 April**. Cheques may be sent earlier, but Clive will only bank them after **31 March**, whereupon we will return his passport to him.

Those posting cheques are asked to include a note showing their birth dates and those of their **XYL's** (the *year* is not required), the **XYL's** name and their anniversary date. We find all too often that members have not been greeted on special occasions, but this is due to their details not being on record. For those paying direct to Clive, a form will be available for filling in the required details.

The subscription will be **R50** for a full member, **R30** for a family or student member.



A Word

from the Chair

Social activity within the Club has been somewhat low of late and your Committee has set about rectifying the matter.

Clive ZS2RT has drawn up a list of proposed activities for the remainder of the year (see page 4).

Now, all we require is your support. A braai, for example, or a treasure hunt is perhaps not everyone's cup of tea, but then again, if there is some activity in which *you* wish to participate but support from *others* is lacking, understandably you feel frustrated.

Remember, others feel the same when it happens to *them*.

Unfortunately, however, it cannot always be all play and no work. The Grahamstown repeater facility requires extensive reworking to accommodate new equipment and space for the battery back-up. A container has been delivered to the site and now the real task of refurbishment and transfer of equipment needs to be undertaken. This, of course, requires manpower.

Please support the efforts of the repeater working group, who intend tackling this project over the weekend 22 and/or 23 March. Let Chris ZS2AAW or Trevor ZS2AE know as soon as possible if you can lend a hand (their telephone numbers appear on page 15).

Once this work has been completed, we can all get together for a real social gathering at the site.

73,

Dick ZS2RS

General Meeting

The next Hamnet general meeting will take place on Wednesday, 2nd April at 1930 at the Municipal Disaster Management Centre. A number of important matters need to be discussed, so please make a special effort to attend.

Hamnet Simulated Emergency Contest

This contest takes place on Sunday, 6th April from 1400 to 1600 SAST on the forty metre band. No mains power to be used and antennas must be non gain with reference to a dipole. There are three categories: A – Single operator stationary mobile, serials starting with 201. B – Single operator portable, serials starting with 401. C – Multi-operator portable, serials starting with 601.

Fixed and mobile stations may, however,

give points. Their serials start with 801. Contacts with fixed stations will score as follows:

- ZS6: 1 point.
- ZS1, 2, 4, 5: 2 points.
- ZS3: 5 points.
- A2, C9, H5, S4, S8, V5, V9, ZS7, ZS8, Z2, 3DA0 and 7P: 10 points.

Contact with a portable or stationary mobile station will score double these points.

There is a multiplier of 2 for powers in excess of 50 watts PEP and a multiplier of 3 for powers below this.

Send logs to Hamnet Simulated Emergency Contest, P. O. Box 19005, Linton Grange. 6015

73

Al Akers ZS2U
Provincial Director,
Hamnet East Cape.

SOCIAL EVENTS FOR 1997

Your Committee has accepted a suggestion by Viv Moore ZS2VM that the Club has not offered sufficient social activities and that something is needed to generate a little more togetherness. A tentative schedule of events other than monthly club meetings and technical gatherings, put together by Clive Fife ZS2RT, was discussed at the last meeting and this is how it looks – but it is subject to change as circumstances require:

- March 23 Grahamstown work party and braai at repeater site
- April 26 Flea market
- May 18 DF hunt
- June 22 Treasure hunt
- Jul 18/19 VW Rally
- Aug ?? QSO party or other VHF function – or a visit to ZS1J near Plettenberg Bay
- Sept 27 Travelling supper
- Oct 19 DF hunt

Nov ?? Christmas dinner

The last treasure hunt, excellently and humorously set up by Owen ZS2AZ, was not well supported – maybe there was not enough publicity for it – but perhaps word has got around about how much fun it was and hopefully the next one will enjoy the support that it really deserves.

A *travelling supper* is a meal in which each course is served at a different location [No! Not that kind!]. Diners are carted from place to place by bus [No! Not that kind!] or other mode of transport, becoming noisier and noisier as the evening wears on [No! Not quite like that kind – we don't hood].

If you have any suggestions about this proposed, tentative, subject-to-change calendar of events, please let Viv Moore have them right away. Ω

NEW PEARS CERTIFICATES

Following the metamorphosis from branch to society status it was decided to scrap the certificates and awards previously issued by the Branch and create an entirely new set in their stead. After deliberation by the Committee the following will henceforth be issued upon application, subject to the conditions indicated:

CERTIFICATES OF ACHIEVEMENT

1. **VHF:** On achieving a minimum of 50 points, with endorsements for each additional 50 points up to a maximum of 200.

One point is scored for every contact within the applicant's own Maidenhead Locator System grid square, five points for each contact in an adjoining grid square and twenty points for each contact outside these areas.

"Grid square" means the four-character Maidenhead locator level, e.g. KF26.

All contacts must be made from within the same grid square.

2. **CW:** Recognising two-way radiotelegraph contacts with fifty *different* stations. Endorsements for 100, 250 and 500 contacts. A new certificate will be issued for 1000 contacts.
3. **QRP:** On establishing contacts with stations in twenty *different* grid squares. Endorsements for each additional twenty up to 100 grid squares.

The maximum power permitted is five watts output to the antenna.

Miscellaneous provisions

- Contacts must be *direct*, i.e. no

repeaters or relays may be used and no assistance from other stations is permitted.

- Only one contact with a particular station may be counted.
- Contacts made before 1 January 1997 do not qualify.
- Logs, signed by the chairman of the applicant's club or by two other amateurs, shall be submitted with the application to the PEARS Awards Manager.
- The decision of the Committee regarding eligibility of contacts and scoring will be final.
- Although the certificates will be issued free for the time being, the Committee reserves the right to raise a charge for future certificates.

OTHER AWARDS

1. **MERIT AWARD:** At the discretion of the Committee, this award is made to persons who have rendered outstanding service to the Society. The award is presented at the annual general meeting.
2. **ACHIEVEMENT AWARD:** At the discretion of the Committee, an award is made in recognition of a special or unusual achievement. It may be presented at any monthly general meeting or such other occasion as decided by the Committee. Ω

Fiddlers' Corner

Not just a piece of wire....

The Fuse

FROM *DIALOG*, FALSE BAY RECC

Fhe fuse is probably the least understood component in common use today. Furthermore, the popular belief that it is merely a piece of wire which melts when the current flowing exceeds the quoted rating is not only inaccurate but, under certain circumstances, a danger to the equipment which it is supposed to be protecting.

Ideal Protection

Before looking further into the operation of fuses themselves, let us consider what protection circuitry would be necessary if they had never been invented.

Firstly, the current flowing in the circuit would have to be continuously monitored. The most effective way of achieving this would be by means of a current transducer, the output of which would be fed to a microprocessor via an analogue-to-digital converter.

The micro would need to determine whether excessive current flow was due to a natural variation, for example the initial surge due to capacitors charging on switch-on, or due to a fault condition. This, of course, would be incorporated in the software which numerically integrates the current, giving a measure of the thermal stresses in the protected circuit, match this against a map of the safe operating area of the particular circuit.

Assuming that this can satisfactorily be achieved, on detection of a fault condition, the output signal must then open the faulty circuit. This would most conveniently be achieved by a small power amplifier driving a circuit breaker capable of breaking the maximum fault current, which in mains circuits may well be in excess of several hundred amperes.

Such a protection circuit could doubtless be

developed and, when placed on the market, sell for several hundred pounds. In practice, the designer would not even consider such a complex solution - instead he or she fits a miniature fuse.

Surprising as it may seem, the miniature fuse performs all the functions described previously and at a cost of only a few pence as long as the correct type and rating has been specified in the first place.

Fuse Characteristics

Most users select a fuse according to its rated current (I_n), believing that above this level the fuse will blow, thus safeguarding the circuit. This is a misconception, for the rated current is that which the device will carry continuously without degradation. Thus if the normal current in a circuit is 500 mA, then that is the rating of fuse which should be fitted. To cause the fuse to blow, the current will have to be much higher than this. The lowest current which will cause the fuse to melt is called the minimum fusing current (I_m) and its ratio to I_n is called the fusing factor. Typically the fusing factor is in the order of 1.5-2.0. Thus a 500 mA fuse will normally fail at a current between 750 mA and 1.0A.

Considerable difficulties are experienced in determining I_m and the fusing factor, but these are circumvented by specifying current levels at which the fuse should not

(or should) break within a given time. These levels are called the conventional non-fusing current and conventional fusing current respectively.

A typical specification for this is the BS 4265 requirement for miniature fuses which requires that the fuse under test should not fail when tested for one hour at $1.5 I_n$.

A fuse's country of origin is important. For example, in the United States, standards require that miniature fuses should break within one hour at $1.35 I_n$. In view of this, fuses from European and US sources are not generally interchangeable.

A further consideration in the specification of a fuse for a particular purpose is the time necessary for operation when subjected to a high fault current. For example, a time delay or anti-surge type will take far longer to break than a fast acting fuse. Fast acting fuses to BS 4265 (Cat F) must break within 20 ms at $10 I_n$ whilst anti-surge types (Cat T) must take from 20 to 300 ms. Super-fast-acting and super-time-lag types are also available.

After the Break

Another misconception is formed by the belief that once the wire melts, that is the end of the operation. Nothing could be further from the truth, for the failure of the wire is only the prelude to the most important part of the operation - the arcing period.

As the fuse element disintegrates, current flow does not cease immediately but

continues through an electric arc. The duration of this arc (known as the arcing time) is very dependent on the parameters, and particularly the inductance, of the circuit to which it is attached. So important is this, that the period is often further broken down to itemise the period immediately prior to melting, referred to as the pre-arcing time.

When the arc is established, it effectively inserts a high resistance within the circuit, rapidly decreasing the current which eventually falls to zero.

It is possible to design the fuse such that the arc voltage greatly exceeds that of the supply, with the result that the fault current is rapidly eliminated with consequent reduction of the stresses imposed on the circuit. This is usually achieved by embedding the fuse element in a sand filler which constricts the arc diameter, considerably increasing its resistance and giving rise to the rapid current limiting action required.

Fuse Safety

The installation of a fuse is the cheapest and most effective circuit protection available today. To achieve this, a fuse with the correct characteristics and of the correct rating has to be chosen. It is hoped that this short article has given constructors an insight into the design and characteristics of fuses, enabling a choice which will provide both economic and effective circuit protection. Ω



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A HANDY QUARTZ CRYSTAL CHECKER

DREW DIAMOND VK3XU IN *AMATEUR RADIO*, FEBRUARY 1988

From time to time we find it necessary to check a crystal for activity and/or frequency. For instance, in trouble-shooting an oscillator circuit, it would be helpful to know if the crystal was good before checking elsewhere in the circuit.

By making the checker pocket-size and battery powered, we may take it along to 'white elephant' sales or parts shops so that a crystal may be given at least a functional check before buying.

If a frequency measuring device is available in the shack or workshop, such as a counter or calibrated receiver, it is possible to make a reasonably accurate measurement of the crystal frequency.

With an appropriate crystal, the device may also be used as a simple signal source for receiver work, or as a marker generator to identify a specific frequency where no other accurate calibration method is available.

Even after much delving and experimenting I was not able to produce a simple "universal" circuit which would drive crystals marked in the 100 kHz to 24 MHz range. Upon reflection it will probably be agreed that most fundamental crystals for radio, electronics and computer work lie in the range of perhaps 1,8 to 24 MHz; so a circuit providing at least this range was aimed for.

With the addition of a switch to connect an extra capacitor, crystals down to 455 kHz (the lowest in my collection) may be checked. Overtone crystals, e.g. 27 MHz or 36 MHz etc. will be excited on their fundamental frequency, i.e. 9 and 12 MHz respectively.

So, the final circuit arrangement should prove useful in checking the majority of crystals used by amateurs, experimenters and computer buffs.

CIRCUIT DESCRIPTION

The final circuit (Figure 2 on the next page) was empirically designed, and is based on the Colpitts configuration. For fundamental crystals in the HF range, from about 2 MHz to 24 MHz, the capacitive voltage divider consists of C1 in series with C2. For crystals in the MF range, from about 0,5 MHz to 2 MHz, C3 is switched in parallel with C2 to optimise the divider ratio for lower frequency crystals.

When the crystal is oscillating, the AC voltage developed across R2-L1 in series is applied to the voltage doubler C5, D1, D2, C6. The positive voltage thus established across C6 injects a current through R3 into the base of Q2, whose collector current flows as a direct result. The LED in series with Q2 and R4 will illuminate in rough proportion to base current, and by implication indicates crystal activity - the more active the crystal, the brighter the LED.

CONSTRUCTION

A small printed wiring board (Figure 1 shows an actual size board) accommodates most of the components, although any desired form of construction may be employed to suit individual resources. The crystal connection method may also be left to individual taste. To accommodate all crystal types would require up to five different kinds of connector.

My own suggested approach is two ordinary banana sockets, spaced 0,75 inches (traditional spacing going back to the early

days of radio and still in use). Only some of the very old style crystals may be directly inserted. However, it is a simple matter of plugging paper clips or similar into the rather large holes to make a 'universal' connection to the crystal being tested.

The checker may be housed in a plastic or metal box measuring about 120 x 55 x 30 mm. The banana sockets can also serve to attach the circuit board to the lid of the box. If the nuts are used, make sure that the nut securing the 'hot' banana socket (marked Y on the PCB) clears the nearby earthy track.

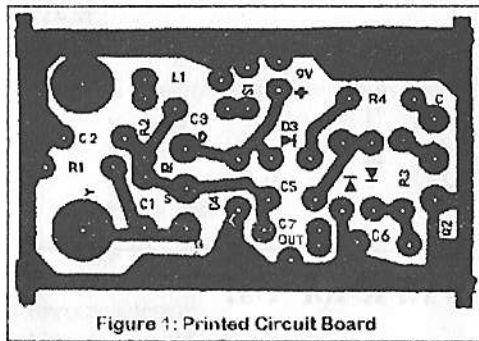


Figure 1: Printed Circuit Board

The LED has been placed at the approximate geographic centre of the PCB, so the lid needs a small corresponding hole for the LED to protrude through. The two switches and the output connector may be mounted on the lower part of the lid. Polarities of the FET, transistor, diodes and battery must be strictly observed.

With the box described, it will be found that the nine volt battery will fit snugly in the lower part of the box. Other boxes may require the battery to be fixed in position by some method, perhaps with a blob of "Prestik" or similar. [Since the checker will probably be used only occasionally, a viable alternative is to simply bring out a pair of wires fitted with terminals to match an

external PP3 9v battery, as Viv ZS2VM did with his checker-Ed.]

For the visually handicapped user, there is room to include a piezo buzzer to provide an audible indication. The piezo is connected in parallel with the LED as shown on the circuit.

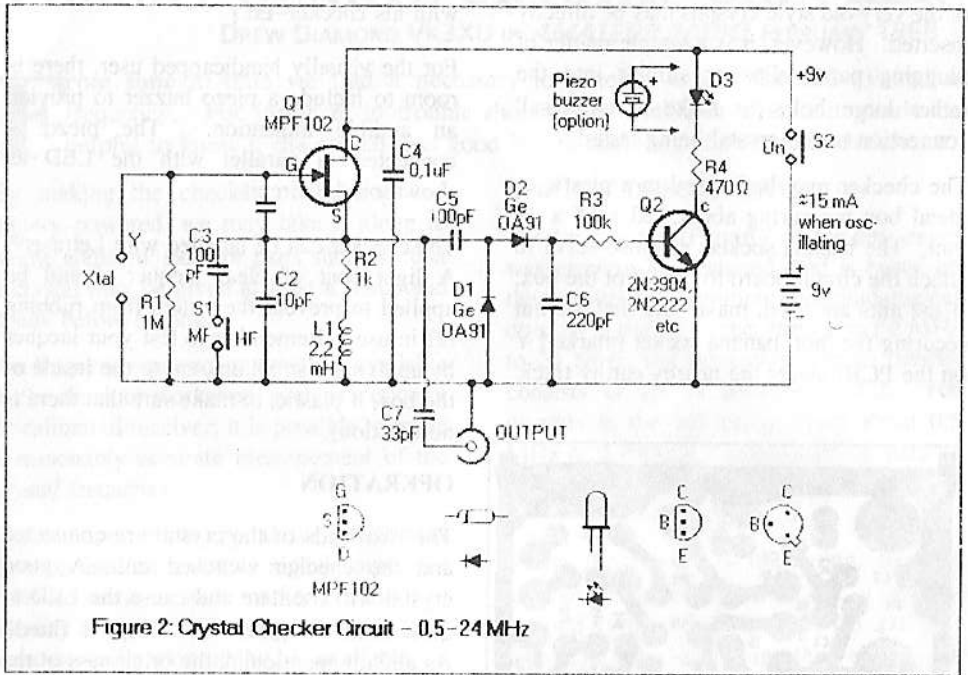
The checker can be labelled with Letraset®. A light coat of clear lacquer should be applied to prevent the letters from rubbing off in use. (Remember to test your lacquer by applying a small amount to the inside of the box, if plastic, to make sure that there is no reaction).

OPERATION

The two leads of the crystal are connected and the checker switched on. A good crystal will oscillate and cause the LED to glow (and the piezo will 'beep' if fitted). As already mentioned, the brightness of the LED gives some indication of crystal activity.

The division between 'MF' and 'HF' crystals is not sharp, so if a particular crystal at say 1.8 MHz will not oscillate in the MF position, then try the HF position. It may be noted that some really active crystals will oscillate with only the 'hot' lead connected. Stray capacitance to the metal parts of the checker and hand capacitance are supplying the return path for the crystal under these circumstances.

To use the checker as a signal source, connect your crystal of appropriate frequency and place the checker near the receiver input connector. It should not be necessary to make a direct connection to the receiver input. A small radiator, such as a piece of stiff wire, may be inserted into the output connector to radiate a signal into a nearby receiver. Ω



Affiliation: What's in it for Us?

A member recently asked on our bulletin net: "What benefit will the Society derive if we affiliate with the SARL?" Many others have posed the same question, and from the replies offered there seems to be only one tangible benefit – use of the QSL bureau for cards arising from the use of PEARS' callsign ZS2PE (e.g. field days etc.).

True, PEARS would be able to place motions on the SARL AGM agenda and cast a vote. Perhaps, via this route, a non-member of the League could also have an item discussed at the SARL AGM as a PEARS motion. But then, he could just as easily find a local League member to submit it.

While affiliation might suggest general support for the SARL and what it does to protect our interests, the League could hardly impress the authorities with the fact that various clubs are affiliated. Since, for affiliation, 70% of their members are required to belong to the SARL in their own right anyway, they are already accounted for in the League's strength, and the authorities are concerned with *licensees*, i.e. people.

Our library would receive a copy of RADIO ZS

every two months, provided of course that PEARS pays the additional subscription for this.

In general, it seems that affiliation amounts to little more than a token of camaraderie and a contribution towards the League's running costs., while direct membership by licensees provides the real strength to the League's arm. What do *you* think? Let's have your views.

- ❑ Only 71 of PEARS' 143 paid-up members are also SARL members, so we do not qualify for affiliation. However, we understand that a motion to scrap the 70% requirement will be discussed at the forthcoming League AGM. [Did I hear somebody say "We *told* you so?"]
- ❑ Talking of the AGM, the SARL constitution requires that notices thereabout should be posted to members at least three weeks before the event. Allowing for postal delays, this hardly gives one time to study the motions, discuss them with others and possibly do research if one wants to speak meaningfully on them at the AGM. With less than two weeks to go now, nobody seems to have received their notices yet. Ω

**MINUTES OF THE GENERAL MEETING OF THE PORT ELIZABETH
AMATEUR RADIO SOCIETY, HELD AT THE MUNICIPAL DISASTER
MANAGEMENT CENTRE, MILL PARK, PORT ELIZABETH ON
FRIDAY, 21 FEBRUARY 1997**

Present & Apologies: 26 members attended, as per register.

Welcome: Beavan ZS2RL acted as chairman in the absence of Dick ZS2RS who was ill and Chris ZS2AAW who was on honeymoon. He welcomed all, and in particular the guest speakers Rod Johnstone and Mike ZR2LM from AUTOPAGE.

Guest speaker: The meeting commenced with the talk by Rod and Mike on the functioning of their paging and alarm systems. It was most informative and elicited many questions from the floor.

At the conclusion of the talk, the customary tea break was replaced by a smoke (koff!) break, for the simple reason that the tea urn had suffered an untimely death.

Minutes of the Previous Meeting: Adopted - Proposed Owen ZS2AZ, seconded Viv ZS2VM.

Matters Arising: None

Finance & Membership: Report by the Treasurer Clive ZS2RT -

Savings	- R4 837
Investment	- R16 177
Fully paid members	- 143
Partly paid	- 17

The QSX Manager Trevor ZS2AE reported that erstwhile members who had not paid any subs had been removed from the mailing list for QSX.

Correspondence:

1. Clive ZS2RT reported that SARI HQ had requested a list of our members, on which they would mark which are SARI members. This will enable us to establish our eligibility for affiliation to the SARI.
2. The Secretary was requested to write to the SARI and request an updated list of clubs with addresses etc. so that we could update our QSX mailing list.

General:

1. Vic ZS2SZ returned equipment which belonged to PEARS and had been stored in his garage (DF equipment etc.)
2. The Awards Manager Viv ZS2VM showed members the new-look certificates which would be awarded to members for meritorious activity. They looked good indeed.
3. On the white board, Clive ZS2RT listed proposed social functions for the remainder of the year. These would be published in QSX.
4. Raphie ZS2SP has a fully functional veteran 70 MHz transceiver (by PYE) plus matching mobile unit which is looking for a good home, gratis and for nothing.
5. Beavan ZS2RL reported that the matter of RFI from prepayment electricity meters will be taken up by a national technical committee which is in the process of developing specifications for these meters.

The meeting closed at 21:50.

PEARSTALK

List of Members

Although it was decided some two months ago that a list of PEARS members should be published in QSX, it seems appropriate to hold this over until the new financial year, considering that one published now will probably be out of date in a month's time.

By then, too, the new ZS Callsign book will hopefully be out and those whose callsigns do not appear therein, and who have not had their callsigns reported in QSX in the past year, are asked to *please* make a point of informing the Treasurer Clive ZS2RT of your callsign and other relevant personal details.

Hamnet exercise a success

An exercise on 24 February in which an aircraft supposedly crashed in the Giant's Castle area involved the Disaster Management services, the Air Force, the 4X4 Club, etc. as well as Hamnet, who manned stations at both Giant's Castle and Johannesburg as well as in one or more helicopters.

Although one of the Johannesburg operators tended to speak too fast,

necessitating several repetitions, the organisers of the exercise were most satisfied with the accuracy and efficiency with which the amateurs did their thing. Their only complaint about actual operating was that the hams used Q codes which were not understood by members of the other participating services who were also monitoring the amateur transmissions.

This vindicates the occasional prodding in QSX about operating habits. The moral of the story is, especially when dealing with emergencies, to practise speaking plain language and cut out jargon. For example, say Rands, not Ohms; Doctor, not Man in the White Coat; Mercedes, not the Car that Starts with an M, etc. And, of course, that 'QSL?' thing when you mean 'over'.

Ham jargon is fun on occasions but should not be done to death, and especially should not become one's standard ham speak.

The aforementioned Johannesburg operator, by the way, has lately been heard passing information at proper dictation speed.

FOR SALE ★ WANTED ★ SWOP

FOR SALE

- ★ Kenwood TS-50 compact HF all-mode transceiver - R3500; Kenwood TH79A dual-band (2m/70cm) handheld - R2200. Both as new. Credit card facilities available - Colin Robertson ZS2CR, ☎ 0431-55439 after hours.
- ★ Atlas 210X 80-10m (28400-29400) HF transceiver - R1000 o.n.o.; CB radios: 2xAM @R100 each, 2xSSB @R250 each; 2 x 29MHz xtal-controlled radios R100 each.- Viv Moore ZS2VM, ☎ 30-4433.

WANTED

- ★ FT101 power transformer *even if it's burnt out* - André Botes ZS2ACP, ☎ 57-3850 (work) 73-2058 (home) or write 3 Marisa St., Kragga Kamma 7060.

Our Oldest Member?

In response to our query last month, we were pleased to receive the following comments from OM Van, ZS2Y: "Nice to note that, even with complete absence of Ham activity, I still occasionally make the pages of QSX-PE even if it is the somewhat dubious distinction of being the oldest member. Makes me feel positively ancient Hi!

"Yes, regretfully I think I do qualify having joined the P.E. branch of the then SARRL (note the second R subsequently dropped because we didn't do any relaying) in the middle of 1934. My licence was issued on the 12th November 1935 which, at age 16, made me the youngest ham in S.A. In those days it was called an Amateur Radio Experimenter Licence and mine was No. 225. To obtain your licence in those days you had to state what experiments you were going to conduct, I was going to experiment with Ultra Short Waves. I did too and around 1939 set up a record for 1¼ metres (220 MHz) by communicating from the Lady's Slipper to P.E.

"Dudley Forsyth ZS2AW was licensed around 1937 and issued the call sign of ZU2D. At that stage we had ZS, ZT and ZU calls. I was lucky I got a ZS call from the start. Dudley is still active so on that score he is streets ahead of me.

"Sorry I'm not active, but am still working, as a consultant to the Western Region District Council, which satisfies my craving for radio activity. Am retaining my licence for when I retire, but by that time it may be too late as possibly where I will be retiring to there is no Ham radio Hi!"

So there you have it, as the saying goes. Is there anybody out there who can claim earlier membership of the PE Branch? In any case, how about some memoirs from the older hams?

Other Member Activities

Chris White, ZS4ABS, and Lydia recently undertook a trip to Katima Mulilo in the Caprivi Strip, Namibia. He reports that they passed through Gaborone and doing well, still

driving in rain since Zeerust. Chris continues:

"It's a beautiful country, well worth seeing. A word of warning - do not carry too much liquor as you will pay import duty on it. Also, don't take any red meat as it will be confiscated. Wear your seat belts at all times and do not exceed the speed limits, which often change down to 80 or 60 kph! Fuel is cheaper in Botswana and credit cards are accepted. Some places will even accept Rands, but then a Pula (usually R1.35) can cost R1.65.

"Just before Nata there is a very nice lodge with a welcome swimming pool and bungalows. From Nata on to Chobe one must drive with care as there are plenty elephant on that 300 km stretch. Up to this point the roads were good and all tar. At Kazungula, near Chobe, one can cross the border into either Zimbabwe for Victoria falls, a mere 72 km away, or into Zambia and on to Livingstone.

"From Chobe there are 60 km of gravel road through the game reserve. This road is presently under construction and will soon be good to travel on. From the Namibian border you have 60 km of poor gravel road.

"Katima is a beautiful and green little town on the Zambesi river. There are a few lodges where one can stay on the river. Swimming is not advised as there are lots of hippo and crocs around!

"Often one has to stop at what they call 'cattle check points' and one is asked for your driver's licence. Some stretches of the road are widened for aircraft to land on. On the return trip, we turned away from the main road at Serule, going to Martin's Drift. The first 15 km was in poor condition with pot holes and deviations, but work on that stretch should soon be finished and it will also be a nice road to travel on. As this road is used a lot by heavy vehicles and the Gauteng travellers, this border post is very busy. From Martin's Drift one can take either the Potgietersrust road and the N1 or, as I came, via Ellisras, Thabazimbi, Rustenburg, which is a nice road and quieter than the N1.

"In all, it is a trip to be recommended." Q

Congratulations...

on your birthdays:

March

28 Joey Tyler XYL of Bernard ZS4CW

April

- 2 Eddie Coetzee
3 Ria XYL of Garth ZS2HB
4 Iona XYL of Eric ZS2CV
5 Mike Jones ZS2MJ
Heather XYL of Jimmy Hooie
ZS2ABM
9 Piet Blom ZS2PB
11 Simone Pukall Olivier ZS2YL
13 Graham Butcher ZR2GIB
16 Hans Rohwer ZR2AX
Schalk vd Merwe ZS2Y
17 **Allan Ansell ZS2AJ 80 today!**
18 Jock Morris ZS2MD
19 Margaret XYL of Waidie Bartie
ZS2WM
20 Trevor Scarr ZS2AE
Joey XYL of Des Petit ZS2ABU
Glenn Weiss

on your anniversaries:

March

- 26 Simone & Keith Olivier ZS2YL/-
ZR2AAX
Des & Alan Paulsen

April

- 6 Wolf & Cathy Gerstle ZS2WG
Judith & Bob Urquhart
8 Marlene & Andrew Gray ZS2G
10 Sel & Rietjie Staples ZS6SS
14 Margaret & John Raven ZR2ABH
15 Jack & Claire Smailes ZS2SM

Octogenarians: Mike Smuts ZS2XE turned 80 on 10 March, while Alan Ansell ZS2AJ will catch up with him on 17 April. It's an honour to have such up-and-about youngsters in our midst. We salute you, Mike and Alan, and trust that you will grace our Society with your presence for many years to come.

Moving About: Mike Smuts ZS2XE and XYL are taking a slow boat to Mombasa for a month or two.

Not Moving About: Dick Schönborn, ZS2RS, hasn't been to the UK for over a month now!

New Candidates: Hearty welcome to the 1997 first-session RAE candidates Rafiq Manan, Elizabeth Chatterton, Andrew Sinclair, Nicolas Thomas, Neil Thomas (Nic's dad), Johan Smit, Ron Fitzmaurice, Louis Grasman, Colin Savage, Gavin de Villiers, Grant Kruger, Michael MacMillan and Christo Krog. Christo does not intend to write the RAE but is attending in order to brush up on his electronics. Similarly, Grant Kruger and Michael MacMillan are attending this session although they passed the RAE last year. Great stuff, chaps!

Those who are writing in May must ensure that their applications reach the Regulator not later than 26 March!

SARL Bookshop Catalogue available

Clive ZS2RT has an up-to-date list of books available from the SARL Bookshop. Give him a ring if you are interested in examining it or wish to ascertain the price of a specific publication.

Q

Your Society's Committee

Chairman; Special Events	Dick Schönborn ZS2RS	38-5070
Vice Chairman, Repeaters, Packet	Chris Scarr ZS2AAW	38-1344
Secretary	Beavan Gwilt ZS2RL	30-6968
Treasurer; Assets Control	Clive Fife ZS2RT	32-3203
assisting with Assets Control	Lynne Crothall ZS2MM	35-4671
Social, Awards	Viv Moore ZS2VM	30-4433
assisting with refreshments at meetings	Bill Hodges ZS2ABZ	51-2580
QSX Manager	Trevor Scarr ZS2AE	32-1746
assisting as QSX Editor/layout	Garth Laaks ZS2HB	38-1101
Technical Classes	Al Akers ZS2U	30-2983

PEARS' VHF & Other Services

REPEATERS

Town VHF	145,050/650	Kareedouw	† 145,125/725
Town UHF	431,050/438,650	Knysna	*145,050/650
Cockscomb	145,000/600	Lady's Slipper	*145,100/700
Cradoek	145,050/650	Uitenhage	145,075/675
Grahamstown	*145,150/750	Theescombe	† 145,175/775

* The East London 145,125/725 MHz repeater and the George repeater on 145,100/700 are linked to PE's long-range 2m repeater system.

† These are privately owned repeaters and are not included in the PEARS linked repeater system.

OTHER SERVICES

Packet Bulletin Board (ZSØNTP)	144,625
Packet Rose Switch (ZSØGHT-3,046101/046102)	144,675
2m Beacon (ZS2VHF CW ID)	144,910
6m Beacon (ZS2SIX CW ID)	50,005
6m Link with Lady's Slipper 2m Repeater	51,400
Wefax Relay (Meteosat)	145,350

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 and environs via repeaters on 145,750 MHz (Grahamstown), 145,700 (PE Slipper), 145,650 (Knysna), George's 145,700 and East London's 145,725. PEARS' 7098 or 3640 kHz transceive facilities are also remotely linked as needed. In addition, the SARL's 40m transmissions on 7082 or 7066 kHz can be remotely patched into the 2m network.

Date	Prepare and Read on 145,750	DIARY DATES
16 Mar	ZS2AE	MARCH
23	ZS2RS	21 PEARS monthly meeting
30	ZS2RT	26 Technical evening
6 Apr	ZS2VM	APRIL
13	ZS2U	6 Simulated Emgcy Contest
20	ZS2AAW	17 80-Metre QSO Party
		26 Marconi Day

*** We Like Being Your Society! ***