

THIS NEWSLETTER IS PUBLISHED BY THE
PORT ELIZABETH AMATEUR RADIO SOCIETY

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LINTON GRANGE

C015

February 2000

NOTICE OF MEETING

The monthly general meeting of the PORT ELIZABETH AMATEUR RADIO SOCIETY will be held on **Friday 18 February 2000** commencing at 20 00 (8pm) in the Municipal Disaster Management Centre, Westview Drive, Mill Park, Port Elizabeth (Civil Defence Centre).

Mr. John Lemon will talk on the **history of the VW Beetle**. He is a fundi on the subject and has put together a very interesting discourse about this much-loved little motorcar. Those who heard and saw John's discussion of the de Havilland Comet aircraft will not want to miss this one.

Business will be conducted *after* the refreshment break and Garth ZS2HB will also reply to any questions on the Chairmen's Indaba held on 22 January.

During the break you will be able to enjoy a cup of tea or coffee and a couple of biscuits.

Wrinkly Ravers

The **next rave** is scheduled for **Thursday, 2 March 2000** at the Zwartkops Yacht Club Clubhouse. Any time between 12:00 and 12:30 is a good time to arrive and place your order while you chat to some of the best gassers in the southern hemisphere.

The Bushies rave at the holiday QTH of Julie and Trevor Scarr on 8 January was, as expected, another great and memorable occasion for PEARS members, families and friends. Some 60 odd people turned out and had a good time in excellent weather in spite of early fears of rain and wind.

Our thanks to Julie and Trevor and their helpers for their hospitality.

MEMBERSHIP OF THE SARL

Elsewhere in this issue we deal with the urgent need to boost membership of the SARL, highlighting the fact that most of the factors that gave rise to the drop in membership have been attended to.


Please read the article carefully and give serious consideration to joining (or rejoining) the SA Radio League in the true interests of

amateur radio - a *unique* hobby, *your* hobby, the hobby that has provided you with so much fun and so many instant and genuine friends.

STOP PRESS-The President of the SARL will possibly visit us during the weekend 19/20 February. Listen to the bulletin and 2 metres for details

Supporting the SARL is now more important than it ever was. Importantly, there are strong indications that the League will henceforth

be run the way the *members* want it run. No more tail wagging the dog!

Do join now and help to turn the tide. 



A Word *From the Chair*

Judging by the activity on VHF during the PEARS contest weekend, the event was a great success. I was very pleased to be part of the fun, and made my very first simplex contact all the way to Div 5. This was thanks to Louis ZR2J dropping off his FT225RD for repairs that Saturday afternoon.

I had been listening on VHF FM on the Friday evening, and heard lots of activity from East London and Mossel Bay. After checking the FT225 on the test equipment, it showed that sensitivity was good, but faded away intermittently. Even with its sick condition, I was able to couple it up to the 5el Yagi and get enough stable operation time to manage a contact with ZR5ADQ on SSB.

The East London chaps were coming through to PE very well most of the time too, so it was not too difficult to get some contacts down on paper. Thanks to Mike and Al for organising and publicising the event.

The SARL chairman's Indaba is now a thing of the past. I was not too impressed with how the latter half of the meeting was handled, but the SARL HQ now has their mandate to allow the reincarnation of branches. In my opinion they will need to do more to actually attract their members back into the fold before establishing branches will help things. *But my feeling is still to support a national body, so let's see if we can help them to get it right.*

And on a similar note, we have cleaned up our own mailing list, and hence those members who have not renewed their subs since last year have been deleted from the mailing list. All clubs that did not respond to our request for confirmation of remaining on the QSX recipient's list have also been removed. The days of lots of freebies have long gone, unfortunately. So to those that receive this QSX – we dearly love your support, and we thank you for making us such a great society!

73,

Chris ZS2AAW

HAMNET / ECARES NEWS

It is as well to restate Hamnet/ECARES policy from time to time for the benefit of new members and to refresh the memories of others.

With everyday emergencies which are handled by the various emergency services, we would not normally be required. It is during major disasters when these services' communications systems are overloaded or possibly even out of action that we play a valuable role. We can also be of assistance if we are the first on an emergency scene who are in a position to assist.

It is seldom that we are likely to be involved with emergency communications, so members may feel that constant preparation for this is a waste of time. I certainly do not advocate rushing around like busy little bees preparing for emergencies. What I do suggest are the following:

- Whenever convenient, monitor one or other of the emergency frequencies. Be a good operator. You can achieve this and have fun in the process by assisting with comms for the VW Rally, enter contests and work DX.
- Be prepared for any emergency. See that you are not literally left in the dark if

there is a mains power failure. Provide some lights and some means of cooking.

- Have at least a basic medical kit handy. Make sure your equipment is functional and that you have power to operate the equipment for a reasonable time.
- Have a list of items you would require if you need to go somewhere to assist with an emergency.

This may be regarded as the basic requirements and no doubt you can think of a number of other things you can do. It is up to the individual to decide just how much preparation he or she needs to make.

General

Welcome to Bill ZS2ABZ, who has joined ECARES. Bill has a PRC77 now and it was good to have him on the six metre net on Wednesday, 26th January. The net seems to be looking up as we had a total of five members on that evening.

73.

Al Akers ZS2U
Provincial Director,
Hamnet East Cape/ECARES

JUNIOR PEARS — A COLUMN BY GREG MAYNARD ZS2RE

Howzit okes. Hope that all you okes had a really cool Christmas and New Year. I spent Christmas in Johannesburg with my family and then went to Sedgefield to spend New Year with my fiancée and her family. I had a really cool time exploring the Garden Route from Plettenberg Bay to Mossel Bay.

Enough of holidays, it is time to get down to some serious work. I mentioned at the end of last year that we were going to get together for a social at the beginning of this year.

Well checking out the diary and stuff, we are going to do some-

Junior PEARS Social Nite

When: Saturday 4 March 2000

Where: Greenacres Entertainment Centre

What's happening: Ten Pin Bowling

Time to Meet: 19h30 SAST

Time to Finish: 22h30 SAST

Bring: Some cash and 20 of your closest friends.


Check you all there.

Cheers

thing on Saturday 4 March 2000.

We are going to play Ten Pin bowling and stuff. The panel alongside tells you all about it. So come and join the rest of us okes. We want to meet you.

Enjoy the rest of this month, catch ya in March.

Cheers - Greg. 

THE SARL NEEDS YOU!

PLEASE READ THIS! PLEASE READ THIS! PLEASE READ THIS!

At the Chairmen's Indaba in Johannesburg on 22 January, the proposals by SARL Council for the reconstitution of the League were defeated. Nevertheless, the idea of re-establishing branches was well supported and, after much discussion mainly about the shortcomings of the League, it was decided by 64 votes to 1, with one abstention, to submit a motion to the forthcoming AGM to amend the *existing* Constitution to *permit of the establishment* of branches.

This does not mean that branches will be established right away if the motion is adopted. A committee will be appointed to go into the desirability of actually doing so and, if appropriate, it will propose the wording for further amendments to the Constitution that will lay down the rules for the administration of branches as and when they may be created.

It was made quite clear that there is no intention to force clubs to become branches. In fact, the SARL has no power to do so. Clubs and branches could co-exist side by side, but in order to become a member of a *branch* one would obviously have to join the *League*. It was further stated that the League would have no claim on the property and funds of branches.

Club members, as at present, would be under no obligation to join the League. This, of course, is a major drawback that arose when a majority of SARL members voted to dismantle the former branch structure four or five years ago. (One wonders how many of them are still members!)

Port Elizabeth did not favour the change then, and in fact submitted a motion to the 1998 AGM to revert to the branch system in order to revitalize the League. It was defeated. Two years down the line the League is in a far worse position, and the wisdom of our motion has finally sunk in.

But the League is under new management, and the new President is steering the organisation in a more popular, user-friendly direction. However, no matter how hard he tries, the League will go nowhere without a good deal more support from hams. There are currently a mere 1200 members – a lot fewer than when HQ was transferred to Johannesburg.

Of course, things unfortunately cost more in Gauteng, and we are unable now to do anything about that. What we have to do is increase membership so that the League's costs per member come down, and thus also the subscriptions.

HQ estimated that, with 2500 members, subs could be fixed at R125 per member per year. With 3000 members it could drop to R100. But an AGM *can not fix a lower subscription* on the strength of *promises* that people will join if subs are reduced. Promises have evaporated too often for any organisation to work on that basis.

PEARS has decided to embark on an SARL membership drive on the basis that applicants complete the SARL application form *and attach a cheque* for the maximum amount that they are prepared to pay, which should be not less than R100 but preferably R125 or more.

Remember, for a R125 sub to be adopted at the forthcoming AGM we

need to have 1300 *guaranteed new* members. A sub of R100 would require that 1800 new members must join. We know we will not get that in the first year, but if there is a meaningful increase in membership this coming year, others will be inspired to join and the effect will hopefully snowball.

The point is that, if those who have had objections based on costs and/or personality differences will put their money where their mouths are, we can revitalize the League and, by nominating and electing the people we want to represent us on Council, we can really get things going.

So we appeal to all non-SARL members to join forces now, complete the enclosed application form and attach a cheque, crossed and signed and made out to the **SA RADIO LEAGUE**. Return it to **PEARS** so that our representative at the AGM can show, without any argument, how many *guaranteed* additional members we can offer if the price is right.

If the AGM is not prepared to accept the applications at the subs offered, the cheques will be returned by **PEARS** to the applicants for cancellation.

We are asking other clubs to do the same so that we can possibly approach the 2500 member level nationally, and perhaps even exceed it – who knows?

But please! Fill in the form *now* and post it back to **PEARS** with your cheque. Indicate the maximum amount you are prepared to pay, both on your cheque and in the space provided on the modified application form. Our representative will take all applications and cheques to the AGM, and a few months might elapse before you hear whether your offer can be accepted.

In this regard we appeal to you *not to put a figure lower than what you really can afford*. Existing members should please not raise eyebrows at

the thought that newcomers might be accepted at less than *their* standard subscription.

Remember, it is the *increase in membership*, i.e. these newcomers, that will bring about a reduction in *everybody's* fees. That reduction could conceivably take effect from the coming 2000/2001 League year anyway. And, of course, newcomers in many fields are *often* attracted with special rate offers.


If you know anyone who is not a member of the SARL or **PEARS**, and thus will not receive this appeal via QSX, please photostat the application form and twist his/her arm to join, if possible at the standard applicable rates. But, if he/she really can not afford that, get him/her to make out a cheque for R150, R125 or even R100.

Remember, the League is under new management. The personality problem that got many people's goat has been addressed, there are signs of new life at HQ, and now it's up to the hams to play their part.

It is a fact that we need a League to look after our affairs with the authorities and the International Amateur Radio Union; to co-ordinate activities nationally; to provide a QSL bureau; and generally to keep amateur radio alive and well for our benefit.

The League, and in this sense we mean the Councilors and HQ staff, work hard for us, largely behind the scenes, even if only one or two of them seem to hit the headlines most of the time. Without them, the League would fold.

So long as they do the bidding of the members, they deserve the support of every ham. Hans Potgieter intends to do just that, so let us rally around him and get the League back on track in 2000.

Complete the application form and attach your cheque, and post it to **PEARS today!** Next month is *too late!* 

PARABOLIC REFLECTOR FOR SOUND

A 'beam' for your microphone

BY AL AKERS ZS2U

Apart from the more obvious uses of microphones, such as with transceivers or amplifiers for talking or singing, they may also be used to pick up a variety of sounds such as birds singing, insects chirping or other noises. This may, of course, be just for the fun of it or for some specific purpose.

Using a parabolic reflector with a microphone provides increased sensitivity and directivity, which means that you will be able to hear weaker sounds or sounds from further afield and you will be able to pinpoint the source of the sounds. You could buy such a system, but it will probably be difficult to obtain and may cost the earth anyway, so why not make it?

There are several factors to consider when building such a system. Let us examine these.

Microphone

As the microphone is in the path of some of the received sound, it is advisable to use as small a microphone as possible. The response curve (omnidirectional, bi-directional, cardioid etc) should also be taken into account, as also the frequency response and sound pickup characteristics.

A good choice would be an electrostatic microphone because they are small (about 10mm diameter) and are sensitive to more distant sounds, as opposed to close-talking microphones. They also have a good frequency response, rather too good at the low frequencies, but this can be compensated for in the amplifier.

An omnidirectional microphone (with reflector) will provide a better low frequency response than a unidirectional microphone. This may be an advantage or disadvantage,

depending on your requirements.

Parabolic Reflector

The material it is constructed from has an effect, but it seems that as long as the surface is hard and smooth, it will work well. Probably the most suitable material to use is fibreglass.

Your next consideration is reflector size. The audio frequency range is very wide and for good gain and directivity the reflector must be large in terms of wavelength at the frequencies you need it for. That means if the frequencies required are low, the reflector will be very large, but can be quite small for high frequencies.

Normally the choice would be from 300mm to 600mm in diameter, which is a size you can handle comfortably and will exhibit good gain and directivity from about 1000 Hertz to 10 000 Hertz. Maximum gain will be somewhere round 7 500 Hertz and will be about 15 dB with a 300mm reflector and 19 dB with a 600mm one.

What focal length to use? See Fig. 1. A large focal length gives a shallow reflector and a small focal length gives a deep reflector. The latter provides a smoother frequency response, but is somewhat heavier and more cumbersome to handle. It does provide more shielding of the microphone from the wind. Recommended values are between 80 mm and 180 mm.

To serve as a guide for the construction of a reflector, here is

information on the one I built.

The diameter is 320 mm and the focal length is 90 mm. The curve is calculated from information in Fig. 1 (I have a computer program to calculate this). See table 1. An aluminium strip is made as per Fig. 2.

Find a wooden board to build the mould on. Use chicken mesh to roughly form the parabolic shape on the board and cover with plaster of paris. Place a pivot in the centre for the aluminium strip (3mm brazing rod). The strip is rotated on the pivot to 'form' the plaster of paris to the correct shape. This will probably require a few repeats of sanding off high spots and filling up low spots to get a good curve.

When properly dry, coat with a release agent, then cover with fibreglass. Coat with fibreglass resin, let it set and use another layer of fibreglass and more resin.

I fibreglassed a pvc pipe on the back of the reflector to fit a broom handle into. You could make a suitable hand grip instead. I also fibreglassed a plastic box on the back of the reflector to house the amplifier.

I found that my reflector was a bit wobbly, so I made a ring of 3mm brazing rod slightly smaller than the reflector diameter and fibreglassed it to the back of the reflector, which is fine now.

The microphone is held by a clamp made of brass shim and the clamp is supported by three 2mm diameter brazing rods, which are fibreglassed on the edge of the reflector. The microphone lead runs along one of the

rods.

The Amplifier

A variety of amplifiers could be used. Fig. 3 shows my one, which uses two sections of a LM3900 quad op amp and a transistor emitter follower to feed the low impedance headphones. Component values may be changed to alter the gain and/or frequency response to your needs. It is advisable to use headphones to avoid feedback.

When I decided to build a parabolic reflector several years ago, by chance and good fortune I came across an article by G.N. Patchett entitled 'Microphone Reflectors' in the June 1973 issue of Wireless World. Much of the information presented here was taken from this article and it makes interesting reading.

I found the reflector particularly directional to high-pitched sounds like leaves rustling in the wind and cricket chirps, and one can pin-point a cricket's position pretty accurately. Incidentally, when reasonably close to a cricket, you can hear the lower frequency sound of its legs rubbing on its body in addition to the chirp. It is surprising how much noise is made by a vehicle's tyres on a road.

As the construction of a reflector is quite time-consuming, it is a good idea to make it a group project and make several reflectors from the one mould.

Have fun.


• Figures 1 and 2 appear on page 13 in case you wish to remove the PIC sheet or this one for your files. 

TABLE 1 – A SELECTION OF X/Y VALUES

Y (mm)	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
X (mm)	0,3	1	2	4	6	10	13	17	22	27	33	40	46	54	62	71

PIC WORK GROUP PROJECT

(Part 6)

BY NEIL THOMAS ZR2NT

This part will describe the PIC routine to do the binary division explained in Part 5. It will be a good idea if you keep Part 5 handy while studying the following routine.

The following group of routines converts the binary number in Binaryno to three binary-coded decimal no's. (BCD). The three numbers are stored in Digit1, Digit2 and Digit3. We need to do this as we cannot display a number larger than 9 on one digit. So if Binaryno is 234, we get 2 into digit3, 3 into digit2 and 4 into digit1. This is done by dividing Binaryno by ten, taking the remainder and storing it in Digit1. The quotient (answer) is then divided by ten and the remainder is stored in Digit2 etc.

ROUTINES	COMMENTS
convert_prep	
movf BinaryNo,w	Move contents of file 'BinaryNo' to w register
movwf Dividend	Move contents of w reg. to file called 'Dividend'
movlw 0x11	Move literal value hex11 to w register
movwf Digitno	Move contents of w register to file called 'Digitno'

At a previous occasion we defined memory location 0x11 as that of Digit1.

convert	
movlw 0x08	Move the literal value 8 into the file called 'Bitno' via the w register.
movwf Bitno	
movf Digitno,w	Move the contents of Digitno into the File Select Register via the w register
movwf FSR	
clrf Temp	Clear the file called 'Temp'
clrf Quotient	Clear the file called 'Quotient'
bcf C	Clear the carry bit in the control register

When the 'convert' routine is run for the first time the contents of the File Select Register will be hex11 as that is the value assigned to it by the routine called 'convert_prep'. The FSR is used for indirect addressing and when we move some information into the file called INDF, the information will actually go into the address held by the FSR register. i.e. if we now move a value into INDF, it will actually go into 'Digit1'!

The 'Temp' register is used to store the interim result during the division process. It is from the interim value that we get the sign bit as shown in Part 5. The value called 'Bitno' is used to count the number of times we drop a bit from the 'Dividend' as shown in Part 5

divide	COMMENTS
rif Divident,f	Rotate the file 'Dividend' left one bit with carry
rif Temp,f	Rotate the file 'Temp' left one bit with carry
btfsc C	Test the carry bit and skip the next inst. if clear
goto add	Goto routine 'add' if carry bit is not clear i.e. 1

It is vital to understand the above routine. By rotating the dividend left we put

the most significant bit of the dividend into the carry bit. We then rotate 'Temp' left which puts the contents of the carry bit into the least significant bit of 'Temp'. (This is equivalent to dropping the bit as shown in Part 5) The most significant bit of 'Temp' is also moved into the carry bit. Now we can test it to see if the result is positive or negative and decide if we must add or subtract the divisor. If the sign bit now in the carry position was 0, the program will skip the 'goto add' statement and continue below with the 'subtract' routine.

subtract

movlw	.10	Move the decimal value 10 into the w register
subwf	Temp,f	Subtract the contents of w reg. from 'Temp'
rif	Quotient,f	Rotate the Quotient left through carry

The PIC automatically takes care of the two's compliment when you use the 'subwf' command. The result is stored back into the 'Temp' register. This command also generates something useful in the form of the carry bit in the control register. If the result of the subtraction is positive, the carry bit is set. When the Quotient register is rotated left, the carry bit is rotated into 'Quotient' on the right. So the first time this routine is executed the carry bit is moved into the least significant bit of 'Quotient'. If the result was positive, the quotient must be one and as the carry bit is set if the result is positive, we get the one into the Quotient by rotating it to the left. If we do this eight times, the first least significant bit will become the most significant bit of the Quotient. Neat hey?! The next step is to decrease the contents of file 'Bitno'

decbitno

decfsz	Bitno,f	Decrease the contents of 'Bitno' by one and skip the next statement if the contents = 0
goto	divide	If Bitno is not 0, repeat the process by executing the routine 'divide' above.

If 'Bitno' is 0, the division is complete except for the remainder. The following routine deals with the remainder and stores it in the appropriate register for the digits.

remainder

btfsz	Temp,7	Test bit 7 of 'Temp' and skip the next statement if it is set
goto	storedigits	If not set, goto 'storedigits' below

add_rem

movlw	.10	If bit 7 was set, add 10 to the 'Temp' register
addwf	Temp,f	which then becomes the remainder. Then go
goto	storedigits	to 'Storedigits' to save the remainder

add

movlw	.10	
addwf	Temp,f	This 'add' routine bears no relation to the remainder but relates to the division routine. It
rif	Quotient,f	is just conveniently placed here
goto	decbitno	

storedigits

movf Temp,w
movwf INDF
movf Quotient,w
movwf Divident
decf Digitno,f
movlw 0x0E
subwf Digitno,w
btfss STATUS,2
goto convert
RETURN

This routine uses indirect addressing previously described to store the 'Temp' register, now containing the remainder, into the appropriate digit register. The quotient is also moved into the 'Divident' register so that the process can be repeated for the next digit. The last few statements check to see if the values for all the digits are determined. Goto 'convert' and repeat the process. Return to the main calling program.

This concludes 8 bit binary division. The next article will deal with displaying the digits on the seven-segment display and will also describe zero blanking. It will be the last in the series unless there are some clarification required or a particular PIC project of interest to the readers.

MINUTES OF THE MONTHLY GENERAL MEETING OF THE PORT ELIZABETH AMATEUR RADIO SOCIETY HELD AT THE MUNICIPAL DISASTER MANAGEMENT CENTRE, MILL PARK, PORT ELIZABETH ON 21 JANUARY 2000.

Present & Apologies: As per the register. Notably apologised-for were the Secretary ZS2RL and the PEARS representative ZS2HB who was sharpening his pencil in Gauteng in preparation for the Chairman's Indaba the following day.

Welcome: Chairman Chris ZS2AAW welcomed all present, and wished them all the best for the New Year.

Minutes of the previous meeting: Acceptance proposed by Fred. ZS2JS and seconded by Louis. ZR2J

Matters arising: Under "General", point 1) was corrected to read that Beavan, ZS2RL was taking charge of the Scifest organisation

Finance & membership: Clive ZS2RT reported that the society funds were still healthy. He commented that R807 had recently been paid for repeater licences for the year, along with R130 for the Post Box.

Correspondence: Various club newsletters, repeater licences and the SARL Chairman's Indaba agenda

General: 1) Grahamstown Scifest – Neil ZR2NT commented that since Ewan ZS2EN had moved QTH, we would not have a wefax transmission for the Scifest display. He asked for input as to how we might get a station going -- possibly a relay from the Humewood transmission? He had also approached Microchip for sponsorship for the event.

2) SARL Proposal. The proposal was discussed as it stood. Members still felt that there was no incentive to rejoin the SARL. A question was put to the floor as to how many would rejoin if SARL membership fees stood at R100 only – this was unanimously supported. A quick survey was conducted to check the percentage SARL members within those PEARS members present – 8 out of 24 indicated their current SARL membership was valid. Items discussed were to be conveyed to our representative ZS2HB via telephone later that evening.

The meeting was closed at 21h30, whereafter the usual refreshments were enjoyed.

PEARS CONTEST IS A SA FAVOURITE

BY MIKE BOSCH ZS2FM

Although activities of the SARL in Johannesburg clashed with our PEARS National VHF/UHF contest, it was nevertheless a resounding success in most areas. Divisions 1, 2, 4, 5 and 6 were worked from Port Elizabeth on VHF. Some stations were logged for the first time ever.

Alex ZR2T recorded the longest distance, almost 840 Km, on 144 MHz when he worked John ZS5J in Richards Bay. Both Al ZS2U and Alex ZR2T had the pleasure of working Paul ZS6PJS in Pietersburg on 6 Metres.


Friday night saw a tremendous Tropo opening to the west and stacks of stations at S9+ appeared on 144.450 MHz FM, stretching from Dana Bay to East London. This created a lot of havoc on the frequency and some stations QSYed to adjacent channels to escape the QRM.

On Saturday, Tropo propagation opened towards Natal and a number of Div 5 stations were also worked from Port Elizabeth. Donald ZR2A must be congratulated for working quite a few

distant stations from Grahamstown with his 2½ Watt QRP station.

PEARS also operated a club station on 50 MHz, 144 MHz and 432 MHz, manned by Bill ZS2ABZ, Cyril ZR2H and Tony ZR2AI. Last but not least, our Chairman Chris ZS2AAW also joined in the fun and worked as far as ZR5ADQ in Umbumbulu on 2 Metres.

Many accolades about the contest have been streaming in. Locally Al ZS2U, an oldtimer in VHF contesting, says that this was the best VHF contest that he has ever participated in and he has never worked so many distant VHF stations before, while Rob ZS5LA of Pinetown expresses his sincere thanks and congratulations to the organisers for a well run contest scheduled during the best time of the year.

Please remember to submit your log sheet before the end of February 2000 to PEARS, PO Box 10402, Linton Grange 6015, or e-mail it to glaaks@iafrica.com. 

FOR \$ALE ★ WANTED ★ SWOP

WANTED

* Two metre **multi-mode transceiver**—Al Akers ZS2U, tel. [041] 360-2983.

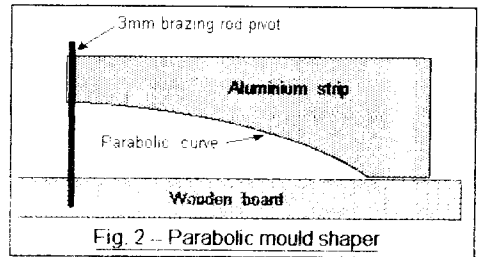
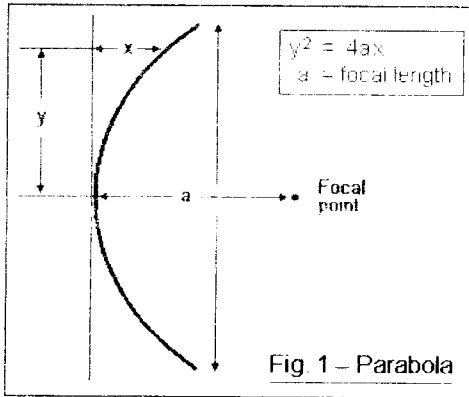
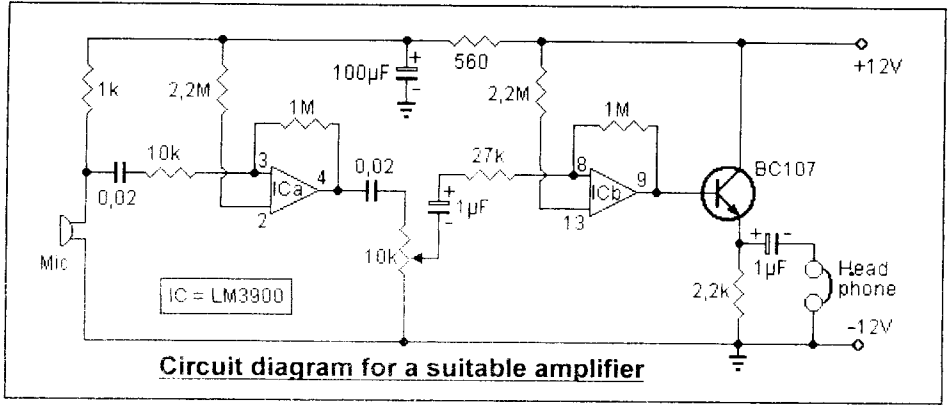
FOR SALE

* Yaesu FT902DM **HF transceiver** with memories, desk and hand microphones, handbooks. Good condition, original packaging. Thoroughly checked and tested by Roger ZS1J — John Hugo ZS2J, tel. [046] 624-2358 or 082 990 5793.

* A number of **two-way radios** — Steve Williams ZS2WS, tel. 083 384 7686.

* Yaesu FT221R **all-mode 2 Metre transceiver** R500 — Shaun Victor ZR2AAV, tel. 083 3358 342.

PARABOLIC REFLECTOR (from page 8)



QSX-PE Feb. 2000

PUZZLE THIS OUT!

At the beach, a lad buries his father up to his neck in sea sand in 10 minutes, while his sister takes 15 minutes to do it. How long would it take them if they worked on the task together?

The radio station on which I heard this poser provided the answer and explained how the puzzle is solved using simple logic. The answer appears below. Of course, many hams would immediately notice another route to the answer. How did *you* do it?

Since it takes the lad 10 minutes to cover his dad, he could cover 6 dads in an hour. The girl could do 4, since she takes 15 minutes each.
 Now $6+4 = 10$ in an hour working together, so they could cover one dad in a tenth of an hour, or 6 minutes.
 But many hams would see the similarity to resistors in parallel. The inverse of $1/10$ plus $1/15$ gives us 6. QED huh? It pays to think sideways sometimes!

MOBILEERS TAKE NOTE!

In terms of the new Section 308A of the National Road Traffic Regulations, no person shall drive a vehicle on a public road while holding a cellular or mobile telephone or any other communication device in one or both hands or with any other part of the body.

The regulation also requires that the communication device must be affixed to, or be part of the fixture in, the vehicle and

remain so affixed while being used.

A "headgear", e.g. headphone with microphone attached, is permissible provided it is "fitted to or attached to one or both ears of the driver". Surprisingly, the covering of *both* ears of the driver is acceptable to these road safety watchdogs. Surely shielding both ears from traffic sounds is not conducive to road safety?

THE GIZMO UNVEILED

BY ROGER DAVIS ZS1J

In the October issue of this illustrious magazine, the Editor asked for information on a "gizmo" that I discovered in one of my valve glory boxes. Well, all has been revealed. It is amazing how things seem to come together.

The other day, I came across a book on Telephony printed in 1947 and I stumbled across not one but three gizmos mounted on a board. The caption read as follows:

"Fig. 412 shows a portion of a panel of gas discharge protectors designed to safeguard telephone lines from high voltage surges. The protector illustrated is manufactured by Edison Swan Cables Ltd.

And consists of three tungsten electrodes in a mixture of inert gases (mainly neon) enclosed in an envelope of glass. Two of the electrodes are for connexion to the lines and are terminated on a standard E.S. lamp cap. The third, or earth electrode, is led out at the opposite end of the glass envelope and is terminated on a single screwed stem with terminal nut. The striking voltage of the tube is 150 to 250 V with an extinction potential of about 100 to 150 V. The 10 A type is recommended for overhead lines and is rated to carry 10 A per line."

So there we are!

TRANS-INDIAN OCEAN TESTS ON 144 MHZ

BY MIKE BOSCH ZS2FM

A new series of Trans-Indian Ocean tests has commenced and will last until the end of February. A keen Port Elizabeth group, ZS2ACP, ZR2J, ZR2JRF and ZS2FM are transmitting high power CW signals towards Perth, Australia daily for several hours starting from sunset Western Australian time. The horizontally polarized signals are beamed on 144,250 MHz.

One of the Australian beacons, VK6RBU on 144.560 MHz, has previously

been heard on Reunion Island around midday, and Emil Pocock W3EP has often tried to encourage South African VHF amateurs to explore the 8000 Km path to VK via the Reunion High Pressure Cell.

The main objective is to discover what conditions would propagate Tropo signals across the Indian Ocean and thus lay the foundation for future two-way tests on 144 MHz. It certainly would make headlines in the radio world!



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SARL AGM APPROACHING

The SARL's annual general meeting is scheduled to take place on Saturday, 8 April. Any member of the SARL who wishes to place a motion or a discussion item on the agenda should ensure that it reaches the SARL Secretary not later than 29 February.

PEARS AGM IN MAY

Although our Society AGM is still a few months away, start thinking about who you want to serve you on Committee for the year ahead. The time is also ripe for you to prepare any motion that you wish to place on the agenda when items are called for in the next month or so.

HOPES FOR OWN CLUBHOUSE DASHED

Following enquiries about the fate of certain halls that we had heard were no longer being used by local Scout troops, we received a tentative offer from the Scouts of a disused one in Westering with what initially seemed to be quite acceptable conditions. A spacious building for our exclusive use would open the way for many developmental possibilities.

Unfortunately, enquiries revealed that the building is actually owned by the Municipality and its reallocation is out of the hands of the Scouts who have had it on a long lease at very favourable rates. We would not receive the same special treatment from the Municipality that they have enjoyed.

And so our quest for a home of our own is back to square 1, but we shall

keep looking. Meanwhile, we are privileged to have the use of the Disaster Management Centre for our meetings and other activities from time to time.

LICENCES OVERDUE

If you have not yet renewed your licence, it is overdue. The licence should have been renewed by 31 January.

If you have not received a reminder from SATRA you can telephone them at 011 321-8297 or fax them at 011 321-8562 to ask for a duplicate. Or you can take last year's reminder to the Post Office from which the clerk can obtain the data type information. Let him/her print your receipt on a separate sheet of paper, not on top of the old impression.

PACKET RADIO MESSAGES

If the addressee of a packet radio message fails to download it from the bulletin board within a certain time (several weeks), the sender is notified automatically. However, I was surprised to learn from our SYSOP that *the message itself is also transmitted back to the originator!*

If long messages are involved and they have to be forwarded via HF, with its attendant QRN, QRM, QSB etc., they can place quite a demand on the links.

Those unduly lengthy 'signatures' too, consisting of numerous lines of personal (and mostly unnecessary) particulars of the sender, add to the hassles. These often contain many times more bytes than the actual

messages themselves and are really superfluous.

SARL NEWSLETTERS ON PACKET

At the recent Chairmen's Indaba attendees prevailed upon the SARL's Council to use packet radio in addition to the Internet for its periodic newsletter. Until now, it has been forwarded only by e-mail to those who have placed their addresses on the distribution list.

The view was expressed that only members should be able to receive the newsletters but your delegate pointed out that bulletins are received by all listeners and we have never objected to non-members deriving benefit therefrom.

He also suggested that non-members reading the newsletters on packet radio would get a better idea of what the League is doing. They might develop a more responsive attitude towards the SARL and feel inclined to join up.

RADIO AMATEUR OF YEAR AWARD

The announcement that Chris Turner ZS6GM, past President of the SARL, was selected for the Radio Amateur of the Year award raised a number of eyebrows around the country. Many amateurs feel that he played a large part in the waning of the League and the alienation of its members.

To compound the dismay, the report on the award was broadcast in the same SARL bulletin that reported on the Chairmen's Indaba of 22 January. This apparently led listeners to believe that the award was made *by the SARL* – and at the very indaba that was concerned with restoring the League's position of trust and confidence.

In fact, the award was *not* made by the League. It is an annual award presented by an entirely different and independent organisation, i.e. the SA Amateur Radio Development Trust, over which the League has no control. The award to Chris was announced officially by the SAARDT representative the day *before* the Indaba, when the SARL's new Education Facility in the HQ building was officially opened.

The timing of the announcement apart, it can not be gainsaid that Chris has done, and still does, a lot of hard work on behalf of amateur radio in Southern Africa, and he deserves recognition therefor.

We congratulate Chris and trust that, apart from his other duties as Councillor, he will support President Hans Potgieter ZS6ALJ to the full in the way he is trying to revive the League and provide the kind of services that the members want.

We also congratulate Henro Richie ZR6RIT on his election as Young Radio Amateur of the Year. Henro is 15 years old and passed the RAE with distinction but no details of his achievements that led to the award appear to have been published.

LINKED REPEATER SYSTEM

There have been a number of grouses about stations not leaving gaps between overs on the linked repeater system, with the result that others have difficulty in breaking in.

Puhleez! Wait for the tail to drop out before you press your PTT button. Remember, there are a great many repeaters involved now, stretching from Umtata to Cape Town, and perhaps many operators would like to join your QSO or arrange for their friends to meet them on another frequency – or just to disconnect a section of the link so that they can

have peace and quiet while retaining their local area linked facility!

PRIVATE QSOs DURING BULLETINS

In recent weeks we have had several instances of QRM from operators holding private QSOs while bulletins are in progress. In the good old days these ops would have been clobbered in no uncertain terms by their peers but the practice has become commonplace.

While many operators have no interest in SARL or club bulletins, and that is their right, their rather selfish operation close to a bulletin frequency often makes life difficult for the many others with a community spirit. The problem is twofold, the swamping or desensitization of one's receiver by a strong station nearby, and splatter from maladjusted or incorrectly operated transmitters, which has also become commonplace.

Those who encounter difficulties of this nature should break in at a suitable moment and *courteously* ask the operators if they would mind moving to a frequency as far as possible from one used for the bulletins, and/or to correct the splatter.

Please do not interfere with their QSOs in the hope of making them move! If they were there first, they have every right to occupy the frequency. A courteous request usually gets a courteous response.

QSO BUREAU A BIT BEHIND

When the QSL bureau was moved to the new SARL HQ building recently, the shifters apparently dumped the cards willy-nilly into a number of mailbags and any that had already been sorted will have to be sorted again.

Due to this as well as the change of administrative personnel and the

pressure of other work, there will probably be a greater-than-usual delay before cards are sent out to addressees. Hang in there. You'll get them eventually.

ANOTHER PEARS VHF/UHF CONTEST


The success and popularity of the PEARS national contest on 21-23 January is evident from the many favourable comments received from participants throughout the Republic. Several have suggested that we should not wait a year between such events but have them more frequently.

Of course, January has been selected because of the almost certain likelihood of propagation conditions occurring that facilitate long-distance communication on 2 and 6 Metres. Nevertheless, our intrepid contest organisers, Al ZS2U and Mike ZS2FM, hope to put together a slightly watered-down version of the January contest and hold it over the weekend 1-2 April. (No, this is *not* an April Fool's joke! That is the only weekend in the window suitable for the contest that does not already have some other activity on the calendar.)

Listen to bulletins, watch packet radio, or contact Al or Mike for details.

FAME AT LAST!

In a document to the SARL setting out their views on restructuring the League, a Gauteng club listed inter alia several points complaining about lack of communication by Council with clubs and members. The unavailability of Council minutes was especially highlighted. The report added: "If you really want to know what is going on in Council, then make sure that you subscribe to the Port Elizabeth Club Newsletter".

Wow! 

Condolences — We extend our condolences to Bubbles Lookwhy and family on the recent passing of Langley, formerly ZS2LW and an ex member of the PE Branch.

Congratulations...

on your birthdays:

February

- 20 Vic Batt ZR2BBH
- 20 Jim Duck ZR2JRD
- 25 Ralph Hall ZS2IV
- 26 Dick van den Berg ZS2VV

March

- 3 Nita Davis XYL of ZS1J
- 13 Maureen Vroom XYL of ZS2NV
- 14 Ali Mathieson XYL of ZS2EN
- 15 Susanna Bosch XYL of ZS2FM
- 16 Anne Butcher XYL of ZR2GIB

on your anniversaries:

February

None in this QSX period (20 February to 18 March)

March

- 2 Belinda ZR2CH & Des Herselman ZR2DH
- 3 Anne & Graham Butcher ZR2GIB
- 3 Merle and Louis Jordaan ZR2J
- 4 Pamela & Jack Koen ZR1JAC

on passing your CW test Joe Jasson ZR2JLJ. Joe is now awaiting his ZS call sign. And he passed with flying colours during what was

supposed to be only his initial warm-up session!

At least Bryan Haefele ZR2BH can derive some satisfaction from the fact that *someone* pursued his labour-intensive CW practice sessions on 2m to their intended conclusion! (hint, hint!)



Welcome: Hearty welcome back to Colin Robertson ZS2CR from East London. As most readers will know, Colin served on the Committee of the PE Branch, holding the position of Chairman for a while, when he was previously resident in our fair city.

Sick List: We lied last month. We said Ken ZS2BWB was undergoing structural repairs, but his run-in with the medics has been postponed until next month. Meanwhile, he is running up and down his tower like a spring chicken, aided and abetted by our young octogenarian Peter ZS2PL, so I guess this operation business has something to do with tax relief.

Commiserations to Colin Ashwell ZS2AO, whose tower came down ahead of schedule across the roof while he was trying to lower it single-handedly. Fortunately, no serious damage was suffered.

Your Society's Committee

Chairman, Repeaters, Packet.....	Chris Scarr ZS2AAW	38-1344
Vice Chairman, Secretary	Beavan Gwilt ZS2RL	360-6968
Treasurer, Assets Control.....	Clive Fife ZS2RT	32-3203
Awards, Refreshments.....	Bill Hodges ZS2ABZ	581-2580
QSO Editor	Garth Laaks ZS2HB	38-1101
e-mail the Editor at..... glaaks@iafrica.com		
QSO Collation/Distribution, repeaters, packet.....	Trevor Scarr ZS2AE	32-1746
Technical Classes (convening/administration).....	Cyril Hislop ZR2H	360-8482
Technical Classes (lectures)	Viv Moore ZS2VM	360-4433
Librarian	Neil Thomas ZR2NT	487-2403
Special Events, Social.....	Cyril Hislop ZR2H	360-8482

PEARS' VHF/UHF & Other Services

REPEATERS

Town VHF.....	# 145.050/650	Kareedouw.....	† 145.125/725
Town UHF.....	# 431.050/438.650	Knysna.....	* 145.075/675
Butterworth	145.125/725	Lady's Slipper.....	* 145.100/700
Cockscomb	145.000/600	Theescombe.....	† 145.175/775
Cradock	* 145.050/650	Uitenhage.....	# 145.075/675
Grahamstown	* 145.150/750	Umtata.....	438.725 duplex

* These form PEARS' long-range 2-metre repeater system, to which the East London 145.775 MHz repeater, George 145.700, Danabaai 145.600, Stilbaai 145.750, Butterworth 145.725, King Williams Town 145.625 and Umtata (438.725 duplex) are also linked. It is further extendable to Cape Town via the WCRWG system. † These can also be linked as required. ‡ These are privately owned repeaters and are not included in the PEARS linked repeater system.

OTHER SERVICES

Packet Bulletin Board (ZSON IP)	144.625
Packet Rose Switch (ZSOGHI-3,046101 (144.675 in out) or 046102 (UHF out to BBS)).....	144.675
2m Beacon (ZS2VHF CW ID) (horizontally polarized, 160W ERP).....	144.410
6m Beacon (ZS2SIX CW ID) (horizontally polarized, 25W ERP).....	50.005
6m Simplex Link with Lady's Slipper 2m Repeater (vertically polarized).....	51.400
Wefax Relay (Meteosat).....	145.350
Web Site.....	pears.8m.com

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 10m operations on 7082 or 7066 kHz or Hamnet's 7070 kHz can be remotely patched into the 2m network in receive only mode or with full transceive capability for interactive events.

Date	Prepare and Read on 2m Repeater link
13 Feb	ZS2ABZ
20	ZS2RL
27	ZS2AE
5 Mar	ZS2RI
12	ZR2H
19	ZS2AAW
26	ZS2HB

DIARY DATES

FEBRUARY

18 PEARS monthly meeting
19/20 ARRL DX CW contest

MARCH

2 Wrinkly Rave
11/12 SARL HF Field Day
contest
18/19 SARL VHF/UHF contest

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