

THIS NEWSLETTER IS PUBLISHED BY THE
PORT ELIZABETH AMATEUR RADIO SOCIETY

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June 2000

June Meeting – *NOTE THE DATE!!*

The monthly general meeting of the PORT ELIZABETH AMATEUR RADIO SOCIETY will be held on **Friday 23 June 2000** commencing at 20:00 (8pm) in the Municipal Disaster Management Centre, Westview Drive, Mill Park, Port Elizabeth (Civil Defence Centre). *This is a change from the usual (third) Friday in view of the public holiday.* **Please note the change of date!**

We will be entertained to a video show by our new Chairman, Beavan Gwilt, on his and Mel's recent tour of national parks and other places of interest in the Northern Cape, Namibia and the Richtersveld. He had some dicey moments at the latter location.

Tea, coffee and biscuits will be provided by good ol' Bill ZS2ABZ, bless his cotton socks. What *would* we do without him?

Wrinkly Ravers

The next rave will be held on Thursday, 6 July 2000 at the Zwartkops Yacht Club Clubhouse. I hear that some of the fossils regularly turn up as early as 11:30 just to get a good yak in before grub! That tells you how lekker is the camaraderie at these get-togethers, so roll up! Place your meal orders from 12:30. Smoothies are also welcome.

The June Rave unfortunately fell flat due to another change of caterers, and the incoming okes deciding the kitchen wasn't what they thought it should be so while they were revamping we couldn't rave.

A suggestion has been made that we should have a rave at Jeffrey's Bay some time to make things easier for our pals in the JayBay area to join us. We'll see what develops, so keep an ear on bulletins and an eye on QSX.



IT'S RALLY TIME AGAIN!



(Or soon will be!)

If you have not yet returned the questionnaire that appeared in the May issue of QSX to Beavan, and you are prepared to help with comms for the rally on 21 and/or 22 July, please do so as a matter of urgency, or at least telephone Beavan with details.

Please note, too, that the rally will start on the day we would normally hold our July meeting. As usual, the meeting will be brought forward to the *Wednesday evening*, i.e. 19 July, and final briefing for the rally will take place there, including the distribution of documentation, car stickers etc.

This is also a good time to start checking over all the equipment that you will need for the event, e.g. radios, antennas, cables, batteries, personal requirements etc.



The Chairman's Chat

*I*t seems that being in the Kalahari affords no escape from the duties of office, as I have been asked by our worthy Editor to please radio in my article for this issue of QSX. These notes were therefore prepared on the verandah of our hut at Nossob camp in the Kalahari Gemsbok Park but are being transmitted from Mata-Mata, another camp in the Park. [I didn't ask. I demanded!—Ed.]

The AGM has come and gone and a pleasant event it was too. The committee is almost unchanged, with only one new face. For personal reasons, Cyril ZR2H was not able to stand for re-election this year and Ewalt Bouwer ZS2EHB was elected to fill the vacancy. We have a good team, which functioned well in the past and I am sure it will continue to do so.

As you know, Chris ZS2AAW was not able to stand for re-election as Chairman this year and I wish to thank those present at the AGM for their confidence in electing me to the position. We are fortunate that Chris nevertheless continues to serve on the Committee.

I wonder how many people are serious about monitoring the emergency channel 7,070 MHz. Some days ago, at mid-morning, I felt like a good old-fashioned yak, and put out a series of CQ calls on 7,070 MHz. Only the crackle of our ionosphere in reply. Pity the poor mobile station that really *has* got a problem. We are entering difficult times, and perhaps we should give a thought to this.

With that I will say 73, and get on with my holiday.

73,

Beavan ZS2RL

HAMNET / ECARES NEWS

General Meeting

A Hamnet/ECARES general meeting will be held on Wednesday, 28th June at 19.30 at the Municipal Disaster Management Centre.

The main item on the agenda will be a talk by Ken ZS2OC on liaison with the SA Police Services.

Ken and I are currently negotiating with the SA Police Services with a view to

assisting them with their communications and we are in the process of doing a feasibility study on this.

Ken's talk will be on the results of our study.

73,

Al Akers ZS2U
Provincial Director,
Hamnet East Cape/ECARES

FOR SALE ★ WANTED ★ SWOP

WANTED

* **WW2 surplus HF transmitters** for my vintage collection. Condition unimportant but preferably the front panels should be unmodified — Brian Weller ZS2AB, tel. 365-3935, e-mail zs2ab@icon.co.za

* Light duty **antenna rotator** adequate for VHF/UHF beams — Jim Duck ZR2JRD tel. 042 293-2708 (on behalf of ZR4SED).

* Any **computer program** with Maidenhead **locator map** of South Africa, preferably one that changes the colour of a square when it is clicked on — John Randall ZR2JR/M5ABA, e-mail johnjr@m1cuu.freemove.co.uk

FOR SALE

* Motorola MCX 100 ten-watt remote mount **2 Metre transceivers** with mounting bracket, mike and remote speaker, pre-programmed with 16 channels of your choice — R200 each — Jim Miller ZS2JM, tel. 043 726-5714 after hours.

* **Cooler/warmer box**, hardly used. Operates off 12 volts DC — R200 — Al Akers ZS2U, Tel. 360-2983.

**RAE CLASSES FOR THE NOVEMBER EXAM WILL BE STARTING SOON
ANYONE WISHING TO ENTER SHOULD CONTACT GREG MAYNARD NOW**



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PEARS 2000 AGM

Another successful and pleasurable AGM took place on 13 May. The usual tried and tested formula was followed – Various pieces of 'junk' changed hands at the boot sale in the car park prior to the meeting. I recently heard a new description of such events: 'treasure and trash exchanges'. One man's trash is another man's treasure, for sure!

The usual annual reports were tabled and accepted and all was clearly well with PEARS. There being no motions for consideration, the Chairman then presented the following trophies and awards:

ZS2OB DX Trophy—Isaac Greeff
ZS2ZG

ZS2AB Constructors Trophy—André Botes
ZS2ACP

Ham Spirit Trophy—Bill Hodges
ZS2ABZ

Appreciation certificates went to:

- the South Cape Amateur Radio Club for the work done in extending the repeater network to Cape Town;
- Jim Miller ZS2JM of East London for his personal labours in extending the repeater system eastwards;
- Border Radio Club for their involvement in the extension of the linked repeater system;
- André Muller ZR2A for providing accommodation for three PE operators during the SciFest in Grahamstown.

An *Achievement certificate* was awarded to Mike Bosch ZS2FM in recognition of his promotion of VHF communications in particular and amateur radio in general.

The Vice Chairman, Beavan ZS2RL, then presented a *merit certificate* to Chris Scarr ZS2AAW recognising his development of the East Cape's linked repeater network.

Chris, not being able to stand for re-election to the Society's top post, then called for nominations for the position of Chairman for the ensuing year.


Beavan Gwilt ZS2RL was elected unanimously. He took the chair and called for nominations for the incoming Committee.

With the exception of Cyril Hislop ZR2H, all outgoing members were available for re-election to committee. Ewald Bouwer ZS2EHB accepted nomination and was promptly elected and, in the absence of other volunteers, a proposal was accepted that the remaining members of the outgoing committee be re-elected *en bloc*.

Your new committee's portfolios appear on the last page of this issue of QSX.

After business, members enjoyed a braai and chat, especially with the members who had come from afar to support the event. The Society provided some wine, fruit juice, buns and ice cream, and even arranged for excellent weather. Even if it turned a little cool after the sun had sunk below the horizon, the fires and good companionship made for an ambience *par excellence*.

Many thanks to the outgoing committee members for steering PEARS through another successful year. A particular vote of appreciation must go to Chris Scarr for his outstanding leadership and personal involvement in just about every activity of the Society during his three years in the Chair.

We welcome Ewald ZS2EHB onto the committee and look forward to his help. The UD members now also have a representative from their midst on the committee once more. 

REPEATER NEWS

An update on the Cape Repeater Network status

BY CHRIS SCARR ZS2AAW

Colesberg

The UHF link power supply remains a problem. Many readers will know that the Y2K backup plan included solar power for temporary sites like Noupoot. This site has remained active, but the solar panels were stolen, leaving the site without primary power.

A mains connection was installed during May, but the mains transformer and rectifier fitted was not compatible with the regulator system on site, so the equipment had to be left switched off until another complete power supply or charger can be fitted. The link was active through to Bloemfontein when the site was powered up for a day last month, so the rest of the equipment seems fine.

Noupoot

It looks as if a similar problem is hassling Noupoot – the winter months are proving to have too little sunshine to keep the site active all night, especially if the weather is overcast for a few days. I have noticed that Noupoot sometimes does not respond to DTMF interrogation at night, but is OK most days. So a mains connection will need to be done there too.

Unlike Colesberg, which is a 12V site, this one requires a 24V charger. The battery capacity is ample at these sites, so it is merely a question of keeping them charged.

Kareedouw

Recent negotiations with Ken, ZS2OC led to us planning a recce trip

to Kareedouw to investigate what would be needed to include this site on the link system. Unfortunately weather prevented the trip, and time has been tight since then.

There is a major amount of work to be done if we are to move to the current 725 repeater location, as there is very limited cabinet space and solar power available. Currently we have a UHF back-to-back link at the Eskom site on a "temporary" basis for the 1995 VW rally! I suppose that has outstayed its welcome...

Ken would like to remove the existing 725 repeater and rebuild it to serve as the 775 repeater at Theescombe. But I am hesitant to rely on solar power for an important through-site, having had the experience of Knysna and Noupoot/Colesberg.

On the other hand, if we can ensure we have space for sufficient panels and batteries, we will be fine. It is just the problem of housing the equipment, as the existing meter boxes are hopelessly too small.

Knysna

The temporary mains regulated power supply fitted before the Y2K deadline has either failed or has been left unplugged. As we approach winter, the repeater and associated links drop out most nights, which is an annoyance.

Our lock in the gate has been bypassed, so the locals, ZS2AZR and ZS1J, cannot gain access to the solar panels, regulator and batteries which

are outside the building. Since we fitted two new 110AH low maintenance batteries relatively recently, I hope that we only have a solar panel problem, and not bad batteries.

The main delay in planning a trip to Knysna is the sheer amount of work that should be done. All the equipment inside the building needs to be housed outside the building in a fibreglass meter box. This will allow unlimited access by the local hams, as long as the gate lock is not locked out!

I have secured an old meter box, but need to build it up into something that will do the job, and hopefully fit all the pieces inside.

The trip will entail a full weekend's work, as we need to do "routine" RF maintenance on the radio equipment too. This probably means that a quick trip is needed just to sort out the mains power supply in the interim for the winter.

Cape Town
We are suffering a lot of interference from the far Western end of the link, as well as a broken transmission towards Cape Town from Jonaskop. The bad news is that my Cape Town colleague Dave, ZS1SG has taken early retirement as from the end of August, so I am unsure as to who will take up the challenge from that side.

Nevertheless, the link remains a favourite with the likes of Bryan,

ZS1NQ...

Packet

And finally, there is the rebuilding of the Grahamstown Rose switch. The idea is to connect the TNCs to two Storno radios, and run the equipment off the local battery bank and not the mains power supply that it uses at present.

The present setup was taken as-is

from the nearby farm location that the digi was at for some time, and moved to Governorskop. So the then existing Europa and Bosch rigs stayed in the box. The disadvantage is that we lose the digi whenever the mains fails in the area, and Cradock and East London get isolated.

Also, there seems to be some performance problems towards Port Alfred, probably due to maintenance required on

the radios. Crystals have been purchased for the Stornos, and it is simply a case of getting down to it.

The delay has also been due to the trial run of a 9600bd TNC for the Rose switch to use to talk back to the Lady's Slipper BBS. I cannot get this SAATI 9600bd TNC kit to receive properly. Transmit seems fine, testing to the existing 9600bd port on the BBS. What a pleasure to get the backbone running at that speed.

So there you have it, plenty of plans, problems and pains, but all worth it at the end of the day. Enjoy. ☺



The author, Chris ZS2AAW is not only an expert on repeaters but also knows a thing or two about propagation. In the photo is his latest bit of handiwork - Samantha Alison Scarr, just after birth on 9 June, with proud mom Vanessa ZR2VM. Hearty congrats to you both

MINUTES OF THE MONTHLY GENERAL MEETING OF THE FORT ELIZABETH AMATEUR RADIO SOCIETY HELD IN THE MUNICIPAL DISASTER MANAGEMENT CENTRE, MILL PARK, PORT ELIZABETH ON 14 APRIL 2000.

Before the start of the meeting our guest speaker, John Lemon, gave a talk on the history of the VW Beetle. It was well researched and contained many little-known and fascinating snippets of historical information. Those members that stayed home to watch the cricket really missed something. Tea was enjoyed after John's talk, after which the meeting took place.

Present & apologies: As per the register. Additional apologies from André ZS2ACP and Anthony ZR2APB.

Welcome: Chairman Chris ZS2AAW opened the meeting and welcomed all present, especially Michael from SATRA who wished to become one of us, and Pat ZS2PJP and XYL Ginny ZS2GIN from Port Alfred.

Presentation: The chairman handed over the following SARL awards, which had been made at the recent SARL AGM

- Jack Twine Award to Mike, ZS2FM;
- Arthur Hemsley 2m Trophy, to Mike ZS2FM;
- Certificate for achieving first place in the single operator portable station category in the 1999 SARL Hamnet 40m simulated emergency contest, to Al ZS2U.

Minutes of the previous meeting: Proposed by Garth ZS2HB, seconded by Trevor ZS2AE.

Matters arising: Nil.

Finance: Treasurer Clive ZS2RT reported.

Correspondence: A letter from Nkosekhaya Petse from Walmer Dunes expressing an interest in becoming a radio amateur. The secretary will reply with all the necessary information.

General: 1) SciFest. Greg ZS2RE, who spent a number of days in Grahamstown manning our stand, gave a report. A lot of interest was shown by school children, and Greg said that in future we should have simple kits for sale. The meeting also expressed its thanks to André ZR2A who provided accommodation for Greg ZS2RE, Nicholas ZR2NDT and Marc ZR2BLK during the festival.

2) Greg ZS2RE explained his ideas for the family evening to be held in conjunction with the August meeting. The meeting agreed that if possible the function should be held at the Zwartkops Yacht Club.

3) AGM on 13 May 2000 – It is to be held at the Scout Hall in Fordyce Road, Walmer. Proceedings will commence with a boot sale at 1500, followed by the meeting at 1600, and the party will commence as soon as the meeting is dispensed with. Chris ZS2AAW explained that it would be a bring-and-braai affair; PEARS will provide a few boxes of wine and fruit juice, bread rolls, and the traditional ice cream.

4) The chairman called for nominations for the following awards: ZS2OB DX Trophy, VHF Trophy, ZS2AB Constructor's Trophy, Achievement Certificate.

5) Lionel ZS2DD suggested that PEARS spends whatever is necessary to get the HF transceiver on Lady's Slipper back in operation, instead of incurring delays as a result of trying to keep repair costs to a minimum. The meeting agreed.

6) Beavan ZS2RL reminded members of the VW Rally that was to take place on 21/22 July.

7) Garth reported on the proceedings at the SARL AGM.

The meeting ended at 2215. **Q**

THE QUIESCENT TROPO MONTHS

BY MIKE BOSCH ZS2FM

It is now mid-winter and the probability of a good Tropo opening on 144,450 MHz, the long-distance FM channel, is quite rare. Nevertheless, now you do have the time to upgrade your VHF system.


The South African Tropo season lasts for a period of about nine months of the year, starting around August when frequent long-distance band openings up to 2000 km on 2 Metres could occur. Super Refraction or ducting that appears in December through to February could

MINIMUM ANTENNA GAIN REQUIRED FOR SERIOUS 144 MHz DX

Tropo	Yagi	10 dBd
Tropo Scatter	Yagi (x2)	19 dBd
Sporadic-E	Yagi	10 dBd
Meteor Scatter	Yagi	13 dBd
TEP, FIA	Yagi (x2)	19 dBd
F2	Does not occur	
Satellite	X-Yagi	10 dBc
EME	Yagi (x4)	19 dBd

extend the range to 4000 km or more. But this is only possible with efficient VHF equipment. Here are a few technical tips:

- (1) Erect a high gain Yagi and mount it horizontally. If funds are available then stack two Yagis for better low-angle radiation and additional gain.
- (2) Fit a low noise amplifier (LNA) which will enhance weak signal reception, especially on FM. (The above two steps are the most important to take if you want to do worthwhile experimentation on 2 Metres).
- (3) Add a linear power amplifier to further increase the range and also make communications possible under poor propagation conditions.

Earlier this year 2 Metre contacts were established between Port Elizabeth and Mtunzini on both SSB and FM – a distance of over 800 km! With the greater activity, longer distances could be expected during the coming summer season. 

NOVEL IDEA BOMBS OUT

BY ROGER DAVIS ZS1J

About 9 or 10 years ago, I was involved with the erection and operation of a ham station at the Durban Expo centre, where many organisations had stands to inform the public about the services that they offered.

One stand that caught my eye was for Aids awareness and I spent quite a bit of my time, between operating the station, chatting to the people manning the stand. One of their problems was that the stand was not attracting the attention of the public and I offered to make something for them which would surely attract attention.

The following day, I took six cardboard tubes about 150 mm in length with a diameter of 20 mm. These tubes I covered with red paper and folded the ends in so that the paper would not unwind. The six tubes were then strapped together in a pyramid, three on the base, two in the middle and the last on top of these.

I took an old alarm clock and attached two wires to the inside and took the other

ends of these wires to either end of the pyramid of tubes. I then wrote across the tubes "AIDS IS A TIME BOMB".

That evening, back at the expo centre, the Aids awareness people accepted my offering and were extremely impressed with the attention that the stand was now attracting.

The following morning, when the expo was opened and the morning shift came on duty to man (or woman) the stand, there was a terrific hullaballoo. A "ticking bomb" was found on the Aids stand and the centre was closed whilst the police were called to defuse the situation.

What is that expression about the plans of mice and men? 

Over Voltage Protection: An Alternative

BY BRYAN HAEFELE ZS2BH

In the April 2000 issue of QSX we looked at a different type of over-voltage protection circuit. In that circuit we made use of a simple Zener diode and transistor to monitor the trip voltage. The trip voltage is fixed by the value of the Zener diode and with a Zener of 15 volts rating we find that the circuit trips at around 17 volts. Some of us may feel this a little high.

With this in mind I have adapted a circuit devised by W7RXV (Jan 1980 "73"). This allows us to set any convenient voltage as the trip voltage and still use the tripped relay to release the heavy-duty relay (Relay 2) in the previous circuit, thus disconnecting the rig.

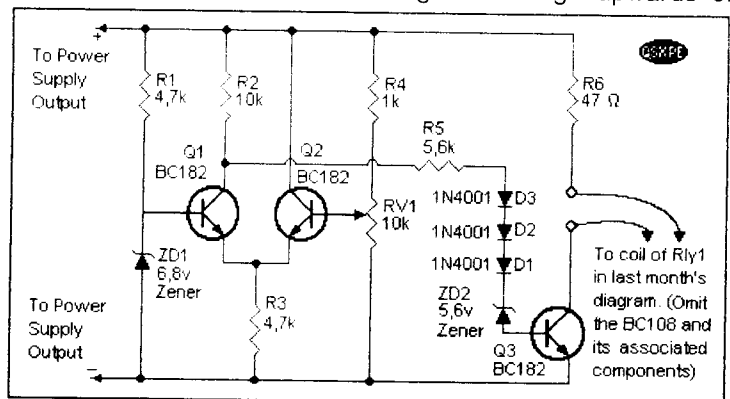
Simply remove the two resistors, Zener and BC108 from the previous schematic and replace them with the circuitry below, which is connected to the power supply output.

Setting Up Procedure

1. Mount ALL components EXCEPT 47Ω resistor and Q3.
2. Connect a variable power supply to the board and set for 14.8 V.
3. Connect a voltmeter to anode of ZD2.
4. Adjust 10K pot until there is a sudden jump from 0 to 2 or more volts. If you cannot reduce to 0, then change the Zener with one that has a rating of 5.6V plus the

minimum measured. Once you have obtained the correct result, proceed to step 5.

5. Mount Q3 and one side of 47Ω resistor to relay.
6. Connect variable power supply as in step 2.
7. With jumper leads connect a 150mA meter between free end of 47Ω resistor and power supply +ve.
8. As 10K preset is adjusted the current should jump from 0 to approx.70 mA. If 70 mA is exceeded then change the 47Ω to a higher value. Set the pot at a position where current is at a high point. Now adjust the variable supply downwards. The current through the meter should immediately drop to zero. Increasing the voltage upwards of

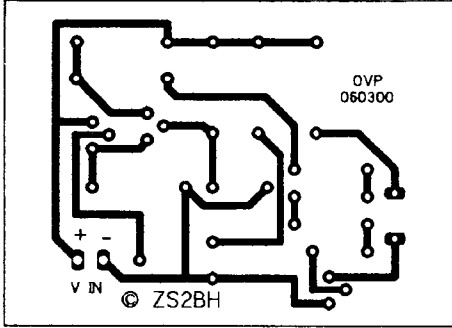


Alternative voltage control circuit

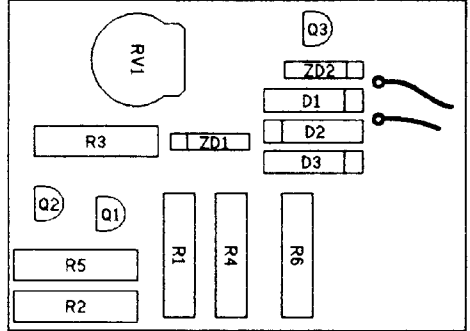
14.8V should immediately register 70 mA.

- Disconnect power supply and meters and solder the free end of 47Ω resistor (or your replacement resistor) to the +V line.

The unit can now be thoroughly tested using the bench variable power supply and, when satisfied with the performance, the unit can be commissioned. **Q**



Alternative voltage control circuit PCB board (actual size)



PCB Overlay (component side)

PEARS HF FIELD DAY STATION

As reported last month, a club station was erected on Al Akers ZS2U's smallholding west of PE for the SARL HF Field Day contest on 11/12 March.

The photo shows the group of faithful hams who did all the work of erecting and dismantling the station as well as putting in many long hours throughout the night making as many contacts as possible.



Next to the tent that accommodated the station are (from left): Stoffel Carr ZS2C, Al Akers ZS2U, Bill Hodges ZS2ABZ and Neil Thomas ZR2NT.

Cyril ZR2H's patent outdoor toilet, not visible in the photo but visible from all other angles, gave new meaning to the expression "public convenience". A separate "easy" chair under the adjacent tree, thoughtfully provided by Al, added to the ambiance, not only providing comfort for those awaiting their turn but also lending a general atmosphere of camaraderie and out-and-out relaxation for all concerned.

All in all, a good job well done, chaps!

PEARS PACKET RADIO FORWARDING NETWORK

JIM VAN LOGGERENBERG ZS2LR, SYSOP OF ZS0NTP

I read the traffic that passes through my station. I have to ensure that my station is run according to the law in order to protect my own interests with regard to my licences. I think it is time that I did something about educating the users instead of sitting on the sidelines watching the chaos.

There is a great deal to know about packet radio. Let us consider the question that is so often asked: "What happens to the mail?"

PRIORITY OF THE MAIL

The "mail" falls into several priority categories. In order of priority:-

- *Personal Mail* or "SP" traffic. Private mail is non-existent. However you send it, it can be read.
- *SysOp Mail* – usually also "SP" traffic which the users do not see.
- *AMSAT mail* – sent as "SB" traffic but has priority after SP and SYSOP messages.
- *ZAF bulletins* which have priority before any other general bulletin such as @WW, @EU etc.
- *General bulletins* sent at world wide. When we run out of @WW we carry @EU traffic to keep our channels busy. As soon as more @WW is available the system switches back to it automatically. @EU traffic belongs in Europe, nowhere else!

The SysOp does not sit at the console all day and all night sorting the mail. This tedious chore is carried out by the software. Priority is set by a single line in the forwarding, or "include", file.

Filters are used to regulate bad

language and to reject unwanted bulletins or to hold certain traffic for review before forwarding it.

ROUTES

The route, or path, that the mail flows along is determined by the "hierarchical address". Take as an example a message sent to a user at ZS0NTP BBS. The address for ZS0NTP is

@ZS0NTP.PEL.ECP.ZAF.AF

(in capitals).

- The "PEL" is the city designator. In this case, Port Elizabeth.
- The "ECP" is the regional designator. In this case, East Cape.
- The "ZAF" is the country designator. In this case, South Africa.
- The "AF" is the continental designator and is of course Africa.

N.B. Simply addressing a message to a callsign does not provide sufficient data.

WHITE PAGES

Every BBS has a file in which route data is stored. If you address a message to ZS2LR @ZS2LR without giving the route information, that data will be added automatically to the "@" information in the message and it will be correctly forwarded because the data is on record.

But, if the data is not present in the records, the system will generate an error report and that message will get stuck on the BBS until the SysOp corrects it or else it will be returned to sender as UNDELIVERED MAIL.

The System warns you before you continue writing your message that the route is unknown. *Automatic systems such as TPK and WINPAC fall apart at*

this point.

DYNAMIC DIRECT DELIVERY

Direct delivery of the mail to its final destination is simply not done. We do not tune around looking for a suitable station to deliver the mail to. This would require manual intervention and defeats the object of the whole packet radio network. [As I recall, such deviation from the established routing by a go-it-alone SysOp in another province actually resulted in non-delivery of some messages—Ed]

Mail can be injected at any point in the network and is then routed from station to station until it reaches its destination. The post office, transport systems, the Internet, work on the same principle. It is the only automatic method that works and is economical at the same time.

We do not waste our time searching for a station to deliver mail to – we send it into the system.

THE ZAF NETWORK

It is not intended to write a complete description of the South African Packet Radio Network. If you have access to the Internet, visit Dick Stratford's (ZS6RO) website and look at the map he has of the network. It provides a better insight. His website is at

<http://conquest.sanrac.co.za/radio/zs6ro/>

SO, WHERE DOES OUR MAIL GO?

Forwarding of the mail is a two-way flow of data. It never stops. It is carried out twenty four hours of the day. It regulates the lives of that dedicated bunch of people known as "The SysOp"! We *do* sleep. Fortunately, the software takes care of things while we are in dreamland or doing other things so necessary for living.

Of course, no system is foolproof, and added to that are the strange things

that users do. Software programs sometimes crash. Rigs might drift or simply become faulty. Users get things snarled up. Failures occur. Life is *like* that.

At present, the software at ZS2LR/ZS0UTE is programmed to commence forwarding with ZS0NTP every half an hour on the quarter hour. This means that mail is deposited and picked up every half an hour – *if* there is mail, that is. This takes place on the UHF backbone frequencies (half duplex) which the users do not see.

On HF, contact is maintained with ZS6RO in Meredale, Gauteng on a continuous basis provided propagation allows it. Contact is lost during the night for a short period during summer and usually all night during winter.

Daylight contact on 7 Megahertz is very poor. Daylight contact on 10 Megahertz is fairly good throughout the year with several "dips" during the day. Fourteen megahertz is only good for a short afternoon period. The hop to Gauteng on 14 MHz is too short. Greyline communication on both 7 and 10 MHz provides very good throughput for short periods morning and evening.

My forwarding partner, Dick Stratford, ZS6RO, runs a packet hub which provides a very extensive service to the amateur fraternity in the RSA. Dick forwards to a great number of stations. He uses Radio (HF VHF and UHF) as well as the Internet.

Most of the general bulletins that you list on the BBS come off of the Internet from Dick, forwarded to us by radio. But, your SP's go via radio. Believe it or not, the radio forwarding is faster than the Internet simply because the Internet traffic is only picked up once a day.

Let us consider a personal message input at ZS0NTP – let's say from Port Alfred. It will be input via ZS0GHT which

will forward it along the UHF backbone to ZS0NTP and store it there. Then it will be forwarded and stored at ZS2LR/ZS0UTE. From there it will be forwarded and stored at ZS6RO.

Depending on circumstances, this might occur within half an hour. During winter it might get stuck at ZS2LR while waiting for a morning propagation opening.

ZS6RO will forward your message to the appropriate next station along the route, depending on its destination. If it is addressed to somebody in the Western Cape, for example, it will be forwarded to ZS0BRF in Brackenfell and then to ZS0STB.

If the message is addressed to a DX address, ZS0STB will upload your message onto a passing packet satellite. Most probably, the satellite will complete a few orbits so as to be over a suitable ground station and then send your message back to ground. On the ground the message is forwarded along suitable routes until it reaches its destination.

Those people that have seen the speed of the system can tell you that it does not take long to get a reply from a station in VK for example. It is amazing considering how fragile the system is.

Just remember that this is a totally voluntary service depending heavily on the dedication of the people involved, the variations in propagation and local circumstances. Power failures occur; computers crash, hard drives get wiped out; lightning strikes antennas and

destroys equipment; SysOps get sick and die and stations close down.

SysOps have to be at work and give attention to their families etc etc. As I said before, it is a fragile system and not guaranteed. Mostly the only return one gets is negative criticism (flames).

WATCH THE ROUTE THAT YOUR MESSAGE TAKES

When you receive a message from your friend on the other side of the world or even just across country, read the "R lines" at the beginning of the message. The time of arrival is recorded on each R line indicating the station where it was received. If there are delays, they will be recorded there.

If you are reading manually directly off of the BBS, type "V [messagenumber]" and the BBS will send the full R line data to you. Doing "L [messagenumber]" will show the stations but with exclamation marks in between and no details.


Some operators using TPK and WINPAC employ "R line strippers" that remove the records. That is a great pity, since the R lines perform a very important function. If you are using such a stripper program, do yourself a favour, disable it!

Happy Packeteering

Jim ZS2LR / ZS0UTE

- email to mwzs2lr@iafrica.com
- AX25 to ...

ZS2LR@ZS2LR.UITECP.ZAF.AF

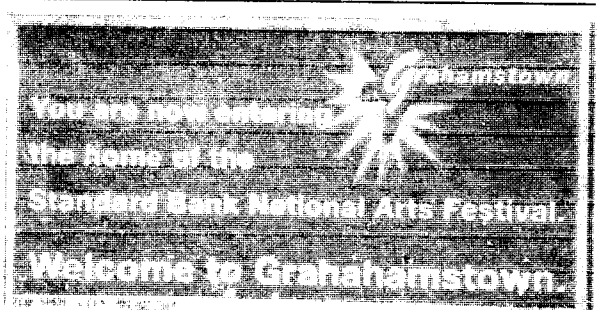
- Located KF26qf 

That's *NOT* Funny!

Colin Robertson ZS2CR sent us the photo alongside, which appeared in an East Cape newspaper recently. He comments: "I didn't realise we hams made such an impression at the Scifest!"

Ha! He must be joking!

The newspaper's comment was not a bahappy one though.



SARL MATTERS

SARL FORMS A STRATEGIC PR COMMITTEE

A Strategic Public Relations committee is to be established to pro-actively lobby for Amateur Radio. Although the establishment was approved at the AGM, no financial provision was made but clubs and members are requested to contribute towards a fund to enable the committee to carry out its task.

A report on the activities and achievements of the committee will be issued at least twice annually.

Hans van de Groenendaal ZS5AKV has been appointed by Council to head the committee and to appoint one member to represent each of the nine provinces. To this end, clubs were invited to nominate a volunteer for consideration.

The main task of the committee's members is to monitor the media in their provinces and to interface with the Provincial Government.

CONTEST ON ALL BANDS

A Division 5 ham has proposed a contest during which all amateur bands are used from 160 metres up to the GHz allocation. The proposal was discussed on a President's Net and the views were very positive.

What is your feeling about such a contest? Contact Dennis ZS4BS on e-mail – zs4bs@netactive.co.za or snail mail to PO Box 12104, Brandhof, 9324 with your comments and suggestions.

NEW OFFICE APPOINTEE FOR SARL HQ

Wally Sime ZS6WAL, the HQ

Administrative manager, reported recently that a number of volunteers are providing assistance at HQ so that the office can operate more efficiently. Among them are Patty ZR6OBS, Henk ZS6ENK, Vic ZS6VIC and Lance ZS6ZN.

In addition, Hal, ZS6WB has been managing the QSL bureau.

SARL HQ has since announced that Patty has been appointed officially to the HQ staff to relieve Wally of some of his burden.

Approximately 20 e-mail messages, many faxes, letters and QSL cards are received daily. Many telephone enquiries as well as book sales are also handled.

We thank the volunteers for their valuable assistance, which can only result in speedier and more efficient handling of services to members.

Renewal notices for membership fees for the 2000/2001 League year have been mailed. We urge members to give urgent attention to their renewals and thus help the League to make headway in the interests of all licensed hams. Amateur Radio needs *your* support.

WHAT IS A 'PENSIONER'?

Reference was made at the AGM to the fact that the pensioner, or 'senior' category of membership was really intended to assist those who, upon retiring, had to go easy on a reduced income.

It was never intended for comfortably-off members. Someone pointed out that one pensioner member recently bought a grand holiday house at the coast and could

easily afford to pay the full 'ordinary' membership rate.

With this in mind, current 'senior' members are invited to review their classification and consider whether they should not upgrade to 'ordinary' status *if they really can afford it*.

EXASPERATION!

Just when we thought the SARL was seeing sense, it shoots itself in the foot again. As if Wally hasn't enough hay on his fork – HQ has had to appoint a second paid staff member to cope with the existing volume of work – they go and introduce a certificate for Morse Code Examiners "as a token of appreciation for their services".

Coupled with HQ's new decision that examiners have to be appointed afresh every year (more admin work, more certificates) one can only throw up one's hands in exasperation. (Equally inexplicably, the voluntary examiners have to *apply* every year to continue giving their free services!)

Consider too that, a couple of years ago, HQ also re-introduced the ridiculous practice of issuing every year those smart but absolutely useless membership cards – another totally unnecessary burden on the staff and budget – after having had the savvy to cease the practice a few years earlier.

Who *is* it who thinks up all these wasteful ideas?

ADVERTISING FOR RADIO ZS

Our Councillor, Cliff Smyth ZS6BOX's portfolio includes responsibility for Radio ZS and advertising. He has appealed to us to help in the incessant hunt for advertising, the revenue from which helps to offset the high cost of

producing the magazine.

The advertisements need not be related to radio or electronics, of course. Can *you* help?


SARL AGMs TO CIRCULATE?

The belief in many amateur circles that the SARL is a Gauteng organization is reinforced by a decision taken a couple of years ago that all AGMs should be held in Johannesburg. This was probably prompted by the construction of our own building in that city, which would provide basic conference facilities.

Unfortunately, it also means that most attendees at AGMs are from Gauteng, giving further credence to the belief. While it is argued that everyone can vote via a proxy, we know that this just does not work in practice and so the Gautengers do, in fact, hold sway at the AGMs.

Because of the cost of travel and accommodation, the number of members attending at their own expense from afar has clearly dwindled of late. This means that an increasing proportion of paying members have virtually no contact with *their* organisation and feel they have no real say in its running.

I intend to submit a motion for the 2001 AGM of the SARL that the meetings should circulate around the country again as in the better years, thus allowing members in other districts at least *some* opportunity to see their League in action and put in their pennyworth.

It is *not necessary* for *all* councillors to attend officially, so the cost need not be exorbitant. In any case, this is one of those *essential* expenses that would give members outside Gauteng the feeling of 'belonging'. 

PEARStalk

AX CALLSIGNS

Australian amateurs may use the optional "AX" call sign prefix to commemorate the Sydney Olympic and Paralympic Games from 15 June to 2 November 2000. VK amateurs have been asked to use AX QSL cards when working with an AX call. The Wireless Institute of Australia has designed a generic AX card for the purpose.

SUNSAT DIGITAL SERVICE

Johann, ZR1CBC, of the SunSat command team has informed AMSAT-SA that the SunSat satellite also known as SO-35, has started transmitting digital signals.

He also said that, when SO-35 orbits permit the acquisition of high-resolution digital images, the image data will be broadcast using an unconnected AX.25 data format. Satellite operators can then collect the data in KISS format.

In addition to images, periodic announcements, bulletins, status information and calibrated telemetry will be transmitted as unconnected AX.25 packets.

The digital transmissions started on 19 May in conjunction with the Dayton Hamvention. The SO-35 digital schedule is to be extended into a continuous service, except for when the FM voice repeater is active.

For South Africa, week day/night passes will be used by the SunSat control station. On weekends, the voice repeater will operate as at present.

Typically, one pass per day will be used for control purposes. On the remaining weekend passes, digital services will be active.

More information is available from the SunSat web page at <http://sunsat.ee.sun.ac.za/index.html>

104 MEMBERS RENEW

The most recent report from the Treasurer was that 104 members had renewed their subs so far. He added that most of the outstanding subs were expected to come in in the next month or so, when the bods suffer withdrawal systems from the non-receipt of their favourite reading matter.


DONATION TO REPEATER FUND

When renewing his membership of PEARS, OM Donald ZS2BW of Cradock kindly included a R50 donation towards the maintenance and extension of the repeater system.

Many thanks, Donald!

IT WASN'T MARC LURIE

On page 6 last month we referred to a letter that a Gauteng ham had addressed to SATRA about establishing the SARL as a statutory or chartered body. When the SARL President read out the letter to the AGM attendees, I thought I heard him give the author's name as Marc Lurie. In fact, the letter was authored by Marc Brooks ZS6C.

That's who should be shot down in flames! Apologies to Marc Lurie ZS6HZ. 

Condolences — We learned with regret of the passing on 12 April of OM Petrus de Jongh ZS2NQ of Uitenhage and express our condolences to XYL Johanna and family. We also extend our sympathy to the family of Tommy Steel ZS2EL of East London, who passed away on 11 June.

Congratulations...

on your birthdays:

June

- 12 Bryan Marshall ZS6SD
- 18 Ossie Osborne ZS1KP
- 21 Rene Roebert XYL of ZS2NR
- 28 Pieter Liebenberg ZS2PL
- 28 Ken Tremeer ZS2BWB

July

- 2 Rosemary Robertson ZR2RR
- 3 Julie Scarr ZR2EY
- 5 Nic Oelofse ZS4NIC
- 9 Lambert ie Doux ZS2LL
- 11 Isaac Greeff ZS2ZG
- 13 Cyril Hislop ZR2H
- 14 Alex Gogos ZR2T
- 19 Bill Browne ZS2BY
- 19 Arthur Baynes ZR2ARB
- 20 Vic Olivier ZS2SZ
- 22 Beavan Gwilt ZS2RL

on your anniversaries:

June

- 20 Bernice & Bryan Marshall ZS1NQ
- 24 Blanka & Vic Batt ZR2BBH
- 24 Ali & Ewan Mathieson ZS2EN

July

- 4 Marge ZS2OB & Brian Weller ZS2AB
- 12 Julia & Bill Atteridge ZS2V

12 Joan & George Bowes ZS2QN



Sick List: We missed Louis Saunders ZS2CB at the AGM due to his hospitalization. He was soon out and about again and we understand he is regaining his strength.

Welcome to Donald Jacobs ZS2BW, who has returned to the fold, as well as two new members André Greyling ZS2ACG and Bryan Marshall ZS6SD, who is a son and namesake of ZS1NQ (but don't hold that against him).

Rambling: Incoming Chairman Beavan Gwilt ZS2RL and XYL Mel have been touring the Northern Cape, Kalahari Gemsbok Park and Namibia, returning via the Richtersveld, but should be back home around now.

Similarly, Peggy & Viv Moore ZS2VM should be getting home around now from their visit to the States.

Bernice and Bryan Marshall ZS1NQ of Somerset West are enjoying a round trip of a couple of weeks to EL, Queenstown, Gauteng and back via the Swartberg Pass.

Other News: Personal greetings to all from Bud Voortman ZS1B (ZS2CA), Ossie Osborne ZS1KP, Ron Marlow ZS1RON, Bryan Marshall ZS1NQ and Bill Slier ZS1ZM, who the Editor saw on his visit to ZS1 recently. 📍

Your Society's Committee

Chairman Awards	Beavan Gwilt ZS2RL	360-6968
Vice Chairman QSX collation & mailing	Trevor Scarr ZS2AE	367-1746
Secretary repeaters, packet	Chris Scarr ZS2AAW	368-1344
Treasurer Assets Control	Clive Fife ZS2RT	367-3203
Social, Refreshments	Bill Hodges ZS2ABZ	581-2580
QSX Editor	Garth Laaks ZS2HB	368-1101
e-mail the Editor at	glaaks@africa.net	
Technical Classes, RAE	Greg Maynard ZS2RE	581-0991
Librarian	Neil Thomas ZR2NT	487-2403
Special Events, Social	Ewalt Bouwer ZS2EHB	933-3482
Youth Affairs	Greg Maynard ZS2RE	581-0991

PEARS' VHF/UHF & Other Services

REPEATERS

Town VHF	# 145.050/650	
Town UHF	# 431.050/438.650	
Cockscomb	145.000/600	
Colesberg	* 431.075/438.675	
Craddock	* 145.050/650	
Grahamstown	* 145.150/750	
	Knysna	* 145.075/675
	Lady's Slipper	* 145.100/700
	Noupoort	* 431.150/438.750
	Uitenhage	# 145.075/675

* These form PE's long-range 2-metre repeater system, also linked to which are East London 145.775 MHz repeater, George 145.700, Danabaar 145.600, Stilbaar 145.750, Butterworth 145.725, King Williams Town 145.625 and Umata (438.725 duplex). It is further extendable to Cape Town via the WC RWG system. # These can also be linked as required

OTHER SERVICES

Packet Bulletin Board (ZSONTP)	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) (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

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 Craddock 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 into the 2m network, in receive-only mode or with full transceive capability for interactive events.

Date	Prepare and Read on 2m Repeater link
1 June	ZS2RT
11	ZS2ABZ
18	ZS2HB
25	ZS2RE
2 July	ZS2EHB
9	ZS2RL
16	ZS2AE

DIARY DATES

JUNE

23 PEARS monthly meeting
28 HAMNET/ECARES meeting

JULY

6 Wrinkly Rave
21/22 VW Rally

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