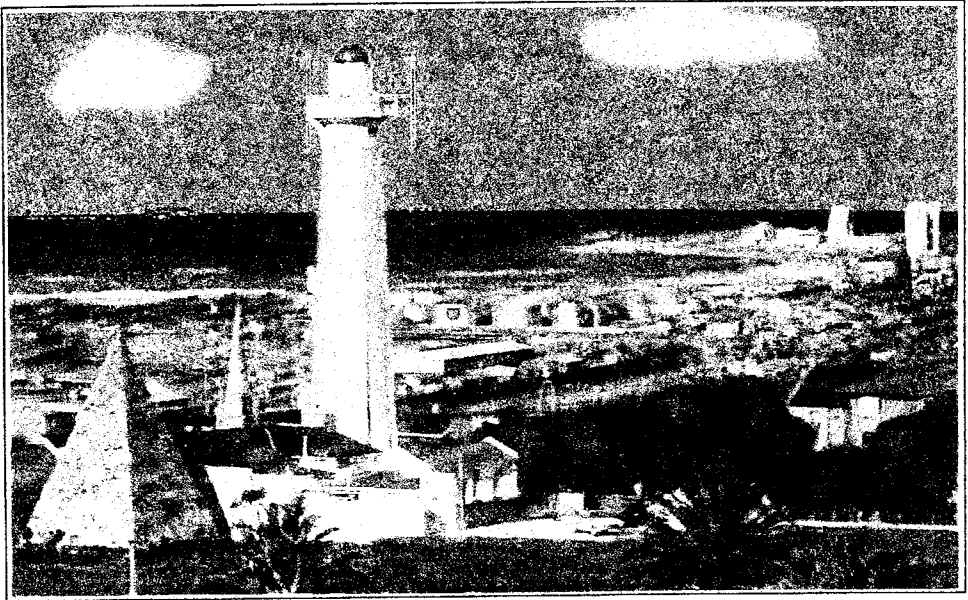




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**THIS NEWSLETTER IS PUBLISHED BY THE
PORT ELIZABETH AMATEUR RADIO SOCIETY**

Web site: pears.8m.com

PO BOX 10402
LINTON GRANGE
6015

February 2002

NOTICE OF MEETING

The monthly general meeting of the PORT ELIZABETH AMATEUR RADIO SOCIETY will be held on **Friday 15 February 2002** commencing at 20:00 (8pm) in the Municipal Disaster Management Centre, Westview Drive, Mill Park, Port Elizabeth (Civil Defence Centre).

Mike Bosch ZS2FM will give us a talk on Optical and Radio Astronomy. Since Mike is a boffin on both aspects of astronomy, his talk should keep us pretty well captivated. Mike built his own observatory in his back yard – sliding roof and all – and hopefully we will one evening be able to look at the stars after hearing all about them at the meeting.

Tea, coffee and munchies will be available.

Wrinkly Ravers

The next rave will be held on Thursday, 7 March 2002. We expect that it will take place at the Charlo Grill, in Luke Road, Charlo which, as you will recall, we have decided will be our main base in future.

However, we have not excluded the possibility of changing spots occasionally just to be difficult - at

~~our~~ your age, we're entitled to be pernickety! So get your hearing aids on and listen to bulletins in case this is one of the months to change our minds. We'll only know after the February rave, which will take place after this issue of QSX has gone to press.

GET TOGETHER AT JEFFREY'S BAY

PEARS members and their families will get together at the Jeffrey's Bay caravan park on Saturday, 2 March for a bring and braai. Those with caravans or tents are invited to make it a weekend trip, overnighing on the Saturday and returning on Sunday afternoon. If you have the necessary facilities, please join us for the weekend. If you can't manage the Saturday day-trip, come along on the Sunday.

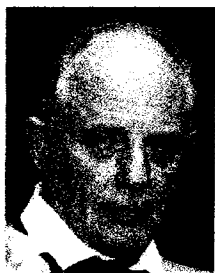
The Saturday bring and braai will be completely self-catering, so please bring all your eating, drinking and seating needs. A portable braai would also be a good idea since we do not know how many the park's braai facilities can cater for.

ON A TECHNICAL NOTE

Remember the get-togethers for technical discussions that take place on the 2-metre repeater link from 20:30 on Monday and Thursday evenings.

On Monday evenings, interested parties discuss the most recent technical article by Alan Whitehead that is published in QSX.

On Thursdays, Neil ZR2NT and Alan ZS2R will discuss current projects and stand by for any technical discussions. All comers are welcome to join in and get the discussion going on their own technical problem. ☺



The Chairman's Chat

A WEEKEND TO REMEMBER.

This is the date of the next PEARS social bash. Those of us who have caravans or tents will be camping at the Jeffreys Bay caravan park for the weekend. On the Saturday (2nd March) other members and friends are invited to gather there for a *lekker saamtrek*.

THE AFFAIR WILL BE STRICTLY SELF-CATERING, so if you intend to braai then it might be a good idea to bring the braai machinery with you if you can, 'cos public braai facilities at the park are not all that plentiful. And if you forget to bring chairs, you sure ain't gonna use mine! The same goes for my beer and swimming trunks.

The only thing that will be provided by PEARS is hot water, courtesy of our hot water urn.

THERE MIGHT BE SOME MEMBERS who will be unable to be there on the Saturday – we will be only too happy to see them on the Sunday. And for those that may come from further afield, why not overnight in a B&B or one of the chalets at the Kabeljous resort (also owned and run by the J/Bay municipality)? But the trick will be to book early.

RAIN? Statistically, it cannot happen again ...

THERE HAVE BEEN SOME MINOR CHANGES in committee responsibilities. With the departure of Greg ZS2RE, Neil ZR2NT has taken over the co-ordination of the RAE classes. In a sort of horse-trading operation, Chris ZS2AAW has taken over the secretarial duties from Neil. My thanks to both gentlemen for their willingness.

ONE VOLUNTEER is worth more than a whole platoon of conscripts.

73 & 88,

Beavan ZS2RL

Nominations for Director of Ecares

Just a reminder to members to forward nominations either to Ken ZS2OC or to me by the end of March. Thus far I have received no nominations.

First establish that the nominee is prepared to stand, and nominations must be signed by a proposer and a seconder.

Hazchem symbols

These are in the process of modification by the Authorities and will be published as soon as a revised version becomes available.

Social

We are sorry to hear that Jim

ZR2JRD has been in hospital and has undergone a triple bypass operation. However, he is making good progress and we wish him a speedy recovery.

We welcome Rory Norton ZS2BL to ECARES. Nice to have you aboard too, Rory.

Two of our members now boast new call signs – Allan, ex ZR2WH, is now ZS2R and André, ex ZR2A, is now ZS2AJ.

PRC77 6 metre sets have just been issued to Rory ZS2BL and Harry Nel ZR2NH.

73.

Al ZS2U
Provincial Director,
Hamnet East Cape/ECARES

♦ Al asked me to point out that the error in last month's Hamnet/ECARES News was a genuine typographical error, not a boast or wishful thinking on Al's part – Ed.

SCIENCE FESTIVAL

Please remember the annual Sasol Science Festival at Grahamstown that will take place from Wednesday, 13 to Tuesday, 19 March.

As reported last month, PEARS is gearing up to participate again with a display incorporating interesting "hands-on" and techno-educational material aimed especially at the younger set.

Volunteers to help erect and, more particularly, to man (person) the stand are required. Since the SciFest will be only a few weeks away when you receive this copy of QSX, and will already be in progress when our March meeting takes place, time is growing short. This is the last opportunity that we have to appeal for help through the medium of QSX.

Neil Thomas ZR2NT is our co-ordinator for the event. Please make a point of letting him know if you are able to help and on which days you can do so. Arrangements will be made, as we did last year, for one car to go up from PE each day carrying operators. That car's fuel cost will be borne by PEARS. Please let Neil also know if you are prepared to use your car in this way on one or more days.

We want to make this a really good show and we need your help. Pick up that phone now... and call 372-1969.

SARL MATTERS

or...

WHAT ON EARTH IS THE MATTER WITH THE SARL?

Snippets from – and comments on – SARL bulletins and goings-on

RAE ENTRY FEE – IS IT A RIP-OFF?

The next RAE takes place on Thursday, 23 May, 2002. The closing date is 16 April. Enrolment forms are available on the SARL website at www.sarl.org.za.

The League has increased the RAE enrolment fee to an outrageous R250 per candidate – hardly a month after they raised it from R135 to R235. The fee includes the operator's certificate (if successful) and first licence fee which, when ICASA handled things, was R27. The SARL asks R35 for it.

No late entries will be accepted.

PEARS wrote to the League about the tremendous increase to R235. That complaint seems not to have deterred them and, just weeks later, the further increase to R250 was announced.

Is the League still a non-profit organization? Are they *really* trying to attract new blood, especially from among the youth who they profess to foster? Can the previously disadvantaged community, who an ICASA spokesman a while ago asked the League to encourage, afford this kind of entry fee?

CHANGING YOUR CALLSIGN?

Following hard on the excessive increase in the RAE fee, the Council of the SARL, showing further scant regard for the pockets of amateurs, has also announced an inordinate increase in their fee for handling licence upgrades or call sign changes.

Anyone changing his or her status, i.e. from ZR or ZU to ZU or ZS or merely changing a call sign, now has to fork up R50 if a member of the League, or R150 if not a member.

Maybe the Ripleys of Believe It Or Not fame would be interested. On the other hand, perhaps even *they* would not believe it!

PEARS has sent the SARL a letter decrying both the raising of these charges over and above those which applied when ICASA handled things, and condemning the unacceptable discrimination against non-members.

The PEARS Committee believes that, acting as an agent for ICASA, the League has no legal or moral right to charge non-members more than it asks from members for services that it performs on behalf of ICASA.

We also believe that the SARL has no right to demand fees that exceed those applied by ICASA, which we assume are still prescribed in the Radio Regulations.

This whole matter has also been taken up with ICASA.

The ill-considered attempt by the SARL to raise funds in this manner has already generated a good deal of negative comment and understandable ill-will from amateurs around the Country – even members of the League – and could just be the final nail in the SARL's coffin.

QSL-BUREAU & NEW CALL BOOK

QSL Bureau facilities are not available to non-members of the SARL. The League says that cards received for non-members are kept until such time as the addressees join the League and the cards will then be handed over to them.

That is as it should be. This announcement was made in the latest of three consecutive SARL bulletins warning that the new call sign book will also be

available only to members.

"This is a free service only to members of the SARL. SARL membership is the only way to obtain this call sign book. Now is the time to become a member of the SARL and gain access to all the services available to members," the bulletins reiterated.

It is odd that, having previously explained why it is not practical to issue a printed call sign book, SARL Council suddenly announced that it is about to do so after all.

Will this book also have only the 3000 odd names that appeared on the stiffie disc version of a call book? Without particulars of the other 3000 or 4000 licensees it is of only limited use.

Hopefully there will not be a replay of the errors and omissions that occurred when the last printed book was published without first asking clubs to check the entries in their divisions.

One gains a sneaking impression that, with this repetitive harping on what non-members are missing, coupled with the

sudden decision to print after all and the haste with which it has been carried out, Council is making a last ditch stand to improve the membership figures, which have apparently again dropped appreciably this year as we, at least, expected.

We still await some sort of reaction – any kind of reaction – from Council to Mike Bosch's independent survey on the reasons offered by potential members for their resistance to joining the League.

While they may have opened their eyes sufficiently to read the writing on the wall, SARL Councillors have consistently failed to also open their ears and listen to the ham fraternity's complaints, especially about rising costs!

This has lost them the goodwill and respect of both members and potential members that are essential to the successful existence of a national organization. Once lost, they are extremely difficult to regain.

Personally, I think the League has sadly passed the point of no return. ☐



Above— The PEARS Science Festival display in 2000. Trevor ZS2AE appears twice because (a) he moves fast and (b) I used a slow shutter speed. Right— Al ZS2U's "comcar" field station for the VHF/UHF contest intrigued our youngest member, Lyle ZR2LL.

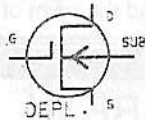
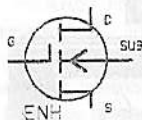
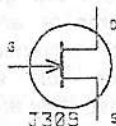


By Alan Whitehead ZS2R

This month we will look at *field effect transistors*. The terminals are called gate, drain and source

These devices can be divided into two categories, namely *junction field effect transistors* (JFET) and *metal oxide field effect transistors* (MOSFET). The latter may be further divided into *enhanced-mode* and *depletion-mode* types. These divisions are important in practice because each type requires different biasing conditions.

The symbols for each type are given below.



The JFET amplifier —

Before designing an amplifier of this type, the following need to be considered from the manufacturer's data sheet:

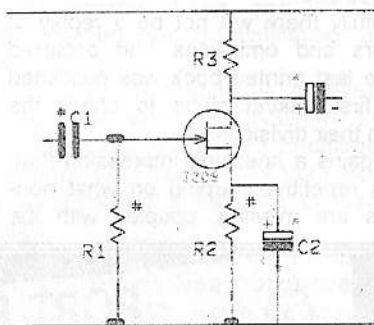
- (1) Maximum source - drain current (I_{dss}) 2 to 5mA,
- (2) Maximum gate source bias voltage for useful operation also called the pinchoff voltage - usually several volts,
- (3) Maximum power dissipated in the device, which is equal to the voltage across the device multiplied by the current in the device - usually about 0.25 watts for small signal JFETS.

The given circuit diagram is that of a common source amplifier. There are many ways of approaching the calculation of components. The following is one way. I look forward to hearing about other methods!

Firstly, decide on a value of source-drain current. A value of 2 mA would be safe for most small JFETS.

Now the gate must be negatively biased by 1 to 2 volts, say 1.5 in this example. The gate will be tied to ground by resistor R1.

If the source is now raised to plus 1.5 volts it will mean that the gate is now negative with respect to the source. Old timers will notice the similarity between valves (grid and cathode) and JFETS (gate and source).



Calculate R3 so that the drain will be at half the supply voltage. If the supply is 9 volts, and the current in R3 is 2 mA, it means that $R3 = 4.5$ volts divided by 0.002 A, i.e. 2250 ohms, so a 2.2k resistor would be satisfactory.

R1 can be any high valued resistor between say 100k and 1M Ω . The reason for this high value is that the input resistance of JFETS is very high and the gate only draws a few nanoamps of current.

You could use a smaller value for R1 if you wanted the input resistance of the amplifier to be smaller.

The gain of the amp. will be about $0.004 \times R3$.

Find out more about these simple devices on Monday evenings at 8.30 pm on the repeater network.

Part 7 will deal with MOSFETS.

MICROPHONES UNLIMITED

By Colin Robertson ZS2CR

These days the sophisticated black boxes which most operators use leave little room for modification and experimentation other than the construction of external requirements, namely antennas, power supplies, and microphone circuits.

I present here four microphone circuits that could be most useful in the radio room. The first three circuits are of RSGB origin. All are of low cost, can be easily constructed, and work very well.

Circuit #1: Desk / hand pre-amplified microphone

This small circuit will work with all makes of transceivers, ideally with one having a 5 to 8-volt supply available on one of the microphone socket pins.

For Icom, Kenwood and/or Yaesu rigs the connection is straight forward. If yours is an older rig with a 4-pin mic socket with no voltage available there and you do not want to go fiddling on the inside of the rig, a switched 9-volt PP3 externally mounted battery supply can be employed. Check the manual or circuit of your rig first.

The microphone socket pinouts of 3 types of transceivers are detailed below. Some commercial rigs, such as the Midland which uses a dynamic mic preamp in its hand mic, have a voltage source at the mic socket.

If you are qualified to open up your rig, find a suitable 5-volt source if you can; otherwise locate a 12-volt take-off point and reduce this to 8 or 5 volts through a small 78L08 or 78L05 100ma regulator. Additional smoothing of this regulator should not be necessary. (Note the odd pinouts of these mini-sized regulators – Ground, Input, and Output, looking from the top, left to right, flat side to the front).

Constructing the circuit using the supplied PC board layout is a doddle. Keep to the stated values for best results you may find that a 5 k Ω or lesser value for RV1 would be more manageable. If your VHF/UHF rig has a Mic Gain control you may be able to omit this pot entirely.

The 2-wire electret mic insert I used was gleaned from a broken Telkom Venus telephone handset, but they are readily available from local components suppliers at

under R10. Note the polarity when soldering onto the mic insert and the electrolytic capacitors.

Complete the soldering on the mic insert as quickly as possible so as not to cause heat damage to it. Mic ground and PTT ground are connected together in the microphone plug.

The circuit board can be built into an old handheld fist mic or old desk microphone, or with a little ingenuity you can build your own desk mike, as follows:

Use a small metal can or box as the base as well as to house an external PP3 9-volt battery (if used) and the optional "power on" LED, with a push-to-make switch or floor switch for the PTT. Shielded cable from the PC board audio output to the rig is preferred.

For the gooseneck, round 2.5mm twin and earth "space cable" can be used. This is then soldered or epoxyed onto the base. Either cover the gooseneck cable with black heatshrink tubing or spray-paint it black.

The mic insert can be fixed onto the end of the gooseneck with epoxy putty and then hidden under a small microphone wind protector cover available from music or electronic shops. The end result can be a neat and professional looking job.

This type of desk mic construction could also be adapted to make a hands-free mobile unit.

To set up the pre-amplifier output level on a HF rig, one method is to first set up the mic gain on your rig to a maximum of 50% and set the processor off. Then, starting from minimum output, increase the output level to the maximum permitted ALC level or to a point where your RF output indicator *peaks* full over. Do not overdrive the modulation level on your HF transceiver.

On a VHF/UHF rig, get a friend to monitor your signal on a simplex frequency and increase the output level in divisions of 12, starting from the minimum output position to the point where increasing the gain further results in no further increase in the monitored output level.

There should be no need to adjust the internal deviation control in your rig.

Circuit #2: Dynamic Mic Pre-amp for Icom transceivers

Icom (and most Motorola commercial rigs) add the voltage supply needed to power electret condenser inserts and dynamic mic insert pre-amps directly onto the audio line itself and then decouple this voltage within the rig. Icom use a pre-amplifier circuit on both electret and dynamic mic inserts supplied by them.

This circuit will allow you to use any low impedance dynamic mic insert on an Icom transceiver. Output level is preset.

Complete the soldering on the mic insert as quickly as possible.

This circuit works well for use with home-brewed headset boom mics using either Heil mic inserts or the tiny square or rectangular dynamic mic inserts removed from the old grey and/or black HT series of Motorola handy-talkies.

This circuit is close to that described in Circuit #3 but includes additional components for RF suppression. No PC board has been prepared as, with so few components used, point-to-point wiring can be used.

The pinouts of the BC109C are the same as those for the BC182 used in Circuit #1. Mic ground and PTT ground are connected together in the microphone plug.

Circuit #3: Dynamic Mic Pre-amp for PC Sound Cards

You might have the occasional application where the use of an existing dynamic hand microphone is preferred when utilising the sound card of your PC. The mic input on a PC soundcard is similar to that used by Icom and thus this circuit closely follows that of #2 above.

The pre-amp's output is taken through a two-core screened lead to the Tip and Ring (wired together) and the screen (the "ground" side or "sleeve") of the 3.5mm stereo jack plug required for your sound card. Point-to-point wiring can be used and, again, complete the soldering on the mic insert as quickly as possible to prevent heat damage.


The pinouts of the BC109C are the same as those for the BC182 used in Circuit #1.

Circuit #4: Kenwood Electret Microphone Circuit

Where additional pre-amplification is *not* required (the case with most VHF transceivers other than Icom), this circuit works extremely well. Designed by Kenwood, it could easily be adapted for use with other makes of transceivers and has been successfully used in boom mic headsets.

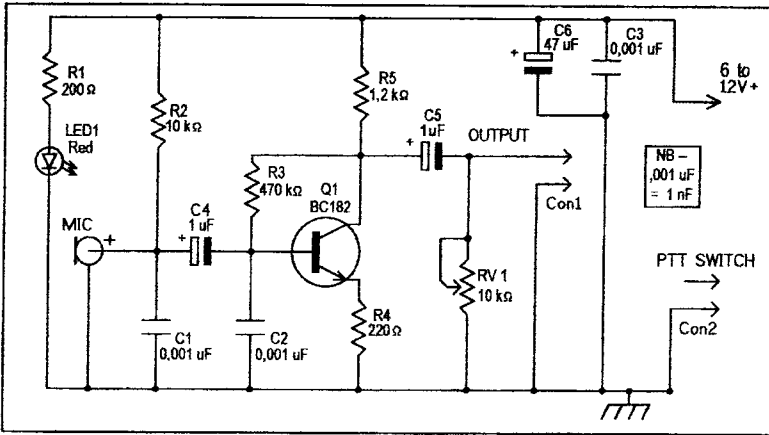
The electrolytic capacitor can be left out where space is a major consideration.

With so few components used, no PC board has been used.

It's always a pleasure to receive excellent audio reports, especially when it is the result of a microphone project that you built yourself! 

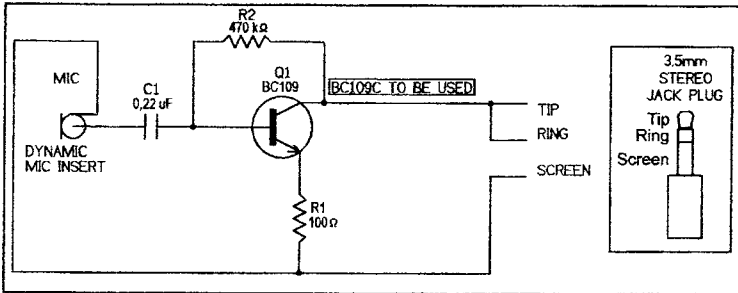
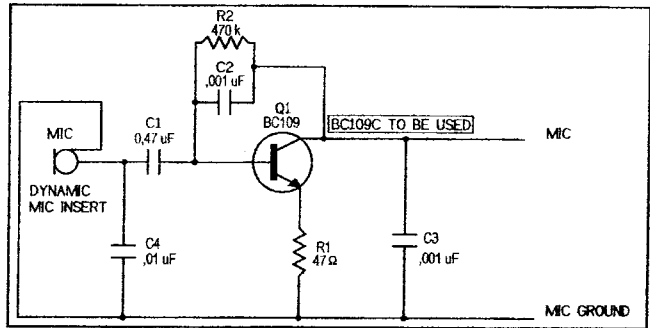
Transceiver Microphone Socket Pinout Chart

Pin #:	Kenwood	Icom	Kenwood 8-pin Modular	Yaesu
1	Mic Audio	Mic Audio	Up	Up
2	PTT	+8V (200mA max)	+8V (200mA max)	Up/Dn Com
3	-470R-- Down	Up	PTT Ground	Down
4	----- Up	N/C	PTT	Fast
5	+8V (200mA max)	PTT	Mic Ground	Fast
6	Rev Audio	PTT Ground	Mic Audio	PTT
7	Mic Ground	Mic Ground	N/C	Mic/PTT Gnd
8	PTT Ground	N/C	Down	Mic Audio



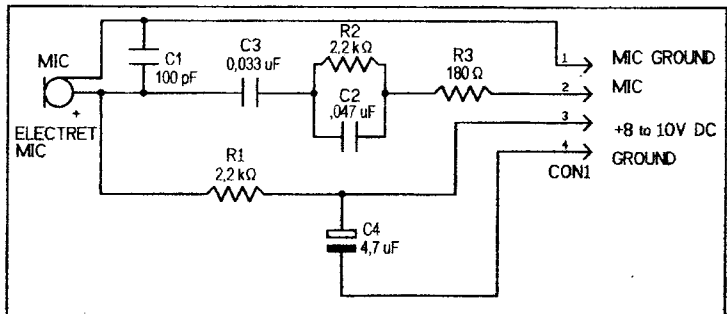
Circuit 1—
Electret
microphone
preamplifier for
use with most
makes of
transceiver

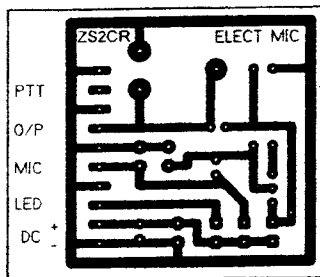
Circuit 2— Dynamic
mic preamplifier for
Icom transceivers



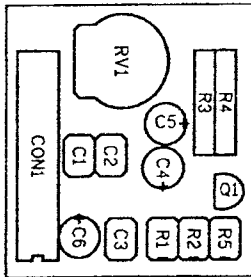
Circuit 3— Dynamic
mic preamplifier for
PC sound cards

Circuit 4— Electret
mic preamplifier
for Kenwood
transceivers

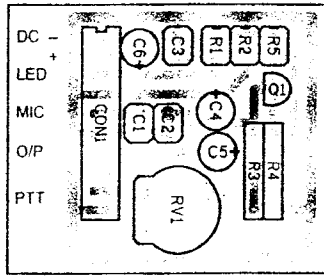




*Circuit 1- PCB foil side
(actual size)*



*Component outlines
(seen from pin side)*



Component overlay

PEARS Awards - 2001/02

By Chairman Beavan ZS2RL

OUR AGM FOR 2002 IS NOT ALL THAT FAR DOWN THE ROAD – it should happen on the 18th of May. Part and parcel of the AGM is the handing over of annual awards for various activities and achievements. PEARS has a number of these awards, most of which require input from members.

Here follows a short resumé to jog memories

ZS2OB DX Trophy: Applications and nominations to be considered by the committee. By definition, without applications or nominations there can be no award.

DF Hunt Trophy: Seems like this ain't gonna happen this year.

ZS2AB Constructor's Trophy: Applications and nominations to be considered by the committee. As for the DX Trophy, the committee needs applications or nominations to consider.

Ham Spirit Trophy: This award is decided by the committee, in confidence.

PEARS Merit Cup: Applications / nominations to be considered by the committee. This award is to the member who has done most to

promote amateur radio, by way of any relevant activity.

Achievement Certificate: In recognition of a special outstanding achievement in the context of amateur radio.

For all of the above awards, the recipient must have been a member of PEARS during the year in question.

Of course, we also usually hand out certificates of appreciation for any service willingly (my Thesaurus gives *freely* as a synonym for willingly!) rendered to PEARS. These are not restricted to PEARS members.

Thusly, dear members, gentlemen and ladies, please let's have your applications and/or nominations. These can be made at any time to any committee member at any place, provided it happens before the April monthly meeting. What can be easier than that? 📧

PEARS VHF/UHF CONTEST WELL SUPPORTED COUNTRY-WIDE

Al Akers ZS2U

It is rather early to report on the contest as only information on the Cape is available. In the West Cape there were two known portable stations – ZS1ESC on Piketberg and another station on Groenberg. Data about other provinces has not yet come to hand.

In the East Cape, Colin ZS2CR and Dennis ZS2CW operated under the call sign of ZS2CE from Windy Ridge, which is about 1200 metres above sea level.

Donald, ZS2BW operated from Leeuwkloofberg just outside Cradock, André ZS2AJ from a mountain outside Grahamstown, John ZS2J operated from the Toposcope at Bathurst and I set up my station at Beacon Farm which, at 275 metres above sea level, is only 5 metres lower than the highest spot in Port Elizabeth.

On Friday and Saturday we had a howling South-easter accompanied by showers and thunder storms, which was not conducive to good operating conditions.

The contest started up on the

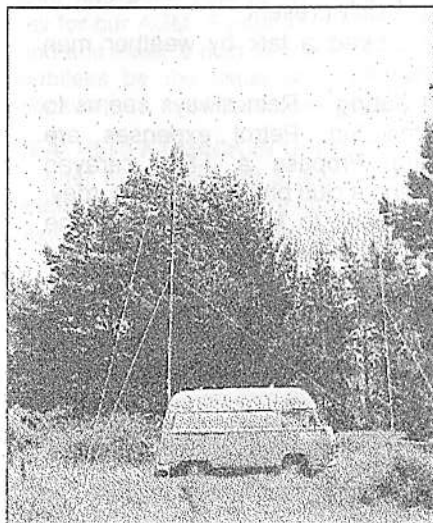
Friday evening with an opening between Port Elizabeth and East London, and several stations at each city made contact. Thereafter, contacts were limited essentially to local ones except between PE and ZS2CE, ZS2BW, ZS2J and ZS2NV at Bathurst, and ZS2AJ.

I also managed to contact ZS2ABK at Bushman's River Mouth.

I believe that ZS2CE managed to contact ZS5DJ at Ramsgate.

All attempts to get through to the West Cape or other provinces were to no avail.

Rather disappointing, but at least a lot of simplex activity was generated and I saw a lot of fun and excitement in spite of the frustration of poor conditions. ☒



Left – Al's "ComCar" ensconced in the forest and two beams aloft – all erected single-handedly! Below – Al scoring a few more points. No, the steering wheel is NOT for turning the beams! Yes, Al IS left-handed, hence the key position.



MINUTES OF THE MONTHLY MEETING OF THE PORT ELIZABETH AMATEUR RADIO SOCIETY HELD AT THE MUNICIPAL DISASTER MANAGEMENT CENTRE, MILL PARK, PORT ELIZABETH ON FRIDAY 18 JANUARY 2002

1. PRESENT AND APOLOGIES:

As noted in the attendance register. Also ZS2FM, ZR2AG

2. WELCOME:

Beavan welcomed all to the first meeting of the year. Special welcome to Mark, Rory.

3. ACCEPTANCE OF PREVIOUS MINUTES:

None printed in QSX – meeting was a social one. Meeting accepted the minutes would have been approved!

4. ARISING FROM PREVIOUS MINUTES:

None

5. FINANCE:

Finance and membership were reported to be sound. Clive has four licences to pay, out of about 18. Membership stands at around 140.

6. CORRESPONDENCE:

In – Application for membership from ZR2DJH

- Licence renewals (first batch)
- Manual for clubs and societies from the SARL. Beavan found it very useful, anyone wanting a copy can approach Beavan for an email version.

Out – RAE examination fees – Letter to the SARL. Beavan has drafted such, and read it to the meeting, asking for reasons for the increase... Regulations believed to state R90 for the RAE. Can the League increase this?

7. GENERAL:

Neil: RAE – What are we going to charge for the manual and PEARS membership? R45 was the previous amount. Have to add the SARL R235 and R50 for PEARS membership for the grand total.

Neil has contacted the Algoa Sun for an advert. But maybe we can submit an article on PEARS and the SciFest, with a

pic etc and then mention the RAE course.

Neil also needs lecturers. He might consider a course even if there are only a few students.

– Science Festival 13 – 19th March. We will need assistance manning the stand, and setting up etc. Emphasis on hands-on building etc.

– QST and QEX has been ordered, and should arrive with Viv.

Beavan: VW Rally – just a reminder. We will need an organiser and committee.

– AGM in May. We need to book a venue. Meeting supported the use of Walmer Scout Hall.

– RAE manuals to ZR2PET. Beavan explained the situation. Chris managed to get a cell phone number, and will follow it up when in Cape Town later this month.

Next meeting – guest speaker will be Mike Bosch, on optical and radio astronomy.

Trevor suggested asking members for a wish list of topics, which other members could possibly present.

Lynne offered a talk by weather man Brent Apple.

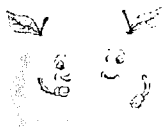
Social outing – Rain always seems to spoil the fun. Petrol expenses are mounting. Propose a J-Bay caravan outing, and a club braai on the Saturday. Bill will speak to Mrs Potgieter at the park, for rates etc. Tentative date 2nd March.

Beavan also mentioned the committee meeting moving to the Friday 06h30 before the general meeting.

AI: VHF contest was highlighted.

Library contents need to be removed – sort out at next committee meeting.

Meeting closed at 20h40. 📺



Pearstalk

RAE COURSE

It is time to start a course for the May RAE, but PEARS does not run one if there are fewer than six candidates. If you know of anybody who would like to write the May exam, please get him or her to contact Neil Thomas ZR2NT without delay. His telephone number is 372-1969 after about 18:00 and weekends.

The fee for our course, if there is one, will be R95, being R50 for membership of PEARS and R45 for the RAE Manual. This is over and above the R250 that the SARRL wants as the cost of enrolling for the exam and which includes the first year's licence if the candidate is successful.

PEARS AGM ON 18 MAY

As we reach the start of another financial year on 1 April, subs will again fall due. There seems little likelihood of any increase from the R50 that we have managed on since the Society's inception, so you can start saving towards this goal!

The Walmer Scout Hall in Fordyce Road has been booked for Saturday, 18 May for our AGM. Please keep this date in mind and make a plan to attend. There will doubtless be the usual bring and braai, boot sale, etc. (and ice cream, Lionel!)

WEATHERFAX BACK IN OPERATION

After an absence of a few weeks, the weatherfax relay on 2 metres from the Bayworld complex has been resuscitated.

Colin Ashwell ZS2AO tells us that the system was apparently put out by lightning during one of the recent storms and the TV receiver and possibly the scan-converter at the Museum went on the blink.

After the receiver was repaired by a TV repair firm Colin, fearing the worst, checked the scan-converter. Luckily, however, only a small transformer in the audio feed had to be replaced.

We are grateful to Colin for getting the system back in operation, especially since we know that staff reductions have put a heavy burden on his time at the saltmine.

DX NEWS

Tom Davies of Grahamstown reports on the following interesting DX:

- **MALAWI, 7Q** – Les, 7Q7LA has been QRV on 20 meters CW around 0330z.
- **NEPAL, 9N** – 9N7YT on 15 meters CW around 0200z. QSL via JJ2NYT.
- **CHINA, BY** – Ted, BA4DX is generally QRV on 15 meters SSB most days after 0000z.
- **PALMYRA AND JARVIS ISLANDS, KH5** – Rick, KH7O/KH5 has been operating on 20 meters SSB around 0300 to 0500z. QSL to home call.
- **VIETNAM, 3W** – Coiy, 3W2FM on 40 meters CW around 1130z. QSL via UA0FM.
- **BHUTAN, A5** – Ray, G3NOM is QRV as A52OM. His length of stay is unknown. He has been active on 20 and 15 meters using CW and SSB around 1300 to 1430z. QSL to home call.
- **PAKISTAN, AP** – Sam, AP2ZA is usually QRV on 20 meters SSB daily around 0230z. QSL via VE3XAP.
- **UNITED ARAB EMIRATES, A6** – Huraiz, A61AU has been active on 20 meters SSB usually after 0400z and on 10 meters SSB around 1300z. QSL to home call.
- **SOUTH SHETLAND ISLANDS** – Oleg, CE9/R1ANF is QRV from Ripamonti Base, Ardley Island. QSL via RK1PWA.
- **REUNION ISLAND, FR** – Roland, FR5AB has been active on 10 meters using SSTV and PSK31 around 1100z and 1030z, respectively. He has also been on 20 meters using RTTY. Joseph, FR5HA has also been QRV using PSK31 on 20 meters after 1630z and again after 0245z. QSL to

home calls.

• **SOUTH KOREA, HL** – The Korean Amateur Radio League is QRV using Special Event call HL17FWC in celebration of the 17th FIFA World Cup until May 30. QSL via HL0HQ.

• **OGASAWARA, JD1** – JA9XBW/JD1 has been active on 40, 30, 20, 17 and 12 meters using CW. JD1BIA has been working 12 meters just after 0000z. JE1PIO/JD1 has been QRV on 40 meters CW just before 1300z. QSL via operators' instructions.

• **MIDWAY ISLAND, KH4** – Dick, AH7G, Barbara, NH7YL, Norm, NH7CT, Lori, AH6OS and NH6FP are QRV as AH4/homecalls. Activity is on 40, 20, 17, 15, 12 and 10 meters. QSL to home calls.

• **WEST KIRIBATI, T30** – Steve, T30ED has been active on 15 meters around 0630z. QSL via 3D2SJ. INDIA, VU. Sabu, VU2ELJ has been on 80 meters long-path around 1400z.

NEW CALL SIGN BOOK

The SARL's new call sign book was reported a few weeks ago to be in the printing process and it is planned to mail it with the Jan/Feb issue of Radio ZS during the last week of January, according to the SARL bulletins of 6, 13 and 20 January.

AO-40 IN THE 'DEAD ZONE'

AO-40 satellite ground controllers have adjusted the spacecraft's attitude as it entered a period of unfavourable sun angles recently.

The satellite relies on solar panels for its power. It is currently in a long period during which Earth eclipses the sun near perigee – its point closest to Earth. These periods will continue well into June.

The attitude shifting necessary to compensate for the unfavourable sun angle leaves AO-40's antennas pointing away from Earth for several weeks.

The JAMSAT SCOPE team recently announced the release of several new photos taken by the SCOPE cameras aboard AO-40. They are available on the JAMSAT Web site
<<http://www.jamsat.or.jp/scope/011215/>>.

For more information on AO-40, visit the AMSAT-NA Web site
<<http://www.amsat.org/>>.

SPARK GAP SIGNAL HEARD FOR HUNDREDS OF KILOMETRES

David Wilson, VE3BBN, reports that his commemorative spark gap transmissions on 12 December to celebrate the 100th anniversary of Marconi's 1901 transatlantic experiments were heard hundreds of kilometres away. David, who lives near Niagara Falls, Ontario, built a low-power rotary spark transmitter and secured permission from the Canadian authorities to use it briefly on 80 meters.

He transmitted "MARCONI S" twice a minute and said he got more than 450 reports but estimated that only about 60 of them were valid. "The best distance was Kansas City," he said – some 1360 km away. He noted that the majority of the reports were in the 320 to 640 km range.

Additional information, photos and audio of what his transmitter sounds like are available on the "Spark Gap Transmitter Signals for Marconi Centennial" Web site
<<http://www.qsl.net/g4rfr/marconi.htm>>.

NEW LICENCE FEES NOT YET BROUGHT TO ACCOUNT.

If you wrote the November RAE you have probably received an invoice from ICASA that includes a fee for last year's licence as well as a fee for your RAE certificate. This is an error – these fees have already been paid and *must not* be paid again.

You only need to pay the R27 for the 2002 licence year. The SARL is trying to get the error corrected.

If you have already paid the extra amount you can either write to ICASA and try to get a refund or ensure that you receive a credit for these amounts in your account next year.

LICENCE RENEWALS

Many local hams have received their annual renewal notices. If you have not received yours, you should contact ICASA.

In the mean time, you can pay your renewal fee at the Post Office using your renewal notice from last year.

SARL CONTESTS

Two SARL Contests are scheduled for March. The HF Field Day takes place over the weekend of 9 and 10 March 2002 and the first leg of the SARL VHF/UHF Contest takes place over the weekend of 16 and 17 March 2002.

Visit the SARL web site at www.sarl.org.za for the rules for these two contests.

WORLD AMATEUR RADIO DAY

This event is scheduled for Thursday, 18 April. The theme will be "*Amateur Radio: continuing innovation in communication technology*".

Presumably more information about activities to celebrate the day will be forthcoming on SARL bulletins as the date approaches. Being a working as well as a school day does not lend itself to putting up a meaningful special event station anywhere – except at schools, perhaps. But what happens when we tell the kids they have to cough up over R300 just to get to the RAE stage?

NEW AMATEUR RADIO ANTENNA ON ISS

ARISS reported that one of the four new ARISS antennas was to be installed during a scheduled January 14 spacewalk. It is a "WA3" model VHF-UHF flexible tape antenna which would be affixed to one end of the Service Module.

The Russian team was able to deploy this particular antenna sooner than the others because it is located very close to where the four RF connections go into the Service Module.

Expedition Four Commander Yuri Onufrienko, RK3DUO, and flight engineers Carl Walz, KC5TIE, and Dan Bursch, KD5PNU, are beginning their second month in orbit aboard the ISS. They have not yet been active on amateur radio, although several ARISS school contacts are pending.

Installation of the new antenna paves the way for two separate ham stations aboard Space Station Alpha. Plans call for one station to remain in the Functional Cargo Block using the Russian antennas that had been used to dock the FGB but are now used for ARISS. A second station will be set up in the Service Module – or Zvezda – using the new antenna.

The installation of this first antenna on the outside of Zvezda will allow the crew to set up ham radio equipment in their living quarters. The initial station ham gear was installed aboard the Zarya module because that module went into space first.

This new setup is much more comfortable and convenient and should allow for more contact between the crew and amateurs on Earth.

IS IT REALLY HAM RADIO?

Bradley Phillips, ZS5BP, one of the two chaps who share the 2001 Radio Amateur of the Year award bestowed by the SA Amateur Radio Development Trust, was honoured for his work on the introduction of Iphone and the development of the Internet Radio Linked project.

The award is made annually to a ham (in this case, two hams) who has made a major contribution to the Amateur Service either on a technical or development basis.

While congratulating the recipients on their selection, I must profess that I do not see how linking repeaters via landlines for general chatting advances amateur radio. Rather, in my view, it is *supplanting* radio links – and must therefore be the very antithesis of advancement. It removes the need to experiment with long-distance propagation, which is surely what amateur radio is all about.

Garth Wilson, ZR6CY, shared the award for his continuous efforts to develop communication skills among the youth. He has to date presented no fewer than 80 camps for Voortrekkers to learn the Morse code and basic communication skills.

The report did not say whether this resulted in any of the Voortrekkers acquiring their ham licences, but we hope that it has whetted some appetites. ☺

Competition

on your birthdays:

February

- 18 Peter Flynn ZS2PF
- 19 Gary Laaks ZR2ABU
- 20 Vic Batt ZR2BBH
- 20 Jim Duck ZR2JRD
- 22 Henning Kriel ZR2HRL
- 25 Ralph Hall ZS2IV
- 26 Yvonne Rhodes XYL of ZS2VU
- 26 Henry Danielson ZR2HPD
- 26 Dick van den Berg ZS2VV
- 28 Karel Stone ZR2KKK
- 29 Wolf Gerstle ZS2WG

March

- 2 Mentoor Steyn ZR2SM
- 3 Nita Davis XYL of ZS1J
- 4 Selwyn Whitebooi ZR2KAT
- 6 Lizelle Russouw XYL of ZR2DWR
- 10 Neil Bousfield ZR2DR
- 13 Maureen Vroom XYL of ZS2NV
- 13 Magret Ras XYL of ZR2MR
- 14 Ali Mathieson XYL of ZS1EM
- 15 Susanna Bosch XYL of ZS2FM
- 16 Anne Butcher XYL of ZR2GIB

on your anniversaries:

February

- 24 Barbara & Bill Hickson ZR2WJA
- 28 Wanda & Jan van Ree ZS2JW

March

- 2 Belinda & Des Herselman ZR2CH
- 3 Anne & Graham Butcher ZR2GIB
- 3 Merle & Louis Jordaan ZR2J
- 4 Pamela & Jack Koen ZR1JAC
- 15 Cheryl & Arno du Preez ZS2ABT

on your call sign André Mulder, ex ZR2A, now **ZS2AJ** – an illustrious call sign relinquished some time ago by our own Allan Ansell, one of the few living hams in South Africa to have used a spark transmitter in his younger days as a professional radio operator and technician.

on your new daughter Liezie and Sean Allen, born on 25 Jan.



Sick list: Jim Duck ZR2JRD went into hospital for a scheduled check but was rapidly admitted to ICU and a triple bypass was performed; Sandy Bartlett ZS2LN was hospitalized following a heart attack; and Dick Schönborn ZS2RS has just gone in for surgery. We wish you all a speedy recovery.

Bad Luck: Donald ZS2BW had the misfortune of having the antennas that he had erected at a field site blown down during the first night of the PEARS VHF/UHF contest. An antenna at home also suffered.

Back Home: Peggy and Viv Moore ZS2VM back from two months in the States and Dick ZS2RS back from the UK. We missed you!

WHAT TOPICS FOR OUR GENERAL MEETINGS



Our Minister of Social Affairs, Bill Hodges ZS2ABZ, has a perpetual problem thinking up ideas for entertaining members at the monthly meetings.

What would *you* like to have at the meetings? What subjects? What *kind* of topics? Do you know anybody who might present an interesting talk for us?

Let us hear from you. It's *your* club, and we like to give you what *you* want.

Isn't that what you *expect* from **PEARS?**

Your Society's Committee

Chairman Awards	Bevan Gwin ZS2RI	369-6968
Vice Chairman repeaters, packer	Chris Scarr ZS2AAW	368-1344
Secretary	Chris Scarr ZS2AAW	368-1344
Treasurer / Aerial Control	Clive Fife ZS2RI	367-5203
Social Refreshments	Bill Hodges ZS2ABZ	581-2580
OSY Editor	Garth Laubs ZS2HB	368-1101
OSY Editor at Large	Clive Fife ZS2RI	367-5203
OSY distribution committee	Trevor Scarr ZS2AE	367-1746
Technical Classes, RAL	Neil Thomas ZR2NT	372-1969
Special Events	Ewald Bouwer ZS2EHB	933-0482
School Personal coordinator	Neil Thomas ZR2NT	372-1969

PEARS' NIF/UHF & Other Services

REPEATERS

Town VHF	# 145,050/650	Kynsna	# 145,075/675
Town UHF	# 431,050/438,650	Lady's Slipper	# 145,100/700
Coelcomb	# 145,000/600	Noupoort	# 431,150/438,750
Goldsberg	# 431,075/438,675	Uitenhage	# 145,075/675
Craddock	# 145,050/650		
Grahamstown	# 145,150/750		

* These form PEARS' long-range 2-metre repeater system, also linked to which are East London 145,775 MHz repeater, George 145,700, Hamman 145,600, Sullham 145,750, Butterworth 145,725, King Williams Town 145,625 and Port Alfred 145,775 duplex. This is further extendible to Cape Town via the WRRWG system. ** These can also be linked as required.

OPTIC SERVICES

Packer Bulletin Board (ZSQNT P)	144,625
Packer Long switch ZSOGHT-2,046/101 (144,675 in/out) or 046/102 (UHF out to BBS)	144,675
2m Beacon ZS2VHF CW ID, FSK (horizontally polarized, 160W ERP)	144,415
6m Beacon ZS2VX CW ID (horizontally polarized, 25W ERP)	50,005
6m Sunple Link with Lady's Slipper 2m Repeater (vertically polarized)	51,400
Wefax Relay (M2050)	145,350

Sunday Bulletins

PEARS bulletins are transmitted on Sundays immediately after the SART English transmission, i.e. at about 08:45, on 7070 kHz, such as the 2 metre linked network that provides coverage from East London to George as well as other transmitters. PEARS' 7070 or 7060 kHz transceive facilities are also remotely linked as needed. In addition, the SART's 40m operations on 7082 or 7066 kHz or Hamner's 7070 kHz can be remotely patched into the Sunlink, in receive-only mode or with full transceive capability for interactive events.

Date	Prepare and Read on 2m Repeater link
10 Feb	ZS2RI
17	ZS2AAW
24	ZR2NT
3 Mar	ZS2HB
10	ZS2RT
17	ZS2FHB
24	ZS2ABZ

DIARY DATES

FEBRUARY

15 MONTHLY MEETING

18, 21 Tech discussions on the link

MARCH

2 Bring in Braai a J-Day

23 Caravan Teating a J-Day

7 Winkly Rave

*Do Not Like Being Your Society! **