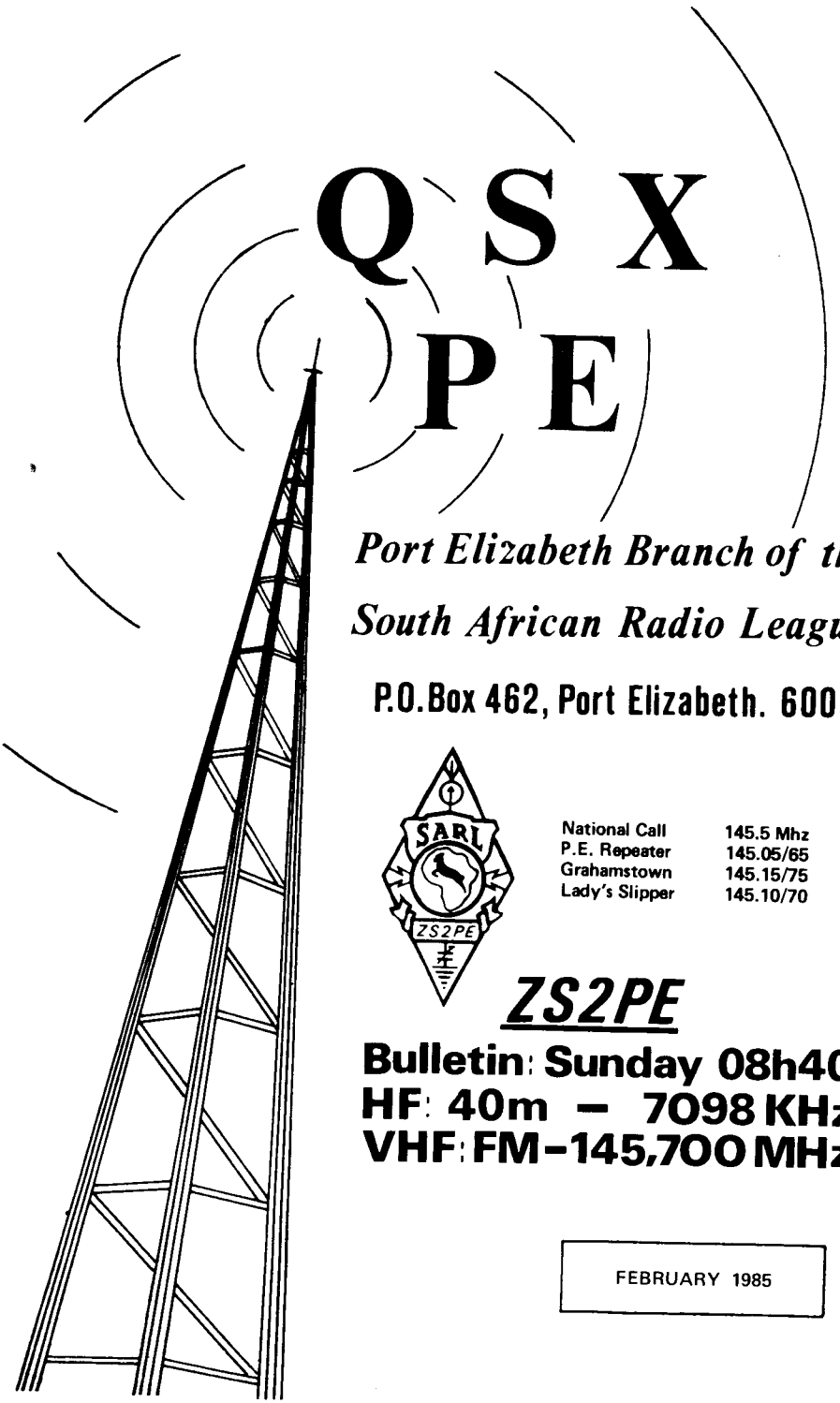

Q S X
P E

Port Elizabeth Branch of the

South African Radio League

P.O.Box 462, Port Elizabeth. 6000.

National Call	145.5 Mhz
P.E. Repeater	145.05/65
Grahamstown	145.15/75
Lady's Slipper	145.10/70

ZS2PE

Bulletin: Sunday 08h40
HF: 40m – 7098 KHz
VHF: FM-145,700 MHz

FEBRUARY 1985

Port Elizabeth Branch

›NOTICE OF MONTHLY MEETING‹

MEMBERS ARE REMINDED THAT THE MONTHLY MEETING OF THE PORT ELIZABETH BRANCH WILL TAKE PLACE AT THE SCOUT HALL, CORNER OF RITCHIE CRESCENT AND VAN PLETTENBERG STREET, KABEGA PARK, ON FRIDAY 15th FEBRUARY, 1985 AT 8p.m.

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Committee

CHAIRMAN: Brian ZS2AB (303498) VICE CHAIRMAN: Dick ZS2RS (322111)
SECRETARY: Marge ZS2OB (303498) TREASURER: Pete ZS2PJ (301493)
MEMBERS: Trevor ZS2AE(321746) Gordon ZS2GK(306776)
QSX-PE: ZS2AB and ZS2OB.

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bulletin roster

17th February	Pete ZS2PJ
24th February	Trevor ZS2AE
3rd March	Gordon ZS2GK
10th March	Brian ZS2AB

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for sale

QSL stickers, log books and Great Circle Maps are obtainable from Pete ZS2PJ. See phone number above, or at a general meeting.

I.R.C.'s (International Reply Coupons) which are useful for those trying to get hold of some rare DX QSL cards, are available from Mitch ZS2DK, Phone 711214 or at the meeting.

As mentioned on the recent HQ bulletin, stickers are available to publicize the 60th anniversary of the S.A.R.L. These are available from P.O. Box 13273, Northmead 1511, or can be ordered through the Branch. Cost R5 per 100. Sample will be available at the next meeting.

Three R1155A general coverage receivers from 75KHz to 18 MHz. If interested, please contact Brian ZS2AB on 303498.

LORRAINE NETBALL CLUB
presents

BEERFEST and BARNDANCE
Friday 1st March 7 to 12pm
Betar Facilities at
Heatherbank.
R5 single. Braai and Beer garden available. Music by Hotspot Disco.
Tickets available at gate or phone Jenny at 302225.

THIS and THAT

Welcome

We would like to extend a very hearty and sincere welcome to John Masters, Mike Uptin, Brindsley Archer, Noel Staples and Mike McCormack who have joined the Branch and we wish them a long and happy association with the League. Best wishes also with your study for the P.M.G. examination.

CONGRATS

To Lynn Crothall ZR2FE who has now passed the cw test and is keenly awaiting her ZS call. Hope the 200 QSO's don't take too long!

To Sam Abrahams ZS2SI and XYL Eunice on the birth of a granddaughter recently. Hope she bring your many happy hours.

To Attie Barnard ZR2DY and XYL Annamarie who also became grandparents recently when their daughter in East London had a son. Looks like it's catching. Well done!

To Mike Bosch ZS2FM who has been appointed as Co-Ordinator for records and achievements on VHF. Let's hope you have many records to log, Mike.

SICK LIST

We were sorry to hear that Dick Schönborn ZS2RS had to have two operations during this month. We hope you recover very quickly Dick and that you will be as right as rain and ready to get your beam up.

WELCOME BACK To Basil Gibson ZS2PG and family who recently had a trip overseas, including G, GI, GM, EA, ON4 and other countries and who have a few stories they could tell about airplane journies in and around Europe.

It looks like Andy Smit ZS6EQ and XYL Theresa are settling down in Div. 6 and are in the throes of buying a house. Lots more space to put up antennas Andy and work some DX.

Many of our members are occupied with computers and various programs for radio use and Sam ZS2SI and Colin ZS2AO have been heard working RTTY recently. Pete Smith ZS2PJ had acquired a new Commodore 64 and been enjoying the challenge. Fred Bonthuys ZS2EQ has been on the lookout for an RTTY program for his Sinclair and it looks as if Mike Robertson has been able to oblige. Brian Weller ZS2AB has got his RTTY station set up again and has had numerous contacts recently and intends entering the world-wide contest in March to try and better his feat of 17th in the world last time round. Good luck to all.

Also with a new toy are Viv Moore ZS2VM and Peggy, who have joined the ranks of the caravanners and apparently enjoying the experience. There are enough of us in the Branch to have our own rally. What about it, chaps?

DID YOU KNOW? that the new Prime Minister of India, Rajiv Gandhi is a licensed radio amateurs, with the call sign of VU2RG. Another good ham joining the ranks of those like King Hussein and Barry Goldwater whose work will interfere with their hobbies.

COMPETITION

At the last monthly meeting, it was decided to extend the closing date of the competition for the best designed QSL card. So if any of you budding artists have any ideas for a card which can be produced in bulk and so save some money, let us have your ideas at the next Branch meeting. You might be in line for a prize of some of the cards.

MINUTES OF THE GENERAL MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE, HELD IN THE SCOUT HALL, KABEGA PARK, PORT ELIZABETH ON FRIDAY 18th JANUARY, 1985.

PRESENT: 31 members and visitors.

APOLOGIES: ZS2FM and ZS2VW.

The Chairman welcomed all to the meeting, especially Jim KA3EVD/MM, Piet Wagener ZS2PC from Fort Beaufort, Mike McCormack, John Masters, Malcolm Harwood and Marlene ZR2ED.

MINUTES: The Minutes of the meeting held 16th November, 1984, having been published and circulated in QSX-PE, were taken as read, proposed by Lynn ZR2FE and seconded by Gordon ZS2GK.

ARISING:
1. The question arose of the advertising by Hamrad in QSX-PE but as yet no further information was forthcoming from Hamrad. Simon Horwitz, to whom an approach was originally made had moved to Canada and we were awaiting further developments.
2. Nothing further had been heard about the late subs renewals so it was assumed that all had been re-instated.
3. A new call book was due for issue soon and it was hoped that this would be with the January issue of Radio ZS.
4. With regard to the branch parties held in December, Trevor ZS2AE and Julie were thanked for the use of their QTH and the ladies for the catering, likewise for the catering for the children's Christmas Tree and also to Father Christmas. Toff ZR2EY was thanked for the music.
5. During 1984 a suggestion had been made regarding a QSL card competition, but as yet no designs were forthcoming so it was decided to extend the date to the February meeting. Buck ZS2RM said that he had cards printed in 2 colours at the price of R44 per thousand.

CORRES:
1. A letter and competition tickets from Eastern Transvaal Branch for donations to their repeater fund. After some discussion about returning the tickets, Colin ZS2AO said that it was not a Branch matter and it was up to individuals to decide whether they wanted to buy tickets. Seconded by Dick ZS2RS.
2. The questionaire re HF operation was sent to 10% of the Branch members but very few had been returned as yet.
3. Several Branch Newsletters.
4. Letter from Secretary of League regarding the Lifetime Membership awards to Cyril ZS2KX and Vi ZS2BR.

FINANCE: The Treasurer Pete ZS2PJ reported that we had R1840 in various accounts.

GENERAL:
1. Brian reported to the meeting re the progress on the Cockscomb repeater. Trevor ZS2AE said that as far as he was concerned it was all ready to go and had been successfully running on test for many months. The S.A.R. were apparently wanting to put a container on their site for their repeaters and the Branch was being offered a "lift" in the helicopter to our site for the erection of our repeater. This would be in the middle of February, depending on weather, and we would get as much warning as possible.
2. Sam ZS2SI was congratulated on becoming a grandfather for the second time.
3. Bill ZS2BY said that he had several radio programmes for the ZX81 computer, including one for a power supply and if these

could be printed out, they could be used in QSX-PE. Pete ZS2PJ has a printer available.

There being no further business, tea was taken and thereafter a most interesting talk was given by Jim McCane KA3EVD who had been travelling around the world in a 31foot yacht "Michael Stuart" for the last six years, having left from Florida. Jim and his xyl Liz, KA3EVE live in Philadelphia and had planned to take 2 years to do the trip but had stayed in various ports during the hurricane seasons. They were two of the very few "Legal" maritime mobile operators and Jim spoke of various experiences they had had. Jim was thanked for his talk and asked to pass on greetings to Liz who unfortunately could not attend due to illness.

sgd:
B.A. Weller ZS2AB
Chairman

sgd:
M.T. Weller ZS2OB
Secretary

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CONSIDER YOUR VERDICT.

A young pregnant lady got onto a bus and sat opposite a young man who smiled and looked amused. Annoyed she changed her seat. However, glancing around she noticed the guy was still smiling, more than ever, so she again changed her position. Catching his eye she observed that he was now grinning broadly. So for the third time she changed her seat, this time right to the front end of the bus. But she was hardly seated when this same young man burst out laughing. This time, very indignant, she called the conductor and had the young man arrested.
When the case came before the Magistrate, he told the young man that it was rude to laugh at a woman in this condition. The Defendant replied that he appreciated the Magistrate's remarks, but the case was so funny that he could not help but laugh.
When asked to explain he told the Magistrate that the lady entered the bus and sat under a bioscope advertisement reading "The Noble Twins are Coming Soon". Then she moved and sat under the advertisement reading "Sloans Liniment will Remove the Swelling". The third time she changed her seat, she sat under an advertisement for shaving soap saying "Williams Stick Did It" and lastly she sat under one reading "Dunlop Rubber Would Have Prevented the Accident".

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THE CASE FOR AMATEUR RADIO

PART 1.

Acknowledgements to I.A.R.U.
and V.C. Clarke W4KFC.

The Amateur Radio Service has no formal champion or spokesman in most countries. Therefore, it falls to radio amateurs themselves, through their national societies, to perform this function on behalf not only of existing amateurs, but of all of those who will one day elect to enter the field, of future generations of radio amateurs, and - most importantly - of the larger society which becomes the ultimate recipient of the enormous benefits provided by a strong amateur radio service.

In stating the needs of amateur radio to our respective administrations, it is important to emphasize that we are presenting the case for a vitally important community resource - not merely seeking selfish ends.

Amateur radio constitutes a privilege available to the citizens of each progressive nation; it provides valuable training, produces international goodwill and yields a variety of public service benefits. Amateur radio enhances both the national image and the quality of life of its citizens. The dimensions of its contribution are many and, depending on local regulations, vary somewhat in nature and emphasis among the members of the world's family of nations. Briefly, amateur radio:

- develops a national source of electronics expertise
- contributes and demonstrates electronics innovations
- explores propagation phenomena and develops efficient spectrum utilization techniques
- provides emergency communications resources
- promotes international friendship and understanding
- is available to all citizens, including the young, the old, and the physically handicapped
- is a disciplined and self-regulating service
- is a rapidly growing service.

A SOURCE OF ELECTRONICS EXPERTISE....

Amateur radio is a self-teaching tool of proven effectiveness; it offers the opportunity for learning electronics and communications technology at home in one's spare time, while affording ready access to assistance and counsel from experienced teachers in every area of electronics.

Amateur radio is unique in that it presents the opportunity for gaining knowledge of electronic systems as well as providing access to the environment in which these must function. In partial consequence, professional people who are also radio amateurs often possess a better grasp of radio system operation compared to those who are not - other factors being equal. Further, electronics specialists with an amateur radio background tend to enjoy their work and are likely to be better employees, to them it is more than merely earning a living.

Participation in amateur radio becomes an exceptionally attractive learning experience, enabling the student (whatever his age) to participate directly in experimental activities while enjoying rewarding social contact with fellow amateurs. Knowledge received through amateur radio activities complements and extends formal electronics, mathematics and physics training. It also provides electronics professionals among the amateur ranks with a means of updating

knowledge obtained through formal education and for co-operatively testing new circuits, devices and systems in a live environment.

Amateur radio training develops a vital supply of electronics expertise and communications resources for the heightened demands for skilled manpower that arise from national and international emergencies of all kinds; to lack these is to be vulnerable. The proliferation of electronic devices in modern society (computers, bioelectronics, measurement instrumentation, navigational aids, radar, control and ignition systems and so on) calls for corresponding increases in the distribution of knowledge concerning their design, operation and maintenance. Amateur radio provides self-trained personnel who are widely distributed among the population, expanding the base of knowledge concerning the selection, use, repair and care of electronic devices of every type.

Amateur radio as a teaching tool thrives, without cost to the public in most of the developed countries and many of the developing countries of the world; in some countries it receives modes subsidies in the form of government grants for training activities, electronic equipment and quarters for school and club stations, and electronic components furnished to newcomers to aid them in assembling their initial receivers or transmitters.

It is the nature of amateur radio to inspire among its practitioners a desire to learn and to participate. It provides experience in a wide variety of disciplines, enabling early determination of aptitudes and interests on the part of the participant, yielding opportunities for contact with more skilled individuals who can assist and furnish guidance which may lead to the choice of a career.

Perhaps, best of all, amateur radio offers a challenging, enriching, productive and socially-constructive activity for young people in our increasingly complex society.

CONTRIBUTES ELECTRONICS INNOVATIONS. ....

Most of the electronic equipment and systems in use today are the products of the radio amateurs. Beginning with Marconi, Hertz and Popov, ardent and dedicated amateur experiments have contributed heavily to the development of electronics technology. Today, industry and government engineers, scientists and technicians who are also radio amateurs, continue their experimental activities during their off-work hours, exchanging ideas with their fellow amateurs. Much of what they learn and discover as amateurs accrues to the advantage of their employers, their government and ultimately, to the public itself. Devices being designed and marketed today are among those first tried and tested in various forms by radio amateurs.

Amateur radio provides almost unlimited opportunities for live experimentation in a wide variety of communications disciplines, and has yielded developments and breakthroughs in many specialised areas including, but not limited to, the following:

- propagation research below 30MHz
- superiority of long distance single sideband voice transmissions
- low cost, high performance satellite transponders and earth terminals
- high efficiency vhf, uhf and microwave repeater systems
- slow scan long distance television systems
- directional antenna design and application
- long distance communication employing very low power devices
- ultra narrow band voice and code transmission and reception
- procedures and techniques for improved spectrum utilization
- low power, extended range, narrow band microwave communication.

To be continued.

CW - Correctly.

SPACING AND LENGTH OF SIGNALS

1. A DASH IS EQUAL TO 3 DOTS.

2. THE SPACE BETWEEN THE SIGNALS WHICH FORM THE SAME LETTER IS EQUAL TO 1 DOT.

3. THE SPACE BETWEEN TWO LETTERS IS EQUAL TO 3 DOTS.

4. THE SPACE BETWEEN TWO WORDS IS EQUAL TO 5 DOTS.

SHORT FIGURES

1 ·—
2 ··—
3 ···—
4 ····—
5 ·····
6 —····
7 ——···
8 ———··
9 ————·
0 —————

PUNCTUATION AND OTHER SIGNS

FULLSTOP ·—·—·—

COMMA ——··——

COLON ———···

QUESTION MARK, OR REQUEST FOR REPETITION OF A TRANSMISSION NOT UNDERSTOOD ··——··

APOSTROPHE ·————·

HYPHEN OR DASH —····—

FRACTION BAR —··—·

BRACKETS(BEFORE AND AFTER THE WORDS) —·——·—

UNDERLINE(BEFORE AND AFTER THE WORDS OR PART OF SENTENCE) ··——·—

BREAKSIGN —···—

DOUBLE HYPHEN —···—

UNDERSTOOD ····—·

ERROR ·····

END OF TRANSMISSION ·—·—·

INVITATION TO TRANSMIT —·—

WAIT ·———···

END OF WORK ···—·—

COMMENCING SIGNAL TO PRECEDE EVERY TRANSMISSION —·—·—

SEPARATION SIGNAL IN THE TRANSMISSION OF FRACTIONAL NUMBERS BETWEEN THE WHOLE NUMBER AND THE FRACTION AND AND OF GROUPS CONSISTING OF LETTERS AND FIGURES(BETWEEN THE GROUPS OF FIGURES AND LETTERS) ·—·—·

IN ORDER TO AVOID ALL POSSIBLE CONFUSION IN TRANSMITTING FRACTIONAL NUMBERS THE FRACTION MUST BE PRECEDED OR FOLLOWED AS THE CASE MAY BE, BY THE SEPARATION SIGNAL.

Propagation News

Propagation Forecast Bulletin from ARRL HQ February 4th 1985.

Though the solar flux peaked at 91 on January 19, the factor more relevant to the propagation picture was the January average of only 76. It is also worth noting that there were 17 days in January when the solar flux was 72 or more, these being close to the minimum possible value at this time of the year. February began on a somewhat more promising note, with the flux back up to 76 and some indications that it may go higher. Any solar developments capable of bringing about major propagation changes, will be reported in special bulletins as soon as possible after they are observed. Geomagnetic activity was fairly low last week, making for improved high latitude propagation on 21 Mhz and lower frequencies. Higher K and A indices are expected February 5 thru 8, making for poor East West propagation on the higher DX frequencies. Transequatorial circuits may actually improve under these conditions. Auroral propagaion on 50 and 144 MHz is likely February 6 to 8, mainly in our more northerly areas and in adjacent Canadian provinces. Auroral effects usually peak in the early evening hours, but may last through the night. Watch for WWV/K indices of 3 or higher and for their predictions of geomagnetic storms. Auroras often follow one to three days after major solar flares, also reported in WWV propagation bulletins heard at 18 minutes after each hour and changed 8 times daily.

CQ DX CQ DX CQ DX

DX Bulletin from ARRL HQ January 25th, 1985.

EGYPT: SU1ER continues to be active on 80 meters on 3778 KHz at 0530Z.

MAYOTTE: FH4AA has been active on 14176 KHz at 1930Z. It is also reported that he has received a new antenna for 160 meters, which has not been installed yet.

KERGUELEN IS: FB8XB has been active around 14190 KHz at 2200Z. It is reported that he has also been active on 160 meters.

SOLOMON IS: H44IA has been worked on 7007 KHz at 1230Z.

MACQUARIE IS: Operations have been reported on 7245 KHz at 0030Z by VKØYL and VKØGC.

ALGERIA: 7X2LS has been active several days recently on 3794 KHz at 0030Z sometimes with YU3MX.

SOUTH COOK IS: ZK1EU is a British Naval communications officer who has been active on 7007 KHz at 1130Z running 150 watts and a vertical.

ZAIRE: W9JER/9Q5 has been active from 0400 to 0430Z on 3760 KHz. QSL to WBØMAB, Box 386, Oneida SD 57564.

CHAD: The QSL manager for TT8CW has been listed incorrectly. The correct address is F6CXB, Box 70, Savigny, Cedax France F91605.

MOZAMBIQUE: SMØDQE/C9 who does not yet have documentation, will be on 14204 Khz at 1500Z.

Many thanks to Buck ZS2RM for this page of info.

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Construction Project

D.I.Y. CO-AX SWITCH.

When one considers the price of a commercial co-ax switch, it is an item that many hams can only dream about. It's not so difficult at HF because the losses in an ordinary relay are not so great, but at VHF, mismatch becomes a nightmare. Sealed relays are available but their power-handling is usually very low. By using an aluminium block, spring-blade contacts stripped from relays and SO 239 sockets, you can build your own relay which will handle about 200 watts up to 23cm, without any great loss.

If you intend to use the relay only for switching RF in and out of an amplifier, you could build the relay direct onto a PC board. I used a piece of copper which I drilled and filed, and contacts stripped from industrial relays. Measurements are very critical if one is to ensure good results.

Drill and file the copper block to the given dimensions. Etch the PC board (double-sided) on one side (the other side is not etched). Drill the 3 holes and clean away the copper around the holes on the unetched side with an 8mm drill. Push a PC pin through from the non-etched side and ensure that the pin does not contact the copper on that side. (The pin must be a tight fit). Solder the pin on the etched side. Position the two fixed contacts in their correct locations and solder on the underside. Ensure that they do not come into contact with the copper on the unetched side.

Solder the long relay blade onto the PC pin, making sure that good contact is made with the fixed contact and that the contact faces mate properly. Locate the copper body over the contact assembly ensuring that it does not touch the contacts (+/- 2mm clearance at least).

Mark the two mounting holes through the body onto the PC board and drill them. Cut a piece of PC board to the dimensions of the body (to form a cover) and drill the two mounting holes in this as well. Roll out the SW's knitting needles and put the snatch on a No. 13 nylon needle. Cut off the head (this might happen to you if she finds out), pull out the steel pin inside and cut off a 12mm length of the nylon. Push the nylon through the hole in the relay body and ensure that the relay works freely and lightly. Strip the contacts off a 12 volt relay and use the solenoid and armature to actuate the nylon rod to move the contacts.

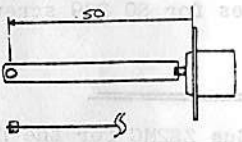
Should you require a relay for higher power, you will need a larger unit. Sometimes one also wants to switch a preamplifier and here one might encounter problems. The capacitive coupling between open contacts could result in sufficient RF getting to the pre-amp to damage it during transmit. If the open contact was grounded, this is unlikely to occur.

Cut a block of aluminium 25 x 25mm x 100mm long. Drill a hole of 8mm through its length. At the centre of 1 face, drill an 8mm hole so that it meets the other hole exactly. Ream the outer edge of all 3 holes so that the body of an SO 239 fits neatly. Solder a double-contact relay blade onto each of 2 SO 239s and a shorter blade onto the third socket (see sketch). Use self-tapping screws to secure one of the sockets at one end of the body, fit the middle socket

and ensure that the contacts mate properly. Do the same with the other end. Again, using a nylon shaft, change the two contacts over. Ensure that in one position, one of the contacts goes to ground while the other makes contact with the centre SO 239 contact. In the other position, the reverse must happen.

Tighten all the SO 239 screws well, and use a solenoid to actuate the nylon rod, as the travel now must be about 4mm plus a small amount of overtravel, combined with a good rapid action. I have used one to switch 160w on line, and after a while, opened it again without any problems. By making two such relays, you can build a masthead preamplifier which will compare with the commercial units.

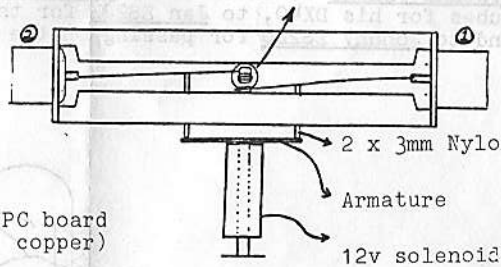
by Johan ZR6YO in Protea Nuus.
(Translation by Brian ZS2AB.) With Thanks.



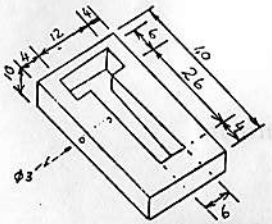
2 x Endsockets

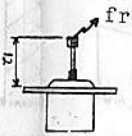
Sectional view from below.

In "off" position contact 1 is grounded and contact 2 is "on" and vice versa.

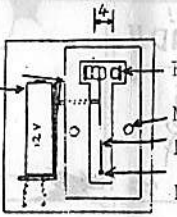


Underside of PC board
(Double-sided copper)

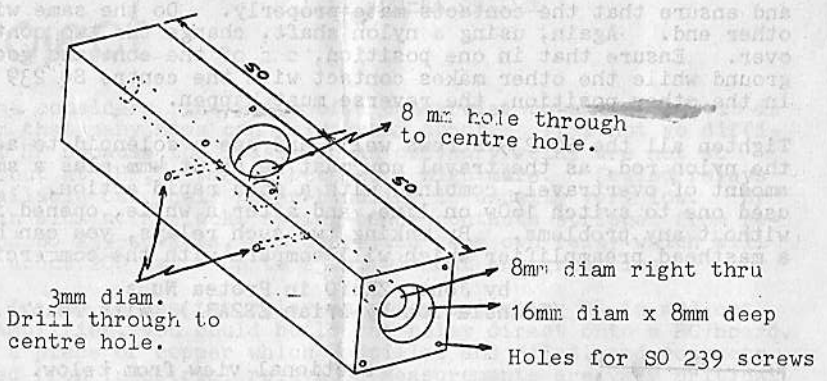




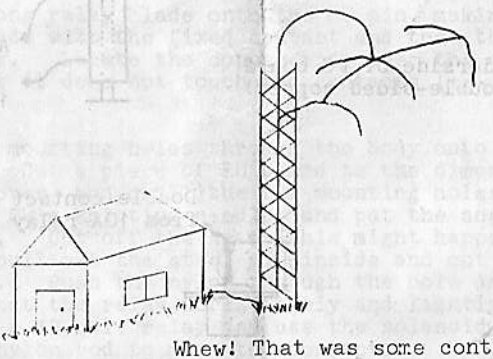
1 x centre socket.



12v relay with rocking armature to actuate Nylon pin.



SINCERE THANKS is extended by Langley ZS2LW to Gus ZS2MC for the new tubes for his DX40, to Jan ZS2JW for the loan of the Mobile Antenna, and to Johnny ZS2DO for passing on the DX40.



Whew! That was some contest.