

Q S X P E



**THIS NEWSLETTER IS PUBLISHED BY THE
PORT ELIZABETH BRANCH OF THE
SOUTH AFRICAN RADIO LEAGUE**

**P.O. BOX 10402
LINTON GRANGE
6015**

FAK (041) 30-7270

5 - 9 1

NOTICE OF MEETING

The May monthly general meeting of the Branch will be held on Friday, 17th May, 1991, at St. Martin's Church, Great West Way, Kabega Park starting at 20:15 (8.15pm).

After tea, we will be entertained with what promises to be an exceptionally interesting talk, accompanied by slides, on activities at our SANAE base on Antarctica. The guest speaker, Mr. Nial Cameron, Head of the Electronics Workshop at the University of PE, spent a 14-month tour of duty on the southernmost continent. His talk will lay emphasis on the radio aspects of his duties there.

How about each of you grabbing one or more of the "unseen" hams in this city and bringing him/her/them along? Maybe we should even organise an old-timers' reunion some time?

President to visit PE

OM RENO, ZS60F, President of the SA Radio League, is visiting various Branches on his way to the Cape Town Branch's convention and will be in Port Elizabeth on the evening of 16 May.

In true Ham spirit, OM Raphie ZS2SP has kindly offered to hold a cheese and wine function at his QTH at 3 Forbes Avenue, Central, to provide an informal atmosphere for getting together with Reno. Forbes Avenue leads out from the south-eastern arc of Park Drive which, as everybody knows, runs around St. George's Park.

Unfortunately, but unavoidably, Reno's visit falls on the night on which candidates sit for the amateur examination. Nevertheless, it is hoped that all other members will attend. Thank you in anticipation for your fine gesture, Raphie.

**MINUTES OF THE GENERAL MEETING OF THE PORT
ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO
LEAGUE HELD AT THE ST MARTINS CHURCH, PORT
ELIZABETH ON FRIDAY, 19 APRIL 1991**

PRESENT: 37 members and visitors

APOLOGIES: as per register.

The Chairman welcomed all present, especially our newest member Robert Pokorny OE3PRW, Phil ZS2PP and Pam from Port Alfred, ZS2D0, ZS2RG and ZS2RL.

MINUTES: The minutes of the March meeting had been circulated in QSX-PE and were taken as read: proposed by Julian ZS2AAV and seconded by Colin ZS2CTR.

ARISING: (a) Marge reported that the Branch dinner was well attended and enjoyed by all. (b) Raphie ZS2SP asked whether individually customised car stickers could be printed and Marge undertook to consult Brian, who produces them.

FINANCE: Colin reported a balance of R4307,67.

CORRESPONDENCE: (a) The GPO wrote to ask for a R20 contribution towards the maintenance of the access road to the Kareedouw repeater; (b) HQ informed us that the President will visit us on 16 May on his way to the Cape Town Convention and would like to meet as many members as possible. Fred ZS2EQ suggested a cheese and wine party to provide a relaxed atmosphere and Raphie offered his QTH therefor and also to accommodate Reno for the night. His offer was accepted with appreciation.

GENERAL: (a) Marge informed members that Chris ZS2CJ and Molly Els are moving back to PE and will stay in their old QTH.

(b) **MORSE & MARCONI DAY:** Marge had arranged a venue at the Alexander Road High School, which was having a big sports day on the same date. Marge would be giving a talk on Marconi during the School's Assembly on the preceding day and the Westering High School Headmaster would publicise it at his school. All this should attract attention to our exhibition. Press and Radio publicity had also been

arranged. Al ZS2U reported that a British station had been allocated the special call sign MORSE.

(c) Our packet radio bulletin board now sports the call sign ZU8KCD and would hopefully again be operational soon.

(d) BATHURST SHOW: The Branch decided to recompense Phil ZS2PP for the rental that he had paid for the stand. Phil expressed his appreciation and used the opportunity to thank those who travelled to Port Alfred to visit the station. He highlighted the immense help he had received from his XYL Pam, Peter ZS2PL, Colin ZS2AO and especially Al ZS2U.

(e) The meeting was sorry to learn of the passing away of Rene Ahlers, XYL of Werner ZS2WA, on 17 April, following a heart attack.

(f) Beavan ZS2RL said that, if another Algoa Rally is arranged this year, he will not be able to organise the communications net but would be willing to give guidance to whoever undertakes the task. Viv ZS2VM undertook to ascertain whether an Algoa Rally will in fact be held this year as there was some doubt about this.

(g) Bud ZS2CA had in his vehicle the UHF repeater that had just arrived in PE. Colin ZS2CTR agreed to house it at his QTH.

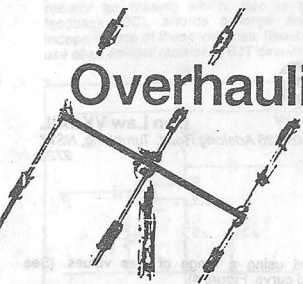
(h) Trevor ZS2AE reported that the Town repeater was off the air for repairs (the GPO had found it to be spurious). He hoped to get it back on the air the following week. He had been in touch with the person who maintains the George repeater in connection with the proposal to link PE with Cape Town.

(i) Phil ZS2PP had donated a transistorised transceiver which could be modified to serve as a repeater to replace the ageing Grahamstown unit.

During the break for refreshments, John ZS2RG won the monthly draw, whereafter Al ZS2U gave a very interesting and amusing talk on DF hunting.

CHAIRMAN

SECRETARY



Overhauling the TH3 Tri-Band Beam

Acknowledgements to
 "Amateur Radio",
 February 1988

Desmond Greenham VK3CO
 16 Clydesdale Court, Mooropna, Vic. 3629

The traps were open at each end allowing water to enter.

Perhaps one of the most popular beams in recent years has been the famous TH3-Junior, made by Hi-Gain, USA. This beam is designed to operate on 10, 15 and 20 metres with a reasonable gain and yet is not too big for the

average suburban backyard. Its gain is claimed to be around 8 dB and this, combined with a good front-to-back ratio, makes the beam most attractive. Many were purchased over the last 12 years including one that has done sterling service at this location. But in recent times it has been noticed that after a shower of rain the SWR along with the performance changes dramatically. The SWR goes up and the performance goes down!!!

Peering at the beam through binoculars showed that the trap ends were, in some cases, not on the traps at all and were, in fact, quite removed from the trap and hanging loose on the elements. The beam was dropped.

An inspection revealed that the plastic ends were perished and split — no doubt due to the Australian sun. This left the traps open at each end allowing water to enter, thus ruining the tuning etc. Replacement caps are available but their life span is doubtful and they are very costly. So, some other alternative was necessary.

The ends of the traps could be sealed with silicone sealer but this idea was not attractive because of possible detuning effects and the difficulty of opening the traps at a later time. The idea of using electricians shrink-tubing was tried and proved to be most effective. Several sizes and various colours are available.

The size chosen was 33 mm. This will shrink to half its original size when heated over a flame. Prior to fitting the ends each trap was dismantled and the collection of dust, spiders, bugs, etc removed. The coil was inspected and cleaned. Connections were tightened. The tuning shield was replaced and prior to fitting the ends, the resonant frequency was checked with an accurate Dip Oscillator. Coupling was made to the GDO with a short piece of wire from the hot-end of the trap around the coil of the GDO. This enabled enough coupling to establish a dip and the frequency was checked. The 10 metre traps resonated at 28 MHz and the 15 metre traps at 21 MHz. There was no detuning due to the fitting of the new ends.

To fit the ends the procedure went like this.

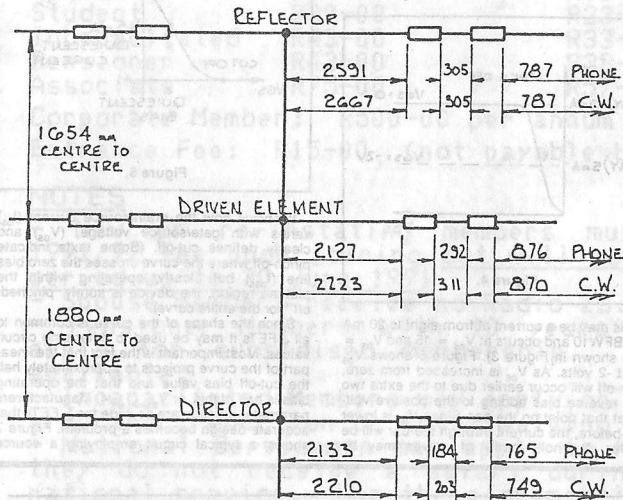
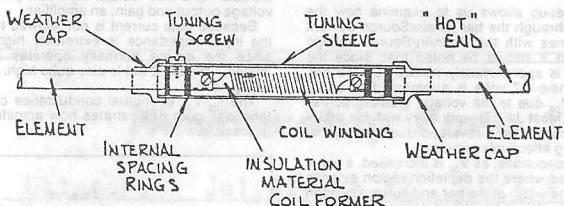
Firstly, clean the trap surface with steel wool to remove corrosion. Cut the 30 mm tubing into 40 mm lengths and fit over the end allowing about five millimetres overlap on the sleeve. To shrink the tubing it must be placed over a flame. The family gas barbecue is ideal for the job! If your wife will permit the operation it can be done over the normal gas stove. The main point is to constantly rotate the trap and not allow the flame to burn the tubing.

Begin applying heat to the larger diameter, rotating all the time, and then move along to the smaller diameter as the shrinking occurs. Do not overheat as the shrinking process will be too great and the sleeve will split and it will be necessary to begin again. There is a knack to this and it will soon be acquired.

After all traps have been treated in this manner the beam should be cleaned with steel wool and reassembled again. The dimension chart should be carefully followed and the beam set up to suit your particular requirement, CW or Phone operation. Check all clamps, connections, etc, to ensure nothing is loose. When all these procedures have been carried out the beam can be put back to work. The life of the shrink-tube is unknown at this stage but, if it only lasts five years, that will be enough. I can repeat the entire operation again, only next time I may change the colour!

Figure 1: TH3-JR Dimensions in millimetres. (Measurements to end of tuning sleeve of trap).

From Hi-Gain Pamphlet



REMEMBER THE NATTER NET
 every Tuesday at 7.30pm
 on Town Repeater
 (650/050)

JUNCTION FIELD EFFECT TRANSISTOR AMPLIFIERS

Don Law VK2AIL
RMB 626 Adelong Road, Tumblong, NSW,
2729

Acknowledgements to
"Amateur Radio",
June, 1987

In the earlier days of amateur radio, when we built most of our equipment, it was common practice to trim meter multipliers by filing the side of solid carbon resistors with a half round file (see Figure 1). The more you filed, the higher the value went; and the lower the meter current. If you went too far it meant starting again, with a new resistor.

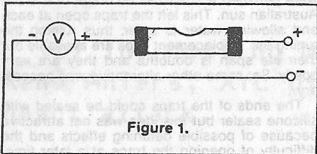


Figure 1.

What if the width of the conducting path could be electronically controlled? The device would then be able to amplify signals. Suppose the resistor were made of lightly doped silicon; that conducts and, like the carbon rod would have a voltage gradient along its length as a result of any applied potential difference. Assuming the rod or bar to be N-type Si, what would happen if a more heavily doped piece of P-type Si were fused into the side near the centre? (Figure 2)

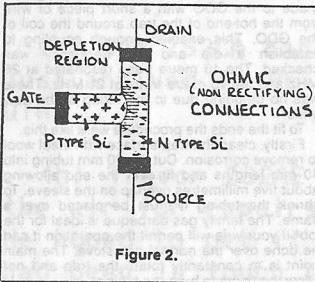


Figure 2.

Although both materials are conductive, on the bench (or in the bin) the junction would be a little like a dry joint. Holes from the P-type material migrate into the N-type and electrons from the N-type material migrate into P-type, creating a depletion region where no conductivity takes place. As with any Si P/N junction (diode) it would require a potential difference of approximately 0.7 volts, positive at the P-type Si to overcome this barrier and cause current to flow through the junction. But we are not interested in junction current, rather, current through the bar. Because the bar is less heavily doped than the P-type intrusion the depletion region extends further into the N-type bar than the P-type material. It narrows the

In the "olden days" it was common practice to trim meter multipliers by filing the side of solid carbon resistors.

conduction path and reduces any current that may be flowing. So far, we have done little more than a bit of electronic 'filing'; conditions are static. Let us examine what we can do with it. (Figure 3.)

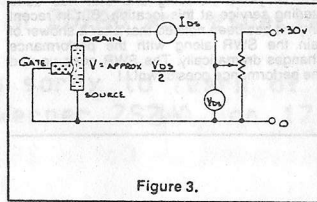


Figure 3.

The set-up allows us to examine how the current through the bar (Drain/Source Current (I_{DS}), varies with the Drain/Source Voltage (V_{DS}) and it should be noted that, since the junction is approximately halfway up the bar, the intrinsic 0.7 volts is augmented by about half of V_{DS} due to the voltage gradient across the bar. (Most J-FETs work okay with the drain/source connections reversed due to the junction being effectively mid-way).

In consequence, as V_{DS} is increased, a value is reached where the depletion region extends across the width of the bar and current through the bar is "pinched off" at some fixed value. Further increase of V_{DS} does not substantially increase I_{DS} above this value. (Figure 4.)

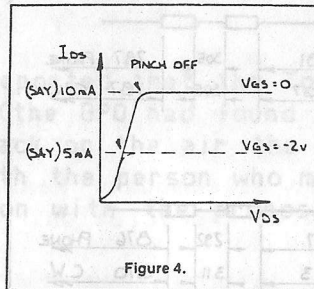


Figure 4.

This may be a current of from eight to 20 mA for a BFW10 and occurs at $V_{DS} = 15$ and $V_{GS} = 0$ as shown in Figure 3). Figure 5 shows V_{GS} set at -2 volts. As V_{DS} is increased from zero, pinch-off will occur earlier due to the extra two volts reverse bias adding to the positive voltage at that point on the bar. Since V_{GS} is lower than before, the current through the bar will be smaller. A whole family of curves may be

plotted using a range of bias values. (See dotted curve, Figure 4).

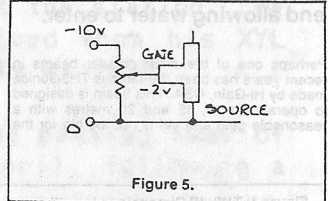


Figure 5.

It follows that, with an input signal swinging from zero to minus four volts, I_{DS} would swing from 10 mA to around zero and that the inclusion of a load resistor R_L would provide a voltage output and gain; an amplifier.

Because gate current is not allowed to flow, the input impedance is extremely high and, since the device normally operates in the 'plateau' region, Z out is also quite high. (Refer to Figure 4.)

The I_{DS} vs V_{GS} or mutual conductance characteristic (Figure 6) illustrates how amplification is possible.

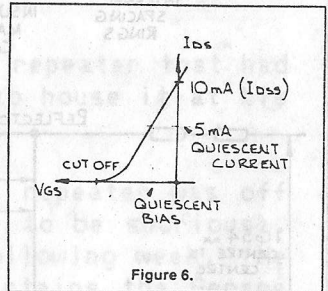


Figure 6.

It shows how the drain/source current (I_{DS}) varies with gate/source voltage, (V_{GS}) and clearly defines cut-off. (Some texts indicate pinch-off where the curve crosses the zero bias line (I_{DS}) but clearly, operating within the plateau region, the device is surely 'pinched-off' for the entire curve).

Since the shape of the curve is common to all J-FETs it may be used to determine circuit values. Most important is the fact that the linear part of the curve projects to approximately half the cut-off bias value, and that the operating bias is half of this, or $V_{GS,off}/4$. Manufacturers parameter spreads are so wide for J-FETs that accurate design becomes a problem. Figure 7 shows a typical circuit employing a source

FOR SALE — GEC general coverage comms receiver with BFO, noise limiter, xtal phasing, filters, IF adjust, spare valves, handbook. ± R160 — Steve Williams ZS2WS, Tel. 31-2784

resistor for biasing which, due to negative feedback (DC), affords a large degree of independence of these vagaries. (Similar to the use of an emitter resistor in BJT circuitry).

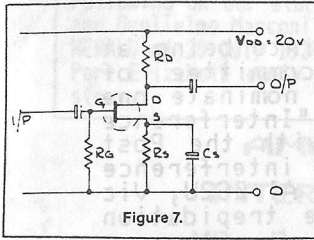


Figure 7.

Figure 7 illustrates a complete audio J-FET amplifier. Let us look up the data for a 2N5459 (Courtesy of Dick Smith's Catalogue).

- $V_{GS(OFF)}$
 = 2 to 8 at V_{DS}
 = + 15,
 I_{DSS}
 = 4 to 9 mA at V_{GS}
 = 0,
 Y_f
 = 2000 to 8000 μ mhos.

Due to the effect of R_S it is satisfactory to use mean values, ie

$V_{GS(OFF)} = 5,$
 $I_{DSS} = 6.5,$
 Y_f expressed as $Gfs = 4 \text{ mA/volt}.$

Thus $R_S = \frac{V_{GS(OFF)}}{I_{DSS}} = \frac{5}{6.5} = 0.77 \text{ k} \approx 770 \Omega$ (see Fig 6)
 $= \frac{5}{6.5} = 0.77 \text{ k} \approx 770 \Omega$
 $= 0.384 \text{ k} (390 \Omega \text{ pref})$
 and $R_D = (V_{DD} \text{ (say } 20 \text{ V)} - V_{GS})$
 $\therefore \frac{I_{DSS}}{2} = \frac{5}{3.25}$
 $= 1.538 \text{ k} (1.5 \text{ k pref})$

(Note that I_{DSS} refers to I_{DS} at $V_{GS} = \text{zero}$.)
 Because I_{DSS} is 1 μ Amp or less, R_D may be very high. (1 Megohm or more). Since no direct current flows through R_D there is no volt-drop across it and V_G (quiescent) = ground zero.
 The unloaded stage gain is:
 $Gfs \times R_D = 4 \times 1.5 = 6,$
 $V_o = +1.25,$
 $V_o = +15.125$

The maximum undistorted output voltage swing is nearly 10V.

Where BJTs bottom, (V_{CE2}), at less than a volt, because of the intrinsically high channel resistance and the conditions for "pinch-off" J-FETs do not. As a straight out AF amplifier, the BJT leaves it for dead regarding voltage gain but it does have a very high input impedance, a reasonably high output impedance and a low output Z as a source follower. It may be used to advantage in conjunction with BJTs. As an RF amplifier, where the DC resistance of the load, (tuned circuit, etc), is very low, the MPF102 will work quite satisfactorily on a nine volt supply. (The calculation for V_o is as for AF usage). Coupled with very low noise figures and large input voltage handling capabilities is its extreme linearity. A useful front end device to counter cross-modulation. It has its place in numerous signal processing circuits including low level television modulators.

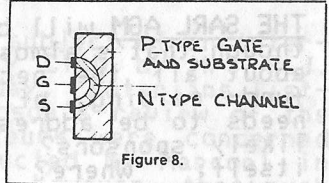


Figure 8.

Of course, the J-FET is not made as a bar with a slug in the side, but as drawn in Figure 8. The principle of operation remains true.

Membership Fees for 1991/92

Category	Jul 91-Jun 92	Oct 91-Jun 92	Jan 92-Jun 92
Full member	R67-00	R52-00	R35-00
Spouse	R24-00	R18-00	R12-00
Student	R30-00	R23-00	R15-00
Incapacitated	R43-00	R33-00	R22-00
Pensioner	R43-00	R33-00	R22-00
Associate	R75-00	R57-00	R38-00

Corporate Member: R500-00 per annum payable on anniversary.
 Entrance Fee: R15-00 (not payable by Student or Spouse).

NOTES

- New or re-instating members must pay the applicable 1991/92 fee upon joining but will not be charged i.r.o. the period up to 30 June 1991.
- Spouse members receive no Radio ZS.
- Pensioner Members with 10 years' standing or more may apply for subsidised membership. Application forms are available.
- Incapacitated Members may apply on the prescribed form for a further reduction or total waiving of the fee.
- National Servicemen may apply to have the fees waived if they do not receive a salary during the period of their national service. Use the aforementioned application form.
- All applications are submitted direct to HQ by the members concerned and are treated in confidence. Except for the Branch Treasurer, not even the local committee knows.

This 'n That

An INTERFERENCE COMMITTEE has been brought into being at Headquarters. It functions as a sub-committee of Council. Each Branch has been requested to nominate one or more members to be appointed as "Interference Consultants", who will work hand-in-glove with the Post Office's radio inspector when complaints of interference by amateur stations are being investigated. Al ZS2U, Vic ZS2SZ and Garth ZS2HB have agreed with some trepidation to accept nomination.

THE SARL AGM will be held in Port Elizabeth in 1994. Although that's almost three years away, it's time to think about all the necessary arrangements. The matter of fund-raising, of course, springs to mind and probably needs to be addressed right away. Do you know of any likely sponsors? Other decisions relate to the event itself: Where? What entertainment? Alternative activities?

For my part, I would opt for a good, old-fashioned, down-to-earth "Boere AGM" - one devoid of costly glitz and high-pressure activity, one which everyone can afford to attend and enjoy, once more, that unique, unhurried atmosphere found at ham AGMs of yesteryear; an atmosphere which of its own accord drew hams from far and wide, not only to see at first hand that Council and their delegates did them justice but, even more, to renew old acquaintances, make new ones and just chew the rag. Ah, yes! Those were the days!

The RAE EXAMINATIONS will be written on Thursday evening, 16 May. We wish all candidates the best of luck. If you have studied sufficiently you should have nothing to worry about and you could be on the air within a matter of weeks. If not, see the following item!

The next series of TECHNICAL LECTURES, aimed at those wishing to write the November 1991 amateur examination, will start early in June. Contact Viv Moore ZS2VM if you wish to enrol.

The Branch PACKET BULLETIN BOARD facility is operating again under the call sign ZU8KCD. The unit, on the Lady's Slipper repeater site, has two ports: one on 144,675 MHz and the other on 14,109 KHz. Lionel ZS2DD has promised to let us have a story on the saga leading up to the resuscitation of this service.

A fine 6 METRE OPENING on 27 April had some of the local boys hopping. Apart from the usual old hands at 6 Metre DX, Hannes ZS2BE and Graham ZS2OD, relative greenies Bud ZS2CA and Viv ZS2VM had a ball and worked a number of stations in three or four different countries. Earlier in April, the Branch 6 Metre beacon ZS2SIX was heard in Bolivia and Sweden.

WIRELESS IN SOUTH AFRICA

Following on our story in the April issue about the experiments of Samuel Morse and Guglielmo Marconi, we print the following extracts from an article in the EP HERALD of 20 July 1934 dealing with experimentation in the science of wireless in Port Elizabeth early this century. Thanks to Raphie, ZS2SP, for furnishing the story.

AMATEURS AND RADIO

INTERESTING STORY OF PROGRESS

MR. R.J. LAMBSON TALKS TO ROTARIANS

The history of amateur radio formed the subject of an interesting address delivered to the Rotary Club by Mr. R.J. Lambson at the King Edward Hotel yesterday. Rotarians listened with deepest attention to Mr. Lambson's review of the progress of the radio as far as amateurs were concerned since the first experiments were conducted by Marconi in 1901. It was not until 10 years later, however, that much was done to advance wireless, as it was known in those days, but in the interval there was one individual in Port Elizabeth who experimented and actually proved to the then Mayor that he could send a signal without the aid of wires from the old Palmerston Hotel to the Town Hall.

In 1911 it was a known fact, said Mr. Lambson, that amateur stations exceeded ship, military and other stations by 75 per cent. It was three years later that an American claimed to have started the first amateur organisation, the American Radio Relay League, when a message was sent from Connecticut to Massachusetts through the medium of some 10 or more radio stations.

AMERICANS GAIN

Mr. Lambson described the advantage the American amateurs gained over their British colleagues through the intervention of the Great War, which resulted in British amateurs being deprived of the opportunity of further experiments.

The speaker went on to describe the experiments which took place in the city in 1920 and 1921, when there were four or five amateurs in the country and commercial stations were on the upgrade. He instanced how the amateurs were allotted certain wavelengths and how in 1922 there were four amateurs who amused wireless listeners with programmes.

In 1923 the first contact for any great distance was established by an amateur station, when two New Zealanders were able to speak in Morse to American stations. Eventually, in 1925 a conference of all the Leagues and Societies decided that it was time that all transmitting amateurs should form themselves into one big band, and an international conference, by correspondence mainly, resulted in the formation of a worldwide organisation.

Now, as long as they conducted their experiments within the bounds laid down and did not interfere with any recognised

broadcasting station, amateurs could do practically what they liked.

The speaker described the international code by which it was possible for any amateur, no matter what nationality, to understand the messages sent by other members of the organisation.

WORLD'S RECORD

He also revealed that in 1926 he established a world's record for wireless telephony when he was able to speak to the Argentine and Uruguay on a wireless telephone, although it was not until years later that the beam system was inaugurated and the trans-continental telephone came into being.

Mr. Lambson exhibited the cards whereby amateurs in different parts of the world proved contact with each other, showing what wireless had done in bringing together people of different nationalities (Applause).

He stressed the usefulness of radio amateurs in time of trouble. "Amateurs have been formed into a second line of defence," he pointed out. "They can play a big part in case of telephone breakdowns, floods, etc."

During his concluding remarks, Mr. Lambson said that the amateurs had been given a definite band of wavelengths to work on, and he hoped that the various Governments would leave them there. They were now experimenting with the ultra-shortwave, and within the last two weeks tests had been made in Johannesburg. He ended up an extremely interesting address by reading the rules of the international amateur organisation, which aimed at unselfish service with objects closely allied to those of Rotary (Applause).

GREAT SERVICE

Mr. V.H.O. Christian proposed a vote of thanks to Mr. Lambson, paying tribute to all he had done for radio and what he was still doing in the city and district. "Some people do not appreciate the work and time Mr. Lambson devotes to it," he concluded.

FOR SALE -- Army headphones at R3 each - Contact Al Akers ZS2U, Tel. 30-2983

FREE! FREE! FREE! -- Diodes: 0A5, 1N4148; Transistors: 0C44, 0C45; 3-6GT5 Valves and holder for TR9000 transceiver - Contact Al Akers ZS2U, Tel. 30-2983

WANTED -- Circuit diagram for FRG7 receiver - Wim van Voorstenbosch ZS2WV, Tel. 33-8645 (home) or 51-3085 (work)

Condolences

to Werner Ahlers ZS2WA and Schalk van der Merwe ZS2Y on the loss of their spouses last month. We extend our sincere sympathy to both of you and your respective families.

Congratulations

to those who will be celebrating:

Birthdays - May: Robin Gatley ZR2A (18th); Bill Hodges ZR2AAN (22nd); Vicky Ansell (ZS2AJ) (24th); Darrell Andersson ZS2CZ (27th); Grobbie Grobbelaar ZS2JO (30th); Shirley Carr (ZS2C) (31st). **June:** Geoff Bowes-Taylor ZS1VS (1st); Claire Smalles (ZS2SM) (4th); June Jones ZS2JJ (5th); Sakkie Viljoen ZS2ID and Gus Winter ZS2MC (9th); Magda van der Merwe (ZS2JC) and Ken Victor ZS2OC (10th); Maureen Fulton (ZS2MG) (11th); Fred Bonthuys ZS2EQ (16th); Natalie Akers (ZS2F) (19th)

Anniversaries - May: Magda and Al van der Merwe ZS2JC (29th); Doris ZS2TL and Owen Thomas ZS2AZ (30th). **June:** Marge and Jim van Loggerenberg ZS2LR (4th); Pat and Trevor Elliott ZS2TJ (5th); Heather and Neil Holmes ZS2AI (8th); Peggy and Viv Moore ZS2VM (16th)

Welcome

to Ken Tremeer, ZS6MG, who has decided to settle in PE following his retirement. Smart fellow, this chap, but that's to be expected - he grew up in EL!

- to Chris ZS2CJ and Molly Els on their return to PE. Good to have you back, chaps. We're sorry about the damage to your belongings on the way down;
- to Robert Pokorny, OE3PRW, who now lives in the PE district and has joined our ranks.

Farewell

OM Theuns Reyneke, ZR2AAZ, has left us for the Transvaal. Cheers, and good luck for the future, Theuns. Hope you'll return some day.

Travelling

Julie and Trevor Scarr ZS2AE leave on a visit to Canada on 16 May. Have a pleasant journey, Julie and Trevor. We look forward to your return from that beautiful country and to hearing all about your trip.

Good Wishes from the Branch...

HAPPY MOTHERS' DAY on 12 May to all the Moms in the Branch. Dads, kids, this is your chance to buy Mom that new rig, beam or automatic ATU that she has been too reticent to approach you about because of the high cost.

We wish **OUR JEWISH MEMBERS** happy Pentecost on 19 and 20 May.

PORT ELIZABETH BRANCH COMMITTEE

CHAIRMAN	Marge Weller	ZS20B	30-4597
VICE CHAIRMAN	Lionel Coombe-Davis	ZS2DD	32-1770
SECRETARY	Lynne Crothall	ZS2MM	35-4671
TREASURER	Colin Robertson	ZS2CTR	30-0570
SOCIAL	Marge Weller	ZS20B	30-4597
SPECIAL EVENTS, AWARDS, CONTESTS	Bud Voortman	ZS2CA	34-2770
HAMNET	Al Akers	ZS2U	30-2983
PROJECTS, PUBLICITY, NOVICE LICENCES	Viv Moore	ZS2VM	30-4433
EDITOR: QSX-PE	Garth Laaks	ZS2HB	38-1101
QSX COMMITTEE MEMBER	Viv Moore	ZS2VM	30-4433
LIBRARIAN, DF HUNTS, IPHA	Vic Olivier	ZS2SZ	30-2440
PACKET WORKING GROUP CO-ORDINATOR	Lionel Coombe-Davis	ZS2DD	32-1770
REPEATER WORKING GROUP CO-ORDINATOR	Trevor Scarr	ZS2AE	32-1746

BULLETIN ROSTER

Bulletin readers please refer to your roster sheet.

SUNDAY BULLETINS

Bulletins are transmitted on Sundays at about 08:40 (after the Headquarters bulletin) on -

7,098 MHz (40 metre band SSB)

145,700 MHz (2 metre band FM - Lady's Slipper)

51,400 MHz (automatic link with 2 m Lady's Slipper)

14,130 MHz (20 metres SSB) when conditions require.

BRANCH VHF SERVICES

Town Repeater (PE Central)	145,050 / 145,650 MHz
Grahamstown Repeater	145,150 / 145,750 MHz
Lady's Slipper Repeater	145,100 / 145,700 MHz
6 metre link with Lady's Slipper ..	51,400 MHz (simplex)
Cockscomb Repeater	145,000 / 145,600 MHz
Kareedouw Repeater	145,075 / 145,675 MHz
University Repeater	145,175 / 145,775 MHz
6 metre beacon (ZS2SIX CW ID)	50,005 MHz
2 metre beacon (ZS2PE CW ID)	144,910 MHz

BRANCH MEETINGS

20:15 (8.15pm) on the third Friday of the month at St. Martin's Presbyterian Church, Great West Way, Kabega Park.

**** We like being your branch ****