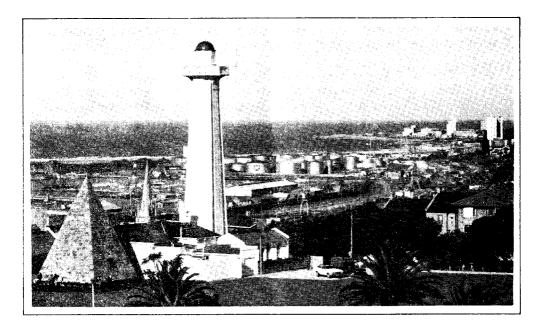


# QSX PE





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

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## NOTICE OF MEETING

The July monthly general meeting of the Branch will be held on Friday, 12th July, 1991, in the St. Martin's Church Hall, Great West Way, Kabega Park starting at 20:15 (8.15pm). PLEASE NOTE: THIS IS THE SECOND FRIDAY OF THE MONTH, NOT the usual third Friday.

After tea, our Branch Sub-committee for communications for the VW Algoa Rally, under the chairmanship of Bud 2S2CA, will put us fully in the picture about the general communication requirements. Bring pens and paper if you are involved - and just about everybody seems to be helping this year.

(Note - There will also be a final briefing by the Rally Organisers themselves the following Wednesday evening, when we will learn our specific tasks and positions and meet the Rally marshalls with whom we will work - more news of this on bulletins and at the general meeting).

# CB & TRANSISTOR RADIOS WANTED

Viv ZS2VM invites anyone who has an unwanted Citizen's Band transceiver or ordinary transistor radio receiver to denate it to the Branch. The transistor receivers must have at least one AM band, preferably shortwave. Viv plans to convert the CB sets to operate in the 10 metre band and lend them to new Novice licensees until they can get themselves set up with their own equipment.

The transistor radios will be fitted with beat frequency oscillators (BFO's) and, if necessary, a bandshield facility. They will then be loaned to those studying for the RAE so that they may keep in touch with Branch and League affairs via the bulletins, listen to general and, and, in the process, learn (proper?) operating a acedume.

The equipment does not have to be in working order although, obviously. Viv would not like to have to each cost make overhauls before getting down to his own modifications.

Any offers of unwanted CB or transie radios?

STOP PRESS - We have just heard that two members have received their literate: After passing the Max ACE. Brendan Robertson (ZUIAAR - first Novice in the Branch in Ben 1988). ZRIAEE - Class A restricted). Congrats will we hope to hear of other new licensees soon (see Persons likely)

# 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, 21 JUNE, 1991

PRESENT: 41 members and visitors APOLOGIES: as per register.

The Chairman extended a warm welcome to all present, especially to Dick ZS2RS, Brian ZS2AB and all those who had recently passed their RAE examinations. She asked all the successful candidates to step forward so that members could see who they are, and she congratulated them all on behalf of the Branch.

MINUTES: The minutes of the May meeting had been circulated in QSX-PE and were taken as read: proposed by U10 282VM and seconded by Garth ZSZHB.

ARISING: (a) VW Algoa Rally - Marge furnished the Herald with a write-up about the part Amateur Radio will be playing in this event and it was expected to appear in the special Rally supplement on 19 July. (b) The next Branch meeting will be held a week earlier than normal because the VW Rally starts on our usual date and most members are assisting with communications. The meeting will serve as a final briefing from the Communications Sub-committee, although operators would also be asked to attend a briefing by the Rally Organisers on the following Wednesday evening. Marge invited those not actually providing communications to accompany participating operators. (c) A reply had been neceived from the Mayor saying that the Framesby Civil Defence Centre had already been let to another organisation. Councillor Vierra also mentioned to Marge that he served in Signals in the Army and would like to get into Amateur Radio when he retires as Mayor. (d) 1994 SARL AGM - Marge invited Dick 252RS, who is Chairman of the AGM Sub-committee, to address the meeting. He spoke about the success of the 1984 AGM held here due, in large measure, to the fact that costs to visitors and delegates had been kept as low as possible. In order to do so again, he asked all members to consider donating, say, R36 between now and AGM 94. Marge reported that some donations had already been received. Regarding the program, Dick said we would need to make provision for the various displays, 'workshops' etc. that had become normal peripheral activities over the AGM period.

FINANCE: The balance in our savings account is just under R4000.

CORRESPONDENCE: (a) Various Branch newsletters, Two applications for the Algoa Bay CW award and a copy of ZS1GPF Paddy Furlong's letter to Cape Town Branch asking for the transfer of his membership to the PE Branch.

GENERAL: (a) Marge had asked Headquarters to approach the PMG with a view to allowing those who had to rewrite one of the RAE subjects to do so earlier than the next examination date. Headquarters had replied that they had already done

so but without success. The cost of setting examinations as well as a dearth of staff in the Sections concerned is already a cause for concern to the PMG's Office. (b) Marge drew attention to the fact that the Librarian had gone to the trouble of assembling magazines in yearly volumes and she asked those who borrow them to return them in the same order. (c) The next Committee meeting would be held at the Civil Defence Centre in Millpark on 2 July.

- (d) VW A)goa Rally Our representative on the Rally Organisers' Committee, Bud 282CA, spoke on the arrangements and requirements for rally communications. He asked that members listen to the Sunday bulletins, which would be used to keep participating stations up to date on developments. He and some of his sub-committee members had tested communications over the entire rally route but some decisions still had to be made. Al 282U was attending to operator matters, Vic 2828Z and Colin 282CTR to repeaters and Gerhard 282UM to maps.
- (e) Al ZS2U suggested that we adopt the `Elmer' system in the Branch. He explained that Elmers take one or more new members under their wing to make them feel welcome at meetings, invite them to their shacks regularly etc. and generally help them to get to know the other members and get established in their hobby. The proposal was strongly supported and accepted. Al will take care of it.
- (f) Garth ZS2HB conveyed a suggestion from the East London Branch for a get-together. Although favoured, it was decided to postpone the matter in view of the forthcoming VW Rally and until the weather was more suitable.

The monthly draw was won by Fred 2S2EQ. It was mentioned that part of the proceeds from the monthly draw go into Branch funds. Marge then subjected all present to a test a la NASA to see how they would survive a setback on the moon. Many didn't return to Earth.

CHAIRMAN

SECRETARY



FOR ALL YOUR COMMERCIAL PRINTING REQUIREMENTS

TRY US FOR YOUR QSL CARDS!

# on Simple Simon Seven DG Receiver

The February issue of Q.S.X. carried the article on the Simple Simon Seven D.C. receiver. There has been widespread interest in this little project, with units having been built in all four provinces. It therefore gives me much pleasure to present my first update on this cute little rig.

(a) Firstly there was an omission in the original diagram FIG 2. R-18 270 ohm was left out completely, due no doubt to my haste to get the article to our editor on time. The

correction is shown in the amended diagram Fig. 2A.

(b) <u>Poor Sensitivity.</u> It has been found that in the majority of cases, C2 which is the resonating capacitor for L3, may be removed from the circuit entirely. This is due to production spread and the inter-capacity effect of other components on the PC board. The result is that there is now too much lumped capacity for our coil at 7Mhz. and the receiver will lack sensitivity. When adjusting C1 and C2 the signal should show a definite peak at resonance. Remove C2.

Now let's look at two of the traps that a few of our constructors fell into. Surprisingly enough there seemed to be little or no trouble getting the VFO up and running.

(c) Probably the most common fault was incorrect value resistors being used. Learn the colour-code or use an ohm

meter to confirm the value.

(d) Some of you forgot one or more of the ground leads from the track side of the PC board through to the groundplane. For example, leaving the ground lead off of L1 or L2 would result in the receiver having the same symptoms as at (a), because it would be impossible to "PEAK" the tuned circuit

IMPROVEMENTS TO THE RECEIVER

Referring to the receiver circuit diagram Fig. 2A. we find R-5 between pins 2 and 3 of IC-1. This is the external gain control for this device. The higher the value of R-5 the lower the gain, and visa versa. It is therefore a simple matter to adjust the gain from the front panel by means of a single pole toggle switch. Remove the existing 100 ohm resistor from the board, and insert a pair of well twisted insulated wire into the now vacant holes. These two wires are then brought out and soldered to the toggle switch. Now solder the 100 ohm resistor across the switch terminals as shown in Fig. 2A. When the switch is in the off position the resistor will be in circuit exactly as it was before, but when the contacts close, the resistor will be shorted out and therefore the gain will be at maximum. The usefulness of this little gadget will become apparent when we consider that our simple receiver has no automatic gain control at this stage.

It was also suggested by ZS6GQ OM Sid. that the coupling capacitor from TR-1, that is C11 be increased to a value of 2uf. This would undoubtedly allow more audio transfer and higher gain. During tests this did indeed prove to be the case, with just a slight increase in bass response. When

# Simple Simon Seven update (cont'd)

inserting the new electrolytic capacitor, place the positive lead towards TR-1 collector.

Another useful device is a simple R.F. attenuator, this is represented in our diagram as VR-3 a 1K Linear pot. which is place directly across the antenna terminal to ground. The incoming signal from the antenna will be unaffected when the control is set at maximum, but as we advance the control towards minimum some of the signal will be attenuated by the increased resistance offered by VR-3, and so protect our ears and our receiver from a neighboring Kilowatt transmitter.

Perhaps the most exciting part of this months update is the S-meter circuit of Fig. 8. The audio voltage is taken from the high side of the volume control VR-2 and fed to a JFET transistor amplifier TR-1. The reason I used a Field Effect transistor in this stage is because of its high impedance. The low impedance of an ordinary bipolar transistor would tend to load the existing circuitry and rob us of some of our valuable audio. TR-2 further amplifies the audio signal to a considerable level. Up to this point we have been dealing with an AC voltage. Now diodes D-1 and D-2 rectify this voltage to DC. It should be obvious from the above that the average of this Direct Current voltage will be dependant upon the audio level, which in turn is dependent upon the incoming signal level at the antenna. Now we are getting somewhere !. TR-3 is a DC amplifier which does just that, it amplifies the current to a level suitable to deflect our S-meter which is placed in the emitter lead, in series with VR-1 which sets the sensitivity, and therefore allows us to adjust the meter setting.

When wiring the completed S-meter board to the receiver board, it will be necessary to slightly modify the existing circuitry. The slider of VR-2 is removed from ground. Now C-24 is wired straight to the slider instead of going to R23. Refer to Figs. 2A & 8. Remember to use shielded cables when making the connections to and from the volume control.

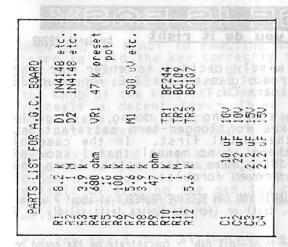
At first glance the component count may seem a bit high compared to that of the completed receiver, but during tests anything less proved unsatisfactory, also we will be using some of the voltage generated to drive an A.G.C. circuit in a later update. If the circuit is used as is, it will be found that the voltage developed by TR-3 is quite substantial, and therefore any meter may be substituted up to about one MA.

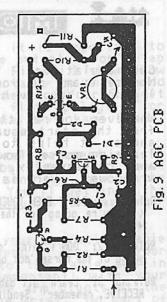
A suggested PC layout is shown in Fig. 9.

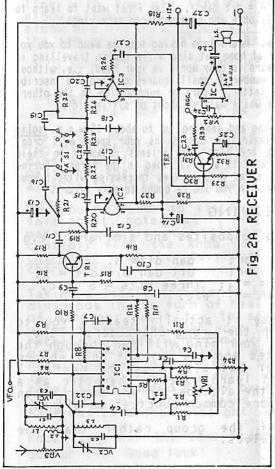
The next update will deal with the inclusion of the automatic gain control and incremental tuning for the VFO.

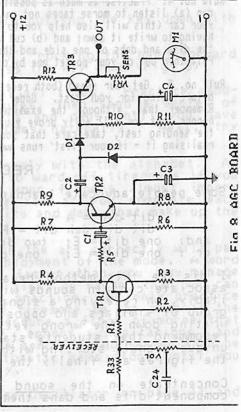
And there you have it! Come on guys, lets all go Q.R.P.

Stick your own advertisement here (another fantastic free facility from your favourite fraternity that makes membership of the premier branch (PE!) such a profound pleasure)









Page 7



when you do it right

by Garth 282HB

Congratulations! You've wisely decided to enter for the Novice exam, or you've already passed the RAE for your 28 licence. You now have to learn CW.

Whenever you're attempting something new, doing it properly from the start usually makes for longer-term satisfaction, and so it helps to read the manual first. In the case of learning morse, however, there is no manual that I know of and, consequently, most budding hams unfortunately learn the wrong way. Here is a well-proven formula:

- Rule no. 1: DON'T EVEN TOUCH THE KEY UNTIL YOU CAN RECEIVE PROPERLY at about 9 w.p.m.

  vif you're going for the 12 w.p.m. test) or (for the Novice test) solidly at 5 W.D.M.
- Rule no. 2: DON'T think 'dot dash' think 'dit dah' concentrate on the sound or swing of the morse, not on the individual dits and dahs.
- Rule no. 3: Learn 'dit dah = A' (NOT 'A = dit dah'). (You first want to learn to RECEIVE, remember! Sending comes easily once you have mastered receiving)
- Rule no. 4: Practise as much as possible. Apart from having someone send to you you can (a) listen to morse tapes not only at home but also while you're travelling in your car (this will also help you to learn to copy morse in your nead, i.e. without having to write it down; and (b) cut a number of small squares of card and inscribe the dits and dahs on one side and the letter, figure or punctuation on the other. Pull them out of your pocket one by one while walking about or sitting idle.
- Rule no. 5: Get your speed (both receiving and sending) up to about 15 w.p.m. solid before going for your test. Under examination conditions your speed will drop. Remember that, although the examiners are also your friends, they're on their honour that you will fully prove your ability as prescribed in the rules. During the sending test, take care that your speed doesn't keep increasing without your realising it - if your 'fist' runs away with you you're bound to make errors.

#### RECEIVING

Some people advocate learning topposites and similars', e.g.

dit dah = Abut dah dit= N, dit dit dah dit = F but dit dah dit dit = L: one dit = E; two dits = I; three dits = S etc. and: one dit = E: one dah = T etr.

I distike this method because it actually teaches with to associate certain sounds with the  $\underline{\text{wrong}}$  characters: They itably, on receiving a signal your mind will run through the group of similars and opposites and you may not only ero up writing down the wrong letter but also miss the next. I recommend that students start learning each character as a unique signal, starting with the alphabet in any order, then the figures and finally the more common punctuation arons.

Concentrate on the <u>sound</u> of the group rather than the component dits and dahs themselves.

#### SENDING

WHEN YOU'RE READY TO PRACTISE SENDING, it is important to learn to hold the key correctly from the outset. Don't tap it, but don't grip it tightly either. Figure 1 shows how your fingers and thumb should rest comfortably on and around the knob of the key. (For maximum enjoyment of your CW, get yourself a decent Key - those small, flat apologies for morse keys, with discs where respectable keys have knobs, are not conducive to good, relaxed sending)

The key should have about 1mm of vertical movement at the knob while you're learning. It may be reduced to about 0.5mm when you are fully competent at sending. Avoid the pitfall of setting the gap too close. You'll get into the habit of nerve-sending, you'll make numerous errors and your wrist will tire quickly.

Fix the key firmly at the <u>near edge</u> of your operating table so that it cannot move about as you send. Position your forearm horizontally at right angles to the table and in line with the key (chair height is important) with your elbow slightly away from your body. The arm pivots at the elbow and hinges without stiffness at the wrist. No part of the arm or wrist rests on the table while sending!

- TO SEND A DIT, DROP THE WRIST, pulling the Key down with the fingertips (Fig. 2)
- TO SEND A DAH, RAISE THE WRIST, rocking the hand forward so that the fingertips press the Key down (Fig. 3)

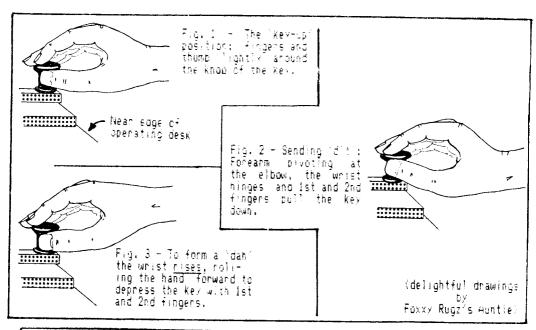
The wrist must remain relaxed at all times. Practice sending dits SLOWLY for a few minutes, then send a series of dahs SLOWLY. Keep at the dits and dahs until you have mastered the action and it comes naturally. Next, try alternating dits with dahs.

Now you're ready to start seriously with the alphabet. At this point, note that it helps to ward off tiredness if you make a practice of releasing your fingers almost imperceptibly from the knob of the key as you complete each character (not the individual dits and dahs that make up the character).

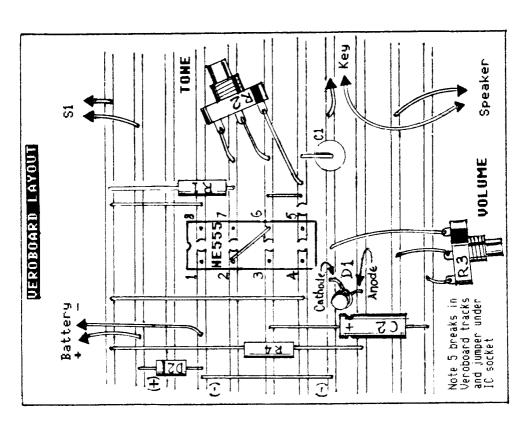
Taking a little trouble to learn the art correctly will pay dividends in the form of real enjoyment of the mode. A word of warning: don't try to send faster than you can manage without stumbling over your own fist, or faster than you can receive. Speed will come with practice, and only practice makes perfect. Nothing is more tiresome to the chap at the receiving end than to have to endure a flood of morse that is poorly formed, full of errors, hesitations and repetitions caused simply by the sender going faster than he is able. Similarly, leave automatic keys alone until you have mastered the 'straight' key.

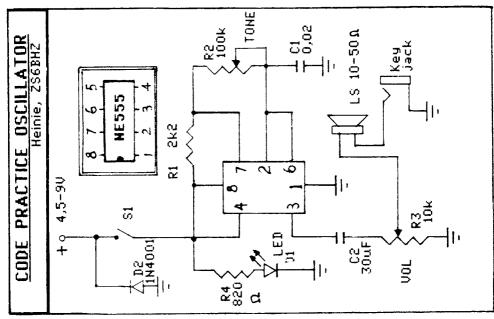
Knock together the Code Practice Oscillator on page 11 and go for it. Good luck!

Page 9



THE MORSE CODE	
dah-di-dit       B       dah-dah-dah       (         dah-di-dah-dit       C       di-dah-dah-dit       (         dah-di-dit       D       dah-dah-dit       (         di-dah-dit       E       di-dah-dit       (         di-di-di-dit       G       dah       (         di-di-di-dit       G       dah       (         di-di-di-dit       G       dah       (         di-di-di-dit       G       dah       (         di-di-di-dit       G       di-di-dah       (         di-di-dah-dah       G       dah-dah       (         di-dah-dah       G       dah-dah       (         dah-dah-di-dah       G       dah-dah-dah       (         dah-dah-dah       G       dah-dah-dah       (         dah-dah-dah       G       dah-dah-dah       (         dah-dah-dah       G       dah-dah-dah       (	
di-dah-dah-dah-dah       1       dah-di-di-di-dit       0         di-di-dah-dah-dah       2       dah-dah-di-dit       0         di-di-di-dah-dah       3       dah-dah-dah-dah-di-dit       0         di-di-di-di-di-dah       4       dah-dah-dah-dah-dah-dah-dah-dah-dah-dah-	40 Z 10 O. F.
di-dah-di-dah-di-dah	
(Thanks to Jim van Loggerenberg 252LR for this stylisation of the Morse code. Jim also supplied the code for many foreign characters and abbreviated numerals. We will print them in a later QSX-PE)	

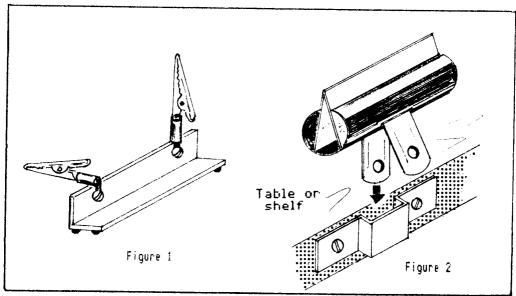




Page 11

- 1. If you need a third hand for holding small parts when soldering, use a pair of long-nosed pliers as a small vise by winding a rubber band around the handles.

  (Note: Checkers sell a set of four different-style tweezers for about R13, one of which is a 'normally closed' clamping type, useful for holding small items when soldering)
- 2. A 'Helping Hand' to hold small articles for soldering can also be made by mounting two alligator clips, one upright and the other horizontally, on a piece of heavy angle stock cut to a convenient length (Fig. 1). Clamp it to your workbench or in a vise if necessary. Rubber feet can be added to the bottom flange of the angle stock.
- 3. Prestik is another useful item for holding parts that you want to solder, either on the workbench or keeping components in place on a PC board while you turn it over for soldering. It also has many other uses in the shack, e.g. keeping morse keys from sliding about etc.
- 4. Make a metal bracket as in Fig. 2 into which one leg of a `bulldog' paper clamp slides snugly. The wide jaws of the bulldog clip make a useful `vise' for soldering. In addition, your pencil-type soldering iron can be hooked onto the bracket when it is not holding the paper clamp.
- 5. Steel wool makes an ideal cleaner for a hot soldering iron tip. However, Algoa Engineering sell a small container of tinning paste with which you can dress the tip of your iron when you've let it overheat and had to file it. You don't (or shouldn't have to) use it often, so it lasts a long time.



When using a transceiver, netting accurately onto a distant station's frequency on CW takes a little forethought. Tuning the incoming signal to a pitch that suits your ear is all very well but, if that doesn't get you reasonably close to his actual frequency, your signal may be out of his receiver's passband (especially if he is using a narrow CW filter) and he won't hear your call. Even if he does, by using separate frequencies you may cause interference to others without being aware of it.

My FT707 uses the UPPER sideband mode for receiving on CW. When switched to USB, the frequency of my SSB signal is indicated by the digital readout. If I switch from USB to CW while listening to another station there is no change in his voice or his CW carrier pitch, i.e. I am still receiving on the same frequency. However, my digital readout alters to show where my carrier will be if I now transmit on CW. The difference in the readout, in my case, is 700 Hertz (0,7 KHz).

The reason for this offset is not important here. Suffice it to know that, to be sure another CW operator hears you when you reply to his CQ, you must set your transmitting frequency as close to his as possible. To ensure that I am within about 50 Hertz of the distant station, I turn the main tuning knob to lower the audio pitch of his CW signal to zero Hertz (known as zero ceat), at which point it is inaudible). Noting the frequency readout at that point, I rotate the tuning knob in the opposite direction to produce a difference in the readout of 700 Hertz. My CW carrier is now within about 50 Hz of his and the pitch of his signal in my loudspeaker is close to 700 Hz.

Most receivers probably don't reproduce tones lower than about 100 Hz. Therefore, when adjusting the pitch of the other station's signal to zero beat, you can safely continue for about a hundred Hertz (0,1 kHz) beyond the point at which it actually becomes inaudible. Now note the digital readout and then rotate the main tuning knob back in the other direction for the appropriate offset according to the design of your particular rig. (Yours may have a different offset, not necessarily 700 Hz as in my case).

Depending on whether your set uses USB or LSB for receiving CW, the final frequency could be lower or higher than the readout that you noted at zero beat. It doesn't matter, so long as the wanted signal is back in the speaker with a pitch equal to your transmit receive offset. If this doesn't suit your ear, USE YOUR CLARIFIER to adjust it to your liking, NOT THE MAIN TUNING KNOB.

If your readout does not vary when you switch between CW and the sideband used when receiving CW, or if the pitch of the received signal also changes when you switch, check your manual to determine the CW offset.

Another simple method that works with many rigs, but not all, is to tune in the other station so that the pitch matches the tone of your rig's sidetone oscillator. You need to experiment to determine whether this works with your equipment: get a third operator to compare your frequency with that of the other station on which you are practising zero beating.

Remember when zero-beating, whether on CW or SSB, always disable your classifier for 'RIT's.

Of course, if you're using a rig with a factory-made marrow CW filter, you've been wasting you'r time reading all this! Just tune to the loudest part of the incoming signal and you'll be home and dry.

# PAY YOUR SUBS IN DRIBS & DRABS

By now you should have received your subscription renewal notice and you have, perhaps, read in Radio 2S that subsidely due on 1 July for the new leadure year.

Pacognising that members may sometimes find a single lump sum payment a bit of a knock, the Port Elizabeth Branch offers a facility for paying subs in two or three instalments. If you would like to make use of this service, please contact Colin ZSZCTR as soon as possible to make the necessary arrangements.

Communication Gap— I know you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant.

#### \* \* \*

Burg's Law- The man who gives in when he is wrong is wise. The man who gives in when he is right is married.

#### \* \* \*

Rowe's Law- The odds are five to six that the light at the end of the tunnel is the headlight of an oncoming train.

# WON'T YOU COME & TALK TO US?

we still get together on the Town repeater (145,050/650 MHz) at 19:30 (7.30 pm) on Tuesdays and we'd like to intermodulate with you with increasing frequency. There's plenty capacity for you in the net, so don't resist and remain isolated. Socket to us on two and we'll beam.

# \* HAMADS \* HAMADS \* HAMADS \*

SSTV Videoscan 1000 converter. Ultra-high resolution, Quad screen (4 simultaneous pictures), Multimode 8, 16 and 32-second compatible, 256 lines x 256 pixels with 64 levels of grey. WITH BLACK-AND-WHITE VIDEO CAMERA, all mint condition. R1200 o.n.o.- Colin Attwell 282AO, Tel. 31-2471 P.E.

TR9000 2 METRE SSB/FM transceiver with B.O. base. R1500 negotiable.- Werner Ahlers ZS2WA, Tel. (0422) 966-2222 (H) or (0422) 994-4316 (W)

Sick Parade Sorry to hear Hester, XYL of OM Grobbie 282JO has been in hospital. Ons hoop dit gaan sommer spanne beter, Hester, en ons wens u 'n spoedige en volkome herstel toe.

# Congratulations...

to those celebrating in the coming weeks, namely:

Birthdays - July: Sel Staples ZS6SS (16th); Bill Browne ZS2BY (19th); Beavan Gwilt ZS2RL (22nd); Fred Friskin ZS2-272 (27th). August: Mandy Masters (ZS2AAN) (1st); Louisa Tallaard (ZRZCS) (3nd); Avril Guthrie ZS2NU (5th); John Watson ZSZKD (11th); Trevor Elliott ZS2TU (17th); Annamarie Barnard (ZRZDY) (15th); Sandra Bothma (ZS2B) (17th); Al Akers ZS2U (18th).

Anniversaries - August: Shirley and Tom Cockbain ZS2TC (Sth): Annamarie and Attre Barnard ZR2DY (9th)

- to all who passed their RAE examinations in May: Wally Bodmer (Sedgefield), who already sports the call sign ZRIWB, Joan and Andrew Bowles, Peter Flynn, Jimmy Hoole, Ann and Rene Olivier, Julie Scarr, Ben Schilder and Donovan van Loggerenberg, who has also already passed his 12 w.p.m. morse test, as well as Brendan Robertson, who will soon become our first ZU licensee and youngest transmitting member. Hearty congrats on a fine job all of you, especially considering the short tuition period of a mere few months. We also doff our hats to the tutors, notably Viv Moore ZSZVM and Colin ZSZCTR, who coached Brendan himself.
- to Marge Z320B for taking fifth place in the Eastern Care in the Businesswoman of the Year competition organised by Sanlam and the SBDC. FB Marge. Of course, behind every successful woman....HI.
- to ken ZS260 for the part he played in getting Radio Haifa removed from 21,232 MHz to a frequency outside the ham bands. How about talking nicely to the fishermen, ken?

Welcome to new member Jack Drayton ZS2SI, of East London. Nice to have you with us, Jack and Phoebe.

Also a hearth delocme to a  $\dot{}$  members of our second series of technical classes for 1991.

Exaction 14 the last issue I welcomed Andre Botes under his isomestricted call sign of ZR2FK instead of his correct are, which is ZS2ACP. Sorry, Andre.

Every now and again, an editor sits with a little piece of blank page - such as this one - and he has absolutely nothing with which to fill it. Needless to say, he can't simply leave it blank, so he just sits around and hopes it goes away, like this one has done. Isn't it positively amazing?

# PORT ELIZABETH BRANCH COMMITTEE

onel Coombe- Davis	ZS2DD	/
nne Crothall Din Robertson Gree Weller	ZS2MM ZS2CTR ZS2OB	32-1770 35-4671 30-0570 30-4597
id Voortman	ZS2CA ZS2U	34-2770 30-2983
rth Laaks v Moore	ZS2HB ZS2VM	30-4433 38-1101 30-4433 30-2440
onel Coombe- Davis	ZS2DD	32-1770 32-1746
	nne Crothall lin Robertson rge Weller  d Voortman Akers  v Moore rth Laaks v Moore c Olivier onel Coombe-	nne Crothall ZS2MM lin Robertson ZS2CTR rge Weller ZS20B  d Voortman ZS2CA Akers ZS2U  v Moore ZS2VM rth Laaks ZS2HB v Moore ZS2VM c Olivier ZS2SZ onel Coombe- Davis ZS2DD

## 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		
Lady's Slipper Repeater	145,100	/ 145,700 MHz
6 metre link with Lady's Slipper		
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.

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