

## Port Elizabeth Branch of the

 South African Radio LeagueP.O.Box 462, Port Elizabeth. 6000.

THE ANNUAL GENERAL MEETING OF THE POR'T ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE WILL BE HELD IN THE LECTURE ROOM OF THE MOUNT ROAD POLICE STATION PORT ELIZABETH AT 8P.M. ON FRIDAY 19th SEPTEMBER, 1980.

The Agenda is as follows:

1. Welcome and Apologies.
2. Minutes of Annual General Meeting held September, 1979.
3. Adoption of Chairman's Report.
4. Adoption of Financial Statement.
5. Election of Office Bearers.
6. General.

ALL ARE WELCOME.

DIE ALGEMENE JAARVERGADERING VAN TAK PORT ELIZABETH VAN DIE SUIDAFRIKAANSE RADIOLIGA SAL IN DIE IESINGSAAL VAN DIE MOUNTWEG POLISIE STASIE, PORT ELIZABETH OM 8N.M. OP
VRYDAG 19 SEPTENBER 1980. PLAASVIND.
Die Agende is soos volg:

1. Welkom en Verontskuldigings.
2. Notule van Algemene Jaarvergadering September 1979.
3. Voorsitter se Jaarverslag.
4. Finansieleberig.
5. Verkiesing van Komitee.
6. Algemeen.

Almal is welkom.

|  |  |
| :---: | :---: |

MINUTES OF THE ANNUAL GENERAL MEPTING OF THE PORT ELIZABETH BRANCH OF THE S.A.R.L. HELD AT THE Y.M.C.A. HAVELOCK STREFT, PORT ELIZABETH ON FRIDAY 2lst SEPTEMBER, 1979.

PRESFNT: 33 members and visitors. The Chaiman extended a general welcome to all those present, especially to the wives, Janet Will, and the visitors.

APOLOGIES: ZS2JJ, ZS2MJ, ZS2Y, ZR2BJ, ZS2EA, ZS2CT, ZS2BF, ZS2TW, ZR2BW, ZS2MC and R. Mash.

MINUTES: The minutes of the previous AGM had been published in QSX-PE. They were approved, and their adoption was proposed by Cyril ZS2KX and seconded by Trevor ZS2AE.

ARISING: -
FINANCE: The financial statement up till 30th Jme, 1979, having been published in QSX-FE was then adopted. Proposed by Lionel ZS2DD and seconded by ZS2KX.

CORRES :

CHAIRMAN'S The Chaiman stated that this was the first A.G.M. since the breakaway REFORT: from the Branch by the Algoa Club, but that membership numbers were still very good, but that an effort should be made to bring the number up to the previous figure. Branch activities had continued normally and these had included the Dinner Dance at the Edward Hotel, the Christmas tree party for the children. D.F. Hunts had not proved too popular and had been held on a three-monthly basis. The Jamboree-of-the-Air station had been organised by Brian ZS2AB, and operators were ZS2AB, ZS2SS, ZS2DD, ZS2OB, ZS2RS. Brian and Selwy were thanked for their efforts in erecting the antennas. A good number of Port Elizabeth and Uitenhage members had travelled up to Grahamstown to clear the excess growth of trees and the Grahemstown repeater site, and had been assisted by mombers from Grahamstown and Fort Beaufort. A new antenna had also been erected at the aite. A raffle to assist with funds for the Dinner Dance had been run and this was a four-band mains/ portable radio. At a general meeting a soldering iron donated by ZS2HZ had also been raffled which realised a donation for the Branch funds. At the general meetings, there had been several speakers including Major T.C. Cockbain who had spoken on radar and radio defence syatems, Mr. W. Bartie spoke on the Communications course for Naval Cadets, Lionel ZS2DD gave a talk on Satellites, Peter ZS2PD had spoken on Antennas and Propagations slide showa were given by Colin ZS2AO and Andre ZS2BK on their overseas trips and several films had been shown. Several C.B.'ers had shown interest in becoming hams and technical classes were being held by Poter ZS2PD. The Chairman stated that the finances of the Branch were healthy and he also thanked Committee members for their help and co-operation duxing the past year.
At this stage Dick ZS2RS the Chairman then stood down and Cymil ZS2KX took the chair to supervise the election of the new Chaimme. ZS2RS was proposed by ZS2AB and seconded unanimously. He then accepted the position of Chairman. Nominations were then called for to fill the positions on the Committee. Selwy ZS2SS and Lionel ZS2DD indicated that they were not willing to stand. The nominations were as follows: ZS2KX, ZS2BK, ZS2AB, ZR2BS, ZS2CY, and ZS2OB and these accepted nomination. As these were sufficient to fill the vacancies there was no election. They were congratulated on their nomination.

There being no further business, the meeting was declared closed. Marge ZS2OB, together with the wives of Committee members were thanked for their help with the preparation of the Cheasemand-Wine Party and donations of eats. Thereafter, members had a very enjoyable evening.
sgd.
sg. W. Schönborn ZS2RS
Chairnan

## sgd.

M.F. Colson ZS2OB

Secretary

The past year has once again, in my opinion, been a good one for the Port Elizabeth Branch. We have had a healthy influx of new members to whom we once again extend a hearty welcome.
Our monthly meetings have been reasonably well attended but there is always room for improvement in this department. Several members have assisted in an effort to make meetings as interesting as possible and to them we extend our thanks. Unfortunately our envisaged projects did not get off the ground and we could do well to try again.
The Hobbies Fair, a dual Branch effort, was a Ereat success and will surely lead to better co-operation between the
two branches. The Port Đlizabeth Branch was responsible for manning a record number of stations during last years Boy Scouts Jemboree on the Air. To all the helpers and operators, a big thank you.
The financial state of the Branch, as can be seen from the balance sheet, is extremely healthy, thanks to our component sale, donations etc. QSX has cost virtually nothing to produce, thanks to our sponsors. Whilst on the subject of our newsletter, mention must be made of our secretary, whose efforts cannot go unnoticed. Marge ZS2OB somehow inherited editorship and has done a sterling job ever since. Brian ZS2AB has had his ups and downs with the repeaters, but has once again come up trumns and all the units are operating efficiently. Thank you Brian for all those trips up the mountain.
To the committee, I say thank you for your support and to you the members, without you we wouldn't have a Branch. To those members who have had to move to other cities, we wish you well. To our printers, Zanne and John MacDonald of Instant Printing, thank you for your generous support, quality work and above all, your patience when we barely meet the deadline.
In conclusion I say, support your Branch and we will support you. Thank you one and all.

R.W.SCHÖNBORN ZS2RS

## CHAIRMAN

## SOUTH african radio league ( port elizabeth)

INCOME AND EXPENDITURE 30th Jume, 1980.

| Delegates Travel Exp. | 130 | 46 | Branch Subs | 344 | 00 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| QSX-PE Sundries | 14 | 56 | Interest | 8 | 90 |
| AGM 1979 | 26 | 00 |  | 96 | 40 |
| Licence 2PE and 5 Reptr | 60 | 00 | " |  | 10 |
| P.O. Box Rent | 5 | $\infty$ | Typewriter (Sale) | 21 | 24 |
| Rent of Room | 6 | $\infty$ | P.E. Avard | 1 | $\infty$ |
| 2M Antenna (ZS2BK) | 92 | 00 | Donation (ex 2S2BK) | 463 | 01 |
| mas Party 1979 | 15 | 00 | Ladys Slipper Reptr | 18 | 20 |
| Postages and Sundries |  |  | Donations (nett) | 1 | 37 |
| Receipts | 18 | 34 | Bank charges (nett) | 1 | 32 |
|  |  |  | Refreshments | 5 | 10 |
|  | 367 | 36 | QSL cards |  | 43 |

Excess of Income
to Acc. Funds 60671

R974 07


BALANCE SHEET 30 th Jume 1980 .

| Acc. Funds 1101-49 |  |  | Fixed Deposit | 1000 | 00 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| add Excess 606.71 | 1708 | 20 | Cash on Hand | 15 | 26 |
| H.Q. shere of Subs |  |  | Cash at Sav. a/c | 234 | 53 |
| not paid | 28 | 50 | Cash at Sp/Sav a/c | 463 | 01 |
|  |  |  | Cash at Trans e/c |  | 24 |
|  |  |  | Stock of Badges | 8 | 00 |
|  |  |  | Stock of QSL stickers | 13 | 66 |

Audited and found correct 3rd September, 1980.
Sgd. D. Winter ZS2MC
Hon, Auditor
sgd: F.G. Burrell ZS2CY
Hon. Treasurer.

Corrosion is an important consideration where dissimilar metals are brought into physical contact. Care must be given to the materials used in order to avoid severe galvanic corrosion. Galvanic corrosion occurs between dissimilar metals causing electrical current flow between them, similar to a battery or electroplating action. Galvanic corrosion can be greatly reduced by the use of similar materials or by passivating the materials in contact by plating or chemical conversion treatment (Alodine or Iridite). Where dissimilar metals must be brought into contact the metals should be close to each other in the galvanic series (see Table of Galvanic Series) so that galvanic action is very slow.

Gradual destruction occurs in the case of the metal which is highest in the electromotive series. Copper is the most inert of common conductor materials in this respect while aluminum is the most active. If bare copper and aluminum cables were buried in close proximity in active soil conditions, ground current would
flow between them resulting in the ultimate destruction of the aluminum cable. Buried cables, regardless of construction, should always be jacketed.

TABLE OF GALVANIC SERIES
(Relative Position of Metals and Platings Commonly Used)
(1) Magnesium
(2) Zinc
(3) Aluminum
(4) Aluminum Alloys
(5) Cadmium
(6) Steel or Iron
(7) Stainless Steel (active)
(8) Lead-Tin Solders
(9) Lead
(10) Tin
(11) Nickel (active)
(12) Brass
(13) Copper
(14) Monel
(15) Silver
(16) Gold
(17) Platinum

Note: Low number is anode and high number cathode. Metal flows from low number to high number in galvanic action.

Connectors used in the great majority of two-way radio installations are usually UHF or type N . Both types are readily available. Adaptors are available for both male and female type $N$ to UHF. Typical connectors are shown in Figure 2.
Type UHF is the oldest and most popular connector in the industry. It is rugged, easy to install, simple to connect, mechanically reliable, and generally considered quite adequate electrically up to about 300 MHz . Since it is not a constant impedance, its electrical performance begins to deteriorate above 300 MHz . At 300 MHz and above, type N is the usual connector choice. It has constant impedance and works well electrically to about 10 GHz . It is more fragile, more difficult to install, and more difficult to connect than type UHF.

There are many different types of connectors available, many for specialized applications. A few of those that are found useful in special situations are the E.I.A. flange, HN , and BNC. The E.I.A. flange is used mostly above 450 MHz and usually for pressurized transmission lines.
The HN connector is a 50 ohm, constant impedance connector, having higher voltage characteristics than the type N connector.
The BNC connector is a small quick disconnect with a bayonet type lock coupling. It is used on small diameter cables for interconnecting within equipment.

## CONNECTORS USED IN TWO-WAY INDUSTRY



## Installation of Coaxial Cable

A carefully planned and executed installation will assure long and trouble-free service. Always read the instructions supplied before installation. Inspect the cable for shipping damage, especially air cablecheck the pressure and make sure there are no leaks.
Check to make sure the connector on the antenna mates with the connector on the antenna end of the cable. A typical installation is shown by Figure 3.
Hoisting should be by a suitable line that will adequately support the weight of the cable. The cable can be run up the tower by use of a hand line or power winch. If the cable is on a reel, it should be positioned in such a way as to let the cable play off the bottom of the reel toward the tower. When the cable is shipped in rolls, the entire length should be uncoiled along the ground, away from the tower. The hoisting line should be attached to the cable by use of a cable grip or rope sling approximately 18 inches or more below the connector. When the cable is over 200 feet, additional hoisting

grips should be used to distribute the pull in several places along the cable ( 150 to 200 foot intervals are recommended).
Fastening the cable, after it has been raised to the proper height, should be started at the top near the antenna connector. The cable should be securely supported with a hoisting grip, hose clamp, or wraplock over an adequate area. Secure the cable at recommended intervals ( 3 to 5 feet) with clamps or wraplock. Secondary attachments (tie wires), for properly supported cable, can be used to dress the cable to the supporting structure. All cable attachments should be secure but not tight enough to dent or deform the cable. For waveguide or larger cable ( $7 / 8^{\prime \prime}$ or greater) the proper waveguide or coax hanger kit should be used for the support.
An all important final installation step is to waterproof the connector at the antenna input. Neither the basic type $N$ or UHF connector is weatherproof. Weatherproofing is best accomplished by taping the entire connection with a low temperature tape and then coating with a sealant.

Grounding the cable to the tower should be done by ușing recommended grounding kits at the top and bottom of the tower, or to a suitable "down" conductor physically separated from the cable if the tower is nonmetallic. Local building or electrical codes may have other requirements which should be investigated.

## Selecting the Proper Coaxial Cable

There are a number of factors involved in the selection of the optimum coaxial cable for any given installation. These are explained in detail below. Factors involved are electrical, mechanical and economic, or more specifically, frequency, loss, environment, and cost. Generally, there are several cables that will perform adequately, but selection of the optimum cable for the purpose requires careful consideration of each of the factors.
Cost of cables is based primarily on the size and material content. However, additional indirect elements which need to be considered in making a selection are
loss, long term stability and installation cost. It costs money to generate RF power. Each decibel lost in the cable may be hard to replace. Loss is a function of size, frequency, length, and materials. Sometimes there is a trade off between antenna "gain" and cable loss. Sometimes there is not. In some applications, a high gain antenna may be undesirable. Another factor is the dead weight and added wind load to the tower or antenna supporting structure. Braided cables are the easiest to install; $1 / 2$ inch is somewhat more difficult and $7 / 8$ inch about 50 percent more difficult.
Cables discussed herein will work over the entire twoway radio frequency spectrum. Use of a lower loss cable, particularly at higher frequencies, is generally a good economic choice.

The Environment in which the cable is to be in stalled determines the difficulty and cost of the instal lation. Environment, specifically sunlight and higl ambient temperature also can reduce the power han ding capability of a cable. This is generally not factor in two-way radio service.

## Field Testing Coaxial Cable

There are three simple tests that can be performed readily and easily in the field. These are (1) inner an outer conductor continuity, (2) shorts between conduc tors, and (3) VSWR. The first two are self-explanator and are performed with an ohmmeter. VSWR is a indirect measurement. The forward and reflected pow er is measured with a thru-line wattmeter. VSWR is the taken from a conversion table or graph supplied wit the wattmeter. If all three measurements appear satis factory but system performance is unsatisfactory o erratic, there may be an intermittent condition causin the problem. This is usually the most difficult kind 0 fault to detect. The usual procedure is to check th connections and repeat the tests. If there is no change try flexing the cable slightly in the vicinity of the cor nections, and repeat the measurements again.


Ban
 on atinet coo h, ging to an andysis in Electionic Mail \& Message Systems' nemasiettar Itriterrational Resource Development Inc, USA miorket esearch specialist), which reveals that a telephorie equipped with a hand, capable of transmitiong hurrian yestures such as pointing, feeling, waving etc, is now withir the state of the art of the telephone industry.

Called a 'Feel-a-Phone' his ststem could revolutionise the conventional telecommunications voice industry by inserting expressive hand gestures into daily relephone conversions, transmirting teelings and undertones that are not conveyed in voices.

The EMMS analysis points to the sudden growth in the industrial rohot market as evidence of possible future interest in 'Feel-a-Phone'. Recent developments in sensor and transducer technology, allowing for the production of durable, precise robot 'hands'. has caused many marnufactures of industrial vobots to have backlogs stretching well into 1981. Mainy manufacturers are turning to robors to, perriom tasks that were once performed by humens. and ais a resuth of this growing market several compuar mmpanies (including Digital Equipment Compan (Bnil are belie ad to be considering entry into the robot inaket.

Extensive woik has been caried out in the field of prostheses (artuficial limbs) with sensory feedback and partial 'bionic strength, and in hazardous areas leg, the nuclear industryi the $u$ of manipulator hands is widespread.
Although thase temwighes, wath possibly be adapted in the design of a 'Feet-a Phone', they are all quite expensive ann, coupled with the other necessary equipment such as multiplesers, additional yoice channel etc, could result in the overall cost of a 'phone system being in the region of $\$ 5000$ to $\$ 10000$. However, EMMS believes that as the applicable technologies fall in price, companies will possibly develop a 'Feel-a-Phone' which could sell for around $\$ 200$.

## Zener Hegulator



When the output from an AC power supply is too high for a solidstate project, chop it down to size with a zener diode voltage regulator and keep it on the button.

To calculate R, first add the load current and $1 / 20$ of the load crirent for the zener's idling current. Then use Ohm's Law ( $R=E / I$ ) to calculate R . The resistor's power rating should be twice the calculated power.
The power rating for the zener diode is deterinined by the voltage across the diode squared, divided by diode's nominal internal resistance. You can calculate the internal resistance by working backwards from the zener's power rating. As an example: a 9 -volt, 1 -watt zener would have a nominal internal resistance of $\mathrm{R}=$ $\mathrm{E}^{2} / \mathrm{W}, 81 / 1$, or 81 ohms. It's not precisely accurate, but close enough.

"Dear, you've been at that thing for 14 hours now. Get some sleep and try it again tomorrow."


## DIDAH LANGUAGE.

There are many amateurs who maintain that Samuel Morse ought never to have written down his code on paper, but that right from the start it should have been expressed just as a series of soumds.
The ARRL stresses that you should consider the code simply as a way of conveying information and not deliberately try to translate words into dots and dashes. It says:
Leaming the code is as easy or difficult as leaming to type. Think of it as a language of sound, never as a combination of dots and dashes. It is easy to speak code equivalents using "dit" and "dah" so that A should be "didah" (the 't' is dropped in such combinations). The sound "di" should be staccato. A code character such as 5 should sound like a machine gun burst "dididididit". Take a few characters at a time. Learn them thoroughly in "didah" language before going to the nev ones. If someone who is familiar with the code can be found to send to you either by whistling or by means of a buzzer or code oscillator, enlist his cooperation. Learn the code by listening to it. Don't think about speed to start: the first requirement is to leam the characters to a point where you can recognise each of them without hesitating.

In time it is even possible to recognise whole words such as the word "the". Once you have reached this stage you are well on the way to becoming a good operator. Try to memorise as much of the code as you can, even if it is only a few letters a day, and then whenever you have a few moments, try these ont in your mind on any poster, advertisements or road signs you can see.
Rhythm is important - by receiving the letters quickly you can learn them as a rhythm. Once this rhythm is mastered you have no longer any need to think. Morse is just another language, when you hear the "tune" of the word, you at once understend it as well as you do the same word on the printed page.

It may be rondered why Morse did not work out a simple sequence such as one dot for the letter $A$ and two dots for the letter $B$ and so on. Morse was clever enonf to use the simplest and briefest symbols for the letters most used - such as one dot for $E$, two dots for $I$ and one dash for $T$, leaving the longer symbols for letters such as J, Q and Z. Unfortunately the Morse Code came into use before the $Q$ code otherwise Samuel Morse might have made some changes to avoid $C$ and $Q$ being so long winded. Of course there are probably many of you working hard to pass the twelve words a minute examination who feel that the world would be a happer place had Morse not lived at all.

STMMARY:
Learn code by sound not sight. There are no dots and dashes in code, there are only dits and dahs. Do not learn the alphabet in sequence because you would tend to run through the entire alphabet in your mind each time you hear a symbol. Code practice sessions must be short. Practice 30 minutes at a time at least once a day, 6 days a week. Rhythm is important - the code symbols for the letter $Q$ sound like "here comes the bride". As soon as you can, listen to slow morse on the air, as the CW note can be varied from a shrill tone to a low beep, those who learn only with a buzzer will need to refamiliarise themselves all over again. Good luck.
One last thought. Consider your parents teaching you to talk. They did not write the words down - you were taught by hearing the sound repeated day after day. Do try and get the alphabet on a tape and destroy those pieces of paper.

## Morse outmoded?

On both sides of the Atlantic the age-old controversy about Morse seems to be raging once again. While it is understandable that many would-be h.f. operators resent what they feel to be a waste of time in learning the code in order to use s.s.b., it is noticeable that very few amateurs who have become reasonably proficient in Morse operation seem to share the view that this is now an out moded system of communication. As I have witten elsewhere: "Newcomers who really wish to learn Morse operating are few and far between. The majority view it as a necessary evil that has to be surmounted before a Class A licence can be obtained. Yet once achieved, mastery of the code opens up a new world to the shortwave enthusiast and proves a source of endless satisfaction." Or, as Geoffrey Vore, W9QBJ, has put it recently in QST: "The greatest reason of all for c.w. use remains its complete satisfaction as an operating medium. Solid contacts with moderate to low power, simplified equip ment (and expense) and a minimum of ulcer-producing tensions make c.w. operation sheer pleasure."

But those who believe that any recognizable personal characteristics in sending the code is a deviation from perfection may be a little horrified at the attempt by John Myers, W9LA to resurrect the "sideswiper key" fashioned as ever from a short length of hacksaw blade to "give real character to one's fist". He reminds us of the regional and national "accents" that once made sideswiper keying as individually distinctive as a fingerprint: the draggy Southern drawl; the flat drawl of the mid-West; the clipped British accent; the stutter--all he claims were reflected in the sideswiper so popular (some will say too popular) in the days before the electronic keyer or the latest vogue for keyboard "keyers".

With the current inflation rate for Japanese s.s.b. transceivers now at over 20 per cent per annum, amateur radio may well be facing a period when the low costs of c.w. operation will become once more attractive.

## Quotable quote . .

"COMPUTERS spare men from making a lot of unnecessary conjectures. So do bikinis.

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POISON IN THE HAM SHACK. (QST June 1980)
Radio amateurs may be poisoning themselves with one of the most insidious chemicals produced in the last 50 years. The chemical may be present in the oil of oilfilled capacitors and transformers. It contaminates everything it touches. It can be absorbed directly through the skin into the bloodstream. It does its subtle damage over a period of months or years. Because of this, its effects are seldom detected until bng after any possible corrective or preventive treatment is possible.
The poison involved is PCB, short for polychlorinated biphenyl. This chemical is frequently added to mineral oil or glycerine to improve the dielectric properties of these organic solvents for use in capacitors and transformers. Almost all such devices built in the 1950s and 1960 s contain some of this compound. The transformer oil of ten used in rf dummy loads probably contains PCB. PCB may enter the body by ingestion, inhalation and absorption through the skin. It tends to accumulate in body fats and is poorly metabolized. In the U.S.A. population, background levels of PCB are 5 to 20 parts per million in body fluids and 500 to 5000 parts per billion in fatty tissue. In human exposure studies, body fluid levels of 50 parts per billion have been associated with skin lesions, hyperpigmentation (spots on the skin) and abnormal liver function. Children bom to mothers exposed at this level are of low birth weight, may be hyperpigmented and may develop skin lesions from PCB in their mother's milk.
Because of these dangers, Federal legislation in 1976 mandated that the manufacture and distribution of PCB in the J.S.A. cease within $2 \frac{1}{2}$ years, and that all nonenclosed use of this chemical be banned. However, since much equipment containing $P C B$ is still in use, exposures may still occur.
Kost publicity about PCB poisoning has centered around contamination of livestock feed and subsequent high levels of the compound in meat, poultry and milk. Usually contamination occurs from leaking power transfomers in the feed plants.
As long as PCB-containing oil remains sealed inside its container, be it a capacitor, transformer or dummy load, it is safe. But if any of the devices leak, a serious hazard exists and the object should be diaposed of immediately. Disposal of leaking devices and any other contaminated objects or storage containers should be done with great care to aoid spreading the contamination to soil, watersheds and ground water sources. The only safe economical method of disposal is to seal the contaminated material in a water-tight, impervious container and bury it in a landfill that is approved by health authorities, for disposal of hazardous waste. Amateurs are also cautioned to keep all oil-filled devices of this nature, even if not visibly leaking, inaccessible to children or pets. (Larry W. Strain N7DF. Utah) Thanks to ZS2RM.


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THE CONFESSIONS OF A TREASURER.

The Chaiman,
Port Elizabeth Branch, S.A.R.L.


Dear 0.M.,
31 Aventida Presidente
Brasil.
13th August, 1980.

I am so sorry that I have not responded to four various telephone messages over the last two months - I don't know, the time just seems to slip by without one realising it, and I have been pretty busy lately. Organising an overseas trip isn't done in five minutes, you know.

I gathered from my secretary that your call was not particularly urgent although she did get the impression from the fortyfive messages you left in the last three days that you were under considerable pressure. In fact "babbling" was the word she used. You really must control yourself OM - it doesn't do to allow one's job to get on top of one, you know. It only leads to ulcers and a general deterioration in health.
What you probably need is a holiday "away from it all" - from personal experience I can recommend it.

I believe you have one or two queries concerning the Branch bslance sheet and that someone has auggested to you that certain funds have not been properly accounted for. Well, OM, I don't know who has been spreading what I can only describe as malicious rumours. I want you to know that every cent which hes passed through my hands has been meticulously recorded - a full set of accounts will follow shortly. Just as soon as I can get the books back from the commercial division of the S.A.P.
It really is very pleasant here (darling, please be careful with that bottle of Brazilian Cane - it doesn't grow on trees you know) and I think it is an ideal location for a DF hunt. I would happily be the "fox" but, unfortunately, I am only passing through on my way to an undisclosed destination. Sorry about the secrecy but with so many industrial spies about ...... you do understand I'm sure.
By the way, if anyone queries why the "Cash at Bank" figure is only R5, don't worry about it - I had to convert it to "Cash on Hand" at rather short notice and didn't have the time to explain it to you. However, the OM at the "Confidential Travel Agency - We Ask No Questions" has full details and will be happy to pass them on to you.
Of course, travelling around these parts does have its snags. Credit cards, for some peculiar reason, are not popular here and having a suitcase of cash chained to one's wrist is a little awkward at times. Still one mast look on the bright side - at least good old S.A. currency is proving very acceptable to the locals.

Well I mustn't hold it too long - it's time for my daily round of the tables at the Casino. It's a bit of a drag but it is expected of one and it ia necessary to keep up appearancer.
So, 73 es gud dx.
Your treasurer.
P.S. I almost forgot the real reason for writing. Please hand in my apologies at the A.G.M. on Friday.
(Editor's Note: Since the above arrived we have received a postcard from OM Treasurer stamped 'Miss Universe Contest - Florida, saying "wish you were here". )
$R O U N D \quad A N D \quad A B O U T$.

Quite a number of members will be 'doing their thing' in various parts of the world in the next few months:
Van ZS2Y is at present on a Europen trip and we hope enjoying themselves. Peter ZS2PD will be leaving on a European Trip also, including France, Italy, Switzerland, Germany, the U. K. and a few other places I'm too jealous to mention, but Peter's trip is more in the line of business before pleasure, but we sure hope you enjoy yourgelf, Peter.
Bette ZS2LO and Cyril ZS2KX who have just moved QTH to another flat, this time in Bird Street, will be atarting their trip to Canada on 27th September. Have a wonderful time.
Congratulations are due to Peter ZR2CJ who passed his Horse test and is eagerly awaiting his $Z S$ call and is keen to be able to start working $D X$, Oscar, join in on the bulletins, - you name it - Peter has enough enthusiasm for it!
Some VHF NEWS supplied by Peter ZR2CJ.
ZS5TR Alan transmits for 10 minutes, Receives for 10 minutes between 0530 and 0630 daily SSB on 144,310 , Power 400 W with 96 element array.
Durban Beacon ZS5VEF Xmit to F.E. 24 hours a day on 144,925 , c.w.
Johannesburg Beacon ZS6TJ transmitting soon to P.E. 24hrs /day 144,915, c. W.
Port Elizabeth Beacon is being worked on presently by ZR2CJ and ZR6QU/2 and will soon be on the air 24 hours a day.
From 0630-0745 ZR6QU/2 in Grahamstown mits daily. Beacon ZR6QU beams to P.E. and O.F.S.

From 0630 - 0645 Welkom stations listening for P.E.
From 0645 - 0700 P.E. and Grahamstom contacts.
From 0700 - 0720 P.E. and East London contacts - listen for ZR2DF Alan, ZR2CX Danie, ZR2CV Doug and ZS2BD Heinz.
The stations on 2m SSB in this area are ZR2CJ, ZS2CJ, ZR2CY, ZS2PR, ZR2CN, ZR2CW, and ZR2BS.
Interest is being show in forming a Div. 2 VHF working group to work on projects e.g. RF preamps, linear amps, antennas and OSCAR, to be constructed on a group basis. Please contact ZR2CJ or ZR2CY Werner.

We would like to welcome the following new members to the Branch and wish them a long and happy association with the Branch and the League: Andre le Rowx from Knyena, Waldie Bartie from Port Elizabeth, and Atholie Macdonald ZS 20 Z from Queenstow.

For those who might be interested in contacting Bert ZS2EA on matters technical, or even matters social, his new landine number is 515438 , and this will not appear in the phonebook, so remember you saw it in QSX-PE.

FOR SALE:
RMI DB22A Tumable 2 stage pre-
selector 1 - 30 mc R20.00
Heathkit GR88 VHF tunable FM
receiver 152-174 MHz. NEH 825.
Contact Dudley ZS2AW
10 Cromwell Street, Grahamstown.

'I get a much better picture now.'

LAST VEEK VAN DER MERWE TRIED TO CHANGE A LIGHT BULB - AND NOW HE'S VAN DER WALT.

## MNCROUUAVE MOODULES LITO RTTY TO TV CONVERTER: MM 2000



## FEATURES

$\star$ Complete terminal unit/TV interface

* Latest state of the art microprocessor system
$\star$ Automatic speed sensing
* Automatic carriage return/line feed
$\star$ Includes modulator to enable direct connection to a standard UHF TV set
$\star$ Automatic letter shift facility


## SPECIFICATION

POWER REQUIREMENTS POWER SOCKET AUDIO INPUT SOCKET TV (UHF OUTPUT) SOCKET MODES OF RECEPTION

WEIGHT
OVERALL SIZE
12.5 V at 1 Amp nominal

## 5 pin DIN

Phono
R295
Phono
(i) Amateur Standard ASCII, 300 baud
(ii) Murray Coded RTTY, 45.5 baud
(iii) Murray Coded RTTY, 50 baud
(iv) Murray Coded RTTY, 75 baud

IN EACH OF THESE FOUR MODES, THE CONVERTER WILL ACCEPT FSK AND AFSK SIGNALS
1 Kg (2lb 2oz)
$187 \times 120 \times 53 \mathrm{~mm}\left(73 / 8 \times 4^{3 / 4} \times 2^{1 / 16}\right.$ inches $)$.

## DESCRIPTION

This converter, MM 2000, contains a terminal unit and a microprocessor controlled TV interface, and requires only an audio input from a short-wave receiver, and a 12 volt DC supply, to enable a live display of "Off-air" RTTY and ASCII on a domestic UHF standard TV set
The converter can accept the following modes of reception:-
(i) Amateur standard ASCII $(1.2 / 2.4 \mathrm{KHz}, 300$ baud $)$
(ii) Murray coded RTTY, 45.5 baud
(iii) Murray coded RTTY, 50 baud
(iv) Murray coded RTTY, 75 baud

IN EACH OF THESE CASES, THE CONVERTER WILL ACCEPT BOTH FSK AND ASFK SIGNALS
The converter automatically senses the speed in use, when the iront panei mounted "auto" switch is in the "on" position. LED status lights provide a visual indication of correct "centre-tuning" and the RTTY or ASCII speed being received.
The inclusion of automatic software routines eliminates the possibility of information being corrupted or over-written, by the incorporation of automatic carriage return/line feed (RTTY signals only).
After 15 different characters in figure shift have elapsed, the converter will automatically return to letter shift. This feature alleviates the problem caused by a corrupt character forcing figure shift, but allows for repetitive underline characters.
This facility may be overriden when the front-panel mounted "auto" switch is in the "off" position. This enables reception of continuous figure shift characters, e.g., Oscar prediction tables (RTTY signals only).
The converter utilises two microprocessors and 21 integrated circuits, and all circuitry is constructed on two, high quality glass-fibre printed circuit boards, coupled with edge connectors.
The unit is housed in a highly durable black diecast enclosure, and plugs for the DC power socket, audio input and TV UHF output sockets are provided.
The Murray/ASCII conversion program is contained in a user interchangeable E-PROM, facilitating re-programming should software modification be required (e.g., alternative code/speed etc.).

