

Q S X
P E

*Port Elizabeth Branch of the
South African Radio League*

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



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

ZS2PE

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

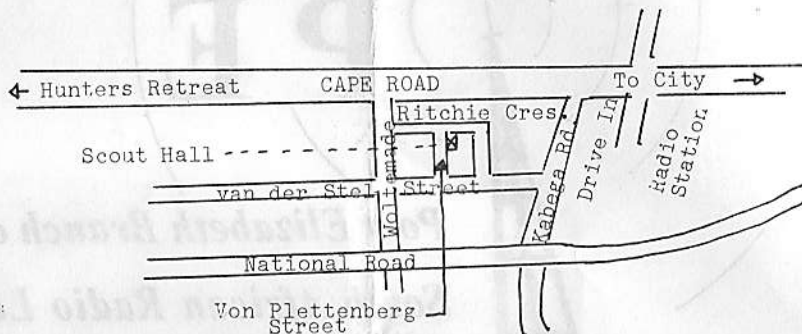
NOVEMBER 1984

Port Elizabeth Branch

›NOTICE OF MONTHLY MEETING‹

THE MONTHLY MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE WILL BE HELD AT THE SCOUT HALL, VON PLETTENBERG STREET, ON THE CORNER OF RITCHIE CRESCENT, KABEGA PARK, ON FRIDAY 16th NOVEMBER 1984, AT 8p.m.

Apologies for the slightly incorrect map printed in last month's QSX PE, although everyone used their grey matter to get there, although not all on time (apologies, again!) so shown below is a correct map.



COMMITTEE

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



bulletin roster

11th November Dick ZS2RS
18th November Marge ZS2OB
25th November Pete ZS2PJ
2nd December Trevor ZS2AE
9th December Gordon ZS2GK.

HOW'S THIS FOR COURAGE AND INGENUITY? ZS2RM has just received a QSL from Bob KT30 in Broomfield Pennsylvania USA, who says he cannot use his hands so he sends CW with his mouth. He sips on a tube to make dashes and blows to make dots. There is so much to be thankful for.

W1AW Code Practice runs on November 19th at 2100 UTC on 3,58, 7,08, 14,07, 21,08, 28,08 MHz at speeds of 35, 30, 25, 20, 15, 13 and 10 WPM. Why not give it a go?

THIS and THAT

CONGRATS

The Branch wishes to extend its heartiest congratulations to Vi Cruickshanks ZS2BR and Cyril Goodman ZS2KX who have both been awarded Life Membership of the S.A. Radio League for their services to radio, the Branch and

the League.

CONGRATULATIONS also to Langley Lookwhy ZR2FC who has passed his c.w. test and has already applied for his ZS call. Well done, Langley.

CONGRATULATIONS to Ros Gibson xyl of Basil ZS2PG, who although she was referred to in the Press as Mr. Ross Gibson, came first in an Air Rally recently. Talk about M.C.P.'s!

THANKS

Through QSX-PE, Langley ZR2FC has asked me to thanks all the following who helped him in any way with his studying for his Morse: Buck ZS2RM, Brian ZS2AB, Paul ZS2OE, Pete ZS2PJ, Colin ZS2AO, Gordon ZS2GK, Fred ZS2JS and Roy ZS2RN.

Welcome

We would like to extend a cordial welcome to Fred Strutt ZS2JS and Bruce MacMillan who have become Social members of the Branch and we wish them a long and happy association with us.



JAMBOREE OF THE AIR: The weekend of 20/21 October saw a very successful operation of the JOTA stations operated by this Branch at the Sunridge Scout Hall. The Scoutmaster Athol ZS2CM was instrumental in laying on all the facilities, such as a tent for the second station, a caravan outside selling all sorts of goodies and all the necessary help with setting up the two stations. The SSTV station was set up in the hall and at the times when SSTV was not used, it rig was used to contact other stations, including several DX Jota stations, such as W4JAM and ZD7JAM and several other stations. In all we managed to work about 70 stations of which 51 were JOTA stations, and we qualified for all the awards which were offered. These will be presented at the next JOTA, as the two which were presented to Dick ZS2RS for last year's operation. There were very many Scout and Cub visitors from all areas in town and plans are already afoot to make it bigger and better for next year. So many of the hams were there to help with putting up the five element beam and other antennas, and to help with the operation, that it is impossible to name them all, but very many, many thanks for your efforts, they were much appreciated. See you next year!

HAPPENINGS Christmas Party

The Branch Christmas Party will be taking place on Saturday 8th December at the QTH of Trevor and Julie Scarr at 14 Kitching Road, Charlo. The cost of double tickets will be R15 and singles R7.50. A disco will be provided again by Christopher and a good time is assured. HOWEVER, please let the Secretary know as soon as possible if you will be coming in order to facilitate catering arrangements.

Kiddies Xmas Tree

A Christmas tree party for the kiddies (of all ages) will be held on Sunday 2nd December at the QTH of Derek and Gaynor Betts, Butterfield Road, off the Kragga Kama Road at 3.30p.m. There will be no charge for the little kiddies, but the grownup kiddies will be asked to part with R1.50 for their tea. There will be Father Christmas and a Clown in attendance and presents will be given out. Please contact Marge 303498 if you will be coming, and how many.

MINUTES OF THE GENERAL MEETING OF THE PORT ELIZABETH BRANCH OF THE S.A.R.L.
HELD AT THE SCOUT HALL, VAN PLETTERBERG STREET, KABEGA ON FRIDAY 19th
OCTOBER 1984.

The Chairman welcomed all to the meeting despite the slightly wrong map in QSX-PE! It was a nice surprise to have with us ZS2PR, ZS2JS, ZS2WG and ZS2PD. Brian said that inspite of having a new Chairman and a new venue, it was his unpleasant task to mention the passing of Bert Ellin ZS2EA who had been a member of the Branch for several years and had been a whizz with logic, computers and other facets of electronics and had been willing to give a helping hand always. He would be greatly missed by many and the meeting stood in silence in his memory.

PRESENT: 20 members and visitors.

APOLOGIES: ZS2RB, ZS2DD, ZS2MC, ZR2ET and Colette Rundle.

MINUTES: The Minutes of the meeting held 17th August, 1984, having been published and circulated in QSX-PE were taken as read, proposed by ZS2RS and seconded by ZS2AE.

ARISING: It was mentioned that the Branch was still awaiting the donations for the power supply and cables donated by Andre ZS2BK.

FINANCIAL: Brian stated that he had just handed over to Pete ZS2PJ. The cut-off date for renewal of subs was the end of September, but a call had been made to HQ to let them know that several more were on the way. At present there were 106 members and several were still in the process of renewing. Brian said that there were small costs attached to the use of the hall but said that the tea money taken at the meeting would cover this. Many thanks to Ron ZS2MF who had been instrumental in arranging the use of the hall.

CORRES: A letter giving permission for use of special call for JOTA. Several Branch Newsletter.

GENERAL:

- (1) Congratulations were extended to Mitch ZS2DK and Pete ZS2PJ who had done well in the recent SARL Phone Contest.
- (2) Motions for the 1985 AGM were discussed and anyone who wished to submit a motion must please do so by the next meeting.
- (3) The Branch Christmas Party and the childrens party were discussed and it was decided to hold the kids party at Windomayne again and Trevor ZS2AE offered the use of his QTH for the Branch party, but he would confirm this at a later date.
- (4) The Branch Newsletter was mentioned and Brian said that up till now, Dick had carried the costs himself. The printing had amounted to approximately R36, and there were then envelopes and postage to be paid. The printer had wanted to increase the price to R90 which was out of the question for the Branch, and other ideas had been planned. He had since reconsidered and it was agreed to charge R40. While in Cape Town Brian had visited Hamrad and it had been agreed to place an advert which would bring in R20 and it was hoped that further adverts would be forthcoming so that the cost to the Branch would be totally eliminated, although at this stage, adverts were fairly hard to come by.
- (4) The Jamboree of the Air would be taking place on Saturday 20th and the branch would be setting up a station at the Sunridge Scout Hall using the call ZS2JAM. We would be setting up two stations, one in the hall using SSTV and one outside in the tent. Help would be required from members and it was planned to start at 7.30a.m. to erect the beam and 2 other antennas. Lunch would be provided for the operators there at the time. Two certificates would be presented to Dick by Tiny Packwood as Dick had been the Chairman during the operations last year.
- (5) Sundays Bulletin was to be transmitted by Trevor ZS2AE.

- (6) The P.M.G. exam was to be written on 8th November and good luck was wished to all those who would be writing.
- (7) Gordon ZS2GK proposed a vote of thanks to Dick for his work in the past and this was unanimously applauded.
- (8) Trevor ZS2TJ thanked the Branch for the card of sympathy on the death of his father-in-law and the birthday card for his xyl.
- (9) The folling members volunteered to operate at the JOTA station: ZS2TJ, ZS2PJ, ZS2RS, ZS2GK, ZS2RT, ZS2AE, ZS2DK, ZS2AB and ZS2OB. Dick said that he would bring along the video tape of the Ham in Space which should be of interest.
- (10)The suggestion was made that QSX-PE should be sent to all the libraries in the city and this would be done.

There being no further business, the meeting was closed and tea was taken and a general rag chew followed.

sgd:
B.A. Weller ZS2AB
CHAIRMAN

sgd:
M.T. Weller ZS2OB
SECRETARY

Letter to the Editor

Dear QSX Editor,

From the outset let me make it clear that this article was written under duress. You may have heard some strange stories about me. Please take no notice of them, they're all true. The first mistake I made was to believe everything I read in QSX, particularly on the evening when I decided to attend last month's branch meeting with the QSX map alongside me.....

The first part of the evening was very pleasant. It's nice to sit back and do nothing, then have coffee and chocolate cake served up. That was my second mistake and downfall. Sadly as the evening wore on, the chocolate cake began to take effect and I forgot where I was. I can vaguely recall promising, amongst other things, to switch on my 2 metre rig occasionally, and worst of all, to write a few articles for QSX. I even forgave our Secretary for asking "Did you get lost?" in her namesake British P.M. voice. If only I could forget. (Not that I would be allowed to). Fortunately, much later that evening with the help of further liquid refreshment, Peter ZS2 GW agreed to share my burden of QSX articles and 2 metre activity. Hopefully I may be able to persuade a few more.....

Here is my first article for a portable antenna system for 6m or 10m or even 2m as well as for possible usage on other unmentionable frequencies around 27Mhz.

73's in adversity.

Peter ZS2PD.

(Thanks, Peter. I'll hold you to your promises! Ed.)

HAVE YOU HEARD the one that says "A rig in the hand is worth a bird in the bush?"

There was a girl used to live down our road - we called her Radio Sal. Whatever the frequency, you were guaranteed good reception. Or the one about the Disc Jockey who went to see a Doctor of Music complaining about a slipped disc?

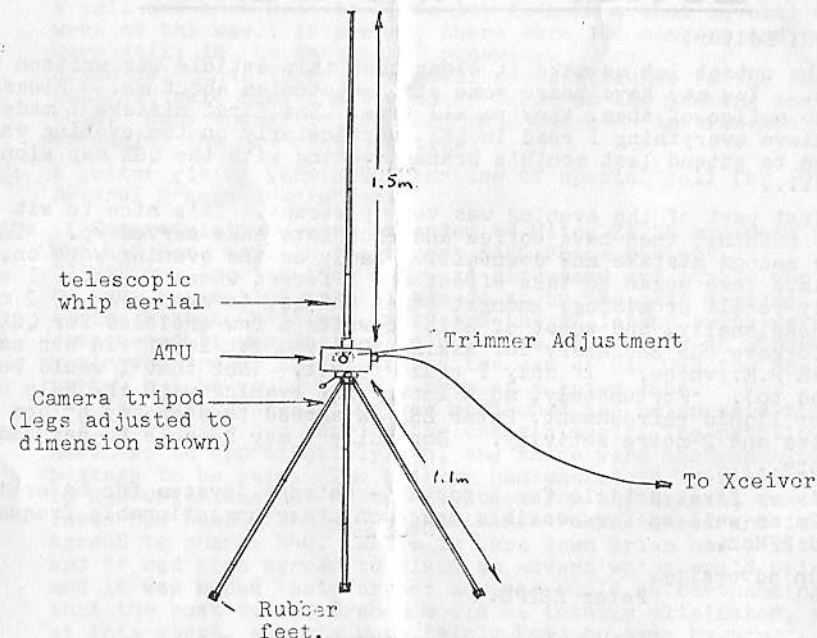
3el. Portable Antenna

by Peter Neveling ZS2PD

The antenna shown here was built some years ago to provide maximum portability on photographic 'expeditions'. It is simple to build and with some thought could form the basis for an adjustable unit covering everything from 10m through 2m. It puts out a healthy signal, far superior to a simple whip and the tripod is still usable for its intended photographic purpose.

Very little requires explanation and studying the diagrams should make it all clear. The tripod attaching boss is available from most photographic shops. The toroid used was a surplus from another project and I still have one or two available. The telescope whip is an old car type soldered to a PL 259 plug (note the earthed outside of the plug must be insulated from the whip with epoxy).

Tuning up should also present no problems; adjust the telescoping whip tripod legs and tuning capacitor in turn for minimum SWR and repeat until no further improvement is achievable (approx 1,2:1) then mark the position of all the variables for future quick setting up.

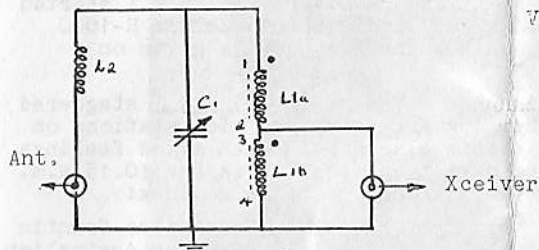


NOTES:

- (1) All dimensions and component values are for 50Mhz band, however it could easily be revised for other bands.
- (2) The ATU unit can be used separately to load into almost any other antenna.
- (3) The tripod will allow the whip to be tilted for horizontal polarization.



L1 a and b winding details.

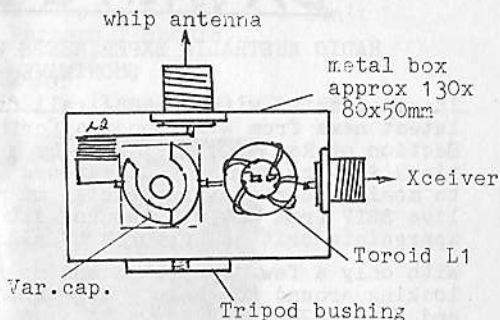


Case ground and tripod

C1 = 100pf airspaced variable

L2 = 6 turns 1mm dia. enamel wire x 12mm dia. close wound self-supporting

L1 a & b = 5 turns bifilar wound 0,3 - 0,5mm dia. enam. wire spaced around small ferrite toroid of 20mm approx dia. (Amidon T-68/2 type) not critical.



• Start of winding

FIELD DAY

On Saturday 17th November, the Branch will be taking part in the S.A.R.L. Field Day and will be setting up a station on the open stand at the back of the Scout Hall, Broadway Avenue, Sunridge Park. Helpers will be needed to erect the antennas, including a five-element beam and also to operate the station. As the contest runs from 10a.m. till midnight, as many operators as we can rustle up will be welcomed, and especially on the nights shifts, we need a minimum of two there for safety's sake. All bands from 80 to 10 meters will be used. Last year, we were treated to the mother and father of all thunderstorms so we are holding thumbs for this year, so that the beam can stay horizontally polarized. Hope to see YOU there.

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DX with a Difference

RADIO AUSTRALIA EXPERIMENTS WITH SSTV ON THE INTERNATIONAL SHORTWAVE BANDS.

It all started with a phone call from Buck ZS2RM. He had copied the latest news from W1AW about a forthcoming broadcast from the Overseas Section of Radio Australia to be made on 28th October. In the bulletin R.A. were asking all amateurs worldwide with slow scan equipment to monitor certain frequencies on that day. They would be transmitting live SSTV from their Melbourne studio at specific times and would appreciate critical reports of signal and picture quality, etc.

With only a few days to go and no shortwave receiver available I started looking around for help. Hugh Robb ZS2RB kindly loaned me his R-1000 and Neil ZS2MG said he would also monitor the frequencies given on another (borrowed) R-1000.

The first transmission time was given at 4.15a.m.(local) and I staggered into the shack and switched on. Nothing but curry and rice stations on the frequencies given and QRM and static elsewhere! With mixed feelings I crawled back to bed at 4.30. The next transmission was for 10.15 a.m. (local) and Neil and I once again tuned around. Still no luck!

There followed much wild swinging around of the tuning knob plus frantic switching from one antenna to the other. Suddenly I heard an Australian accented voice discussing something to do with Ham Radio. A call to Neil on 2m verified that he too was copying the same voice but slightly stronger on 11.720MHz.

The announcer was actually in direct contact with some VK hams presently on a DX-pedition on Mellish Reef via a ham rig in the studio. We were listening to a rebroadcast of both sides of the contact and it was extremely interesting. After a while, the announcer said that he was going to transmit the first of 3 pictures via SSTV. This was of the station logo and came through very well. Unfortunately I was caught on the wrong foot and just missed copying it on tape.

The second picture was a live shot of the announcer and this came through fair to poor as the signal was going down fast from the original Q5 to about Q3 with strong fading (QSB).

I did, however, manage to record it and as can be seen from the photograph it suffered from bursts of noise as well.

The photograph does not do justice, however, as the printing process used for QSX does not allow for good reproduction.

The last picture was if a Kookaburra bird but this resembled nothing more than some moth-eaten parrot as by now conditions were very bad with speech being unreadable.

I was very pleased with the results though as it was the first time in my life that I had heard any Australia broadcast station other than amateurs. It was also the first time that I had copied SSTV from a commercial source. (In AM mode, as well).

A report and photograph were sent off to Melbourne with a request for a certificate to commemorate this experiment as offered to the first 1000 replies.

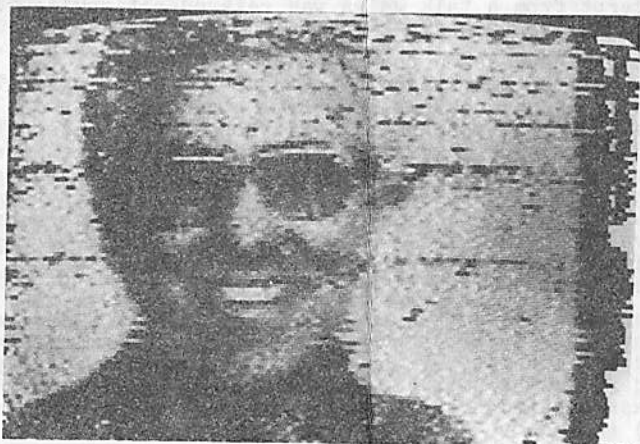
All in all a very interesting experiment. Perhaps we should approach our own R.S.A. to do the same on special occasions. The mind boggles.

My thanks to Hugh Robb for the loan of his receiver and to his son Kevin for so ably taking and developing the photo off the monitor screen.

Also to Buck for taking the trouble of tipping me off as I don't usually monitor the W1AW bulletins. Perhaps I should.

Colin ZS2AO.

(Thanks Colin. ED.)



Received on 28.10.84 Frequency 11,720 mHz from Radio Australia
8 Second Slow Scan Television.

CQ DX

MACAO: K0CS is operating from XX9A. A VS6 ham from Hongkong expects to be going to Macao in two weeks and will be concentrating on 80 and 40 meters.

CAYMAN ISLAND: ZF2HP is active.

BERMUDA/VP9: W3MA/VP9 will be active on all bands.

SOUTH COOK ISLANDS: A group of Dutch amateurs signing ZK1XC and ZK1XD has been worked on 80 and 40 meters. QSL ZK1XD via PA3DFM.

MONTSERRAT: Nine English operators will operate VP2MW on 10 through 160 meters.

SOUTH SANDWICH: Several rumours have been heard about operations this month or next from South Sandwich in the Atlantic Ocean. Watch for either 4K1I or VP8ASR. No confirmation has been received about any of these operations.

SAO TOME: Our latest rumour says that PS7ABT/S9 was in Sao Tome but was asked to QRT by local authorities. No official word.

PAPUA NEW GUINEA: Jim P29JS continues to be active three or four days per week on 40 metres from 11 to 1300Z. After conditions fade Jim tries 80 or 160 meters. He plans to be active for one more year.

TAIWAN: Another expedition to Taiwan is planned for late November, this time by a group from Washington DC Organised by Barry Goldwater K7UGA. The group hopes for an 80 meter operating permit. Operation will probably be as BVØBG and will include the CQ WW CW contest.

DX Bulletins from ARRL Headquarters and information supplied to QSX-PE by Buck ZS2RM for which many thanks.

6 Metres: Past, Present and Future

By Mike Bosch ZS2FM.

(Here is an excerpt from a talk which was relayed nationwide via the link-up of two metre repeaters).

Many radio amateurs have asked the question; "What is all this fuss about six metres, why not concentrate on some other VHF band instead?" Well the six metre band is unique when seen from a scientific point of view, because this is where the ionospheric and tropospheric modes of propagation cross over and thus give six metres the best of both worlds. In short, all forms of propagation are present on this band at one time or another. Furthermore, a series of tests that I have conducted on two metres with ZS6LW, ZS6ALE and ZS6AVL with their moonbounce equipment and high power, have shown that the two metre results cannot be compared with the superior six metre signals received over the same distance and that with simpler equipment and lower ERP.

The six metre band covers a frequency range of 50-54 MHz and was allocated to radio amateurs shortly after World War II. Almost immediately, long distance records were set up by the two Rhieder brothers of Cape Town, namely ZS1P and ZS1T, who both QSO-ed stations in Holland and England. This DX feat was repeated every 11 years or so when the maximum usable frequency (MUF) rose above 50 MHz during the peak of the solar cycle. Later the European amateurs lost the use of the six metre band when it became part of the European Television Band 1. Other countries such as the USA and South Africa continued their DX work over the maximum sunspot period when the F_2 propagation on six metres invariably eclipsed 10 metres.

Several other forms of propagation, other than F_2 , can also appear during the high sunspot period, e.g. Sporadic E, Backscatter, T.E.P. as well as Aurora. But many amateurs, especially in the USA have discovered that long distance signals are still possible on six metres during the low sunspot period covering thousands of kilometres via Tropospheric Scatter, Temperature Inversion or Tropo, Meteor Showers and isolated patches of Sporadic E.

Until recently, six metre activity in South Africa mainly revolved around F_2 propagation during the peak of the sunspot cycle and thereafter the band was deserted again until the peak period of the next cycle, and so forth. ZS6LN was the first ZS station to work Hawaii via F_2 and thus established a long distance record of approximately 20 000 kilometres, which no other ZS ham further south or west of Pietersburg could ever break. The six metre Sporadic E record was set up by the late ZS2CY of Port Elizabeth when he worked ZS3G of Tsumeb over the distance of 1770 kilometres. During the years of the quiet sun, i.e. low sunspot period, a lone 50 MHz beacon ZS6VHF operated by ZS6ASO, kept the six metre light burning during the lean years and this beacon was picked up intermittently throughout the country via meteor scatter. Here in Port Elizabeth, ZS2DD heard it on many occasions. During the peak of the previous solar cycle 21, many more beacons appeared on the six metre scene. They were ZS6LN, ZS6DN, ZS6PW, ZS5VHF, ZS2STB and were later followed by ZS1SIX, ZS6AXO and ZS6SIX. These beacon signals proved beyond any doubt that many band openings were occurring and often at unexpected times. Yet this did not stimulate interest in this band, since that was a pleasure still to come.

Several years ago the military released the Plessey C-42 VHF transceivers to ZS amateurs. These units were tried out by many throughout the country but were eventually abandoned by most as being too bulky and only suitable for short range communication.

So it came to pass that a few local hams presented me with a C-42. I was astonished to see the magnificent construction of this ugly duckling - the last of the miniature tube era! Little did I realise at the time that this same C-42 would become instrumental in sparking of a renewed interest in the six metre band and that during the current "quiet years of the sun".

An AC power supply was hurriedly constructed, a ground plane antenna erected and the C-42 was put on the air. So I joined a small band of enthusiasts on 52,6 MHz who at the time consisted of ZS2BE, ZS2KU, ZS2VM and ZS2U.

It did not take long to realise the shortcomings of the standard C-42. So a number of basic improvements were made, such as replacing the microphone, constructing a solid state pre-amplifier and adding an external 100 watt class C power amplifier with a six element beam antenna.

In East London, ZS2FF modified his C-42 but did not have a power amplifier at the time. So now we had an FM link between East London and Port Elizabeth, which taught us a great deal about propagation along this 250 KM. VHF path.

Around this time a few more hams joined our group. i.e. ZR2EC, ZS2OD, ZS2WM as well as ZS2BZ and ZS2NR in Kingwilliamstown and ZS2OW of Komgha. We alerted ZS5BM and his six metre group in Durban who in turn were encouraging VHF activity in Natal. ZR5HZ of Stanger and ZS5AAK in Durban came on the scene with Icom 551D's and five element yagis while ZR5HZ provided us with some very interesting tests. Several Division 6 stations became interested namely ZS6AXO, ZS6BZT, ZS6OB, ZS6HS, ZS6XL etc. With all this extra activity on the band, we soon discovered that six metre signals could break through unexpectedly any time of the day and any day of the week, such as ZR5HZ of Stanger some 700 kilometres away.

More and more interest developed in six metres and currently we have about fifty hams on frequency in the Eastern Cape, but most of them are on FM only. Everything was not always plain sailing as we did experience some opposition to our six metre project. At first many hams could not understand why we wanted to play around with Frequency Modulation or with the old obsolete C-42.

About ten of us were also equipped for all mode operation on six metres and with the assistance of our Natal friends we made a startling discovery. We found that during weak signal conditions SSB and FM would perform about the same and in some cases FM would even outperform SSB i.e. watt for watt on standard commercial VHF equipment. At first this was very difficult to believe, but later experiments on both two and six metres have corroborated this fact. In theory SSB, with its narrower bandwidth, should be better than FM during weak signal reception. But the ever present interference and also the enhanced limiting sensitivity of modern FM receivers have greatly reduced this gap between SSB and FM. Once the signal is fully quieting the receiver, then FM is superior to any other form of modulation, especially in audio quality.

Since the earth passes regularly through different meteor showers, very interesting long distance contacts can be made throughout the year with superb signals which may last from one to two minutes at a time. RTTY is a very suitable mode of transmission for meteor scatter work. For instance, strong digital type signals, probably ASCII, which emanated from ZS6DN of Irene and beamed to Durban during high meteor activity, have been picked up in Port Elizabeth. Interesting phone QSO's have also been made between the following 6 metre stations: ZS5QM of Pietermaritzburg QSP-ed ZS2OD and ZS2FM of Port Elizabeth. A Kingwilliamstown station ZS2NR worked ZS6OB of Pretoria. ZS2OD established contact with ZR5HZ in Stanger and ZS6AXO of Roodepoort contacted ZS2FM in Port Elizabeth. The latter contact is around 900 kilometres and is currently our best distance

covered on meteor scatter. Some of the strongest signals ever heard on this band emanated from ZS6LW and ZS6BTL. In 1982 ZS6AXO and I were conducting tests with sporadic meteors and during this occasion we discovered six metre tropospheric scatter in South Africa. This form of propagation produces a weak signal which is continuously present above the noise level. Tests conducted with ZS6LN of Pietersburg some 1200 kilometres from Port Elizabeth, have indicated that these signals were still present and probably extended a great deal further. Similar signals from ZS5CU and ZS5QM in Pietermaritzburg were also audible in Port Elizabeth.

You may wonder why this type of propagation was not discovered earlier in this country. Van ZS2Y of Port Elizabeth, who was one time VHF editor of Radio ZS, puts it in a nutshell. He says that the receivers in use during the 1950's and 1960's were too insensitive to detect this type of signal.

During a recent VHF contest ZS6BZT of Kempton Park established contact with me via tropospheric scatter over a distance of 917 kilometres. Tropospheric scatter propagation could be exploited to give us 24 hour coverage on six metres throughout South Africa.

In the meantime, we continued with modifications to the C-42 and ZS20D and I succeeded in stabilising the C-42 and converted it into an all-mode receiver i.e. FM, AM, CW and SSB. Due to special requests by hams we have looked into the feasibility of turning the C-42 into a CW transmitter. By adding an external preselector to the C-42 we have increased its sensitivity on FM to such an extent that it starts limiting with only 0,07 microvolts at the antenna terminals. Full details of our sophisticated Mark III C-42 will be published in a future issue of Radio ZS.

As time passed, more interesting long distance contacts took place. ZS3AK of Windhoek QSO-ed ZS6AXO, ZS6HS and ZS6OB. Three days later he hooked up with ZS5QM on SSB to establish a new six metre tropo record of 1580 kilometres. But the greatest surprise came when ZS5BN of Camperdown, with only three watts FM and a five element yagi, worked ZS1ABD in Simonstown and afterwards the latter also contacted ZS5AV of Illovo who was running only 10 watts FM.

Finally, here are a few pointers of how you can improve your six metre equipment for optimum long distance performance. (1) Increase your output power to at least 80-100 watts with the aid of a linear or in the case of FM and CW use a class C amplifier. (2) Go for a nine element yagi or stack two five or six element yagis and erect these arrays as high as legally possible. (3) Add a low noise preselector to the front end of your commercial receiver, or try a masthead amplifier to improve weak signal reception. The Icom 551-D made provision for such a pre-selector and its performance can be greatly enhanced as confirmed by ZS20D.

So see you on 51,4 MHZ FM or 50,1 MHZ SSB or CW!

(Many thanks Mike. Ed.)

for sale

Icom 215 FM portable 2m rig. All repeater frequencies and 3 simplex channels. Please contact Wolfie ZS2WG phone 041-301510 or contact him at 5 Kragga Kama Road, Sunridge Park, Port Elizabeth, 60 1.

1 brand new, still in the box Kenwood MC 50 Desk Microphone. Contact Brian ZS2AB at 25 Olive Schreiner Ave, van der Stel, P.E. or Phone 303498.

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