

TR 1 SACE
ZS2AE

Q S X P E

ZS2PE

FREQUENCIES:

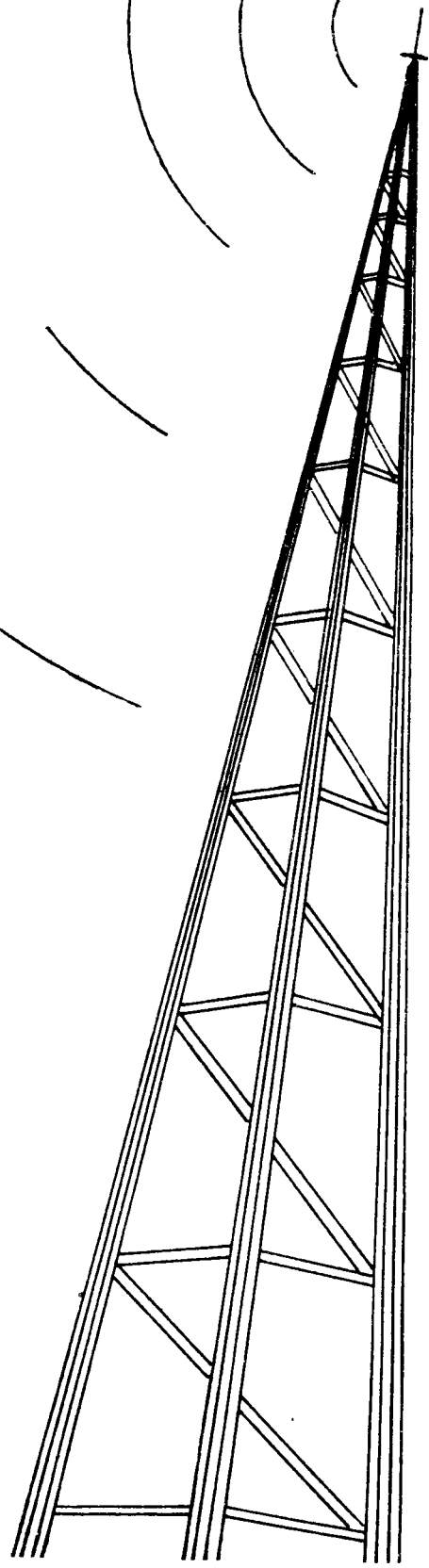
Bulletin	3640 Khz 7102 Khz
National Call	145,5 Mhz
P.E. Repeater	145,05/65
Grahamstown	145,15/75
Lady's Slipper	145,10/70



*Port Elizabeth Branch of the
South African Radio League*

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

18 NOV 1980



PORT ELIZABETH BRANCH.

THE NEXT MEETING OF THE PORT ELIZABETH BRANCH WILL TAKE PLACE AT THE Y.M.C.A. HAVELOCK STREET, PORT ELIZABETH ON FRIDAY 21st NOVEMBER, 1980. AFTER THE BUSINESS OF THE MEETING, THE FILM "THE WORLD OF AMATEUR RADIO" WILL BE SHOWN BRING YOUR FRIENDS AND ANYONE WHO MAY BE INTERESTED IN LEARNING ABOUT AMATEUR RADIO.

The Bulletin roster is as follows:

9th November	Brian ZS2AB	7th December	Peter ZS2PS
16th November	Frank ZS2CY	14th December	Trevor ZS2TJ
23rd November	Selwyn ZS2SS	21st December	Dick ZS2RS
30th November	Marge ZS2OB	28th December	Brian ZS2AB

AROUND AND ABOUT.

As usual we start with congratulations - this time to Trevor Elliott who, after much gnashing of teeth, received his call and can now be heard as ZS2TJ. Hope to hear you soon on HF, Trevor.

S9-plus congratulations are also due to Peter ZS2PS and Irene who thought they were surprising everyone by getting married - nice work, you two, but with the stars in your eyes, we could see it coming. All the very best for the future.

Back from his business-cum-pleasure trip to various countries in Europe is Peter ZS2PD. According to Peter, although the women in Italy are really very beautiful, the same can't be said for parts of the country. Being caught in the middle of civil riots wasn't too pleasant and Peter made sure he wasn't going to be involved. Foreigners are not too welcome there and a ZS one would have been even less so. Peter travelled from France to Italy by train and woke to find a Customs officer poking him in the ribs with a machine pistol. However, things weren't all grim and Switzerland was one of the loveliest places he had ever visited. Clean and with beautiful scenery, but very expensive. For the last few days of his trip he stayed outside London at a place called Mount Pleasant, which was! And the weather was good all the time he was there. Unfortunately Peter caught a bug which decided to settle in his chest, and he had to spend some time in bed on his return to ZS. Hope you are better now Peter, and it was good to see you at the Branch meeting.

Got a postcard from Rio de Janeiro where Cyril ZS2KX and Bette ZS2LO were evidently enjoying themselves. According to them the steaks and coffee were 599 plus. From there they were going to New York before taking a bus trip on the east coast of Canada. Bet they have lots to tell us, now they are back.

After many hassles from a neighbour, Colin ZS2AO is back in business on the air. After exhaustive tests by the G.P.O. Colin's equipment was found to be A 1. Good show Colin.

Brian ZS2TY seems to be out and about again after being in the White House for an operation. Hope all is well now Brian and that the thesis is finished.

CHRISTMAS PARTY.

This year we are having something completely different - a Travelling Supper. Those attending will leave their cars at a central venue and be taken by bus from house to house where the four courses will be served. Wine will be also served with the last three. The cost will be R10 per couple or R5 single. If you wish to attend, please let Dick 541461 or Marge 302334 know. The date will be Saturday December 13th. Further details will be made known in due course.

FOR SALE: SX-28 receivers, recondition and in good order. R100 each/ Also T.T.L. I.c.'s - varied and numerous to mention. Contact Fred Hurter for details at phone No. 24585.

New League Film Promotes Amateur Radio

W6AQ's masterpiece — "The World of Amateur Radio."
How was it made?

By Bill Pasternak,* WA6ITF

"The World of Amateur Radio" was not meant to be an entirely new film. The original thrust of the project was to update an earlier Dave Bell/ARRL film, "Ham's Wide World" which had been made back in the '60s. An awful lot of technology had changed since that time, of course. For instance, fm repeater operation, now a day-to-day part of virtually every amateur lifestyle, was just getting started in 1968. Neglected in "HWW" fm repeaters would obviously have to be included in the new version and old style am-vhf operation deleted.

Similarly, the AMSAT/OSCAR program had come a long way in the 10 years since "HWW" was made. Nor could we overlook the modernised methods of amateur instruction. One prime example of such advanced learning techniques found its roots in Los Angeles under the name "Murphy's Code and Theory Class". These were not the only stories to be told. What about the value of Amateur Radio to the handicapped; its use as a therapeutic tool in the rehabilitation of those requiring prolonged confinement in a hospital? Perhaps you have read about April Moell WA6OPS and her 'rehab-radio' programme (September 1979 QST). In "The World of Amateur Radio, you will see exactly what April does and why she had been so successful.

On an international level, how can the value of Amateur Radio be better depicted than by telling the story of its emergence in Jordan and showing the profound effect that Amateur Radio has had on the development of this Middle Eastern nation? We were fortunate to have been granted permission to film in Jordan and to have the entire sequence narrated by His Majesty King Hussein JYL. Almost on the spur of the moment Dave Bell and cameraman Wayne Threm found themselves aboard an ALIA (Royal Jordanian Airlines) jet headed some 10 000 miles away to capture this story on film. His Majesty's message about Amateur Radio being a tool of understanding between all peoples of the world is well worth listening to. One thing is certain: what started as a remake became a really new film!

In the span of 28 minutes, "The World of Amateur Radio" touches on just about every aspect of today's Amateur Radio society, and then pauses to glimpse into what the future may hold. This fast-paced trip around the nation and the world, as seen from the stand-point of the radio amateur, has something for everyone, amateur and non-amateur alike.

"The World of Amateur Radio" does little good sitting in a videocassette collection or in the library. We freely admit it to be a promotional film— one designed to educate and inform the world as to who amateurs are and the type of services they can render. The film has already taken a special-category prize at the International Telecommunication Union Film festival in Geneva, and it is entered in other competitions. What is even more important, however, is showing it to the general public. How, you ask?

WELL, AS A START, THIS FILM WILL BE SHOWN AT THE MEETING OF THE PORT ELIZABETH BRANCH TO BE HELD ON FRIDAY 21st NOVEMBER, 1980, AT THE Y.M.C.A., HAVELOCK STREET PORT ELIZABETH. BRING ALONG YOUR FAMILY AND FRIENDS, AND IF YOU HAVE ANY C.B. BUDDIES WHO ARE TIRED OF C.B. OR JUST ANYONE ELSE WHO YOU THINK MAY BE INTERESTED BRING THEM ALONG TOO. SEE YOU THERE.

MINUTES OF THE GENERAL MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE HELD AT THE Y.M.C.A., HAVELOCK STREET, PORT ELIZABETH ON FRIDAY 17th OCTOBER, 1980.

PRESENT: 18 members and visitors.

APOLOGIES: ZS2SS, ZS2TJ, ZR2CF.

The Chairman welcomed all to the meeting, especially the ladies, ZS2JR, ZS2PD and Stuart ZR2AS.

MINUTES: The Minutes of the meeting held 15th August, 1980, having been published in QSX-PE and circulated, were taken as read, proposed by Brian ZS2AB and seconded by Peter ZS2PS.

ARISING: The Chairman said that the Secretary had written to Headquarters, as requested, with regard to the 40 metre transmission of the RTTY bulletin and this was now being copied in the Eastern Cape. The question of the inclusion of 6 metres in the V.H.F. contest had been passed to the Contest Committee. The video tape of the Ham films had arrived and would be shown soon.

CORRES: Letter from Peter Strauss ZR6MI re Video tape.
Letter from Dick Stratford ZS1RO re RTTY and contests.

ARISING: It was stated that there was also a relay of the satellite bulletin on 7080 KHz.

FINANCE: -

GENERAL: The Chairman read the letter from ZR6MI and said that it would be necessary to borrow a Phillips V.C.R. and that the films would be shown at the November meeting, which would give us plenty of time to advertise this and he hoped there would be a good turnout.

This weekend was the J.O.T.A. and the Port Elizabeth Branch would be running two stations ZS2JAM at Summerstrand and ZS2SCT in Newton Park. Anyone who was available to lend a hand with the erection of antennas and operation of the stations would be most welcome. Non-operating visitors would also be welcome.

Trevor ZR2CT had now acquired his new call ZS2TJ and was congratulated. The Chairman said, that as had been mentioned on the air, the Branch had undertaken to do the modifications on approximately 100 T.V. games which were useless in ZS, being on the wrong frequency. After much negotiation, a price of R5 per unit had been decided, after the project had been shelved for 6 weeks as being too expensive. The Chairman said that he could not undertake this at his saltmine, and this would then be handled as a Branch project, which would result in almost R500 towards Branch funds. It had been tentatively suggested that this be used to improve the Lady's Slipper repeater or help with the setting up of the Cockscomb repeater. The money would be put to good use. It was not considered a good idea to leave this over for four or five weeks, and so it would be tackled the following weekend. 14 or 15 members offered their support, and the Secretary would contact them by phone to confirm times etc.

The Chairman said that at the last Committee meeting, it had been decided to try something completely different for the Christmas party and a Travelling supper had been suggested. The Secretary was asked to explain how this worked. The price would be R10 per couple or R5 single. Members would be transported from venue to venue by bus, and each of the four courses would be served at different homes. 9 members signified their support and the Chairman said he hoped it would be successful.

The Lady's Slipper was back on the air, after the mains switch had tripped and the battery had gone flat. Brian ZS2AB and Dick ZS2RS had replaced the old battery.

Frank ZS2CY enquired whether a call book for Tiny Stephenson had been obtained and the Secretary explained that Lionel ZS2DD had donated one which had been sent to her.

There being no further business, the meeting was closed and tea was taken. After tea, a very interesting and well-prepared talk, with diagrams and photographs on the subject of the Computer Controlled Traffic System in Port Elizabeth, was given by James ZS2L. The Chairman thanked him on behalf of those present.

sgd:
R.W. Schönborn ZS2RS
Chairman

sgd:
M.T. Colson ZS2OB
Secretary.

TO REMOVE IC'S FROM SURPLUS P.C. BOARDS.

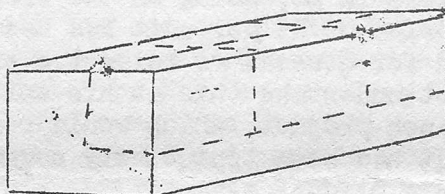
1. Use appropriate sized bulldog clip as heat sink for I.C.
2. Remove as much solder from pins as possible. A sucker helps but if you haven't got one, take a length of surplus braiding from old coax or screened lead saturated with solder flux. This will absorb solder when applied with the iron. As the braiding becomes tinned, cut off and discard, or even just heating pins and wiping with a piece of sponge will help.
3. With a knife or small screw driver straighten any bent pins.
- *4. With a blade or similar instrument (sharpened screw driver) cut all copper printed circuit leading away from pins.
- *5. Previous heating and maybe a little more will make copper pc around pins loose and using a sharp blade, etc. will lift copper around pin. Your IC should fall off the p.c. board.

N.B. Steps *4 and *5 should only be used for circuit boards that are not to be used again.

Make sure bulldog clip remains in place throughout the operation. If necessary a piece of wire run over the clip and soldered on any appropriate spot will prevent falling off.

Holding your board during this operation can be difficult at times. Here's an easily made aid:

Take a block of wood plus/minus 20 x 12 x 10c.m.



Dotted lines show saw cuts into which an edge of your pc board can be held while constructing or destructing circuits.

Acknowledgements to Bernie ZS1BW and "Ragchew"

I've got a new transceiver - it's synthesised, of course.
It sends all modes and TTY and generates good Morse.
It's got a micro in it, which calls and logs them too.
It prints the QSL cards - there's nothing left to do.
And so I'll lock the shack up and let it have a ball
While I'll go weed the garden - it won't need me at all. VK3AOH.

Thanks to ZELAN.

I know the code from A to Z, ask me any digit.
And I'll reply straight from my head Didah to Dahdahdidit.
Each night with newly-gather will, before the set I sit
My pen is poised the page to fill, but dahs sound just like dits.
The only way from ZR land to lands across the ocean
Is to bend your head to HF bands till you've slowed that Dahdit motion. G8JHZ.

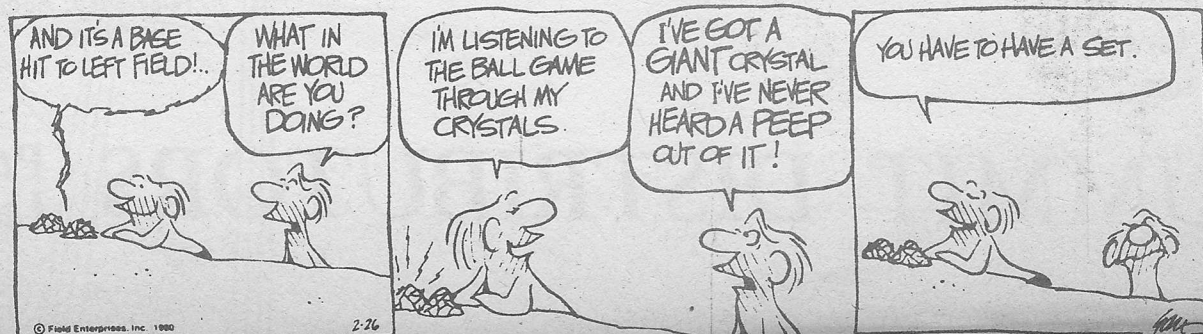
An American spacecraft, VOYAGER 1, has been touring our galaxy since launching about three years ago. It has visited Mars and Jupiter to date, flying past the planets at a relatively close distance and transmitting back to Earth colour pictures of the surface details and cloud formations around the planets.

The craft is now approaching Saturn to complete its mission before carrying on into outer space and....what? This mission has been of great interest to radio amateurs around the world as slow-scan television pictures have been transmitted from Mission Control on the HF bands for long periods of time before the craft has arrived at the various planets, and for a short while after the time of closest approach. This has enabled hams with SSTV capability to see what has been taking place up there very soon after the actual pictures have been taken by the cameras on the craft. This may be the only way in which a lot of people would ever get to see the pictures at all.

The Amateur Radio Club at the Jet Propulsion Laboratories in Pasadena, California started transmitting SSTV pictures on the 1st November and this will continue until the 16th, by which time the craft will have passed Saturn and be on its way to oblivion. The J.P.L.A.R.C. are issuing a very pretty commemorative QSL card for contacts made during this period with their special-events station W6VIO. VIO standing for Voyager in Outer space. The station is manned by a total of 28 operators who are giving up their lunchtimes and evenings to man the station.

I was able to contact the station at 2231 SAST on the 2nd of November, and talked with Dick Piety K6SVP. He very kindly sent me a selection of the pictures which were available at the time, and these were probably the first to be received in Africa. The next morning, at 0517, I was present on 20 metres looking for W6VIO all ready to record the pictures this time. I was greeted by a tremendous pileup of American stations working them, and tried for some time to make myself heard. After a while George W4JZA called them and said that I was on the frequency. They immediately ceased operations with the locals and devoted the next full hour to sending pictures and data to me so that I could record it for future use. I was tremendously impressed by the fact that during that hour, not a single one of the American stations even so much as tried to call them. The band was very quiet and QRM free, and good results were obtained. Their S9+20 signal helped of course. At the time of this writing (Sunday) several more QSO's have resulted in more pictures of the planet as the craft approaches, and there will be several more before the mission ends. I will show the pictures at the next Branch meeting to any who are interested.

Some of the figures associated with the mission are rather impressive. When the first pictures were received here, the craft was about 9.5 million miles from Saturn, making it some 921 million miles from Earth. The radio signals to and from the craft take 85 minutes to travel each way. When the craft passes the planet it will do so at a distance of about 45000 miles, and will also pass Titan, the largest moon at a distance of about 1200 miles. The pictures are transmitted to Earth on 2300 and 7000 MHz, using one common 12 foot parabolic dish antenna with a gain at 7GHz of 55 dB. Transmitter output power is 20 watts RF, resulting in an ERP of about $5\frac{1}{4}$ million watts! Path loss from the craft is about -130 dBW. The signals are received at three places on Earth, namely Goldstone (USA), Spain and Australia. The receiving antennas are dishes of 64 metres diameter having a gain of 65 dB. Receiving preamplifiers are liquid helium cooled to reduce noise. The data from the craft is in digital form coming at the rate of 100 to 120000 bits per second. Some technology, what. I should like to record my thanks to all the operators who so patiently ensured that I received good pictures.





**2 METER
FM
TRANSCEIVER**

TR-7800



SPECIFICATIONS

[GENERAL]

Semiconductors: MPU 1, ICs 18, transistors 58, FETs 9, diodes 76

Frequency range: 144.000 to 145.995 MHz

Frequency synthesizer: Digital control, phase locked VCO

Mode: FM (F3)

Antenna impedance: 50 Ω

Power requirement: 13.8 V DC \pm 15%

Grounding: Negative

Operating temperature: -20°C to +50°C

Current drain: 0.4 A in receive mode with no input signal
6 A in HI transmit mode (Approx.)
2.5 A in LOW transmit mode (Approx.)
Less than 2.5 mA for memory backup (from power supply)
Less than 3 mA for memory backup (from built-in battery)

Dimensions: 175 mm (6-7/8") wide
64 mm (2-1/2") high
206 mm (8-1/16") deep (projections not included)

Weight: 2.1 kg (4.63 lbs) approx.

[TRANSMITTER SECTION]

RF output power (at 13.8 V DC, 50 Ω load): HI 25 W min
LOW 5 W approx. (Adjustable)

Modulation: Variable reactance direct shift

Frequency tolerance: Less than $\pm 20 \times 10^{-4}$

Spurious radiation: HI Less than -60 dB
LOW Less than -53 dB

Maximum frequency deviation: ± 5 kHz

Microphone: Dynamic microphone with PTT switch, 500 Ω

[RECEIVER SECTION]

Circuitry: Double conversion superheterodyne

Intermediate frequency: 1st IF.....10.695MHz
2nd IF.....455 kHz

Receiver sensitivity: FM Better than 0.5 μ V for 30dB S/N
Better than 0.2 μ V for 12dB SINAD

Receiver selectivity: FM More than 12 kHz (-6 dB)
Less than 24 kHz (-60 dB)

Spurious response: Better than 60 dB

Squelch sensitivity: 0.16 μ V (threshold)

Auto scan stop level: Less than 0.2 μ V (threshold)

Audio output: More than 2.0 W across 8 Ω load (10% dist.)

Call: Dick ZS2RS

25/27 Reed Street

PORT ELIZABETH

P.O. Box 500

6000

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541461/2

Telegraphic Address:

"SUMMIT"

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