

# 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.**

14 JUL 1980

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THE NEXT MEETING OF THE PORT ELIZABETH BRANCH WILL TAKE PLACE AT 8P.M. ON FRIDAY 18th JULY, 1980, AT THE Y.M.C.A., HAVELOCK STREET, PORT ELIZABETH.

THERE WILL BE A TALK AND SLIDE SHOW ON OSCAR BY  
PETER ZR2CJ.

All are welcome.

Bring your friends.

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### THIS AND THAT.

Well, the Hobbies Fair is now a thing of the past and seems to have been quite a success, both from the promotion of Amateur Radio to the public and the getting together of members from both Branches. Several members from both branches gathered at the Feather Market Hall on the Sunday to set up the stall with the antennas and H.F. and V.H.F. equipment. The H.F. rig was a Kenwood 180 S and the antenna was an all-band vertical clamped to the railing outside the Hall, not really in an ideal location, being quite a lot lower than the surrounding buildings, but we managed to work about 15 or 16 dx countries and about 80 contacts in all. The three letter callsign ZS2HFE was quite an attraction, but was also not quite believed by a few ZS stations who thought we were pirates! The two meter antenna was suspended from the ceiling inside the Hall and Town Repeater was the frequency most used. Quite a few amusing remarks were passed by various members of the public, including "0000 look, C.B.!", a little guy of about 9 years of age tapped Selqyn ZS2SS on the shoulder while he was transmitting in C.W. and said "Tell me, do you do this for fun?" and a young girl came up to Marge ZS2OB and said "Do you really know what you are talking about all this ZS etc?" Many members from both Branches operated the rigs, acted as P.R.O.s and just visited and a visitor from out-of-town was WilleM ZS1ON. Also down from Grahamstown was James Crichton. A big thank-you to all those who helped in anyway to make it a success and we look forward to a bigger and brighter Hobbies Fair next time round.

June ZS2JJ and Mike ZS2MJ took advantage of the school holidays and spent some time at the Spinning Reel in Port Alfred and they were heard operating with a very good signal with their new 120S. Alongside them in the next cottage were Neil ZS2AI and Jennifer and family, who had a slight mishap with their car on an icy patch of road on the way. They were a little shaken-up but not injured and the car was put to rights before they continued on their way. Hope you all enjoyed yourselves.

James Crichton, who was seen at the Hobbies Fair, has just returned from a Post-graduate course in Australia, just in time to apply for his restricted call before the two-year period was up. James is on the lookout for a two-meter rig capable of at least Grahamstown repeater and national call.

We hear from Sam ZR2CF, that Peter Wilken has now settled in Tsumeb, S.W.A. with the call of ZR2AK, and will still remain a member of this Branch. Good luck up there Peter.

Bert ZS2EA has sold up his own salt-mine and has joined up with Sigma Electronics. Maybe you'll have more time for Ham radio, now Bert.

The classes being run by Viv ZR2CI are in progress and taking place at the Linton Grange Library Hall on Thursday evenings, and if anyone is interested in taking the exam, please let them know about this.

We hear that Peter ZS2PD is very busy at work, with the launch of a new vehicle imminent, and that he will be in Cape Town for a while.

Cyril ZS2KX and Bette ZS2LO, who is recovering nicely from her knee operation, are full of plans for a trip overseas, which includes Rio, the Big Apple and a tripto Canada. Have a lovely time.

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 20 JUNE 1980.

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PRESENT: 17 members and visitors.

The Chairman extended a welcome to all to the meeting and in particular to Langley and Verity Lookwhy and Hugh Robb ZS2RB, and also to John ZS2JR.

APOLOGIES: were received from ZS2TY, ZS2BF, ZR2CJ, ZR2CT, ZR2CF, ZS2KX And ZS2LO.

MINUTES: The Minutes of the meeting held 16th May, 1980, having been published in QSX-PE and circulated, were taken as read, proposed by Colin ZS2AO and seconded by Bill Hodges.

ARISING: -

CORRES: Letter re Hobbies Fair.  
Letter from P.M.G. re allocation of call sign.  
Council Minutes dated 21st May, 1980.  
Letter from U.B.S.  
Letter from P.E. Municipality.

ARISING: The Chairman noted from Council Minutes that Greg Roberts ZS1BI had resigned from Council.

FINANCE: Two application forms had been received.  
The Treasurer referred to the electricity account for Lady's Slipper.

ARISING: Referring to the letter from the U.B.S. regarding the policy which had matured, the Chairman said that the Branch was due to hold an A.G.M. in about 4 years time and that it would be a good idea to re-invest the money. It was suggested that we start raising money early and to find out to what extent dinners and other functions could be subsidized. The three major motor manufacturers would be approached regarding printing, stationery, etc.  
A letter from the Treasury increasing the electricity account to R28 due to the fact that the meter had not been read for four months, was taken up with Trevor Scarr, as the Branch did not have access to the meter. It appeared that a lock on the gate at the bottom of the mountain had been changed and the meter reader could not get to the meter.

GENERAL: The Hobbies Fair was discussed and various members offered the loan of equipment, such as the computer and power supply by ZS2RI, rig by ZR2CJ, and various others. The Chairman said that he had the loan of a Siemens telex machine and had received paint from Bergers Paints. An all band vertical was discussed as we had the use of one. World maps and qsl cards were needed to decorate the stand. Selwyn ZS2SS said he would make enquiries about a t.v. set. The Algoa Branch would be lending equipment including some for display only, such as a spark gap transmitter belonging to Mr. Schauder. The Chairman showed the S.A.R.L. badge he had made and wished thanks to be recorded to Colin Ward for the loan of the epidiastope and the professional hot wire polystyrene cutter. The layout of the stall would be finally decided on Sunday when members from both Branches would meet at the Feather Market Hall to set up the antenna and equipment.  
A number of members notified that they would be available to operate the stand on various afternoons and evenings.  
It was decided that the classes for the following P.M.G. exam would be started after the Hobbies Fair, so that any interested persons could make contact at the Fair. Viv ZR2CI would start the classes and Peter ZS2PD would take over when business commitments allowed.

There being no further business, the meeting was declared closed.

sgd.  
R.W. Schonborn ZS2RS  
Chairman

sgd.  
M.T. Colson ZS2OB  
Secretary

FOLD - AWAY GROUND PLANE ANTENNA.

Shown below are the diagrams for a very efficient fold-away ground plane antenna for 2, 6 and 10 meters. This has been sent in by Dudley ZS2AW (to whom many thanks for the contributions) who says that he uses it on 2 and 10 with excellent results.

The element lengths are    - 145 mHZ    19 $\frac{1}{4}$  inches  
                                       50 mHZ    54 inches  
                                       28 mHZ    100 inches.

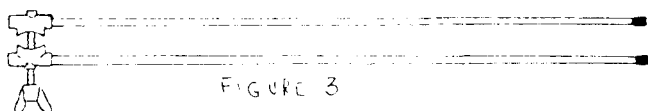


FIGURE 3

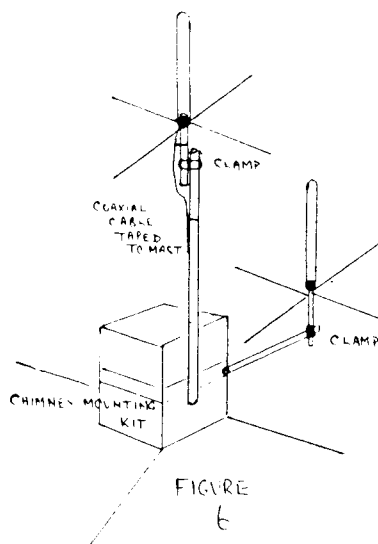


FIGURE 6

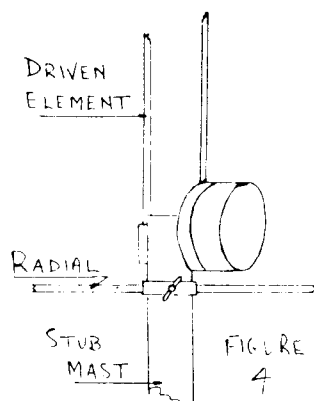


FIGURE 4

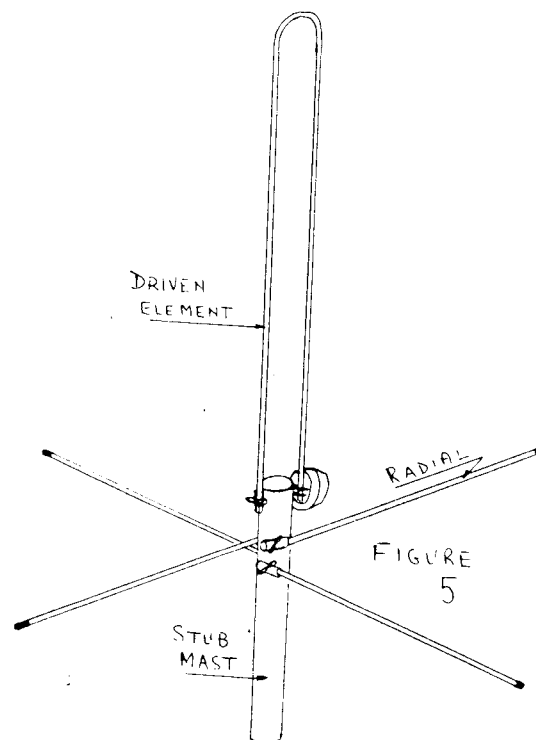


FIGURE 5

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THIS AND THAT.

Passing through town recently and heard on 2 meters were Ian ZS1SX/mobile on his way to Natal and places north on business and pleasure, and also Robert ZR1CM.

For those who are dx-minded, confirmation has come in the latest supplement to the Post Office Guide that International Reply Coupons are no longer valid in South Africa and have not been issued or redeemed since 24th March, 1980. However, for those who have received many of these with requests for direct reply QSLs, don't despair. Just send them when You want a card direct or they are still valid for certificates issued by Radio Societies and Clubs overseas.

Also seen at the Hobbies Fair was Buck ZS2RM who has now reached 315 countries or more and says that new ones are very few and far between to find. Keep looking Buck, and maybe someone will send a new DX-pedition somewhere soon.

12 STEPS IN TRANSISTOR REPLACEMENT - continued.

## STEP NO. 2 - ISOLATING THE DEFECTIVE TRANSISTOR.

It doesn't matter if the unit is a TV, radio, auto radio, stereo player or cassette player. A schematic diagram is a must in transistor replacement. To locate the defective transistor, we must isolate in what stage or section the transistor may be found. For instance, in a TV receiver, if the symptoms are no sound - but a good picture, we know all stages are functioning except the sound section. When the symptoms are good sound - a raster and no picture, the trouble lies in the video section. Why the video stages? Because the sound taps off at the first video stage. If the TV chassis has no sound or raster, we may assume the trouble is in the low voltage or horizontal output stages. Since 80% of TV problems occur in the horizontal output circuits, start here.

Isolating problems in the transistor or auto radio can be made quite easy. Simply break the circuit in half. Turn the volume wide open and touch the centre terminal of the volume control, resulting in a loud hum. What, no hum? The trouble lies in the audio and low voltage stages. A loud hum indicates the audio is normal, so the front end must be dead. Place another radio near the defective one and tune through the entire band. When you hear a whistling noise, you know the oscillator section is functioning. The problem must occur between the oscillator and audio stages.

In an AM-FM MPX stereo compact player, a dead unit may be caused in the power supply or amplifier sections. When the AM stations are normal and no FM, check the FM stages or vice-versa. If the radio and stereo 8 player performs with a dead or weak record player, check the phono cartridge. When the stereo 8 and cassette player will play correctly, but not record, go directly to the recording circuits as the amplifier circuits are used in both play and record functions.

First, we must isolate the probable symptom on the schematic and then proceed to the suspected stage. You may locate the defective transistor with a v.o.m., v.t.v.m. or d.v.m. meter. The defective transistor may be located with an incircuit transistor tester. You may want to use signal tracing methods to help locate the defective transistor or a combination of all three methods.

More later.

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FOR SALE:

Multi 2000 2m transceiver.  
Narrow/wide band FM, SSB. 12v or mains.  
synthesised. R400.  
KP 202 2m walkie-talkie. R110.  
Barlow-Wadley with F.M. needs alignment  
R90.  
Contact Peter ZS2PD at home 32-2524  
after 6p.m.

WANTED:

Beam Rotator.  
10 foot tower.  
H.F. beam -  
ZR2CJ Peter - desperate!  
Phone 21169 home or 521684 business.

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10-4 GOOD BUDDY - With acknowledgement to Rotary International JHB South Branch:  
A church gave its minister a Citizens Band Radio for a Birthday present. A month later he received this letter from his board: 'We might suggest that you are getting a little carried away with your CB hobby. Last Sunday your prayer started - 'Do you read me, Big Daddy?' You described our large crowd as 'Wall to Wall and Treetop Tall'. It is also a bit much when you kept referring to Moses the Lawgiver as the 'Sinai Bear'. We believe our congregation would have better understood your sermon on the hereafter without the constant reference to 'Negatory Purgatory'. And last, we prefer a reverent 'Amen' to 'From Holy Roller to Big Daddy - 10.4'.

## 3 PIN POWER, REGULATED TOO. (By Louis ZS5LP)

If you are in line for a power supply, yet not too sure what to get, consider using one of the new 3 terminal I.C. packages.

This chip requires only 2 resistors to set its voltage. In our case we are going to make one of these a variable resistor to have adjustable voltage output.

Refer to fig. 1 and it will be seen that R1 is a fixed resistor, this is the most important component, referred to as the "Programming resistor". In our application the resistor has been calculated and saves some time. If however another application is necessary the formula is given below,

$$\text{VOLTAGE OUT} = 1,2 \times (1 + \frac{R1}{R2}) + 50 \text{ A} \times R2. \text{ ohms.}$$

This program resistor sets the upper and lower voltage limits on adjust facility. As the requirement was adjustment over the range 2 volts to 24 volts the value of R1 must be 120 ohms, that of R2, 2,5 K being a linear type. Ordinary carbon type in the unit.

These I.C.'s the LM 317 comes in two power packages, one of 0,8 Amps the other one 1,8 Amps. If the power levels required are less than the above levels no other components are required, but if higher currents are required an external power transistor must be fitted, see figure 2.

The above chips require heatsink when used by themselves but for drive purposes this is not necessary. A diode is included to protect the I.C. if the output is shorted. This protection is necessary to avoid smoothing caps damaging on discharge.

It is interesting to know that when this I.C. is short-circuited that it will current limit to the above levels, get hotter and hotter and then cut-off for protection, cool down and operate again.

The transformer and diodes with smoothing are not shown, these circuits are standard procedure and need not be repeated.

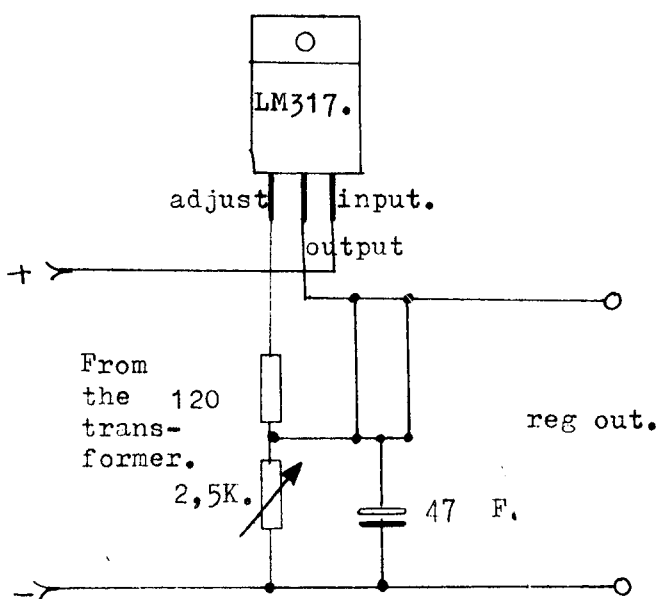


Fig 1.



THE ETHERAL TRIANGLE???

 **KENWOOD**

MEETS

 **apple**



**TS-120S LINE**



**APPLE II COMPUTER.**

2 M SYNTHESIZED HAND HELD

- 5 KHz STEPS
- LIQUID CRYSTAL DISPLAY (FOR PROLONGED BATTERY LIFE AND CLEAR VISIBILITY IN DIRECT SUNLIGHT)
- 10 MEMORIES
- AC CHARGER (FAST OR SLOW)
- DC QUICK CHARGER
- LEATHER CASE
  - RUBBER HELICAL ANTENNA
  - CAN ALSO BE USED AS A BASE STATION

# TR-2400

## SUMMIT

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