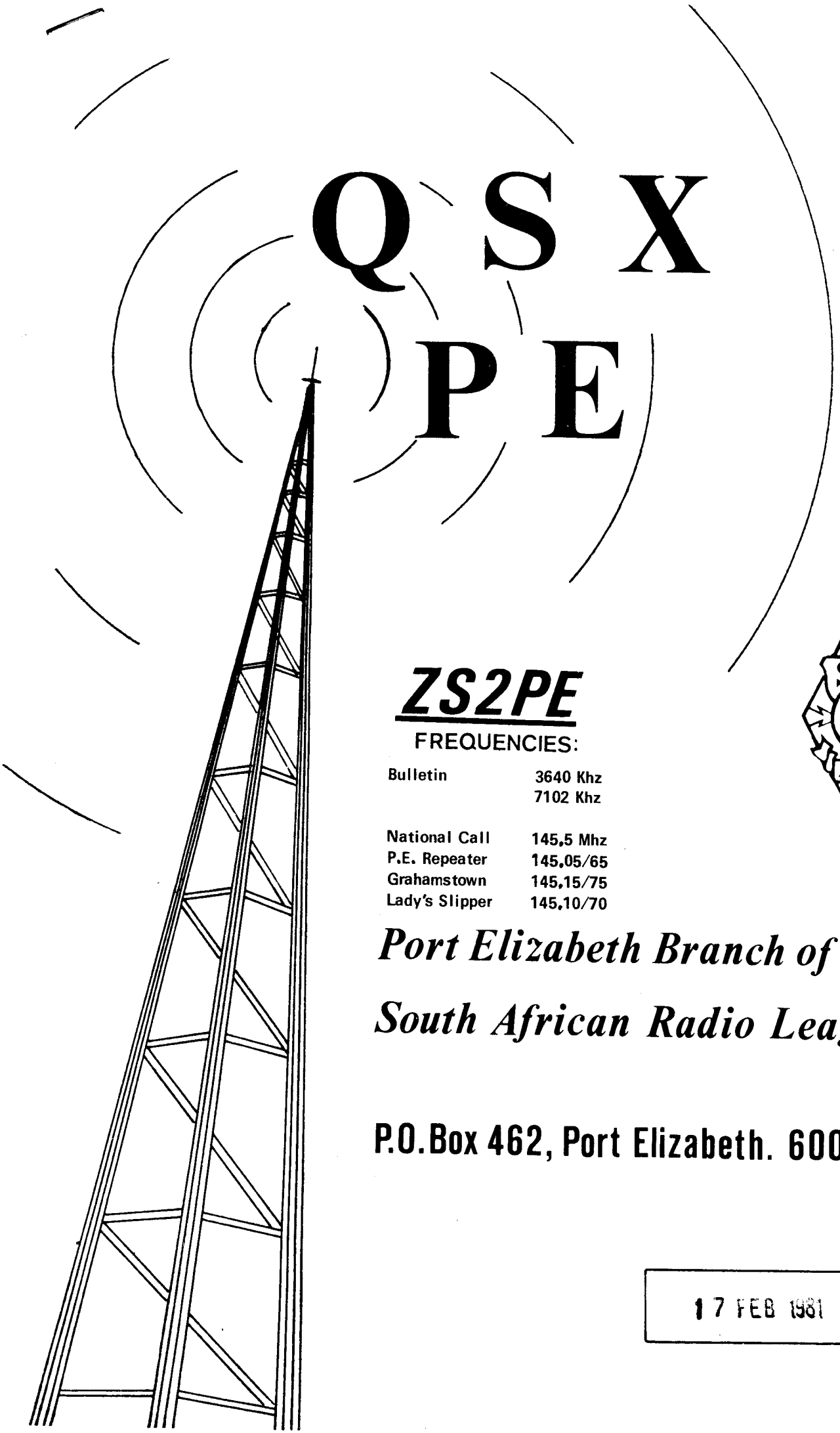
# QSX PE



## 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.**

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 20th FEBRUARY, 1981. SEE YOU THERE.

**********

## G R A H A M S T O W N  T R I P  AND  F I E L D  S T A T I O N.

IN PLACE OF THE MONTHLY MEETING FOR MARCH, THERE WILL BE A SOCIAL GATHERING IN GRAHAMSTOWN ON SUNDAY 15th MARCH AT THE CARAVAN PARK. THE BUS WILL LEAVE FROM THE CHECKERS HYPERMARKET PARKING AREA AT 8.45A.M. AND TICKETS WILL BE R2 PER HEAD. WE WILL BE SETTING UP A FIELD STATION AT THE PARK AND THERE WILL BE ENTERTAINMENT LAID ON FOR THE KIDDIES AFTER LUNCH. PLEASE TAKE ALL YOUR OWN FOOD AND DRINKS, AND THERE WILL BE BRAAI FACILITIES FOR THOSE WHO WISH TO MAKE USE OF THEM. THERE WILL ALSO BE A LUCKY SEAT NUMBER IN THE BUS AND THE PRIZE WILL BE A BONUS BOND. IF YOU WISH TO JOIN THE HAPPY THRONG, PLEASE LET MARGE (PHONE 302334) HAVE A DEFINITE NUMBER AND THE MONEY AS SOON AS POSSIBLE. THE BRANCH WILL BE SUBSIDISING THE COST OF THE BUS. WE WILL BE RETURNING TO P.E. AT ABOUT 3.30 P.M.

**********

WELCOME: to Clive Fyfe and Petrus Fourie who have joined the Branch and also to Andy ZR2CW and Ron ZR2DK who have joined as Social Members. Glad to have you with us.

FAREWELL: To Ray Connolly ex ZR2CQ and now ZS2DX, and his wife Bev and family who are leaving us to visit Utah, U.S.A. for about 2 or 3 years. Ray comes from there originally and is taking his family to meet his parents. He hopes to get a W call and will be on the lookout for Port Elizabeth stations.

THANKS: From Ray to Cyril ZS2KX and Colin ZS2AO for all the hard work, time and effort that they put into c.w. classes for him. He wishes everyone farewell and hopes to see us all again soon.

CONDOLENCES: To Langley Lookwhy and family on their recent bereavement.

CONGRATULATIONS: to Sam ZR2CF whose son got married in Johannesburg recently. Sam, we are sorry to hear that you had a dose of laryngitis, but glad to hear you back in good voice again.

Congratulations also due to Basil ZS2PG who has been doing various examinations for his pilots licence and naturally has been flying through them.

Sorry to hear that Peter ZS2PD had to have an operation recently and hope that you are around and about soon, Peter.

THANKS: to Brian ZS2AB who had quite a repair job to do on the Lady's Slipper Repeater after it had been damaged by water during the recent heavy rains. Also to Dick ZS2HS who with Brian, travelled up the mountain to get it down and put it back. Thanks chaps.

Peter ZS2PS and Irene have moved QTH from the flat in Cape Road and have settled in their own house in Bridgemeade and Peter now has lots of room for antennas and a shack, so will soon be setting up RTTY, SSTV, OSCAR stations and the lot!

Brian ZS2TY was a guest speaker at an International Conference held at Rhodes University in Grahamstown, recently. Good for you Brian, keep it up.

Sorry to hear that the bike given to Trevor ZS2TJ 's son for Christmas was stolen within a few weeks. Fortunately it was insured and so he is now the proud owner of another one.

**********

TECHNICAL CLASSES: These classes are now being held on Thursday evenings at 7.30p.m. and will in future be held at the QTH of Colin ZS2AO, 5 Hamerkop Street, Cotswold Extension. If you know of anyone who would like to attend the classes please let them know about this.

DON'T FORGET THE TRIP TO GRAHAMSTOWN - LET'S MAKE A GREAT SUCCESS OF IT.

Did you hear about the C.B. yl who thought that 73's was 69 plus G.S.T.?

BULLETIN ROSTER: 15th February Brian ZS2AB
22nd February Marge ZS2OB
1st March Frank ZS2CY
8th March Selwyn ZS2SS
22nd March Peter ZS2PS

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 16th JANUARY, 1981.

PRESENT: 20 members and visitors.

APOLOGIES: ZS2KX/LO, ZS2PS, ZS2JR, ZR2CN.

The Chairman welcomed all to the first meeting of the year and apologised for the slight delay due to the fact that the Committee meeting had been held prior to the general meeting. He extended a special welcome to Harry Winch as a new member, to Waldie Bartie and son and to the ladies. He congratulated Waldie and Fred Bonthuys who had written and passed the November P.M.G. exam.

MINUTES: The minutes of the meeting held 21st November, 1980, having been published in QSX-PE were taken as read, proposed by Viv ZR2CI and seconded by Trevor ZS2TJ.

ARISING. -

CORRES: Minutes and Agenda of P.M.G. and Liaison Committee.
(The Chairman read out various important sections to the meeting).
Copy of letter to Irvine Green.
Council Minutes.
Letter re 6 metres calling frequency.
Financial Statement.

FINANCE: It was stated that interest in the amount of R35.50 had been received on the fixed deposits. The cheque for R495 for the modification of the T.V. games had been banked. The current financial assets of the Branch were R2295 in fixed deposits, saving account and transmission account. The bulk of this had come from the component sale and the cheque of R495.

GENERAL: The Chairman said that he would appreciate comment and participation from the members at this point. As far as he was concerned, the points he wished to raise included future meetings. As regular attenders would realise, it is not easy to provide entertainment, or to make every meeting interesting enough to make people want to attend. He said that the stock of local technical films had been exhausted. He asked for suggestions from the floor as to what type of films or lectures would be of interest. Among those suggested were talks on computers, propagation, the new telephone system, the conversion of C.B. sets to ham sets.
The Chairman also mentioned the fact that in Grahamstown, there were a number of members of the Port Elizabeth Branch, as well as in the towns close to Grahamstown. There were also three hams who had just written and passed the last P.M.G. exam, and he suggested that instead of a meeting in February, the members should travel to Grahamstown for a social get-together with these members. The suggestion was made that members should travel together by bus, and the Secretary undertook to find out costs. The question of the trip was put to the vote and there was a unanimous yes.
The subject of the end-of-year Travelling supper was discussed and in view of the fact that it had been so successful, and that many members had discussed it enthusiastically afterwards, it was decided to have another this year, while the enthusiasm was still there.
Fred Bonthuys raised the question as why the details of the Port Elizabeth Branch were not printed in Radio ZS and the Chairman said that the Secretary had written to Headquarters twice with the information.
Waldie asked about c.w. on tapes and was told that the Branch does have master copies. As regard c.w. on the air, the Chairman said he would speak to Colin ZS2AO about this. Ray ZR2CQ was congratulated on having just passed his c.w. test.

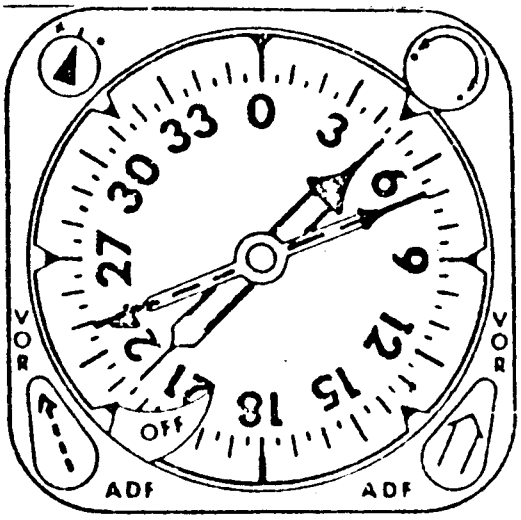
There being no further business, the meeting was closed at 9.20 and tea was taken.

sgd;
R.W. Schönborn ZS2RS
Chairman

sgd:
M.T. Colson ZS2OB
Secretary

# AUTOMATIC DIRECTION FINDER IN MODERN AIRCRAFT

Douglas ZR6WO




Two separate and completely independent Automatic Direction Finder (ADF) systems are installed in the aircraft. Each system consists of a receiver, sense antenna, sense antenna coupler, fixed loop antenna, radio magnetic indicator and control panel.

ADF systems are used as navigation aids using radio signals from sources in the frequency range of 190 to 1750 kilocycles per second. Sources operating in this frequency range include standard broadcast stations, low frequency radio ranges, etc. The ADF systems may be used for automatic determination of bearing to the station being received, manual determination of bearing, flying radio ranges or reception of weather and other broadcast programmes.

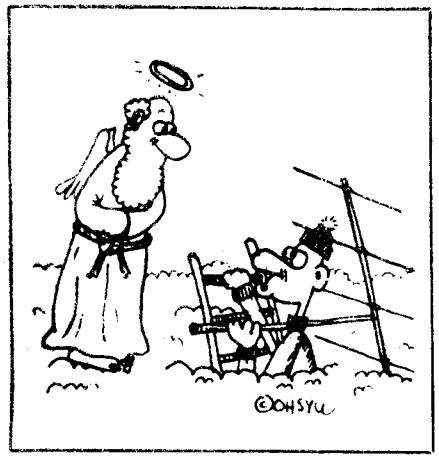
The ADF receivers receive signals from the sense and fixed loop antennas. Circuits in the receiver determine the bearing of radio stations electrically and transmit bearing information as a synchro signal to the radio magnetic indicators. Audio signals from the receivers are monitored through the interphone system.

Each ADF system is remotely controlled from individual control panels located on the forward electronic control panel. Each control panel contains a function selector switch, loop control switch, frequency selector knobs, volume control, beat frequency oscillator control switch, tuning meter, and a frequency indicating window.

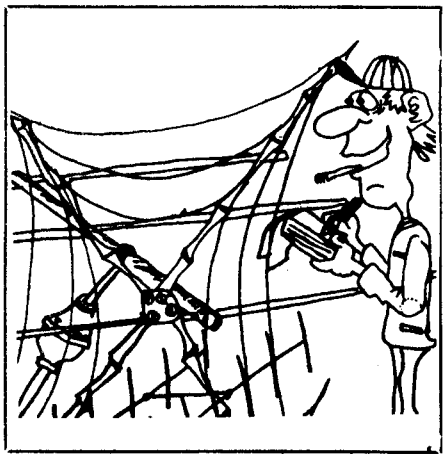
The frequency of the source being received in indicated by a dial so arranged that the frequency may be read directly.

The sense antennas located on the wing body fairings provide a nondirectional reception pattern and high strength signal to the receivers.

Fixed loop antennas are sealed units, flush-mounted from outside in individual antenna cavities on the bottom centre of the fuselage.




"Pardon me. Looks like we're up a little too high . . ."



"Look here what the storm has brought me: 1 quad, 2 Yagis, six over six . . ."

# Thoughts on a TRIBAND VERTICAL

## 20 / 15 / 10 metres

Bill ZS6ko

If you don't own a beam and would like to work some DX under the present good band conditions, then this triband vertical will help you to join in on the fun. It can also be used for a portable antenna if constructed so as to dissemble for transporting.

Use 3 radials on each band, ie,
14 mhz = 5.3 m ; 21 mhz = 3.5 m ; 28 mhz = 2.6 m .

The trap inductances are wound on a 76mm diameter former, or can be self supporting, by 50mm long.
The traps must resonate 800 khz below the operating frequency.
Thus for 28500 khz, the 10 mtr trap inductance is wound over 30mm consisting of 3 turns, the trap resonant frequency being 27700 khz.
Similarly, for 21200 khz the the 15 mtr trap inductance resonant frequency is 20400 khz and is wound with 5 turns and is spread over 40mm.

The capacitors of the traps are made of RG58U or RG8U coaxial cable. This is accomplished by making use of the capacity properties of the coax.

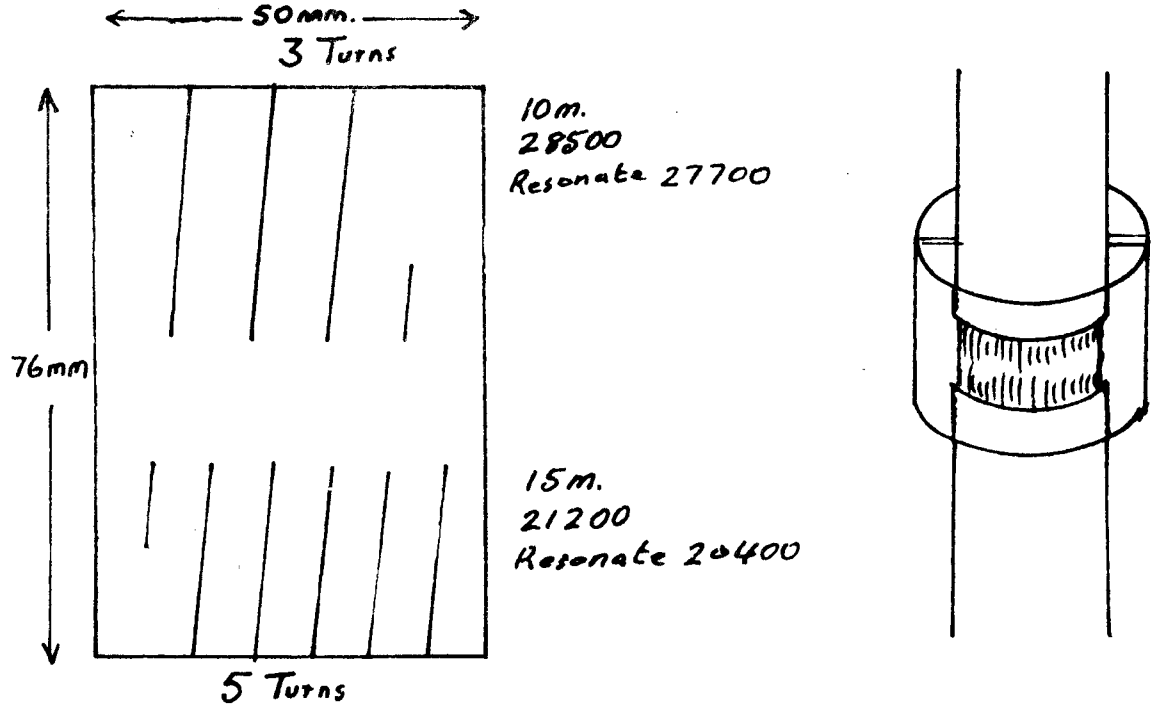
RG58U is 28.5 pf per 304.8 mm
RG8U is 29.5 pf per 304.8 mm

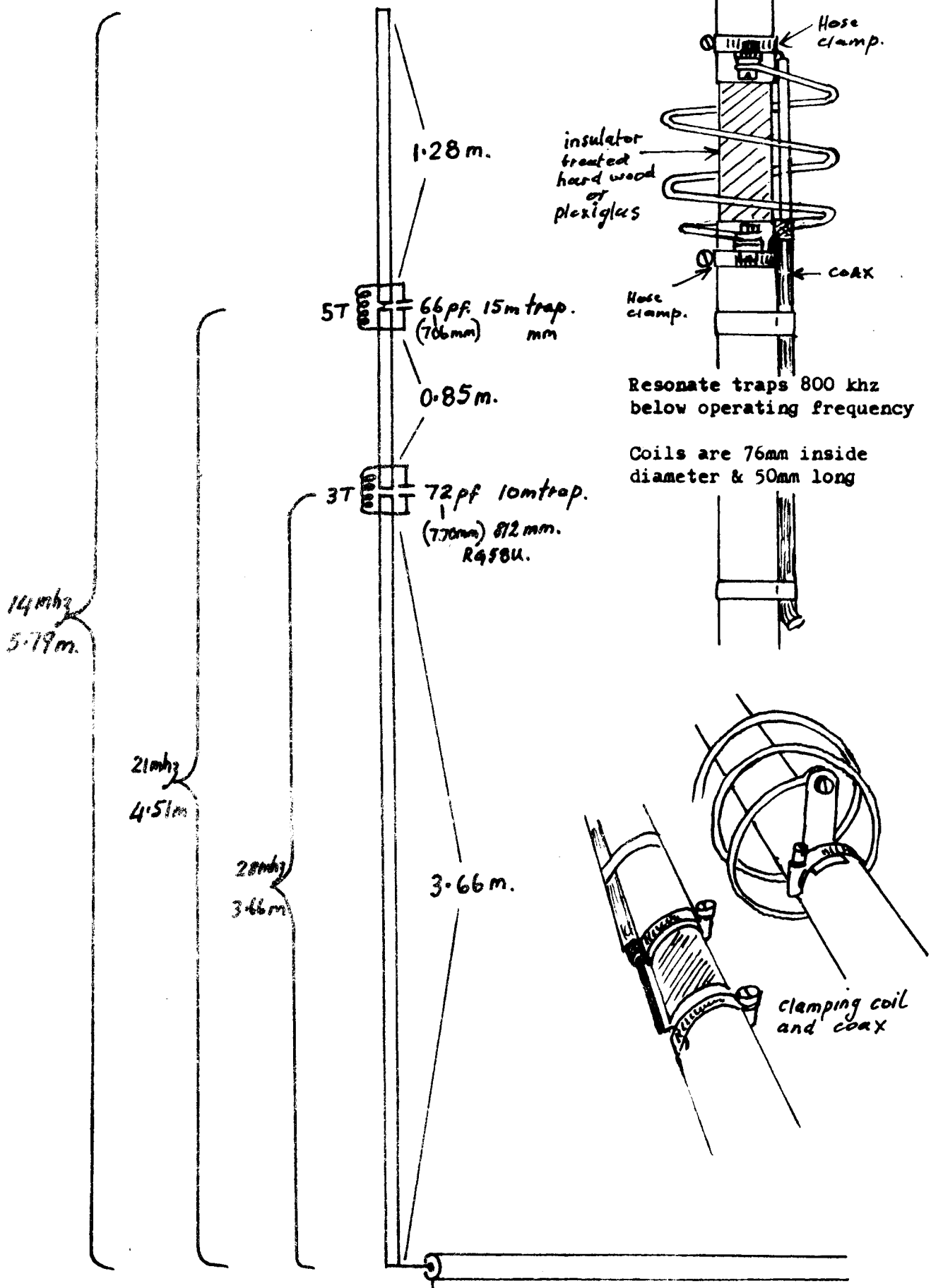
Thus the required lengths for the trap capacitors using RG58U can be calculated as follows :

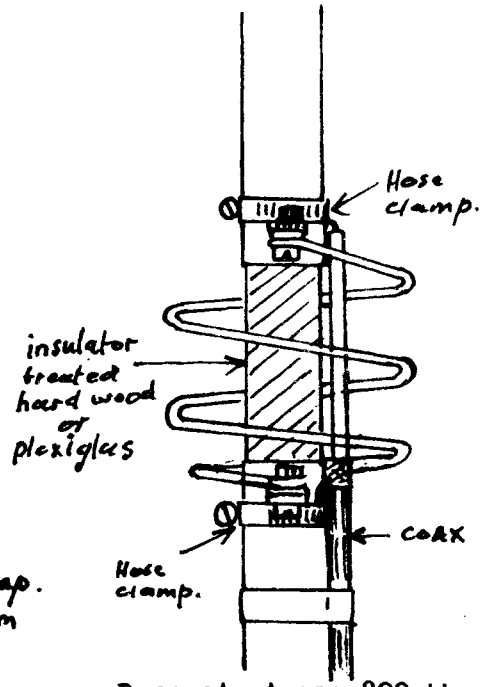
66 pf for 21 mhz is 66 x 304.8 ÷ 28.5 = 705.85 ie 706 mm

72 pf for 28 mhz is 72 x 304,8 ÷ 28.5 = 770.02 ie 770 mm

However, add sufficient coax length to make sure that there will be enough capacity to tune the traps to the required resonant frequency. Thus, let us start with about 812mm for 28mhz and 710mm for 21 mhz. The braiding of the coax is connected to the lower tube in each section and taped to it.
The coaxial capacitors are trimmed to resonance across the inductor by using a GDO and a calibrated receiver to check against for the correct frequency.
Once the coax capacitor is trimmed, the ends of the coax should be sealed with rubber cement or wax to weather proof it.






Resonate traps 800 khz below operating frequency

Coils are 76mm inside diameter & 50mm long






Z36KO.

# TS-130S/V

## "Small wonder"...processor, N/W switch, IF shift, DFC option

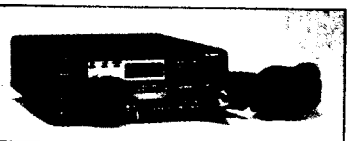
The compact, all solid-state HF SSB/CW mobile or fixed station TS-130 Series transceiver covers 3.5 to 29.7 MHz, including the three new bands.

**TS-130 SERIES FEATURES:**

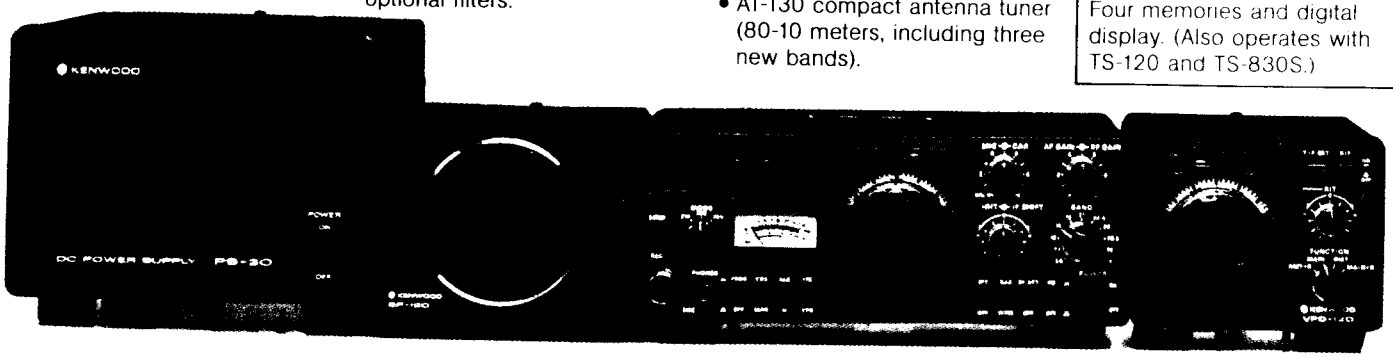
- 80-10 meters, including the new 10, 18, and 24-MHz bands. Receives WWV.
- TS-130S runs 200 W PEP/160 W DC input on 80-15 meters and 160 W PEP/140 W DC on 12 and 10 meters. TS-130V runs 25 W PEP/20 W DC input on all bands.
- Built-in speech processor.
- Narrow/wide filter selection on both CW (500 Hz or 270 Hz) and SSB (1.8 kHz) with optional filters.
- Automatic selection of sideband mode (LSB on 40 meters and below, and USB on 30 meters and above). SSB REVERSE switch provided.
- Built-in digital display.
- Built-in RF attenuator.
- IF shift (passband tuning).
- Effective noise blanker.

**OPTIONAL ACCESSORIES:**

- PS-30 base-station power supply.
- YK-88C (500 Hz) and YK-88CN (270 Hz) CW filters.
- YK-88SN (1.8 kHz) narrow SSB filter.
- AT-130 compact antenna tuner (80-10 meters, including three new bands).
- SP-120 external speaker.
- VFO-120 remote VFO.
- MB-100 mobile mounting bracket.
- PS-20 base-station power supply for TS-130V.



**Optional DFC-230 Digital Frequency Controller**
Frequency control in 20-Hz steps with UP/DOWN microphone (supplied with DFC-230). Four memories and digital display. (Also operates with TS-120 and TS-830S.)




PS-30 SP-120 TS-130S VFO-120

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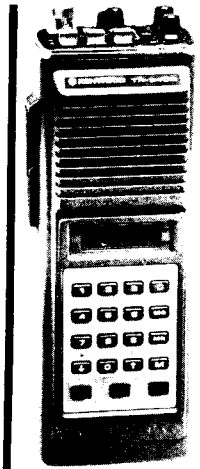
...pacesetter in amateur radio

**Kenwood R-1000**
The R-1000 is a highly advanced communications receiver. Up-conversion, PLL circuitry and other new technology provide optimum sensitivity, selectivity, and stability from 200 kHz to 30 MHz. Featuring easy-to-operate single-knob tuning and digital frequency display, it's perfect for listening to shortwave, medium-wave, and long-wave bands. Even SSB signals are received perfectly. Included is a quartz digital clock and timer.

**R-1000 FEATURES:**

- Continuous frequency coverage from 200 kHz to 30 MHz.
- 30 bands, each 1 MHz wide.
- Five-digit frequency display and illuminated analog dial.
- Quartz digital clock and ON/OFF timer.
- Multi-modes . . . AM (wide and narrow), SSB (USB and LSB), and CW.
- Three IF filters . . . 2.7 kHz for SSB and CW, 6.0 kHz for AM narrow, and 12 kHz for AM wide.
- Effective noise blanker, built-in speaker, three antenna terminals, rf step attenuator, tone control, recording terminal.
- Remote terminal, for access to timer relay ON/OFF circuit and muting circuit.
- SSB sensitivity of 0.5 μV from 2 to 30 MHz.
- More than 60 dB IF image ratio.
- More than 70 dB IF rejection.



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KENWOOD TR-2400 1.5w 2m hand held transceiver. Keyboard frequency entry with LCD readout

CN-720 and CN-620
Frequency Range: 1.8-150 MHz
SWR Detection Sensitivity: 5W min.
Power: 3 Ranges (Forward, 20/200/100W) (Reflected, 4/40/200W)

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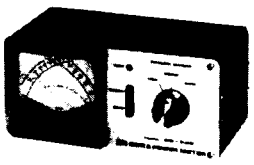
# Coaxial Cable

RG 213 50 ohm Co-ax 89c
OR
100 metres for R79 gst exc



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