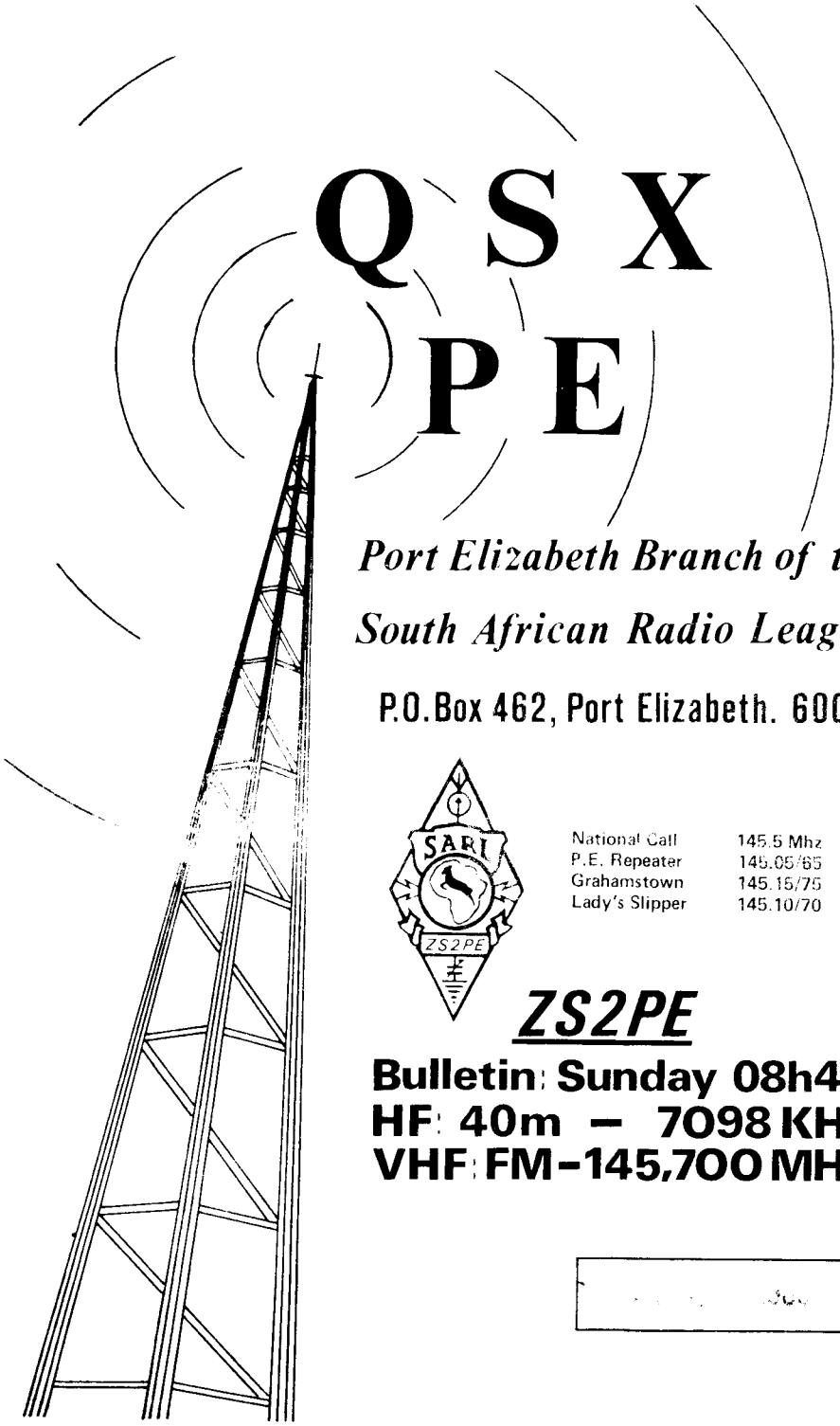

Q S X

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

Port Elizabeth Branch

›NOTICE OF MONTHLY MEETING‹

THE MONTHLY MEETING OF THE BRANCH WILL TAKE PLACE AT THE Y.M.C.A., HAVELOCK STREET, PORT ELIZABETH ON FRIDAY 15th APRIL, 1983 AT 8p.m. THE CHAIRMAN WILL REPORT BACK ON THE LEAGUE A.G.M. IN PIETERMARITZBURG.

****

COMMITTEE MEMBERS.

Chairman:	Dick ZS2RS(322111)	Vice Chairman	Trevor ZS2AE(321746)
Secretary:	Marge ZS20B(303498)	Treasurer:	Brian ZS2AB(303498)
Projects:	Lionel ZS2DD(321770)	Special Events	Colin ZS2AO(312471)
P.R.O.:	Fred ZS2EQ(0433-31419)	Awards:	Attie ZR2DY(325349)
	QSX-PE - Marge ZS20B	and Brian ZS2AB	

****

HEADQUARTERS BULLETINS.

For your information: S.A.RL. Headquarters bulletins are transmitted every Sunday morning at the following times and frequencies:

S.A.S.T.					
07.45 by	ZS1A	on	10,120 and 7020 mHz		cw
0800 by	ZS1RO	on	14,075 and 145,450 and 10,145		RTTY
0830 In					
English by	ZS1BF	on	14 150	kHz	SSB
and by	ZS1CZ	on	7 050	kHz	SSB
Relayed as					
arranged		on	3 700	kHz	
Relayed by	ZS6OF	on	7 808	kHz	SSB and 2m FM
Read by	ZS4CW	on	3 750	kHz	AM
relayed by	ZS4KN	on	7 125	kHz	AM
and by	ZS1DP	on	2	m	FM
In Afri-					
kaans by	ZS1IT	on	14 200	kHz	SSB
Relayed by	ZS1A	on	7 070	kHz	AM
by	ZS1WZ	on	3 600	kHz	AM
by	ZS6FG	on	3 675	kHz	AM
by	ZS6YQ	on	7 060	kHz	AM and 2m FM
and by	ZS6ARD	on	3 780	kHz	AM.

****

NEWS

CONDOLENCES: Sincere sympathies to Del ZS2NS and family on the death of his father in March.

APOLOGIES: To Allan Ansell ZS2AJ, for leaving him out of the list of members. Allan assures me he paid his subs (He even has the receipt to prove it) and he is alive and well and has accepted the fact that the omission was mere a slip up by the Editor!

HOLIDAY MAKERS: As mentioned last month, our Chairman Dick ZS2RS and his family will be attending the AGM in Pietermaritzburg and then proceeding to Sun City for a holiday to recuperate! Let's hope you win the Jackpot. Talking about Sun City, Attie ZR2DY was there recently and managed to win quite a tidy sum and also enjoyed the Extravaganza Show.
Also going on holiday for three weeks are Brian ZS2AB and Marge ZS20B who will be caravanning down to the Western Cape. Trevor ZS2AE will be taking on some of their duties, and if necessary, please contact him.
It was very pleasant to meet Pat Richards recently transferred from the Transvaal, and also Nigel Fitt a member attending the Technical Classes, at the last meeting of the Branch, and we hope to see lots more of them and others in the future.

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 18th MARCH, 1983.

PRESENT: 16 members.

APOLOGIES: ZS2EQ, ZR2DY, ZS2BY, ZS2LO.

The Chairman welcomed all to the meeting, especially Pat Richards, who had recently moved down from Johannesburg and joined this Branch, also to Nigel Fitt a new member and to Piet von den Berg and Marlene ZR2ED.

MINUTES: The Minutes of the meeting held 18th February, 1983, having been published and circulated in QSX-PE were taken as read, proposed by Cyril ZS2KX and seconded by Trevor ZS2AE.

ARISING: -

FINANCE: The Treasurer Brian ZS2AB reported that the AGM fund stood at R846. Donations in response to the R2 request were R89. Sale of technical notes realised R50 and the total cash was R3557.

ARISING: The Chairman reminded members that an envelope would be included with QSX every month and he hoped that donations would be forthcoming in order to meet the budget for the 1984 AGM. He said it was the first time that members had been approached in this manner. The last time an AGM was held in Port Elizabeth was 10 years ago and the next one was likely to be even longer away. He thanked all those for their donations in the past and those who would be generous with theirs in the future.

CORRES: Letter from President re AGM motions.

GENERAL: The Chairman said that by now everyone should have received their copy of Radio ZS and the call book. He congratulated Brian ZS2AB on the reprint of his ZX81 article . He also congratulated the editors of QSX for a really excellent issue. This was most informative and the printing was first class. The Chairman Dick, then said that he wished to thank all those who had bravely attended the meeting and the time had come to go through the motions which had been put forward for the 1983 AGM and make a decision to enable him to vote on behalf of the Branch in Pietermaritzburg. Cyril ZS2KX asked about nomination of a delegate and Dick said that, according to the constitution, the Chairman was to be appointed delegate unless he was unable to go. Trevor ZS2AE was then proposed as alternate delegate, proposed by Cyril ZS2KX and seconded by Marge ZS20B. The members present then discussed and voted on the motions. (See elsewhere the motions and results of voting).

The meeting finished at 10.35 and the Chairman thanked all those present for their patience.

sgd:
R.W. Schönborn ZS2RS
Chairman

sgd:
M.T. Weller ZS20B
Secretary

MOTIONS FOR 1983 AGM.

MOTION.	BRANCH DECISION.
1,	In favour.
2.	Not in favour.
3.	Not in favour. HQ would probably raise subs to compensate.
4.	In favour.
5.	Yes, if HQ agrees with the reduction stated. If economically viable and not a drain on resources.
6.	In favour.
7.	In favour.
8.	Not in favour.
9.	Partially acceptable. A membership certificate, copy of the constitution and a comprehensive call book and badge should be sufficient.
10.	In favour.
11.	In favour. To be considered with motions 47 and 48.
12.	Not in favour.
13.	Not in favour.
14.	Not in favour.
15.	Not in favour.
16.	Not in favour.
17.	Should fall away as result of above.
18.	In favour.
19.	Will hopefully be withdrawn.
20.	With-drawn.
21.	In favour as long as only the terminology is affected and not subs.
22.	Not in favour, unless a practical solution can be found.
23.	Cyril ZS2KX proposed an amendment "strictly in emergencies only" Hamnet and WRR already handle 3rd party traffic. It is important that the words "for gain" be stressed. In favour.
24.	Not in favour.
25.	Not in favour
26.	Not in favour.
27.	In favour.
28.	The system to be used will be "Systeme Internationale".
29.	Depends on Motion 23.
30.	In favour.
31.	In favour.
32.	In favour.
33.	In favour.
34.	Not in favour.
35.	Not in favour.
36.	Not in favour.
37.	Lionel ZS2DD gave the reasons for the Branch's disagreement with the proposed bandplan. It does not make sense and would clash with the ARRL bandplan. Not in favour.
38.	Withdrawn.
39.	Not in favour. How would be non-league members be controlled?
40.	If the beacons stayed above 29mHz and co-ordinated with ARRL. In favour as above.
41.	In favour.
42.	In favour.
43.	Not in favour.
44.	Must be withdrawn. The PMG has already given a definite No.
45.	Delegate's discretion.
46.	Not in favour. Perhaps co-operation between PMG and League.
47, 48.	Considered with motion 11.
49.	In favour.

THE G.D.O. AND THE V.O.M. ---- GREAT----- BUT DON'T OVERLOOK THE YF!

Every Ham is familiar with a few of the more common tools of the trade such as the VOM and the GDO. But I often wonder how many realize what an invaluable but often overlooked accessory the YF could be.....

Even though she may not have a ticket, used properly she may fill the void in the shack and make your operating more pleasurable.

As a for instance, let me relate this lovely incident that occurred at this QTH. Perhaps it will bring a lump to your throat. A definition of love and true affection could not be more dramatic, and if it brings a tear to your eye.....it just proves the point.

It was a typical Wednesday evening with the sweet little thing in the living room, eyes glued to the Wednesday night movie on the Mahogany knothole.....Meanwhile in the shack I tuned for some rare DX. The beam refused to budge. I rushed upstairs and explained the plight to the YF, but she refused to leave the movie. Later, during a commercial she agreed to help. Almost at the same instant a flash of lightning and a clap of thunder rattled the house.

Undaunted, she donned her linesman's belt, and at that precise moment - I was proud of her - as she began her ascent up the 4 inch pipe mast. After all she weighs only 50 kilos, and the linesman's belt with cutters, pliers, hammer, small crowbar, 10 metre roll of RG8U and a few other things she needed weighed 20 kilos.

I watched her as she shinned up the pipe, and I could see her quite well during the lightning flashes, and between the rolls of thunder I could hear the rattle of tools as they dangled from the belt.

She yelled to me to turn on the flashlight and shine it at the top. She really didn't need the light to find the top, because the only way to the top was up. Anyway, she knew the way to the top as she had climbed it many times before. Apparently she was not aware of the price of flashlight batteries.

It had begun to rain quite hard, and I yelled to her to get a move on up there because I was getting wet. She had finally reached the top and yelled down for some light. I told her that the lightning was so frequent she could work during the flashes.

She got excited and dropped the hammer that almost hit me on the head. I scolded her for being careless, and since I was getting wet, I was going into the house and dry off. As a nice gesture I watched the end of the movie so I could tell her how it ended as I was sure she would want to know.

When she came into the house she refused to talk to me just because I had yelled at her while she was on the mast. She wouldn't even listen when I tried to tell her that the movie ended with John and Marcie getting a divorce because John was very mean and unreasonable.

What I originally started out to say is simply that the YF can be a valuable addition to the shack although at times they can be a bit difficult.

Since she is a bit miffed, please don't print my name or call. Better yet I wish this could self-destruct after you read it!

(Acknowledgements to S.A.R.A. Newsletter and Ed K8EMI)

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BULLETIN ROSTER.

24th April	Fred ZS2EJ
1st May	Attie ZR2DY
8th May	Dick ZS2RS
15th May	Trevor ZS2AE

When the device to be tested is a Transistor you must first find out which are the BASE, EMITTER and COLLECTOR connections. There are commercial meters available which perform this function. I am in the process of developing such a circuit which will hopefully be able to sort out the connections of a Transistor.

	A	B
1	BASE	COLLECTOR
2	BASE	EMITTER
3	COLLECTOR	BASE
4	EMITTER	BASE
5	COLLECTOR	EMITTER
6	EMITTER	COLLECTOR

Connect the Transistor as per 1 or 2 of the table shown above, i.e. Base to Terminal A and Collector or Emitter to Terminal B.
If the Transistor under test is a NPN type you will obtain a reading of ± 500 micro Amps on M1.
If no reading is obtained connect the Transistor as per 3 or 4 of the table.
If a reading of ± 500 micro Amps is obtained on M1 the Transistor is a PNP type.
If no readings are obtained on M1 during the above tests discard the Transistor as it possibly has open circuit junctions.
Once again when a reading of ± 500 micro Amps is obtained on M1, one way only close the switch to M2. M2 will read the voltage across the BASE/EMITTER or BASE/COLLECTOR junctions of the Transistor. The junctions of a Transistor act in the same way as a Diode.
For a Silicon Transistor M2 should read between 0,4 and 0,7 volts.
For a Germanium Transistor M2 should read between 0,1 and 0,3 volts
Connecting either a NPN or PNP Transistor as per 5 of the table will give a higher reading than the connections of 6. If a Silicon Transistor is connected as per 6 it will give a lower reading, if any at all, than a Germanium Transistor connected as per 6 of the table.
Once you become familiar with the operation of this simple tester you will be able to check Transistors for junction shorts and open circuits.
Junctions are the internal connections between the BASE, EMITTER and COLLECTOR elements of a Transistor. They usually all show a Diode action, i.e. when checked with an Ohmeter they will show a higher resistance one way than the other.
Now all we need is for someone to come up with an instrument that will check out and identify the Intergrated Circuits HI HI.

Many thanks Neil. Ed.

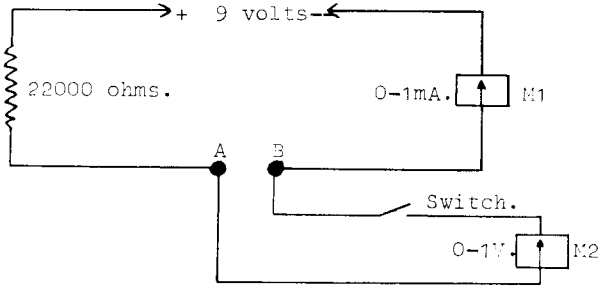
****

FOR SALE:
1 only Gonset G76 Multiband Transceiver (Amateur Bands) 80m to 6m. 100 w AM/150w CW. R150.00.
1 only Icom IC215E 2 metre Handheld 12 channel, with Nicad batteries. R150.00
3 Motorola "Business dispatcher" VHF base stations. R25 each.
Contact Fred Hurter. Phone 24585.

SILICON or GERMANIUM.

By Neil Holmes ZS2AI.

Considering the fact that we Radio Amateurs are often able to lay our hands on surplus Electronic equipment in one way or another, where nine times out of ten the Semi-Conductor devices are marked with some obscure Type number (which I believe are referred to as in house numbers) I wish to present this article which I hope will help you to identify Diodes and Transistors (which are Semi-Conductors) as SILICON or GERMANIUM and NPN or PNP devices.
By building up the simple circuit shown in the diagram below you can determine how these devices operate.



Connect the unknown Diode across Terminals A and B. I you obtain no reading or a very small reading on M1 reverse the connections of the Diode across A and B. A reading of ± 500 micro Amps should be obtained in one direction or the other. If no reading can be obtained the Diode is probably open circuit and if a reading of ± 500 micro Amps is obtained with the Diode connected either way the Diode is probably short circuit. In either of these cases the Diode should be discarded as it is of value to no one.
When a reading of ± 500 micro Amps is obtained in one way only, close the switch to Voltmeter M2. For safety and simplicity this switch can be of the Spring loaded push to make type. M2 will read the voltage drop across the Diode.
For Germanium Diodes this voltage will be between 0,1 and 0,3 volts. For Silicon Diodes this voltage will be between 0,4 and 0,7 volts. These voltages will vary up and down from these values depending on the type of Diode, i.e. Power or Small Signal Diodes. If the reading falls between 0,3 and 0,4 volts compare this Diode with another which has the same Type number or discard it altogether.
If the Diode under test is open circuit almost the full 9 volts will be connected to M2 when the switch is closed. Now if you are using an analog meter (that's the old type with a pointer that moves over a calibrated scale) with a low voltage range selected this condition could have a disastrous effect on the meter. The modern Digital type meters (these are the ones that have digital displays) usually flash the whole display or an overload indicator shows up if you overload the meter. They are not normally damaged with this degree of overload. To be on the safe side DO NOT press the switch if M1 is reading very little or nothing at all.

BRANCH TROPHIES.

Just a reminder of these three trophies, the VHF, the ZS2AB Constructors and ZS2OB DX trophies which are available to members and which will be awarded at the 1983 Branch AGM.

ZS2AB HOME CONSTRUCTORS TROPHY.

This trophy is made available to the P.E. Branch, to be awarded on an annual basis to the member who, in the opinion of the Committee serving at the time, has constructed the best piece of radio or associated equipment during the branch year. The trophy takes the form of an engraved silver cup, which shall be awarded to the winner at each Branch AGM, together with a printed certificate. The cup will remain the property of the Branch and must be returned to the Branch just prior to the AGM. The accompanying certificate will remain the members property. The Committee will ask members interested in qualifying for the trophy to bring their respective projects to a meeting for judging or in the case of a piece of equipment or installation not being readily transportable, the Committee will visit the site of such equipment for judging purposes. The unit submitted for consideration may form part of a complete system employing other items of commercially made equipment, but units constructed from commercially available kits shall not be eligible for the award. Outer cabinets housing the constructed equipment may be of commercial origin, but more favourable consideration will be given to units which are completely constructed in the home workshop. While there is no restriction on the type or purpose of the equipment submitted for consideration, preference is to be given to items relating mainly to the more specialised modes of communication available to the amateur,i.e. RTTY, SSTV FAX, computer equipment, etc. Aspects of construction which will be taken into account will be decided by the judges, i.e, neatness of layout, finish and wiring etc and the degree of electronic sophistication of the equipment will not necessarily determine the winner. This trophy is made available in the hope that it will spur some of our members on in the field of home construction, an aspect of ham radio which seems to be sadly becoming a thing of the past.

****

ZS2OB DX TROPHY.

This trophy is made available to the Port Elizabeth Branch to be awarded on an annual basis to the member who, in the opinion of the Committee serving at the time, has established two way contact with the greatest number of dx stations on the HF bands during the branch year. The trophy takes the form of an engraved silver cup, which shall be awarded to the winner at each Branch AGM, together with a printed certificate. The cup will remain the property of the Branch, and must be returned to the Branch just prior to the AGM. The accompanying certificate will remain the member's property. The winner will be decided by the Committee after scrutiny of the logbooks of those who wish to qualify for the award. QSL cards need not be submitted. The certificate will carry certain endorsements, i.e. CW only, SSB only, RTTY only or any other mode only, or mixed. All the available bands (HF) from 1,8 to 30 mHz may be used, but special endorsements will be made should the winner have used only the bands below 10 mHz. Contacts made during the various DX HF contests are permissible.

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VHF TROPHY.

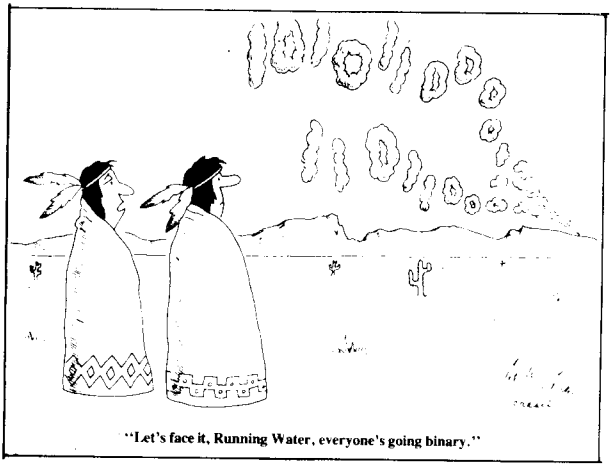
This silver cup is awarded to a member of the Branch who proves his outstanding achievements on any of the VHF bands. Proof must be submitted to the Committee for their consideration. A certificate will also be presented to the winner.

AGM'84

Once again, you will find an envelope enclosed for your donation to the 1984 AGM fund. That is, if you have not paid your donation all in one go. First of all, we would like to thank all those who have already contributed, and thanks to all those who we know will be generous in their contributions in the future.
Members have never been approached to donate in this manner before, but short of having other fund-raising ventures such as raffles and jumble sales (which most people don't like anyway, and usually only the same few get involved in those) there does not seem to be an alternative way of spreading the load over all the members and so making the burden lighter for all and make sure of attaining the budget.
The last AGM here was ten years ago and the one after 1984 could be as long or even longer away. We know we can rely on you all to do your "fair share".

AN EDITOR'S LAMENT.

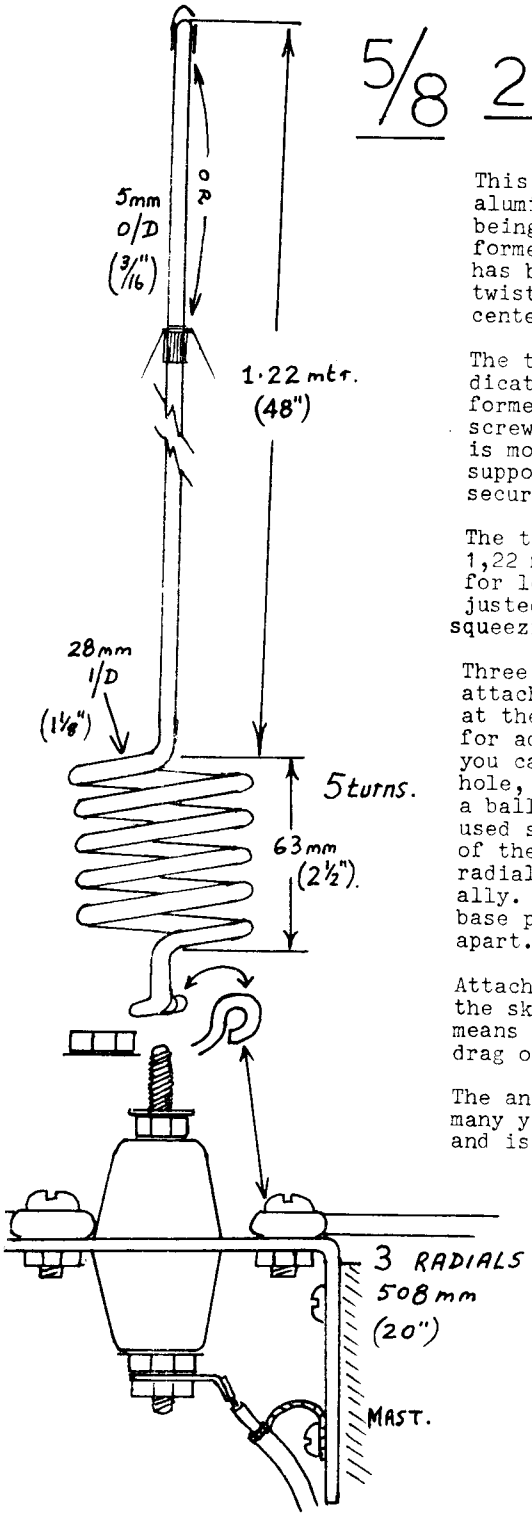
The typographical error is a slippery thing, and sly:
You can hunt it until you're dizzy, but it somehow will get by
Until the plates are off the presses, it's strange how still it keeps.
It shrinks down into a corner and it never stirs or peeps.
That typographical error, too small for human eyes,
Till the ink is on the paper, when it grows to mountainous size.
The Editor stares in horror, then grabs his hair and moans
The copy reader drops her head upon her hands and groans.
The remainder of the issue may be clean, as clean can be,
But that typographical error is the very thing all see. (Anon.)



"Let's face it, Running Water, everyone's going binary."

5/8 2 MTR VERTICAL

Bill ZS6KO



This antenna is constructed from 5mm aluminium rod or wire, the coil section being close wound over a 25mm pipe or former, which is removed after the coil has been formed. The two ends are twisted inwards and then outwards, centering on the coil.

The turns are then spread apart as indicated in the sketch. An eye is formed at the one end to fit over the screw of the stand-off insulator which is mounted on the base plate used to support the three radials and also to secure the antenna to a mast or pole.

The top section is made longer than 1,22 meters to start with, and is trimmed for lowest SWR. The SWR is also adjusted by expanding the turns apart or squeezing them together.

Three pieces of nylon fishing line are attached to the top vertical section, at the top or 1/4 to 1/3 from the top for additional support, using any means you can devise, or by drilling a tiny hole, using coax sheathing or parts of a ball-point pen. The latter I have used successfully. The opposite ends of the nylon lines are tied to the radials, holding the radiator vertically. The radials are screwed to the base plate through holes drilled 120° apart.

Attach the feedline as indicated in the sketch securing it to the mast by means of insulating tape, to keep the drag off of the connections.

The antenna has been used by me for many years, requires minimum maintenance and is inexpensive to make.

"So, how are we doing on fuel?"

TROUBLE WITH YOUR BEAM ROTATOR ?

Here's some ideas from QST

☐ If your antenna is slow to rotate, don't go immediately climbing your tower to service the rotator. First suspect the control box. CDR antenna rotators (as well as many other types) use a phase-shift motor in the rotator unit. The phase-shift motor has two windings connected in series. One winding is excited by an in-phase current directly from a 28-volt transformer in the control unit; the other winding is excited by

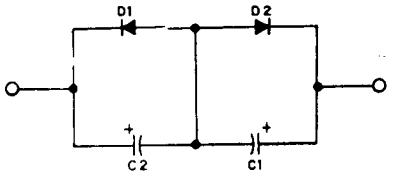


Fig. 3 — Method of connecting two diodes and two electrolytic capacitors to provide a large capacitance that will pass alternating current, as discussed by WØPD.

the same transformer, but its phase is caused to lead the current in the first winding because of the electrolytic capacitor in the control box. The control unit alternately switches the capacitor and leading current into either of the two motor windings, depending on the direction of rotation. To check the control unit, you must measure two ac voltages and determine their ratio. The voltages across the two motor windings can be measured at the terminal panel of the control unit without disturbing the remote wiring. On all CDR control units, terminals 1 and 8 are for one motor winding, and terminals 1 and 4 are for the other. (For other manufacturers' control units, consult the schematic diagram.)

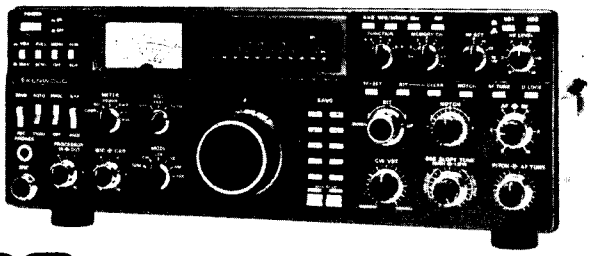
Measure the two ac voltages while turning the rotator clockwise. A voltage ratio of about 30:25 is normal for CDR rotators. If the ratio is around 30:15, the capacitance of the electrolytic has decreased and the rotator will turn more slowly. As the ratio approaches 30:8, the speed will be very slow. Repeat the measurements with the rotator turning counterclockwise. The ratio should be the same, but the voltages reversed with respect to the two windings. Should the voltage ratio be unity (30:30) in these tests, suspect that one of the motor windings or its associated circuit is open.

As you probably realize, an electrolytic capacitor is a poor vehicle to pass alternating current. A suitable paper capacitor would be prohibitively large, however. The electrolytic capacitor in the CDR control unit apparently lasts from six months to three years. There is a trick that can greatly lengthen the life of this capacitor, shown in Fig. 3.

This "fix," as originally designed and suggested by Irving McNally, K6WX, provides a means of using two electrolytic capacitors for passing ac without violating polarity requirements. There is sufficient space in the CDR control unit to add the additional components. Current on one half of the cycle will flow through D1 and C1, but D1 will short out C2, preventing reverse polarity on C2. By the same token, D2 prevents reverse polarity from appearing on C1. C1 and C2 should be equivalent to the capacitor originally contained in the unit. D1 and D2 may be any silicon rectifiers having a rating of at least 100 PRV at 2 A dc.

Another item of interest in preventive care has been brought to my attention by our Canadian friends. Many hams in extremely cold climates take apart the rotator units and replace the existing grease with snowmobile grease, available at stores where snowmobiles and associated equipment are sold. — *C. Bill Wilkinson, WØPD, 3103 East Pikes Peak, Colorado Springs, CO 80909*

KENWOOD



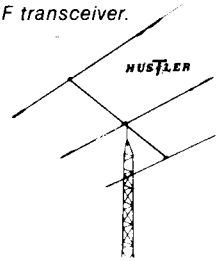
TR 2500

The TR-2500 is a compact 2 meter FM handheld transceiver featuring an LCD readout, 10 channel memory, lithium battery memory back-up, memory scan, programmable automatic band-scan and Hi/Lo power switch.

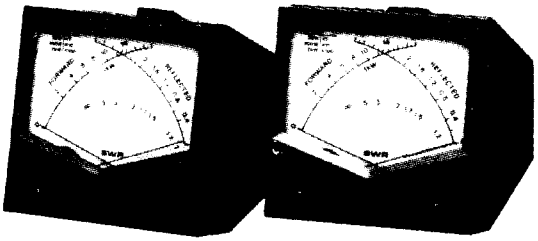
Kenwood's TS-930S HF transceiver.

KENWOOD

hy-gain



DAIWA POWER METERS



CN540
50MHz · 150MHz

CN520
1.8MHz · 60MHz

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