

# 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.**

12 JUL 1991

PORT ELIZABETH BRANCH.-- COMMITTEE MEMBERS, NAMES AND TELEPHONE NUMBERS.

CHAIRMAN: Dick Schonborn ZS2RS. Home 322111 Business 544545  
V/CHAIRMAN: Brian Weller ZS2AB Home 303498 Business 21173  
SECRETARY: Marge Weller ZS2OB Home 303498  
TREASURER: Frank Burrell ZS2CY Home 511259  
MEMBERS: Sel Staples ZS2SS Home 304651 Business 544660  
Peter Tiedt ZS2PS Home 713612 Business 521684  
Trevor Elliot ZS2TJ Home 303591 Business 45731

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BULLETIN ROSTER JULY/AUGUST .

JULY 12: Trevor ZS2TJ. JULY 19: Dick ZS2RS. JULY 26: Brian ZS2AB.  
AUGUST 2: Marge ZS2OB. AUGUST 9: Frank ZS2CY. AUGUST 16: Peter ZS2PS.

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All amateurs are invited to participate in a "Home Brew" exhibition at the Crusaders Club, Park Drive, Port Elizabeth on Friday 17 July at 8.00pm.

Bring along any construction project in which your fellow Amateurs may be interested, whether completed or not. Come and enjoy a general ragchew and see the faces behind the voices. Bar facilities are available. There will be a lucky draw and prizes will be presented.

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The evening will be rounded off with the viewing of an interesting video.

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Entrance to Crusaders ground through main "Frielinghaus" gate in Park Drive. Enter club at rear of grandstand, proceed up stairs. Lounge and bar at top of stairs.

For any further info contact Dick; 544545, Brian 21173, Marge 303498, Peter ZS2PS 713612.

A range of the latest Kenwood amateur equipment will also be on show.

THE CARE AND MAINTENANCE OF NICAD (NiCd) BATTERIES WITH A VIEW TO ENSURING  
THEIR LONG LIFE.

Peter Sawyer ZS5DN.

(With acknowledgement to CQ News Letter - Durban Branch)

PART 1 : The NiCd cell (General)

The Nickel-Cadmium cell was developed between 1893 and 1909 by Jungner and Berg. The NiCd cell is similar to the Edison cell, but cadmium (Cd) replaces iron (Fe) as the material from which the anode is made. The NiCd cell has a lower rate of self-discharge, has a higher percentage of capacity at low temperatures, and it may be correctly trickle-charged without damage.

NiCd cells are widely used in batteries designed to power portable radio sets, and cells may be damaged if they are not properly used and maintained.

As NiCd cells may be stored in either the charged or discharged state, when they are received from stock they may be fully or partially charged or discharged. The most convenient approach to these possibilities is to place the battery into service or onto a dummy load until such time as it has been discharged. Discharge may be assumed at the moment when the radio set ceases to function normally or when the voltage of the battery equals 1,0 times the number of cells in it.

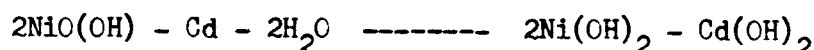
In cases where the cells will be automatically charged 'on float' when they are in service, it is preferred to discharge the cells to 1,0v and then to charge them by means of a constant current device at the ten hour rate, but for approximately 14 H, then to place them in the radio set. A NiCd cell has a charging efficiency of approx. 60% thus at the 10h rate 140 % charging is needed at approx. 25 deg C.

It is now opportune to mention that a partially discharged battery may benefit from two deep cycles of discharging and charging before it is placed into service.

Some notes on temperature may prove of interest: 4,4 deg C is the lowest temperature at which the 10h charging rate may be applied. At 1,0 deg C the 12,5 h rate is the highest possible. At -18 deg C the 20 h rate is the limit.

It is undesirable to discharge the NiCd cell completely. The capacity of the cell is affected by the rate of discharge. For a final voltage of 1,125 the 10h rate results in 104% capacity, the 5h rate approx. 93% and the 1h rate 80%. (See graph on next page).

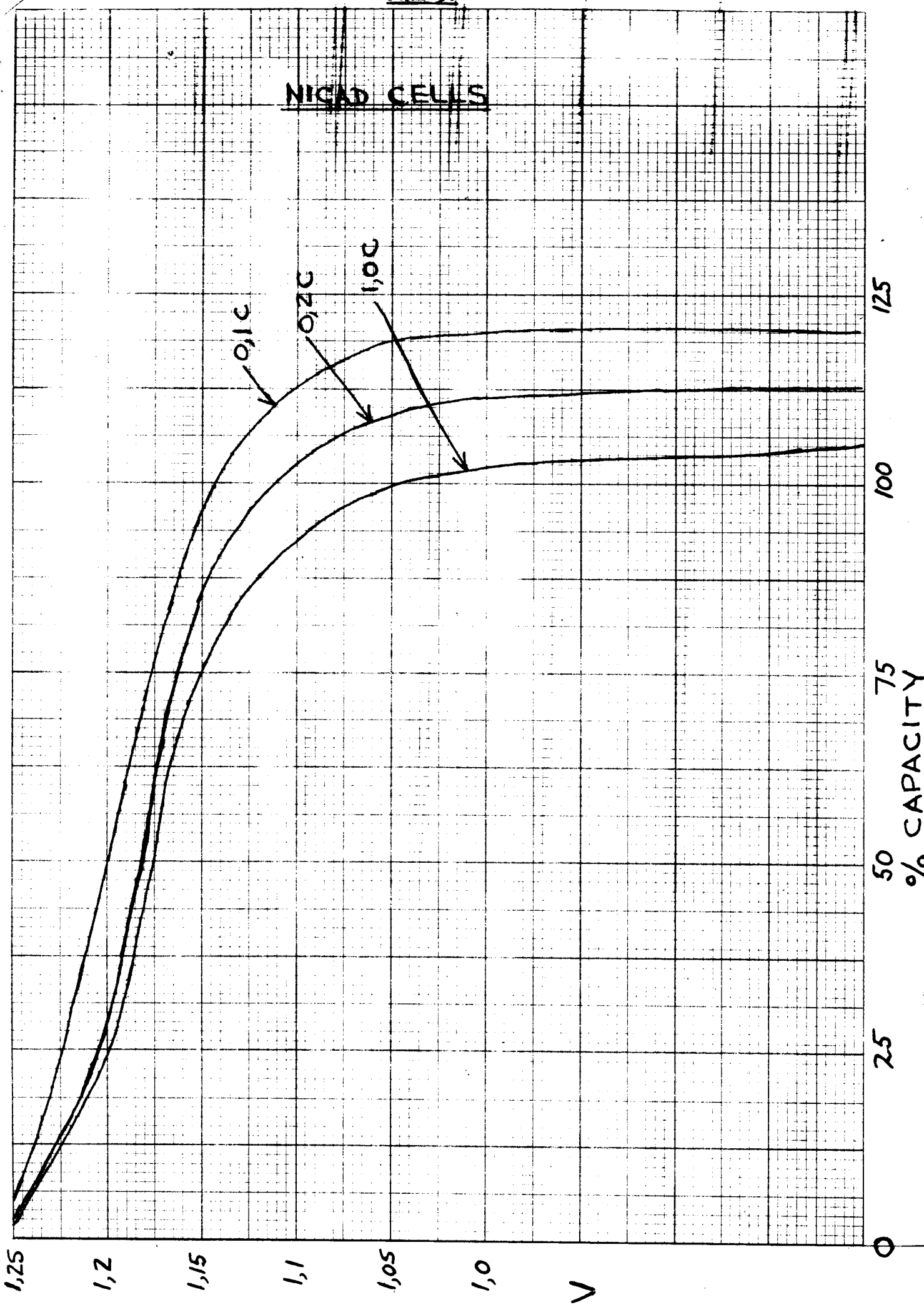
Cells discharged completely sometimes assume a reversed polarity. They will then be useless and oppose the voltage of the battery. At discharge currents of less than C/5 cells rarely reverse, and this is becoming less of a problem with improved design techniques which provide closer capacitance tolerances during manufacture; for instance a well-known brand of cell has a discharge time variance between cells of approx. 3 mins. at the high rate of C/1, i.e. from 57 to 63 minutes. The chemical reaction of discharging is :



PART TWO NEXT MONTH.

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- FOR SALE: 1) Complete station comprising Collins 75A4 hamband receiver fitted mechanical filters, and Viceroy Mark 3 CW/SSB Transmitter complete with microphone and Dowkey Changeover relay. With handbooks. Perfect condition. R400.  
APPLY: Buck ZS2RM, P.O.Box 5181, Walmer 6065. Phone 732207.
- 2) HEATHKIT SB101 SSB/CW Transceiver complete with matching Speaker/Power Supply. Recently completely overhauled and in good working order. Standing here wasting space. Manual available as well. R350 or reasonable offer. APPLY: Brian ZS2AB. Phone 303498 (Home).
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NICAD CELLS



LETTER RECEIVED FROM RAY CONNOLLY ZS2DX.

Ray Connolly,  
Apt. 32,  
55 West Center Street,  
North Salt Lake,  
Utah. 84054.

Hi ZS2PE and readers,

Greetings from alias ZR2CQ, ZS2DX, G4LLN and soon with the suffix "Portable W7" for operating from Utah on a guest licence. I will endeavour to keep this written QSO short, otherwise I'll have ZS2 "Old Boy" doing a great editing job.

Well after leaving "Joeies" in the summer of mid-February, we arrived in the cold of London about 12 hours later on the first leg of our long, long journey. Staying with various members of my scattered low land Scottish clansmen, we toured England and Scotland in a rented car for 10 days. Believe it or not, but it never rained once and we encountered snow only on two brief occasions way up north, but it was very cold.

We toured places such as Windsor Castle, Stratford-upon-Avon (Shakespeares birthplace) Blenheim Place (Churchills birthplace), the Lake District of England and the bonnie braes of Scotland. Not forgetting our tired feet from walking London flat for two days. I wouldn't recommend guided tours in the UK. It is so easy to get about on your own and the motorways definitely rate the best that I've seen yet! But boy, do those guys drive - speed limit is supposed to be 70 mph but on occasion we pushed our Escort up to 90 mph just to see what speed the other guys were doing; and a few still passed us. (P.S. don't eat at the motorways cafes - YUK! ) While in London I visited the Home Office and spoke with a Mr. Nuttall through whom I successfully applied for my British callsign. The cost was £8 and it was forwarded onto the USA via my cousins QTH in Britain. The purpose being to use my G4LLN to apply for the USA guest permit.

We left for New York on the last day of February, transferring to another flight for Syracuse, northern N.Y. state where we were met by a friend of mine. We thoroughly enjoyed our stay in his small village Lyons, midway between Syracuse and Rochester, and prolonged the visit for two weeks. Once again the weather was super and we enjoyed our first heavy snowfall. With his assistance we purchased a 1975 Chev Impala for 1200 dollars. The car was in real good shape and its still going strong today. By the way, the motel there cost the four of us 100 dollars a week - where can you beat that ?; and it was very clean and comfortable.

We left for Niagara driving ever so cautiously in our "tank" on the "wrong" side of the road. We then crossed into Canada and stayed the night in Burlington, just south of Toronto. I must add at this point that the only radio with us was a CB Sidebander 6, as I just didn't want to run the expense of adding crystals to the Kenwood TR 2200 g which I left behind in PE. I discovered that most of the Canadians operate around 146 Mhz. (The CB was for emergency use). However we stopped in Burlington to find a Radio Shack USA/Canada no longer stocks ham equipment as such and now concentrates on hi-fi and computers - not forgetting CB stuff. It was just on closing time when we arrived and the manager (keen to get out) gave me a phone number for a guy Rae Baker whom I phoned and was promptly invited to their flea market that evening. Well I unloaded the family at the Ponderosa Motel, had my four S's and found my way to the central arena. What a flea market! It looked more like a garage sale. Everything from Gramophones and TV to you don't know what. Rae met me on 'Q' and introduced me around to a few locals. One OM - Mel Waterdown VE3QU mentioned that he frequently chews the rag down your way and specifically mentioned ZS2MX. I must say the flea market was very well supported. It appears that each person sells for his own pocket and contributes something to the club. I was also amazed that they all spoke of visiting the Rochester (USA) flea market due in April and thought nothing of the journey.

We headed North via North Bay Ontario for Timmins in the northern territories and where the road ends, where we visited another friend and family. Then south via a different route crossing back into the USA at Sault St. Marie at the intersection of Lakes Superior and Huron. Down to Chicago then due west to Salt Lake City. We could have stayed in Canada for our westward journey as the gasoline is cheaper and the Canadian dollar is 80% the value of the USA dollar but motels and food are very expensive that side of the border.

We finally arrived at my sisters QTH late in March and now have set up home in a flat. So it's back to job hunting to replenish the piggy bank. Salt Lake City is really attractive - just about surrounded with 10 000 foot mountains. I hope we can manage to shoot skip over that lot into PE in the near future. Once my guest permit arrives, I'll be using a Gonset rig which I bought for 100 dollars and a wet shoe string antenna. So keep the 'big ears' open. I would greatly appreciate someone sending me a card setting up a sked. That is if you have all dried out the equipment by now - we heard all about the flood - what a mess!! I trust you are all well.

Best 73's, especially to ZS2PD for my ZR callsign, ZS2AO and ZS2KX for my ZS callsign, and to ZR2CF for information leading to my GALLN callsign. Finally to ZS2OB for editing and typesetting from my handwriting. (Sorry Ray, she didnt do it - I did de ZS2AB)

God Bless,

Ray and family.

P.S. For visitors to the Toronto area, the most reputable and friendly radio repair and service store is: Lakeshore Electronics, 3106 Lakeshore Blvd. West, Etobicoke, MV8 1L2. Phone 259-7135, manager Ray Hyde. He is a ham - top class guy.

## NEWS

ANOTHER MOVE PENDING: We are very sorry indeed to have to announce that another of our active members and friends is about to QSY to Johannesburg on transfer. OM Sel ZS2SS will be leaving P.E. at the end of July to take up a new position with his saltmine in Div.6. Sel has been a very keen Branch supporter and committee member, and has put our division on the six metre map well and truly. We would like to wish you every success in your new venture Sel, and look forward to making contact from time to time.

P.L.C. GAINS ANOTHER MEMBER: The Permanent Loafers Club has just gained a new member in the person of Seymour ZS2RX!! OM Seymour went on pension from the end of June, and he and his XYL are leaving on July 28 for an extensive overseas holiday. This will last about two months, and will include a visit to Holland, a bus tour to Denmark and a bus tour around the Lake District in the UK. Seymour has said that he will spend some of his free time putting up some decent antennas. We certainly hope that you enjoy your retirement to the full, Seymour, and make the most of your holiday.

GRAHAMSTOWN REPEATER: The recent trip to the Grahamstown repeater site to undertake bush clearing and equipment maintenance was attended by a large number of local and Grahamstown hams as well as several who travelled all the way from East London. Our thanks go to Jeff 2GJ, Colin Robertson, Seymour 2RX, Viv ZR2CI, Ron ZR2DK, Colin 2AO, Dick 2RS, Fred Bonthuys, Bill Hodges, James Crichton, Sel 2SS, Darryl 2CZ, Alan 2Z, Brian 2AB and Marge 2CB, Barry ZR2DN, and various members of the various families. Your help was greatly appreciated.

RECIPROCAL LICENCING: June ZS2JJ has just been advised that she and Mike ZS2MJ have been awarded reciprocal licences by the Canadian Licencing Authorities which will allow them to operate using their ZS calls during their forthcoming trip to that country. They are leaving home on the 15th of July for six weeks. Amongst others they will be staying with Bob W9MVX who was their guest in SA recently. June has promised us a write-up of the trip for QSX after they return on August 31. We wish you a safe and pleasant trip Mike and June, and look forward to hearing all the details on your return. P.S. These are the first ever reciprocal licences to be issued to ZS amateurs by Canada. Congrats folks.

# ON SALE THIS MONTH

 **KENWOOD**



## TS-130S SPECIFICATIONS

### (GENERAL)

Frequency Range..... 80m Band 3.5-4.0MHz  
 40m Band 7.0-7.3MHz  
 \*30m Band 10.1-10.15  
 (10MHz WWV)  
 20m Band 14.0-14.35MHz  
 \*17m Band 18.068-18.168MHz  
 15m Band 21.0-21.45MHz  
 12m Band 24.89-24.99MHz  
 10m Band 28.0-29.7MHz

\* Receive only. After government amateur authorization, you can modify TS-130S very easily to transmit on the new 30, 17, and 12 meter bands.

Mode..... SSB/CW  
 Antenna Impedance..... 50 ohms  
 Frequency Stability..... Within 100 Hz during any 30 minutes period after warmup.  
 Within 1 kHz during the first hour after 1 minute of warmup.

Semiconductors..... IC..... 20  
 Transistors..... 18  
 FETs..... 91  
 Diodes..... 190  
 MPU..... 1

### Power requirements

TS-130S		TS-130V	
RX:0.7A	13.8V DC	RX:0.7A	13.8V DC
TX:19A	13.8V DC	TX:4A	13.8V DC

### Dimensions

TS-130S  
 241 (9.6)W x 94 (3.8)H x 293 (11.7)D  
 mm (inch)  
 TS-130V  
 241 (9.6)W x 94 (3.8)H x 235 (9.4) D  
 mm (inch)

### Weight

TS-130S 5.6kg (12.4lbs)  
 TS-130V 4.9kg (10.8lbs)

### TRANSMITTER

Final Power Input..... TS-130S  
 80m-15m Band..... 200 Watts PEP for SSB operation  
 160 Watts DC for CW operation  
 12m-10m Band..... 160 Watts PEP for SSB operation  
 140 Watts DC for CW operation

Carrier Suppression..... Better than 40dB  
 Sideband Suppression..... Better than 50dB  
 Spurious Radiation..... Better than 40dB  
 Harmonic Radiation..... Better than 40dB  
 Audio Input Impedance..... 400 ohms to 2,600Hz, within -6dB

### (RECEIVER)

Sensitivity..... 0.25uF at 10dB S/N  
 Image Ratio..... Better than 50dB  
 IF Rejection..... Better than 70dB  
 Selectivity..... SSB/CW WIDE 2.4kHz (-6dB), 4.2kHz (-60dB)  
 SSB NARROW 1.8kHz (-6dB), 3.3kHz (-60dB)  
 with optional YK-88SN filter  
 CW NARROW 500Hz (-6dB), 1.5kHz (-60dB)  
 with optional YK-88C filter  
 or 270Hz (-6dB), 1.1kHz (-60dB)  
 with optional YK88CN filter

Audio Output Impedance..... 4 ohms to 16 ohms  
 Audio Output..... 1.5 Watts

**Price R895**

**Less 10% Cash Discount**

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