

Q S X P E

ZS2PE

FREQUENCIES:

Bulletin	3640 Khz
	7098 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.

17 FEB 1962

PORT ELIZABETH BRANCH.

NOTICE OF MEETING.

THE NEXT MONTHLY MEETING OF THE PORT ELIZABETH BRANCH OF THE SOUTH AFRICAN RADIO LEAGUE WILL BE HELD AT THE Y.M.C.A., HAVELOCK STREET, ON FRIDAY 19th FEBRUARY, 1982, AT 8p.m.

GRAHAMSTOWN

OR BUST!

HOW TO GET THERE IN ONE EASY BUS RIDE.

On Sunday 7th March, 1982, the Port Elizabeth Branch will once again be hosts to hams and their families from all the branches in the Eastern Cape and hopefully even further afield. Last year, a most successful social get-together was held at the QTH of Alan Armstrong ZS2Z at Stones Hill and he kindly extended the invitation again this year for the use of his home. SO.....on Sunday 7th March, at 9a.m., a bus, sponsored by the P.E. Branch, will be leaving from the Checkers Hypermarket parking area, Greenacres, to take us all to Grahamstown. The cost will be R2.50 per person, and members are asked to bring their own eaties and drinkies along. Braai facilities will be provided, and Alan has promised to do his best regarding the weather. For those interested, a trip will be made to the Monument and the Settlers Museum. A V.H.F. and H.F. station will also be set up for those who wish to operate. The return time is approximately 3.30p.m. PLEASE, IF YOU WISH TO COME ALONG, LET ANY OF THE COMMITTEE MEMBERS KNOW AS SOON AS POSSIBLE.

TECHNICAL CLASSES CONTINUE AT THE QTH OF COLIN, ZS2AO, 5 HAMERKOP STREET, COTSWOLD EXTENSION ON THURSDAY EVENINGS STARTING AT 7.30, AND IF YOU KNOW OF ANYONE WHO WOULD LIKE TO ATTEND, PLEASE LET THEM KNOW.

HEARTIEST CONGRATULATIONS: to Brian ZS2TY for obtaining his M.Sc. Agric. recently, in spite of a few typing errors in his thesis! May you go from strength to strength Brian. Very well done!

:to Fred ex ZR2DQ for his call ZS2EQ.

:to Clive for his call ZS2RT. Happy hamming.

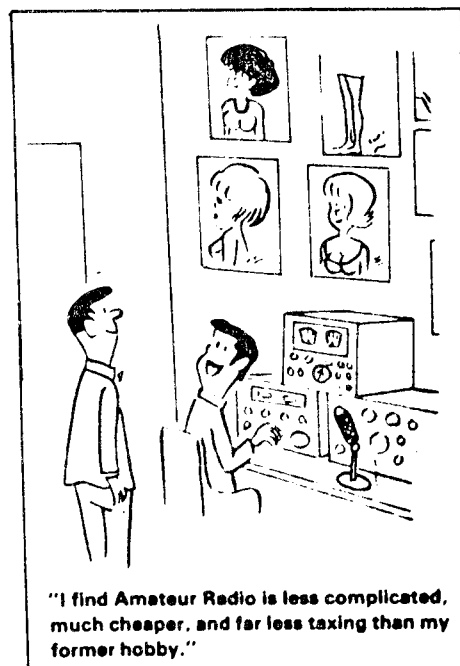
BULLETIN ROSTER.



28th February	Fred32429(0422)
7th March	GTN trip
14th March	Dick 322111
21st March	Brian 303498

Please let the readers have any news for the bulletin, preferably the Saturday evening before. Thanks a lot.

DON'T FORGET THE THREE BRANCH TROPHIES WHICH WILL BE PRESENTED AT THE 1982 A.G.M. FOR FULL DETAILS, PLEASE REFER TO YOUR SEPTEMBER 1981 ISSUE OF QSX-PE.



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 15TH JANUARY, 1982.

PRESENT: 19 members and visitors.

APOLOGIES: ZS2JR.

The Chairman welcomed all to the meeting, wished them a Happy New Year. Special greetings were extended to Marlene, Chris Barnes and all the ladies.

MINUTES: The Minutes of the November meeting, having been published and circulated in QSX were taken as read, proposed by ZS2PS and seconded by ZS2AB.

ARISING: -

FINANCE: -

GENERAL: The Chairman asked that those who had not yet paid their R5 for the travelling supper should do so as soon as possible so that all the loose ends could be tied up.

The Chairman said that he had spoken to John Herbst who apologised for his non-appearance, but he had not realised that it was a positive commitment. He was prepared to give a talk this year. With regard to the Ciskei trip, everything had gone off well. Thanks were extended to all those who had participated and to Peter ZS2PS for a well-written account of the trip. He hoped the pictures told a story. Frank said that he had enjoyed reading it. The Chairman reminded members of the trip to Grahamstown last year and said that the Branch had a standing invitation from ZS2Z to repeat it. After discussion, it was decided that the Branch would take up the offer from Alan and that a bus would be organised to transport members and their families. This would take place on Sunday 7th March and would be advertised in QSX and on bulletins. An added attraction would be a trip to the Monument and the Albany Museum for those interested.

At the Committee meeting, it had been decided to definitely hold technical classes and these would be held at the QTH of Colin ZS2AO starting on the first Thursday of February at 7.30p.m. There would be no charge for the classes.

The Chairman thanked Brian and Marge for QSX and it was noted that the quality of the printing had definitely improved.

At this stage the Chairman referred to Headquarters bulletins, and said that at the last meeting, Lionel ZS2DD had referred to the lack of information regarding the launch of UOSAT. Lionel had subsequently received a letter from the President taking him to task and enclosing a copy of the minutes and a copy of the bulletin which had contained news of the imminent launch of UOSAT. In fact, Lionel had been correct, there had been no information of the actual launch and it had been wrong to send a letter of this kind to Lionel.

The Chairman said that tentative discussions had been had with regard to sending all Branches a questionnaire regarding their bulletin frequencies, in an effort to get the P.E. Branch Sunday bulletin away from the interference from Swazi Radio.

Peter ZS2PS asked when operation would take place again from S42A and suggested that the Branch get a permanent call sign. He had a TH3 beam which he would loan to the Branch on a semi-permanent basis. The offer was appreciated. The QSLs were still to be overprinted and written out before despatch.

CAN YOU HELP?

Complete service manual or diagram only of EDDYSTONE 750 HF receiver required. Will have photocopied and return. Please contact Brian ZS2AB at 30-3498 or 21173 (saltmine).

PAGE 3

The Chairman said that there would be a guest speaker at the next meeting. He said that the S.A.P. had a film which they would be willing to show at a meeting of 20 or more and the Chairman suggested that it might be a good idea for member's wives to attend also, as this showed what could be done in the case of assaults, muggings, etc.

The Committee was working hard to make the meetings interesting and to obtain guest speakers. It was very difficult to find film of interest for this type of gathering, especially when members don't make their likes or dislikes known. It becomes very difficult for the Committee to arrange.

There being no further business, the meeting was closed and tea was taken followed by a rag-chew.

sgd:
R.W. Schönborn ZS2RS
Chairman

sgd:
M.T. Weller ZS2OB
Secretary

CQ DX CQ DX CQ DX

NAVASSA ISLAND: KP2A and several other operators are reportedly heading for Navassa Island, KP1 on 16th March for a five day all-band expedition.

SVALBARD: SP2BHZ/JW is now JWØP and quite active. QSL either to SM5DQC.

SOUTH SHETLAND ISLAND: LU5ZI is active now through 15th February on all bands,

NORTH COOK ISLAND: ZK1CG will be on from North Cook Island for one week starting on 25 February.

HEARD ISLAND: It has been reported that VK9NS and SVØBK have combined forces for an assault on Heard Island, VKØ, which is set to go for the third week in March of this year.

ASCENSION ISLAND: ZD8TC is a regular on 21345 kHz at 2300Z. 5W1DQ often shows up at the same time on the same frequency.

WILLIS ISLAND: VK6YL is now the QSL manager for VK9ZG and VK9ZH.

NETHERLANDS ANTILLES: W1BIH has been issued the call P42J, which he will put on the air from Curacao for the ARRL DX contest, CW February 20 and 21 SSB March 6 and 7. Joun says that QSL's should be sent to W1BIH but not before 1 April 1982.

BRITISH VIRGIN ISLAND: K1IJU and friends will be on Tortola, British Virgin Islands, from 20 Feb through 4 March. Operation will be on all bands including 160 metres both CW and SSB. The four callsigns to be used are VP2VFI, VP2VFT, VP2VFU and VP2VFW. QSL's will go to K1IJU.

TRISTAN da CUNHA ISLAND: ZD9BV will be active after 25th Feb. Tune in to 21338 kHz after 2000Z for up to date reports.

ANTARCTICA: VP8ANT can often be heard on 14212 kHz after 0100Z. Richard expects to spend a lot more time on the lower bands now that his summer season is ending.

Our thanks to Lionel ZS2DD for sending us this information which was put out by W1AW on their DX bulletins during January 1982.

FOR SALE TOWARDS BRANCH FUNDS.

One KW Viceroy transmitter. All the old bands 80 to 10 metres. SSB and CW operation. Complete with service manual and diagrams. From the estate of the late ZS2DU. Value approx R100 or make a reasonable offer. On view at the QTH of Brian ZS2AB. Phone 30-3498 or 21173 (saltmine).

Jerrold A. Swank W8HXR
657 Willabar Drive
Washington Court House
OH 43160

Many thanks to Alan ZS6BTI
for this article.

The Earth Mover

— would you believe that this antenna changes its height above ground without moving?

A few years back I was listening to a W8 station in West Virginia tell about how he put a reflector under his 80-meter dipole and his close-in signal improved so much that he sold his linear. He talked only with amateurs within a couple of hundred miles, and he was very pleased with the results. It greatly reduced interference, too.

Recently, I had an inverted vee 40-meter dipole at 60 feet which was very good into places like Australia and Europe, but which was not really good into the USA up to 1500 miles. Since I had a pair of

phased verticals for DX use, I decided to lower the vee to 30 feet and found that it was much better into New Orleans and Florida but only fair into California.

I got to thinking about the West Virginia ham and also remembered that when I used to run Antarctic traffic with K1GZL he had tried what he called "a gadget," which was a reflector under his 20-meter driven element with three elements at 66 feet. We both had been talking to KC4VOS one night and he was shocked to get a report of S-6 when I was 20 over 9. Then he remembered that he still had

his reflector up, and he ran out and lowered it. When he came back he also was 20 over 9 in the Russian Antarctic Station at Vostok.

His superb 20-meter, full-size, three-element wire beam thought it was only 20 feet above ground and became a high-angle radiator.

Now, what do you do if you have room for only one antenna and yet want to have both DX and local coverage? The answer is the old half-wave line trick.

A half-wavelength line will repeat the impedance at the load that is present at the source. Thus, if you short a half-wavelength line it will show a short at the opposite end.

Let's take an inverted vee as in Fig 1. The apex is at 60 feet, and this is a good height for DX. Actually, since a half-wave height would be 68' 4", that would be best for a low angle, but since your electrical ground may be anywhere from 3 to 10 feet below the surface, 60' is good economical compromise.

Now let's place a reflector which is 5% longer than the driven element $\frac{1}{4}$ -wavelength below it. This is about 34'. Fig. 2 shows the difference between the radiation angle at 60' both

with and without the reflector.

The length of the coax line should be $\frac{1}{2}$ -wavelength multiplied by the velocity factor of the coaxial line. This is .66 for polyethylene line. Thus, the length of a half-wave line at 7.2 MHz is $492/7.2 \times .66$, which is 45' 1". If this is not long enough to reach the transceiver, use twice that, or 90'. Forget about the inches since you probably won't be operating exactly at 7.2 MHz most of the time.

Now, at the station end, install a SPST switch, perhaps a toggle, with which to short the line.

Remember that we are talking about a separate line to the reflector and *not* the feedline from the transmitter to the driven element. (See line A in Fig. 1; the feedline to the transmitter is at B.)

When you throw the switch closed, the reflector is in operation. When you open the switch, the reflector splits into two 20-meter lengths and has no effect on the antenna at 40 meters. Thus, you have a high-low antenna. Open switch—low angle; closed switch—high angle.

Be sure to run the coax down the tower at right angles to the reflector and

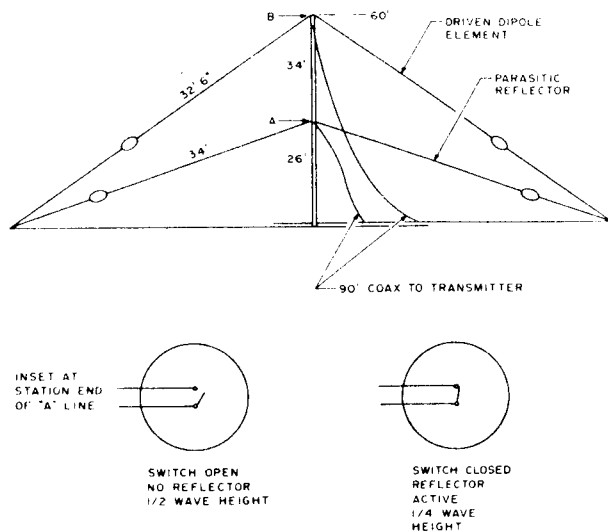


Fig. 1.

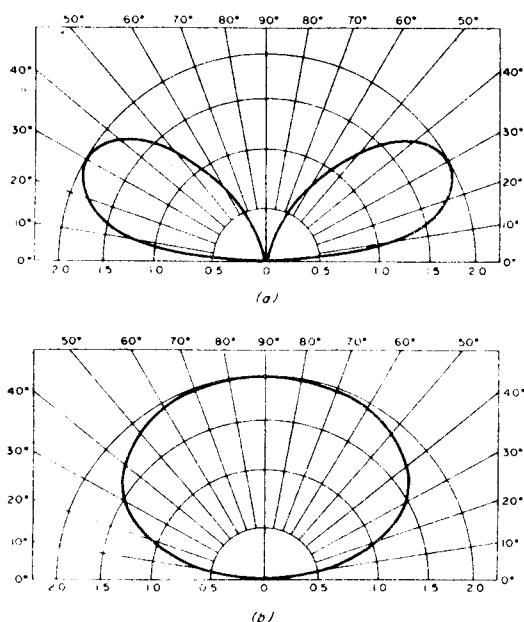


Fig. 2. (a) The radiation pattern with the reflector $\frac{1}{4}$ -wavelength below the dipole. (b) The pattern of a dipole $\frac{1}{2}$ -wavelength above the ground without reflector.

antenna to keep them out of the field as much as possible. Running them down inside the tower is the best way.

At this spacing there will be little or no change in the swr since the elements are a quarter-wave apart, and at that distance reflectors have little effect on the impedance of an antenna.

By the way, you can use RG-58 or RG-59 for the switching line to the reflector as there will be little power in the line. When the line is shorted it will take no power, and when the line is open it is detuned and still will take no power worth mentioning. As a matter of fact, you can use even twin-lead as long as you allow for the correct velocity factor of .82 and have a half-wave multiple.

This same principle will work for a flat-top dipole, of course, and will work fine on 75 meters if you have the space and that is your band.

If you are short of space and have two supports, you might try the method shown in Fig. 3. I have two towers 48 feet apart, and

this is not room enough for 40-meter dipoles. I want to put up a low pair of 40-meter dipoles using a set of four traps which Bill Pace of Pace-Traps designed for me. Then I will put an 80-meter vee on the tower where the 40-meter vee is now.

Pace-Traps will build a set of coils for you for whatever space you have available. Write them at Box 234, Middlebury CN 06762. They do beautiful work, but if you want to wind your own the information is in Fig. 4, for 40 meters. Be sure to weatherproof them so that snow or rain will not change the inductance. (Pace-Traps are completely enclosed and do not need the external insulator shown in Fig. 4.) They have now added this coil series to their line of traps, for shortened dipoles. My two sets are for 40 meters, 43 feet, and 80 meters, 63 feet.

I expect to have good signals out to about 1000 miles with the 40-meter dipole at 35 feet, and a strong signal out to about 500 miles with the reflector working. This will keep out

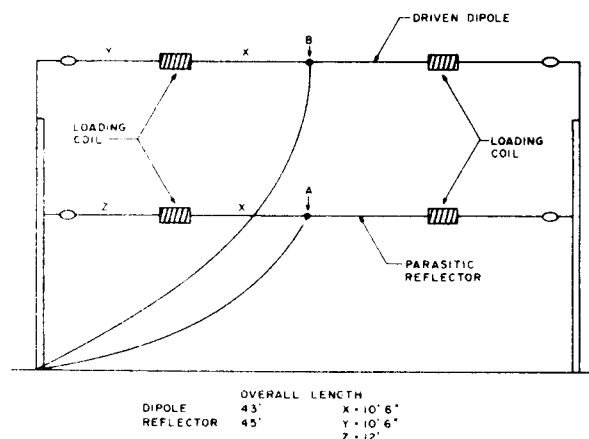


Fig. 3. All loading coils are identical.

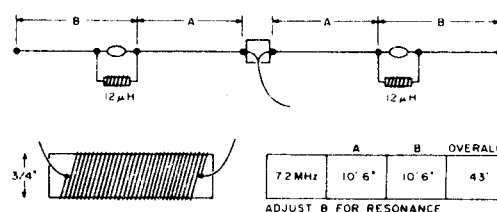


Fig. 4. Loading coil construction details. Inductance required is 12 μ H. Close-wind 52 turns of #16 enameled wire on a $\frac{3}{4}$ "-diameter plastic form. Windings should be $2\frac{3}{4}$ " long. Hang coil across insulator at distance A from center of antenna as shown.

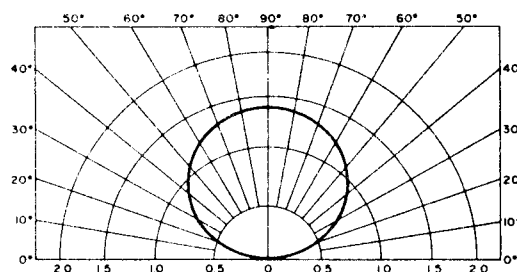


Fig. 5. The radiation pattern with the reflector $\frac{1}{8}$ -wavelength below the dipole.

distant interference when I am working in nearby states, as I do in the daytime.

The reflector will be 17' below the driven dipole— $\frac{1}{8}$ wave. Even at higher dipole heights the reflector can be 17' below it for even higher angle radiation. Fig. 5 shows the expected radiation pattern.

Some amateurs find that two to five reflectors about one or two feet above the ground below the antenna make a good substitute for

a poor ground condition. This would be especially good if you are a local rag chewer on 75 meters. You will not need high power, and will get less QRM for emergency work.

High antennas aren't the answer to all problems. One large manufacturer of commercial equipment says that this is a common mistake of his customers—the use of high antennas for short distance work, such as close-in ship-to-shore operation. ■

Things Remembered

-- ever heard of an 807?

Daniel T. Davis W8LUX
1610 E. McKinley
South Bend IN 46617

I've never really been too certain about what it takes to be called an old-timer — being licensed for 50 years, holding a two letter call, or perhaps having had your start with a spark gap transmitter. Whatever the specific element happens to be, memories have to play an important role, and this is an area where I'm making progress towards that "OT" designation.

After having been exposed to amateur radio for a quarter of a century and an actual participant in it for the past 20 years, I've begun to notice that a lot of things I once took for granted just aren't around any more.

Recently I put together a partial list of some of the things associated with amateur radio which were once important to me. Check it over and see if there's anything you recognize:

- Crystals for 80 and 40 meters that came in those rugged FT-243 holders.

- Those strange WV calls which were assigned to Novices briefly in the late 1950s.

- The thrill of using a VFO for the first time to explore the area below 3700 kHz.

- When you said "kilocycle" and everyone knew what you meant.

- A CW signal that was actually produced by a human being and not a device, mechanical or electronic.

- Blazing arguments about whether sideband would ever compete with AM.

- Transmitters that had a DSB mode.

- Building those Johnson or

WRL screen modulators as a means of getting on phone inexpensively.

- Discovering that the screen modulator really worked.

- The night I actually heard someone over six meters on my Hallicrafters S-53A.

- Catalogs from mail-order electronics supply houses that were 200 pages thick.

- When six or seven manufacturers published catalogs.

- All those surplus equipment stores near Arch Street in Philadelphia where a 110 V ac DPDT relay cost a buck.

- Row after row of ARC-5 equipment in those surplus stores.

- An 807 which didn't become gassy after 50 hours of use.

- The Viking Adventurer, Globe Chief 90, Heath AT-1, and all the similar transmitters that made it possible for a Novice with a school-boy's allowance to get on the air.

- Hearing the FCC examiner tell you that someone in Washington would send you your General ticket in about four weeks.

- Finding out that the examiner and the man in Washington were men of integrity.

- When you didn't have to own a linear and make an appointment to QSO on 20 phone.

- Something called 2½ meters.

- Or even 11 meters.

- Fidgeting with the BFO to unscramble those "Donald Duck" voices.

- A handful of guys fooling around with commercial FM gear on six meters.

- When it was rare to see a K-call in the "Silent Keys" column of QST.

- Almost coming to blows with someone over incentive licensing.

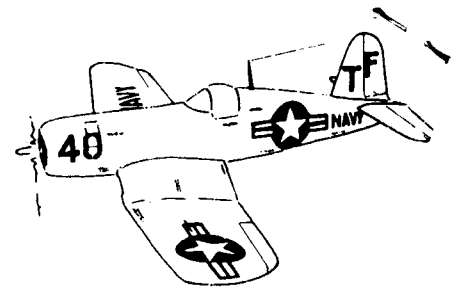
- When postage for a QSL card only cost two cents.

- An *enfant terrible* publishing a new ham magazine that was irreverent, humorous, and simply interesting to read.

- The *enfant terrible* has mellowed somewhat, but thankfully his magazine hasn't.

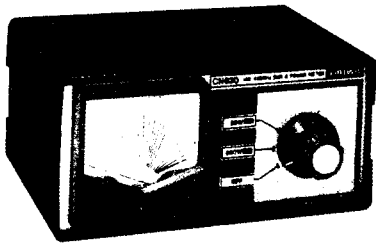
No, I'm neither ready nor qualified to be called an old-timer. I really look forward to my next 25 years in ham radio, but in my "middle age" I can't help but look back and, like the well-known comedian, simply say, "Thanks for the memories." ■

DON'T FLY AROUND WITH FLY BY NIGHT OPERATIONS.



You Want

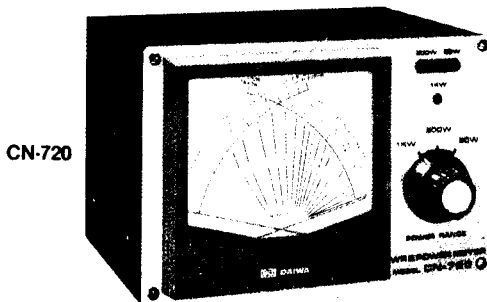
- Fast Service
- Fair Prices



CN-630

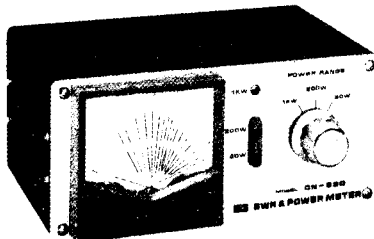
SWR & Power Meter Model CN-630

Simultaneous direct reading SWR,
Forward Power and Reflected Power.
Frequency Range: 140—450 MHz
SWR Detection Sensitivity: 5 Watts min.
Power: 2 Ranges (Forward, 20/200 Watts)
(Reflected, 4/40 Watts)
Tolerance: $\pm 10\%$ full scale
Input/output Impedance: 50 Ohms
Connectors: SO-239
Dimensions: 180 x 85 x 120 mm;
7.12 x 3.37 x 4.75 in.



CN-720

SAVE MONEY



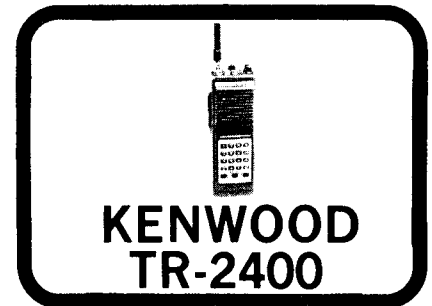
CN-620

SWR & Power Meters Models CN-720 and CN-620

Simultaneous direct reading SWR,
Forward Power and Reflected Power.
Frequency Range: 1.8—150 MHz
SWR Detection Sensitivity: 5 Watts min.
Power: 3 Ranges (Forward, 20/200/1000 Watts)
(Reflected, 4/40/200 Watts)
Tolerance: $\pm 10\%$ full scale
Input/output Impedance: 50 Ohms
Connectors: SO-239



**KENWOOD
TS-130S**



**KENWOOD
TR-2400**



**KENWOOD
R-1000**