

Radiation resistance for dipole cannot exceed $R_r = 80\pi^2 (\frac{l}{\lambda})^2$ & length

33 1/2 m available

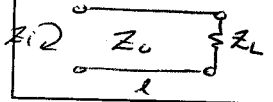
True Ray

with β the phase constant of the line, $\beta = \frac{2\pi}{\lambda} = \frac{2\pi f}{v_p}$; v_p phase velocity
 β in line

$$Z_0 = 276 \log_{10} \frac{2S}{d}$$

S - distance
d - od of wire } same (-) units

$$Z_i = Z_0 \left[\frac{Z_L \cos \beta l + j Z_0 \sin \beta l}{Z_0 \cos \beta l + j Z_L \sin \beta l} \right]$$



G5RV HOMEBREW

BOB OPPERMAN - ZS1ABO

So, you have a 20-15-10 meter beam ... and a forty metre Inverted vee .. what else do you need ... besides 2 m?

Well, these days have you heard the lively signals on 30 m or the 5x9+20 signals on 12 m State-side? If you are into RTTY or Packet the 30 m band is just for you. If we don't use it we may one day lose it. So what's wrong in going back to some old tried and trusted idea like the G5RV where you can operate all NINE Amateur Bands with little or no expense, requiring no baluns or traps, and a lot of fun thrown in.

I will not go into any design details as there has been so much coverage on this antenna. If you are short of design information, drop a line to Ragchew or the author Bob, ZS1ABO, but a good open feed line terminating in 50 Ohm coax will surprise you with results.

Yes, there was a lot of changing, only because I thought I would try to improve the learned professor Louis Varney's de-

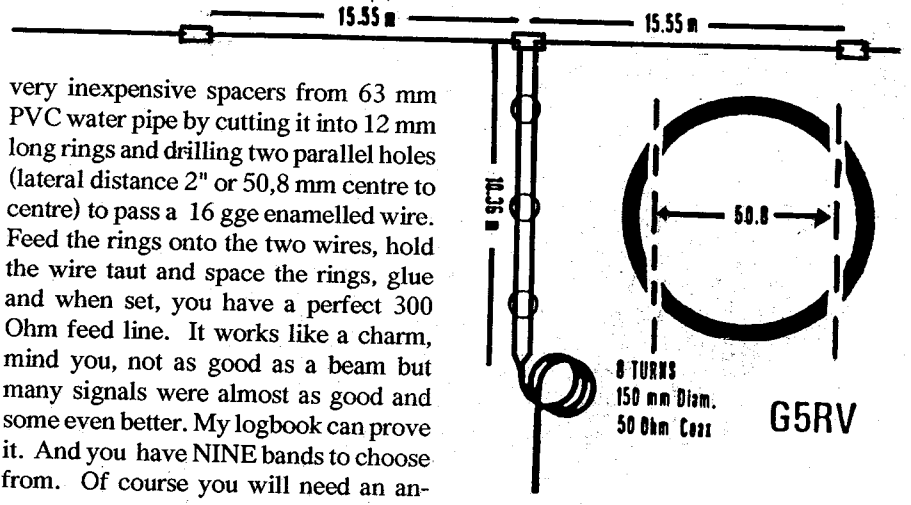
sign and one thing I learned was that there were no shortcuts. This good gentleman had the theory and principle completely ironed out.

About the open feed line; don't be tempted to use the Indoor or outdoor TV ribbon. These don't stand up to the changes in weather, instead I made some

tenna matching unit. If you don't possess one here is another simple and worthwhile project for you to tackle. Hope you have as much fun and learning by doing this as I have had.

If you wish to build this antenna, I can lend you a drilling jig for the PVC rings.

very inexpensive spacers from 63 mm PVC water pipe by cutting it into 12 mm long rings and drilling two parallel holes (lateral distance 2" or 50,8 mm centre to centre) to pass a 16 gge enamelled wire. Feed the rings onto the two wires, hold the wire taut and space the rings, glue and when set, you have a perfect 300 Ohm feed line. It works like a charm, mind you, not as good as a beam but many signals were almost as good and some even better. My logbook can prove it. And you have NINE bands to choose from. Of course you will need an an-



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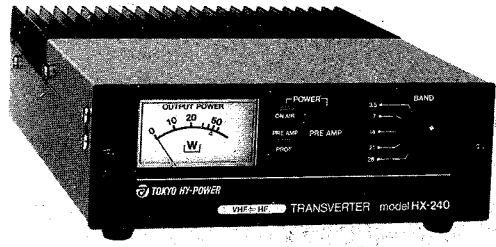
HF TRANCEIVERS:

- | | | |
|----------------|-------------|-----------------|
| YAESU FT 747GX | ICOM IC 725 | KENWOOD TS-140S |
| YAESU FT 757GX | ICOM IC 726 | KENWOOD TS-680S |
| YAESU FT 767GX | ICOM IC 765 | KENWOOD TS 440S |

TOKYO HY-POWER VHF TO HF TRANSVERTER MODEL HX-240 - R 1095

VHF TRANCEIVERS

- | | | |
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| YAESU FT 73T | | KENWOOD TH 46A |



- CREATIVE DESIGN MODEL 318 3 ELEMENT TRI-BAND HF BEAM R 1275
DIAMOND CP-6 6 BAND TRAP VERTICAL ANTENNA WITH TRAP RADIALS R 895
DIAMOND D-130 25-1300 MHz SUPER WIDEBAND DISCONE ANTENNA R 395
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SPECIFICATIONS:

- | | | |
|--------|-------------------------|------------------------------|
| BANDS | 3,5/7/14/28 MHz. | FROM 7B |
| MODE | SSB, CW, FM, AM. | May 92 059 Ads |
| OUTPUT | 30/40 watts. | Dark 160-10 200 ft |
| DRIVE | 2,5/10 watt switchable. | 80-10 10 ft |
| | | Half 40-10 51 ft |
| | | Quadr 20-10 26 ft |
| | | P2a |
| | | 80-10 102' 31' 300 ft in |
| | | 70' R2X-X |
| | | Durban 4001 |
| | | 40-10 51' 26' 300 ft feeding |

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