THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY

PO BOX 1838 WOLLONGONG NSW 2500

NO. 80/9 SEPTEMBER 1980

THIS MONTH'S MEETING:

Monday 8th September, 7.30 p.m. at the Congregational Hall, corner of Coombe and Market Streets.

The meeting will feature a talk and demonstration on metal detectors.

LAST MONTH'S MEETING:

Keith VK2OB presented a talk on quad antennas. Keith undoubtedly holds the current record in this area for both number and size of quads erected, so can speak with considerable authority. He presently has a 3-band 4-element quad in the air. The talk was illustrated with slides and a movie.

In the 3-prize raffle, Bill Stewart won a Drake low-pass filter, and Mike Keech VK2VXS and Leo Kleeborn VK2YJK each won a socket set.

Mike Kilpatrick demonstrated some of the new Ten-Tech gear for which Scalar are now the agents. The sight of the gear should help to spur on those sitting for the August examinations!

A quick head-count (which is getting more difficult these days) showed 57 people in attendance at the meeting.

Our thanks to both Keith and Mike for their entertainment and information.

COMING EVENTS:

November 10th (Regular meeting night): auction night.

December 8th (Regular meeting night): Dave VK2YKQ/VAV will be demonstrating slow-scan television and RTTY with his Apple computer, aided by Paul VK2ZQT with his Tono.

WICEN EXERCISE:

Jim VK2BBG reports that the WICEN exercise held at Bateman's Bay on 26/27 July was very successful. Eighteen amateurs participated, including Jim VK2BBG, Richard VK2ZVX, Col VK2NKG, and Les VK2VTF from the Illawarra. Communications were provided for the North Shore Car Club Rally, mainly on 80 metres.

SPECIAL EVENT:

The weekend October 18/19 is being planned as a combined Jamboree of the air and Field Day, to be held at Bass Point. Keep these dates clear, so that whether you have gear or not, you can get out to Bass Point and have a ball.

THIRD PARTY TRAFFIC:

Elsewhere in the Propagator is a transcript of Mr. Staley's Opening Address for the Remembrance Day Contest. Read it carefully - it contains the announcement that the prohibition on third party traffic by amateurs will be removed for non-commercial traffic. It will undoubtedly cause the biggest change to the Amateur Service since Novice Licencing.

NEW HANDBOOK:

The new Amateur Operator's Handbook is available now from the office of the District Radio Inspector, 86-88 Market Street Wollongong (cost $3-60). It runs to 105 pages, and in addition to the revised regulations includes syllabuses for the Novice, Limited and Full examinations, as well as sample examination papers.

MACELEC PTY. LTD.

KENWOOD
...pacesetter in amateur radio

Small wonder.

Processor, N/W switch, IF shift, DFC option

TS-130S/V

Incredibly compact, full-featured, all solid-state HF SSB/CW transceiver for both mobile and fixed operation. It covers 3.5 to 29.7 MHz (including the three new Amateur bands!) and is styled with optimum operating features such as digital display, IF shift, speech processor, narrow/wide filter selection (on both SSB and CW), and optional DFC-230 digital frequency control. The TS-130S runs high power and the TS-130V a low-power version for QRP applications.

TS-130 SERIES FEATURES:

160-10 meters, including three new bands
Covers all Amateur bands from 3.5 to 29.7 MHz, including the new 10, 18, and 24-MHz bands. Receives WWV on 10 MHz. VFO covers more than 50 kHz above and below each 500-kHz band.

Two power versions . . . easy operation
TS-130S runs 200 W PEP/160 W DC input on 160-15 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. Solid-state, wideband final amplifier eliminates transmitter tuning, and receiver wideband RF amplifiers eliminate preselector peaking.

Built-in speech processor
Increases audio punch and average SSB output power, while suppressing sideband splatter.

CW narrow/wide selection
"N-W" switch allows selection of wide and narrow bandwidths. Wide CW and SSB bandwidths are the same. Optional YK-88C (500 Hz) or YK-88CN (270 Hz) filter may be installed for narrow CW.

SSB narrow selection
"N-W" switch allows selection of narrow SSB bandwidth to eliminate QRM, when optional YK-88SN (1.8 kHz) filter is installed. (CW filter may still be selected in CW mode.)

Sideband mode selected automatically
LSB is selected on 40 meters and below, and USB on 30 meters and above. SSB REVERSE position is provided on the MODE switch.

Built-in digital display
Six-digit green fluorescent tube display indicates actual operating frequency to 100 Hz. Also indicates external VFO or fixed-channel frequency, RIT shift, and CW transmit/receive shifts. Also analog subdial for backup frequency indication.

IF shift
Allows IF passband to be moved away from interfering signals and sideband splatter.

Single-conversion PLL system
Improves stability as well as transmit and receive spurious characteristics.

Built-in RF attenuator
For optimum rejection of intermodulation distortion.

Built-in VOX
For convenient SSB operation, as well as semi-break-in CW with sidetone.

Effective noise blanker
Eliminates pulse-type interference such as ignition noise.

Built-in 25-kHz marker
Accurate frequency reference for calibration.

Compact and lightweight
Measures only 3-3/4 inches high, 9-1/2 inches wide, and 11-9/16 inches deep, and weighs only 12.3 pounds. It is styled to enhance the appearance of any fixed or mobile station.

Optional DFC-230 Digital Frequency Controller
Allows frequency control in 20-Hz steps with UP/DOWN microphone (supplied with DFC-230). Includes four memories (handy for split-frequency operation) and digital display. Covers 100 kHz above and below each 500-kHz band. Very compact.

Ask your Authorized Kenwood Dealer about the compact, full-featured, all solid-state TS-130 Series.

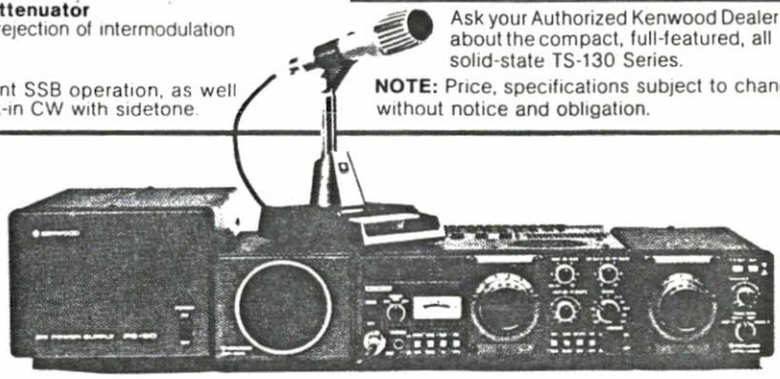
NOTE: Price, specifications subject to change without notice and obligation.

MATCHING ACCESSORIES FOR FIXED-STATION OPERATION:

- PS-30 base-station power supply (remotely switchable on and off with TS-130S power switch).
- SP-120 external speaker
- VFO-120 remote VFO
- MC-50 50kΩ/500Ω desk microphone

Other accessories not shown:

- 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 m, including 3 new bands)
- MB-100 mobile mounting bracket
- MC-30S and MC-35S noise cancelling hand microphones
- PC-1 phone patch
- TL-922A linear amplifier
- HS-5 and HS-4 headphones
- HC-10 world digital clock
- PS-20 base-station power supply for TS-130V



- SP-40 compact mobile speaker
- VFO-230 digital VFO with five memories

ILLAWARRA 80 METRE NET, 3.565 MHz, SUNDAYS 8 P.M.

The inaugural net on Sunday 17th August went very well, and will continue every Sunday night. It was especially pleasing to hear "out of town" friends on the net, including Brian VK4ST (ex VK2BCI), Ned VK2AGV portable 7, Ian VK2NJM, and Mario VK2NVP mobile Coonabarrabran. Other participants were Denis VK2DMR, Les VK2ALK, Gio VK2VPD, Dave VK2PBP, Paul VK2VVS, Jim VK2DLJ, Jim VK2NYY, Mike VK2VXS, and Dave VK2VOI. Eddy VK2PCK mobile /4 also joined in.

Special thanks to Rick VK2DAP for his job as net controller.

10 METRE NEWS:

If people in Parkes Street Oak Flats complain to you about having a stiff neck it's probably due to John VK2VWT's new landmark. Towering above his shack, reaching skywards towards the ionosphere is his new 10 metre antenna system - a half-wave ground plane above a three element beam.

The 10 metre band has been quite active from time to time. Contacts made by John VK2VWT between 22nd July and 3rd August include:

3D2FL Fiji
XE1EFT Mexico
EA7PW Spain
TI4DRT Costa Rica
YCØBRT Indonesia
KL7H Alaska
P29NDF Papua New Guinea
VK9ZG Willis Island
WA4CHE portable American Samoa
HL4YJ Korea
5Z4GX/A Kenya
HP1XHI, HP1XJZ, HP1XDI, HP1LB Panama
YJ8IND Vanuatu (New Hebrides)
VS5MS Brunei
9M2GZ Penang Island Malaya

REGIONAL WICEN COORDINATOR'S CONFERENCE:

Tentative date for this conference is Saturday 1st November in Sydney (the day before the Conference of Clubs). Monday 15th September is the closing date for receipt of agenda items for this conference. Direct any enquiries concerning WICEN or agenda items to Jim Potts VK2BBG, the Illawarra Regional Coordinator.

CONFERENCE OF CLUBS:

Definite date is Sunday 2nd November. Agenda items must be received in Sydney by Friday 19th September.

If you have any suggestions for agenda items, put them on paper, bring them to the September club meeting, and let a Committee member have them.

Illawarra will be represented at the Conference, and the agenda items provide a way for your ideas about amateur radio to be discussed at a State level.

FOR SALE:
Kenwood TS-520-S. A1 condition with mic., DC-DC converter and switchable power level for Novice use. $550.

Wagner 80 metre SSB transceiver base unit and portable unit, with circuit diagrams. Needs crystals or V.F.O. $40 each.

Contact Mark Ryan VK2NTD, phone (042) 742404

FOR SALE:
TS120V transceiver. 12 months old. Very good condition. $490.

Contact Jim VK2DLJ phone (042) 29 6329.

WANTED:
Two 12-volt generators or alternators with voltage regulators. Donation appreciated but prepared to pay if absolutely necessary.

John VK2BNG, phone (042) 74 1374.

THE ILL-FATED ARIANE ROCKET.

Examination has shown that "foreign object damage" may have caused the failure of the Ariane rocket carrying the latest Oscar satellite. Apparently a small metal tag was dropped into a fuel pump and this caused the failure.

UNITED KINGDOM TO LEGALISE "CB" RADIO.

Her Majesty's government have now issued a "green paper" which is a consultative document so that discussions can start regarding "CB" radio. It is understood that it will not be called "CB" but "Open Channel Radio" in the U.K. and that the proposed frequency will be in the nature of 928 MHz. The choice of this frequency is deliberate in order to avoid interference to television and other services operating at the lower frequencies and also to limit the range which is expected to be not more than about 8 KM in built-up areas. The paper indicates that those wishing to communicate over longer distances should qualify and obtain an amateur licence. The use of this higher frequency will mean that the equipment will be more expensive than the usual "CB" sets and we wonder how many years it will take to clear out all of the thousands of 27 MHz sets which have been smuggled in and are in use in this country. Incidentally it would appear that it is the intention to use FM only at this higher frequency.

GB2ATG TRANSMISSION SCHEDULE.

GB2ATG is the news service station of the British Amateur Radio Teletype Group operated in conjunction with the RSGB. Transmissions are on Sundays, on 14.090 MHz, at the following times (G.M.T.):

Summer Schedule:
07.30 Hrs beamed South West (Long path the VK and ZL)
15.30 Hrs beamed East accoss Europe (to the Far East)
19.00 Hrs beamed North West (To North America).

Winter Schedule:

08.30 Hrs beamed South West (Long Path to VK and ZL)
16.00 Hrs beamed East Across Europe (to the Far East)
18.00 Hrs beamed North West (to North America)

This year the winter schedule commences on October 26th.

- From GB2ATG RTTY broadcast,17th August.

P29 REPEATER:

The Goroka amateurs are setting up a 10 meter beacon, as well as a 2 meter repeater, on top of a 14,000 foot mountain. QRP tests have been carried out from the site and the Cairns repeater has been accessed. The permanent repeater will have an output power of 50 watts, so it looks like the repeater should be of great asset to the VK4 chaps, they may be able to work Japan through it.

PUBLICITY OFFICER:

"Amateur Radio" is looking for a publicity officer for each state. The position is unpaid, and will include the collection of advertising, articles and interesting information associated with amateur radio. If you are interested in helping your fellow amateurs in this matter contact the Editor of "Amateur Radio" at the head office in Melbourne - Box 150 Toorak Vic 3142.

- From VK2TTY RTTY broadcasts.

FOR SALE:

Ten metre 2 element quad on 30 foot rotating mast, for sale with all fittings. $150 o.n.o.

See Rick VK2DAP at meeting or home 59 Deakin St. Oak Flats.

Pixilated Patents

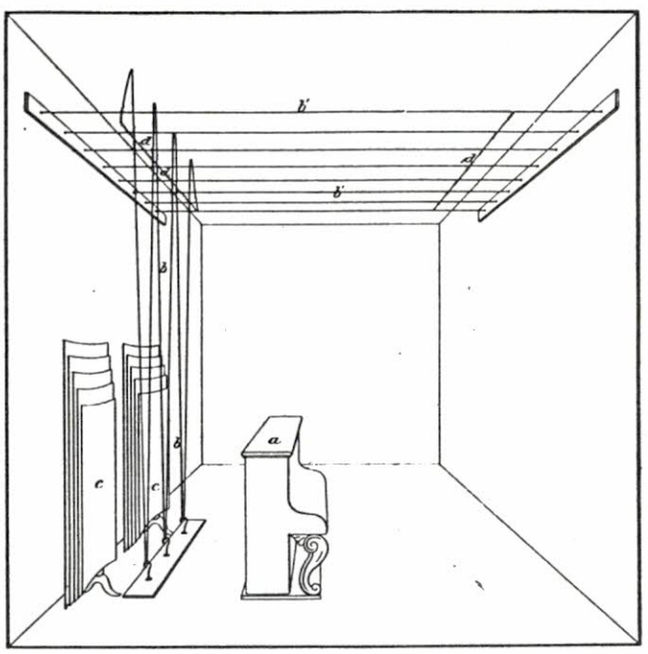
By Mike Rivise

"Silence Is Golden!"

This is No. 116 in a series of odd and interesting inventions in the electrical/electronic field from the files of the US Patent Office.

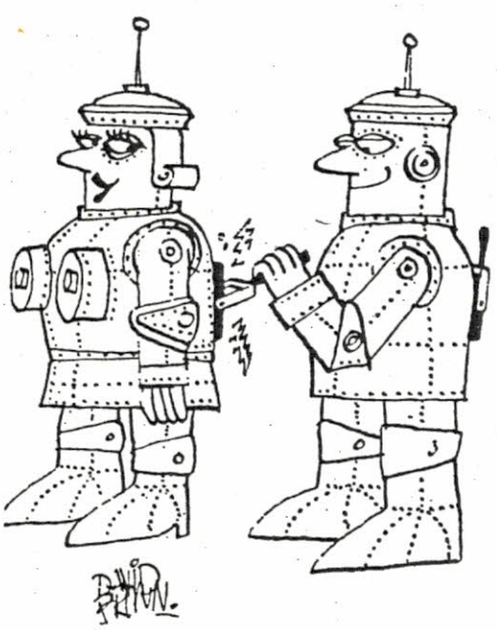
Does your wife have a screechy voice? Now don't be afraid to admit it; they all have—and it's especially noticeable whenever their mouths are open. Don't feel bad though, buddy, I think maybe I can help a little. I can't guarantee I'll stop the noise completely—only amputation of that rock hard knob on her shoulders or a little foam-in-place polyurethane resin in her throat could do that—but I perhaps can make your ears rest a little easier. Just follow these simple instructions.

Go out and buy a couple of reels of high strength steel wire and string rows of it a few inches from the walls and ceilings of all the rooms in your house, such as shown in the figure. Pull the wires up nice and tight with a block-and-tackle so they become tuned and readily pick up sound waves in the air and distribute these waves so quickly that they cannot do harm, and consequently no after-echo will be experienced.

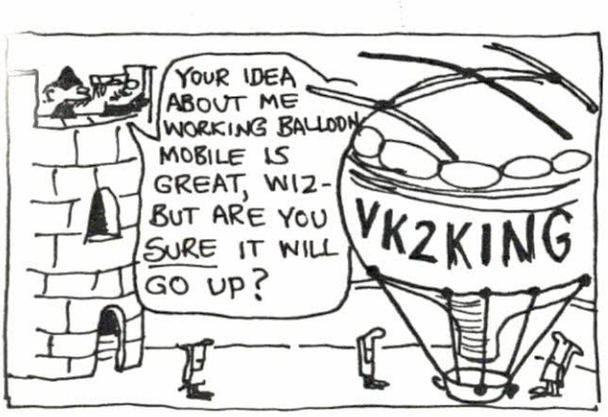


Although I have changed the story somewhat to protect the inventor and throw the ire of the opposite sex upon myself, the intent of the invention is still intact. He used the example of the sound of a piano, although we all know who he was referring to—she probably had legs like one. The inventor's name was Adam C. Engert and he was from Middlesex, England, a town whose name alone engenders curious implications. Adam obtained his patent in this country back on March 29, 1881, and was understood to have been welcomed to this country as a conquering hero and made honorary chairman of the Air Pollution Control Association, Noise Abatement Section.

Adam also described an additional advantage in his patent. Besides being capable of absorbing unwanted echoes, the wires were claimed to be useful in transmitting sound from one location to another. For example, wire under tension could be run from near the piano in the figure out through a window into the yard for people gathered to hear a recital. I, myself, find this additional advantage very useful, and in fact profitable, by running the wires from my wife's mouth out through a window and down to O'Hare Field to disperse the fog whenever the planes can't land.



"Oh, Howard, my sweet, you really know how to turn me on."



REMEMBRANCE DAY CONTEST 1980 - OPENING ADDRESS

The 1980 Remembrance Day Contest was opened on Saturday 9th August by Mr. Staley, the minister for Posts and Telecommunications. We reproduce in full Mr. Staley's address, which includes the very welcome granting of third party traffic privileges.

"It is with a great deal of pleasure that I received your invitation to open the 1980 Remembrance Day Contest.

"Since becoming minister for Posts and Telecommunications I've enjoyed close relations with the Institute. Indeed the aims and ideas of the Institute seem to me to be embodied in the contest itself. The contest is dedicated to the memory of those amateurs who laid down their lives in defence of their country during World War II, and personally I can think of no better way in which they would have wished to be remembered.

"This contest is also renowned for its friendliness and fellowship; in fact I understand it's sometimes referred to as "the friendly contest".

" The form of the contest not only demonstrates the very high degree of skill that amateurs have achieved but also shows the way in which such skills can be used for their fellow man in times of both national or international emergency. Here we have a contest founded to commemorate sacrifice and duty, renowned for its friendliness and fellowship, and in its format encouraging the development and refinement of communication skills. This event not only permits experienced amateurs to demonstrate their expertise but is in reality also an extension for the more inexperienced amateurs of the excellent training offered by the W.I.A. to its members.

"Let me take the advantage of the opportunity presented in talking at the opening of your 1980 contest to also mention some issues which are currently under discussion between the Institute and the Government.

"First I am very pleased on this occasion to be able to announce that the long standing prohibition on the use of third party traffic by amateur radio operators will be removed for non-commercial messages.

"As you will be aware the W.I.A. presented their submission for a restricted form of third party traffic in June 1977. Since that time there's been considerable discussion on this matter between my department and the W.I.A. There's no reason why this privilege may not be provided forthwith within Australia, but before any international traffic can proceed in this way we must await the agreement of the countries concerned. At this stage it would appear likely that only the United States may agree. My department will continue to discuss such aspects with the W.I.A.

"Certain legislative changes will of course need to be made to the Wireless Telegraphy regulations. In the meantime the conditions under which third party traffic will be permitted will exclude certain forms of radio communications mainly involving communications for the purpose of material gains such as advertising. I'll take the necessary steps to ensure that all bodies concerned with this change in policy will be advised in writing and that the required legislative changes will be made as soon as possible.

"Second I've agreed to the proposals made by my department to produce a draft of the post-WARC Australian Radio Frequency Table in consultation with all interested parties including of course the W.I.A. itself. It's my hope that you will all see a copy of the draft table within the next few months.

"I'm sure that you are all anxious to begin your contest and I now have much pleasure in declaring the 1980 Remembrance Day Contest open."

- from W.I.A. news broadcast, 9th August 1980.

THE ERECTION OF TOWERS

In a recent edition of the W.I.A.'s Minibulletin there were quoted instances of amateur operators being refused permission to erect a tower, the localities actually being Fairfield and Campbelltown. In one instance the operator defied the Council's rejection of the application and did erect his tower only to be prosecuted and ordered to remove the tower. Incidentally the operator's tower was not as high as many of the neighbouring towers for T.V. antennae.

For the guidance of all amateurs who are contemplating the erection of a tower I would like to offer the following advice; having been an alderman I have seen the regulations being applied many times.

First and foremost, always make a formal application to the shire or council for the erection of any structure be it a minor addition to the house, an outhouse or even a flag pole; if approval is given then this is the answer to any future criticisms from anyone for any reason.

Secondly, consider the safety angles of the tower and the necessity of insurance in the case the tower should fall onto another property.

Thirdly, and this is the one of which few people are aware, there is easy recourse to a person who has been unjustly treated by his local government authority: the Local Government Appeals Tribunal is readily available to everyone, it is inexpensive to have one's matter dealt with by the Tribunal, legal representation is unnecessary and the Tribunal becomes the Council (or Shire) and their decision is final and cannot be upset except on a point of law. All councils must have a supply of the forms which are used for application and, by legislation, the council must assist the applicant to complete the form if requested.

Everyone is entitled to the quiet enjoyment of one's own amenity - this is a democratic fundamental. If the enjoyment of this amenity necessitates that a tower should be erected on one's property then, provided it does not constitute a danger to anyone and is not for commercial use, the necessary approval should be forthcoming.

If the initial application is rejected by the local authority, the applicant should NOT proceed with the erection of the structure as this will surely invite a losing battle; submit the matter to the Local Government Appeals Tribunal and, provided there are no obvious and serious objections, approval will be given.

- de Mike VK2VRB, in "Smoke Signals", the newsletter of the Central Coast Amateur Radio Club.

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NEW ZEALAND REPEATERS

New Zealand VHF repeaters are in the process of changing from their 700 KHz offset to the world wide accepted 600 KHz offset. This will bring them in line with the VK repeater set-up. It is expected that the change over will take about 12 months or more, but when the change-over is completed it will be more convenient for visitors to ZL with their 144 MHz gear.

SHOALHAVEN CLUB

The 1st annual general meeting of the Shoalhaven Amateur Radio Club has been held and the President is Bill VK2BUY, Treasurer Stan VK2BRZ, Secretary Jim VK2AJT. It is hoped to have the Nowra repeater in operation by November.

- from VK2TTY RTTY broadcasts.

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NOVICE SECTION

- Gio Donk VK2VPD

NOISE BRIDGE

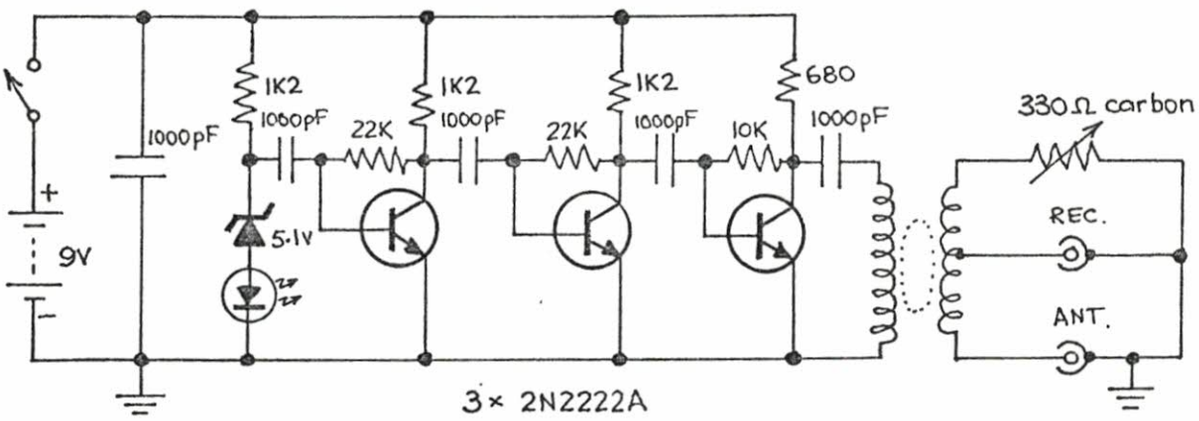
The first noise bridge I built had a very limited frequency range and I learnt from my many mistakes. Firstly, simple designs are often best; secondly, design the P.C.B. so that it is very symmetrical; thirdly, keep all leads extremely short; fourthly, make sure you design the tracks on the P.C.B. in such a way that they will not become inductors at high frequencies; fifthly, be sure to put the circuit inside a completely metal case.

The second noise bridge I built used the circuit shown below and has the same output strength at 148 MHz as it does at 1.8 MHz and everywhere in between. I was amazed with this result and thought some of you would also like to try this one. With the components shown, it will measure impedances up to 330 ohms.

For the transformer, use a normal grey ferrite ½ inch toroid and 21 gauge enamel wire. Twist two strands of wire together and then put eleven turns on the toroid. Find the sixth turn (the centre one) and file the enamel off a small part of one of the wires only, solder another short piece of wire to this and this is now the centre tap. Keep the ends very short.

For the bridge part of the circuit I used the case itself as the earth return.

The LED in series with the 5.1 volt zener is to bring its value up to about 6.7 volts and at the same time providing a check to see if the battery needs replacing.



Use another potentiometer to calibrate the instrument. With the resistance function of a multimeter, set the extra pot. for values such as 25, 50, 75, 100, 150, 200, 250, 300 ohms and for each setting connect it to the antenna input and find the corresponding null position and mark it on the face of the box.

When using this bridge, it will give nearly a full scale deflection of your signal strength meter on both H.F. and V.H.F. rigs and there will be a sharp drop in the reading when a null is reached.

Good luck,
Gio.

People with hobbies are not likely to go crazy. This is not necessarily true of the people they live with.

DIGITAL TRANSISTOR CHECKER - A "HANDS-ON" PROJECT

Most of us are familiar with the method of checking transistors for shorts and opens using the x100 ohmmeter scale. Now you can check for amplifying action as well, using just your ohmmeter and your digits (fingers).

In the case of an unknown transistor, first determine which is the base lead by checking for diode action: Put one probe on any transistor lead and check for continuity to each of the other two leads. It usually will be between 200 and 2000 ohms. Reverse the meter leads and check again. It should read an open circuit. The base lead is the one which reads like a diode to both other leads (see figure 1).

Next, connect the ohmmeter prods to the collector and emitter leads. We don't know which is which, but it doesn't matter yet. Now moisten your index digit and touch it to both the base lead and either of the other leads. If you've hit it right, the meter will show a lower resistance. If nothing happens, touch your still wet finger to the base and the other transistor lead. If your luck is as poor as mine, and still nothing happens, don't give up. Now reverse the ohmmeter prods on the collector and emitter and repeat the wet-digit test. One of the four tests will show a lower resistance between the collector and emitter if the transistor is amplifying. In effect, the wet finger serves as a high resistance from collector to base, biasing the transistor partially on (see figure 2).

You now know the collector lead. It is the one that gives the lowered resistance when "digitally" connected to the base. If you know the polarity of your ohmmeter prods, you also can determine if it is an NPN or PNP transistor: if the positive prod is on the collector, it's an NPN.

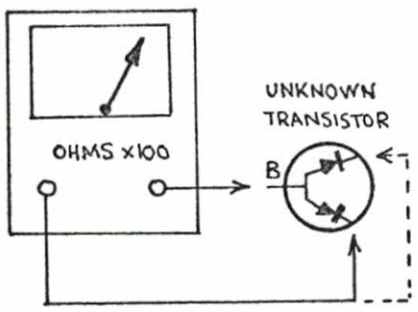


Figure 1

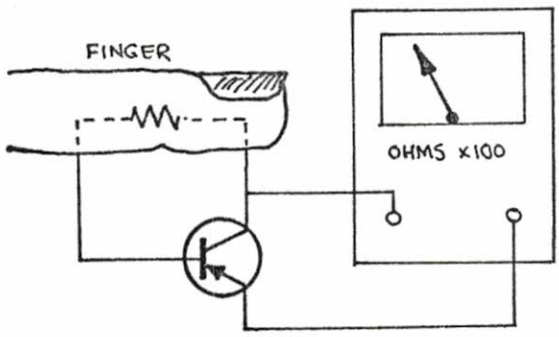


Figure 2

- Curtis Goodson, W4QBU/PY2ZBG, in "73", June 1980.

STOLEN: PUMPKIN WITH TEETH

TORONTO - "Will the party who stole the pumpkin from 273 Withrow Ave. please return my wife's false teeth."

This advertisement was placed last Wednesday in the Lost column of a newspaper's classified advertisement section.

Robert Green, who placed the advertisement, admitted he had bitten off more than he could chew. He put the pumpkin on the verandah Tuesday night to please the Hallowe'en visitors. To add realism he stole his wife's teeth and propped them up under the pumpkin lid.

Then somebody stole the pumpkin.

- Winnipeg Press.

SCORCHED

Arthur Kitchener was seriously burned Saturday afternoon when he came in contact with a high voltage wife.

- Surrey paper.

BAFFLED

I was never taught electricity at school, nor was it often a topic of dinner-table converstation among my parents. What I know about the subject I have mastered the hard way, and all in all I have picked up a pretty sound working knowledge of electrical matters. When I jot down a summary of what I have learned, I marvel that I have never been asked to write for the "Electrical Journal":

1. Most electricity is manufactured in power stations where it is fed into wires which are then wound around large drums.

2. Some electricity, however, does not need to go along wires. That used in portable radios, for example, and that used in lightning. This kind of electricity is not generated but is just lying about in the air, loose.

3. Electricity becomes intensified when wet. Electric kettles are immune to this.

4. Electricity has to be earthed. That is to say, it has to be connected with the ground before it can function, except in the case of aeroplanes, which have separate arrangements.

5. Electricity makes a low humming noise. This noise may be pitched at different levels for use in doorbells, telephones, electric organs, etc.

6. Although electricity does not leak out of an empty light socket, that light socket is nevertheless live if you happen to shove your finger in it when the switch is at the "on" position. So if it's not leaking, what else is it doing?

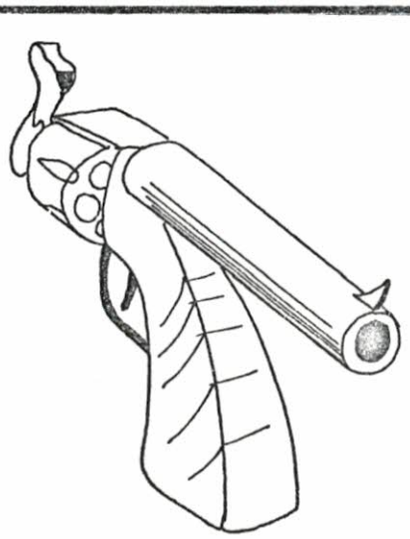
7. Electricity is made up of two ingredients, negative and positive. One ingredient travels along a wire covered with red plastic, and the other along a wire covered with black plastic. When these two wires meet together in what we call a plug, the different ingredients are mixed together to form electricity. Washing machines need stronger electricity, and for this a booster ingredient is required. This travels along a wire covered with green plastic.

8. Stronger electricity cannot be used for electric razors. Electric razors make a fizzing sound when attached to a power plug.

9. Electricity may be stored in batteries. Big batteries do not necessarily hold more electricity than small batteries. In big batteries the electricity is just shovelled in, while in small batteries (transistors) it is packed flat.

10. Electricity is composed of small particles called electrons, an electron weighing only 1/1,837 as much as an atom of the lightest chemical element, hydrogen, unless the "Encyclopaedia Britannica" is a liar.

- Keith Waterhouse, in "Punch", 1968.



FOR SALE

.38 CALIBRE PISTOL

GENUINE ONE-OWNER

SORRY NO REFUNDS

REFER ANY COMPLAINTS
TO VK2OB.

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MOONBOUNCE REPORT SEPTEMBER 1980

The 1296 MHz disc feed was installed in the new six foot diameter dish. The 1296 MHz preamp was mounted directly at the feed with a short length of coax to the converter giving an overall receiver noise figure of approximately 3.5 dB.

4 dB of sun noise was obtained, with quite a clean radiation pattern.

A special EME test on 1296 MHz is being organised by SK2GJ in Sweden for September or October. They will have the use of a 100 foot diameter dish and they are hoping that signals may be received by stations having an antenna with gain equivalent to only a five foot diameter dish.

VK2BYX in Moree has started to construct a 432 MHz EME system. He will initially use an antenna array of four long yagis.

MICROWAVE NEWS

A visit was made recently to VK2AC in Sydney to see his newly completed crystal controlled transmitter operating on the 10 GHz band. Output is at least 25 mW. Most interesting - as such equipment will allow "narrow band" communication techniques to be used to get quite an improvement in capability over the relatively wideband Gunn diode oscillators at present used on the 3 cm band.

SATELLITE NEWS

Programs have been available for some time for hand-held calculators to provide a minute by minute readout of azimuth and elevation etc. of the OSCAR satellites.

Information is now being published which will allow the antenna to follow the satellite in both azimuth and elevation under computer control, thus overcoming one of the more difficult problems, that of accurate tracking - particularly if a relatively high gain beam is used.

WANTED WANTED WANTED

A small sighting telexcope (x2 magnification) from a tank periscope as was available from the local "junk" shop some years ago - for sighting the six foot dish referred to above. Please contact me by phone 29 6984 if you can help.

- Lyle VK2ALU.

FIELD DAY AND JAMBOREE OF THE AIR - FURTHER DETAILS.

This will be held over the weekend 18/19 October at Bass Point. The Field Day Committe comprising Rick VK2DAP, Les VK2ALK, Kieran VK2DAN, Paul VK2ZQT, Doug Rose, and Ian VK2DKS will be visiting South Side scout groups to get them primed up for the Jamboree.

For the weekend itself, Tubemakers and possibly the steelworks are going to supply tubing, hopefully with pulleys and ropes already attached, for wire antennas. A tower can be obtained if needed - can anyone get a 20 metre beam to put on the tower? It is proposed to operate three stations through the weekend, from three large tents, and Paul VK2ZQT will have his computer on site.

A barbecue will be held at the site on Sunday lunchtime, so that people not able to participate in the Jamboree can still come out, have a look around, and enjoy a picnic/barbecue lunch.

Does anyone know the whereabouts of VK2AMW's QSL cards from the last two Jamborees? The scouts would like to put up a display using the cards.

See Paul VK2ZQT at the next meeting to get on the operator and equipment roster.

DX TIP: From Dave VK2PBP comes news that VK9ZG, op. Graham, on Willis Island can be worked on 28.5MHz at 2400 Zulu. QSL via VK3OT.

STORE SPECIALS: 10 watt wire-wound resistors, all values from 3 ohms to 10K, 10 resistors for 50¢, at next meeting. Also reels of silicon bronze welding wire, ideal for wire antennas.

CHRISTMAS FAMILY BARBECUE: Sunday 7th December, Saddleback Mountain, bring-your-own-everything. Mark it on your calendar now.

THE ILLAWARRA AMATEUR RADIO SOCIETY - SERVICES

1. Monthly meeting: Second Monday of each month (except January) at 7.30 p.m., Congregational Hall, corner of Coombe and Market Streets, Wollongong (between Kembla and Corrimal Streets).
2. Monthly broadcast: 7.15 p.m. on the Sunday night before the monthly meeting, on VHF repeater 5; UHF repeater 1; 28.46 MHz.
3. Slow Morse Broadcast: From VK2AMW, on Monday nights (except meeting nights), 7 - 8 p.m., on 1.805 MHz.
4. Monthly newsletter: The Propagator is usually posted to reach members during the week before the monthly meeting.
5. Amateur Radio Classes: Designed for those intending to sit for the Novice, Limited, or Full licence examinations - held on Friday nights, 6 - 9 p.m. Contact Keith Curle VK2OB or Denis McKay, VK2DMR.
6. Club nets: 6 metres: 8.30 a.m. Sundays - 52.525 MHz FM.
   10 metres: 8.00 p.m. Sundays - 28.46 MHz USB.
7. VHF Repeater: VK2RAW, Channel 5 (146.25 MHz in, 146.85 MHz out).
8. UHF repeater: VK2RUW, Channel 1 (433.225 MHz in, 438.225 MHz out).
9. Club Station: VK2AMW.

THE PROPAGATOR
Newsletter of the Illawarra
Amateur Radio Society.

Registered for posting as a publication
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ANNUAL SUBSCRIPTIONS: Send $5 to the Treasurer, I.A.R.S., P.O. Box 1838, Wollongong, N.S.W. 2500., or see Geoff Cuthbert at meetings.

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