
THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY

PO BOX 1838 WOLLONGONG NSW 2500

VOLUME 81, NUMBER 8

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SEPTEMBER 1981

MEETINGS ARE HELD ON THE SECOND MONDAY OF EACH MONTH (EXCEPT JANUARY) AT 7.30 P.M. IN THE CONGREGATIONAL HALL, CORNER OF COOMBE AND MARKET STREETS, WOLLONGONG. VISITORS ARE WELCOME TO ATTEND MEETINGS.

NOTICE OF MEETING:

The September General Meeting of the Illawarra Amateur Radio Society will be held on Monday 14th September at 7.30 p.m., in the Congregational Hall, Coombe Street, Wollongong.

The meeting was to have featured a talk by an officer of the Ionospheric Prediction Service, but unfortunately this has had to be postponed. An alternative attraction is being arranged.

Watch out for some good values in the club store this month. Bring your money for the raffle - a Foreign Callbook is the prize, to be drawn at the meeting. Join the general discussion over a hot cuppa after the meeting.

RED CROSS ISSUE:

A red cross on your address label this month means you are now unfinancial and this will be your last issue of the "Propagator" ... to avoid such a horrible consequence, send \$5 immediately to PO Box 1838, Wollongong 2500.

COMING EVENTS:

October meeting - Monday 12th October.

Jamboree of the Air - 17/18th October - start planning now for a great weekend at Bass Point, 24 hour DX, and giant antennas.

Fifth Conference of Clubs - Sunday 1st November 1981, being hosted by the Illawarra Amateur Radio Society in Wollongong.

REGULAR ACTIVITIES:

80 metre net - 3.565 MHz, 8 p.m., Sunday nights.

Lawrence Hargrave Award session, 21.170 MHz, 3 p.m. Sundays.



Slow Morse Net (newcomers welcome) - 28.44 MHz, Tuesdays 8 p.m.

CLUB NEWS:

In a club of our size, there are many interesting activities which involve perhaps a handful of members, but which nobody else ever hears about... whether it is an antenna-raising party, a funny contact on air, a third-party traffic operation, etc., etc. The Broadcast Officer (Denis VK2DMR) and/or the Propagator Editor (Brian VK2AXI) would be delighted to receive even the shortest of notes about such things - including the amateurs involved and what they did. Typing and rewriting, if necessary, will be done for you.

Two particular requests: We would like some club member to make jottings of interest from the 80 metre net for inclusion in the Propagator each month - preferably someone who isn't already up the to the ears in running the net, minding the store, and so on. Also, we are hoping to produce another bumper Christmas issue of the Propagator for December and need lots of contributions - especially constructional items to keep the lads off the streets around New Year.

NOWRA REPEATER: The Shalhaven District Repeater, VK2RSD, is now operational from the Cambewarra Lookout, 6 miles northwest of Nowra and 2200 feet above sea level. It is on channel 7200 (147.800 MHz in, 147.200 MHz out), with an output power of 25 watts.



ILLAWARRA AMATEUR RADIO SOCIETY - INFORMATION

MONTHLY MEETINGS: Second Monday of each month (except January) at 7.30 p.m. in the Congregational Hall, corner of Coombe and Market Streets, Wollongong.

CLUB NETS: Phone nets are held on six metres (52.525 MHz FM, 8.30 a.m. Sundays), and on eighty metres (3.565 MHz, 8.00 p.m. Sundays). An informal morse net is held on 28.46 MHz, at 8.00 p.m. on Tuesdays - nervous newcomers to CW are especially welcome on this net.

MONTHLY NEWSLETTER: The Propagator is usually posted to reach members during the week before the monthly meetings. Technical, news, and humorous items are always wanted. "For Sale" and "Wanted" advertisements are free for members. Give your material to the Editor, or any Committee Member, at meetings or during the month. Copy deadline is the last Tuesday of each month.

MONTHLY BROADCAST: 7.15 p.m. on the Sunday night before the monthly meeting, on VHF repeater 6850 (Ch 5), UHF repeater 8225 (Ch 9), 28.46 MHz, and 3.565 MHz. The broadcast officer is always looking for news items, and would appreciate any contributions.

SLOW MORSE BROADCAST: From VK2AMW on Monday nights (except meeting nights), 7 to 8 p.m., on 1.805 MHz in the 160 metre band.

W.I.A. BROADCAST RELAYS: Sundays at 11 a.m. and 7.30 p.m. through VHF repeater 6850 (Ch 5). The 11 a.m. broadcast can also be heard on 7.146 MHz A.M.

AMATEUR RADIO CLASSES: Provide all the theory, regulations, and morse tuition needed to obtain the amateur Novice, Limited, and Full licences. Classes are held on Fridays, 6-9 p.m. during term time. Contact any committee member for further information.

VHF REPEATER: VK2RAW, Channel 6850 (old Ch 5) - 146.25 MHz in, 146.85 MHz out.

UHF REPEATER: VK2RUW, Channel 8225 (old Ch 9) - 433.225 MHz in, 438.225 MHz out .

QSL SERVICE: Club members who are also W.I.A. members can deliver and collect their QSL cards at club meetings.

LAWRENCE HARGRAVE AWARD: - the award of the I.A.R.S. - Stations in VK must work 10 members of I.A.R.S. Stations outside VK must work 5 members of I.A.R.S. Club station VK2AMW is worth the award by itself for any amateur. Cost is \$2 or 4 I.R.C.s (within Illawarra only, cost is \$1 and award must be collected personally from a club meeting). QSL cards are not needed for verification - send callsigns, frequencies, GMT, and payment to Box 1838, Wollongong, 2500.

MEMBERSHIP ENQUIRIES: For information about W.I.A. or I.A.R.S. membership, see Geoff Cuthbert VK2ZHU at club meetings. To join the I.A.R.S. by post, send your \$5 annual subscription to the Treasurer, I.A.R.S., P.O. Box 1838, Wollongong, N.S.W., 2500. For general enquiries, write to the Secretary at the same address.

SOCIETY PRESIDENT: Keith Curle, VK2OB, 24 Beach Drive, Woonona, 2517.

VICE PRESIDENT: Ron Dorin, VK2VOE. SECRETARY: Dave Meyers, VK2PBP

TREASURER: Geoff Cuthbert VK2ZHU. COMMITTEE: Mike Keech VK2VXS, Jock Taylor VK2JT, Eric Fien VK2YVF, Paul Engbo VK2DTZ, Denis McKay VK2DMR, Brian Wade VK2AXI.

QSL ENQUIRIES TO: Mike Keech VK2VXS and Paul Engbo VK2DTZ.

LAWRENCE HARGRAVE AWARD MANAGER: Mike Keech VK2VXS.

BROADCAST OFFICER: Denis McKay VK2DMR (phone (042)847786).

PROPAGATOR EDITOR: Brian Wade VK2AXI, 72 Murray Road Corrimal 2518, phone (042)841381.

WANTED: Cheap Amateur Band Receiver for beginner. Tony Barnes, 216 Old Southern Road, Yanderra. N.S.W. 2574.

FOR SALE: TS520, SP520, MC50 \$580-00. With AT200 \$680-00 (will haggle). D. Colless VK2PGV. Home 291773, Work 289198.

FOR SALE: 1 set of new H.F. helical mobile antennae, 80M, 40M, 20M, 15M, 10M, made by "Lepstick" - \$100-00

1 BC348 Communications receiver including power supply and external speaker. Has following bands: 200-500 Kcs; 1.5 to 3.5 Mcs; 3.5 to 6.0 Mcs; 6.0 to 9.5 Mcs; 9.5 to 13.5 Mcs; 13.5 to 18 Mcs. Has B.F.O. for S.S.B. and C.W. reception - \$50-00.

1 Model 15 Teletype teleprinter - \$50-00

1 ST6 demodulator using ANARTS kit including tuning meter - \$60-00

Contact Les VK2ALK QTHR Telephone 042-563174 evenings, 042-281011 business hours.

FOR SALE: Quad spider hub, W6SAI design, strong construction, \$60. John Thurstun VK2DET, Phone 843400.

MORSE THE EASY WAY - Part 2.

The previous article covered the construction of the keyboard using keys from the Video Brain board, and of the diode matrix. This article will deal with the Keyer and Instructor sections of the project.

3) The Keyer Board. This is constructed on a 3" x 3" piece of 1/10" matrix board and ic holders are used. The layout I decided on is as shown. Draw the underneath layout on a piece of thin paper, outlining the positions of the ics and marking the ic numbers and end pins, and match it to the underside of the matrix board. Then insert the ic holders from the other side, pressing the pins through the paper which helps hold it in position. The transistors and other components can then be fitted in the spaces left and the board wired point to point over the paper, inking in each wire on the diagram as it is fitted. Matrix board pins in the outer rows of holes give connections to the diode matrix, power supply, etc. Don't forget to bring a wire from pin 13 of ic 9 to a separate matrix pin if it is intended to couple the unit up with the Instructor. I like to check continuity from the upper side of the matrix board as each wire is put in, as it's easy to mix up pin numbers, especially as some ics are inverted with respect to others. Wire the flipflop first so you can check the operation of the changeover of the leds, and thus of the 12V supply rails.

PRA 1 is a self-contained NEC reed relay, used to key the transmitter. I obtained mine from Jaycar in Sussex Street, Sydney.

For safety, you can insert the ics into their holders on a sink unit, resting bare forearms onto the metal to avoid static, but in my experience such precautions are not really necessary. Just keep your fingers away from the pins as you insert the ics.

Rainbow cable can be used to connect the figure and letter halves of the diode matrix to the inputs of the Nor gates, and for the earth and +12V connections. I found one type of Motorola gate gave incorrect operation, so watch out for that.

When I was satisfied that the keyer was operating correctly, I covered the underneath wiring with nail varnish to partially encapsulate it. However, this makes later repair or modification very difficult.

4) The Instructor Board. Again a piece of 3" x 3" matrix board is used and wired up in a similar fashion to the Keyer Board, over a paper pattern. Layout for the ics is as shown, other components being accommodated in the spaces as desired.

There are 32 possible combinations of the 5 outputs of ic9, (the Counter), and these can be easily worked out from the binary combinations 00000 to 11111, each combination being called a 'word'.

However, of these only 26 are allowed through to give a Morse character as explained in the article, the unwanted 'illegal words' triggering the Illegal Word Detector to cut off the Register briefly. Unfortunately there is an error in the published circuit diagram which has the effect of stopping the inverses of the illegal words, while letting the illegal words themselves through. There are two ways round this problem.

The error is that all the Q and \bar{Q} lines are reversed on the inputs of ic4a, b, c, ic3a, b, c and ic1a and b. Thus ic4a pin 1 should go to ic5 pin 3 and ic4a pin 2 should go to ic5 pin 4, and should be labelled $\bar{Q}2$ etc. The designer of the unit suggested that the input and output leads to ic5 could be reversed, except for those going to ic9.

I found it easier, as I had already wired the board up, to change the wiring of the Register (ics 10, 11, and 12) to invert everything by using the \bar{Q} outputs. When the Counter produces an illegal word, it is inverted and becomes 'legal', while the detected words become the unwanted ones and are stopped. It should not matter which method is used to overcome the error.

There is not a lot of spare room on the boards and it may be necessary to move the ic holders a space or two from where I've shown them, to accommodate the other components. It would pay to experiment a bit to decide on the best layout, not forgetting to include the matrix pins. Also, remember you'll have to fasten the boards down somehow. The 1uF capacitors on each board are preferably tag tantalums.

Regarding the keys, you will note S1 on the Keyer diagram. This (on my unit) is part of the key which switches from Keyboard to Instructor, and applies 12V to the flipflop to change it or hold it on LETTERS, the Instructor being connected to those inputs of the Nor gates. When the keyboard is in use I have arranged for the 12V to be disconnected from the Instructor, instead of it merely being held in a Set mode. S2 therefore disconnects ic9, pin 13 of the Keyer from the Instructor.

I hope these notes are of assistance, and I would be interested to hear from anyone who constructs this project. It certainly makes excellent Morse a lot easier to achieve.

- Ken VK2D0I.

BLACK HOLES: Dave VK2VAV/YKQ reports that the density of equipment in his shack has now reached the stage where he no longer has a door on the shack - he has an event horizon! (If he's come up against a naked singularity, he isn't saying.)

Special thanks to Dave for making this issue of the Propagator possible, while our regular printer is on leave.

MORSE KEYS AND INSTRUCTOR

This keyer/instructor enables morse to be sent from a keyboard, and also generates random morse in 5-letter groups for practice sessions. This is the second and final extract from the original article by Robert Spindel, K1GN, in "73" for December 1980. Ken VK2DOI, who has been giving details of his modified version in "The Propagator" reminds that there are some errors in the original article.

Construction

Parts placement and inter-component wiring are not at all critical. I prefer to use wire-wrap techniques for digital logic circuits because it is fast and reliable. All the wiring can be completed in an evening or two. Care should be exercised in construction of the diode matrix, if it is included. With so many diodes, it is

easy to make an error. However, troubleshooting, if required, can be accomplished with simple equipment. A voltmeter will indicate high or low states or an LED driven by a transistor will serve the same purpose. One of these simple tools will allow diagnosis of almost any possible problem.

The power supply is not critical. I chose to use a 12-volt regulator (Fig. 4), but

anything from 5 to 12 volts will work and regulation is not necessary. It is a good idea, though, to filter the power supply adequately. Oscillators like the keyer clock have a tendency to synchronize with power supply ripple. If this occurs, speeds will appear to jump from one to another as the speed control is rotated, rather than to vary smoothly.

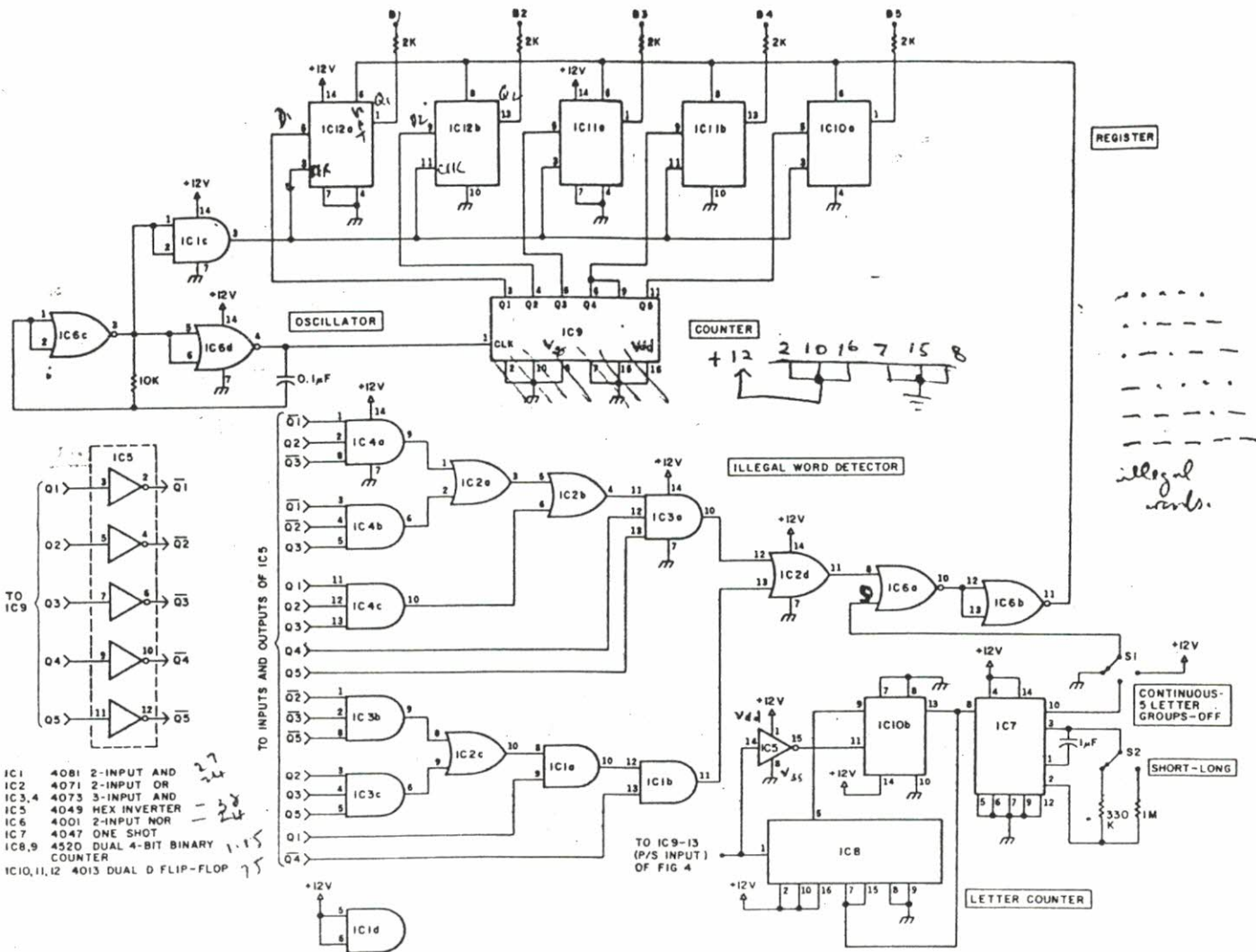


Fig. 3. The electronics of the Instructor. Not all connections are shown to avoid confusion in the diagram. All points labeled Q1 to Q5 are connected together. Similarly, all those labeled Q1 to Q5 are connected together. All unused CMOS gates are tied to 12 volts.

Variations

The Instructor portion of the circuitry can be used as is with many existing keyboards, and can be adapted simply for use with others. If the coding scheme in your keyboard uses diodes for dashes and character termination and operates from 5 to 12 volts, just connect the Instructor directly to it. If you can identify a portion of your keyboard logic that produces a low-to-high transition after each letter, connect it to IC8-1. If you cannot find such a point, leave out IC7, IC8, and IC10b. Then switch S1 to ground for continuous letter generation or to 12 volts for resumption of normal keyboard operation.

With keyboards that use other coding schemes, the illegal-logic-state detector must be modified. This should not prove to be difficult once it is understood exactly how the detector works. If, for example, your existing keyboard uses diodes for dots instead of dashes, simply reverse all Q1 to Q5 and Q1 to Q5 leads. Other coding

schemes will require similar simple changes.

As mentioned above, the Instructor-Keyboard also can be constructed without the keyboard or diode matrix and used as an Instructor alone. Simply construct keyer and instructor electronics as shown in the figures and attach 10k pull-up resistors to lines B1 to B8 of Fig. 2.

Numbers and punctuation can be added to the Instructor's vocabulary, if desired. However, this will require the addition of extensive detection circuitry to eliminate unwanted codes. In order to accommodate these additional characters, a total of 8 bits in a code word is needed. There are 256 combinations of zeros and ones in an 8-bit word, a total of 8 bits in a code word is needed. There are 256 combinations of zeros and ones in an 8-bit word, a total of 8 bits in a code word is needed. There are 256 combinations of zeros and ones in an 8-bit word, a total of 8 bits in a code word is needed. Thirty-six are needed for letters and numbers. Adding a comma, question mark, and

period gives 39; special symbols will add a few more. In this case, we would have to detect 217 illegal words (ignoring special symbols which are not really needed for practice). It would undoubtedly be easier to detect the 39 legal ones, allow them to be passed through the register to the keyer, and reject all the rest. To do this, one simply would invert the output of the detector logic at IC6b. IC9 would have to be wired as a full 8-bit counter and two more D flip-flops would have to be added to the register. ■

References

1. Bryant, "Touchcoder II," QST, July, 1969; Horowitz, "Compu-coder," QST, June, 1975; Crom, "This Station Plays Beautiful CW," 73, March, 1979; Helfrick, "An Inexpensive Morse Keyboard," QST, January, 1978. These articles contain additional references.
2. Hart, "High Speed CW, Anyone?" QST, June, 1979.

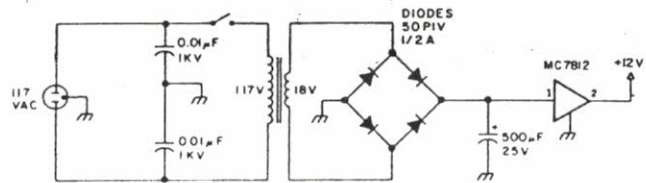
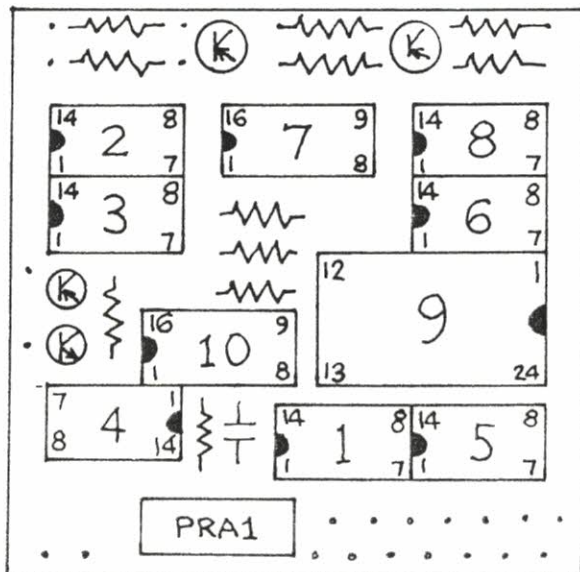
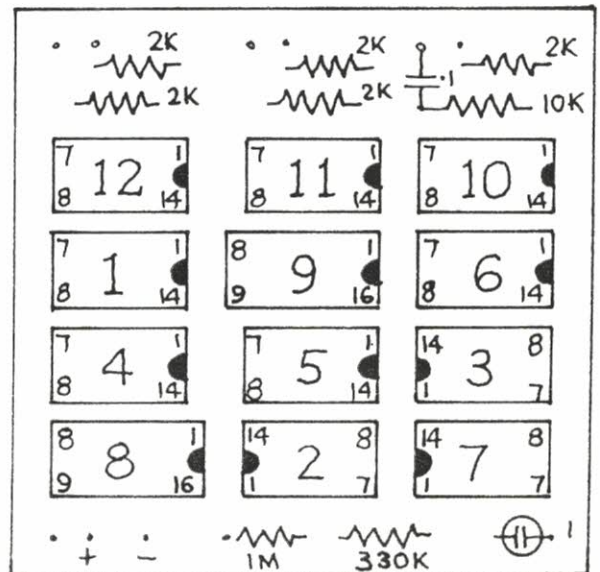


Fig. 4. The power supply is not critical, and any voltage from 5 to 12 will work.

Board Layouts
by VK2DOI



KEYER (top view)



INSTRUCTOR (Top view)

Pixilated Patents

By Mike Rivise

"Dummy!"



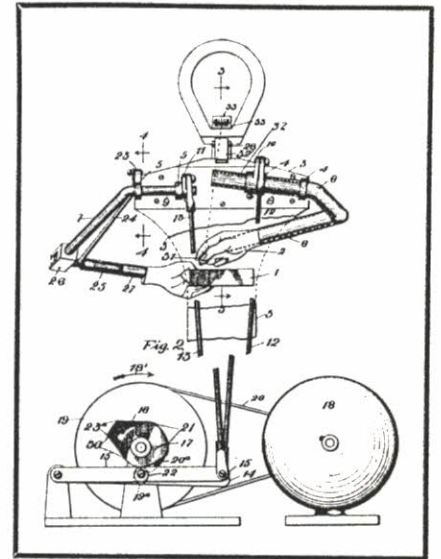
"My husband built it as a retreat from noise, air pollution, the general unrest, and me."

This is No. 123 in a series of odd and interesting inventions in the electrical/electronic field from the files of the US Patent Office.

Robots have been around quite a while, as evidenced by Robert H. Little's "automaton figure" invention (patent No. 711,511 in 1902) shown in the drawing. This electric motor-driven figure (that's supposed to be its head on top) did not possess logic or decision-making capabilities, but was said to use one of its hands to take a piece of candy or other object from a box held by its other hand, bring the candy to its mouth, tilt its head back, then place the candy into its mouth. Considering the foregoing description, one might wonder whether it was a coincidence that the inventor suggested that the simulated figure of a lady be fitted to the device.

Being the curious type, at least people have frequently referred to me as curious, I had one of the devices built for myself. It did perform as the inventor claimed, although I soon realized that there was no overwhelming demand for a simulated woman that stuffs itself with candy.

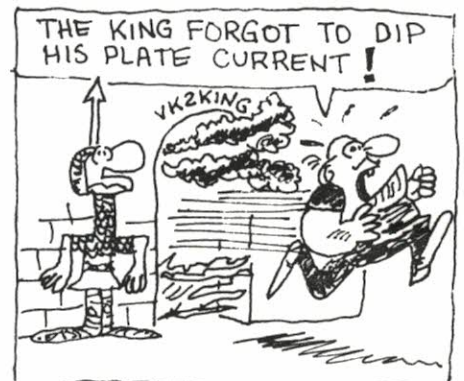
However, the project assumed new dimensions when a friend suggested two modifications to what he called the "homemade human." He suggested that a small computer be fitted to the device, and also that a replica of me be placed on it in place of the female figure. He pointed out that I could stay home on those days that I felt like sleeping, since we could program the thing's computer and send it off to the office where it could perform some simple tasks, and nobody



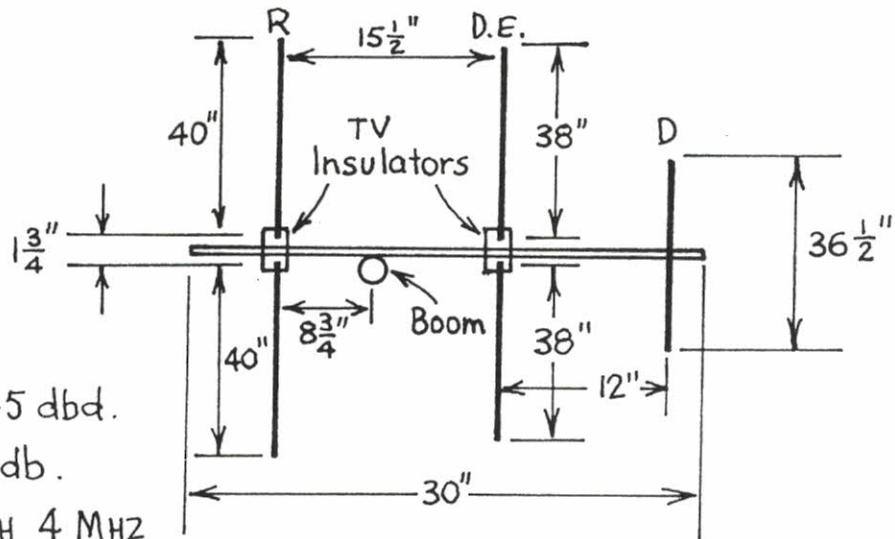
would know the difference. The idea sounded good, though I didn't like his inference about the simple tasks.

Everything worked out just about as my friend said it would, except for one thing: the robot outdid me at everything. It was expert at staring out the window, contriving excuses for being late, leering at secretaries, appearing busy, entering sports pools, stretching coffee breaks, and laughing loudly at off-color stories.

Fearing for my job, I went to the office to explain that I was real, whereas my replacement was a dummy. They said they didn't know which of us (if either) was real, but that we were both dummies. The only thing that saved my job was that the other "dummy" bet even money against the Green Bay Packers in a championship game, and my boss agreed that nobody could be that dumb.

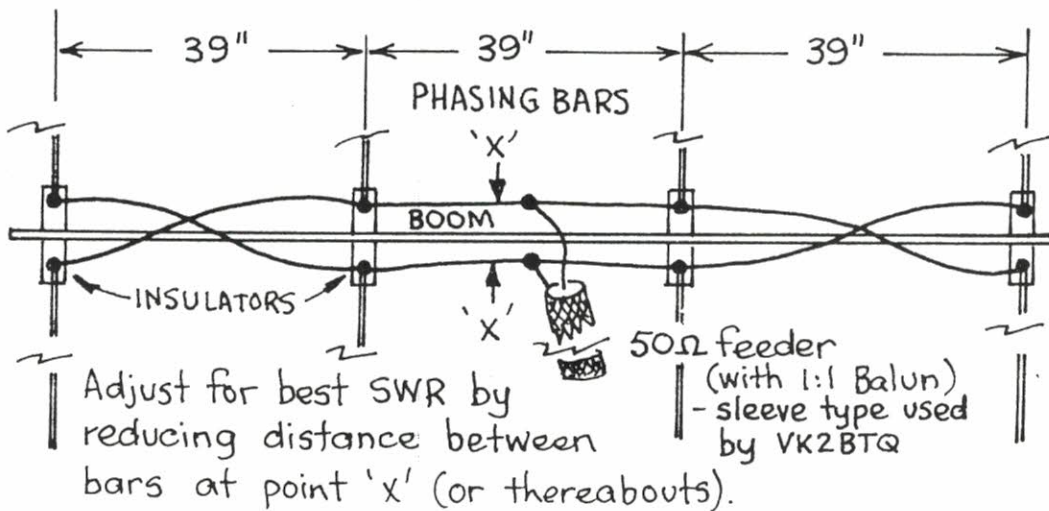


PHASED ARRAY AS USED BY VK2BTQ ON 2M.



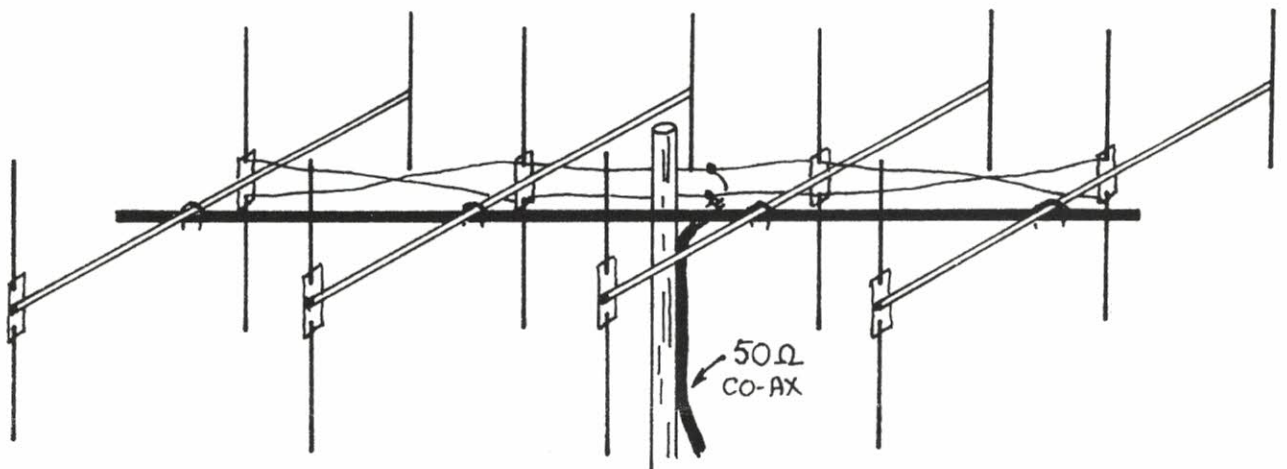
GAIN 13.5 dbd.
 F.B. 20 db.
 BANDWIDTH 4 MHz
 (Cut for 146.06 MHz)

MAKE FOUR YAGIS AS ABOVE



Adjust for best SWR by reducing distance between bars at point 'x' (or thereabouts).

50Ω feeder
 (with 1:1 Balun)
 - sleeve type used by VK2BTQ



REPEATER NEWS

As most 2 metre operators are aware, the Wollongong repeater VK2RAW (channel 5) has just been run for a two-week test period on the scarp above the northern suburbs, using battery power and a transmitter power of 5 watts.

In an endeavour to provide the best possible service to club members, a questionnaire is included in this copy of the "Propagator". Fill it in and bring it to a club meeting or post it to the club at PO Box 1838 Wollongong 2500.

Graeme VK2CAG has, since the inception of repeaters in Australia, made a tremendous contribution to the club and its members in much of the construction and maintenance of the channel 5 repeater, so the proposals which he has made are worth very close consideration:

Proposals:

1. That the channel 5 repeater remain at its original site and all long term plans for its improvement be carried out as a long term club project.
2. That a second 2-metre repeater channel allocation be applied for and a new repeater be built as a club project for installation at Sublime Point.

Reasons for the above Proposals:

There is an obvious need for a repeater that gives better local coverage.

From the results of tests done at Sublime Point, two conflicting points arise -

- (1) Northern suburbs amateurs have better access into the repeater enabling them to use low power and hand held units not before possible. Mobile operation is greatly improved, in the Northern Suburbs and in the City.
- (2) Southern suburbs amateurs remain unaffected by ability to access the repeater, but they stand to lose the ability to talk to stations further afield such as Sydney and South Coast.

In other words, the move to Sublime Point will give the repeater better local coverage but will lose its DX coverage.

I think that every club member deserves to have good access to the club's repeater.

I also think that it would be a step backwards if our repeater lost its DX coverage.

Local amateurs who have been regularly working out of town stations through the repeater deserve to continue to do so. In many cases Channel 5 is the only means to communicate between certain points if 2 metres is the band to be used. Channel 5 enjoys the reputation of being the best DX repeater into ZL when the band is open.

Some of the amateurs who live in Sydney or the South Coast who will miss out on the move to Sublime Point are in fact members of our club. Others have shown their support in the past in various ways - some that come to mind are 2BTQ (Ulladulla) purchased and donated a new transmit crystal when the original one failed; 2AJT (Nowra) donated lightning arrestors and kept the P.A. stage in P.A. valves for several years; 2ZXC and company gave up a weekend to do the rigging for our new aerial system - many outsiders gave cash donations to help pay the power bill, etc.

I personally have spent many hours and done many miles in keeping Channel 5 on the air since it was first installed on 14/2/75. I am prepared to continue, knowing that it is a much needed (and much appreciated) service.

Repeater news - contd.

It appears that to satisfy everyone's needs two repeaters are necessary.

Canberra is an example of a club that maintains two repeaters - Channel 7 on Mt. Ginini is an excellent DX repeater that gives marginal coverage to some parts of Canberra. Channel 6 is a local repeater that gives good coverage to the city and suburbs of Canberra.

The original concept of a repeater was to provide a means of communicating that would not be possible using simplex. Channel 5 meets this requirement very well.

A repeater should also give good coverage in its prime service area. A repeater on Sublime Point will do this very well. It appears that we can't have both in the one package.

A repeater on Sublime Point needs not to be as sophisticated as the one at Robertson. Low power, say 25 watts, a single high-gain aerial, and cavity diplexer can be used. A diplexer is practical at Sublime Point because of more constant temperature, lower power and adequate housing.

I would like to see the construction of the new repeater as a club project with one small job allocated to one person (similar to the Moonbounce project when it started). I am prepared to spend a fair amount of time on the project. Perhaps later on we can co-site our other 70 cm repeater there?

Well, that's my comments but it's the club's decision, so how about we form a policy?

- Graeme VK2CAG.

INTRUDER WATCH SERVICE (By Bill Martin, VK2PFH, NSW Intruder Watch Co-Ordinator).

Intruder Watchers are needed in NSW to assist the Intruder Watch Service, which cannot function without the help of observers. Reports are needed from all over the State and, at this moment, NSW is lagging far behind most of the other states in this regard. Don't think that we expect you to sit for hours in front of the rig listening for intruders. However, please send us a report of any that you do hear whilst you are working on the air. If the bands are quiet, have a listen around to see if you can pick up any intruders. If you have a Novice Callsign, you can still LISTEN on all Amateur Bands.

We must LODGE OBJECTIONS to Intruders for the following reasons:

"Generally speaking, anyone may use any frequency until someone objects. This means that Intruders who use Amateur frequencies illegally may claim they have a right to the frequencies - BECAUSE NO ONE HAS OBJECTED... This is vital at the international level. Unless Amateurs can prove that they have objected to Intruders using their bands, they have no case before an international tribunal. It is thus important that we have a record of Intruders, and the action we have taken to object to them...."

This conception is still valid, so you see WE MUST LODGE OBJECTIONS and we must have the ammunition in the form of INTRUDER WATCH REPORTS. You can register as an Intruder Watcher, or just send in Reports from time to time as you hear them. PLEASE INCLUDE (i) Date (ii) Time (iii) Frequency (iv) Signal Strength (v) Nature of transmission heard (vi) Callsign or other identification.

Reports may be sent to R.W. Martin, VK2PFH, 33 Somerville Road, Hornsby Heights, 2077, Telephone 02-4772717, OR to Intruder Watch Service, WIA NSW Division, P.O. Box 123, St. Leonards, 2065.

PLEASE HELP WITH INTRUDER WATCH. KEEP THE AMATEUR BANDS FOR THE AMATEURS.

LATE NEWS ITEMS:

The raffle prize at the September meeting will be a Foreign Callbook - essential for any self-respecting DX-hound. QSL cards will also be available at the meeting (see last month's Propagator for callsigns of cards held). The QSL officer has advised that cards will not be held indefinitely - so if you want them, you had better get them!

FOX HUNTS: Anyone willing to organise a fox hunt? Interest in this direction seems to be again on the increase.

AUSTRALIAN NOVICE CONTEST

WHEN: From 0800 GMT 19th Sept to 0759 GMT, 20th Sept 1981, for all novice and full call amateurs.

OBJECTS: To encourage contest working between amateur stations in VK, ZL and P29 during a 24 hour period with emphasis on working novice and club stations.

CONTEST BANDS: Only the novice allocations on 80, 15, and 10 metres may be used. This also applies to full call stations as well. No cross band operation allowed. Contacts should be phone or CW.

Only stations in VK, ZL or P29 may enter. Stations outside these call areas do not qualify. Stations in your own call area may also be worked.

SECTIONS: A. Novice/Full call Phone
B. Novice/Full call CW
C. SWL

SCORING: For contacts with novice stations - 5 points.
For contacts with radio club station - 10 points.
For contacts with full call stations - 2 points.

PROCEDURE: Phone call "CQ Novice Contest".
CW "CQN"
Stations may be worked once per mode per band.

REPORTS: Phone, RS plus three figures e.g. 5/9 003 etc.
CW, RST plus three figures.
Club stations add letter C after number.

LOGS: Must show GMT time, station worked, band, mode. Number sent and received, score claimed and score tally for each page. A front sheet must be attached showing - Name of operator, call sign, address, section entered and points claimed. Logs are to be sent to -
Federal contest Manager, P.O. Box 236,
Jamison A.C.T. 2614,
and be postmarked no later than 12th October 1981.

For more details see A.R. August 1981, page 42.

73's,
Dave VK2PBP.

FOR SALE: FT-7 transceiver with full 10 metre band, in good condition, \$300. Contact Ian Piper VK2VGP. Phone (042)84 1117.

...Some of those present at the Central West Regional Conference were anxious to see if the DOC could not be persuaded to change its ruling which forbids the linking of repeaters together. This is a subject of especial interest to us in the "bush", and I think we should all get behind any move that may help us to get this privilege, if gained, it would enable our 2 metre rigs to be much more useful.

- Dave VK2BDT, in "SWARS Feedback" for Autumn 81.

CORRIMAL COMPUTER SERVICES

P.O. Box 22 Woonona 2517. Phone (042) 84 1117.

APPLE

Apple 2 with 48K - \$1525
 with 32K - \$1478
 with 16K - \$1420
 Disc drives (with controller) - \$685
 Extra drives (without controller) - \$594

COMMODORE

4008 (8K) - \$1195
 4016 (16K) - \$999
 4032 (32K) - \$2000

Disk drives

4040 - \$2000
 8050 - \$2940

Printers

4022 - \$1245
 8024 - \$2460

C2N Cassette Player - \$115

VIC full colour full size keyboard 5K expandable to 32K - P.O.A.

Also Commodore Pets available for hire.
 Get in quick for your pre-budget discount price (pre-budget stock goes at pre-budget sales tax).
 Free delivery Kiama, Roberston, Appin, Camden and Illawarra area.

Ring for special deals. Contact Ian Piper VK2VGP (042)84-1117.
 Prices subject to change without notice.

THE 5th WEST AUSTRALIAN 3.5MHz C.W. and SSB CONTESTS.

The CW section was on 8/9 August. However, you can catch the SSB section on 12/13 September between 1900 and 2130 W.A. time. Brief rules are as follows: (Send logs to PO Box 6250 Hay Street East Perth 6000 by October 9th).

All contacts to be made in the 3.5/3.7 MHz band. Stations in Eastern states and Overseas will score 2 points per contact with W.A. stations only. Stations may be worked twice on each night i.e., once between 1130 to 1330 GMT and again between 1330 to 1400 these contacts will count for points.

Eastern states and overseas stations will send RST plus a running number starting at 001.

Contest logs to be set out on one side of a quarto or foolscap sheet with columns headed as below:

DATE:	CALL:	OPERATOR:		SHIRE	POINTS CLAIMED
TIME	CALL	RST	RST		
Z	WKD	OUT	IN		

Here is your opportunity to give your opinions on the kind of repeater service which the Illawarra Society should be providing for its members. Fill in the sheet and bring it to the September meeting, or post it to I.A.R.S. (address given on information page).

1. What kind of VHF/UHF equipment do you usually operate in conjunction with the Illawarra repeaters? (Tick applicable boxes)

	2M	70cm
Handheld	<input type="checkbox"/>	<input type="checkbox"/>
Mobile	<input type="checkbox"/>	<input type="checkbox"/>
Base station	<input type="checkbox"/>	<input type="checkbox"/>

2. What kind of equipment would you like to operate, assuming satisfactory access to 2M and 70cm repeaters (and a licence)?

	2M	70cm
Handheld	<input type="checkbox"/>	<input type="checkbox"/>
Mobile	<input type="checkbox"/>	<input type="checkbox"/>
Base station	<input type="checkbox"/>	<input type="checkbox"/>

3. What kind of service do you think our 2M and 70cm repeaters should provide?

	2M	70cm
Mainly local handheld/mobile links	<input type="checkbox"/>	<input type="checkbox"/>
Mainly links out of Wollongong	<input type="checkbox"/>	<input type="checkbox"/>
Local links <u>AND</u> links out of Wollongong	<input type="checkbox"/>	<input type="checkbox"/>

4. Where would you prefer to have the present 2 metre repeater permanently sited?

- Robertson (original location)
- Bulli (the test location)
- Other location (give details)

5. On 2 metres, would you prefer to have -

- One only repeater, located as in question 4
- Two independent repeaters (one "local" and one "DX")
- A "local" and a "DX" repeater linked together

6. Any further comments or suggestions?

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7. If you can help to construct/maintain/house/transport or generally help in any way with repeaters, give name or call:

1911

Received of Mr. J. H. ...

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M. L. K.
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