

# IAR/S THE PROPAGATOR IAR/S

ILLAWARRA AMATEUR RADIO SOC. INC.

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOC. INC.  
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MEETINGS ARE HELD ON THE SECOND TUESDAY OF EACH MONTH ,  
(EXCEPT JANUARY) AT 7.30.PM. AT THE STATE EMERGENCY SERVICES ,  
BUILDING , IN MONTAGUE STREET , NORTH WOLLONGONG .

VISITORS ARE MOST WELCOME TO ATTEND THE MEETING'S .

## THE MAY MEETING .

There were 30 members who braved the rain and sloppy conditions to turn up for the May meeting. The meeting was told that Maurie Van Der Vorstenbosch had been admitted to hospital for another back operation and we wish him all the best and a speedy recovery. During the past many years Maurie has been involved in the production of our newsletter as Assistant Editor and Editor. You will note the standard of past copies where the professional looking columns made it a top quality publication, this was because Maurie retyped all the articles to his standard. Well I'm sorry to let the side down Maurie but my articles for this month are going to be just as they come off the printer.

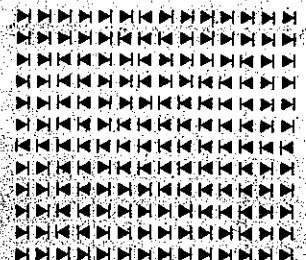
There was a general discussion on the future of the club and it's growth or otherwise in the future - see my editorial and ponder on it.

The guest speaker for the evening was Dave Henderson VK2YKQ/VAV who seems to be spending more time globetrotting around the world than he does back here in Oz. Dave discussed his recent trip to Finland - USSR - Mongolia - China - Tibet and then Hong Kong aided by a collection of colour slides. As usual it was an entertaining talk and for a change the audience didn't break up into a dozen little discussion groups while the guest speaker was trying to make himself heard.

## TRY THIS

### 2 OPTICAL PUZZLES

Hold the illustration 30 cm from your eyes. Stare at the 3 dots on the nose for 90 seconds without moving your eyes. Then look at a blank wall about 1 metre away and in a few seconds, the drawing will appear as a positive.



Can you find the LED?

## EDITORIAL.

At the last meeting we had the usual 'pep' talk about who does and who doesn't work for the good of the club. This was received with the usual amount of resentment by most people who are working in the best interest of the club and was ignored by the people who find that their other commitments leave them little time to assist. It is about time that people realised that Amateur Radio is a hobby that seems to be particularly attractive to 'loners' who are not really fussed about great social gatherings or in fact in becoming involved in projects that are going to consume their time.

We have been fortunate in the past in having some dedicated people who have given up their time to build and repair equipment, to publish the club journal and to run the store and look after supper. At the present time we have some younger members who look like taking over and it was good to hear one of them stand up at the end of the meeting and discuss plans to bring new blood into the committee as well as take over the newsletter.

Our geographical location is now probably our major stumbling block. While we can't really afford to move from our existing spot to a more accessible venue, it is evident that we will have very few junior members if any, who can find their way to our meetings. While this may suit some people who prefer to 'ragchew' with their old mates it means that there will be no younger members to take the place of the old guys who will eventually 'fall off the perch'. A club that does not grow - dies.

Maybe some type of circular to secondary school science teachers expounding the virtues of Amateur Radio and the promise of a demonstration of the hobby at the Club Room will kindle interest enough to have them bring some of their students to witness our communication skills. In the past JOTA has been looked on as a possible source of juniors to the hobby but we do in fact look rather inept when you are using your equipment set up on a trestle table in a scout hall with a piece of wire strung from the flagpole to a nearby tree. Not the best way to impress young people - even if you do manage to work interstate. A properly conducted demonstration in a reasonably equipped club room with good aerials should convert at least some of the youngsters involved to the hobby.

In the meanwhile if you do feel strongly as to what should be done in the club and would like to see it run differently you can have your chance at the Annual General Meeting, nominate yourself for a position on the committee. It is little use turning up once every six months and telling the members what should be done and how it should be done - turn up to the committee meetings and discuss what can be done, you will be surprised how receptive they are to good ideas.

Keith VK2OB.

## 160 METRE ANTENNA.

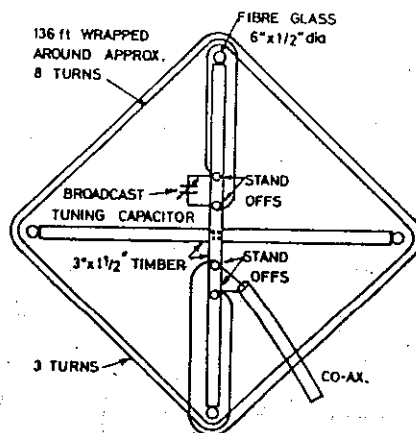
Those of you who remember the early Morse broadcasts on 1.8 Mhz will recall seeing this antenna at the VK2OB QTH, before it came down in a westerly wind.

Reprinted from South Australian Wireless Institute Journal October 1972.

The antenna to be described has shown improved results over the various dipoles and long wires that had been used in the past. Compared with the other antennae, this one shows a couple of "S" points more.

I have been able to copy K4SGU at 559, and VK5DV's signal, which was not so strong here at Balaklava, is now up another couple of "S" points.

The antenna is basically a one element yagi with a tuned winding and a low impedance link. To construct the antenna you will need 2 pieces of timber 6' x 3" x 1 1/2" to form the cross, 136 ft. of 20-22 s.w.g. enamel wire to form the main tuned winding, and enough 20-22 s.w.g. enamel wire to wind on three turns to form the link. Four pieces of glass fibre rod, about 1/2" diameter and 6" long from an old fishing rod, four small stand-off insulators to terminate the ends of the wire and a single gang



160 METRE ANTENNA

broadcast type capacitor (mounted as close as possible to the stand off insulators) are also needed.

The construction of the antenna is as follows. Screw the two pieces of timber together to form a cross, and across the ends of the timber screw the four pieces of fibre glass rod. Attach one end of the 136 ft. length of wire to an insulator, these insulators having first been mounted in pairs as shown in the diagram. Wind on all the wire and attach the end to the adjacent insulator. This will be about eight turns. Now wind on the three turns, attaching the ends to the other set of insulators.

Mount the single gang condenser to the boom as close as possible to the stand-offs that are connected to the 136 ft. length of wire, and connect to the ends. Attach 70 or 50 ohm co-ax to the ends of the three turn link and the antenna is ready.

The final step is to peak the capacitor for maximum signal strength and the antenna is then complete.

## ONE MEMBERS OPINION

Dear Member,

I.A.R.S. Inc.

At the May meeting of the society much was said by a few about the current position of the club, the poor attendance at meetings the lack of good lecture material and the people to deliver them, the lack of support that has been given in recent times to the committee projects, and the general feeling that the club, both by declining membership, loss of interest, and an ongoing financial burden which is overtaking income, was on it's last legs. If not quite that bad, then it was in need of a good shake up, a review was needed of the aims and attainable goals, both long and short term for the active survival of the club. The old guard got a mention for the past running of the club, some good and some bad, some facts and some fiction.

To be honest in the last 20 odd years or so that I have been associated with the club the wheel has turned full circle several times, our's is an amateur hobby and people by nature wander thru life, some only stay in amateur radio for a short time and others for a lifetime, such is the nature of our hobby, this is a lean time for the club and it needs some members with strong ideals and the strength and ability to carry on the task of the leadership and running of the club, or do we ??? ..

In the past a gradual intake of new members has taken place from the formal classes conducted firstly by Eric VK2DY then Keith VK2OB and now by the T.A.F.E. college as they progressed to obtain different levels of amateur license, this process has slowed and has not attracted many of the young people to our ranks, those of whom by tradition have carried forward the spirit of amateur radio in the Illawarra in this club.

So what are the options? . If the club is to survive and rise to it's former height and standing in the amateur fraternity then some hard and difficult decisions have to be made by you the collective members, either individually or thru the newly elected committee, who's task it will be to address these problems, Ask yourself these questions, Is the Illawarra area ever serviced by repeaters? , Can the club afford to maintain these facilities with our current financial base and manpower resources? , What is the future method of theory and morse training for the newcomer to the hobby in this area since the introduction of the TAFE college fees? , What is the "PROPAGATOR", a news and information monthly publication, or is it a mailed notice to inform members that the monthly meeting will be held on a certain date at a certain place? , Do you know the Charter and Constitution of the I.A.R.S. INC.? , Do you as a financial member of the I.A.R.S. Inc. know your obligations to the club?

These are just a few of the questions that come to mind, together with the impending rise in fees of the W.I.A., the continued raising license fee which is tied to the CPI, the high purchase cost of commercial equipment without which it now appears no new amateurs can get on air. ?

I do not know the answers to these questions, nor do I know if you the member will be interested,

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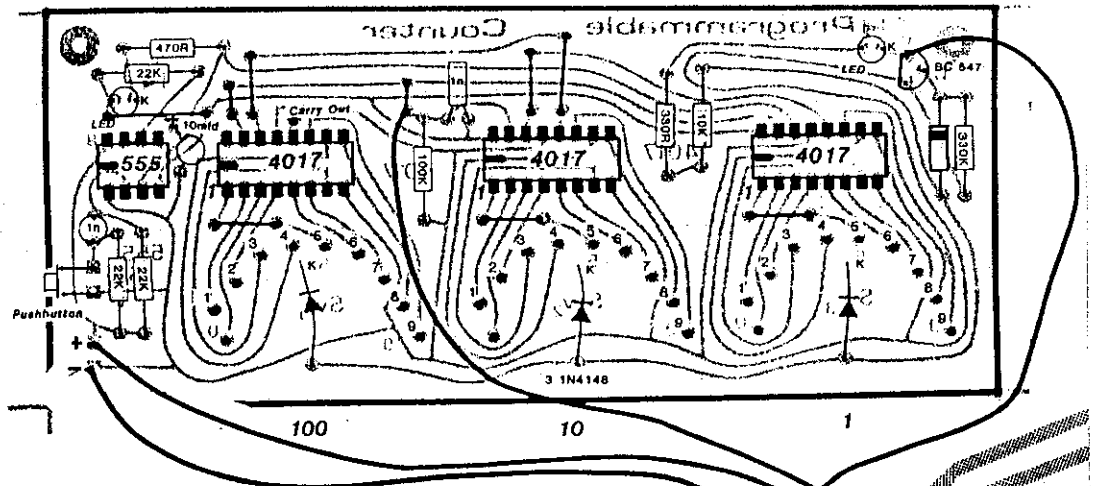
but if you are concerned in the continued well being of this club, do consider these matters & other relevant matters that you may consider important, then be prepared to attend the Annual General Meeting, possibly holding and performing a position on the committee, and participate in moulding the future of your club.

(These are the current views of the author, not the committee of I.A.R.S Inc. and are presented for your consideration).

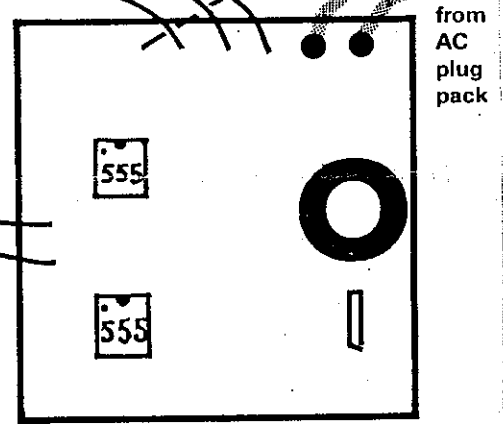
- 1 330R
- 1 470R
- 1 10k
- 3 22k
- 1 100k
  
- 2 1n 100v
- 1 100mfd 16v
- 1 555 timer IC
- 3 CD 4017 IC
- 1 BC 547
- 3 1N 914 diode
- 2 5mm red LEDs
- 1 push switch
- 30 Molex pins
- 1 battery snap

**AUTO RESET PARTS LIST**

- 1 - 220R
- 1 - 330R
- 1 - 3k9
- 4 - 4k7
- 1 - 10k
- 1 - 22k
- 2 - 10n 100v
- 1 - 22mfd 16v
- 1 - 220mfd 16v
- 1 - 1000mfd 25v
- 1 - 1N 914 diode
- 4 - 1N 4002
- 2 - 555 timer IC
- 1 - 7805 regulator



To set up the counter for testing, choose a low number and correctly position the three Molex "switches". Trigger the 555 with the push-button switch and count the number of pushes. The LED should light. Next choose a higher number involving the 4017's and check its accuracy. This counter can be used for many types of digital applications or can be coupled with a Schmitt Trigger for more "ragged" inputs.



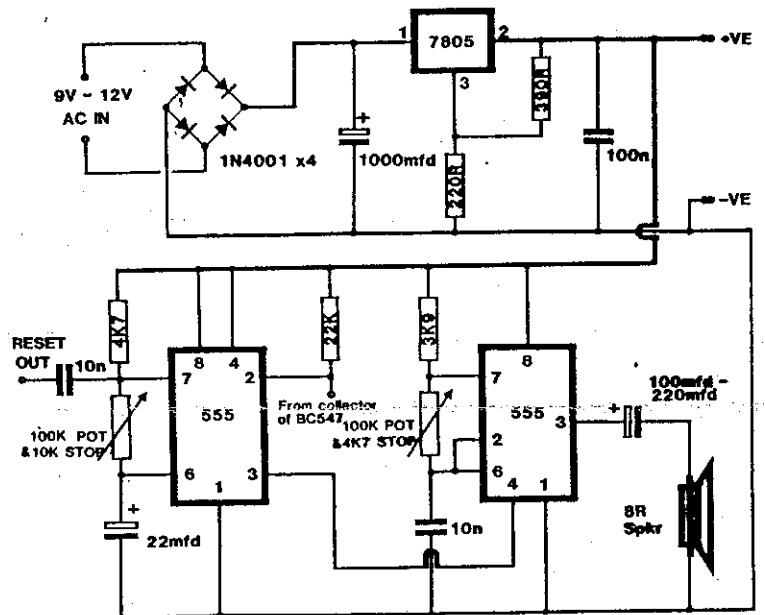
Connecting the reset PC board to the counter PC board. A plug pack supplies the unit and is fed into the AC input.

**CONSTRUCTION**

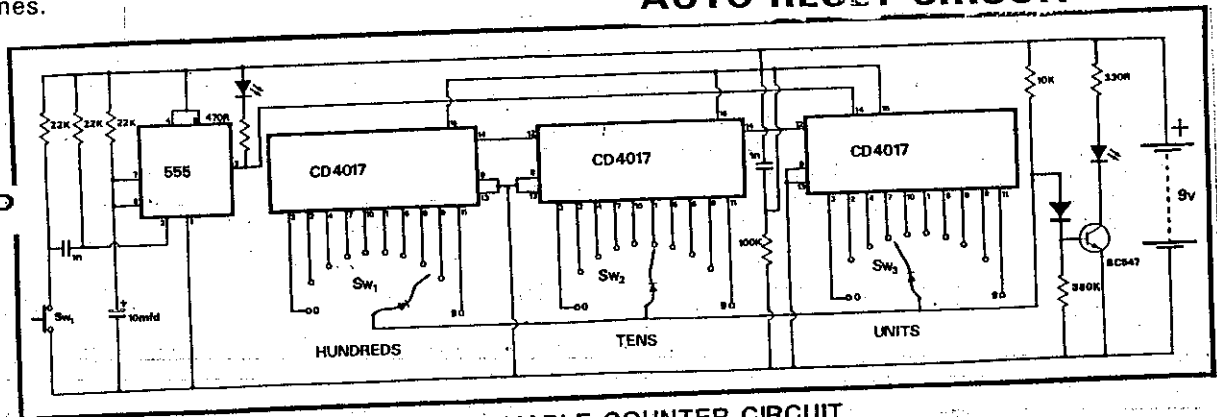
As most of the expense lies in the three CD 4017's, we suggest using sockets so that they may be re-employed if necessary. I hope this won't be needed, but you never know what the future holds.

The assembly is very simple if you follow the layout diagram. As with most of our projects, the components form an orderly fashion and generally follow the positions on the circuit diagram. This is especially necessary when the PC board forms part of the programming panel and the three semi-circles of Molex pins are designed to directly correspond to the pre-programmed number. An overlay is provided in this article as a "cut out" to stick onto the board. This will make it easier to identify each Molex pin when setting a number as the first Molex pin corresponds to "0" and the second pin to "1" with the third equal to "2" etc.

The counter provides automatic reset on "turn-on" via the 1n capacitor and 100k resistor. The 555 has a delay of about one quarter of a second making it capable of accepting about two counts per second. For higher frequencies the delay is shortened and the value of the capacitor required can be obtained by experimentation. For a simple adjustment, you can reduce the capacitor by a factor of 10 to increase the count rate 10 times.



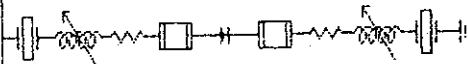
**AUTO RESET CIRCUIT**



**PROGRAMMABLE COUNTER CIRCUIT**

REPRINTED  
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**TALKING  
ELECTRONICS**  
no. 7

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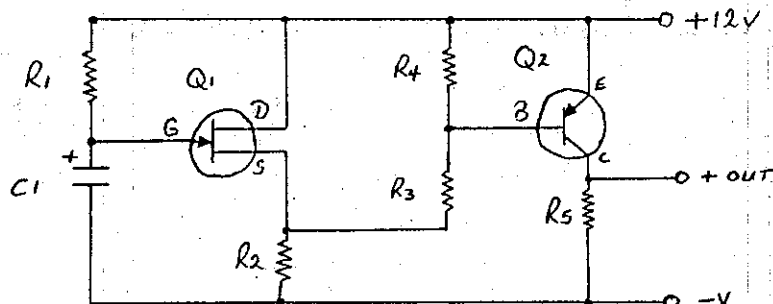
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CONNECT ALARM FOR TNC By Harry VK2JHW.



The above circuit is connected to my TINY 2 TNC and gives an audible warning when another station is connected to the system without relying on the computer being turned on. The base of Q3 is connected to pin 1 of the TNC's RS232 which goes high on connect. The emitter is connected to pin 5 which is ground. A small buzzer can be connected to the output of the timer. The value of C1 is optional. Time Constant of 1uF gives a 20 second warning.

#### COMPONENTS LIST.

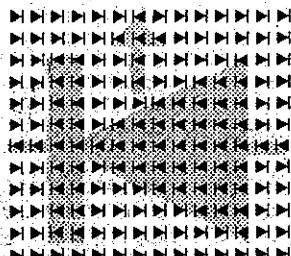
RESISTORS - all 1/2 watt 5%. CAPACITOR  
 R1 10 MOhm C1 1uF 35V Tantalum  
 R2 6k8  
 R3 15k  
 R4 10k  
 R5 4k7  
 R6 1k

#### SEMI-CONDUCTORS.

Q1 NPF106 or equivalent.  
 Q2 BC178, BC308, BC213, DS558 or equivalent.  
 Q3 BB139, 40409 or equivalent.

73's Harry VK2JHW.

Did you find the LED?



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# THE ILLAWARRA AMATEUR RADIO SOCIETY, INC.



P.O. BOX 1838, WOLLONGONG, 2500, N.S.W.

**MEETINGS:** Are held every 2nd Tuesday of the Month except January, at 7.30 pm. in the S.E.S. Headquarters, Montague street, North Wollongong.

**REPEATERS:**  
 VK2RAW - 146.850. - (VOICE) VHF Mt Murray.  
 VK2RAW - 147.575. - (PACKET) VHF Mt Murray.  
 VK2RIL - 147.275. - (VOICE & R.T.T.Y) VHF Sublime Point.  
 VK2RUW - 438.225. - (VOICE) UHF Hill 60 Port Kembla.  
 VK2RIL - 438.725. - (VOICE & R.T.T.Y) UHF Sublime Point.

**BROADCAST:** On Sunday evening prior to the club meeting, at 6.45 pm. R.T.T.Y. Mode Transmitted on 147.275. VHF, and relay on 3.562. Mhz. +/- DRM. Callbacks taken immediately afterwards. The voice broadcast will be held straight after the WIA Broadcast on 146.850. Mhz < VK2RAW > and 3.562. Mhz +/- DRM.

**W.I.A. RELAY:** On 146.850. at 10.45 am. and at 7.15 pm. each Sunday.

**CLUB - NETS:** On 3.562. Mhz. SSB +/- DRM on Sunday at 8.00 pm.

**NEWSLETTER:** "THE PROPAGATOR", published Monthly to reach FINANCIAL-MEMBERS in the week preceding the club meeting. All articles, adds etc, to the editor must be in, or try, by the 3rd Tuesday each month.

**MEMBERSHIP:** The Secretary, I.A.R.S. Inc, P.O. Box. 1838. Wollongong. 2500. Full membership is \$12 per annum; students & pensioners concessional members \$9 per annum.

**AWARDS:** The Award of the Illawarra Amateur Radio Society, Inc. is the LAWRENCE-HARGRAVE-AWARD. VK stations require 10 contacts with I.A.R.S. members. Overseas stations require 5 contacts with I.A.R.S. members. A contact with VK2AMW is sufficient for the award. Band-details, date, frequency, station worked and \$2 or 2 I.R.C.'s to THE AWARD-MANAGER, I.A.R.S. Inc, P.O. Box. 1838. WOLLONGONG. 2500. No DSL-CARD is required.

**STORE:** The club store operates at each club meeting, by COMMITTEE-MEMBERS.

## COMMITTEE:

**PRESIDENT:** VK2DYU- BILL CHADBURN, 45. Beltana Ave, Dapto.  
**VICE-PRESIDENT:** VK2OB - KEITH CURLE, 24. Beach Drv, Woonona.  
**SECRETARY:** VK2TPH- PHILL HOWCHIN, 12. Mawarra Ave, Dapto.  
**TREASURER:** VK2DMR- DENIS MCKAY, 17 Doncaster street Corrimal.

**GENERAL - COMMITTEE:** VK2BIT - Peter Woods, VK2XCC - Ray Ball, VK2FPN - Peter.

**REPEATER - CHAIRMAN:** VK2XGJ - JOHN SIMON.

**REPEATER - COMMITTEE:** VK2CAG - GRAEME DOWSE, \*VK2EXN - IAN CALLCOTT, VK2KHE - Peter Tomlin, VK2FPN - Peter, \*VK2EMV - MURRY v.d. VORSTENBOSCH, VK2MT-ROB-MCKNIGHT, VK2BIT-PETER WOODS, VK2FCP-FRED BROWN.

**QSL-CARD'S OUT :** VK2IU - RAFFAEL BUONO.

**QSL-CARD'S IN :** VK2BIT - PETER WOODS.

**PUBLICITY - OFFICER:** - (STILL LOOKING FOR ONE) (?)

**BROADCAST - OFFICER:** VK2KHE - PETER TOMLIN.

**CARTOONIST :** VK2AXI - BRIAN WADE.

**PROPAGATOR-EDITORS :** VK2JT - JOCK TAYLOR, VK2EMV - MURRY. v.d. VORSTENBOSCH, VK2DTC - DAVE CAPON.

**PRINTERS :** VK2DFK - MIKE KEECH. AND POSTED BY VK2BIT - PETER WOODS.

**SOCIAL-DIRECTOR :** VK2XCC/PHD - RAY BALL. D.O.C. LIASION VK2OB - KEITH CURLE.

**CANTEEN-MANAGER :** VK2DYU - BILL CHADBURN.

**LIFE - MEMBERS :** VK2CAG-GRAEME DOWSE, VK2OB-KEITH CURLE, VK2ALU-LYLE PATISON.

**SUNDAY - EVENING - CLUB-NET - ROSTER: STARTING AT 8.00 pm.**

8.00 pm. FIRST SUNDAY OF THE MONTH : VK2MT - ROB MCKNIGHT.

2nd SUNDAY OF THE MONTH : VK2ENX - TONY MOWBRAY.

3rd SUNDAY OF THE MONTH : VK2DTC - DAVE CAPON.

4th SUNDAY OF THE MONTH : VK2PHD - RAY BALL.

5th SUNDAY OF THE MONTH : VK2EBI - KEVIN MURPHY.

And on stand-by : VK2EMV after NOTIFICATION ONLY!