

The PROPAGATOR

Illawarra Amateur Radio Society Inc.



The monthly newsletter of the Illawarra Amateur Radio Society Inc.
Registered by Australia Post publication number :- NBH - 1491.

Meetings are held on the second Tuesday each month (except January) at 7.30 pm in the
State Emergency Services building in Montague St, Nth Wollongong.

Visitors are most welcome.

VOLUME 10

OCTOBER 1990

EDITORIAL COMMENT

HERE WE ARE AGAIN. IT WAS VERY HEARTENING TO SEE SO MANY PEOPLE TURN UP AT THE LAST MEETING TO EXPERIENCE PACKET RACKET FIRST HAND. JOHN AND FRIENDS PUT ON QUITE A NIGHT, AND NO DOUBT MANY OF YOU ARE TRYING TO JUSTIFY THE PRICE OF SOME EQUIPMENT TO GET GOING. HOWEVER, WE MUST ADVISE THAT THERE IS NO TRUTH IN THE RUMOR THAT RAY VK2XCC RUSHED OUT AND BOUGHT SOME GEAR THE DAY AFTER THE MEETING.

INTEREST IS NOW MOUNTING FOR THE COMING FIELD DAY. THERE SHOULD BE A LITTLE SOMETHING SAID INSIDE ABOUT THIS, BUT JUST FOR NOW LET US SAY THAT INITIAL ORGANISATION IS WELL UNDER WAY. A FEW GOOD SITES ARE UNDER INVESTIGATION.

OCTOBER IS ALSO A FAIRLY BOUNTIFUL TIME FOR NEW OPERATORS. WITH THE SCOUTS JOTA, AND A COUPLE OF FAIRLY BUSY WORLD CONTESTS CLOSE BY, IT IS A GOOD MONTH TO BE GETTING A FEW "SECOND OPERATORS" TO HAVE A LOOK AT WHAT YOU DO WITH THOSE BIG TV AERIALS.

PROGRAMME

WELL. SOME OF YOU PROBABLY SEARCHED HIGH AND LOW LAST ISSUE TO FIND THE INFORMATION ON THE FIELD DAY. SUPRISE...THERE WASN'T ANY!

OCTOBER: THIS NIGHT WILL BE SPENT PLANNING THE UPCOMING FIELD DAY. WE MIGHT HAVE SOME DETAILS THIS MONTH IF WE GET ANY BEFORE THE PRINT DATE.

NOVEMBER: A MINI AUCTION OF SOME KIND WILL HAPPEN ON THIS NIGHT. NO DOUBT SOME OF THE BOWER-BIRD TYPES OUT THERE WILL BE ABLE TO FILL THEIR UTES UP AGAIN ON THIS NIGHT. JUST THINK...YOUR WIFE COULD END UP JUST LIKE MRS MESS ONE DAY! ALSO, MORE EXAMS THIS MONTH.

DECEMBER: THE MOOTED SOCIAL NIGHT WILL BE HELD, BUT WE WON'T EVEN TRY TO MAKE OUT THAT WE KNOW ANYTHING ABOUT IT.

CONGRATULATIONS

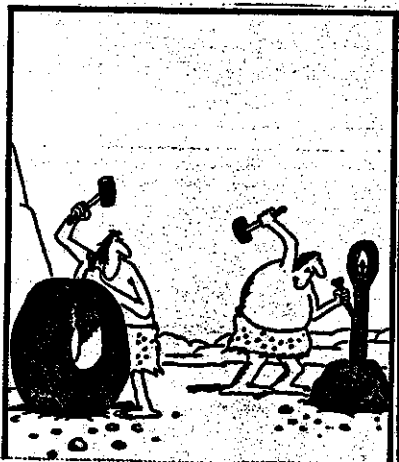
CONGRATULATIONS FROM WE THE EDITOR AND THEM THE COMMITTEE TO THOSE PEOPLE OUT THERE ON NEW CALLSIGNS AFTER THE LAST LOT OF EXAMS. THESE PEOPLE INCLUDE GRAHAM VK2GID (EX VK2JGI) AND ALEX VK2XTX. WELL DONE TO THOSE FELLOWS AND WE HOPE TO SEE SOME MORE IN THE FUTURE. THIS MEANS YOU, BILL.

DENNIS'S ANTENNER COLUMN

NO DOUBT MANY OF YOU OUT THERE ARE WAITING WITH BAITED BREATH (WELL, OK, THAT IS A BIT EXTREME) FOR THE NEXT EDITION OF THE COLUMN FROM OUR RESIDENT TECHNICAL EXPERT. UNFORTUNATELY, WE HAVEN'T BEEN ABLE TO TALK TO DENNIS RECENTLY, AND SO WE HAVE NOTHING FROM HIM FOR THE MONTH.

LAST TIME WE WERE TALKING TO HIM, IT WAS ON ONE OF THE UHF BANDS. HE WAS HAVING A PROBLEM WITH THE SQUELCH SETTING ON HIS RIG. APPARENTLY THE KNOB HAD TO BE TURNED UP TOO FAR OR SOMETHING. NOBODY HAD A SCHEMATIC DIAGRAM FOR THE UNUSUAL RIG THAT HE WAS USING, SO HE SET ABOUT RE-ALIGNING IT HIMSELF. WITH HIS IMMENSE TECHNICAL KNOWLEDGE IN ONE HAND, AND A STEEL SCREWDRIVER IN THE OTHER, HE WENT TO WORK. THE LAST ANYONE HEARD, HE WAS TUNING THE RIG ON AIR AND ASKING HOW IT SOUNDED TO US. THEN HE JUST FADED AWAY...

WE WILL HAVE TO SEE HIM (IF HE IS STILL AROUND) ABOUT WHETHER HE FEELS UP TO WRITING FUTURE COLUMNS FOR US.



I HOPE YOU FINISH THAT SWR METER BEFORE I FINISH THIS BALUN!!

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FOR SALE

ABOUT 250 OR SO BLANK QSL CARDS. THESE ARE THE BINT SERVICES GENERAL TYPE CARDS...THEY DON'T HAVE A CALLSIGN ON THEM, JUST GENERAL INFO. WRITE YOUR OWN CALLSIGN IN AND YOU HAVE YOUR OWN QSL CARDS. GREAT FOR THE SMALL TIME QSL'ER. SAY ABOUT \$30 FOR THE LOT (THEY COST ME \$40). CALL GRAHAM VK2GID ON 286732 (AH). (NO LONGER REQUIRED DUE TO NEW CALLSIGN...HEE HEE).

DIGITAL SIGNAL PROCESSING

NO DOUBT BY NOW YOU HAVE HEARD OF THE NEW KENWOOD HF RIG WITH "DIGITAL SIGNAL PROCESSING". (I THINK IT IS CALLED THE TS-950-SD OR SOMETHING). PERHAPS YOU WERE WONDERING WHAT THIS DIGITAL SIGNAL PROCESSING IS, AND WHETHER IT IS ANY GOOD.

THE IDEA OF DSP (I'LL USE THE ABBREVIATION, BECAUSE IT IS SHORTER) IS THAT AFTER THE FIRST FEW RECEIVE STAGES, BUT BEFORE THE FINAL MIXER, THE IF SIGNAL IS FED INTO THE PROCESSOR AND THEN THE OUTPUT FROM THE PROCESSOR GOES INTO THE FINAL MIXER. THE PROCESSOR BASICALLY CONSISTS OF THREE PARTS: A SMALL COMPUTER TO MODIFY THE SIGNAL, AN ANALOGUE TO DIGITAL CONVERTER TO GET THE SIGNAL INTO A FORM THAT THE COMPUTER UNDERSTANDS, AND A DIGITAL TO ANALOGUE CONVERTER TO GET THE COMPUTER OUTPUT INTO A FORM THAT THE MIXER CAN USE.

WHAT THE COMPUTER DOES WITH THE SIGNAL IS TO PROVIDE A NUMBER OF FILTERS TO SERVE AS A NOTCH FILTER, AN UNWANTED SIDEBAND FILTER, AND A BANDPASS FILTER. BECAUSE OF THE WAY THAT THE COMPUTER SAMPLES THE SIGNAL, THESE FILTERS CAN BE VERY SHARP, AND GIVE VERY GOOD PERFORMANCE.

THE RESULT IS A SUBSTANTIALLY CLEARER RECEIVED SIGNAL. ON CW, THE SIGNAL CAN BE RENDERED VERY CLOSE TO NOISELESS, WHILE ON SIDEBAND THE SIGNAL-TO-NOISE RATIO IS ALSO IMPROVED.

THE TRADE-OFF HERE, HOWEVER, IS THAT YOU NEED A PRETTY FAST COMPUTER TO DO THE JOB. TO BE ABLE TO OPERATE WITH A SIGNAL, THE COMPUTER MUST READ THE INPUT TWICE AS OFTEN AS THE FREQUENCY OF THE INPUT. THIS MEANS THAT FOR A 455 KHZ IF SIGNAL THE COMPUTER HAS TO BE ABLE TO READ THE INPUT, DO CALCULATIONS AND WRITE TO THE OUTPUT ABOUT ONE MILLION TIMES A SECOND. TRY THAT WITH YOUR IBM CLONE!

A COMPUTER TO OPERATE AT THIS SORT OF SPEED WILL TEND TO COST A FAIR BIT. FOR THIS REASON, A DIGITAL SIGNAL PROCESSOR IS NOT SOMETHING YOU WILL SEE ON ANYTHING BUT THE BEST RIGS.

AS FOR THE ACTUAL PERFORMANCE ON AIR, IN THEORY IT SHOULD BE QUITE GOOD. IN PRACTICE, THE EDITORIAL BUDGET DOES NOT QUITE STRETCH FAR ENOUGH. BUT IT ISN'T SOMETHING THAT WILL BE APPEARING ON LYLE'S LATEST MICROWAVE SET YET.

WELL, I HOPE THIS ARTICLE HAS BEEN OF SOME INTEREST TO YOU AND LET YOU KNOW A BIT MORE ABOUT HOW TECHNOLOGY IS GOING.

EXTORTION RACKET

APPARENTLY THERE IS A BIT OF A RACKET GOING ON OVER IN WEST WOLLONGONG AT THE MOMENT. A LEAFLET HAS BEEN DISTRIBUTED IN LETTERBOXES TELLING OF PEOPLE WHO "TRANSMIT HIGH FREQUENCY SOUND" INTO PEOPLE'S HOUSES AND THEN DEMAND MONEY AS PROTECTION.

FOLLOWING HOT ON THE HEELS OF THE CONTROVERSY OVER THE NEW TRANSMITTER TOWERS FOR 2 DOUBLE O, THIS WOULD SEEM TO EVEN FURTHER REDUCE THE LIFE EXPECTANCY OF AMATEUR OPERATORS. YOU REALLY WONDER SOME TIMES...

WHAT'S GOING ON HERE???

LAST MONTH, AN INNOCENT VK2TKE WAS TAKING CALLBACKS TO THE EVENING BROADCAST AS USUAL. THE FIRST ONE WAS VK2JBS. THE SECOND ONE WAS VK2JBS SECOND OPERATOR. UNUSUAL. THINKS KEN, BUT NO MATTER. A FEW MORE CALLS, THEN VK2JBS 3RD OPERATOR. KEN HAD TO THINK A BIT ABOUT THAT ONE.

WHAT WAS GOING ON? ZAPHOD HAD ALL GOT TOGETHER AT BILL'S PLACE TO WRITE THE LAST PROPAGATOR, OF COURSE! CHEERS KEN.

REPEATER REPORT

HOW LONELY I FEEL SITTING HERE, JUST ME AND MY TYPEWRITER. IT'S 12:45AM SATURDAY NIGHT (22/9/90) AND GUESS WHO FORGOT HE HAD TO GET THIS REPORT DONE FOR TOMORROW MORNING, THE EDITORS GET STROPPY IF YOU HAND IN A LATE ITEM. (NO, NO, WE JUST DON'T PRINT IT...ED). LIFE'S TOUGH.

VK2RAW: AFTER REPORTS OF 6850'S COVERAGE BEING DOWN, A CHECK OF THE SYSTEM HAS FOUND THE VSWR ON THE ANTENNA FEEDLINE TO BE AROUND 3.2 TO 1. NOT GOOD. IT WASN'T LONG AGO THAT THE FEEDLINE WAS REPLACED WITH HELIAX AND AT THAT TIME THE VSWR WAS ALMOST 1 TO 1. THE PROBLEM COULD BE FEEDLINE, THE TWO N-TYPE CONNECTORS AT EACH END OR THE ANTENNA. OPINION HAS THE ANTENNA AS THE SUSPECT. THIS MEANS THAT THE TOWER HAS TO BE LOWERED. WE ALL KNOW WHAT HAPPENED LAST TIME THAT WAS DONE, DON'T WE RAY?? SO AS TO MAKE THE JOB AS QUICK AND EASY AS POSSIBLE, A WORKING BEE HAS BEEN ORGANISED FOR SAT 13TH OCTOBER. DETAILS OF TIME AND MEETING PLACE ARE STILL TO BE DECIDED SO IF YOU ARE FREE THAT DAY PLEASE CONTACT MYSELF OR KEN VK2TKE AND WE'LL FILL YOU IN.

VK2RAW PACKET: AAPRA HAS SUPPLIED EQUIPMENT TO US FOR CONNECTION TO OUR EXISTING SYSTEM FOR HOOKING UP TO THE "ROSIE" SYSTEM. THIS WILL HOOK UP RAW VIA A UHF LINK SYSTEM TO HELP ALLEVIATE CONGESTION AS WELL AS SPEEDING UP THROUGH INTO AND OUT OF THE AREA.

VK2RUW: THIS SYSTEM HAS A NEW PROBLEM. AFTER ABOUT 10 TO 15 MINUTES OF OPERATION, A SQUEAL DEVELOPS ON THE AUDIO OUTPUT, WHICH SOUNDS LIKE FEEDBACK. I'VE GOT A COUPLE OF ON SITE TESTS TO DO, THEN DEPENDING ON THE RESULTS THE REPEATER WILL BE REMOVED FROM SERVICE FOR REPAIRS. POSSIBLY BY THE TIME YOU READ THIS IT WILL BE FIXED. FINGERS CROSSED. THE DIPLEXER HAS ORDERED AND WILL PROBABLY BE HERE BY THE TIME YOU READ THIS.

VK2RIL: ALL OK STILL, TOUCH WOOD. AS YOU MAY BE AWARE, THE PARK TRUST IN CHARGE OF SUBLIME

POINT HAVE DECIDED TO START CHARRGING US FOR SITE USE. \$2 A WEEK IS THE CHARGE (\$104 A YEAR). \$2 ISN'T MUCH I SUPPOSE, ALTHOUGH IT DOES ADD UP OVER A COUPLE OF YEARS. ONE COULD SAY THAT IS CHEAP COMPARED TO WHAT OUR COMMERCIAL NEIGHBOURS WOULD BE PAYING, BUT THEY'D BE MAKING MEGA-AMOUNTS FROM THE GREAT LOCATION COMPARED TO OUR CLUB. THIS IS NOT SOUR GRAPES, BUT NO WE ARE PAYING FOR THE USE OF TWO SITES. WE DON'T REALLY HAVE MUCH CHOICE I SUPPOSE...

VK2RAH: IN ABOUT FIVE HOURS, I'LL BE ON MY WAY TO MT MURRAY AND KNIGHTS HILL FOR SOME MORE WORK. SINCE THE LAST REPORT THE CONTROL BOARD FOR THE RX END OF THE REPEATER WAS COMPLETELY REBUILT AND THE RX RE-INSTALLED ON 9/9/90. INCLUDED IN THE REBUILD WAS SOME ADDITIONAL CIRCUITRY TO TRY TO FIX THE PROBLEM OF RAW GETTING INTO RAH. IT WORKED. IN FACT EVERYTHING WORKED PERFECTLY FOR AT LEAST A DAY AND A HALF. FIRST THE CRUDDY RX STARTED PLAYING UP AND THEN THE IDENT STOPPED. LAST WEEKEND I WAS ALL SET TO GO UP BUT OTHER COMMITMENTS PREVENTED ME, BUT OVER THAT WEEKEND THE IDENT-LESS REPEATER WORKED PERFECTLY. SOME EXCELLENT CONTACTS WERE HAD AND I MUST SAY WE FELT PRETTY OPTIMISTIC. THIS WAS SHORT LIVED. AFTER COMPLETION OF THE WIA BROADCAST SUNDAY EVENING SOMETHING UP THERE DIED. THE OUTPUT APPEARS TO HAVE A PROBLEM. I WON'T GO INTO THE DETAILS BUT AFTER DISCUSSION IT WAS DECIDED TO SHUT THE SYSTEM DOWN REMOTELY AND TO THIS DATE IT STILL IS. (STOP PRESS...IT IS TOMORROW NOW AND RAH IS SORT OF WORKING, BUT STILL A BIT ROUGH AROUND THE EDGES...ED).

ELSEWHERE IN THIS ISSUE THERE SHOULD BE SOME INFO ON OUR CLUB'S PROPOSED FIELD DAY. A GET TOGETHER OF AMATEURS, ERECTING ANTENNAS, PLAYING WITH YOUR FAVOURITE BAND, EXCHANGING YARNS, ENJOYING GOOD FOOD, GOOD DRINK & GOOD COMPANY. I WENT TO THE CLUB'S LAST FIELD DAY AT THE OLD EME SITE AND MAY I SAY IT WAS GREAT. THIS WAS 3 OR 4 YEARS AGO. WE ARE HAVING PROBLEMS GETTING THE BEST SITE, BUT WHEN IT IS RIGHT THINK ABOUT COMING ALONG.

TILL NEXT TIME, ROB VK2MT

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OTHER

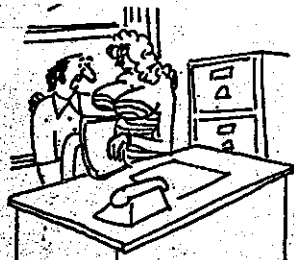
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PRINCESS HWAY DAPTO



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LIST OF FINANCIAL MEMBERS

THE LIST BELOW CONTAINS ALL OF
THE MEMBERS WHO ARE LISTED AS
FINANCIAL AT THE MOMENT. IF YOUR
NAME ISN'T THERE AND YOU PAID
RECENTLY, PLEASE DON'T GET
INSULTED. HOWEVER IF YOUR NAME
ISN'T THERE AND YOU HAVEN'T PAID,
THEN YOU ARE UNFINANCIAL. ALSO,
YOUR MAGAZINE WILL HAVE COME IN A
BLUE WRAPPER TO REMIND YOU.

VK2's: EU, CO, IU, MT, OB, PG,
AGV, AHN, AIV, ALU, ASN, CAG, DHP,
DSH, EBI, EJH, EMI, EMK, ENX, EWJ,
EXN, FCW, GID, JBS, JHW, JJJ, JTS,
KCV, KEY, KHE, KLD, KLH, PJS, TKE,
TPH, XAN, XBC, KWG, XCC/PHD, XDB,
XSV, XGJ, XLA, XNH, XRK, XTE, XTX,
XQX, ZDM, ZLJ, ZNS.

ALSO: T.JEPSON, N.KOOSACHI,
R.MITCHELL, R.BONELLA, R.WOOTEN,
S.BENKO.

IF YOU CAN'T FIND YOUR CALLSIGN
OR NAME ABOVE, AND HAVEN'T PAID
RECENTLY, PAY UP!

**** PAGE 5 ****

IARS FIELD DAY

YES...THIS IS THE LONG AWAITED WRITING ABOUT THE UPCOMING FIELD DAY. THE EVENT WILL BE HELD ON THE WEEKEND OF THE 17TH AND 18TH OF NOVEMBER. THE SITE WILL BE SADDLEBACK MOUNTAIN, WEST OF KIAMA.

GENERATORS WILL BE AVAILABLE ON THE SITE FOR USE. A BBQ PLATE WILL BE AVAILABLE, BUT BRING YOUR OWN FOOD AND THERE IS NO WATER ON SITE, SO BRING SOME YOURSELF. AT THE MOMENT IT LOOKS LIKE THERE WILL BE A COUPLE OF LARGE TENTS BEING SUPPLIED BY THE COMMITTEE, BUT NO DOUBT IF YOU BRING ANOTHER ONE THEN NO HARM WILL BE DONE.

AS PEOPLE ARRIVE ON THE DAY, IT WOULD BE A GOOD IDEA TO SET UP AS THEY COME, RATHER THAN A HUGE EFFORT LATER. IF YOU ARE INTERESTED IN COMING TO THE DAY, MAKE SURE YOU GET ALONG TO THE OCTOBER MEETING TO FIND OUT ALL THE DETAILS.

SADDLEBACK MT HAS YET TO BE CHECKED OUT AS TO SUITABILITY, AND A COUPLE OF OTHER SITES ARE BEING CHECKED OUT IF THIS ONE DOESN'T WORK OUT.

See Jack at

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ILLAWARRA AMATEUR RADIO SOCIETY INC

MINUTES OF COMMITTEE MEETING -
TUESDAY 18TH SEPTEMBER 1990.
HELD AT SES HQ, MONTAGUE ST, NTH
WOLLONGONG, STARTING AT 19:45.

BUSINESS:

1. PETER VK2KHE TO PURCHASE A DOOR LOCK FROM UNANDERRA HARDWARE.
2. A LETTER TO BE WRITTEN TO THE SOUTH COAST RADIO CLUB CONCERNING LONG WIRE ANTENNAS FOR SALE AT \$3.00 EACH, AS LISTED EARLIER.
3. VK2XSV TO LOAN A 8x5 TRAILER TO VK2TKE FOR REMOVAL OF RADIO GEAR PRIOR TO SALE IN THE NOVEMBER AUCTION.
4. FIELD DAY TO BE ORGANISED FOR 17/18TH NOVEMBER AT SADDLEBACK MT, KIAMA.
5. A FIRE TENT 16x16 OR 20x18 TO BE ORGANISED FOR THE FIELD DAY THROUGH THE STEELWORKS FOR A DONATION PRICE.
6. AN ALTERNATIVE FIELD DAY SITE IS TO BE ANNOUNCED.
7. AN APPLICATION IS TO BE SUBMITTED FOR A BUILDING PERMIT FOR ERECTION OF THE TOWER, WITH ALL ITEMS DONATED PRIOR TO PLANS.
8. A WORKING BEE WAS ORGANISED ON VK2RAW MOUNT MURRAY, CONCERNING LOWERING THE TOWER. IT WILL BE HELD ON THE 6TH OCTOBER, WEATHER PERMITTING.
9. VK2MT TO GET CONFIRMATION ABOUT UHF PACKET LINK.
10. THE EXISTING RADIO WILL NEED REPLACING TO MOVE FROM 144.085 TO 144.800 BECAUSE IT IS AT THE EDGE OF ITS RANGE.
11. WE WOULD LIKE TO GET PACKET OPERATION AWAY FROM 147.575, AND WILL GET SOME CRYSTALS FOR 147.550. THIS WILL ALSO REQUIRE A CHANGE OF LICENCE.
12. VK2MT GAVE SOME INFORMATION FROM GRAEME DOWSE ABOUT THE DIPLEXER. A CHEQUE IS TO BE WRITTEN FOR \$582.00 FOR SAME.

13. VK2JH HAD SOME INFORMATION FROM GRAEME DOWSE REGARDING THE DIPLEXER FOR VK2RUW, AND A CHEQUE IS TO BE DISPATCHED FOR \$582.00 FOR SAME.

14. THERE WILL BE A CW NET ON 146.525, ON MONDAY TO FRIDAY NIGHTS FROM 7 TO 7:30PM STARTING ON 24/9/90. THIS IS TO HELP THOSE WHO NEED TO PASS MORSE TO UPGRADE.

MEETING CLOSED 21:45.



YES WARREN
3 BAGS FULL
WARREN

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AND YOU KNOW THE NAME
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DOTC QUESTION

LAST MONTH, KEITH VK2OB ASKED WHAT FEATURE OF A QUARTER WAVE GROUND PLANE MAKES IT A USEFUL ANTENNA FOR HIGH FREQUENCY DX WORK.

THE ANSWER WAS (C) - IT PROVIDES LOW ANGLE RADIATION. OF THE OTHER CHOICES, IT IS NEITHER UNI- OR BI-DIRECTIONAL, AND DOES NOT GIVE HIGH ANGLE RADIATION.

THIS MONTH KEITH ASKS:

HOW MANY OSCILLATORS ARE REQUIRED IN A DOUBLE CONVERSION SUPERHETERODYNE RECEIVER, TO BE USED FOR THE RECEPTION OF SSB AND CW?

- (A) ONE
- (B) TWO
- (C) THREE
- (D) FOUR.

QSL CARD SORTING OUT

THE VK2 QSL CARD BUREAU ADVISES THAT IT IS TRYING TO SORT OUT HOW ALL ITS QSL CARDS ARE TO BE DISTRIBUTED. UNFORTUNATELY ITS COMPUTER SUFFERED A MAJOR BRAIN FAILURE AND SO THEY DON'T KNOW WHAT IS GOING ON. FOR THIS REASON THEY ARE GOING TO SEND OUT ALL CARDS THEY HAVE ON HAND, AND A LETTER TO THOSE THAT THEY SERVICE WHO DON'T HAVE ANY CARDS.

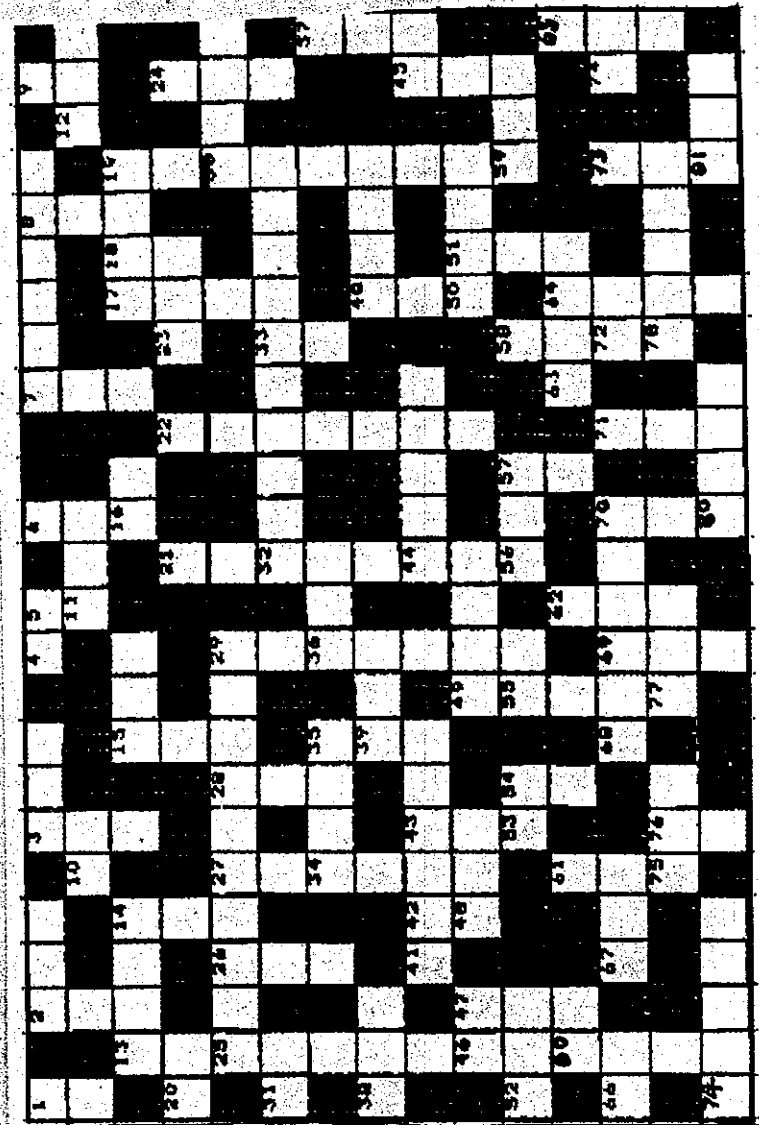
IF YOU WANT TO GET YOUR CARDS THROUGH THE SOCIETY'S QSL SERVICE, THEN PLEASE SEE BILL VK2JBS AND TELL HIM ABOUT IT. IF YOU DON'T WANT TO SEE YOUR QSL CARDS, LET US KNOW AND THEY CAN BE GOT RID OF. IF YOU WANT THEM PERSONALLY, TELL US THAT TOO AND WE CAN SAVE YOU WRITING YOURSELF. WITH A BIT OF LUCK THIS WILL ALSO ALLOW US TO SORT OUT OUR RECORDS AS WELL...

WHERE ARE ZAPHOD'S HINTS???

NO DOUBT YOU HAVE OBSERVED THAT THERE ARE NO ZAPHOD'S HINTS IN THIS ISSUE. WELL, TWO OF US HAVE BEEN WORKING MANY DOUBLER, AND THE OTHER HAS BEEN OFF AIR. SO, NO HINTS.

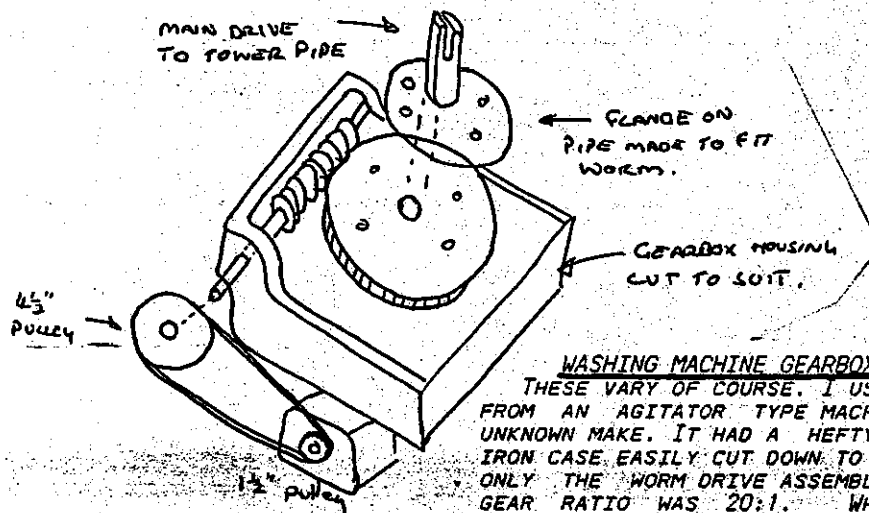
2 OUR TOWER BUILDER VK2***
 3 SHALL I INCREASE POWER?
 4 MAINS POWER.
 7 YOU NEED A GOOD ONE OF THESE .
 10 HOW WE HELP IN JOTA IS GOOD ""
 11 ATTENTION ALL AMATURES.
 12 EDITORS CALLSIGN VK2***.
 13 JAPANESE RADIO MANUFACTURER
 15 CAN YOU ACKNOWLEDGE RECEPTION?.
 16 OPPOSITE TO LD
 17 BACKGROUND NOISE IS A GENTLE """"
 20 OPPOSITE TO OFF
 23 A PLUG CAN HAVE MANY OF THESE.
 25 MODERN VALVE EQUIVALENT.
 30 ANOTHER NAME FOR POWER CIRCUIT.RF
 31 WHAT IS "ID EST" (LATIN)
 32 YOU TALK INTO THIS
 34 OUR CLUB
 36 ASSISTANT BROADCAST OFFICER VK2.
 38 STANDARD TIME SIGNAL
 39 16 COLOUR COMPUTER DISPLAY. I.B.M
 40 NAME.CO-EDITOR OF PROPOGATOR
 41 FORM OF DIGITAL COMMUNICATION
 44 OUR COMMON INTEREST
 45 HOME OF THE ARRL (INITIALS)
 46 WHEN YOU TALK ON RADIO YOU (ABV)
 48 EX PRESIDENT OF OUR CLUB VK2***
 49 YOU CAN MOUNT A ANTENEA ON THIS.
 50 EXPEDITION HOME .
 52 SLANG FOR RADIO TRANSIEVER
 53 OPPOSITE TO AFFIRMATIVE
 55 LOGIC GATE.
 56 A TV SERIES THAT HAS DARLECS. DR.
 59 ETCETERA.
 60 ORANGE JUICE. INITIALS
 63 CONNECTS RADIO TO ANTENEA
 66 THE JUNCTION IN A DIODE.
 67 YOU LISTEN TO RADIO WITH THIS
 68 OUR RESIDENT TECHNICAL EXPERT HA!
 72 US RADIO MANUFACTURER.
 74 FEMALE OPERATOR
 75 TYPE OF LOGIC GATE
 77 RECIEVE FINE TUNING
 78 STATIC CAN BE CALLED WHITE """"
 79 TO LINE UP
 80 ABBREVIATION FOR SIGNAL CORPS.
 81 ASSOCIATION OF RADIO CLUBS AUST.

1 YOU CAN CALL CO""
 2 HE LOVES PACKET HA HA.!!!! VK2***
 3 ARE YOU READY?
 5 CALLING QUESTION.
 6 YOUR LOCATION.
 7 TYPE OF LOGIC GATE
 8 OLD NAME FOR THE STEELWORKS.
 9 MEASURE OF INTELECT.
 13 A CALL OVERSEAS IS """"""""""
 14 AUSTRALIAN EARTHING SYSTEM
 15 GOING CLEAR.
 17 IT PAYS TO GET A AERIAL """"
 18 OPPOSITE TO OUT.
 19 YOU CAN BOUNCE SIGNALS OFF THIS.
 21 WAY OF GETTING EQUIP YOU CANT BUY
 22 SOME PEOPLE STARTED ON THIS.
 24 OPERATES AT 9600 BAUD. VK2***.
 26 TYPE OF LOGIC GATE
 27 TO TURN ON AND OFF
 28 THE LOWER THE BETTER.
 29 USED TO TURN A DIRECTIONAL ANT.
 33 PAST MIDDAY.
 35 EVERY ONE HAS MADE A CRYSTAL """,
 37 REDUCE TRANSMISSION SPEED. (CW).
 40 FOUR OF THESE MAKE A NIBBLE
 42 ACKNOWLEDGE (ABV)
 43 EL PRESIDENTE.
 45 WE LOG THIS TIME
 47 OUR PACKET EXPERT.
 49 NOVICES HAVE A """" LIMITATION.
 51 BOUNCING SIGNALS OFF THE MOON
 54 VK2"" LIFE MEMBER OF CLUB.
 57 OLD MAN (INITIALS)
 58 YOU NEED THIS TO OPERATE.CALL....
 61 NATURAL NOISE
 62 ABR FOR ANTENEA
 64 TYPE OF ELECTRICAL CONDUCTING GAS
 65 VK2... IS GRAEMES CALLSIGN
 69 POWER USED TO RECIEVE IS ALMOST""
 70 INTERATIONAL DISTRESS CALL
 71 WHAT IS MY EXACT FREQUENCY?
 73 NOT SECONDHAND
 76 I AGREE.



A HOMEBREW ANTENNA

THE FOLLOWING ARE INSTRUCTIONS FOR THE CONSTRUCTION OF A ROTATOR USING PARTS FROM A WASHING MACHINE AND A V.W. WIPER MOTOR. PERFORMANCE FIGURES ARE AS FOLLOWS: 1 REVOLUTION IN 60 SECONDS 40 FT LBS T DRIVE SHAFT 9-12 VOLTS SUPPLY



THE ROTATOR ENCOUNTERED HAD A 1/2" DIAMETER SHAFT PROTRUDING FOR MOUNTING A V PULLEY.

NOW THE WIPER MOTOR SHAFT ROTATES AT APPROX 60 RPM, AND THE FINAL DRIVE SHAFT IS TO ROTATE AT ABOUT 1 RPM. SO YOU NEED A STEP DOWN RATIO OF ABOUT 3 TO 1 BETWEEN THE GEARBOX AND THE MOTOR. A LIGHTWEIGHT SET OF PULLEYS WERE USED AND A B-SECTION BELT (NOT A A SECTION -TOO STIFF) WAS ALSO USED.

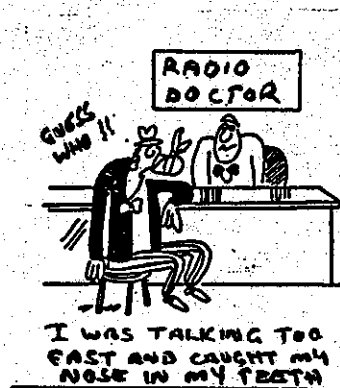
TO SUPPORT THE SMALLER PULLEY, MAKE UP A METAL BRACKET WITH A SHORT STUB AXLE OF 1/2" DIAMETER ROD, AND FIX IT TO WHATEVER CHASSIS YOU CONSTRUCT. THE SMALLER PULLEY RUNS FREELY ON THE AXLE, LINKED BY BELT TO THE LARGER PULLEY. THE IDEA IS TO HAVE THE WIPER MOTOR SUPPLY TORQUE ONLY, WITHOUT ACTUALLY CARRYING THE PULLEY.

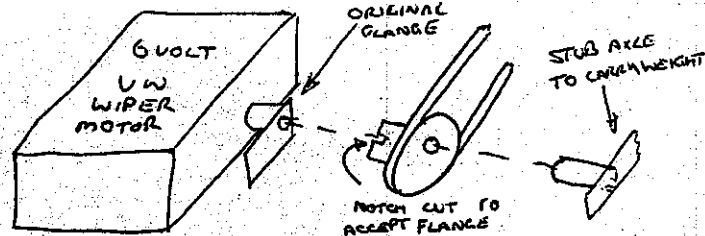
WIPER MOTOR DETAILS

THE MOTOR USED WAS A VOLKSWAGON WIPER MOTOR USED PRIMARILY BECAUSE I FOUND ONE AT THE LOCAL TIP, BUT IT'S A GOOD CHOICE. COMPACT, ROBUST OPERATES INDEFINITELY ON 12 VOLTS. EASILY REVERSABLE BY REVERSING POLARITY OF THE SUPPLY.

WASHING MACHINE GEARBOX

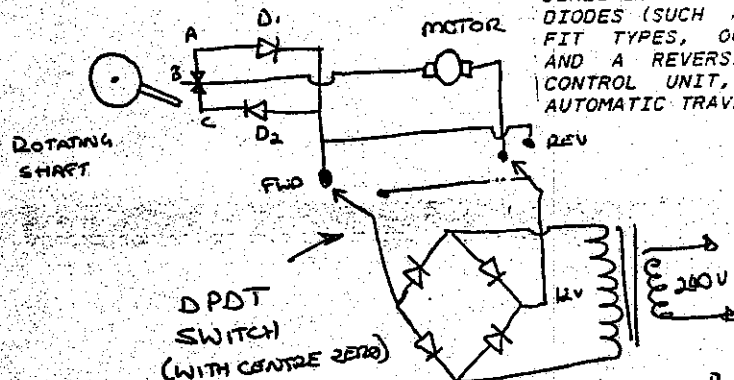
THESE VARY OF COURSE. I USED ONE FROM AN AGITATOR TYPE MACHINE OF UNKNOWN MAKE. IT HAD A HEFTY CAST IRON CASE EASILY CUT DOWN TO RETAIN ONLY THE WORM DRIVE ASSEMBLY. THE GEAR RATIO WAS 20:1. WHATEVER GEARBOX YOU DECIDE TO USE YOU WILL NEED TO REMOVE AND DISCARD THE PARTS WHICH GIVE THE AGITATOR EFFECT AND RETAIN ONLY THE WORM AND WORM WHEEL. A SUITABLE FLANGED PIPE FITTED TO THIS WORM WHEEL FORMS THE DRIVING SHAFT FOR THE FINISHED ROTATOR.





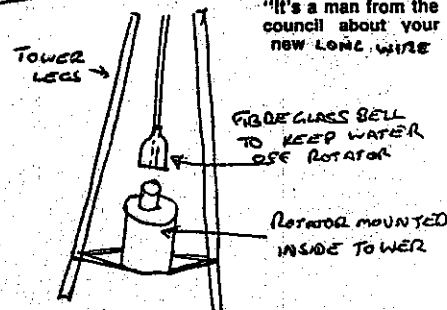
THE NEXT PROBLEM IS HOW TO LIMIT THE ROTATION OF THE DRIVE SHAFT, SO THAT YOU DON'T KEEP WINDING THE SHAFT ROUND AND ROUND, RESULTING IN DAMAGE TO THE COAXIAL CABLE. SHOWN BELOW IS ONE WAY TO DO IT:

NORMALLY BLADES A, B AND C WILL BE IN METALLIC CONTACT WITH EACH OTHER. BUT WHEN THE SHAFT ROTATES FAR ENOUGH, THE PROTRUDING LUG OF FIBREGLASS WILL BEN LUG B ASIDE UNTIL IT NO LONGER CONTACTS LUG C (IN THE CLOCKWISE DIRECTION), OR LUG A (IN THE ANTICLOCKWISE DIRECTION). ADD TWO HEAVY DUTY DIODES (SUCH AS AUTOMOTIVE PRESS FIT TYPES, OUT OF THE JUNK BOX), AND A REVERSING SWITCH IN THE CONTROL UNIT, AND YOU NOW HAVE AUTOMATIC TRAVEL LIMITING:



WITH THE OPERATING SWITCH IN THE FORWARD POSITION, CURRENT FLOWS FROM THE POWER SUPPLY, THROUGH THE MOTOR, ALONG BLADE B, INTO BLADE A AND BACK THROUGH DIODE D. THE MOTOR WILL ROTATE THE SHAFT CLOCKWISE UNTIL THE SHAFT LUG DEPRESSES BLADE B, BENDING IT AWAY FROM A. THE MOTOR NOW STOPS, BUT WILL RUN IN REVERSE IF THE SUPPLY IS REVERSED.

THE WHOLE UNIT WHEN COMPLETED NEEDS A WEATHERPROOF COVER OF SOME KIND. WATER WILL TEND TO RUN DOWN THE DRIVE SHAFT INTO THE WORKS, UNLESS SOME KIND OF SHROUD IS PROVIDED. THIS DIAGRAM SHOWS ONE WAY TO DO IT:



"It's a man from the council about your new LOMC wire"

FINALLY, A BRAKE OF SOME KIND WOULD BE NICE SO THAT THE BEAM DOESN'T WHIP ABOUT IN THE WIND AND CAUSE DAMAGE TO THE WORM WHEEL. I'VE FITTED A SPRING LOADED SET OF BRAKE PADS HIGH UP THE TOWER, LIGHTLY CLAMPED AGAINST THE SHAFT (SO THAT THE BRAKE IS ON ALL THE TIME). IT IS A BIT LIKE DRIVING WITH THE HANDBRAKE ON, BUT THE ROTATOR HAS PLENTY OF TORQUE.

Calling All Amateurs

It's time to visit your local
Market at BULLI if you need :-

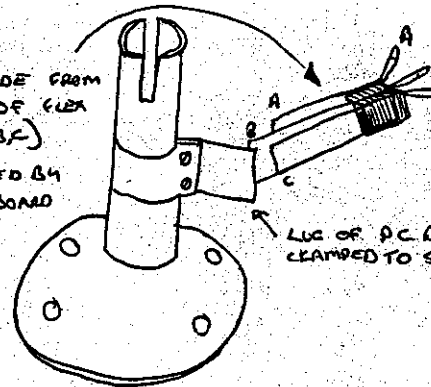
METERS
ANTENNA MATERIAL
RADIO PARTS
KITS AND PIECES
ELECTRONIC THINGAMYS
TRUE VALUE 4 MONEY

CAVIONS

11 Molloy St. Bulli

Ph (042) 845 6838

SWITCH MADE FROM
3 PIECES OF FLEX
BRIDES (A,B,C)
B IS MOVED BY
LUG OF PC BOARD



LAWRENCE HARGREAVE AWARD

THIS AWARD EXISTS FOR MAKING A
SUITABLE NUMBER OF CONTACTS WITH
MEMBERS OF THE SOCIETY. THERE ARE
DETAILS ON THE BACK PAGE OF THE
MAGAZINE (AS THERE ALWAYS ARE).

THE AWARD WILL BE ACTIVATED WITH
VK2AMW/P ON THE FIELD DAY WEEKEND.
THIS WILL ADD AN EXTRA LEVEL OF FUN
TO THE WEEKEND.

PERHAPS ONE OF OUR READERS CAN
SORT US OUT ON ONE POINT... THE BACK
PAGE OF THE MAGAZINE ALWAYS SPELLS
THE MAN'S NAME AS "HARGREAVE".
HOWEVER QUICK REFERENCE TO A TWENTY
DOLLAR NOTE SHOWS IT TO BE SPELT AS
"HARGRAVE". ANYONE WITH ANY IDEAS?

WEATHER REPORT

A WEATHER REPORT IN AN AMATEUR
RADIO MAGAZINE??? WELL, WE REALLY
HAVE NO IDEA OF WHAT THE WEATHER
WILL BE LIKE ANYWHERE AT ANY TIME.

HOWEVER WE DO KNOW THAT FOR THE
NEXT MONTH, THERE WILL BE NO SUN
WHATEVER APPEARING OVER PENRITH.
HELLO TO NOEL VK2ZNS. AND IT WAS
GOOD TO SEE THAT YOUR MAST STAYED
UP AFTER THE STREAMERS WERE HANGING
OFF IT.

THE LEATHER TONGUE AWARD

RECENTLY WE WERE POKING ABOUT IN
JOHN VK2XGJ'S BULLETIN BOARD, AND
FOUND A DESCRIPTION OF THE "LEATHER
TONGUE AWARD". THIS IS APPARENTLY
AN AWARD WHICH STILL EXISTS. TO
OBTAIN THE AWARD (WHICH IS NOT A
DESIRABLE THING TO DO), YOU HAVE TO
BASICALLY CAUSE PEOPLE TO BELIEVE
THAT YOU ARE THE SORT OF OPERATOR
NOT TO LET ONTO A REPEATER.

DETAILS OF THE AWARD RESIDE ON
THE BULLETIN BOARD FOR ANYONE WHO
WANTS TO READ THEM. BUT WE DO HAVE
ONE QUESTION. WHO HAS IT AT THE
MOMENT???

WHILE WE ARE TALKING ABOUT THE
BULLETIN BOARD, HELLO TO FORD
PREFECT. HE WROTE US A MESSAGE ON
THE BULLETIN BOARD REQUESTING A
MENTION IN THE MAGAZINE. WELL, HE
CAN'T HAVE ONE.

A LITTLE STORY

(EDITOR'S NOTE...WE WERE SUPPLIED THIS LITTLE STORY BY ONE OF OUR MEMBERS WHO WISHES TO REMAIN ANONYMOUS - AND NO WONDER. OUR SENSE OF INTELLIGENCE TELLS US NOT TO PRINT IT, BUT OUR SENSE OF NEEDING SOMETHING TO FILL UP THE LAST FEW PAGES SAYS THAT WE RUN IT ANYWAY. YOU HAVE BEEN WARNED...)

FOUR UNION MEMBERS WERE DISCUSSING HOW SMART THEIR DOGS WERE. THE FIRST FELLA WAS A MEMBER OF THE ENGINEERING STAFF, WHO SAID THAT HIS DOG COULD DO MATHEMATICAL CALCULATIONS. THE DOG WAS CALLED "TEE SQUARE", AND THE FELLA TOLD HIM TO GO UP TO THE BLACKBOARD AND DRAW A SQUARE, CIRCLE AND TRIANGLE. THE DOG THIS WITH CONSUMATE EASE.

THE NEXT BLOKE WAS FROM THE IRONWORKERS ASSOCIATION AND RECKONED THAT HIS DOG WAS SMARTER. HE TOLD THE DOG TO FETCH A DOZEN BISCUITS AND DIVIDE THEM INTO FOUR PILES. "SLIDE RULE" HAD NO TROUBLE DOING THIS.

THE LIQUOR TRADES MEMBER ADMITTED THAT THESE WERE SMART DOGS INDEED. HIS DOG "MEASURE" OPENED A STUBBY OF BEER AND, AT HIS MASTER'S REQUEST, POURED SEVEN OUNCES OF BEER INTO A TEN OUNCE GLASS.

THEY ALL TURNED TO ROB AND ASKED WHAT HIS ALSATIAN COULD DO. ROB JUST YELLED OUT "TEA BREAK" AND HIS DOG "RAH" STRUTTED ITS STUFF:

"RAH" WENT OVER, ATE THE BIKKIES, SCULLED THE BEER, DISGRACED HIMSELF ON THE BLACKBOARD, DID UNMENTIONABLE THINGS (THIS IS A FAMILY MAGAZINE, AFTER ALL) TO THE OTHER DOGS, THEN LET OUT A HOWL AND SUFFERED A SEVERE CASE OF DE-SENSING.

(I TOLD YOU IT WASN'T REALLY WORTH RUNNING. HOWEVER, THAT'S ANOTHER COLUMN ALMOST FULL...ED). WE HAVE JUST BEEN INFORMED THAT RAH'S COMPENSATION CLAIM FOR A SORE BACK WAS DENIED.

CAN WE HAVE A BREAK PLEASE?

RAY VK2XCC (YES, HE ALMOST GOT AWAY THIS MONTH) HAS ADVISED US THAT HE OFTEN HAS TROUBLE MAKING THE TWO METRE BROADCAST CALLBACKS, BECAUSE A CALL OF NATURE USUALLY INTERRUPTS HIS CONCENTRATION. TO THIS END, HE HAS REQUESTED A WEE BREAK AT THE END OF THE BROADCAST TO ALLOW HIM THE NECESSARY TIME.

MORE ABOUT NI-CADS

SORRY TO SAY THIS, BUT THE SECOND PART OF THE ARTICLE ON NI-CAD BATTERIES AND THINGS TO DO WITH THEM WILL NOT BE PRINTED THIS MONTH. UNFORTUNATELY, ONE OF THE EDITOR HAD A MAJOR COMPUTER FAILURE (LIKE...I HAD TO FORMAT MY HARD DISK) ON MONDAY AND I LOST THAT ARTICLE. SO, YOU WILL HAVE TO WAIT FOR A WHILE AND I WILL SEE ABOUT RUNNING IT.

REPEATER STOP PRESS

A COUPLE OF INTERESTING THINGS HAPPENED TODAY, SO I THOUGHT I MIGHT JUST PUT IN A SMALL ARTICLE. VK2RAH IS NOW ON AIR, AND SEEMS TO OPERATE FAIRLY WELL. THE IDENT IS A BIT RASPY, BUT VK8 AND JA WERE USING IT TODAY, AND THE TWO BROADCASTS PATCHED THROUGH OK. SO IF YOU ARE A 10M FM FREAK, YOUR TOY IS WORKING. THAT IS, UNLESS YOU ARE VK2MT. HE HAS A LOT OF TROUBLE USING IT FROM HIS PLACE.

ONE THING THAT PEOPLE MIGHT CARE TO KNOW: WHEN THE REPEATER IS BROADCASTING THE BROADCAST, YOU CAN ACTUALLY CALL OVER TOP AND CAN BE HEARD. WHEN YOU ADD UP AN INCOMING SIGNAL, THE BROADCAST AND THE VOICE IDENT, THAT MEANS THAT IT IS POSSIBLE TO HAVE THREE VOICES ON THE CHANNEL. QUITE A SMART LITTLE SYSTEM.

A FURTHER PROBLEM WAS FOUND WITH RAH-TX: A BOLT IN THE BATTERY CIRCUIT SHEARED OFF AND FELL RIGHT ACROSS THE DESIGNED-NOT-TO-FAIL BATTERY CONNECTORS, CAUSING THEM TO DISCONNECT THE BATTERY AND RUN THE REPEATER OFF A TWO-AMP BATTERY CHARGER. NOT GOOD.

THE ATTEMPT TO GET MORE PERSONAL COMMENT INTO THE MAGAZINE IS DEGENERATING INTO MINDLESS DRIVEL. OK, TIME FOR ANOTHER TECHNICAL COLUMN. BUT NOT ONE ON BUILDING - THAT COST MONEY. LET'S HAVE A COLUMN ON OPERATING.

"THAT'S SILLY," I HEAR YOU SAY. "ANY DUMMY CAN OPERATE." THIS IS ALL VERY WELL, BUT WHAT ABOUT SOME SERIOUS TESTING OUT? LIKE, FOR INSTANCE, CONTEST WORKING. COMING UP NEXT MONTH ARE QUITE A FEW CONTESTS - THE VK/ZL OCEANIA DX CONTEST, WHERE AUSSIES WORK THE WORLD, OR THE CQ WORLDWIDE DX CONTEST.

"BUT I DON'T LIKE CONTESTS - ALL THIS HELLO, GOODBYE STUFF ISN'T MY STYLE." FINE. HOW ABOUT SHOWING SOME YOUNGSTERS HOW TO OPERATE DOWN AT THE LOCAL SCOUT HALL DURING JOTA? YOU MIGHT THINK WE HARP ON THIS A LOT, BUT THAT IS EXACTLY HOW ONE OF US GOT STARTED ON AMATEUR RADIO.

ALSO ON THE SUBJECT OF OPERATING, DO YOU EVER FIND YOURSELF TOTALLY LOST IN YOUR OPERATING? WE'VE ALL HEARD OF RADIO WIDOWS. THAT'S NOT WHAT I AM TALKING ABOUT - HOW WOULD YOU GO FINDING SOMEONE ELSE WHO IS LOST? YES, YOU GUESSED IT, A FOX HUNT. WE (THE EDITORIAL STAFF, NOT THE IARS COMMITTEE) HAVE THE CRAZY IDEA THAT RUNNING A FOX HUNT AND PARTTAKING IN SAME COULD BE RATHER FUN. AT THE MOMENT WE HAVE NO DETAILS, IT IS JUST AN IDEA. NO IDEA WHAT BAND, WHEN, WHERE OR ANYTHING. WHAT DO YOU THINK...WOULD YOU BE INTERESTED IN SUCH AN EVENT? LET US KNOW...

FOR SALE

AN ICOM IC-4N 70CM HANDHELD, WITH TWO OR THREE (?) SPARE BATTERY PACKS, AND A CHARGER. START HAGGLING AT \$200 OR SWAP (DON'T KNOW WHAT FOR...ANYTHING RADIO). SEE JOHN VK2XGJ ON ANY FREQUENCY YOU ARE GAME ENOUGH TO TRY. (BUT NOTHING EVER HAPPENS BELOW 30 MHZ SO DON'T LOOK THERE!)

NO, WE HAVEN'T WALKED INTO LYLE'S GARAGE. SEEING AS HOW IT HAS BEEN A WHILE SINCE THE LAST FIELD DAY, WE THOUGHT WE MIGHT HAVE A LOOK AT THE PROPAGATOR OF THE TIME AND SEE WHAT WAS NEWS THEN. ALSO I STILL GOT A WHOLE COLUMN LEFT AND IT'S BEEN A STINKER OF A MONTH FOR NEWS.

LET'S SEE - PRESIDENT WAS VK2OB. NO BIG DEAL THERE. WE WERE HARRASSING MEMBERS ABOUT BEING UNFINANCIAL - NOTHING NEW THERE EITHER. AN ARTICLE ON HOW NOT TO USE A TWO METRE REPEATER - NO COMMENT. UNREADABLE CARTOON CAPTIONS. A MICROWAVE ARTICLE WRITTEN BY LYLE VK2ALU. MORE RIPPED-OFF WIZARD OF ID CARTOONS. REQUESTS FOR PROPAGATOR ARTICLES FROM A BELEAGUED EDITOR.

HANG ON - HERE'S SOMETHING NEW. A ROSTER FOR SOMETHING CALLED A NET ON EIGHTY METRES. HMMM...SOMETHING HAS CHANGED OVER THE YEARS. AND WE USED TO HAVE AN EME CO-ORDINATOR - BRAVE STUFF. HOWEVER, WE NOW HAVE OTHER THINGS TO WORRY ABOUT... PACKET RADIO (ACTUALLY, THAT'S NOT RIGHT EITHER. RAY VK2XCC DID GET A DISHONORABLE MENTION), AND THE LOSS OF OUR BANDS.

O.K., A LITTLE CARTOON UNDER THIS AND YOU SHOULD BE PRETTY MUCH RIGHT FOR THE MONTH. SORRY IT IS SO GUFFY, BUT I AM A BIT BRAIN DEAD AT THE MOMENT (AND FOR SOME CRAZY REASON WE DID SIXTEEN PAGES AGAIN). WE HOPE YOU ENJOY THE CROSSWORD - ANSWERS WILL BE IN NEXT MONTH'S MAGAZINE AND THANKS GO TO THE FELLAS AT THE PAINTLINE AT LYSAGHTS FOR HELPING US WRITE IT. NO RESPONSIBILITY IS TAKEN AT ALL FOR SPELLING OR OTHER MISTAKES, BECAUSE NONE OF US HAVE MUCH CHANCE. SEE YOU NEXT TIME...

ANTENNA LENGTH CHART

FORMULAS USED

Length of 1/2 wavelength antenna in metres =

(300 .95 .5 3.281a/feet)/Frequency(MHz)=467.54/Frequency(MHz)

NOTE: $1/2$ wavelength + 5% is used for Inverted Vee Antennas.
Taken from A.R. Sep.1986.



- ALL MAIL CAN BE SENT TO "THE ILLAWARRA AMATEUR
RADIO SOCIETY" AT PO BOX 1838, WOLLONGONG, 2500.

REPEATERS

-VK2RAH - 29.520	VOICE	HF MT MURRAY RX
29.620		KNIGHTS HILL
-VK2RAW - 146.850	VOICE	VHF MT MURRAY
-VK2RIL - 147.275	VOICE/RTTY	VHF 'SUBLIME PT
-VK2RAW - 147.575	PACKET	VHF MT MURRAY
-VK2RUW - 438.225	VOICE	UHF HILL 60
-VK2RIL - 438.725	VOICE/RTTY	UHF SUBLIME PT

(OFF AIR)

BROADCAST

-IS ON SUNDAY EVENING AT 6.45PM, IN RTTY MODE,
TRANSMITTED ON 147.275 AND RELAYED ON 3.618 MHz +/-
QRM. CALL BACKS TAKEN IMMEDIATELY AFTER. VOICE
BROADCAST HELD AFTER WIA RELAY ON 146.850 MHz
(VK2RAW) AND 3.618MHz +/- QRM.

WIA RELAY

-ON 146.850 MHz AT 10.45AM AND 7.15PM EACH SUNDAY.

NEWS LETTER

-PUBLISHED EACH MONTH TO REACH ALL FINANCIAL MEMBERS
IN THE WEEK PRECEDING THE CLUB MEETINGS. ARTICLES
AND LETTERS ARE VERY WELCOME.

MEMBERSHIP

-\$15.00 P.A. CONCESSIONS \$12.00 P.A.

LAWRENCE HARGREAVE AWARD

-VK STATIONS REQUIRE 10 CONTACTS WITH IARS MEMBERS.
OVERSEAS STATIONS REQUIRE 5 CONTACTS. ONE CONTACT
WITH THE CLUB STATION VK2AMW IS SUITABLE. DETAILS
OF CONTACTS ARE TO BE SENT TO THE CLUB SECRETARY.

STORE

-THE CLUB STORE IS OPEN AT EACH MEETING.

***** COMMITTEE *****

PRESIDENT SECRETARY TREASURER ASSIST SEC TREASURER ASSIST TREAS COMMITTEE

-VK2KWG - KEN GRIMM	
-VK2KEY - PAT JORDAN	
-VK2KCV - PAT KENNEDY	
-VK2XSV - VIC HEE	
-VK2TKE - KEN GOODHEW	
-VK2KHE - PETER TOMLIN	
-VK2MT - ROB MCKNIGHT	- VK2XSV - VIC HEE
-VK2FPN - PETER READ	- VK2XGJ - JOHN SIMONS
-VK2KLH - BRIAN CLARKE	- VK2KHE - PETER TOMLIN
-VK2MT - ROB MCKNIGHT	
-VK2KHE - PETER TOMLIN	- VK2XLA - GRAEME EAST
-VK2TKE - KEN GOODHEW	- VK2XGJ - JOHN SIMON
- TOM JEPSON	- VK2KLD - LES DAVID
-VK2TPH - PHIL HOWCHIN	
-VK2GID - GRAHAM DENNEY	
-VK2JBS - BILL STONE	
-VK2MT - ROB MCKNIGHT	
-???	(YOUR NAME COULD BE HERE....)
-VK2AXI - BRIAN WADE	
-ZAPHOD (VK2XQX, VK2JBS, VK2GID)	
-VK2DSH - DALE HUGHES	-VK2XCC - RAY BALL
-VK2XCC - RAY BALL	
-VK2DYU - BILL CHADBURN	
-VK2XSV - VIC HEE	
-VK2XSV - VIC HEE	
-VK2OB - KEITH CURLE	-VK2OB - KEITH CURLE
-VK2ALU - LYLE PATISON	
-VK2CAG - GRAEME DOWSE	

REPEATER PRES REPEATER COMM

QSL CARDS OUT QSL CARDS IN PUBLICITY BROADCAST CARTOONIST PROPAGATOR ED PRINTERS SOCIAL DIRECTOR CANTEEN STORE TOWER CO-ORD DOTO LIASON LIFE MEMBERS