

QRM

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MEETINGS

- | | | | |
|-----------|--------------------------------|---------------------|--------|
| Nov. 8th | North West Branch, Lakins Hall | Ulverstone | 8 p.m. |
| Nov. 11th | Northern Branch clubrooms | <u>34 Burke St.</u> | 8 p.m. |

A.O.C.P. CLASSES

Kings Meadows High School, Block B room 35.

- | | |
|-----------|-----------------------------------|
| Nov. 7th | Specialized Communication Systems |
| Nov. 14th | Revision |
| Nov. 21st | Revision |
| Nov. 28th | Revision |
| Dec. 5th | Revision |

CONTESTS

- | | |
|------------|--|
| Nov. 12/13 | European RTTY contest |
| Nov. 19/20 | WW DX CW contest |
| Nov. 26/27 | CQ WW DX CW contest |
| Dec. 3/4 | Spanish Phone contest |
| NOV. 19/20 | TASMANIAN AMATEUR RADIO CONVENTION 1977
send your registration form in <u>NOW</u> |
| Nov. 19 | Deadline for the December issue of QRM |

North Western Branch notes from Wayne Gibson.

The monthly meeting was held at Lakins Hall, Ulverstone on the 11th of October. As I did not attend the meeting, the report below is not first hand information.

Radio tutorial classes are to cease, Graeme VK7ZAQ informed the meeting that he could no longer make himself available for the Saturday afternoon classes. As no other members are prepared to step into the job classes will have to end.

Enquiries are being made to see if Adult Education could provide a satisfactory substitute in Devonport and Burnie.

Thanks Graeme and helpers for your efforts and the many Saturday afternoons and weekends given up to help others.

The 2 metre beacon may soon be operating from a new site near Natone. Leon Dive VK7YD has offered to operate the unit from his QTH. Nothing has been settled as yet but the beacon is not likely to operate from the Lonah site again.

The meeting was rounded off by a talk delivered by Bert Sectrine, the subject was "the early days of radio".

DON'T FORGET the Tasmanian Amateur Radio Convention to be held at Turners Beach on the 19/20th of November.
SEND YOUR REGISTRATION FORM IN NOW !!

73 Wayne

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Novice notes by John Doolan VK7NJD

Notes this month consist of some local news and some usefull information.

28MHz Beacon frequencies to monitor for DX openings are as follows:

VP9BA	Bermuda	28.165
VE3TEN	Canada	28.175
ZC4RY	Cypress	28.180
GB3XS	England	28.185
3B8MS	Mauritius	28.190
WA1IOB	Massachusetts	28.150
XL2HMF	New Zealand	28.170
JA1GY	Japan	28.200
DLØAR	Germany	29.000

Allen VK7NAB is now the proud owner of a TS-520 and can be heard around the bands working DX.

Mark VK7NAM has had some good DX contacts on 10 metres, JA, P29, W's etc.. Ten and fifteen metres have given us some very good openings this month, especially into Europe. European openings are becoming quite frequent on 15 metres and UA, FK, and YJ8's have all been worked by VK7N's.

73 John

DX Notes by Col Wright VK7LZ.

Casual checks over the bands during both the Phone and CW sections of the VK/ZL Oceania DX Contest gave the impression that although no really unusual countries showed up, the bands were certainly not lacking in DX.

In general conditions were above average up to the middle of the month, however, although still interesting at the time of writing these notes, they are well down on the first two weeks. At its peak, DX from all continents was being heard on 14MHz, all at good strength, possibly the main interest centred on the Central and South Americas, CE, LU, PJ, PY, VP1, VP2, VP8 and ZP all put in excellent signals, however as the month advanced the JA's could be heard giving the same stations S9 reports whilst they were practically inaudible at this QTH.

Another good pointer to conditions was the lack of ZS's and Africans on the Anzus net and the stations checking into the Pacific DX net, although regulars such as CEØAE, KM6FC, HI8MFP, 9H1EY and KP4's were still all workable, most stations were well down in strength or missing entirely.

7MHz also followed the same pattern however some good DX was worked by VK7's. Europeans were workable both on Phone and CW around 0700Z and FMØCOO on CW and CE7AA on SSB were unusual contacts.

Although there have been reports of good openings on 21 and 28MHz I'm afraid my listening has been done at the wrong times because all I've heard has been Asiatic and American stations.

XF4JJ on the Revilla Gigedo Islands did come up on 21MHz CW for three days but I didn't hear any VK or ZL get a contact. Other VK's have reported European contacts on both 21 and 28MHz. ZL2HE told me that he has worked 43 countries in an arc extending from Japan round through Asia and Europe to the Canary Islands on 28MHz, all in the first half of October.

DX JOTTINGS

Argentina is expected to put a base on the South Sandwich Islands and activity on the Amateur bands is a distinct possibility.

Walvis Bay could become a new country with independence from South West Africa.

Transkei has not as yet been added to the DXCC listings however IØLLZ advises that independence celebrations are set down for the 1st of November and from that date it may have a new and practically unpronounceable name and some expected Amateur activity.

4X4AT informed me that he QSO'ed SV1IT and found that he got himself a new country as the SV's QTH was on Crete.

LU1ZA operates from Isla Laurie which forms part of the South Orkneys, also VP8PL is operating from Signy Island in the same group. Mac uses 1KW but as yet has only a wire antenna.

VP8PJ is on Adelaide Island which counts as Antarctica.

VP8PC, PE, PP and PM are all on the Falkland Islands.

4X4TT is going on another Pacific Safari next Autumn and is expected to operate from ZK2.

VE1BFV has now left Sable Island and at present there is no Amateur activity from that location.

PY0BXC expects to activate Fernando de Moronha towards the end of November according to PY1ZAE.

CE0Z Juan de Fernando is a possibility in the CQDX WW CW Contest.

KC4 Navassa Island, from the 23rd of November SSB and CW, also in the CQ DX CW Contest on the 26th and 27th November.

QTH's

HB0LL via DJ0ZB

XF4JJ via WB4KPZ

KM6FC via K5YMY

VP2MJE via W6EL

VP1BB, Box 536 Belize City, Belize.

VP8PC, VP8PM, Box 113 Stanley, Falkland Island.

VP8PE, VP8PP, Box 224 Stanley, Falkland Island.

73 Coll

WMWMWMWMWMWMWMWM

VHF notes by Joe Gelston VK7JG.

Six metres is still as quiet as it has been for the past few month with no contacts been made. However this morning I did hear some CW on 52,050.

Dont forget that the DX season is just around the corner and we do have some good openings early in November, so if your gear is still in moth balls from last year now is the time to get it operating.

We had one good two metre opening for the month to VK3 this being on the 11th when myself VK7JG and Kevin VK7ZAH worked several stations on SSB these included VK3's YII, ZBJ, YCS, AZG, YFU and ZBB. Brian VK7ZBY checked with the Met. section and found that the inversion centred from Mt. Gambier to Gipsland and was present for about 3 days. During this time the mainland repeaters were workable from Launceston and many VK3's were heard via VK7RAA.

At the same time I worked VK3ZBB, VK3AZG and VK3ZBJ on 432MHz. Signals were better on this band than on 2 metres. Winston VK7EM was also active on 432MHz ATV exchanging pictures with VK3's, I have no further details as they were passed on to me via VK3ZBJ.

73 Joe

BITS AND PIECES

David Chadderton is back from England and looking for work. He would like to get a job in electronics, maybe even a apprenticeship, can you help ?

Talking to Col VK7LZ the other day he mentioned that the small number drills used for printed circuit boards are too small to fit in the electric drill, so he wraps a piece of paper around the shank and it works fine. Another solution is to buy a pin chuck for a few dollars.

One question that seems to be asked regularly is "what type of pen do you use for PCB etching"? From experience I found that the best is Parcelmate (black ink) however it draws a fairly thick line. Another pen I use is Kuretake (blue ink) but when using this pen you must etch quickly as it does wear of after about 15 minutes in the etching solution. Etching can be done in 5 - 7 minutes if you use a slightly stronger solution (ferric chloride) use at a temperature of 30°C or higher and give it continuous agitation. I did hear about a pen called Artline 7000 which is supposed to be very good and has a harder tip than Parcelmate but I haven't tried it.

Before using single strand copper wire, clamp one end in a vice and pull the other end tight with a pair of pliers to harden and tension it. If the wire breaks where it bends around the jaws of the pliers you have tensioned it enough. Air wound coils will now be much more rigid and wire links bent to shape for mounting on PCB will retain their shape much better.

A standard mouse trap bolted to the work bench is a very handy third hand when soldering.

Several of our members have recently built the ACCU-keyer as described in the ARRL handbook. I can recommend this project to anyone interested as it is easy to built and get going. Squeeze type paddles are available from 2 sources that I know of: 1) The Galbraith Keyer Paddle from The NZART, Christchurch Branch Project Group, P.O. Box 1733 Christchurch New Zealand. the cost is \$16.00 N.Z. including postage. 2) HAM-KEY HK-2, available from several sources in the USA, one being, Ham Radio Centre Inc., P.O. Box 28271 St.Louis, MO 63132 USA. Cost including Air Mail postage is \$23.00 U.S. mine arrived 11 days after I posted the letter. Incidentally I've always found it easiest, when buying from America, to get the bank to give you a cheque on the Bank of America for the required amount.

FOR SALE.

Lafayette 5 band Amateur band only receiver
plus WWV \$150.00
Lin Williams C/o JBL Electronic Servicing
178a Charles St.

1 - TCA1674, 6 metres AM 53.032 and tunable
also 52.050 RX only \$45.00

1 - MTR25-141, 25W 146MHz single channel \$45.00

contact- Greg Taylor VK7ZYT (002) 345412 bus.
(002) 493343 a.h.

Some notes on CERAMIC CAPACITORS. by Trevor VK7TB

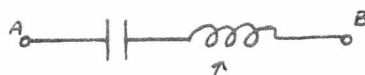
First lets make it quite clear that ceramic capacitors are not the be all and end all in capacitor design. However they have some important advantages when associated amateur radio applications.

- 1) They are relatively cheap. (when compared with other constructions)
- 2) There is a wide range of values available.
- 3) Small size and low leakage.
- 4) Very low self inductance. (a important consideration in VHF use)
- 5) Good capacitance stability. (use in tuned circuits)

At high frequencies even a few inches of wire can have a fairly large inductive reactance value, often too large to be considered a good bypass return.

A capacitor value may be calculated to be a short circuit at the required frequency, but because of its physical construction the circuit bypass may look quite inductive.

impedance between "A" & "B" is high.

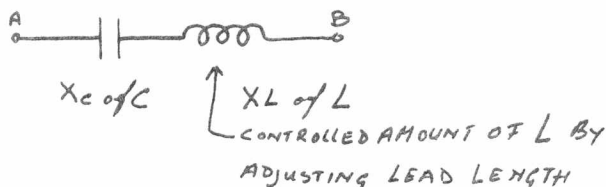


large value of inductance included in the C due to circular construction.

The object of a good bypass capacitor is one which allows all the RF current to flow through the C rather than through the DC supply. To be effective the overall impedance of the bypass should not be more than 1/10 of the impedance of the circuit impedance.

Ceramic capacitors are considered to be very usefull as bypasses and tuning C's for frequencies up to about 200MHZ. Ceramic C's are generallyly made by applying a silver coating on a piece of baked ceramic. A number of types of ceramic material have been developed with permittivity values. In the manufacture of ceramic C's the ceramic material is molded into a thin circular, cylindrical or rectangular form and baked to produce a very hard substance. Then a thin layer of silver is deposited on each side to form the plates of the capacitor. After the leads are attached, the unit is enclosed in a suitable insulated case.

When using a ceramic C in a bypass circuit at UHF carefull consideration must be given to lead length. if the shortest possible lead length does not offer the required low Z bypass, then a system of using the length of the leads to include some series inductance can be incorporated. The circuit then looks like,



When the X_c of C equals the X_l of L the circuit is series resonant and therefore the impedance developed between points A and B is very low indeed (Low Impedance Bypass). Table 18-11 on page 553 of the 1975 ARRL Handbook lists a set of values of series resonant frequencies for lead lengths of $\frac{1}{2}$ and 1 inch. This table should be used as a guide only because series resonant values would change between the various ceramic C manufacturers due to the different types of construction.

One consideration that is often not mentioned is that of the current handling capability of a capacitor, that is the amount of RF current flowing in a capacitor. While ceramic capacitors are generally physically small, limiting their RF current capability they can operate at quite high temperatures without failure, making them less prone to failure on high peak RF currents (e.g. SSB situations).

Ceramic capacitors also make very good tuning C's, values up to 120 pF of N.P.O. rating (N.P.O. meaning negative positive, zero), this simply means that for a given temperature range the value of capacitance does not change.

Ceramic C's make very good compensating capacitors, they come in temperature coefficients from P100 to N5600 (frequency compensation of variable LC oscillators), the letters P and N indicate positive and negative respectively and the number following the letter indicates the temperature coefficient in parts per million per degree centigrade rise. Thus N750 indicates a decrease in capacitance of 750 units per million units for each 1° increase in temperature, based on an ambient (surrounding) temperature of 25°C .

In conclusion, I think you will agree that ceramic capacitors are very usefull devices to have a range of in the shack.

NOTE: Dick Smith is importing low voltage Silver Mica capacitors, these are truly the Rolls Royce of fixed tuning capacitors.

VK7TB

WMWMWMWMWMWMWMWMWM

THE ATHOL JOHNSON CONTEST:

The Athol Johnson contest was very poorly supported with only 5 logs being returned. The total score was around 120 points.

There were no SSB contacts logged and 6 metres FM accounted for about 3% of the contacts, the remainder were on 2 metres FM.

The winner was the North West Branch using the callsign VK7WI/P with Kirby VK7ZKC and Tony VK7AX submitting the log.

WMWMWMWMWMWMWMWMWM

WORKED ALL QUEENSLAND AWARD

Issued by: The Wireless Institute of Australia
Queensland Division

- 1) This Award is divided into TWO sections:

WORKED ALL CITIES AND TOWNS

WORKED ALL SHIRES

- 2) Any transmitting amateur or listening amateur may apply for this Award, provided that these applications comply with the rules.
- 3) Only ONE Award will be issued, but this will be updated upon receipt of further additions.
- 4) WORKED ALL CITIES AND TOWNS

There are 20 (twenty) Incorporated Cities and Towns in Queensland.

Brisbane	Goondiwindi	Rockhampton
Bundaberg	Gympie	Roma
Cairns	Ipswich	Thursday Island
Charters Towers	Mackay	Toowoomba
Dalby	Maryborough	Townsville
Gladstone	Mount Isa	Warwick
Gold Coast	Redcliffe	

Initial Award: Fifteen (15) contacts with Radio Amateurs from these Cities and Towns. A "Silver Sticker" will be awarded if ALL Cities and Towns are worked.

- 5) WORKED ALL SHIRES

There are 111 (one hundred and eleven) Shires in Queensland. For this Award, the listing as at 1/1/76 is considered to be the correct one. The population figures in these Shires range from 250 to well over 25 000.

Albert	Burrum	Gatton	Maroochy	Redland
Allora	Caboolture	Gayndah	Millmeran	Richmond
Aramac	Calliope	Glengallan	Mirani	Rosalie
Atherton	Cambooya	Gooburru	Mirian Vale	Rosenthal
Ayr	Cardwell	Herberton	Monto	Sarina
Balonne	Carpentaria	Hinchinbrook	Moreton	Stanthorpe
Banana	Chinchilla	Ilfracombe	Mount Morgan	Tango
Barcaldine	Clifton	Inglewood	Mulgrave	Tara
Barcoo	Cloncurry	Isis	Munduberra	Taroom
Bauhinia	Cook	Isisford	Murgon	Thuringowa
Beaudesert	Crows Nest	Jericho	Murilla	Tiaro
Belyando	Croydon	Johnston	Murweh	Waggamba
Bendemere	Dalrymple	Jondaryan	Nanago	Wambo
Biggenden	Diamantina	Kilcoy	Nebo	Warroo
Blackall	Douglas	Kilkivan	Noosa	Widgee
Boonah	Duarina	Kingaroy	Paroo	Witon
Booringa	Eacham	Kolan	Peak Downs	Wondai
Boulia	Eidsvold	Laidley	Perry	Woocoo
Bowen	Emerald	Landsborough	Pine Rivers	Woongara
Broadsound	Esk	Livingstone	Pioneer	
Bulloo	Etheridge	Longreach	Pittsworth	
Bungil	Fitzroy	McKinlay	Proserpine	
Burke	Flinders	Mareeba	Quilpie	

Initial Award: 51 (fifty one) contacts/shires. "Stickers" for 61, 71, 81, 91 and 101 Shires, with a gold sticker if ALL Shires have been contacted.

6) MODES AND BANDS

All legitimate modes and bands may be used, LF, HF, VHF, UHF, OSCAR, EME etc., but cross band contacts (except Oscar) are NOT allowed.

7) SPECIAL VK- RULES

As a number of areas are not active, "DX-petitions" to these areas are encouraged to help the Award Hunter (and others) to get that rare Queensland Shire, Town or City.

The following will apply:

- a. The Queensland Awards Manager or his appointed Delegate shall be advised in writing of the intended VK...../P operation in those areas which are not too active or are non-active.
If the approximate dates are available, advance publicity could be given and you may become a much sought after "rare-DX-station".

- b. A copy of the VK...../P log shall be forwarded to the Queensland Awards Manager for use as a check list.

The VK...../P operator will automatically be credited with "as having worked" that particular area, if:

- i. At least 50 contacts are made with a minimum of 4 VK-call areas OR
ii At least 30 overseas contacts are logged.

8) METHOD OF APPLICATION

A CERTIFIED LIST OF CONTACTS, AS PER CHC RULES (or similar)

TO BE SENT TO: The W.I.A. QLD. Div. AWARDS MANAGER
G.P.O. Box 638
Brisbane, Qld 4001

With either, \$1.- Australian or 10 IRC's or equivalent in mint stamps or M.O. for the initial Award.

Subsequent Stickers are FREE, although a return Postage will be appreciated.

- 9) Contacts made as from 1st January 1976 will be valid for this Award.

10) SPECIAL RULE FOR QUEENSLAND AMATEURS

As a matter of courtesy to the amateurs of the world outside the Sunshine State, PLEASE make sure that you will be able to tell in what City, Town or Shire you reside or are operating from.

INCLUDE THIS INFORMATION ON YOUR QSL CARD.

LOGIC PROBLEM

A JA station worked 6 VK stations in quick succession the other day but mixed up all his notes. He worked 6 different call areas and all stations were using different antennas and transceivers. From the following clues can you discover the name and callsign of each station and the equipment they used ?

On the next page is a chart which should help you solve this problem. You could put an X for "no" answer and a circle for a "yes"

- 1) The Kenwood was not used by VK4, Collin or Joe.
- 2) John (who is not VK8) and the users of the Vertical and the Long Wire all operate regularly.
- 3) The owner of the Heathkit does not use a Long Wire.
- 4) Brian, David and the VK7 all used to have Rhombics.
- 5) The VK6 isn't Collin, David or Brian, but he does use Swan equipment.
- 6) Neither the Drake nor the Swan owner used a Beam or a Dipole antenna.
- 7) The VK2 could not afford a Beam.
- 8) David used either a Kenwood, Swan or Heathkit transceiver, but not a Beam.
- 9) Neither Peter nor the Heathkit owner is a VK8.
- 10) The Rhombic was used with a Kenwood.
- 11) The VK4 didn't use Yeasu equipment.
- 12) The VK7 did not use Drake or Yeasu. The VK6 didn't use a Long Wire.
- 13) Brian did not have a Vertical, Long Wire or Yeasu equipment.
- 14) John hasn't got room for a Rhombic antenna.
- 15) The Yeasu was not used with a Long Wire.

When using the chart remember that once you have a definite "yes" (circle) you can place a X in the remainder of that row and column.

[illegible]

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