

THE PROPAGATOR.

Club Call VK2AMW

**VOLUME 04/02 ISSUED 2nd April, 2004. PRINTED BI MONTHLY
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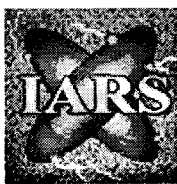
Meetings held second Tuesday of each month (except January).
S.E.S building Montague Street, Nth Wollongong. Starting at 7:30pm.

Official newsletter of the

ILLAWARRA AMATEUR RADIO SOCIETY INC.

PO Box 1838 WOLLONGONG 2500.

WEB Page www.iars.1earth.net E-MAIL iars@1earth.net



Editor Dave VK2TDN

davenn@optusnet.com.au

The weeks are rolling by fast and already here comes the end of March. What successes have you achieved in amateur radio so far this year ? Maybe several new countries contacted on HF ? maybe a longer simplex distance on a VHF or UHF band ? how about a new project or 2 completed and on the air. Whatever it is, I hope you are enjoying the advancements in your knowledge and experience on amateur radio. Look for info on the up and coming club 2m simplex contest in this issue.

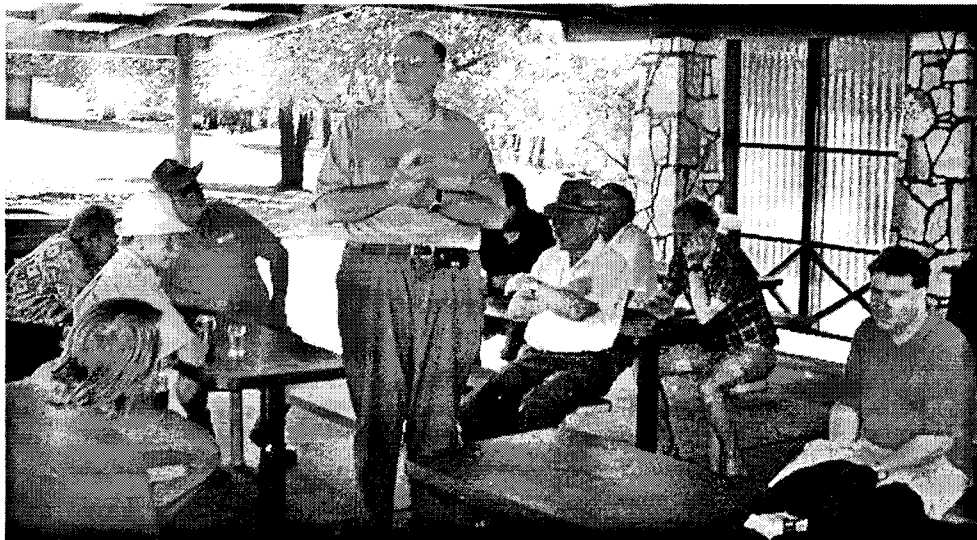


Picnic at Sublime Pnt 13/03/04

Photo by VK2TDN

COMING EVENTS.

- 1) Club Broadcasts Tuesday nights 1930 hrs local time
 - 2) Club Slow Scan TV Monday nights 1930 hrs local time
- The above events take place on the 146.850 and linked repeaters.
The Tuesday nite club net can also be heard on 3.620MHz
- 3) The 'new' have a chat net is on 28.320, 1700 onwards, most nights
 - 4) 2 Metre simplex contest, from 4th to 30th April 2004
- see details later in this newsletter



A couple of pics from the Cataract Dam BBQ, Dec 2003,

Hank VK2BHL



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Secretary's report March 2004.

On a very hot and sticky night, March 9th, the general meeting of the IARS was held. 25 members attended this meeting but AGAIN only 20 members signed the book. **(Only hope those NOT signed in do not have an accident going home).**

Apologies received were from members VK2's, VKA, HJP, XIC, VZQ, TDN, HDS and HFE.

John VK2JJP opened the meeting at 19:40 and welcomed all those attending.

At the very last minute, Dr Brian Clarke VK2GCE, asked if he could speak at this meeting.

Dr Clarke is the chairperson of the review committee looking into the restructuring of the W.I.A into one body. As there was very little time for the Committee to arrange this meeting, Brian VK2UBF suggested that at the April Meeting which will be held April 13th. That Dr Clarke comes again to answer questions from members.

Brian VK2GCE, also suggested that if any member wanted to E-mail him their concerns he will try to answer them at this meeting.

His E mail address is brianclarke01@optusnet.com.au

It's hoped that many members will be able to attend this meeting.

As the meeting did not go to the normal format. There was no treasurer's report but I can say that YOUR club is going VERY well financially. Considering that 12 months ago the bankbook looked VERY sick and the club looked like going BROKE!

Brian VK2UBF advised that Dom VK2SX and Peter VK2HPR have taken on the role of fund raising. Brian asked those at the meeting who would be willing to help. The calls are VK2's HIC, HPR, JJP, ARA, EZD, WRJ, BHL, DZJ, JJJ, AUB and KEJ.

Is your name on this list? If not and you can help out contact, Dom VK2SX or Peter VK2HPR. Or send an E mail to the club and they will be past onto those concerned.

Ted VK2ARA spoke about two Amateurs that are clearing out their shacks. Both are NOT members but Ted is doing this as a favour to them. So if you are looking for some gear contact Rick VK2QU or VK2BSQ.

John VK2JJP thanked Dr Clarke for coming and David VK2EZD gave a very interesting talk on PORTABLE OPERATION. The table that David had set up was full of all different portable equipment. Most of the sets were in cases and it was just a matter of picking up the case and a power pack and you were on the air.

There were, different types of aerials, aerial tuning units, batteries, generators, solar panels, etc. It must have taken David a long time to pack his car. This talk David was very enjoyable. Thanks from me Dave.

Being no more to be spoken about, the meeting closed at around 20:45 and a cuppa and a rag chew was enjoyed by all.

SIMON VK2XQX won the lucky door prize of \$30 and the snowball number drawn out of the barrel by Dr Clarke was number 6. This number is for Jesse VK2CP. As Jesse was NOT present this is the second time now. The **SNOWBALL** of \$120 will be drawn at the next meeting.

Be there to collect your snowball!!

Catch you on the air or at a meeting soon.

Regards Brian VK2UBF

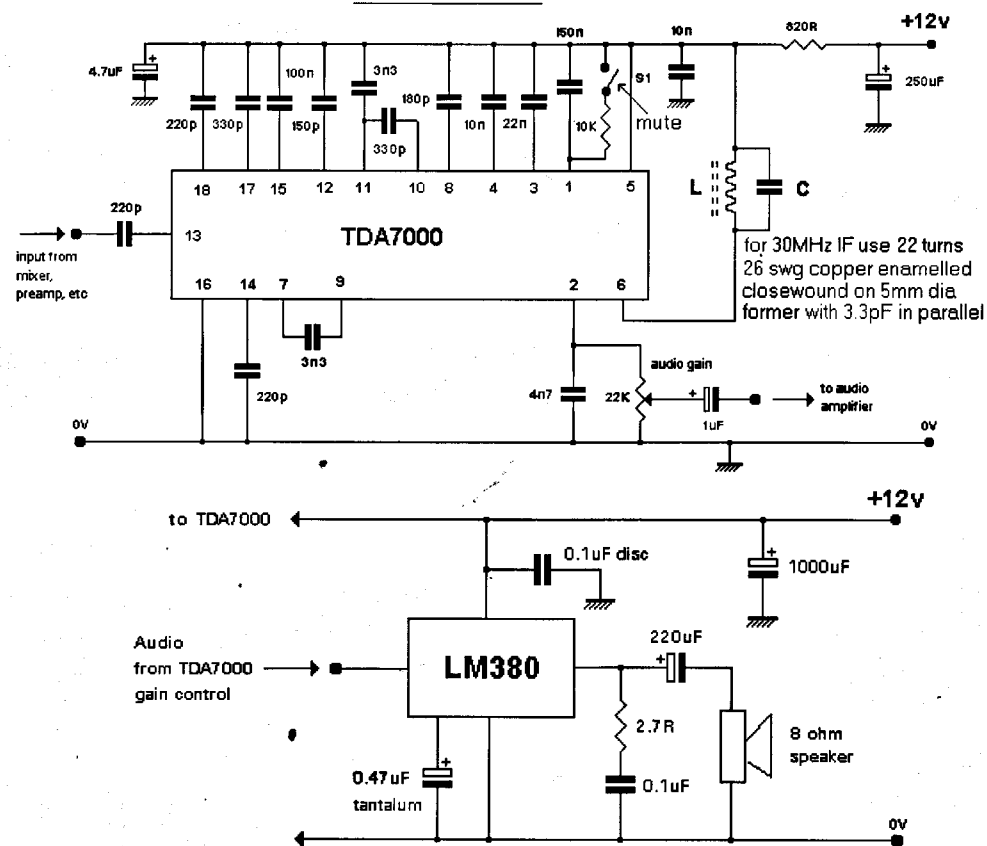
Hon Secretary IARS inc.

A Venture into Microwaves Part 2

Dave VK2TDN

The most common frequency used for an IF receiver is 30MHz. This can be a custom built receiver using a receiver IC like the TDA7000 and have that receiver board built into the the transceiver case. The other method is to use a separate commercial receiver , eg a scanner. Keep in mind 2 things ... a) this is an FM signal and b) it is wideband $\sim 100\text{kc} \pm 50\text{kc}$. Many scanners can handle this and possibly some HF rigs that have FM capability on 30MHz.

30 MHz Receiver



Audio Amplifier

The above cct is just one example of a simple 30MHz WBFM receiver. With the range of other RX IC's available, eg. the NE 602 and its offspring, you are not limited in your choice. The CA3089 IC has an AFC output which can be used for frequency tracking.

A low noise preamplifier between the mixer diode and the receiver will improve reception. Finally, here is a quick look at system gain and path loss resulting in a maximum working distance for a given setup under normal atmospheric conditions ie. no enhancement from ducting etc.

$$\text{Pathloss (dB)} = 96.6 + 20 \log_{10} F \text{ (GHz)} + 20 \log_{10} D \text{ (miles)}$$

1 Mile (1.6 km) @ 10.250 GHz = 116 dB

adding 6 dB every time distance doubles:

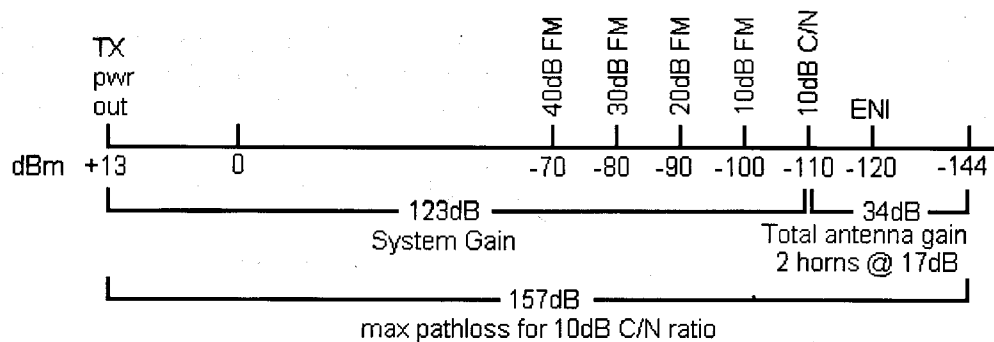
eg. 3.2 km = 122.8 dB

6.4 km = 128.8 dB

With a 12 dB NF with 15 kHz I.F. bandwidth = -120 dBm E.N.I (Equiv. Noise Input or absolute threshold)

To achieve a 10 dB c/n (Carrier to Noise) ratio a signal of -110 dBm is required

Using 17 dB horns, 20mW TX power, you have a max distance of 151 km (102 miles) with a total free space attenuation of 157 dB.

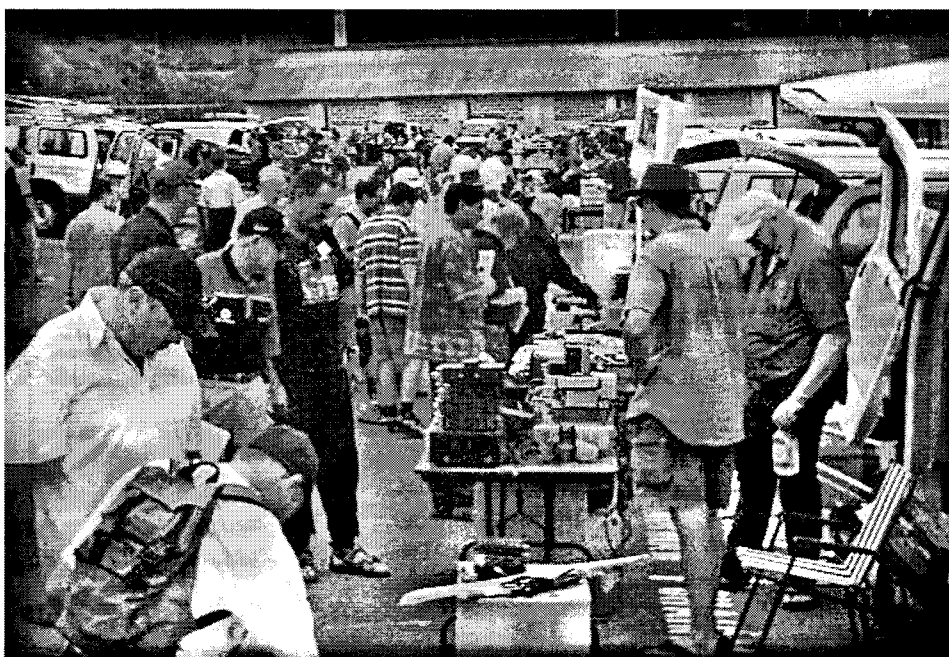


Path performance calculations for 15kHz IF bandwidth



A couple of pics from Wyong fieldday 29-02-04

Dave VK2TDN



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Band Activity Report

6 Metres and 2 Metres No reports for these bands this issue, but from brief comments received 6m and 2m dx has been very quiet during February and March.

I would like to take the opportunity to remind everyone of the good 40 metre net being run on 7085 KHz weekdays from 1600hrs to ~ 1730hrs depending on conditions.

Tom VK2TDM, runs the Newbridge net from his QTH in Kandos, NSW. This net is a great way for everyone to get active on 40m and get some signal reports from around the eastern states. Call in and say hi to all the guys.

Batemans Bay



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A Call to Club Members

This is your newsletter, it needs your input to survive. Please help out
By submitting articles for publication, e.g. Construction projects, news snippets, good
DX you have worked. Post, E-mail Items to the Editor,
Dave VK2TDN davenn@optusnet.com.au

BATTERY CARRYING STRAP

Geoff VK2HEF

On a recent Summerland A.R.C. Wicen net the topic of portable 12.V battery operation arose, all methods of battery movement mentioned involved lifting by the battery terminal posts, prompting this note of a somewhat easier way.

This battery carry / lifting strap is constructed from flat nylon webbing and it was originally designed to facilitate the insertion and removal of a heavy battery in a confined space such as an underground battery pit for a Telstra R.I.M. exchange.

It is well suited for a variety of Amateur uses, from field operations to WICEN or just around the shack. There are no metallic parts to invite short circuits and there is no strain exerted on battery terminal posts.

The dimensions shown are for a 12V 37 A/H (at C10) sealed lead acid battery 250 x 200 x 95mm (WHD) weighing about 25 kg. The webbing is 40mm wide. The shown dimensions will obviously need to be adjusted for a different size battery.

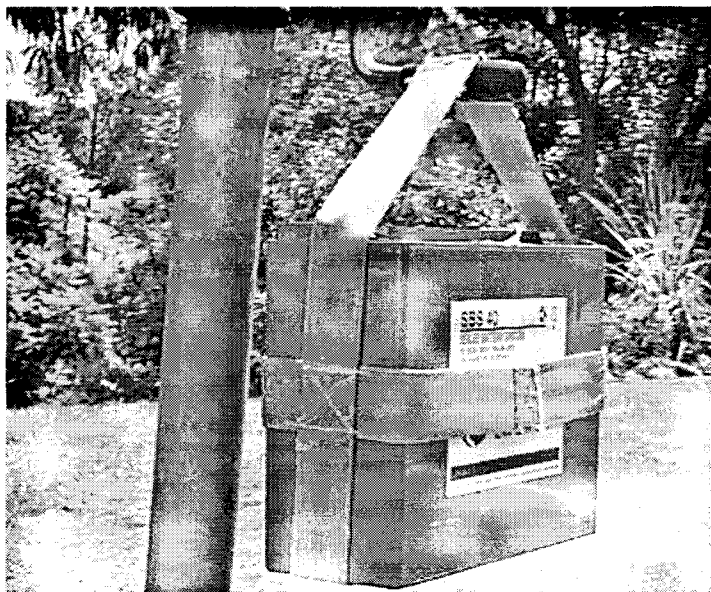
A discarded seat belt would be ideal material to use. The design is basically a vertical loop to support the weight and a horizontal loop to stop it falling on your foot. In practice, it is left around the battery but it can be easily be removed with the battery sitting on a flat surface.

How to construct: Firstly, convince your XYL that you are not insane and it will not damage her sewing machine.

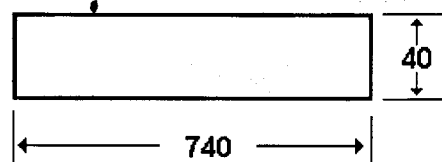
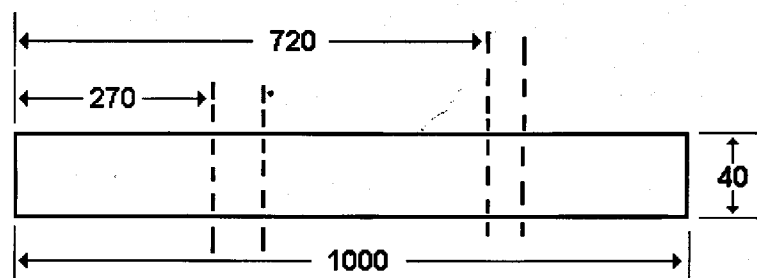
1.. The shorter length of webbing is sewn to form a loop, the overlap is the width of the webbing, this is the horizontal loop.

- 2.. Attach this at a 90 degree angle to the longer section 270mm from one end.
- 3.. Position the loop horizontally around the battery, with the 270mm end coming up and over one end of the battery, the longer end under the battery and up over the other end of the battery. Adjust the horizontal strap until its about one-third to one-half way up the battery. Mark where the two straps cross and sew together.
- 4.. Join the two ends of the vertical loop, inspect and test.

See diagrams and picture to make sense of all this



Measurements for the strapping



all measurements are in mm.

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SATTINGLER'S LAW: IT WORKS BETTER IF YOU PLUG IT IN

ONCE A JOB HAS GONE WRONG, ANYTHING DONE TO IMPROVE IT WILL ONLY MAKE
THINGS WORSE

The following log is from Brian VK2UBF.

All contacts, except 144 and 50 Megas where using Yaesu FT900 G5RV
and 100 watts.

The 144 and 50 Megas where on the Icom 706Mk2G.

Hope to see your log in future editions in the near future.

Brian.

Date	Time	Frequency	Call	Tx	Rx	Qsl	Name
01/02/04	5.45	14.195	UW2I	05/09	05/09		
05/02/04	4.21	28.320	VK2HRD	05/09+	05/09+		Richard
05/02/04	10.39	14.205	XQ5SM	05/07	05/07	Buro	Ferando
05/02/04	20.16	144.140	ZL1IU	05/05	05/07		Nick
05/02/04	20.21	144.140	ZL3TY	05/05	05/05		Bob
08/02/04	06.12	14.220	LZ1YG	05/06	05/07	Buro	Ivan
09/02/04	07.51	14.162	JH0MGW	05/05	05/08	Buro	Terry
12/02/04	10.48	7.073	6K2AVL	05/05	05/08	Buro	Yoon
13/02/04	07.18	14.210	OK2ZW	05/07	05/07	Buro	Zdeno
14/02/04	04.41	14.205	ZK3SB	05/07	05/09	I2YSB	
15/02/04	06.02	14.195	KH0AC	05/05	05/06	K7ZA	Len
15/02/04	07.53	14.210	PA1C	05/09	05/09	Buro	Hans
15/02/04	21.41	144.100	VK2EI	04/01	04/01		Neil
17/02/04	06.48	14.205	OK2SAI	05/05	05/07	Buro	Hendrk

19/02/04	20.11	144.100	VK2ZCV	05/05	05/05	Bill
19/02/04	20.19	144.200	VK2EI	05/05	05/05	Neil
19/02/04	20.39	144.200	VK2DVZ	05/05	05/07	Ross
20/02/04	04.45	50.120	ZL3TJZ	05/07	05/08	James
21/02/04	04.31	7.055	VK2TSC	05/05	05/05	Serge
21/02/04	20.57	144.100	ZL2IU	05/07	05/07	Neil
23/02/04	04.32	7.065	VK2FH	05/03	05/03	John
23/02/04	04.45	7.065	VK2DET	05/05	05/05	Denis
23/02/04	06.05	14.203	RZ3AA	05/05	05/07	Buro Roman
27/02/04	04.35	7.064	VK2QC	05/07	05/07 QRP	John
28/02/04	05.11	7.065	VK3KYF	05/05	05/05	Garry
28/02/04	05.25	7.065	ZL1VK	05/09	05/09 001	
28/02/04	05.27	7.062	ZL1AA	05/05	05/09 002	
28/02/04	09.22	7.067.5	ZL2AL	05/09	05/09 003	
28/02/04	10.21	7.071	ZL2WB	05/09	05/09 004	
28/02/04	10.26	7.082	ZL4AL	05/09	05/09 005	

GOOD LUCK IN THE SIMPLEX CONTEST. Brian VK2UBF.

IARS 2 metre FM Simplex contest rules

For a period from 4th April to 30th April 2004, IARS invites members to participate in a 2 M FM Simplex contest.

The highest scoring entry will receive **FREE** membership for the 2004/2005 year. If, there are more than one, with the highest score. The winner will be drawn from a hat. The judges decision will be FINAL.

A, Club members may contact any other club member or any other Amateur Station. On any of the 29 FM simplex channels, that they are licensed to use, as per page eight of the Feb 04 Propagator.

B, On any day, repeat contacts with any station are permitted, provide that each contact is on a different channel, from the 29 listed.

C, Repeated contacts on the same channel, on the same day are not accepted for point scoring.

D, Repeaters or any other means maybe used to arrange or schedule contacts

E, The minimum for a report for point scoring is the successful exchange of: Call sign, Signal report, Contact number, and Operator name.

F, Point scoring will be on a daily basis. Where the number of channels used, is multiplied by the number of stations worked. Contest score is the Sum of this daily score.

G, Contest entries maybe in printed copy or "word Document" form and include a cover sheet which shows Name and Call sign, All daily scores and contest total.

The log sheets must show the following details....

Date, Local time, Call signed worked, Operators Name, Channel Number,
Signal Report and contact number.

Contact numbers will start at 001, and progressing upwards for each contact.

Listeners and SWL's may also participate by submitting a Listener Only entry.

For listeners a point scoring contact will be a record of a valid contact as per these rules, showing the details for a least one of the stations in contact.

Entries can be delivered by post, or by hand to the Secretary VK2UBF.
NO later than the **May** members meeting which will be held **Tuesday 11 May 2004**.
Results will be advised ""if possible"" by the June members meeting.

The judging panel is looking forward to **YOUR ENTRY**. Let's hope that many members take part in this contest. They maybe surprised how far your radio will work on **SIMPLEX!**

Brian Farrar Hon Secretary IARS inc

For a reminder of the 2 m simplex freq's (channels) Here is the list....

Chan	Freq	16	146.425
1	144.625	17	146.450
2	144.650	18	146.475
3	144.675	19	146.500
4	145.225	20	146.525
5	145.250	21	146.550
6	145.275	22	146.575
7	145.325	23	147.400
8	145.350	24	147.425
9	145.375	25	147.450
10	145.400	26	147.475
11	145.425	27	147.500
12	145.450	28	147.525
13	145.475	29	147.550
14	145.500		
15	145.525		

Don't forget channels 1 to 15 are not available to novice licencees

Our Committee.

President. John Peary VK2JJP 4261 4762
Vice President. Ted Thrift VK2ARA 4272 9521
Secretary. Brian Farrar VK2UBF 4267 2296 vk2ubf@fishinternet.com.au
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Repeater Committee. Rob VK2MT, Simon VK2XQX, Phil VK2TPH, John VK2AAL
Canteen. Leigh Whitmarsh, Peter VK2HPR.
Web Master. Michael VK2GNV, with help from Daniel VK2TAU.

Art Union Shopping Centre Dates

Thurs, Aug 26th Stockland, (Corrimal Court) 9am – 7pm
Thurs, Sept 23rd Stockland, Shellharbour (Shellharbour Square)
9am – 7pm

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That's it for this issue,
73 Dave VK2TDN

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