



REPEATERS VK3RGV 2m  
& VK3RGV 70cm  
CLUB CALL SIGN VK3SOL

Volume 2, Issue 4 May '06

# SHEPPARTON & DISTRICT AMATEUR RADIO CLUB Inc

Incorporation No. A6677  
P.O Box 692 Shepparton 3632 [www.sadarc.org](http://www.sadarc.org)

**ATTENTION - Guest Speaker at next meeting!!**  
**3RD JUNE 2006**



Hi to Everyone,

Another month has come and gone and still plenty happening, Kane and Ben they have secured an Internet connection on behalf of our club, and by the way at no cost to the club, what a great asset to the club to have this connection available to us at no cost, this opens the club to IRLP and Echo Link and endless other possibilities, well done Kane and Ben.

At our next meeting we should notice some new hardware in the air on top of our club room building, come and have a look, that's correct isn't it Kane and Ben.

At the last meeting we had a good turn out, it was supposed to be a working bee, but it turned out to be an excellent social meeting with the barby working overtime, hamburgers and snags on tap all afternoon, however some work was eventually done.

Three candidates arrived earlier in the afternoon to sit various exams, Ed VK3BG conducted the exams on site at the club rooms, congratulations are in order, the three candidates completed and passed the exams on the day, and we will hear the new call signs, on air, in the near future, well done.

During my absence last month, I went walk about, to the interior of Australia, we travelled 5826kms, door to door, the fuel prices at some places was \$1.86ltr, work it out for your self, my average fuel consumption towing a 2 tonne

caravan was 21.4ltr to the 100kms travelled, other than the hip pocket being blown out it was a great trip, and more so, because of the club members that made regular contacts with me on a daily basis, I managed to work 186 contacts during my trip, I worked into Spain, England, New Zealand and of course every State in Australia, many thanks go to Terry VK3FTHS, Bill VK3DWG and Daryl VK3KL for their regular daily contact via Ham Radio, especially Terry, we worked continually on the 40mtr band with QSO's lasting over 2 hours and attracting up to 14 other hams joining in on the QSO, well done Terry. The travellers net on 20mtrs is a very valuable net, its great to know that someone is keeping a log on your activities whilst you are travelling around Australia, they provide a very valuable service to Amateur Radio. I took 288 digital photos on the trip with my Canon EOS 300D Camera; I managed to cut a deal with Kodak to print those pictures at 23c a print, I will bring them along to next meeting if anyone is interested in having a look.

I have received plenty of emails from Les VK3TEX since our last club meeting, Les and Jaeck where requested to follow up on the possibility of linking our 70cm Repeater on Mt Wombat with the IRLP Network, lets see what the outcome is at our next meeting, the news will be very beneficial to all the members.

As you, know this club is very active with different club broadcasts, such as the WIA Broadcast on 40mtr's, I was very disappointed on Sunday 14th May 2006, I ran the club WIA Broadcast as usual at 10.00am, it requires a fair bit of work to present the Broadcast to our members and the listening public, I had initially only one check in, Danny VK3FDTH, Followed by Daryl VK3KL, my first reaction was why bother, but then my next thought was positive, Danny has been checking in every Sunday

morning and night, he is a very new comer to the hobby and very supportive of all the club activities, for Danny's sake I will continue to run the broadcast, but please, how about some support, I know the club has grown to 64 financial members, our short wave listeners are our biggest supporters, they are to be congratulated, we as a club don't ask much from our membership, just a little bit of support, your executive is working very hard for you as members of the club, just check in, not much to ask, is it?

Daryl is still pulling his hair out, the newsletter dead lines are still trying to be met, without much success, and maybe we should produce a bi monthly newsletter instead? What do you think? Come on; please get involved, this is a very proactive Committee of Management trying to provide a better service to the membership, where would we be now? I have instructed Daryl to print the newsletter with or without any articles on the day it is supposed to go out.

On reflection we take a lot for granted, Alan VK3AYD our elected treasurer is having a very trying time in his life.(medically speaking) Alan is a person that takes his responsibilities and life very seriously, due to his medical condition Alan has not been able to attend club meetings, Alan never complains, he only supports the current executive and the club in every way, Alan is currently at home from the hospital, he is on the improve, my thoughts are with you every day Alan, and on behalf of the club membership we wish you a speedy recovery, and look forward to seeing you soon, thanks to Barry VK3KBY for keeping me informed, Barry regularly checks on Alan's well being.

Max VK3DSF gave us a comprehensive report at the last meeting, re-the Comm.'s day in September which consisted of a few new ideas, one big winner was the thought of pre selling tickets

prior to the doors opening, basically the public could purchase the entry ticket outside the venue before the start time, which would mean that once the doors open you could go straight in without waiting in a que.

Our 80mtr club net on 3.620 MHz is going very well, with plenty of call backs, this net gives club members the opportunity to run the net, using our club call sign VK3SOL, please note the start time is 7.00pm local time, and check the roster to see if you are the next net controller, if you can't make your roster schedule, please let Les VK3TEX know so alternative arrangements can be made.

What's on the radio horizon, the RD Contest, JOTA, and in Jan 2007 the Australian Scout Jamboree to be held Elmore, this Jamboree will last 11 days from the 2nd January 2007, I have approached Vic Scouts to see if we as a Club can assist in some way with the presence of Amateur Radio, maybe a permanent portable Ham Station, the Jamboree is expected to attract 13,000 Scouts from all over Australia.

I had the opportunity to visit VK3FDTH Danny's Ham shack on the way home from the last meeting, I was very impressed, I was even more impressed with a mobile antenna he was making, and hopefully Danny will bring his antenna to the next meeting and give us a small presentation on what he has done. 10 out of 10 Danny that's what the hobby is all about, experimenting.

The next Meeting will be held on Saturday the 3rd June 2006, PLEASE NOTE THE NEW START TIME, at the last meeting it was agreed by all members in attendance to start the meetings earlier, the new start time is 1.00pm,

73s for now Roger VK2RO

EMTRON DX2 Hf Linear Amplifier.

A product review by Les, VK-3TEX

A couple of years ago when we Limited Amateurs received our HF privileges when the Morse code requirement was lifted giving us access to the HF bands I started to think about the HF bands and what types of antenna's and other gear I would need to

Get myself active.

I already had an HF rig and an old FL2000B Yaesu HF Amplifier that was getting on close to 35 plus years old. I had this amplifier for a while and it slowly started to develop problems with ageing. Power supply Capacitors had to be replaced with modern ones, and there were a couple of other problems that were really starting to annoy me. In the end, I had a problem with it that I just couldn't track down, as I am not an expert on these Amps by any means.

So I gave the FL2000B to another Amateur who did have the time and patience to track down the fault and get the thing working right.

(This Amateur has since found the fault and got the Amp going, which he was very happy about.)

Having got rid of my old Amp I decided I would need some sort of help to get my signal through the when conditions are tough and to produce a better signal to DX stations.

So a new Amp was decided on, but I was still not sure whether to go solid state or a tube type amplifier.

I looked around at various manufacturers and while there were some quite nice Amps made abroad I thought I would stick to an Australian made Amp for the ease of having a local company for backup and support.

Looking at a couple of manufacturers, I decided to go with a Sydney based company called Emtronics. They have been around the Amateur Radio scene for a few decades going from being the largest Ham Radio outlet in Australia, to a rather small business these days dealing mainly with tube type amplifiers.

The company has several models in their DX range and all of these are ceramic tube types so the issue of solid state over tube type was decided.

All of Emtronics Amps are designed around the Russian Svetlana Ceramic Tetrode. They use one of two depending on availability. The 800-watt plate dissipation 4CX800A, or the 4CX1600A.

They have several different models, but after much thought I had decided on the DX2 model, which is one of their midrange Amps.

The Emtron DX2 is 1500-watt average output amp for the 160m to 10m bands covering all 9 Amateur HF bands. It uses two Svetlana tetrodes type GU74B (4CX800A), which are more stable than triodes and offer higher performance.

The DX2 is a manually tuned Amp, but that's OK because I like to have plenty of interaction with my radio gear and even then there are only three front panel adjustments, the band switch, plate and load controls. The status display for the amplifier is of the LED type and I find this very useful because several functions are monitored at once.

These are RF power, reflected power; grid current, plate voltage, plate current and these are all visible at a glance! No meter switching!

You also have some status indicators for over drive, SWR, on air, ready, and fault.

All are LED type indicators so they should last a long time.

One of the main things I liked about this amp is the wide range of protection provided for the tubes and it virtually makes this amp bulletproof as far as hurting the amp is concerned.

To start with they have provided a very nice slow start circuit on power up for the power supply. The way it works is simple. When the power switch is switched on, the voltage is slowly brought up over about 3 seconds and it energizes those massive filter capacitors so there is no sudden inrush current to do any damage and stress the power supply circuit. It works very nice and smooth...

The protection circuits protect against things like, over temperature, over current, over drive, High SWR (>2.6:1) and it won't let you transmit before it reaches operating temperature for the grid circuit of the tube. It is a little annoying that you have to wait 4 minutes but I guess that comes down to patience.

Here are the specs for the DX2:

Technical Specifications  
**FREQUENCY COVERAGE:** Complete (manually tuned) coverage of the nine HF amateur bands:

1.800 - 1.900 MHz 3.500 - 4.000 MHz 7.000 - 7.500 MHz 10.000 - 10.300 MHz 14.000 - 14.350 MHz 18.000 - 18.500 MHz 21.000 - 21.500 MHz 24.000 - 24.500 MHz 28.500 - 29.990 MHz  
**TRANSMITTING MODES:** Both continuous and low duty cycle modes are supported. That is, the DX-2 supports SSB, CW, AM, FM, RTTY and SSTV.

**OUTPUT POWER:** Typical 1500 watts carrier or up to 2000 W PEP.  
**DRIVE POWER:** Nominal 40-60 watts for full rated output.

**INPUT IMPEDANCE:** Nominal 50-ohm passive impedance, unbalanced. VSWR 1.4:1 or less.  
**OUTPUT IMPEDANCE:** Nominal 50-ohm passive impedance, unbalanced. VSWR 2.6:1 or less.

**DISTORTION:** Third order intermodulation products are more than 35 dB below rated output.  
**HARMONICS:** Harmonic output is better than 50dB below the rated output.

**FAULT PROTECTION:** The comprehensive fault protection systems include circuitry to monitor:

- Plate current: should the plate current exceed a safe value, the amplifier goes to standby mode for 2 minutes.

- Screen grid over-current: Absolute tube protection is offered with visual warning and a reduced power level being enabled if the screen current exceeds a pre-set limit.

- Temperature: Should the tube's temperature exceed a specific level, amplifier operation will be suspended until the temperature drops to a safe level.

**Overdrive protection:** Should the DX-2 be overdriven, a LED warning indicator will light up when the linearity limit is reached. If the drive is increased further, a 2 second cut off (by-pass) will follow.

**SWR protection:** Should the DX-2 sense an SWR exceeding 2.6:1, a LED-warning indicator will light up, simultaneously with a 3 second cut off.

**ALC:** Negative going, adjustable output level.

**EBS:** Electronic Bias Switch - automatically switches the standing current (about 0.5 A) to a lower ("pre-bias") value - when there is no input drive.

**PRE-BIAS:** A small current will flow in the tube when the amplifier is keyed on, but there is no modulation. This will prevent a harsh sound at the beginning of each word, when the EBS is activated and the tube goes through a non-linear zone, before reaching the correct initial bias.

**QSK:** is an option that makes possible the antenna switching at very fast rate - typically 3ms switching time in each direction.  
**FACTORY INSTALLED ONLY.** (MINE HAS THIS OPTION-EXCELLENT SWITCHING TIMES AND NO RELAY CLUNK OR CHATTER!)

**SOFT START:** when switched on, the mains power is gradually applied to the transformer, over a period of about 5 seconds, to avoid the high in-rush current typical for such high loads.

**COOLING:** forced air-cooling.  
**OPERATING TEMPERATURE:** 0 to 40° Celsius  
**FUSING:** Two 20A normal acting fuses on

the rear panel  
**DIMENSIONS:** 435mm wide, 190mm high, 465mm deep  
**WEIGHT:** 36kg (80lb) unpacked

Here are some photos of the amps insides. The workmanship is first rate and VERY HIGH QUALITY materials are used. Full marks in this department.

Left is the GU74B Tetrodes.

The heart of the DX2, the high voltage transformer. (Note: it comes with it's own serial number!)

Output Tuning circuit and heavy-duty band switch. It uses a VERY smooth reduction drive for precise tuning. Dial accuracy is consistent and repeatable for each band change. You change band and put the load and plate controls back to where they were for that band section (Last time) and you are tuned! No endless fiddling.

Lot's of room inside! That transformer is REALLY BIG!

This is the operating table for VK3TEX, you can see the DX2 is the big boy on the bench...

I could say a lot more about this Amp but it would fill a small book, so I will sum up and say that this is one of the highest quality pieces of equipment that I have ever owned and it was worth the money that it cost.

I love Amateur Radio and it is my primary hobby, so I make no qualms about spending money on it. I have worked much DX since I got the DX2 and it DEFINITELY does make a difference at the other end when conditions are bad on the bands. With the amount of QRN and other noise on the bands it is a GREAT addition to the shack. The cost of unit was 5250 dollars with the QSK option delivered. Emtronics provide a 5-year warranty for the Amp so that is a bonus in itself.

The DX2 is run very conservatively here in the VK3TEX shack so it should last a very long time.

I have run it on a couple of transceivers, one my old IC-765 radio and the Kenwood TS 2000. They both hooked up very easily and I was putting out good power within minutes...

It only takes a tickle of 5 watts on 80 meters to get it to the VK limit and about 20 watts on the 10-meter band. Any higher drive power than this and it goes above our power restrictions... Now, we wouldn't do this would we?

I would recommend this Amplifier to anyone who is serious about HF operations.

More information can be had on the Emtronics website at [www.emtron.com.au](http://www.emtron.com.au).

Les, VK3TEX.

# CLASSIFIEDS

## Public Notice

### GGREC Inc. HAMFEST

*Saturday 22nd JULY 2006.*

Gippsland Gate Radio & Electronics Club Inc Hamfest.

At our LARGE venue, the CRANBOURNE PUBLIC HALL, located at the corner of Clarendon St and High St. *Melway 133 K4.* (High Street forms part of the South Gippsland highway in Cranbourne)

40 tables of new and used Electrical, Electronic and Amateur Radio equipment.

- Everything is under cover.
- Free Tea & Coffee available all day.
- A selection of hot & cold food will be available.
- A great Door Prize will be drawn at approx 1:30 PM.
- Doors open to sellers at 8.30 AM & buyers at 10.00 AM.
- Buyers can gain entry for \$5.00.
- Sellers will pay \$20.00 per table, which includes entry for two.
- Proceeds from the sale will go to the Gippsland Gate Radio & Electronics Club for the upgrade of facilities.

Persons wishing to reserve a table position must Contact Dianne Jackson VK3JDI before the event on 03 5625 2545 to obtain a Stall Holder Information sheet.

***Book early, positions are limited!***

## For Sale



Heil/Adio-Technica Shockproof Mic Holder and Stand with PTT. New Price \$150.00 as new \$60.00  
*Pictured right*

Kenwood MC-85 Excellent condition with built in Pre Amp, (has had the rf mod.) Suits Late Type Kenwoods with 8pin plugs. Can switch to 3 different Trancievers. \$130.00



## Guest Speaker to attend next meeting

Thankyou for the invitation, I will be very pleased to be there, I will also take the opportunity to discuss various issues about the WIA also, as WICEN and the WIA share common ground, so have your questions ready. There is a lot of "mis-understanding" about what is really going on and the services available, so this is a good opportunity to put your club views.

I might be able to bring along a higher profile member as well, but as yet have not been able to finalise anything yet. WICEN is quite thin in your area, so thanks for the chance to bring our message to you.  
*73's Bruce Bathols VK3UV  
OIC Murray River Canoe  
Marathon WICEN Co-ordinator  
Treasurer WIA*

## DID YOU KNOW?

That the Cobram Urban Fire Brigade has been serving the Cobram & District community since 1907.

They are pleased to announce that in 2007 they will be 100 years old.

Preparations are now being made to contact past members and affiliates of the Brigade and are also looking for any memorabilia from the Cobram CFA. If you were once a member, or know of someone who was involved with the Brigade then please let the Brigade know by calling them on either:

**0358722538**

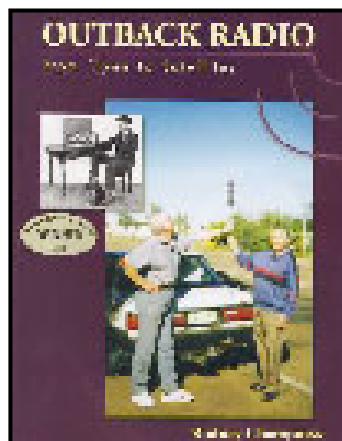
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**Or visit the website  
[www.cobramcfa.org.au](http://www.cobramcfa.org.au)**



## OUTBACK RADIO

From Flynn to Satellites  
By Rodney Champness  
(VK3UG)



Outback Radio is a 186 page A4 size book complete with a total of 92 diagrams, pictures and circuits.

Up until now there has been no book published which has traced the history of the development of communications (particularly radio communications) in outback Australia. The book shows the social, educational, medical and business uses to which radio communications have been put to in the outback. The story describes how

the equipment came to be developed by Traeger and others to meet the impossible technical requirements of the 1920s. Radio was in its infancy at that time.

The progressive improvements in radio equipment design and capabilities are explored through the book and end up with the use of satellite phone communications. The author has been involved in radio communications all his adult life and writes professionally the column Vintage Radio for Silicon Chip.

The book is available from the author at:-

6 Mundoona Court, Mooropna, 3629 or email: [rodlynn@dodo.com.au](mailto:rodlynn@dodo.com.au)  
for \$39.95 per copy, plus \$8 for post in Australia for up to two copies.  
Three or more copies post free in Australia.



# Measure of Success

How do you measure a club's success? Is it the \$ balance in the bank account, or is it what the club achieves for its members over time, a few members would reflect on the \$ amount that is retained in the bank account over time as being successful. Our club is a non profit organisation, like many others in Australia, non-profit means the income and property of the club must be applied solely towards the promotion of the objects of the club, set out in the constitution. If you go down the path of building the bank balance, then the aims and goals of the club become non progressive and non productive, the club fails to fulfil its obligations to the membership, the

club becomes a business machine for profit, rather than a club for membership participation, involvement, and progression. Much time and money has been spent in the last 6 months in rebuilding the very basic foundations of the club, and a very long overdue upgrade on Mt Wombat. It's my belief, and aim, to further add value to the membership and fulfil the goals of our club. For the benefit of those members who cannot attend club meetings and hear the treasurer's report, I can report our financial situation is still very healthy and positive. In closing, you can't keep taking; you must give back, and invest in the future of our club and hobby.

## A letter from home

Dear Redneck Son,  
I'm writing this slow because I know you can't read fast. We don't live where we did when you left home. Your dad read in the newspaper that most accidents happen within 20 miles of your home, so we moved. I won't be able to send you the address because the last West Virginia family that lived here took the house numbers when they moved so they wouldn't have to change their address.

This place is really nice. It even has a washing machine. I'm not sure about it. I put a load of clothes in and pulled the chain. We haven't seen them

since.

The weather isn't bad here. It only rained twice last week; the first time for three days and the second time for four days. About that coat you wanted me to send; your Uncle Billy Bob said it would be too heavy to send in the mail with the buttons on, so we cut them off and put them in the pockets.

Bubba locked his keys in the car yesterday. We were really worried because it took him two hours to get me and your father out.

Your sister had a baby this morning, but I haven't found out what it is yet so I don't know if you

are an aunt or uncle.

Uncle Bobby Ray fell into a whiskey vat last week. Some men tried to pull him out but he fought them off and drowned. We had him cremated, he burned for three days.

Three of your friends went off a bridge in a pickup truck. Butch was driving. He rolled down the window and swam to safety. Your other two friends were in the back. They drowned because they couldn't get the tailgate down! There isn't much more news at this time. Nothing much out of the normal has happened.

*Your Favorite Aunt,  
Mom*

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 Daryl Hitchcock VK3KL  
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 Duncan VK3FDCC  
 Kevin Cahir SWL  
 Les George VK3FLGL  
 Angela Mc Callum VK3FELT

## S.A.D.A.R.C CALLSIGN VK3SOL

### ROSTER for 80m

Name	Callsign	E_mail	Club WIA
Roger Conway	VK2RO	plus10@optusnet.com.au	5th APRIL
Jim Day	VK2TWY	jde1@bigpond.com	12th APRIL
Ray Hughes	VK2ZOR	rayhughes@dvd-cad.com.au	19th APRIL
Ed Roache	VK3BG	vk3bg@bigpond.com	26th APRIL
George Francis	VK3HV	vk3hv@bigpond.net.au	3rd MAY
Pat O'Shannessy	VK3OV	patbarb@mcmedia.com.au	10th MAY
Bruce Plowman	VK3QC	bplowman@westnet.com.au	
Ray Wales	VK3RW		17th MAY
Rod Champness	VK3UG	rodlynn@dodo.com.au	24th MAY
Trevor Pitman	VK3VG	jantree@satlink.com.au	31st MAY
Warren Heywood	VK3WH		7th JUNE
Peter O'Keefe	VK3YF	peter@solarcom.com.au	14th JUNE
Hilton Younger	VK3AHY	notlih@younger.id.au	21st JUNE
Bob Knaggs	VK3AJN		28th JUNE
Jan VanKerkwijk	VK3ALF	jkerkwijk@bigpond.com	5th JULY
David Waring	VK3ANP	waringbd@netc.net.au	12th JULY
Fred Kent	VK3APA	fred40@mcmedia.com.au	19th JULY
Allan Dobson	VK3AYD	radobson@mcmedia.com.au	26th JULY
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Max Johnston	VK3DSF		16th AUG
Bill Griffiths	VK3DWG	vk3dwg@tpg.com.au	23rd AUG
Graham Tremellen	VK3GPT	vk3gpt@dodo.com.au	30th AUG
Robbie Moore	VK3HGC	robwendy@dodo.com.au	6th SEPT
Brian Webb	VK3HBW		13th SEPT
Toby Corbett	VK3HIV	vk3hiv@dragnet.com.au	20th SEPT
Mark Bennett	VK3HMB		27th SEPT
Ian Sturman	VK3JNC	namruts@bigpond.com	4th OCT
Dave Duff	VK3JRA	jdu29660@bigpond.net.au	11th OCT
Neil Webster	VK3KAL	kalnet@austarnet.com.au	18th OCT
Rob George	VK3KBV	rrgeorge@bigpond.com	25th OCT
Barrie Halliday	VK3KBY	barrieh@mcmedia.com.au	1st NOV
David Leonard	VK3KDL	vk3kdl@hotmail.com	8th NOV
Daryl Hitchcock	VK3KL	vk3kln@netspace.net.au	15th NOV
John Waters	VK3PXJ	glengordon@bigpond.com	22nd NOV
Les Tatar	VK3TEX	lestatar@bigpond.com	RELIEF
Jacek Szczurek	VK3TJS	vk3tjs@etheira.net	9th NOV
Ross Smith	VK3UCR	rossgs@netc.net.au	6th DEC
Danny Hender	VK3FDTH	danhender@bigpond.net.au	13th DEC
Cameron Grambau	VK3FMCG	cg495@hotmail.com	20th DEC
Gordon McDonald	VK3ACC	gordonmcdonald@tadaust.org.au	
Duncan VK3FDCC		camcor@bordnet.com.au	
Kevin Cahir		river022@bigpond.com	
Les George		lesgeorge@dodo.com.au	

## CONGRATULATIONS

We have two newly licenced operators they are Les George VK3FLGL and Angela Mc Callum VK3FELT.

Also there are two others waiting ACMA to process their applications.

Editor...