

GATEWAY

THE OFFICIAL JOURNAL OF
THE GIPPSLAND GATE RADIO
AND ELECTRONICS CLUB



JANUARY 1998

Gippsland Gate Radio and Electronics Club Inc.

Club meetings are held on the third Friday of each month
at the Cranbourne Girl Guide Hall in Grant street.

The doors open at 8:15 PM & the meeting commences at 8:30 PM

Visitors are most welcome.

Committee Members 1996/1997

President	Ian Jackson	VK3BUF
Secretary	Ivan Blezard	VK3ARV
Treasurer	Paul Ash	VK3HAS
Committee member	Graham Brennan	VK3KCS
Social Co-ordinator	Reg Goddard	VK3UK

Magazine Editor & Robin Linn VK3TFA
Printing & Dispatch Ph. 9807-3083

Deadlines for articles is Thursday week prior to the meeting.

Club Station VK3BJA Located at the Guide Hall

Club Repeater VK3RDD Freq. In 52.575, out 53.575 MHz.

Call in Freqs. are HF on 28.325 MHz-USB

VHF on 146.225 MHz, FM and UHF on 438.850 MHz, FM

Current GGREC Inc. Membership Fee Schedule

Full Member \$30.00, Pensioner Member \$15.00

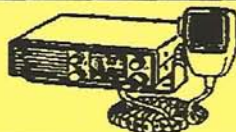
Junior Member \$15.00, Extra Family Member \$10.00

Fees due after each April Annual General Meeting.

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GRAHAM VK3KCS

THE PRESIDENTS REPORT

Have you ever been sound asleep and been woken up by a noise, just brief enough to make you wonder whether or not you actually heard it? So you lie there for a while trying to match up this barely perceived half-noise with any reasonable normal noise while you decide whether to investigate or go back to sleep.

I heard this thump the other night, well at least it was a barely perceived half thump. Was that the sound of small meteor plunging through roof tiles? Had a police SWAT team kicked down our door erroneously after misreading the address? No, it was non of these. The noise was in fact the sound of the cat pushing the ironing board from the laundry cupboard, culminating in a fist sized indentation in the adjacent plaster wall. I should have guessed. You may well ask what this has got to do with Amateur Radio? Well, I'm not sure yet either, but I'm working on it.

I trust that all Club members have had a satisfactory break over the Christmas and New Year period. Summer is a good time to think about radio because more people are travelling and living away from home. This can be the catalyst for some good contacts with portable stations on HF, and even on VHF when inversions are running well. Last month Peter VK3VB made a two directional video contact with Graeme VK3XTA, from Tooradin to Baxter, some 22km using one of the Clubs ATV transmitters. If you are interested in giving this a bit of a go, put your hand up sometime during the year for a loan of a transmitter and antenna.

This Friday night shall be an interesting one. Ron VK3EXJ shall be bringing along his home brew 8 inch reflector telescope. We will learn how he made it and discover what can be seen with it. (and no jokes please about examining heavenly bodies) Fabricating one of these units is an exacting process, we will find out how you can turn a slab of glass into a near perfect parabola with the right sized grit and a lot of determination.

The February Prac Night will be a project and fixit session. Bring along your current project to do a little work on it, or just show everyone how far you have progressed. With a little bit of luck we will be using the March Prac Night to introduce the JV FAX modem we intend to produce as a kit. This little unit should support two transceivers simultaneously with full tx/rx monitoring features, while maintaining complete electrical isolation with your PC. More details next month

An important safety tip for the new year: Make sure your workbench has a good soldering iron stand, after all, a falling iron can leave a lasting impression.

dc VK3BUF

A new Radio Dispatch System for the Queensland Ambulance Service

by Andy Beales VK4KCS

I recently completed a job that I thought may be of interest to those not actively involved in the Commercial radio field.

The Queensland Ambulance Service is currently involved in relocating their Radio Control Room to the refurbished 1st. floor level in their headquarters Building and setting up a joint Call-taking and Radio Dispatch Service with the Queensland Fire and Rescue Authority, as well as introducing a Computer Aided Dispatch system.

As part of this work, Motorola successfully tendered to supply labour to install and test the new Radio Equipment associated with the relocation.

The equipment consists of 37 Tait rack mounted Transmitters, 37 Tait rack mounted Receivers, 19 Telewave Transmitter combiner/filter assemblies and 12 Receiver Filter/amplifiers, the whole installation occupying Qty. 8 x 60 ru high 19" Racks.

These racks are installed side by side in one row with a 600 mm wide cable tray suspended from the ceiling, about 300mm above the top of the racks. This cable tray is used to carry D.C., Control and antenna cables to the equipment in the racks, and also provide the means of bonding all the racks and equipment at a common potential to reduce the effects of lightning strikes.

The main Power Supply for this installation consists of dual, diode isolated, 360 Amperehour battery banks, each bank capable of sustaining the equipment for approx. 8 hours of normal use. The battery banks are charged in parallel by 3 paralleled 40 Amp each Switch mode Battery chargers. This form of supply is used because of the critical nature the communications provided by this facility, which must remain operational under all circumstances.

The main labour content of this job was to measure each run of FSJ 4 - 50 coaxial cable, terminate both ends with Type N connectors and fit the cable. There is a run from each Transmitter to the appropriate combiner, a run to each Receiver from the Filter/amplifier and then from the combiners and filters to the Antenna Window where a Lightening Arrester is fitted for each of 27 Antenna Feeders.

There is a combination of 27, 9 and 16 element Stainless steel Yagis and Side mount Dipole Phased Arrays all mounted on 25 Metre tall freestanding rectangular Tower installed on the roof of the 3 Storey building.

There is a total of 508 metres of FSJ 4 - 50 flexible, solid jacket coaxial cable and 210 connectors. This alone took 4 weeks to prepare and install 105 runs of feeder.

The radios are mounted in 19" rack assemblies of 6 radios per Rack frame with individual 12 volt D.C. feeds to each radio via a circuit breaker of appropriate rating. There are 17 of these Rackframes, 8 for Transmitters, 8 for Receivers and 1 for 2 other Transceivers, one VHF Marine and one VHF Aeronautical .

Each Rackframe has 2 x 10 pair Krone blocks fitted for audio and command signals in and out. This is wired via a 20 pair cable from each Rackframe to an M.D.F. nearby and then via 10 by 100 pair cables to the Telemetry Room on the 1st Floor for distribution to the Operators Positions via a customised AWA Switcher. This switcher is controlled as required by the Operator, via an L.C.D. Touchscreen panel built into the Console.

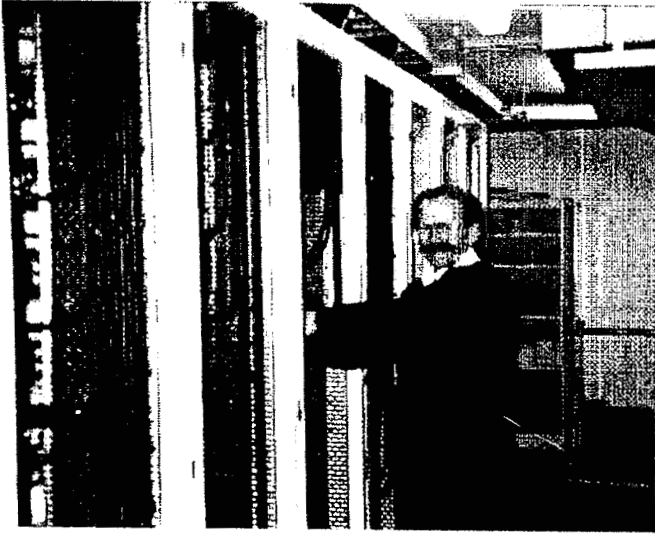
Also fitted is a pair from each Rackframe for each block of 6 circuit breakers to an alarm system which alerts the Control Room Supervisor if a circuit breaker should trip.

A special feature of these Radios is that each radio is programmed with every frequency and CTCSS frequency for the site and the channel of operation is selected by the radio being plugged into the Rack slot designated for that channel. This is achieved by bringing the channel select lines for the radio out of the back of the radio on an added D 15 connector which mates with a D 15 connector on the rack frame that has been hardwired with the relevant Binary channel select information.

This means that any radio, including the onsite spare radios, can be plugged into any slot by non technical staff to make that channel operational again in the shortest possible time.

Also installed in the same room is a GPS Receiver which provides an accurate time signal to be used for time stamping the voice logger recordings and synchronising all the clocks in the Control Room.

I hope that this brief description gives an insight into a some of what a Two way radio technician gets involved with these days.



ANDY VK4KCS BEHIND TRANSMITTER RACKS

RIGHT:
LOOKING AT THE
FRONT OF 'RACK A'



EVENT QUEUE for January 98

FRIDAY	16/01/98	8:15pm	GENERAL MEETING ,TELESCOPE DEMO
AUSTRALIA DAY WEEKEND 24 TH - 26 TH JAN WOORNAMBOOL			
FRIDAY	06/02/98	8:15pm	PRAC NIGHT, CONSTRUCTION AND REPAIR OF YOUR BUSTED TOYS.
FRIDAY	20/02/98	8:15	GENERAL MEETING - VISUAL BASIC
SUNDAY	22/02/98	2:00pm	CASINO TRIP
FRIDAY	06/03/98	8:15	PRAC NIGHT
FRIDAY	13/03/98	8:00	COMMITTEE MEETING
FRIDAY	20/03/98	8:15	GENERAL MEETING
SUNDAY	29/03/98		BOWLING AND DINNER AT MOOROOLBARK

AUSTRALIA DAY WEEKEND 1998

JAN 24, 25, 26 at Warnambool

**IF YOU CAN'T MAKE IT, YOU MUST BE IN JAIL
AND IF YOU'RE IN JAIL ...BREAK OUT!**

**Powered sites are still available at the Surfside
Holiday Park. Ring 0355 61 2611 for reservations.**

**The park is between the Main Beach
and the Adventure Playground**