GATEWAY

THE OFFICIAL JOURNAL OF
THE GIPPSLAND GATE RADIO
AND ELECTRONICS CLUB INC

MAY 2000

Gippsland Gate Radio and Electronics Club Inc.
Incorporation Number A0016893M

Club Meetings are held on the third Friday of each month
at the Cranbourne Girl Guide Hall in Grant Street.
The meetings commence at 8:00 PM.
Visitors are most welcome.

Committee Members 1999/2000

President	Bruno Tonizzo	VK3BFT
Secretary	Andrew Clinkaberry	
Treasurer	Mike Ide	VK3KTO
Committee member	Russell White	VK3MWR
Committee member	Helmut Inhoven	VK3DHI
Magazine Editor &	Dianne Jackson	VK3HDI
Printing and Dispatch		Ph. (03) 9776 5000

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
Visit our internet site at:
http://avoca.vicnet.net.au/~ggrec/

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.

The deadline for submitting Gateway articles is EIGHT DAYS before each General Meeting.

Please direct magazine correspondence to **105 Franciscan ave Frankston 3199**
Phone: **9776 5000** or Email **ijackson@netspace.net.au** or Fax: **9776 5451**

All other Club correspondence to **PO BOX 1098 Cranbourne 3977**

Presidents Message

Welcome to the May edition of GATEWAY, and welcome back after the Easter break.

The committee for the 2000 to 2001 Club Year was elected at the April AGM. The committee members are: -

President :	Bruno Tonizzo VK3BFT
Secretary :	Andrew Clinkaberry
Treasurer :	Mike Ide VK3KTO
Committee Member :	Russell White VK3MWR
Committee Member :	Helmut Inhoven VK3DHI

Helmut and Andrew have taken up their positions with great enthusiasm and are already hard at work making the approaching events a success.

The coming months will bring with them our Clubs major events.
The Millennium Dinner in June, the Amateur Radio and Electronics Trash and Treasure day in July and before you know it, it will be time for JOTA.
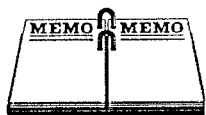
Each of these events will require participation from all available Club members to make them a success.   Please make a personal commitment to come along and "do your bit" for the Club.

Do you have a computer? Are you looking for an outlet for your artistic talents? If you answered yes (or no!) to these questions, then you can become our new magazine editor. Talk to any of the committee members to find out more about this very rewarding position.

I wish to pass on GGREC's sincere thanks to the EMDRC for their co-operation in changing their Hamfest date and I encourage all our members to support their event.

Remember to call in to our Club Net on the second and fourth Sunday of the month on 146.225 MHz at 8:00 PM.

73's from Bruno Tonizzo, VK3BFT

Event Queue

DAY	DATE	TIME	DETAILS
Sun	14/05/00	8pm	**2 Metre Net** on 146.225
Fri	19/05/00	8pm	**General Meeting** and **ICOM** equipment night
Sat	27/05/00	2pm	Visit Nar Nar Goon **Fire Station**
Sun	28/05/00	8pm	**2 Metre Net** on 146.225
Fri	02/06/00	8pm	**Prac Night**
Tues	06/06/00	7.30pm	Committee Meeting at Mike VK3KTO's house.
Fri	16/06/00	8pm	**General Meeting**
Sat	17/06/00	7pm	**Millennium Dinner** at the Guide Hall
Fri	07/07/00	8pm	**Prac Night**
Fri	21/07/00	8pm	**General Meeting**
Sat	22/07/00	10am	Amateur Radio **Trash and Treasure** day
Fri	29/07/00	7pm	**Pub Night** at the **Waltzing Matilda Hotel** in Springvale

FEES

Membership renewal fees are now due.
If payment is not received this month, then,

This will be your last copy of Gateway.

Current GGREC Inc Membership Fee Schedule

Full Member $30.00, Pensioner Member $15.00
Junior Member $15.00, Extra Family Member $10.00
(See the treasurer or mail to our PO Box.)

Gory Details...

CLUB NET

We are now running regularly scheduled Club Nets, on the Club 2 Metre frequency, 146.225. The Nets are held on every 2nd and 4th Sunday's of each month. Mike VK3KTO is our net controller until we can work out an effective roster. The next net nights will be, Sunday the 28th of May, and then the 11th of June, the 25th of June and the 9th of July.

OM NIGHT

Friday the 19th of May, after the general meeting. Like our previous radio theme nights, this will be your opportunity to show off your favourite radios. This month we will be featuring ICOM equipment. The idea is for members to bring along amateur equip of a specific manufacturer. Then display and discuss the various attributes of the gear. This is a good opportunity for new operators to put 'a face to the name' of rigs they see in advertisements.

FIRE BRIGADE VISIT

On **Saturday the 27th of May** we will be doing a tour of the Nar Nar Goon Fire Brigade, in Carney street Nar Nar Goon. The tour will start at 2pm so we thought we would have a **barbecue lunch** first **at 12.30pm**. There is a barbecue there and some seating, the rest will be BYO. (Please see mud map, on the last page of this magazine, for location details)

PUB NIGHT

We will be having another GGREC Pub Night **on Friday the 29th of July**. This time it will be at the **Waltzing Matilda Hotel**, on the corner of Springvale and Heatherton roads in Springvale. **Melways Map Ref 88 K 1**. Anyone interested in coming along on the night ʼuld see Bruno or Helmut at a Club Meeting, to make sure that we get enough tables booked. Even if you make up your mind to attend as late as the day of the dinner, please make sure you give **Bruno** a call on **9700 4526** so that table numbers can be adjusted.

CLUB MILLENIUM DINNER

This year our annual dinner will be **fully catered** instead of bring your own, so we can all just sit back and enjoy. The only thing that you will need to bring along will be some drinks and glasses. This looks like it could be a great fun night out with Music, Dancing, Competitions and Prizes. **The price will be $12.00 per head** and **full payment** will be required, no later than the June Prac night.

READ ALL ABOUT IT

If you have been up to anything interesting or entertaining since our last meeting, then jot it down and let us read all about it.

T-SHIRT PRINTING

Following the success of our t shirt printing night, we have decided to do it again. A new date will be advertised as soon as we find out how many others would be interested in having the GGREC logo printed on t shirts or windcheaters. The price is $3.00 per Club Logo with call sign.

CLUB MERCHANDISE

The Radio club has still has stocks of GGREC Bumper Stickers, for 50 cents. Stub holders, for $5.00 and sew on Cloth Patches for $4.00. If anyone is interested in buying any of these items then please see Mike at the next Club meeting. **Only while stocks last**.

EXAMS

The next AOCP exam will be held at Peter Pavey VK3VB's house, at 6 Bayview rd Tooradin, on Saturday the 3rd of June. For the running of the exam to be cost effective, we need at least three applicants per exam. To be eligible to participate in the June exam, your application forms, with payment, must be returned to Peter Pavey by the 19th of May
You can get an application form by contacting Peter Pavey on 59 98 35333, or Ian Jackson on 9776 5000.

NEW EDITOR NEEDED

We are still looking for a new magazine editor. The job will be commencing from January 2001. The main task will be compiling the Club magazine on a computer. This usually doesn't take long, it isn't hard and you can add your own style. Ian VK3BUF will still be able to photocopy each edition. I hope that you will give it some thought.

CONGRATULATIONS

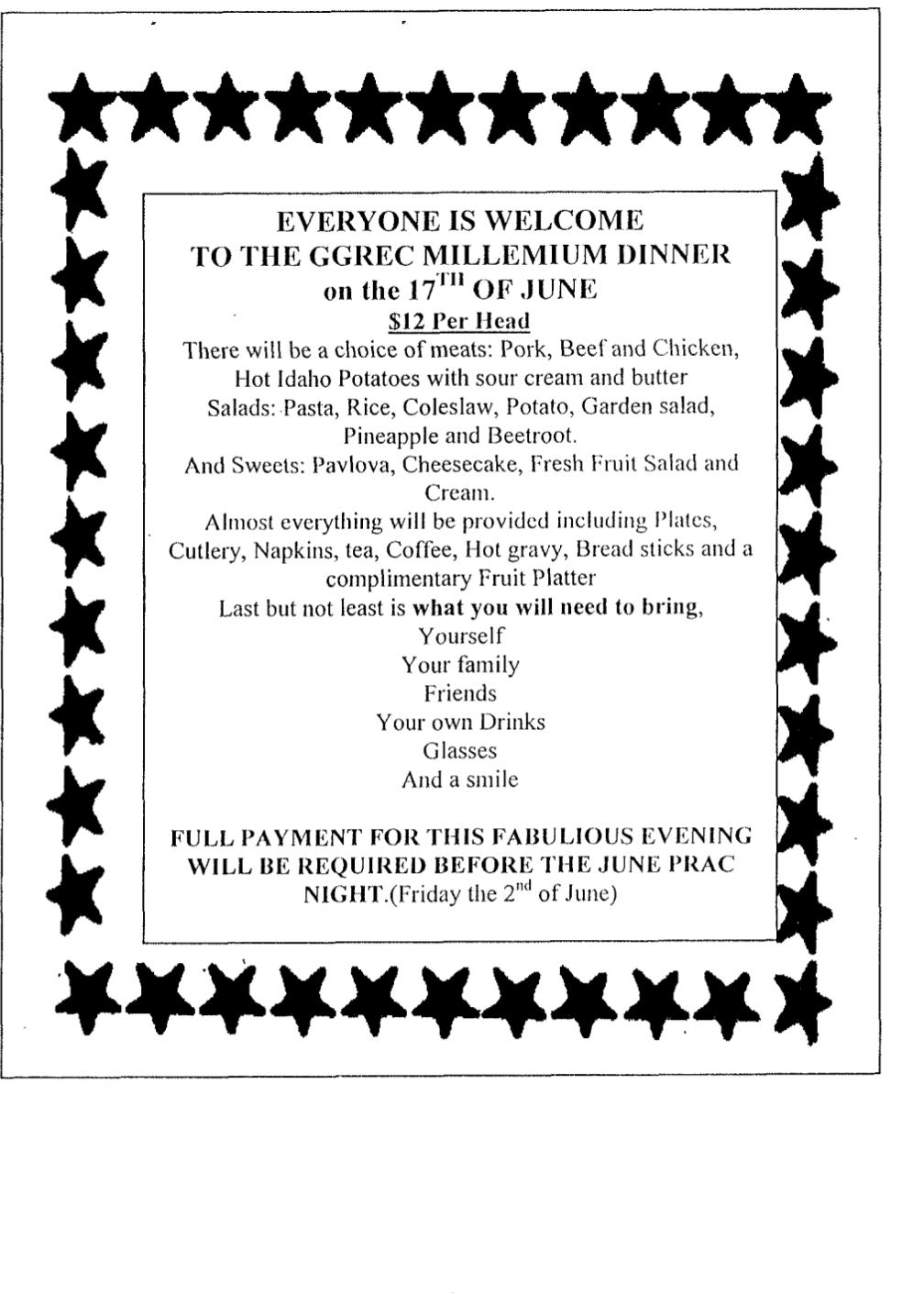Congratulations go to Andrew Clinkaberry for passing his Novice exam. He is now awaiti~ his call sign.

JOKE   (Supplied by Maria Harding)

A man at a construction site was bragging that he could outdo anyone in a feat of strength. He made fun of one of the older workmen.

After several minutes, the older worker had had enough. "Put you put your money where your mouth is," he said. "I will bet a week's wages that I can haul something in a wheelbarrow over to that outbuilding that you won't be able to wheel back."

"You're on, old man," the braggart replied. "Let's see what you got."
The old man grabbed the wheelbarrow by the handles. Then, nodding to the young man, he said with a smile, "All right. Get in."

EVERYONE IS WELCOME
TO THE GGREC MILLEMIUM DINNER
on the 17TH OF JUNE
$12 Per Head

There will be a choice of meats: Pork, Beef and Chicken,
Hot Idaho Potatoes with sour cream and butter
Salads: Pasta, Rice, Coleslaw, Potato, Garden salad,
Pineapple and Beetroot.
And Sweets: Pavlova, Cheesecake, Fresh Fruit Salad and
Cream.
Almost everything will be provided including Plates,
Cutlery, Napkins, tea, Coffee, Hot gravy, Bread sticks and a
complimentary Fruit Platter
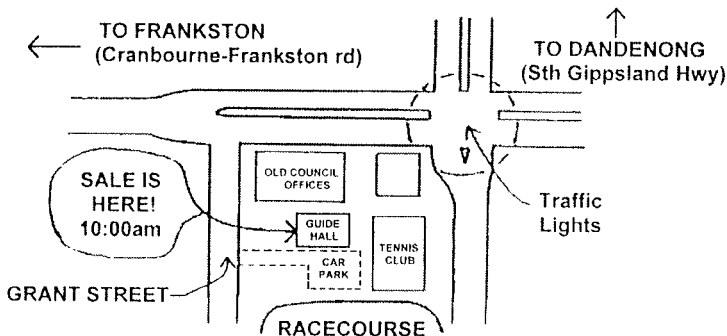Last but not least is **what you will need to bring,**
Yourself
Your family
Friends
Your own Drinks
Glasses
And a smile

FULL PAYMENT FOR THIS FABULIOUS EVENING
WILL BE REQUIRED BEFORE THE JUNE PRAC
NIGHT.(Friday the 2nd of June)

GGREC TRASH & TREASURE SALE

Saturday 22th July 2000

This will be held at the Guide Hall in Grant Street, Cranbourne.

TO FRANKSTON
(Cranbourne-Frankston rd)

↑ TO DANDENONG
(Sth Gippsland Hwy)

SALE IS HERE!
10:00am

OLD COUNCIL OFFICES

GUIDE HALL

TENNIS CLUB

CAR PARK

Traffic Lights

GRANT STREET

RACECOURSE

The doors open for Sellers to set up at 8:30 am.

$15.00 a table, $8.00 a half table.

The doors open for Buyers at 10:00 am.

Entrance fee $4.00

Hot & Cold refreshments available

Call in on 146.225 Mhz

For table bookings or further information, please contact:
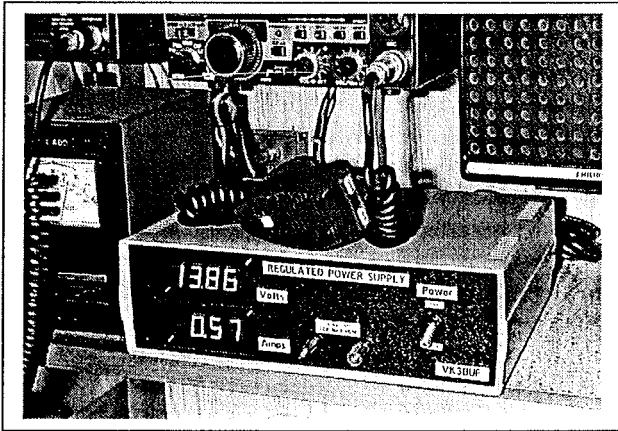
RUSS WHITE VK3MWR at (03) 9796 2601

CLUB POWER SUPPLY PROJECT

For some time the Club has been looking at getting a simple power supply project together, and here it is. After some trials were carried out of the dual PC power supply concept as printed in January's AR magazine, (by Keith Alder VK2AXN) we have decided to go this way ourselves.

The idea is that we take two 2nd hand standard PC power supplies, extract the pcb modules, put them into a nice plastic box, trick it up with some switches and digital panel meters to show amps and volts and bingo! Instant 18-20A shack power supply.

These PC supplies have a 5V rail rated at 18 to 20 amps. A very small modification to each module allows us to tweak the output from 5V to 6.9V. When 6.9V from one module is placed in series with 6.9V from another you have 13.8V!

On the meeting THIS FRIDAY NIGHT ONLY we will take a $20 deposit (from Club members only) who wish to purchase a kit. The total price is $75, with the balance payable on delivery of the kit at the June general meeting.

The kit will consist of :
- Two standard PC power supplies (second hand)
- A plastic enclosure (as shown in the pic above)
- Two Liquid crystal displays for current and voltage (bright LED is available)
- A power switch, shunt resistor, banana posts, cct breaker
- A new 60mm x 60mm cooling fan (the ones in the supplies are too big)
- A set of modification/assembly instructions
- A fantail lolly   (to suck on while building the kit)

A Disclaimer.: The only way we can do this project at this price is to use 2nd hand supplies. While we intend to pair up identical supplies in each kit, there will probably be some variations of the supplies from kit to kit. If any of these supplies do not work at all, we will replace them. The *performance* of these supplies will be 'What you see is What you get'. Should they arise, any interference problems will have to be dealt with by yourself.

This kit is a one time only offer. If you don't give Mike our Treasurer a $20 deposit at this meeting, you are doomed to be an observer and not a participant.

IBM PC	$ 400.00
Soldering Iron	$ 100.00
Nally Radio Tower	$ 450.00
TH3 tri band beam	$ 125.00
UHF TV yagi	$ 20.00
Jpole antenna	$ 50.00
Antenna rotator	$ 100.00
Power supply 12V . 20A	$ 100.00
Kenwood 520S Hf transceiver	$ 300.00
Kenwood 2m tx. xtal locked	$ 90.00
Digital freq. meter 500 Mhz	$ 100.00
Revex VHF/UHF SWR bridge	$ 125.00
RF noise bridge Palomar	$ 70.00
Capacitance meter	$ 40.00
6 metre Jpole for 6 metre rpt	$ 50.00
Power supply for 6 metre rpt	$ 80.00
Rack for 6 metre rpt	$ 50.00
Diplexer unit for 6 metre rpt	$ 900.00
Tx/Rx for 6 metre rpt	$ 180.00
Stock held for small sales, drink coolers etc	$ 50.00
White board & stand	$ 250.00
12` x 24` tent	$ 90.00
Club coax kit	$ 140.00
Club equipment rack	$ 350.00
Desk mic for HF radio	$ 40.00
TV decoder (VGA to Comp vidio)	$ 300.00
2x ATV transmitters @ $400.00	$ 800.00
70 cm ATV antennas 2@ $30.00	$ 60.00
B&W camera for ATV tx.	$ 30.00
Hot water Urn	$ 40.00
SSTV KIT for club use	$ 50.00
Portable gas BBQ	$ 90.00
Crockery	$ 10.00
Assets purchased this year	

Antenna hardware	$ 66.13

TOTAL VALUE OF NON MONETARY ASSETS*	$ 5696.13
INVESTMENT ACCOUNT WITH GIO BLD. SOC.	$ 2500.00
ASSETS IN CBA CHEQUE ACCOUNT & CASH IN HAND	
AS AT 31/03/2000 AS PER LEDGER	$ 3011.96
TOTAL ASSETS AS AT 31/03/2000	**$11208.96**

The value of assets are based upon a reasonable estimate by the Treasurer
of their redeemable value should they be sold at the present date

Audited. 29/4/2000
JPWilson

Gippsland Gate Radio & Electronics Club
Profit and Loss
April 1, 1999 through to March 31, 2000

Ordinary Income/Expense

Income

Membership Fees	$ 945.00
Small Sales	$ 519.00
Exam Fees	$ 745.00
Hamfest Sale Income	$1435.35
AOCP Class Fees	$ 70.00
Fund Raising & Donations	$ 138.38

Total Income	$3852.73

Expense

Printing & Stationery	$ 83.19
Postage & Freight	$ 8.00
Bank & Govt Charges	$ 20.47
Refreshments & Food	$ 171.25
Rent & Rates	$1360.00
Magazine	$ 398.70
Licence Fees	$ 100.00
Examination Expenses	$ 645.00
Equipment Purchases	$ 79.66
WIA Membership	$ 75.00
Purchase of Call Books	$ 258.47
Costs relating to 1999 AOCP Class	$ 805.00
Other Expenses	$ 521.08
Subsidy for Club Night Out	$ 375.00

Total Expense	$ 4900.82

Net Ordinary Income Loss	$ 1048.09-

Other Income/ Expense

Other Income/ Interest Received	$ 77.42
Other Income	$ 372.23

	$ 449.65

Net Loss	**$ 598.44**

Treasurer's Notes

Although a loss of $ 598.44 was recorded for the period 1st April 1999
to March 31st 2000, it should be remembered that all expenses relating
to the 1999 AOCP Class were paid in that year. These would total $1380
as follows. Hall rent $525, other costs as submitted by Ian Jackson $805
and an estimate of $50 for refreshments.
Income from class fees of $1450 was recorded in the previous report.
If an average were taken over the 2 years, this would show a profit of $856.
In addition to the small profit from class fees, the AOCP class generated a
total of $255 from new members.

Audited 29/4/2000
JPWilson.

The Answer to Written Radio Telecommunications Problems Found Decades Ago

by John L. WICKHAM VK3ZK

With written modes such as RTTY, we have all witnessed the battle to see an RTTY system that is free of all the problems with receive errors. You copy even a moderately strong RTTY signal, and then multi-path sets in and garbles sixty percent of the message.
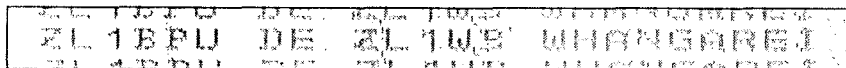
We have seen in recent times, the arrival of the newer modes to fight the receive error malady, such as packet radio, AMTOR, PACTOR and Clover. Whilst all of these are fine modes in their own right, we have gone to all that high-falooting and pricy technology, wherein a good solution was found **JUST OVER SEVENTY YEARS AGO!** This ultimate answer can be found in **HELL!**

No, I don't mean the place you are sent to if you are evil, Hell is short for **"Hellschreiber"**, a telecommunications system invented by **Dr Rudolf Hell** in Germany, during 1929. Hellschreiber was used by the Nazis in World War II and in later years by the USSR, Red China and Korea. It was also used elsewhere by the newspaper industry.

Its most common form is called **"Feld (field) Hell"**, and like morse, it consists of a keyed on/off carrier. I copied a weak russian amateur on forty metres on RTTY, with about forty percent of the signal garbled by multi-path. This same station re-appeared using Feld Hell, and whilst the lettering tends to fade in and out due to QSB, **THERE WERE NONE OF THE RECEIVE ERRORS THAT PLAGUE RTTY!** We have gone to all that trouble with packet, AMTOR, et all, wherein Dr Rudolph Hell elegantly answered the problem decades ago. **WHY?**

Here is a small sample of a received Feld Hell signal:-

Each character of a Feld-Hell transmission is portrayed as a series of dots, in a matrix, just like the printing of a dot-matrix printer. The dots are sent one at a time, rather like Morse code. Feld-Hell transmits in the following order - up each row from bottom to top, then up each successive column from left to right. 150 characters are transmitted

every minute. Each character takes 400ms. Since there are 49 pixels per character, each pixel is 8.163ms long. The effective baud rate is $^1/_{8.163}$ ms = 122.5 baud, and the throughput is 2.5 characters/sec. or about 25 WPM.

In the original Feld-Hell machine, the characters were generated in an interesting way. A drum contained one ring of brass contacts for each character provided on the keyboard. When a key was pressed, the drum rotated once, and in the process

transmitted via a contact the dots required for that character. A mechanical interlock prevented keys being pressed simultaneously, and at the same time ensured that each new character started at the correct time to preserve the phase of the transmission. Using the keyboard was a challenge, because each new key needed to be pressed lightly during transmission of the previous character, to "lock in" the character at the correct time. Otherwise a space would be transmitted between characters. Since only one ring of dots was used per character, and the drum was rotated once per character, rather than once per column, the character matrix was rearranged in a line around the circumference of the drum.

Modern DSP techniques can considerably improve the performance of Feld-Hell reception and transmission, reducing the transmitted bandwidth and providing impressive receive sensitivity. In most cases the hardware requirements are very simple - either a "HAMCOM" type interface or a sound card. Although not originally conceived in this way, Feld-Hell can benefit substantially from the use of DSP, specifically digital filtering, detection, averaging and analog to digital conversion techniques.

Like with other popular modes, if you use IZ8BLY's Hellschreiber software, you use your sound card as part of the interface between your rig and computer. It is so simple, it is even possible to use a cheap QRP CW transceiver. The Feld Hell signal only has to key the carrier on and off.

Feld Hell can be found on frequencies such as **3.559, 7.040, 14.063** and **21.063**. Most Feld Hellers monitor **14.063**. There are also other Hellschreiber forms, such as **FSK Hell** and **MT Hell**. IZ8BLY's software *covers them all.*
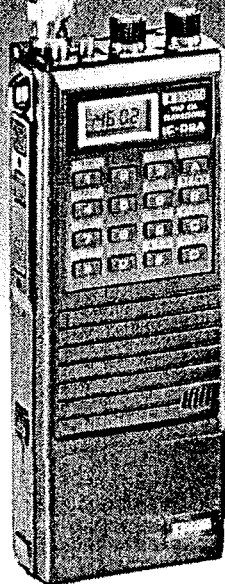
Unfortunately, there appears to be some ignorance towards Feld Hell and its virtues. A minority of PACTOR stations rather rudely put their signal either near the Feld Hell signals or right on top of them. Others will try to tell you that all the Hellschreiber modes belong in the museum, and this lot have probably spent hundreds of dollars on a PACTOR system. To fight this ignorance, people are needed with salesmen-like skills to sell the Hell modes to the Amateur community.

I, for one, am convinced that it is not necessary to go to all of these super-fancy technology modes, such as AMTOR, PACTOR, packet, et all, just to have error-free reception of written radio telecommunications, when the problem was elegantly addressed by Dr Rudolph Hell back in 1929 with his Hellschreiber system. Now visit http://www.qsl.net/zl1bpu/ , download IZ8BLY's Hellschreiber program and judge for yourself.

STOP PRESS:-

I have recently received the Fijian DX station **3D2AA** on Feld Hell, so give this mode a go.

DON'T FORGET TO BRING YOUR ICOM GEAR TO THE CLUBROOMS THIS FRIDAY NIGHT!

April 2000 DF Hunt Preparation Night
Helmut 3DHI, Ian 3VIB, Jason, Colin 3NQS, Reg 3UK, Paul 3TGX

GGREC COMMITTEE 2000-2001

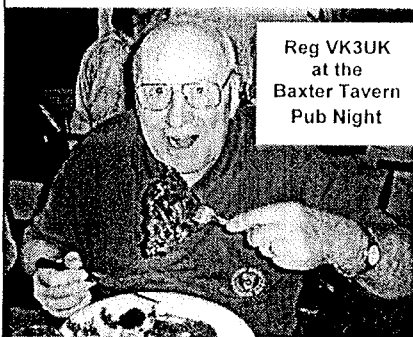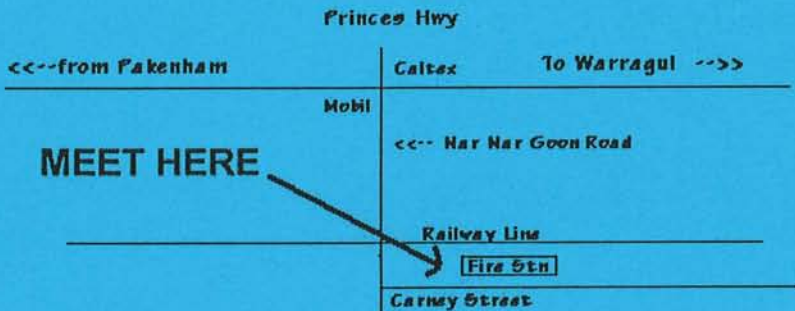Helmut (Member) — Andrew (Secretary) — Bruno (President) — Mike (Treasurer) — Russell (Member)

Valerie & Bobbie at the Baxter Tavern
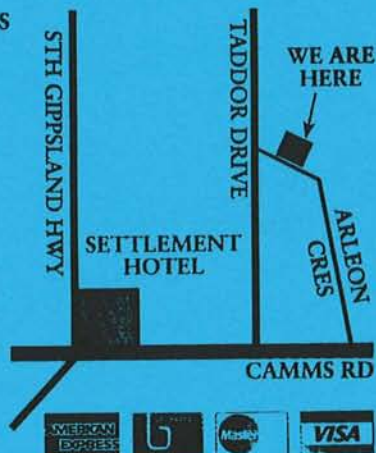

Reg VK3UK at the Baxter Tavern Pub Night

GGREC
P.O. BOX 1098
CRANBOURNE