GATEWAY

The Official Magazine of the Gippsland Gate Radio & Electronics Club Inc.

July 2015 From The President

As I will be away on holidays, I am writing this message in advance.

I am holidaying in Bangkok and other islands and hope to get contacts back in Aus. via echolink . So listen to 145.540MHz and say hello if you hear me calling.

I don't know what the amateur radio scene is like there but I won't be carrying a hand held as I don't feel like attracting attention at airports.

The door fob system is now up and running again after a meltdown of battery and computer. Many thanks to Ian and Paul for the work they did to get things running again.

I hope you had a good fog free time at Arthurs Seat and made the most of the beautiful views and good food.

The next event, our hamfest, will need your help to make it a success. Albert and Wayne have been working for months to make sure everything will go smoothly on the day.

The Sunday night net is still well attended with lots to talk about. If you haven't called in, please give it a try any time after 8:00 PM and have some fun.

See you at the July General Meeting,

Bruno Tonizzo VK3BFT

President GGREC Inc.

Contents.

Something missing? – YES, YOUR content – Send it in!

Event Queue

July:

11-12th	Gippstech
12th	Club Net on VK3RLP, 8.00 pm.
17th	General Meeting (no guest speaker o/a Hamfest the following day.)
18th	2015 GGREC Hamfest, Cranbourne Public Hall
19th	Club Net on VK3RLP, 8.00 pm.
26th	Club Net on VK3RLP, 8.00 pm.

August:

2nd	Club Net on VK3RLP, 8.00 pm.
4th	Committee Meeting
7th	Prac Night|
8th -9th	Foundation Course
21st	General Meeting, featuring Joe VK3YSP & Julie VK3FOWL on Portable Op
22nd -28th	VI100ANZAC Commemoration Operation by GGREC members.
30th	Club Net on VK3RLP, 8.00 pm.

From The Editor

So here we go for another month,
In my shack, I have been looking at an audio amplifier I have had under construction for quite a while as mention was had of a home brew night, that and the fact it's about time I moved that project on. – Trouble is I'm in two minds as to whether it will be a test amp for the workshop, or a distribution amp for the house. It's a 70W device, so maybe underpowered as a 'house amp'. On the repair Bench I have a Xenon strobe light.
This is a rather ancient device I built while at tech school 40 odd years ago!
At the time there had been a few projects of this type in the electronics magazines, but that's where the similarity's end. One of the main differences is that the magazine units were 'live chassis' meaning no isolation from the mains. Mine on the other hand used a power transformer. This solved one problem I had at the time, that being the discharge caps, the best I could scrounge at the time were only 250V rated oil caps (filled with PCB's ??? ☠ – I hate to think). So why is it on my bench, well My brother who has had custody of it for quite a while went to use it for his kids birthday party – fail, lots of miss firing etc. After poking around for quite a while I came to the conclusion that the xenon tubes were kaput, with one end rather blackened. I was amazed, I had thought this was a rather useless project for ages, as it will never get enough use to justify its construction – but here it is, worn out! With only about 230V as a discharge voltage, with only 16Mfd caps, I thought the tubes were so under driven they'd never die.

So, should I fix it, or just ditch it etc.?
I had a look at the regular suppliers, not much joy, it seems xenon tubes are out of fashion. A look on the web produced one site, $21US landed here for 2 tubes. while Jaycar have a complete flash unit for $24.
So it does not make much sense economically. Floating around my workbench at this time are a few high power LED's. So I tried flashing one of these, heaps more light. (shows you how far these flash tubes have gone) So I could just gut it and put, say 4 high power LED's in, this would say goodbye to all the high voltage bits (Bar the 240VAC power input) and give me the option of variable duty cycle, and also the ability of just using it as a spotlight/work light. Maybe a replacement for the cheap dual 500W tripod mounted work light I bought from the local hardware shop, the halogen lamps of it blow so quickly it's not funny – I think heat is the problem. The heads are probably way too small for all the heat that must be dissipated. The only good point about this worklight is that it makes a good hand wormer on cold nights. Lately I have been keeping an eye out for power transformers to suit valve audio amps – the one in the strobe originally came from a B/W TV, and should be ideal. When I was a lot younger I use to scavenge heaps of transformers from old B/W TV's, then I would rewind them for all sorts of projects. (I'm amazed, I survived!).
So is anyone interested in building valve audio amps?, they have one redeeming feature – simplicity, a welcome change from all the processor driven equipment the surrounds us in this modern age. (And thinking of tubes, the one reason I'm hesitating stripping the old strobe light)

Paul VK3TGX

For Sale:

Nally 2-stage13.7M tower with Emotator Extra heavy duty rotator.
$650 for both items. Presently located in Springvale.

Contact Norm VK3MG on 0407 316 701

Notices:

Hi all

As you aware this Saturday 18/7/15 is the club's annual Hamfest at the Cranbourne Community Hall. We are aiming for a 7am start time, for setting up tables & will need as much help from club members as possible.

During the event, we will need members to help around the BBQ, Kitchen & with door security. Members will be responsible for the sale of their items on the club table.

If you have any fold out trestle tables, could you please bring them along in case they required for the bumper event.

Here's hoping the day goes off with a bang & everyone has a great time & we raise loads of money.

Thanks
Wayne
VK3XF

Antenna Photo's

A few photo's from the on-going Antenna photo project started by Ian VK3BUF - It's not too late – Send them in!

Look in the Gallery section of the club website to see the current collection.

TV from outer space?

Christmas Time

Microwave Bird Bath

Uploading Photo's to the GGREC website

Recently I made mention to a club member about uploading photo's – he said, Can I, How – So read on, and start uploading.

After bringing up the website, http://ggrec.org.au/

Go to the 'Gallery' section.

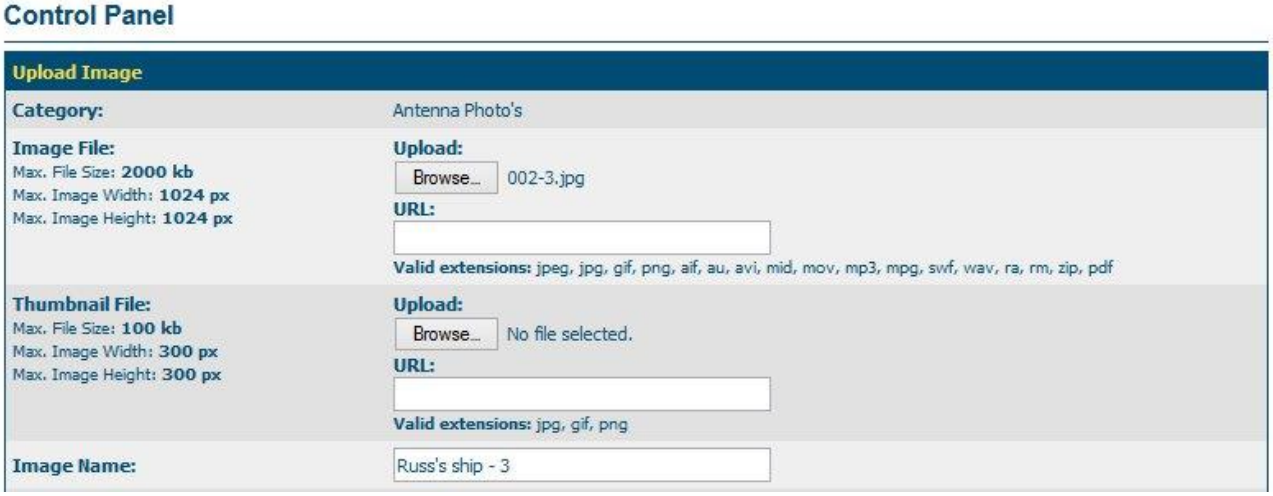
In the top left corner is the logon section.

Click 'Registration', and use your callsign as your name.

If you have forgotten your password, then click on 'Forgot password' and a new password will be emailed to you.

After you have logged on, select "Antenna Photo's" etc

On the right hand side, click the "Upload" button



On the upload section, Click “browse”

You should now have a file browser window open where you can find your photo.

After you have done so, the window will close, and your selected picture’s file name will be listed next to the browse button, as in the above screen shot. “002-3.jpg”

Now go down to the ‘Image Name’ section and give it a name.

You can also fill in the other sections, but they are optional, maybe skip them for now until you have uploaded at least one picture, then try exploring the other entry fields later on (after you regard yourself as ‘expert uploader’)

Now comes the slightly tricky bit.

To help keep the site secure, you are asked for a verification code. What you do here is to copy the camouflaged letters to the entry field below, in this case ‘2fghbd’

Then click the ‘submit’ button

If all is ok you should soon see your picture up on the website.

If you have another, click (for example) ‘Antenna photo’, just under the GGREC banner, then go through the same process again.

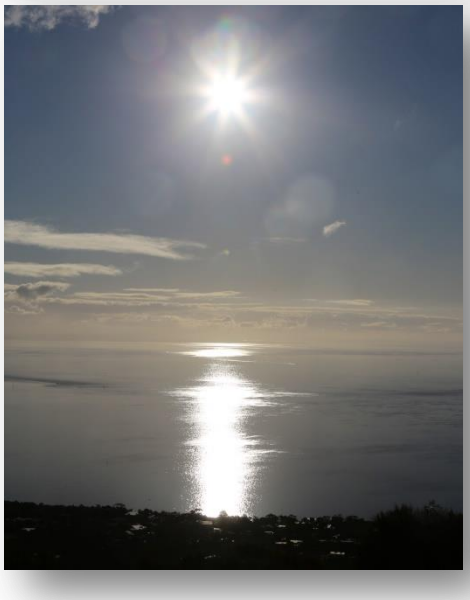
This is all assuming you only have a very small number of pictures to upload, if you have lots, then it probably would be easier to get me, Paul VKTGX, or Mark to do it for you.

Also, it is not possible to create new categories (folders / albums), so unless there is somewhere obvious to put them (ie Antenna photo’s), then drop them into the year (ie ‘2015’) with some comments, then let me or Mark know and we will sort it for you.

And finally, to save on scarce web server space, please resize you pictures to 1024x1024 or less. (ie 1024 x 768 etc)

Paul VK3TGX.

Mid-Year Lunch – Arthurs Seat



The Clock

Douglas Adams once wrote: “Time is an illusion, Lunchtime, doubly so”. Still, many people derive a lot of fun from fiddling with it and one of the biggest of fiddlers is the artist Christian Marclay, who in 2010 produced a clipshow movie that runs for a full 24 hours.

He worked on the basis that within the tens of thousands of movies in existence there are a vast number of references and images to clocks. He believed he could find an image of a clock for every minute of a day and set about proving it.

So the movie ‘The Clock’ was produced. It runs continuously at about 5 museums around the world, synchronised with real time. Within this time frame there are themes that emerge, as described in this Wikipedia extract:.

> After midnight, characters go to bars and drink. Some seek intimacy while others are angry to have been awakened by the phone.[1] In the early hours, characters are generally alone or sleeping.[2][3] Several dream sequences occur between 3 a.m. and 5 a.m.[4] At around 7 a.m., characters are shown waking up.[1] From 9 a.m. to noon, they eat breakfast and have wake-up sex.[5] As noon approaches, a sequence of action scenes build up to bells ringing in *High Noon*.[4][6] The video's pace immediately slows once noon passes.[4]
>
> Between 4 p.m. and 5 p.m., transportation becomes important as characters travel on cars, trains, and aeroplanes.[2] At 6 p.m., characters eat dinner and have shootouts.[7] In the evening, they attend parties.[1] Around 8 p.m., orchestras and theaters begin their shows.[8] As midnight approaches, the characters become more frantic, throwing tantrums and requesting stays of execution. Screeching violins from multiple clips build up to the moment.[2] At midnight Orson Welles is impaled on a clock tower in *The Stranger*, and Big Ben, a common sight in *The Clock*, explodes in *V for Vendetta*.[2][4]

It is an unusual creation and viewers will see hundreds of familar scenes from movies around the world over a long span of time. Short grabs of video are interleaved in creative ways, but the clock is ever-present, making it difficult to turn away for fear of missing out on what is coming next.

If you can’t visit one of the museums to observe the real thing, a snippet can be seen on You Tube if you follow this link:

https://www.youtube.com/watch?v=BXbQw0rE5UE

That is of course, if you have the time.....

PORTABLE MAST CONCEPT – by Ian Jackson VK3BUF

At the last prac night it was resolved to put together a portable mast that is easy to transport and must be capable of reaching a fair height. The intention is that it would be a rigid mast of 8 to 10 metres that gets guyed as the centre of a wire HF antenna, so that the antenna ends can be tied to trees or to squid poles.

Telescoping masts sound tempting, but there are problems reaching great heights without the top getting too thin, also telescoping tube in many sizes can be hard to buy.

Two telescoping sections that are readily available in aluminium tube are 48mm tube and 44mm tube with 1.6mm wall thickness. This can be purchased in 6.5 metre lengths and gives about 0.4mm of clearance between the tubes, so they are a good fit.

The plan is that we prepare 8 sections of 48mm tube cut to 1.625 metres long.

Then we cut six smaller 300mm sections that can be used to sleeve-join the larger sections into one very long pole. With the sleeves, each section would be 1775 metres long, which is a reasonable transport size. If all sections are used it would be 13 metres tall and weigh 9.5kg. but for many situations not all would be needed.

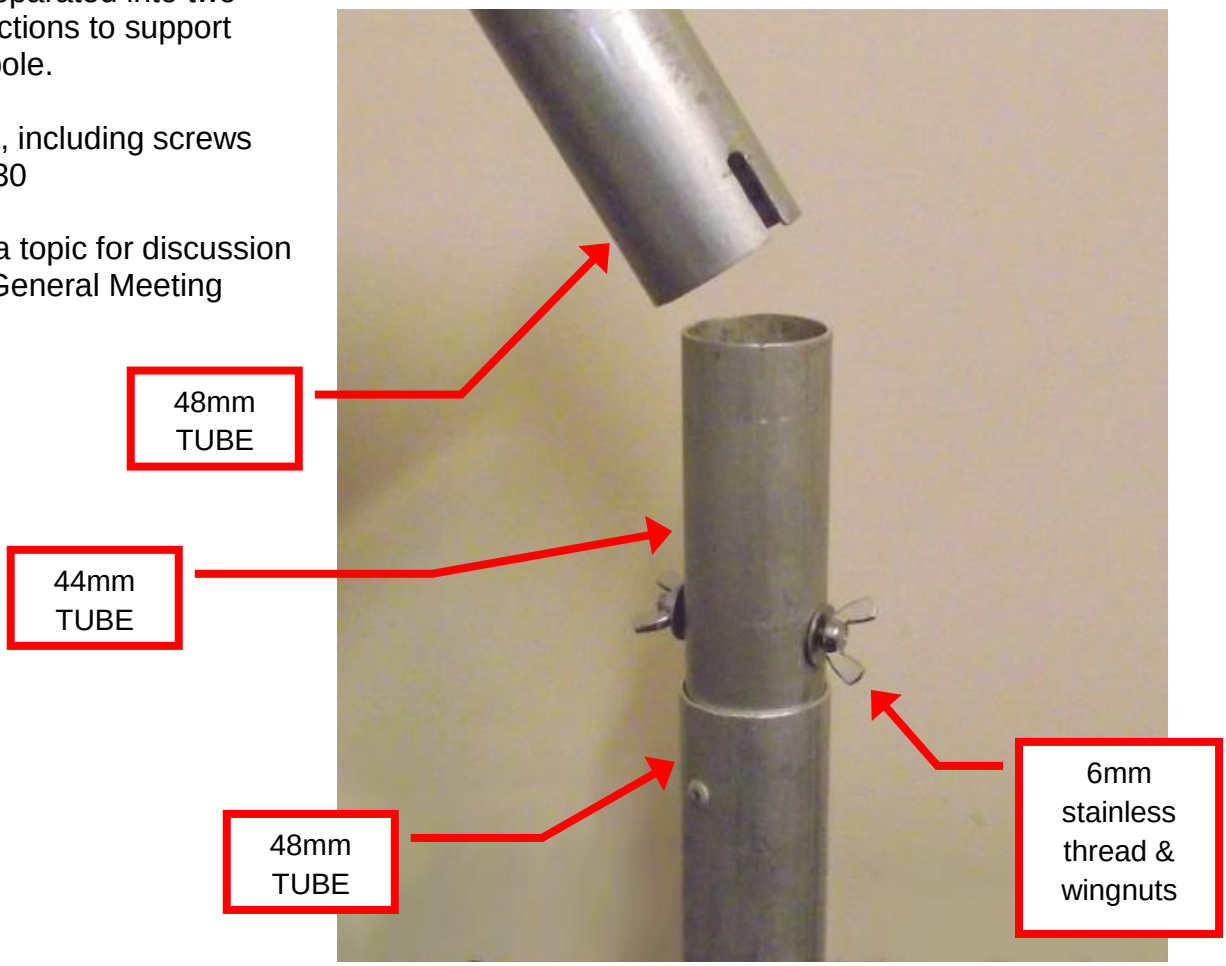
They can be quickly joined together by using a combination of stainless steel threads, washers and wingnuts as per the sample prepared in the picture here. Threads are crimped to prevent wingnuts from escaping. This technique makes for a very rigid connection.

A simple swivel base and guy point collar would also be prepared to match this assembly.

It could be separated into two 6.5 metre sections to support a straight dipole.

Material cost, including screws would be $130

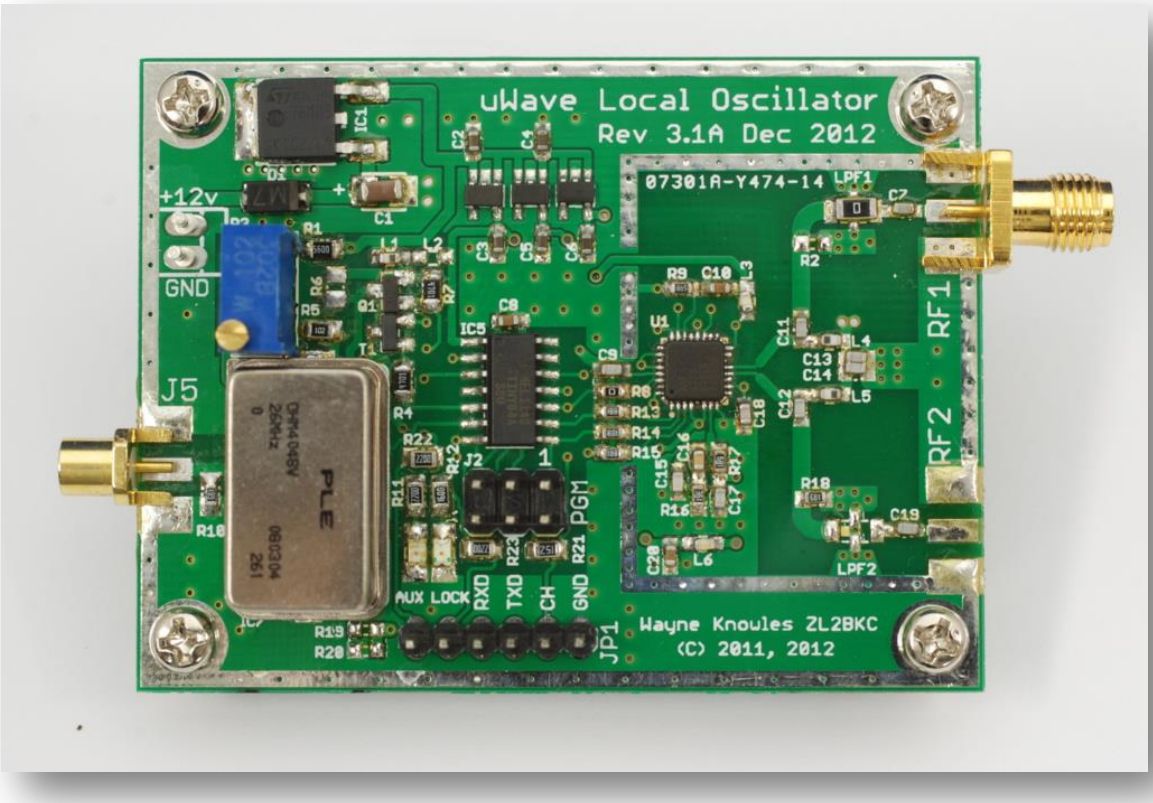
This can be a topic for discussion at the June General Meeting



GGREC Beacon Project Part 2

Or, are we excited yet?

One of the first decisions to be made after starting the beacon project was regarding the exciters. What type of exciter are we going to use, what output power, can it be adjusted, do we want rock locked or DDS control etc. etc. etc... After some discussion we decided on an exciter that was being made over in New Zealand, the ZLPLL by Wayne Knowles ZL2BKC. These exciters are a “new breed” of exciter compared to the existing exciters in the current club beacons, the main difference being the ZLPLL is DDS (Direct Digital Synthisis) controlled and can be programmed for an output frequency between 31 MHZ and 4.4 GHz. They can also be programmed to reduce their output power in 4 steps, 2 dB at a time and also to “ident” itself and include any message up to 300 characters you want to add to be transmitted via OOK. Output power was quoted at 7 dBm (5 milliwatts) and as a very desirable side benefit they could be driven by an external 10 MHz reference which would automatically switch back to the onboard 10 MHz OCXO if the external reference was lost. Quite a versatile little board indeed! Here is the board pictured below.



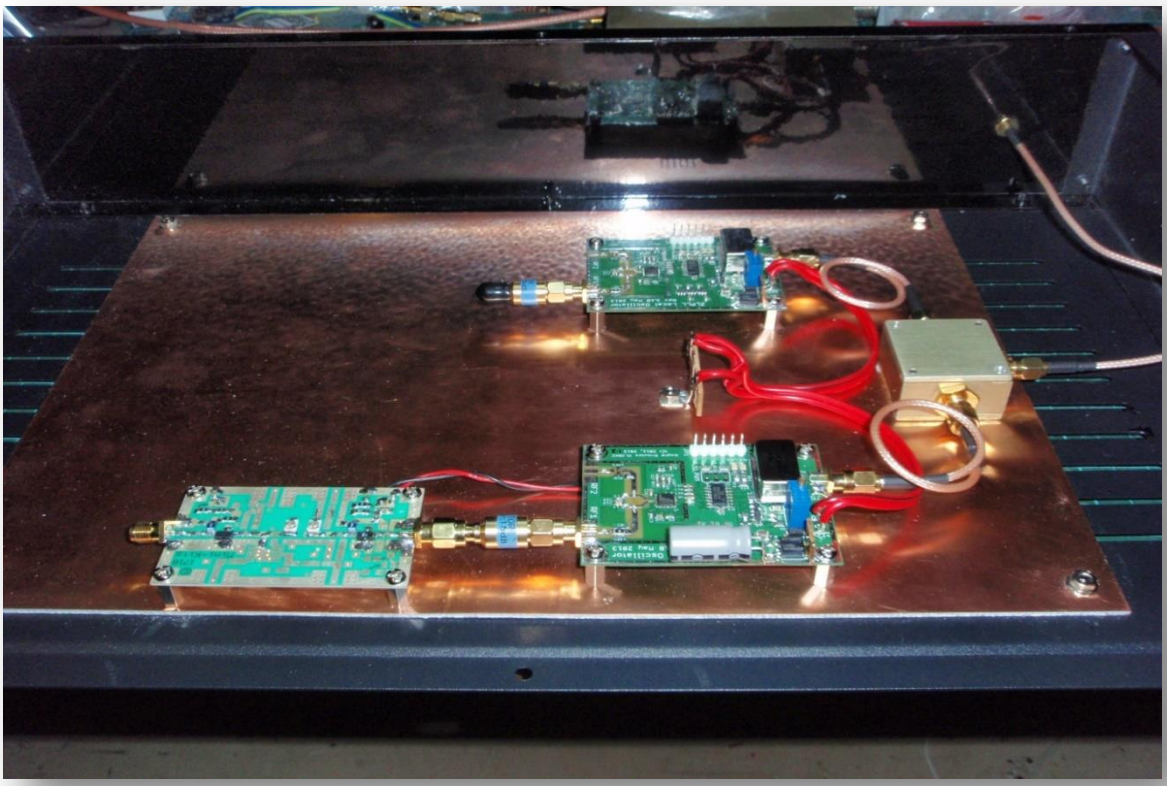
You can see the 10 MHz external input on the left of the board and the fundamental frequency output on the right hand side of the board. You can also program the exciter to “switch” to a second output (components need to be fitted) and alternate between say 2

directional antennas with synchronised ident and differing information on either antenna including direction and output power etc. One last point that sold me on this board was due to the DDS frequency synthesis on the board which would output the desired Fundamental beacon frequency at either 23 or 13 cm's. This meant there was no need to double or triple the exciter frequency to get it up to our 1296 or 2403 MHz. It was already there !

Two units were quickly ordered and delivered to a club member post haste to get the project started. Al, VK3BQO and myself took on the programming of the exciters with Al doing the preliminary work of "learning" the code. A couple of nights nose down in a laptop gave us two working exciters , one on 1296.532 MHz, the other on 2403.532 MHz which idented "VK3RLP", "Power 10 watts" and then a constant carrier for 30 seconds. A small gap and then it would announce the callsign again followed by "Power 7.5 Watts" and another 30 seconds of carrier followed by the same again except "Power 5 Watts" and the same again followed by "Power 2 Watts" all the time reducing the drive level accordingly.

This was to prove too clever during on air testing, as the common consensus amongst the microwave boys was to just maintain a single output level and ident every 1 minute. Oh well, it was a good idea at the time and the feature is still there for future improvements!

As the external 10 MHz reference needed to feed both the 23 and the 13 cm exciter boards a Minicircuits 5 to 200 MHz "splitter" was obtained to split the single 10 MHz output from the GPS reference into 2 10 MHz signals to feed both exciters. This is the small square gold box on the right of the exciters with the 10 MHz reference input in the top right hand corner of the case.



A sheet of PCB material was cut to size and added as a ground plane for the boards to ensure a good earth and the second board connected to the bottom exciter is the driver board for the 23 cm beacon. The small gold SMA fitting with the blue band between the exciter and the driver board is an attenuator as the exciter's output was to great for the input of the driver board.

Testing with an accurate power meter was needed to "match" the power levels from the exciter to the driver board and yes, the power meter is on the 30 milliwatt scale showing an output of 10.5 milliwatts.

More on this in the next instalment of the GGREC Beacon Project.

Cheers and 73,

Rob VK3BRS

General Meeting Minutes 19/06/2015

Start time: 8:05 pm.

Location: Club rooms in Cranbourne VIC

Chairperson: Albert VK3BQO

Minute Taker: David VK3XMF

Present: As per attendance sheet

V**isitors:** Nil

Apologies: As per attendance sheet.

Silent Key - Albert welcomed members and visitors to the meeting, and called for one minute of silence for Susan Coleman VK3UMM who passed away recently after a prolonged illness. She will be missed, but remembered as a member who gave her time to the Club enthusiastically, including as magazine editor and volunteer at many Hamfests in the kitchen. Her bright bubbly and friendly nature will be missed by all.

Correspondence received:

WIA Spectrum management, Breakout mag, WIA reciprocal license review and other correspondence as presented to the Chairperson.

Treasurer's report: As per presented to the Chairperson.

New Callsigns: Tom VK3FAPH

Previous Minutes:

Read: as distributed Moved: VK3L1GH Seconded: VK3FACB Approved: yes

Business arising from the previous minutes:

1. Mid-year dinner - 12 GGREC members and also 12 ALARA members have confirmed their attendance.
2. Fire extinguisher - A new fire extinguisher has been mounted on a wall in the Club rooms.
3. Hamfest - The Club table will be manned by Yarn VK3NOV. All tables have been booked. Our members will be arriving at 7am to set up trestle tables, so help out if you can. Pat VK30Z needs more help in the kitchen; please contact her if you are able to assist. 2:30pm is the proposed finish time as the hall is booked for another function later in the day. Albert thanked Mark VK3PKT for promptly updating the table bookings on the Website.
4. Shack Door opening unit - Shack key fobs work again after the control laptop was replaced thanks to Ian VK3BUF and Paul VK3TGX.
5. Home Brew Competition - Planning is still in progress for the Home Brew Competition to be held later in the year.
6. Secretary position - The committee thanked Bryan VK3FOAB for taking previous minutes even though he has retired from the Secretary position.

General Business -

1. Member News - Albert VK3BQO reported that Jenny Goddard has moved to a Donvale retirement village. Reg VK3UK will join her at a later date. Albert is selling Reg's radio equipment at the Hamfest.
2. Lost and Found - A digital multimeter was found. This was claimed by Ian VK3BUF
3. Exams - Graham VK3BXG reported F calls have passed their exams last weekend. Ian VK3BUF thanked Graeme, Bryan VK3FOAB and Wayne VK3XF for their time. The next exam will be conducted on the 2nd weekend in August.
4. Club Net - This was held last Sunday at 8pm and attended by 8 members.
5. 2m band plan proposal- 145.450 is proposed to be a repeater input freq. Submissions closed on 15 June. The Committee replied with comments that 145.450MHz not be reallocated as a priority.
6. Club HF Field Antenna - Ian VK3BUF reported on a possible multi stage portable pole that could be assembled quickly. He asked that members come to the next Prac. night to offer input into the Club HF Field Antenna design.
7. YAGI Antennas - 70cm/2m dual band 5 element YAGI antennas are available for $60 including freight from Ian VK3BUF at cost. He will order these from China in 10 days time so interested members need to contact him asap.
8. Charging Batteries - Russ VK3MWR reported that care needs to be taken when charging different types of batteries as each have their own particular requirements.
9. Synchrotron Open Day - David VK3XMF reported that the Synchrotron Open Day lecture is advertised for 2-3:30pm on Monday 29 June for those interested.
10. Ian VK3BUF gave a talk about antenna photos that he has taken over the years and invited other members to come forward to present their own photos and talk about their history. He printed various photos from his laptop pc and printer on the night.

Meeting closed: 9:00 pm

Next Committee Meeting: *06/07/2015*

Next Prac. Night: *03/07/2015*

Next General Meeting: *17/07/2015*

Club Information

Meetings 2000hrs on third Friday of the month at the
Cranbourne Guide Grant Street Cranbourne
Prac nights first Friday in the Peter Pavey Clubrooms Cranbourne 1930hrs
Visitors are always welcome to attend

Office bearers

President	Bruno Tonizzo	VK3BFT	Repeater Officer	Albert Hubbard	VK3BQO
Admin Sec	Bryan Simm	VK3FOAB	Web Master	Mark Clohesy	VK3PKT
Treasurer	Graeme Brown	VK3BXG	Magazine Editor	Paul Stubbs	VK3TGX
General 1	Rob Streater	VK3BRS	Property Officer	Bruno Tonizzo	VK3BFT
General 2	Wayne Cooke	VK3XF	Secretary	Vacant	

Call in Frequencies, Beacons and Repeaters

The Club Station VK3BJA operates from the Cranbourne Clubrooms.
6m Repeater Cockatoo VK3RDD In 52.575MHz, Out 53.575MHz CTCSS 91.5Hz
70cm Repeater Cranbourne VK3RLP In 434.475MHz Out 439.475MHz CTCSS 123Hz
VK3RLP Repeater supports Remote Internet access (IRLP), Node 6794.
70cm Repeater Drouin VK3RWD In 433.575MHz Out 438.575Mhz CTCSS 91.5Hz
Simplex VHF - 145.450MHz FM • Simplex UHF - 438.850MHz FM
VK3RLP Beacons 1296.532MHz & 2403.532MHz

Membership Fee Schedule

Pension Member rate $25.00 Extra Family Member $20.00
Standard Member rate $40.00 Junior Member rate$25.00
Fees can be paid by EFT to BSB 633000 - Account 146016746.
• Always identify your EFT payments.
• Membership Fee's Are Due at each April Annual General Meeting.

Magazine Articles to editor@ggrec.org.au or vk3tgx@gmail.com
All other Club correspondence to: secretary@ggrec.org.au
or via Snail Mail : PO Box 1098, Cranbourne 3977
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