

October 2023

INTERFACE

MONTHLY BULLETIN

MARLBOROUGH AMATEUR RADIO CLUB INC. P.O. BOX 432 BLENHEIM NZ

CLUB CALENDAR

General Meeting;.... 12 Oct, 7.30pm, EOC
Social Group; 19 Oct, Dodson St Beer Garden
Committee Meeting; 26 Oct, 7.30pm, via Zoom

HF Net Tuesdays & Saturdays
2030 hrs 3876kHz

VHF - USB Net Wednesdays
1930 hrs 144.150MHz



VHF Mondays 1930 hrs
146.950MHz,
145.600MHz, 147.225MHz

Net Controller;
Rob Carter, ZL2IW

Website: www.zl2ks.org.nz

BRANCH 22 NOTICES

1. Astronomy, Graeme McKay 12 Oct
2. Marl. Lines DMR system construction, Paul R.... 9 Nov
3. Xmas Lunch, Woodbourne Tavern 16 Dec?

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*What they lacked in quantity,
they made up for in quality - and interest!*



**to the 2023 winner of the
Constructors Award**

**Bill Cousins, ZXL2AYZ,
with his chirping bird**

(More details on P5 - 6)



*One of the judges, Gary Lodge, ZL1GA,
congratulates Bill Cousins, ZL2AYZ*

THINK LIKE A PROTON



STAY POSITIVE!

MARLBOROUGH AMATEUR RADIO CLUB GENERAL MEETING
at EOC, 14th September 2023 at 19.30hrs

Present: John Errington (Chair), Don Laing (Secretary), Greg Barton (Treasurer), Bill Cousins, Ron Harris, Grant Simpson, Link Teale, Paul Rennie, Gary Lodge, Rob Carter, Ken Menzies, Anthony Winter, Ian Conway, Don Jamieson, Neville Marr

Apologies: Helen Harris, Gerard Van Antwerpen, Nick Batt, Stuart Watchman, Graham McKay, Ken Hynds

Visitors: Kerstin Mueller

Correspondence: (since Committee Meeting 24/08/23)

Inward	22/08/23	ILLW	Completed entry form
	26/08/23	CARC	Eastfest 2023
	26/08/23	Luca van Rensburg	Amateur radio training & licensing inquiry
	31/08/23	CARC	Eastfest updated catalogue
	01/09/23	RSM	Annual license fees due
	01/09/23	Gerard van Antwerpen	Activation event & VHF Field day
Outward	27/08/23	Luca van Rensburg	Inquiry reply from Gerard van Antwerpen
	28/08/23	Graham Hunter	Membership clarification from Treasurer
	09/08/23	EOC operators	Schedule Oct~Dec 2023
	14/09/23	NZART	Status of Gerard van Antwerpen Examiner application

Responses & distribution of the Inwards as applicable

Finance & Membership:

Membership 58 paid.
Graham Hunter has paid subscription but yet to contact
Two members will shortly be moving away from Blenheim
Accounts (available upon request)
Income Interest
Payments Replacement tuner and Annual Lunch
RSM license fees due in September

Treasurer has prepared a cash flow for this year which indicates an approximate surplus of \$900 excluding further Brayshaw Park costs. Forecast interest income is about \$900 without which membership fees would need to increase 150~200%. Conclusion is that situation is OK but no surplus for major expenses.

Events:

- **04~05 November – Marlborough 150th A & P Show**
EOC CD approached for possible joint display however they are participating with Red Cross.
SAR have requested volunteers to assist them with gate duties. Names to Paul Rennie.
Suggested that SAR share income that they receive.
- **Ward Repeater Field Trip – Request for a Coordinator.**
- **CARC Eastfest – Positive reports from those attending.**
Next to be held in 2024 as Westfest at Murchison by Nelson branch.
- **Wine & Food Festival – await advice from Organisers**

Repeaters & Systems:

Kaikoura - David Rothwell has returned and await his advice

Brayshaw Park - Grant S has procured a replacement ex-lease HP mini-PC which presently set up at home however issue with audio connection to server. A monitor found but yet to source a 12Vdc power supply.

Speaker Schedule

October - Graeme McK - Astronomy **November** - Paul R - Marlborough Lines DMR system construction

SAR / AREC Paul Rennie

Two laptops for SARTRAC installed in EOC truck.

SAREX exercise being held end Sept. Self catering and accommodation. Contact Paul if you wish to participate. Proposed site not accessible by EOC Coms truck however weather contingency alternative is Pine Valley.

GENERAL BUSINESS:

RSM Repeater Licenses - Proposed that the licenses for the 60m Beacon & Kaikoura Digipeater costing \$100 each be cancelled as have not been operational for a long time and no plans to reinstate.

*Motion: The 60m Beacon & Kaikoura Digipeater licenses be cancelled. N. Marr / D. Laing / For: 2 Against: 3/ **Lost***

Estate Radio Equipment & Components - Graeme Dillion & Ken Menzies both have estate radio equipment & parts available. Contact directly if interested.

Meeting closed: 20:05

Next Committee meeting: 26th September (NB Tuesday) by Zoom, 7:30pm

Next General meeting: 12th October 2023 at EOC, 7:30pm

Constructors Award: Presentations by Bill Cousins, Anthony Winter & John Errington
Awarded to Bill Cousins.



Paul Rennie

CONGRATULATIONS to Rob, ZL2IW, who won a longer antenna, suitable for handhelds, at EastFest

MARLBOROUGH AMATEUR RADIO CLUB COMMITTEE MEETING
via Zoom 26th September 2023 at 19:30 hours

Present: John Errington (Chair), Don Laing, Greg Barton, Graeme McKay, Gerard van Antwerpen, Paul Rennie, David Rothwell

Apologies: Nick Batt, Stuart Watchman

Health & Safety: No issues identified

Confirmation of last Committee meeting minutes: Confirmed as correct *Moved JE, Seconded DL, Passed: All*

Matters Arising: None

Correspondence: (since GM MOM 14/09/23)

Inward:

14/09/23	NZART	Confirmation that Examiner T&C's posted to Gerard van Antwerpen
18/09/23	Register of Incorporated Societies	Law changes review update
27/09/23	Kiwibank	Statement

Outward:

15/09/23	MARC	Members Request for A&P show 4~5/11/23 volunteers
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Matters Arising: Gerard confirmed receipt of NZART mail

Finance: (In Committee)

Treasurer presented his report

Membership 58 paid, 1 unpaid
2 members will soon be transferring away

Income: Interest & Subscription

Payments: Remote antenna tuner replacement
Annual lunch expenses

Upcoming Payments: Repeater licenses
Replacement batteries
Kaikoura repeater installation

Motion: The Accounts be accepted and the payments approved

Moved: GB / Seconded: JE / Passed: All

Motion: The Committee recommends that the RSM repeater licenses for the 60m Beacon and the Kaikoura Digipeater be cancelled at the next renewal (Sept. 2024) unless a member proposes a definite plan to proceed which is accepted.

Moved: GB / Seconded: JE / Passed: All

Events:

VHF/UHF Field Day 2~3 Dec 23; Await response to Interface notice

Weld Cone; Farmer presently OK for visit on 3rd or 10th December 2023

Proposed that a Club picnic be held at Ward Domain using the hall and car share to repeater site.

Repeaters & Systems:

Kaikoura - No response to messages left with Dolphin Encounters re replacement of existing pole

To check original cabinet for possible door replacement.

Intent to have independent MARC cabinet & facilities with mast & aerials attached to cabinet

PR

DR

Weld Cone - Repeater hut needs measuring for replacement of corroded steel members.

PR

Brayshaw Park - Grant S still working on system with purchased replacement PC.

GvA

GvA to assist as required when GvA returns

Speaker Schedule:

October Graeme McK - Astronomy

November Paul R – Marlborough Lines DMR system construction

AREC:

PR

- **EOC Replacement Tuner** - Tuner delivered and installed however not operating to specifications.

Temporarily replaced by Stuart W's LDG tuner while defect investigated.

- **Generator fuel containers & Yagi aerial bag** - 20L fuel container purchased and Yagi being manufactured

- **Starlink setup demonstration** at EOC next Thursday evening 28/09/23

- **SAREX exercise next weekend 30/09~01/10/23**

- **A & P Show** - Four persons have volunteered to assist with each of the am & pm shifts 4th & 5th Nov. and SAR advised accordingly. Await SAR response prior to submitting funding request.

GENERAL BUSINESS:

➤ **NZART Draft Constitution** - Don L advised that comments need to be submitted to NZART by 30/09/23.

Query as to NZART issue of Branch Constitution template

DL

➤ **Recording of Branch Presentations.** Query made during VHF Net discussed. Slide shows & similar can easily be uploaded to club website but attempts to record live presentations during the Covid restrictions were found to be difficult with poor sound using the equipment available. Also concern regarding personal images being uploaded to the internet for perpetuity.

Meeting Closed: 20:25

Next General Meeting: 12th October 2023. D Laing advised apology

Next Committee Meeting: 26th October 2023 (via Zoom)

*Radios & antenna analyser available for members to borrow if required.
Contact marcbranch22@gmail.com
or a committee member for details.*

VHF/UHF Field Day Contest

All bands 6m and up. First Saturday in December, and the following day.

Operating periods are 5 pm to 11 pm on the Saturday, and 7 am to 1 pm on the Sunday, NZ local time.

Is there any interest in the club to participate in the above contest? We've done this at least once many years ago, but it has dropped off the activities list. If anyone is interested, please reply to me and we'll see if it's viable.

- Gerard, ZL2GVA, GerardA@cudon.co.nz



Coordinator Volunteer needed for Weld Repeater Site Field Visit.

If you can help, please contact Don marcbranch22@gmail.com



ACTIVATION DAY

To get some practical radio fun going I thought about organising an 'Activity Day', sometime in November/December. The initial idea was to set up somewhere in a park or so and make some HF contacts. A better alternative could be to not just have 1 location, but people go out to where ever they like and set up for a few hours of radio fun. Or stay at home if that suits you better, and operate from your back (or front) garden, or use your home station.

This is all very much like the New Year's Activation Day that has been on for a couple of years now on January 1st, and we could consider our event just a practice run for this!

Having people spread out will at least give a good chance of making some contacts, and it also avoids only a few people using the radio and others just standing around. Of course we could have a central location to all come back to afterwards and perhaps have a BBQ if there's interest in that.

For those that are not sure how to set up, or don't have gear that's portable, I suggest a buddy system. Go out there and work it out together, you may either learn something, or be able to teach someone else. It will also be easier to fend off awkward questions from passers by!

I think 80/40m HF will be good to use, but we should also consider VHF/UHF. Bring out that handheld and see how far you get without using a repeater. Hook it up to an external antenna and see the difference.

Let me know, via email, if you are interested.

- Gerard, ZL2GVA, GerardA@cudon.co.nz

Congratulations! again!

Bill Cousins sent the information in the last Interface about Gerard coming 2nd in the Sangster Shield Contest.

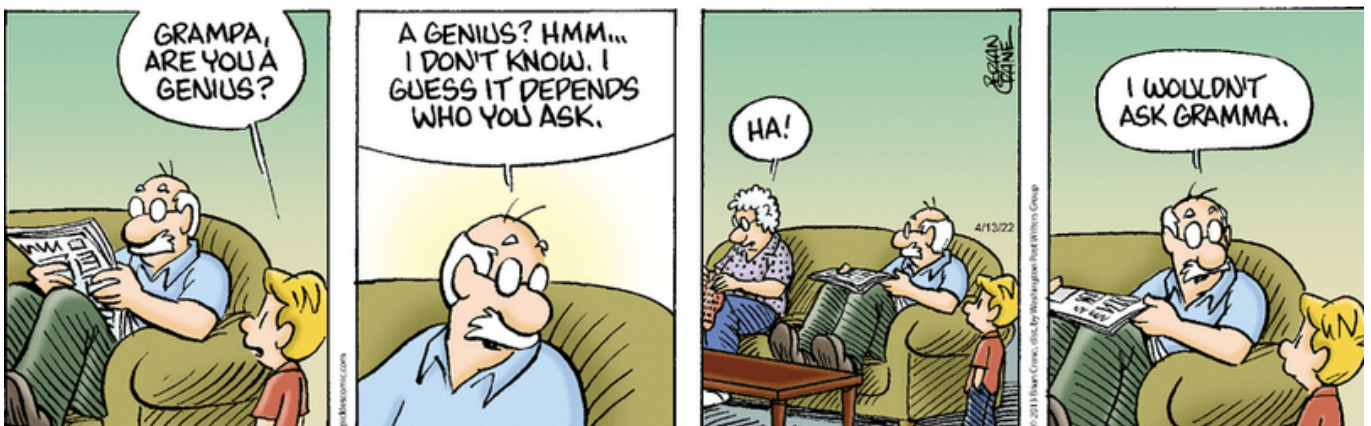
What he failed to mention is that, under the callsign ZL3VZ, Bill was the overall winner, for the second year in a row, of the Memorial Contest!

Well done Greg, ZL2GBX, who managed to get the best deal in the EastFest auction with his absentee bid. He got a new Anytone Digital DMR including extra Bluetooth headset.



Caption: How to raise a 160m vertical.

One wag in the email group responded ...
"and cheap too, bet it only cost peanuts. Just make sure the area is well cleared of field mice first"



CONSTRUCTORS AWARD 2023 (thanks to Don & Grant for the photos)

Entries were well down on last year's 8 participants, with only 3 members presenting their projects. Gary Lodge, ZL1GA and Rob Carter, ZL2IW, were the judges.

Bill Cousin's winning entry was a songbird (as seen on the front page) - a printed circuit board project in the shape of a bird, which tweeted.

It was a Silicon Chip magazine project intended for introducing children to electronic assembly and soldering techniques. Bill bought the kit of components for his 10 year old grandson, Alton, to have a go at in the school holidays (under his guidance) to get him off the other technology for a couple of hours! He did most of it but it was finished off by his 14 year-old sister, Jessica. It worked first time! Their soldering was excellent.

Bill says he is highly embarrassed to win the award because, as he said on the night, he really offered it as a novelty item, not a serious entry. His grandchildren did all the work - Bill only oversaw it.

Never mind, the kids were chuffed to hear it had won. Perhaps it will hook them onto electronics, the idea behind the Silicon Chip project in the first place, leading them into amateur radio in the future.

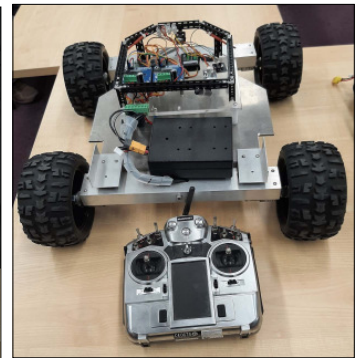
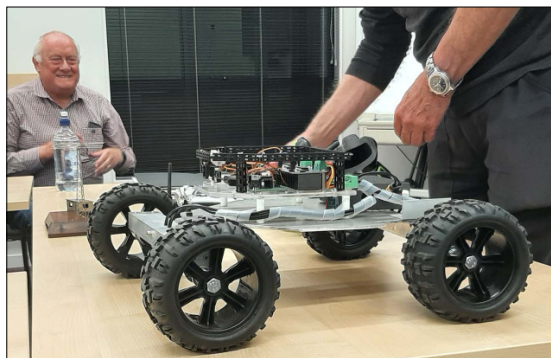


Anthony's entry was a four-wheel-drive radio-controlled vehicle, which he called 'Rover'. He built it to check out whether tracks or wheels were better for getting across rough ground, and to carry a camera for remote inspection, such as checking the floor insulation under the house.

The radio control system operates at 2.4GHz, and the video at 5.8GHz. Power is from four LiPo cells salvaged from Dyson vacuum cleaner power packs.

The chassis is made from aluminium, but the upper bits are made with 'Totem' beams and joiners (see <https://totemaker.net/> and <https://totemaker.net/product/beams-20-pack/> for more details).

It has the obligatory Arduino on board, currently programmed to convert R/C servo pulses to motor-control commands.



Details of John Errington's entry are on the next page so all his information and the accompanying photos and diagram stayed together for ease of comprehension, rather than be split between two pages.

We need YOU! Coordinator Volunteer needed for Weld Repeater Site Field Visit. **VOLUNTEER Needed!** If you can help, please contact Don marcbranch22@gmail.com

**LET'S EAT KIDS.
LET'S EAT, KIDS.
PUNCTUATION
SAVES LIVES!**

There are two sides to every...

never mind

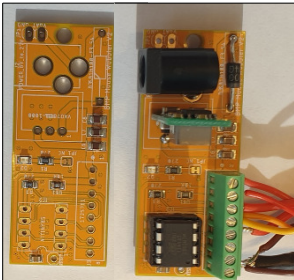
**NOW I AM
UNSTOPPABLE**

John Errington's entry was a servo controller board.

Small servo motors are available cheaply from many suppliers including Adafruit and Pololu. They are used in robotics and are useful anytime you want to operate a mechanical device remotely.

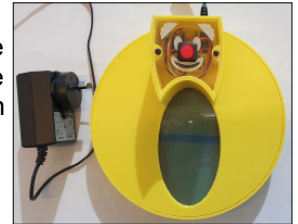
You can see many more details here: <https://learn.adafruit.com/adafruit-arduino-lesson-14-servo-motors?view=all>
 He has included the circuit diagram of his controller. If anyone is interested, he is happy to supply the board layout and software details.

The board features a broad range power supply. He has a lot of "wall warts" stored away when other electronic equipment failed or was replaced. These produce a random range of DC voltages. The power supply was designed to accommodate as many different options as possible. It is also protected from reverse polarity. The servo is controlled by an ATTINY85. It can be controlled by a button, via a serial port, or by a rotary knob (by reassigning pins connected to J3).

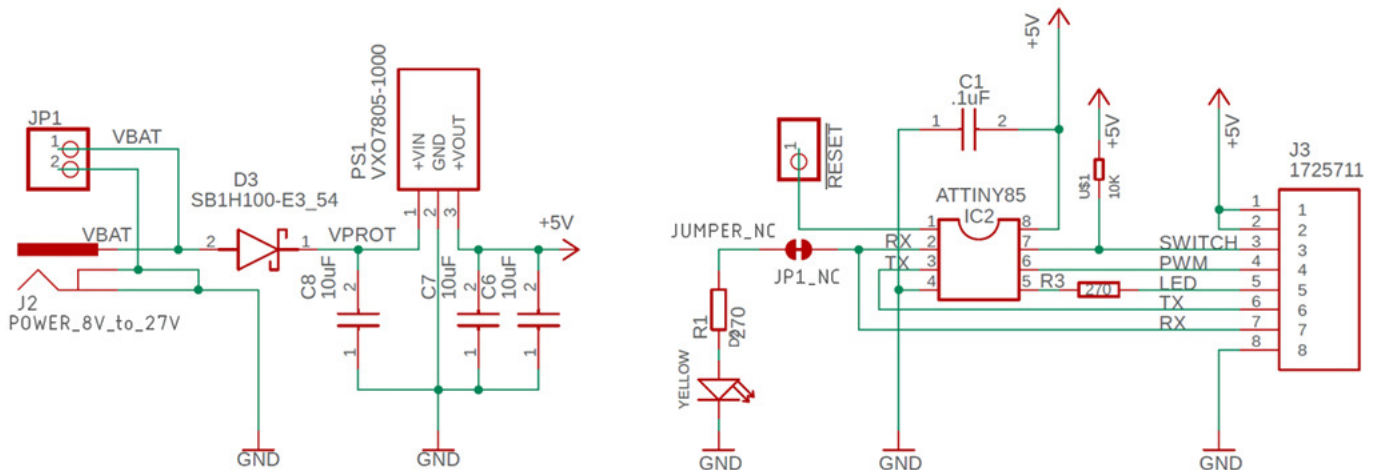


The project provides an interesting illustration of the process of getting a board made in China. He had the boards made by Seeed and had them place all the SMD components. In the photograph you can see the board as received. You can also see the assembled board after the through hole components have been placed.

As a bit of a joke, he used the controller to make a "mouse wobbler". This will move your mouse randomly while you are away from your desk. The end result is shown in this photograph on the right.



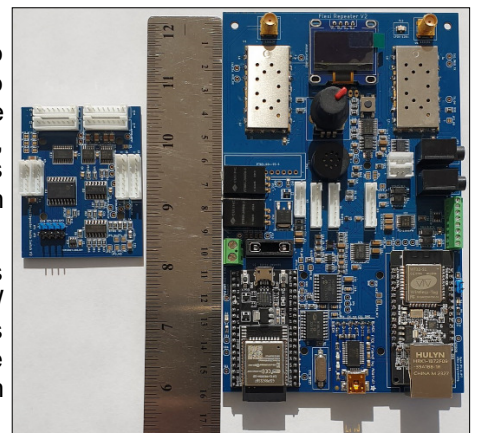
<http://projectsfromtech.blogspot.com/2013/06/serial-communication-on-attiny85-with.html>
 See also : <http://www.technoblogy.com/show?ZU7>



With only 3 entries, he also demonstrated his "Flexi Repeater". This was not a formal entry, as it has yet to be commissioned.

The Flexi Repeater consists of a receiver module, transmitter, repeater controller, internet "transceiver", DTMF encoder/decoder, screen, keyboard (sort of), speaker and power supply, all on a 100 by 160mm PCB. It is designed so multiple units can be linked together directly or via a CAN bus style bus. This version is a VHF analogue version, but 70cm and DMR are also possible.

You can also see in the picture a small board. This is a many to one audio mixer that allows the controller to route audio from any of the audio sources to one of the outputs, under software control. For example, the outgoing transmitter can be supplied with audio mixed from the receiver, internet input, the DTMF generator, or an off-board source. Multiple mixers can be used. A separate mixer could mix what is heard on the built in speaker, or maybe send traffic to the DTMF decoder.



This unit produces a nominal 2W. Separately he is building a linear amplifier that will give a nominal 25W output from a similar sized board. The amplifier is controlled by a dedicated controller that monitors the amplifier temperature and SWR and links to the main repeater controller.

He invites anyone who is interested to let him know of their interest in the project. He plans to make all of this available in an "open source" manner as soon as he has commissioned and tested all the pieces.

We need a **VOLUNTEER**

Coordinator Volunteer needed for Weld Repeater Site Field Visit.

If you can help, please contact Don marcbranch22@gmail.com