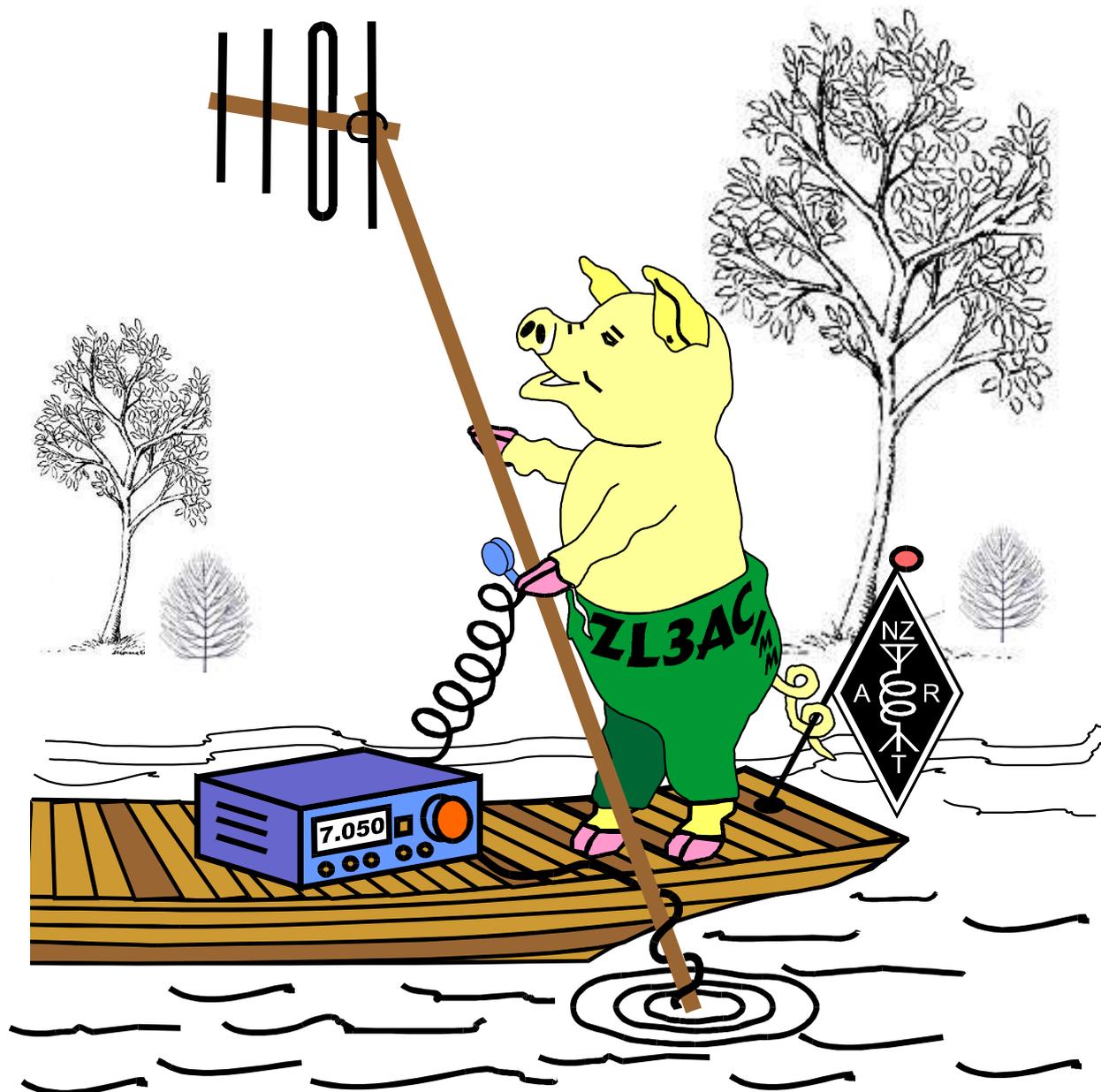


HAMLARKS

Christchurch Amateur Radio Club



September 2016

Branch 05 Club re-occurring events

MAIN BRANCH MEETING First Wednesday of the month 7.30pm, except January. *All visitors welcome.* At 5 Idris Road, Fendalton.

Branch 05 Website www.chchhamradio.org.nz

ACTIVITIES and STUDY NIGHT Every Tuesday 7:30pm at 5 Idris Road, Fendalton.
All visitors welcome.

DAYTIME MEETING (Branch05)

Meet third Thursday of month, 1PM at Branch05 clubrooms.

All visitors welcome.

COMMITTEE MEETING 1st Monday after branch meeting 7.30pm

At 5 Idris Road, Fendalton

AREC MEETINGS Normally the 2nd Wednesday of the month 7.30pm. At 5 Idris Road, Fendalton

DEADLINE FOR HAMLARKS COPY 11 days before the main branch meeting.

WEEKLY CLUB VHF NET Every Sunday 8:00 PM on 145.625MHz repeater if available, otherwise 147.050MHz repeater.

OFFICIAL NZART BROADCAST Last Sunday of the month 8:00 PM on 147.050MHz repeater.

CW PRACTICE

Boyd ZL3LE every Tuesday at 8pm. 3550 kHz. Listen in your shack or come along to Branch 05 clubrooms.

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Programme for next branch meeting

The September meeting will be "entertained" by another of ZL3KB's photo quizzes. For the best score, prizes will be awarded, and not all will come from the junk table!

Secretary Rory's Ramblings - ZL3HB

At long last it's underway. Garage slab poured. Now await the kitset to be delivered & erected. In a few weeks we might actually have a house for the monsters!!

Quite a hole was dug. 1m down & 100 tonnes of fill put in with layers of cloth & mesh between.

Quite an undertaking. The best bit was the old sewer pipes we dug up weren't the ones being used as had obviously been redone since the quakes and all was still functioning. So that has saved a dollar or two!!

Next step is a working bee to clear up around the foundation and spread out



some of the soil and to get the fence up ready for planting & landscaping.

And today we had another RadioTek day with 12 happy campers. Wiggly wires, AM radios, some with amps and a new venture with computer programmable rover bot. One lass was quite up with the play teaching us how to programme!! She'll go far!

On the RadioTek subject I'm thinking we could do with more helpers. We have been going for around 6 years now with mostly the same team. The original idea was to have a couple of helper teams so the same ones don't have to do it each time. With the club membership growing from around 65 at Galbraith Ave to around 145 now maybe we can get a few more of you to assist us. So if you are able to spare a couple of Sundays a year we would love to hear from you please. A very rewarding day to see them going away with working radios.

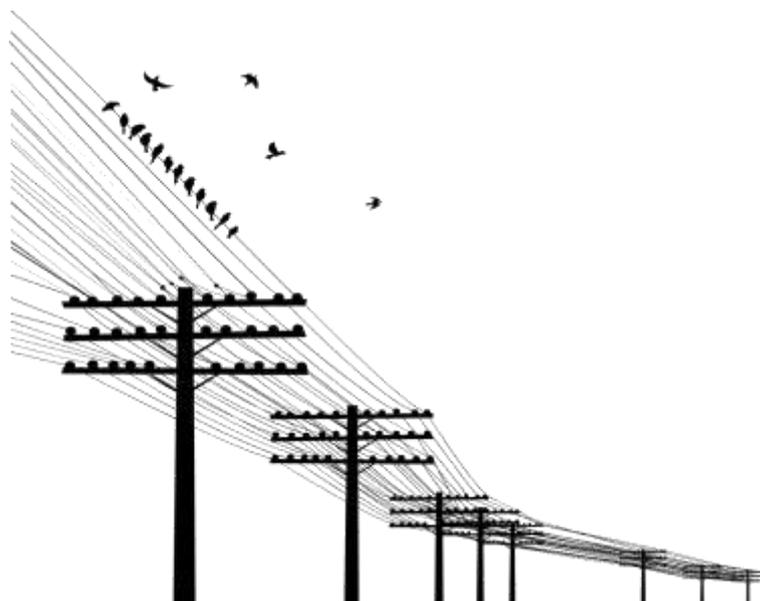
We also have speakers booked up until February which is great – although next month is something a bit different.

See you there.

Rory ZL3HB

LINE TUNING Ross ZL3TFK**“How I Learned to Love the Return Loss Bridge”**

In 1961, fresh from High School at age 18 years, I joined the NZPO Regional Engineer's Branch in Christchurch. For two years, I was attached to different Engineering Offices, and then sent out for six months' familiarization and training in PABX installation and maintenance. Following this, it was six months in Suburban Exchanges, then six months in the Carrier Room (now known as the Transmission Centre). I took readily to this wired wireless stuff (all SSB). We were short of experienced staff, so I was soon acting two grades higher and in sole charge on the night shifts, and stayed much longer than I was supposed to.



This was the period where maximum use was being made of physical pole/toll lines, by using carrier systems. There were 3-channel systems (8-32 kHz), normal frequency 12-channel systems (32-150 kHz), and high frequency 12-channel systems (150-300 kHz). For example, we had a rolling quad from

Christchurch to Waipara, on through the Weka Pass and up to Hanmer, a distance of 140 km. This carried two physical circuits (the side circuits), a phantom circuit derived from the side circuits by transformers, a 3-channel STOC carrier system, and a teleprinter working on the tail of the phantom to ground. This rolling quad therefore carried 6 speech circuits and the teleprinter. Not bad for four 140km long wires!

Now it happened that our Head Office in Wellington instructed us to put a further (normal frequency) 12-channel carrier system in, from Christchurch to Greymouth. There was a rolling quad from Chch to Arthurs Pass, known as 61-64 West, which already had the CH-GM SOJ-B

system on it. This had pilot regulated repeaters at Arthurs Pass and Otira. It also carried the National Programme (50-7000 Hz) from CH to GM, with the reverse direction carrying an off-air back-up reception of 2YA from somewhere near Westport. In bad snow weather, the lines near Arthurs Pass would build up with snow to a diameter about 70mm, and then the system would slowly lose regulation and fail. We were therefore to put in an additional repeater at Darfield.

The new system was to go on a flat transpose pair known as 67-68 West, repeaters the same as above, at Darfield, Arthurs Pass, and Otira.

Transmit levels of the new system were carefully set to match the old system. The new equipment was duly installed and commissioned, and put into service, except for channels 4 and 5. These channels experienced gross cross-talk from the broadcast channel on the SOJ-B above. By selective measurements, we determined the crosstalk was in the Darfield-Christchurch line section, but try as we could, we could not eliminate the cross-talk. Head Office decreed that one channel must be permanently abandoned, whilst the other could be used as an order-wire to call Greymouth Transmission.

About a year later, I noted that our six physical line terminating racks were not in any order. East, West, North and South physical lines were all mixed up and spread out over six racks without any seeming logic. Being a bit idle on the night shift, I asked our Supervising Technician (Noel, the Boss) if I might tidy this lot up, into one rack for each direction. (For those wondering, our east physical lines went to Little River, Davauchelle, and Akaroa). This was not the first strange request "for improvements" that he had had from me and I don't know how he tolerated such- he was certainly a kindly man. I was told to go ahead, but only as time permitted.

When working on the old wiring in the West line rack, I found some disconnected pairs leading to two E-1 loading (matching) panels labelled 61-64 West. They were not connected up to the lead-in cable from the street. We were four levels above footpath, and so the length of lead-in cable (140 ohm quad) from the pole-head, down the pole, along the footpath, into and up the building to the line jacks, was quite long. The

insulation was some stuff called “cotopa”. The loading units allowed tuning out of the cable capacitance. The best account I could get of this disconnection, was that Head Office had decreed that the E-1 loading units should be taken out of their previous place following the line jacks, and be put instead between the line jacks and the quad/cotopa lead-in cable, and they had not been reinstated.

The next move was to request the Return Loss Bridge from HO, Wellington (only one bridge in NZ, held in the Wellington Test Lab). The bridge was duly applied to 61-62 West, and also the other pair 63-64 West, and the Return Loss at 150 kHz was found to be 7 dB! The E-1 loading units were then connected in, and adjusted for best return loss, getting about 33 dB.

Head Office’s minimum requirement was 27 dB.

When the 12-channel SOJ-B system was let back into traffic, the crosstalk interference to channels 4 and 5 of the new system had vanished. The channels went into use, to earn many times my salary! –
Ross, ZL3TFK

\$\$ Hamads \$\$

Get your Aerial up Higher...- 3 poles available. 60 mm square at base x 40 mm square at top, 9 m long. Collect from Somerfield. Would suit end support for simple wire aerial, or centre support for vertical incidence delta. Donation to Br. 05. Contact Ross, ZL3TFK at weir.rd@xtra.co.nz.

Motors Available: I have a range of used, ex-equipment electric motors for disposal. No charge but a donation to the club would be welcomed, 230V Motors include 1/4 HP motor, 1/10 HP High-speed (2000 rpm) motor.

Range of smaller motors; ex- fan etc.

Range of low-voltage DC motors 3 - 24 VDC, various sizes.

Contact John ZL3IB. Ph 03-3489084 john.zl3ib@ihug.co.nz



First – some history:

From NZART notes of Radio and Electrical Review of May, 1955,
“The Christchurch Branch class for Hams has proved most popular, being packed to capacity. The success of ZL3RZ’s teaching is demonstrated by eleven passes from the last twelve examination candidates, and we hope the balance of the present class will be ready to repeat this splendid performance in the September examination”.

So the tradition of Branch 05 successful examination passes continues....

HamCram August 2016

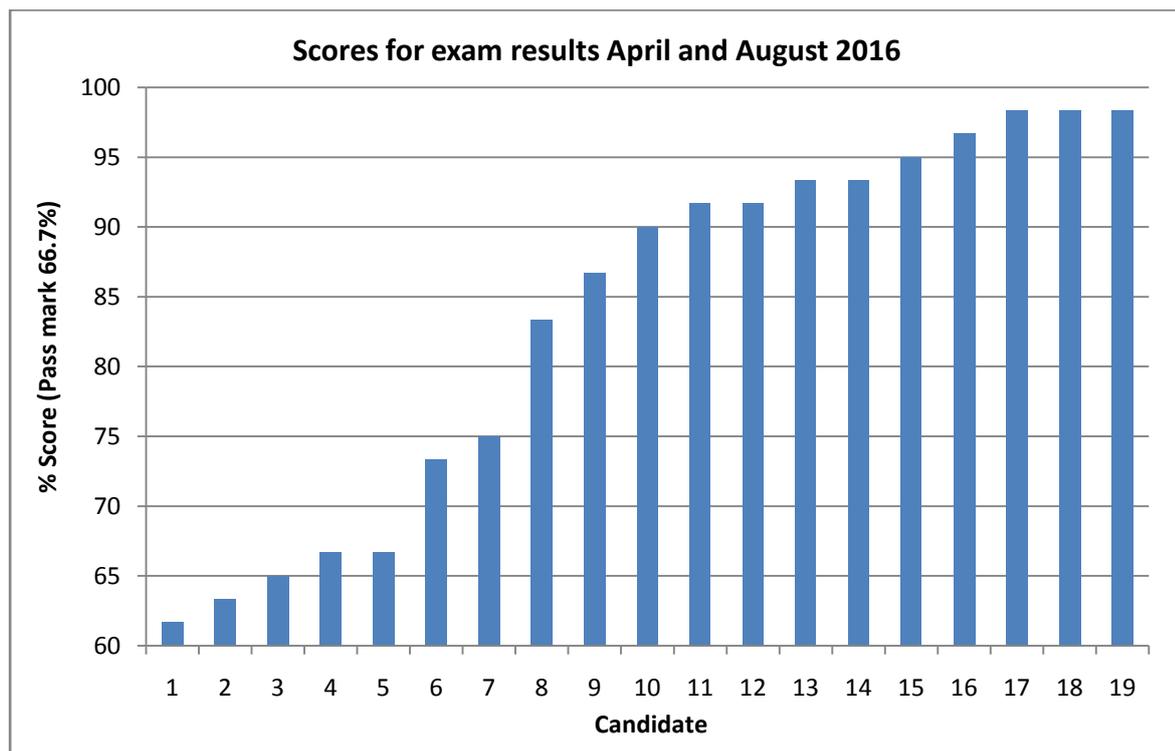
Our second HamCram event of 2016 was held at our clubrooms on 14th August. The event was booked out at an early date, and in the end we had eleven students turn up to take the course, the youngest being seventeen. Some of the victims can be seen in the photo below, obviously taken after the exam.



After the last HamCram event, we analysed our results and the feedback from the tutors and students, and this resulted in minor changes being made to the course content and teaching program sequence. The experiences from the last event also showed we needed to share the load and split the tasks over more teams, so this time we had a separate examination team handling all the exam printing and official paperwork tasks. When the teachers are finished (literally), the examiners move in! The preparation, bookings, housekeeping and form filling on the day was handled by Rory ZL3HB and Ian ZL3TAO, while in the teaching squad we had Richard ZL4FZ, Dave ZL3FJ, Don ZL3DMC, Mike ZL3MWD, Aidan ZL3APB and Kelvin ZL3KB. The examination team consisted of Des ZL3AK, Rob ZL3RX and Ross ZL3TFK. As you can see, this is a formidable group of volunteers, and shows the commitment given by the club members. In fact, we had many comments from the HamCram students saying how they were impressed with the club dedication.

The weekend turned out to be terrible weather on the Saturday with constant rain, so no one minded being stuck in doors all day. At the end of the examinations we had ten passes out of the eleven, and the eleventh is coming back to the club on a regular basis to ensure he finally “nails it”.

The next HamCram will be in December, almost all places are booked already, so we must be doing something right.



RadioTek August 2016 ZL3KB

Another RadioTek completed today, twelve students going home with working projects. Four being first timers had built a steady hand game and AM tuner, whilst the other build speaker amplifiers, line following mouse and other projects. This event saw the first of the mechatronics program, where two students built and programmed a roving robot, using the Picaxe microcontroller and software. As it turned out, one of



the students had “done something like this before” and ended up teaching me a new way of programming! All good, and I got to learn something new.

Many thanks to the Branch05's RadioTek team again, namely, Rory ZL3HB, Brian ZL2BAT, Graeme ZL3GSL, Rod ZL3NW, Ross ZL3TFK, Mike ZL3MWD, Ken ZL3EC, Ian ZL3TAO and Kelvin ZL3KB.

We are now recruiting new “first timers” for next RadioTek, which is scheduled

in November 2016. If you want to help us spread the word, the booking contact details are Rory Deans 03 344 6292 or rory1@xtra.co.nz with our website at <http://www.radiotek.org.nz>



Minutes of the Branch 05 meeting

Christchurch Amateur Radio club meeting 3rd August 2016

Apologies ZL3TFM. Moved to accept by Ian ZL3TAO. Carried.

Minutes of July meeting moved to accept by Rory ZL3HB, seconded Rob ZL3RX. Carried.

Correspondence Q-bit, Ragchew, Lion audit, CARDS thanks email.

Reports AREC All quiet

2 x SAR events coming up

LandSARSARtrack meeting at clubrooms on 31st August

Repeaters 725 still dead

705 locked up for a few hours this AM.

D-star on line as local repeater in a few days.

DMR operating OK

QSL Bureau No new cards in

Tuesday night 2 passed exam last week

Band report HF poor

Rod ZL3NW reported 160m poor to Europe but open to Sth America

Some 6m activity, 2m OK into Napier & EME to Europe

Some 10 beacons coming in from USA

General Business Mike ZL3TMB has dropped off some 900MHz antennas

Garage progressing with hole dug

Bank investments –David ZL3DO moved ‘that investments 2019 & 2020 be re-invested for one year with interest compounding on maturity’ seconded Gareth ZL3VP. Carried.

WARO have bought a pull up banner from the club.

Mid winter dinner – cancelled Papanui club. Not much enthusiasm so committee will consider.

Blair ZL3TOY will have D-star operating in local mode in a few days.

Meeting closed at 7.45 PM.

Michael Wise ZL3AX then gave a very interesting talk on Clandestine radios of WWII.

Christchurch Amateur Radio ClubCommittee for 2016 email: rory1@xtra.co.nz

		<u>Ph home</u>	<u>Ph work</u>	<u>Cell phone</u>	
President:	Ian MacPherson	ZL3TAO	3518485		021 048 0298
		17 O'Neill Ave Northwood Chch			
		Email: ian@macpherson.gen.nz			
V/President:	David Holland	ZL2IC	960 0833	9644686	021 2220849
		7 Parklands Dr, Huntsbury			
		Email: holland.d@clear.net.nz			
Secretary:	Rory Deans	ZL3HB	3446292		0211314599
		29 Seymour St, Hornby, Chch 8042			
		Email: rory1@xtra.co.nz			
Treasurer:	Richard Prattley	ZL3UE	325 2685		027 226 2205
		42 Ryelands Dr, Lincoln,			
		Email: zl3ue@snap.net.nz			
Committee:	Rob Thirkettle	ZL3RX	348 3815	3642510	
		622 Old West Coast Rd, RD1, Christchurch			
		Email: rob.thirkettle@canterbury.ac.nz			
	Brian Ramage	ZL2BAT	385 4428		027 630 6706
		28 Wilmington Place, Fairway Park, Christchurch 8061			
		Email: ramz@ihug.co.nz			
	Mike Barnes	ZL3TMB	03 3133321		021 679 479
		P O Box 218, Christchurch, 8140			
		Email: mike@barnes.net.nz			
	Trevor Wignall	ZL3ADZ	3388953	963 9241	021 057 6279
		32 Worsleys Rd, Cracroft, 8025			
		Email: zl3adz@xtra.co.nz			
	David O'Malley	ZL3DO	3594117		027 6581350
		72 Crofton Rd, Harewood, Chch 8051			
		email: david.b.omalley@gmail.com			
	Mark Atherton	ZL3JVX	3376632		021 0324446
		116B St Martins Rd Chch 8022			
		Email: markaren1@xtra.co.nz			
	Aidan Bamsdale	ZL3APB	3238377		
		18 Rushmore Dr, Belfast 8051			
		Email: ZL3APB@xtra.co.nz			
AREC	Richard Smart	ZL4FZ	385 8355	3728603	021 443 086
		Email: rsmart@netaccess.co.nz			0275085718
Repeater Trustees:	Rob Thirkettle	ZL3RX	3483815	Gareth Bradshaw	ZL3VP 3322406
				Mike Barnes	ZL3TMB 03 3133321
Auditor:	Community auditors/reviewers				
Hamlarks:	Kelvin Bamsdale	ZL3KB	Hm3238377	Cell 021 02904020	Email: kb.ew@xtra.co.nz

Clubrooms 5 Idris Rd, Fendalton Mail to PO Box 1733 Christchurch

From P.O.Box 1733,
Christchurch,
New Zealand