



Western Suburbs Radio Club Inc.

September 2013 Newsletter

ZL1AC, Branch 03 NZART 3000 Great North Road New Lynn,
 PO Box 15-122 New Lynn WAITAKERE 0640
 President: Ian Sangster ZL1RCA, Vice President – Grant Manning ZL1GSM.
 Secretary: Roy Milam ZL1WI. Newsletter Editor – John Neill ZL1NE
 VHF Club Net Wednesday 07:30pm 146.525 MHz,
 HF Club Net Fridays 07:30pm 3.650 MHz
 Website <http://www.qsl.net/zl1ac>

Club Calendar

Saturday	28 th	September	Committee Meeting – combined with main meeting.
Saturday	28 th	September	Club Meeting 9:00 am Working Bee in preparation for the main working bee in November. We will have a rag chew and run a video if it rains.
Saturday	19 th	October	Committee Meeting – 9:00am
Saturday	19 th	October	Club Meeting 10:00 am – Subject to be confirmed
Tuesday	29 th	October	AREC Section Meeting at 7:00 pm – All club member welcome to attend.
Saturday	2 nd	November	Used Equipment Sale
Saturday	23 rd	November	Committee Meeting – 8:00 am Working Bee
Saturday	23 rd	November	Club Meeting 9:00 am – Working Bee at the Club – Proposal is to paint the outside of the Clubrooms.
Saturday	30 th	November	Working Bee Rain Day
Wednesday	18 th	December	End of Year Dinner at the New Lynn RSA

September Meeting

This meeting is on the 28th September **not** the 21st as was in the last few newsletters. (Sorry – it is so hard to get good staff.)

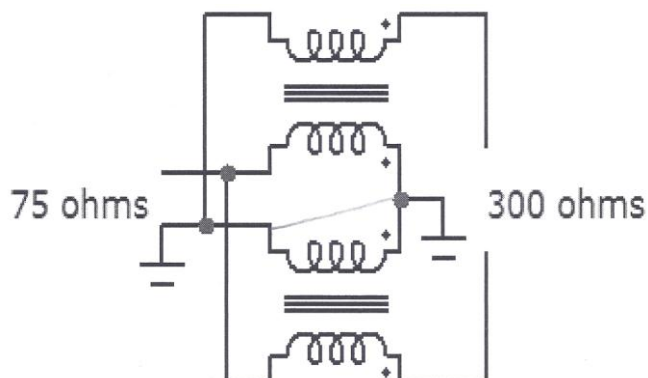
The meeting will be a working bee. This will be a preliminary working bee to the main working bee that will take place in November when we intend painting the club rooms. At this first working bee we need to wash the outside of the building, spray with something to kill the green stuff that is starting to grow on the outside, repair the hole in the front wall and trim some trees that are getting too large and are encroaching onto the building. Any assistance you can give will be appreciated.

If it rains we will run a video and have a chat instead.

August Meeting

The August meeting was a show and tell and we had some very interesting talks.

Eric ZL1ERI spoke on installing TV antenna systems and some tips on getting a good functioning system such as a U-bend in the coaxial cable to stop water tracking down the cable and into the house and the importance of getting the waterproofing correct. He left us a balun circuit to ponder which is reproduced below.



The circuit diagram of the balun that Eric demonstrated.

There is a connection that appears to short out one of the transformer coils.

Barry ZL1ACZ bought in a well-constructed home brew receiver which he is trying to get going. It appeared that all was there but that the power supply may be giving problems.

John ZLINE spoke on scanning old black and white photographs using the software controlled scan facilities on the modern printer/scanner/faxes that many of us have attached to our computers and then manipulating the results using a photo-editing programme to get a positive photograph out. The PowerPoint presentation can be found at http://www.qsl.net/z1ac/newsletter_files/Making Copies of Negatives.pdf



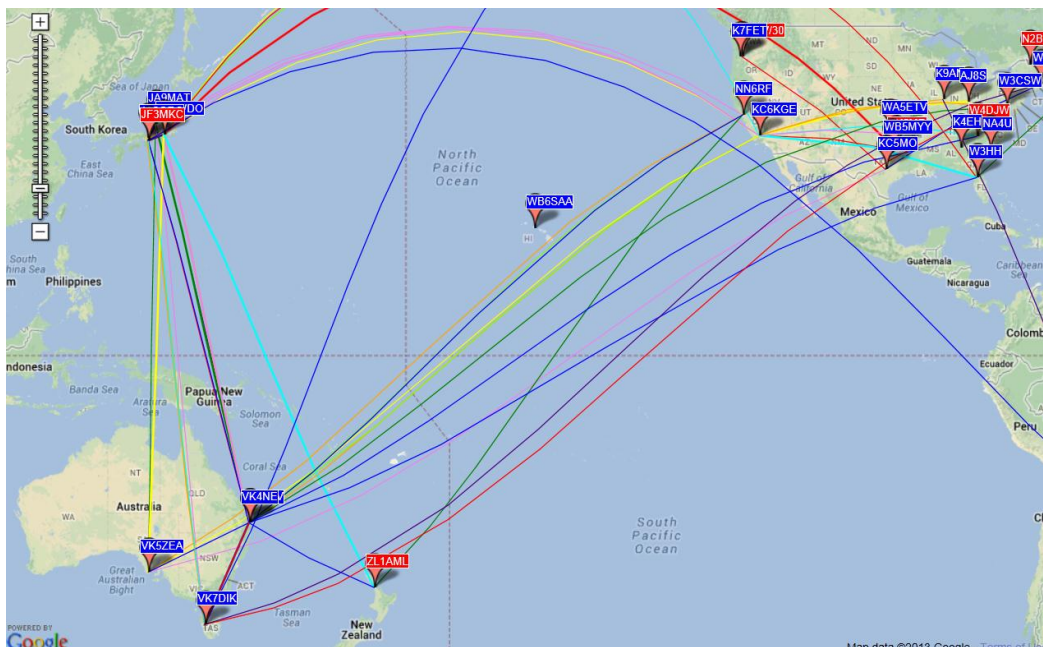
The negative straight from the scanner.



After Photoshop but the photo is still needing to be cleaned up a lot.

An alternative program to Photoshop was mentioned during the meeting is called GIMP (GNU Image Manipulation Program). Details of this programme can be found at <http://www.gimp.org/> . There may be a charge for this and to download. Eric has copies of some of this software so bring a memory stick with you to a future club meeting if you would like some of it. Thank you Eric for finding this web site and making some of the software available.

Alan ZL1AML talked about and demonstrated the WSPR system. This is a collection of low power digital transmitters on all the HF bands and all stations are listening for each other. The contacts are collated by a computer programme and the results are continuously updated and posted on a website. This is an extremely useful system to work out what DX stations may be open to your QTH. The website for the WSPR system is www.wsprnet.org



Screen dump from the website map.

Following the talks Grant produced a video of the antenna farm at the Voice of America (VOA) antenna site in Bethany Ohio, USA. Sadly this antenna site has closed, as are most of the international short wave radio stations, due to much easier transmitting of programmes via the internet.



The original antennas now removed.



The VOA transmitter building.



The Antenna switching Matrix.

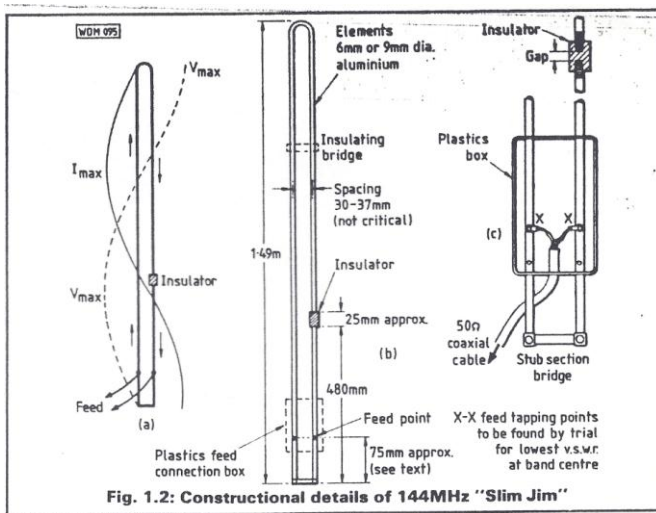
Brain Teaser?

You want to talk to someone via radio to someone on Falkland Islands where would you point the aerial East, West or would it be better South over the South Pole?

Could the answer be in here <http://www.levin.rutgers.edu/research/geography-paper.pdf> just transpose Mecca for your receiving station in Falkland Islands.

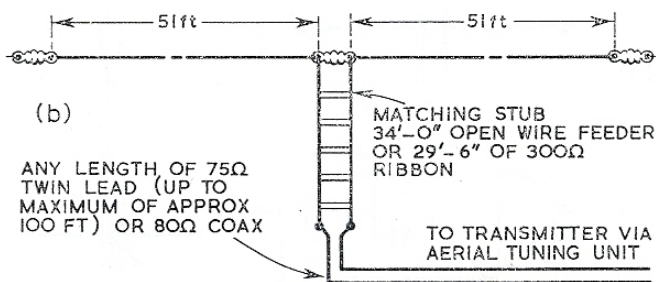
Antennae

From time to time there are enquiries about home built antennae. While there are many books on the subject giving all sorts of complicated designs that may do better or worse than other designs, there are some very simple solutions that will extend the usefulness of your radio. Below are two basic designs that may be worth trying.



2-Metre Slim-Jim Antenna

The basic dimensions of a 2metre "Slim Jim" this antenna will improve the performance of your handheld radio considerably, particularly if you can get it mounted at a reasonable elevation. The diagram to the left is for a one made from aluminium tubing; however the same vertical dimensions can be used for one made from 300 ohm TV ribbon cable and then inserted into some plastic electrical conduit. The conduit needs to be non-conducting of RF and a way of finding of the conduit is suitable is to place a small section of the conduit into the microwave with a glass of water. If the conduit stays cold then it is suitable for the antenna project.



G5RV HF Antenna

The Basic dimensions of the G5RV antenna are shown to the left. This is a multi-band HF antenna that will do 80, 40, 20, 15 and 10 metres. The original design was by Louis Varney (G5RV). Some more elaborate versions have a balun in the feed line, but the basic one shown to the left seems to work reasonably well. Don't expect it to work as well as a beam or a dipole cut to the exact frequency that you want to use. It is a compromise on all bands, but for all-round use it is worth trying, particularly if space is a problem as it is smaller than a normal 80-metre dipole and works really well on 80-metres. An antenna tuner is a must with this antenna.

Sunday Night News and Net

Each Sunday at 08:15 pm the VHF group hosts the Sunday Night News and Net. This is a service to keep all Radio Operators in the region up to date with what is happening out there in Radio Land and what meetings and events are being organised by the various Radio Clubs in the Auckland region. Once a month (last Sunday in the month) the net starts a little later as the NZART Monthly Broadcast, which starts at 8:00 pm, usually takes around 20 minutes and uses the same network of repeaters.

The News and Net can be found on the 2-metre Klondyke repeater which has the output frequency of 146.625 MHz and the News and Net is also relayed onto the UHF National System repeaters north of about Hamilton and extending into the far north. The UHF repeater most likely to be heard in Auckland has the output frequency of 439.875MHz and is also situated at Klondyke.

Club Nets

VHF Net 146.525 MHz 7:30pm every Wednesday, HF Net 3650 KHz +/- QRM/QRN 7:30pm every Friday. All are welcome to check in on the nets.

The HF Net roster is opposite. The full HF Net roster can be found on:

<http://www.qsl.net/zl1ac/wsrc-hf-roster.pdf>

27-Sep-13	ZL1NE	John
4-Oct-13	ZL1RCA	Ian
11-Oct-13	ZL1MW	Brian
18-Oct-13	ZL2ATZ	Tony
25-Oct-13	ZL1WI	Roy
1-Nov-13	ZL1NE	John
8-Nov-13	ZL1RCA	Ian
15-Nov-13	ZL1MW	Brian
22-Nov-13	ZL2ATZ	Tony
29-Nov-13	ZL1WI	Roy

AREC

There will be an AREC section meeting on Tuesday 29th October 2013 at the club rooms at 7:30 pm. All club members with an interest in AREC are invited to attend. We intend to review what the section does and plan where we are going. We have a reasonable amount of equipment and we intend to check this out during the meeting to make sure it is all still functional.

Update to the Radio Regulations

The Radio Regulation pertaining to the Amateur Service was recently updated by the Ministry of Economic Development, Radio Spectrum Management Section. These are reproduced below for your information. Thanks to Brian ZL1MW for bringing this to our attention.

Notice

1. Short title and commencement

1. This notice is the Radiocommunications Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2013.
2. This notice comes into force on **1 August 2013**.

2. General user radio licence

A general user radio licence is granted for the transmission of radio waves by amateur radio operators in New Zealand, for the purpose of communications in the amateur radio service in accordance with the terms, conditions and restrictions of this notice.

3. Terms, conditions and restrictions applying to New Zealand amateur operators

1. Persons who hold a General Amateur Operator's Certificate of Competency and a callsign issued pursuant to the Regulations may operate an amateur radio station in New Zealand.
2. The callsign prefix of "ZL" may be substituted with the prefix "ZM" by the callsign holder for the period of, and participation in, a recognised contest, or as the control station for special event communications.
3. Operation on amateur bands between 5 MHz and 25 MHz is not permitted unless a person has held a General Amateur Operators Certificate of Competency for three months and logged 50 contacts during this period. The person must keep the logbook record for at least one year and, during this period, produce it at the request of the chief executive.

4. Terms, conditions and restrictions applying to visiting amateur operators

1. Persons visiting New Zealand who hold a current amateur certificate of competency, authorisation or licence issued by another administration, may operate an amateur station in New Zealand for a period not exceeding 90

days, provided the certificate, authorisation or licence meets the requirements of Recommendation ITU-R M.1544 or CEPT T/R 61-01 or CEPT T/R 61-02 and is produced at the request of the chief executive.

2. The visiting overseas operator must use the national callsign allocated by the other administration to the operator, in conjunction with the prefix or suffix “ZL”, except where subsection (3) applies, which is to be separated from the national callsign by the character “/” (telegraphy), or the word “stroke” (telephony).
3. The visiting overseas operator may use the prefix or suffix:
 - a. ZL7 when visiting the Chatham Islands
 - b. ZL8 when visiting the Kermadec Islands
 - c. ZL9 when visiting the Sub-Antarctic Islands

5. Terms, conditions and restrictions applying to all amateur operators

1. The use of callsigns, including temporary and club callsigns, must be in accordance with publication PIB 46 “Radio Operator Certificate and Callsign Rules” published at www.rsm.govt.nz
2. Callsigns must be transmitted at least once every 15 minutes during communications.
3. National and international communication is permitted only between amateur stations, and is limited to matters of a personal nature, or for the purpose of self-training, intercommunication and radio technology investigation, solely with a personal aim and without pecuniary interest. The passing of brief messages of a personal nature on behalf of other persons is also permitted, provided no fees or other consideration is requested or accepted.
4. Communications must not be encoded for the purpose of obscuring their meaning, except for control signals by the operators of remotely controlled amateur stations.
5. Except as provided to the contrary in this notice, transmitter power output must not exceed 1000 watts peak envelope power (pX), as defined in ITU Radio Regulation 1.157.
6. Amateur stations must, as far as is compatible with practical considerations, comply with the latest ITU-R recommendations to the extent applicable to the amateur service.
7. In accordance with Article 25 of the International Radio Regulations, amateur operators are encouraged to prepare for, and meet, communication needs in support of disaster relief.
8. Amateur beacons, repeaters and fixed links may not be established pursuant to this licence.
9. Unwanted emissions outside the frequency bands specified in this Schedule must comply with the requirements of technical standard ETSI ETS 300 684 published by the European Telecommunications Standards Institute (ETSI).
10. This general user radio licence applies only to transmissions within the frequency ranges set out in the Schedule to this licence. All such transmissions must be made in accordance with the notes for the frequency range in which that transmission take place and in accordance with the other conditions set out in this licence.

6. Consequential revocation of licences

The Radiocommunication Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2012 dated the 29th day of November 2012 and published in the *New Zealand Gazette*, 6 December 2012, No. 147, page 4287, is revoked.

Schedule

Frequency Range	Notes
130 to 190 kHz	2, 4, 6
472 to 479 kHz	2, 7
505 to 515 kHz	2, 4, 7, 8, 9
1.80 to 1.95 MHz	2
3.50 to 3.90 MHz	2
7.00 to 7.10 MHz	1
7.10 to 7.20 MHz	
7.20 to 7.30 MHz	2
10.10 to 10.15 MHz	2
14.00 to 14.35 MHz	1
18.068 to 18.168 MHz	1
21.00 to 21.45 MHz	1
24.89 to 24.99 MHz	1

26.95 to 27.30 MHz	2, 3, 5, 6
28.00 to 29.70 MHz	1
51.00 to 53.00 MHz	2
144.00 to 146.00 MHz	1
146.00 to 148.00 MHz	2
430.00 to 440.00 MHz	1, 2, 3
921.00 to 928.00 MHz	3, 7
1.24 to 1.30 GHz	1, 2
2.396 to 2.45 GHz	1, 3
3.30 to 3.41 GHz	1, 2
5.65 to 5.85 GHz	1, 3
10.00 to 10.50 GHz	1, 2
24.00 to 24.05 GHz	1, 3
24.05 to 24.25 GHz	3
47.00 to 47.20 GHz	1
75.50 to 76.00 GHz	1, 2
76.00 to 81.00 GHz	1, 2
122.25 to 123.00 GHz	2, 3
134.00 to 136.00 GHz	1
136.00 to 141.00 GHz	1, 2
241.00 to 248.00 GHz	1, 2, 3
248.00 to 250.00 GHz	1
275.00 to 1000 GHz	2, 4

Notes to Schedule

- The following ranges of frequencies may also be used for amateur satellite communications:

7.00 to 7.10 MHz	3.40 to 3.41 GHz
14.00 to 14.25 MHz	5.65 to 5.67 GHz (a)
18.068 to 18.168 MHz	5.83 to 5.85 GHz (b)
21.00 to 21.45 MHz	10.45 to 10.50 GHz
24.89 to 24.99 MHz	24.00 to 24.05 GHz
28.00 to 29.70 MHz	47.00 to 47.20 GHz
144.00 to 146.00 MHz	75.50 to 81.00 GHz
435.00 to 438.00 MHz	134.00 to 141.00 GHz
1.26 to 1.27 GHz (a)	241.00 to 250.00 GHz
2.40 to 2.45 GHz	

- Limited to the earth-to-space direction.
 - Limited to the space-to-earth direction.
- These frequencies are, or may be, allocated for use by other services. Amateur operators must accept interference from, and must not cause interference to, such other services.
 - The frequencies:

27.12 MHz	(26.957 - 27.283 MHz),
433.92 MHz	(433.05 - 434.79 MHz),
921.5 MHz	(915 - 928 MHz),
2.45 GHz	(2.4 - 2.5 GHz),
5.8 GHz	(5.725 - 5.875 GHz),
24.125 GHz	(24.00 - 24.25 GHz),
122.5 GHz	(122 - 123 GHz), and
245 GHz	(244 - 246 GHz)

- are designated for industrial, scientific and medical (ISM) purposes. These frequencies may also be allocated to Short Range Device (SRD) services. Amateur operators must accept interference from ISM and SRD services within these frequency ranges.
- Allocated to the amateur service on a temporary basis until further notice.

6. Telecommand and telemetry operation only.
7. Radiated power must not exceed 5 watts e.i.r.p.
8. Radiated power must not exceed 25 watts e.i.r.p.
9. The bandwidth of emissions must not exceed 200 Hz
10. Use of this band is not permitted after 31 December 2013.

Dated at Wellington this 30th day of July 2013.

JEFFREY DENNIS HICKS, Manager, Radio Spectrum Management Licensing, Ministry of Business, Innovation and Employment.

Explanatory Note

This note is not part of the notice, but is intended to indicate its general effect.

This notice:

1. Prescribes that, pursuant to Regulations made under the Radiocommunications Act 1989, a general user radio licence is granted for the transmission of radio waves by amateur radio operators in New Zealand, for the purpose of communications in the amateur radio service, in accordance with the terms, conditions, and restrictions of this notice. This notice comes into force on **1 August 2013**.
2. This notice replaces the Radiocommunications Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2012. The principal change from that notice is the changes to visiting amateur callsign requirements.

Downloads

 [Radiocommunications Regulations \(General User Radio Licence for Amateur Radio Operators\) Notice 2013 \[23 KB PDF\]](#)

To view or print this document you will require PDF viewing software such as [Adobe Acrobat Reader](#). If you are experiencing problems downloading our forms, make sure you have updated your PDF reader to the latest version.

Last updated 5 August 2013

WESTERN SUBURBS RADIO CLUB: BRANCH 03

P.O BOX 15-122 NEW LYNN 0604 AUCKLAND

Branch03@nzart.org

To past sellers and buyers at our previous equipment sale, just a reminder of this year's sale. An invitation to all to our very entertaining and social function.

EQUIPMENT SALE

SATURDAY 2nd November 2013

At the ROSEBANK ROAD PRIMARY SCHOOL HALL
217 ROSEBANK ROAD, AVONDALE
(THE SAME PLACE AS PREVIOUS YEARS)

It's a lovely big hall and there is plenty of parking.

TABLES ARE \$10.00 each PRE PAID BEFORE SALE DATE

Or \$15.00 each ON THE DAY OF SALE

SELLERS: 0800HRS BUYERS: AT 0900HRS

NB: ONLY SELLERS IN HALL BEFORE 0900HRS

TABLE BOOKINGS - Please contact

ROY, ZL1WI (09) 814 9550

JOHN, ZL1JT (09) 827 3538 jbt.greenbay@xtra.co.nz

**Cheques to reach PO box 15,122 or 29 Cliff View Drive on or before
Friday 1st November 2013.**

NOTE: All unsold equipment must be removed by vendor at close of sale.
Come and discover in person some of the new or changed call sign holders.

Entry fee to sale of \$2.00 payable by all visitors.

SALE CLOSSES AT MIDDAY

Cafeteria with hot sausages, biscuits, tea or coffee available on site, tables and chairs available to sit down and have a rag chew.

Even if you are not buying or selling come along for the fun and meet fellow electronic enthusiasts.

All N.Z.A.R.T branches, private and commercial vendors are more than welcome.

Sellers Note: There are limited power outlets available, so please bring your own power boards and leads if required.

NOTE: to assist buyers a 12 volt 30 amp power supply with power meter and dummy load will be available on site to test any prospective transmitter purchase.