

# THE WORLD BELOW

## 400 GHz

The Periodical Newsletter of the  
WAIKATO VHF GROUP Inc.,  
ZL1IS,  
PO BOX 606,  
Waikato Mail Centre  
Hamilton 3240.



NZART  
BRANCH 81

[www.zl1is.info](http://www.zl1is.info)

**MARCH 2019 ISSUE**

### WAIKATO VHF GROUP EXECUTIVE

President	Phil King	ZL1PK	07 847 1320
Vice President	David King	ZL1DGK	07 884 9590
Secretary	Gavin Petrie	ZL1GWP	07 843 0326
Treasurer	Ian Brown	ZL1TAT	07 847 3709
Projects	Tom Bevan	ZL1THG	07 864 5425
Committee	Peter Reinhard	ZL1PR	021 841 274
Committee	Morris Beale	ZL1ANF	07 884 8416
Committee	Neill Ellis	ZL1TAJ	07 576 1999
Committee	Kevin Hampshire	ZL1KRH	07 544 5987
Editor	David King	ZL1DGK	07 884 9590

## Annual General Meeting 2019

The Annual General Meeting of the Waikato VHF Group will be held on

Sunday, 17th March 2019, 1:30pm

At the Silver Fern Farms Event Centre, (aka Te Aroha Events Centre), 44 Stanley Ave., Te Aroha.

The "WaiPlenty" 2m network on 146.950 will be monitored for anyone requiring directions.

Click [HERE](#) to go to a map of the location.

Please renew your sub or join the Group before the AGM.

A sub renewal/joining form can be found [HERE](#).

## Tauranga Repeaters Update

### Tauranga 680

As of the 17<sup>th</sup> of February the Tauranga 680 repeater has been operating as an FM repeater. The D-Star service on this repeater has been permanently removed and re-established 70cm

### Tauranga 3075 (New)

A new digital modes 70cm repeater has been established on Mt Minden near Tauranga and is co-located with the Tauranga 680 equipment. This is a D-Star repeater, but will also pass DMR & Fusion. The repeater currently does not have a tail but this may change in the future. The frequency is 433.075 with a +5Mhz Split (i.e. the input is 438.075). Power out is approximately 50 watts. The repeaters Internet linking hardware is almost ready and should be activated in a few days

Regards  
Phil Price  
ZL1GI  
Branch 39

\* \* \* \* \*

## Repeaters/Beacons

The Waikato VHF Group owns and maintains a number of repeaters and beacons in the greater Waikato and Bay of Plenty area. These are available for sponsorship for a period of 1 year. Please see <http://zl1is.info/sites.html> for a list of repeaters, beacons & links that are currently available for sponsorship. If you are interested in sponsoring one of them, please contact our Secretary (ZL1GWP) or Treasurer (ZL1TAT).

\* \* \* \* \*

## Coax for sale by the VHF Group

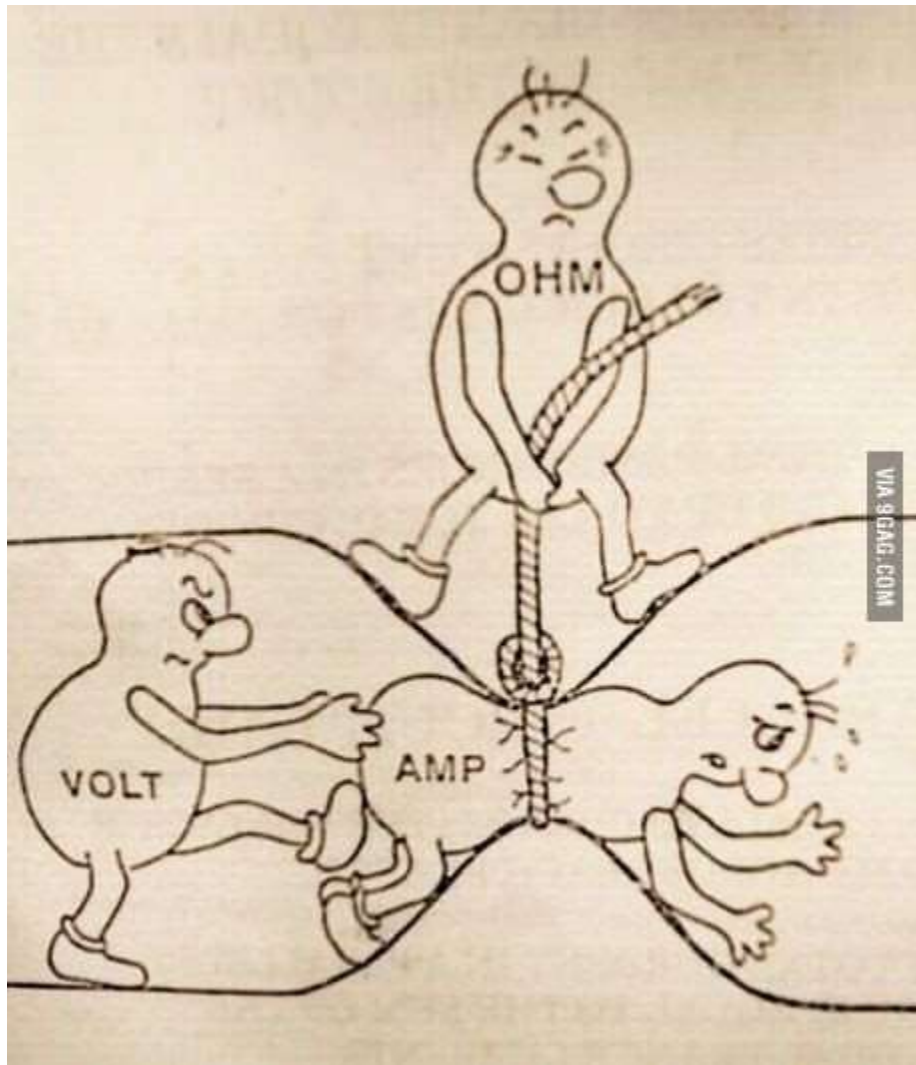
15m of **RFS LCF12-50J** 16mm OD low-loss foam-dielectric coax, data sheet  
<[www.rfsworld.com/WebSearchECat/datasheets/pdf/?q=LCF12-50J-P7](http://www.rfsworld.com/WebSearchECat/datasheets/pdf/?q=LCF12-50J-P7)>

10m of **Rosenberger SL 012R PE** 16mm cable, data sheet  
<[https://www.rosenberger.com/siso/db/160309/SL\\_012R\\_PE.pdf](https://www.rosenberger.com/siso/db/160309/SL_012R_PE.pdf)>

Two **RFS NF-LCF12-070** N sockets to fit above cable, universal fitting instruction sheet  
<<https://products.rfsworld.com/userfiles/pdf/m30749e.pdf>>

Both cable lengths are new unused off-cuts (equivalent to Andrews LDF4-50A), and the connectors (which can fit either cable) are in unopened bags with fitting instructions.

The 2 lengths are for sale as a single lot at \$5.00/m plus the connectors at \$25 each. If not sold, these items will be placed on TradeMe. **See photos attached to this newsletter.**



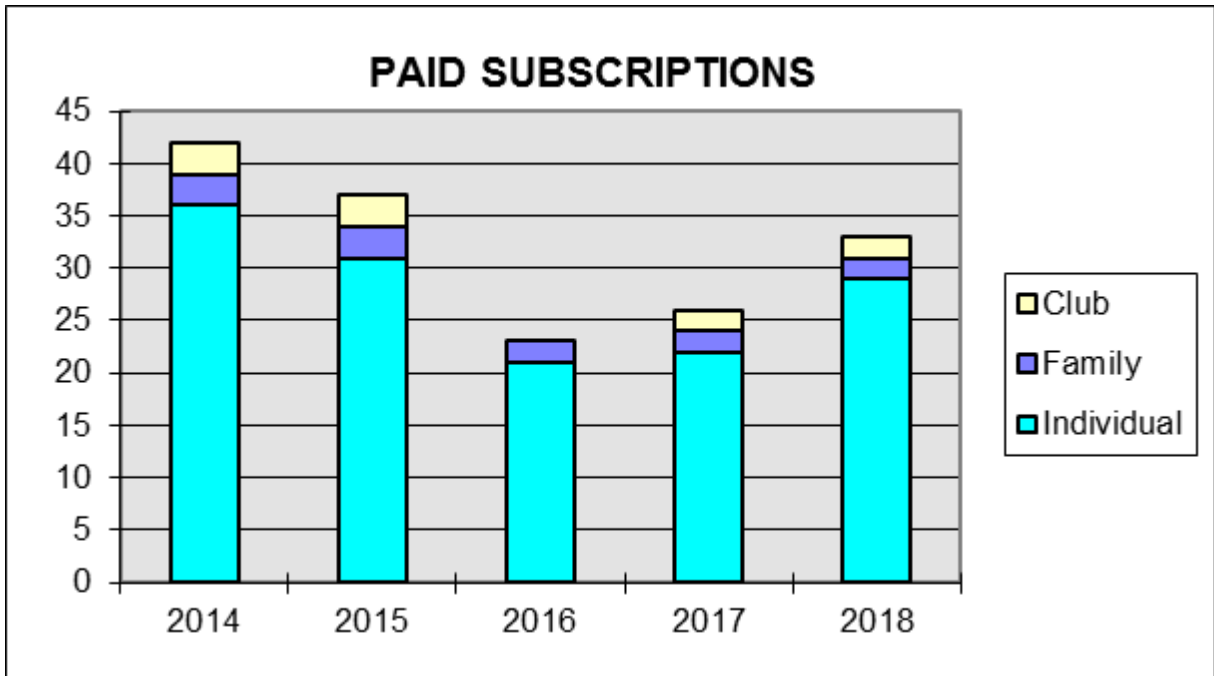
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*WAIKATO VHF GROUP Inc.*  
**TREASURER'S REPORT**  
*FOR FINANCIAL YEAR ENDED 31 DECEMBER 2018*

Thanks to generosity of Waihi Branch 43 donating funds covering repair of a serious power supply fault at our Waihi North '5475 repeater, plus significant trading table revenue earned through efforts by Life Member Tom ZL1TOM / ZL1THG and Kevin ZL1UJG, along with fourteen members adding a donation or licence sponsorship to their subscription payment, our 2018 revenue lifted by \$3254. Expenditure also increased, mainly due to replacement equipment required for that repair at Waihi North costing \$1530 (53% of 2018 year's total expenditure). More than five days of trustee's time plus 500km of travel was donated towards repeater maintenance.

Just prior to Christmas 2018, our Te Uku '5675 repeater and its associated link to Te Weraiti was restored following recovery of that equipment by the NZ Police (allowing the donated repeater to be retained now as spare equipment). It had been anticipated the full **WaiPlenty network** could be restored during two full days worked at Te Uku, however after re-installing our equipment there, we discovered Maungakawa's link had ceased operation during last year. Maungakawa was visited in January 2019, and we found the circuit breaker supplying our link had been accidentally switched off, possibly while new equipment was being installed immediately above.

**Radio licence fees**, presently \$850 annually, are usually our largest single expenditure item. Radio Spectrum Management (RSM)'s budget to administer and support the amateur radio service is now recovered entirely from licensing fees levied on beacons, repeaters and inter-site links. A few amateurs remain under the impression that when licence fees ceased being charged to individual callsign holders in 2005, it became a "free" service. The majority of those fees are now levied on radio clubs and NZART branches operating those facilities, making it important individual operators support those organisations though membership and paying an annual subscription. The Waikato VHF Group Inc. is one such organisation, and beacons plus seven repeaters along with nine associated inter-site links operated by us to benefit amateur users throughout this region don't run on fresh air, they require our share of contribution to RSM's annual budget! It's pleasing to see an earlier trend of paid subscriptions falling away has reversed over this past three years. Long may that trend continue. Remember, **our membership subscriptions fall due on 1 January**



**each year**, and you must be a financial member to participate in voting at our AGM. Renewal details can be advised via our membership application/update form (available on our web site at [www.ZL1IS.info](http://www.ZL1IS.info)). A Waikato VHF Group subscription remains very reasonable, so consider adding a donation or sponsoring one of our radio licences when renewing your sub?

We gratefully acknowledge **donations received during 2018** from ZLs 1AAF, 1AI, 1AMW, 1GWP, 1KIP, 1KM, 1KP, 1KRH, 1PO, 1QW, 1REG, 3DM, 3GR/1FW, and 4GJ. Thank you all for your support.

Your committee carefully manages **expenditure**, minimised through considerable personal time donated by members and trustees. Repairs and maintenance costs spiked last year primarily as a result of restoring Waihi North's repeater service in early July.

Our independently reviewed **Financial Statement** (next page, followed by our reviewer's report) summarises the Waikato VHF Group's financial position at the end of F.Y. 2018.

Ian Brown ZL1TAT

Treasurer (continuously since 1986)

# FINANCIAL STATEMENT

of the WAIKATO VHF GROUP Inc. for F.Y. Ended 31 December 2018

## INCOME & EXPENDITURE ACCOUNT

<u>2017</u>		<u>2018</u>
	INCOME ...	
\$645	Subscriptions received	\$695
\$665	Donations received	\$2,645
\$186	Profit from Trading Table	\$1,707
\$5	Interest received	\$4
\$1,501		\$5,051
	EXPENSES ...	
\$2,552	Depreciation	\$2,169
\$589	Repairs & Maintenance	\$1,539
\$216	Electricity	\$226
\$828	Radio Licence fees	\$850
\$155	Assets written off	\$0
\$170	Stock written off	\$0
\$226	Other expenses	\$268
\$4,736		\$5,052
(\$3,235)	Excess Income / Expenditure	(\$1)

## BALANCE SHEET

<u>2017</u>		<u>2018</u>
	CURRENT ASSETS ...	
\$3,532	Bank Current Account	\$5,855
\$0	Bank Term Deposits	\$0
\$0	Cash on hand / Unpresented Cheque	(\$100)
\$0	Stock on hand	\$0
\$3,532		\$5,755
	LIABILITIES ...	
\$25	Minus Subscriptions received in advance	\$80
\$3,507	Working Capital	\$5,675
\$14,460	Fixed Assets	\$12,291
\$17,967	Member's Funds	\$17,966
	EQUITY ...	
\$21,202	Opening Balance	\$17,967
(\$3,235)	This Year	(\$1)
\$17,967		\$17,966

## SCHEDULE OF FIXED ASSETS & DEPRECIATION

ASSET	Original Cost <small>plus Addns / Disposals at Cost</small>	BV at 31.12.17	+ Addns.	- Deprec. 15 %	Book Value at 31.12.18
Tairua '6975 Repeater	2,731.66	0.00		<small>Xtd to Branch 85 in 2011</small>	
Waihi North '5475 Rpx & Link	11,220.65	4,020.70		603.11	3417.59
Maungakawa '5575 Rpx & Link	7,421.61	2,741.31		411.20	2330.11
TeWerahi '695 Rpx & Links	7,569.58	2,233.73		335.06	1898.67
Kaimai Repeaters Site facilities	6,317.50	819.63		122.94	696.69
Kaimai '540 Data Repeater	2,468.45	33.40		5.01	28.39
Kaimai '485 N.S. ULS Repeater	2,829.20	290.28		43.54	246.74
Kaimai 12cm Beacon	449.00	7.73		1.16	6.57
Hamilton 2m/70/23cm Beacons	315.22	22.86		3.43	19.43
Hamilton '9975 Nat. Syst.Rpx.	4,382.73	240.73		36.11	204.62
Te Uku '5675 Rpx, Links + IRLP	16,029.45	4,026.35		603.95	3422.40
Oto '465 Digipeater <small>(Closed 2017)</small>	295.66	0.00		0.00	0.00
TK705D 2m Transceiver	225.00	23.12		3.47	19.65
<b>TOTALS:</b>	<b>62,255.71</b>	<b>\$14,459.84</b>	<b>\$0.00</b>	<b>\$2,168.98</b>	<b>\$12,290.86</b>
Less Accumulated Depreciation	49,989.90				
Equals Book Value at 31.12.18	<b>\$12,290.86</b>				

I. W. Brown (Treasurer)

G. W. Petrie (Secretary)

P. D. King (President)

**REPORT  
TO THE MEMBERS OF  
WAIKATO VHF GROUP INCORPORATED**

I have reviewed the financial statements of the Waikato VHF Group Incorporated. The financial statements provide information about the past financial performance and financial position of Waikato VHF Group Incorporated as at 31 December 2018. This information is stated in accordance with the accounting policies set out separately.

**The Committee's Responsibilities**

The Committee are responsible for the preparation of financial statements which fairly reflect the financial position of the Group as at 31 December 2018, and the results of its operations for the year ended 31 December 2018.

**My Responsibilities**

It is my responsibility to express an independent opinion on the financial statements presented by the group, and report my opinion to you.

**Basis of Opinion**

A review includes examining, on a test basis, evidence relevant to the amounts and disclosures in the financial statements. It also includes assessing:

- The significant estimates and judgements made by the Group in the preparation of the financial statements, and
- Whether the accounting policies are appropriate to the group's circumstances, consistently applied and adequately disclosed.

I conducted my review in accordance with generally accepted accounting standards in New Zealand. I planned and performed my review so as to obtain all the information and explanations which I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatements, whether caused by fraud or error. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements.

**Unqualified Opinion**

In my opinion the financial statements fairly reflect the financial position of the Group as at 31 December 2018.

My review was completed on 8 January 2019 and my unqualified opinion is expressed at that date.



**M Y JAENSCH**

**TAURANGA**

## International Space Station

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Expedition 58 remains underway. *{From Jonathan's Space Report}*

On Jan 30 the Nanoracks NRCSD-15 cubesat package, launched on Dragon CRS-16, was attached to the MPEP platform. The next day the NRCSD-15/MPEP was pulled out of the Kibo airlock by the JEM RMS robot arm and its contents ejected into orbit over a period of six hours:

APL's CAT-1 and CAT-2 Cubesat Assessment and Test, two 3U cubesats with experimental signal processing payloads for an unidentified US Department of Defense organization; Aarhus University's 1U student cubesat Delphini 1, with a NanoEye Earth imager; The University of Southern Indiana's UNITE 1U student cubesat, with a Langmuir probe to measure ionospheric electron density; The San Jose State Univ/NASA-Ames TechEdSat-8, which will deploy a controllable drag brake to target reentry as part of an ongoing program to attempt recovery of cubesat payloads from orbit.

On Feb 7 the Slingshot deployer, launched aboard Dragon CRS-16, was mounted on the nose of Cygnus NG-10, currently berthed on the Unity node. Slingshot was developed by SEOPS LLC, now part of Hypergiant Galactic of Houston.

On Feb 8 at about 1345 UTC the Cygnus NG-10 (S.S. John Young) was unberthed from the Unity node and at 1616 UTC it was released into orbit. After departing ISS, the cargo ship SS John Young was in a 405 x 418 km orbit slightly above the station. By 2130 UTC it had made two burns to raise orbit to 453 x 460 km in preparation for cubesat deploys.

Cygnus/Slingshot deployed the Hypergiant Galactic/SEOPS Quantum Radar 1 and 2 cubesats at 0000:00 UTC on Feb 9. On Feb 13 at 1200 the Cygnus Nanoracks NRCSD-E deployer ejected Malaysia's MySat and NRL's CHEFSAT 2. CHEFSAT-2's mission is to space-qualify consumer-grade E-band (mm-wave) devices.

Later on Feb 13, Cygnus made a further series of burns to lower its orbit to only 293 x 306 km, below the ISS, and at 2245 UTC the NRCSD-E ejected KickSat-2, which contains over 100 small 5-gram Sprite chipsats. It is unclear when and if the Sprites will be ejected from KickSat-2; the KickSat-2 beacon has been detected but is very weak and it appears its antenna did not deploy correctly.

(Thanks to NG Cygnus team and Nanoracks for the Cygnus cubesat deployment times.)

*Te Puke Amateur Radio Club Inc.*

Branch 53 of NZART

# **“MARKET DAY”**

*Saturday March 23rd, 2019*

*Where*

*Paengaroa Community Hall.*

*4 Old Coach Road, Paengaroa.*

(GPS Coordinates: 37.49S 176.24E)

Venue opens for Vendors from 06.30am.

Sale time 10.00am.

\$20.00 for a 1.8 Table, \$25.00 on the day.

\$12.00 for ½ a Table, \$15.00 on the day.

WARO meets at 10.30am

Overnight Parking for Motorhome's

(Please advise by Phone or Email)

Hot Breakfast from 07.30am (\$10.00).

1 Sausage, 2 Rashers Bacon, 2 Eggs, ½ Tomato, 2 Pieces Toast, Tea or Coffee.

Also available Sandwiches, Cakes, Tea / Coffee, all at reasonable prices.

For further information & Table Booking's, Contact Syd Rowe ZL1LWR  
Phone (07) 533 1029, Mobile: 0272488664, Email [sydrowe@xtra.co.nz](mailto:sydrowe@xtra.co.nz)

Postal Address: 223 State Highway 33, RD 9, Te Puke 3189.