

THE WORLD BELOW 400 GHz

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



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BRANCH 81

www.zl1is.info

MARCH 2022 ISSUE

WAIKATO VHF GROUP EXECUTIVE

President	David King	ZL1DGK	07 884 9590
Vice President	Neill Ellis	ZL1TAJ	07 576 1999
Secretary	Gavin Petrie	ZL1GWP	07 843 0326
Treasurer	Ian Brown	ZL1TAT	07 847 3709
Projects	Tom Bevan	ZL1THG	07 864 5425
Committee	Morris Beale	ZL1ANF	07 884 8416
Committee	David McMillan	ZL1TLQ	07
Editor	David King	ZL1DGK	07 884 9590

Annual General Meeting 2022

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

Sunday, 20th March 2022, 1:30pm

Via Zoom

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

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

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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).

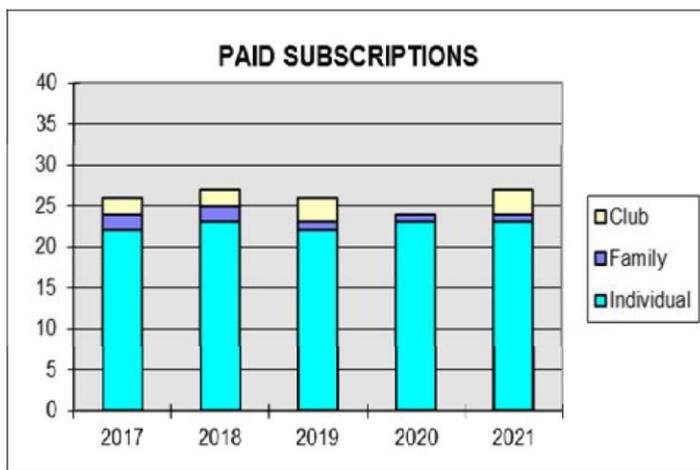
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WAIKATO VHF GROUP Inc. **TREASURER'S REPORT** FOR FINANCIAL YEAR ENDED 31 DECEMBER 2021

This report summarises financial results from the Waikato VHF Group's 58th year of continuous operation. Our independently reviewed **Financial Statement** follows with the reviewer's report. Membership subscriptions increased marginally in 2021 with two members also paying in advance for 2022. A generous donation from Waihi Branch 43 offsetting repair costs incurred at our '5475 repeater boosted donation income significantly. Covid-19 restrictions during 2021 impacted our ability to meet face-to-face, plus reduced our participation in market days resulting in a drop in **Trading Table income**.

Twenty-three individuals, one family along with three clubs paid **subscriptions** for 2021.

Remember that **membership subscriptions fall due on 1st January each year**, and you need to be a financial member to participate in voting at our March AGM. Renewal details can be advised via our membership application/update form (available on our web site at <https://www.zl1is.info/>). A subscription to the Waikato VHF Group costs less than many similar organisations, so how about considering adding a donation or sponsoring one of our radio licences when renewing your sub? Both help us continue offering all our services.



Waikato VHF Group subscriptions remain at **\$25.00** for a member/associate, **\$30.00** for club or family membership (all residing at the same address), and **\$15.00** for a student currently enrolled at NZ secondary school or tertiary educational institution.

We gratefully acknowledge **donations and licence sponsorships received during 2021** from ZLs 1AOX, 1DF, 1GWP, 1KIP, 1KL, 1KRH, 1PO, 1QW, 1REG, 1TAJ, and 1TLQ. Thank you all, your support for the Waikato VHF Group Inc. is much appreciated.

Our only capital expenditure incurred during 2021 was for a filter for our Maungakawa '5575 repeater to reduce intermittent intermodulation interference affecting that repeater's receiver, and thus being relayed across the remainder of the **WaiPlenty repeater network**. The residual value (\$21.51) of our Kaimai '540 data repeater retired in 2019 was written off in 2021. Expenditure continues to be closely monitored while

relying on generosity of individuals donating time and transport for site visits to keep our facilities operational.

Annual **radio licencing fees** remained at \$700 for fourteen licences assigned to us. Our 144.260MHz 2m beacon is yet to make an appearance from its new site in Hamilton, however our 2424.260MHz 12cm beacon remains on the air from its Kaimai site.

All Waikato VHF Group payments are now made electronically. Direct credit to our bank account (details on the membership update/renewal form on our web site) is convenient and is our preferred method for us to receive payments now.

Ian Brown ZL1TAT
Treasurer

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Subscriptions

A reminder that your subscription must be paid before the AGM in order for you to vote on any items.

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Amsats and Hamsats

"Amsats and Hamsats - Amateur radio and other small satellites" is available from Amazon.com in printed or Kindle formats (just click on the cover). You can also buy a copy from the RSGB bookshop or the ARRL bookshop.

Amsats and Hamsats provides a broad overview of how to communicate through amateur radio satellites and how to receive signals from other small satellites and 'weather' satellites. It also answers questions like, "how do satellites stay in orbit" and "why are they so expensive to launch?" There are sections about the history of amateur radio satellites, the mathematics governing orbits, different types of satellite and their orbits. I cover the equipment you need, to track and use the amateur satellites and some of the satellite tracking software that is available.

A lot of readers will want to get straight into receiving or transmitting, so I have put the operating sections near the beginning and followed up with the technical and general interest chapters.

Interest in amateur satellites is increasing because of the large numbers of 'Cube,' 'Micro,' and 'Pico' satellites being launched into space. Listening to signals from satellites or sending signals through them is a challenging and rewarding part of the radio hobby.

-ZL3DW - Andrew Barron

**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 2021. 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 2021, and the results of its operations for the year ended 31 December 2021.

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 2021.

My review was completed on 15 January 2022 and my unqualified opinion is expressed at that date.

M Y JAENSCH

TAURANGA

FINANCIAL STATEMENT

for the WAIKATO VHF GROUP Inc. for F.Y. Ended 31 December 2021

INCOME & EXPENDITURE ACCOUNT

<u>2020</u>		<u>2021</u>
	INCOME ...	
\$805	Subscriptions received	\$620
\$745	Donations received	\$1,549
\$888	Profit from Trading Table	\$180
\$3	Interest received	\$3
\$2,241		\$2,352
	EXPENSES ...	
\$1,827	Depreciation	\$1,570
\$0	Repairs & Maintenance	\$1,160
\$226	Electricity	\$229
\$700	Radio Licence fees	\$700
\$173	Other expenses	\$159
\$2,926		\$3,818
(\$685)	Excess Income / Expenditure	(\$1,466)

BALANCE SHEET

<u>2020</u>		<u>2021</u>
	CURRENT ASSETS ...	
\$5,922	Bank Current Account	\$5,870
\$0	Bank Term Deposits	\$0
\$0	Cash on hand	\$0
\$0	Stock on hand	\$0
\$5,922		\$5,870
	LIABILITIES ...	
\$100	Subscriptions received in advance	\$55
\$5,822	Working Capital	\$5,815
\$10,355	Fixed Assets	\$8,896
\$16,177	Member's Funds	\$14,711
\$16,862	EQUITY ...	\$16,177
(\$685)	Opening Balance	(\$1,466)
\$16,177	This Year	\$14,711
\$16,177		\$14,711

SCHEDULE OF FIXED ASSETS & DEPRECIATION

ASSET	Original Cost plus Addns / Disposals at Cost	B/V at 31.12.20	+ Addns.	- Deprec. 15 %	Book Value at 31.12.21
Tairua '8975 Repeater	2,731.66	0.00		Xfd to Branch 85 in 2011	
Waihi North '5475 Rpx & Link	11,220.65	2,469.21		370.38	2098.83
Maungakawa '5575 Rpx & Link	7,421.61	1,883.50	131.34	272.23	1542.61
TeWeraiti '695 Rpx & Links	7,569.58	1,371.79		205.77	1166.02
Kaimai Repeaters Site facilities	6,317.50	503.36		75.50	427.86
Kaimai '640 Data Rpx. (Closed 2019)	2,468.45	20.51	-20.51	0.00	0.00
Kaimai '485 N.S. ULS Repeater	2,829.20	178.27		26.74	151.53
Kaimai 12cm Beacon	449.00	4.74		0.71	4.03
Hamilton 2m/70/23cm Beacons	315.22	14.04		2.11	11.93
Hamilton '9975 Nat. Syst.Rpx.	4,382.73	147.84		22.18	125.66
Te Uku '5675 Rpx, Links + IRLP	17,765.16	3,948.04		592.21	3355.83
Oto '465 Digipeater (Closed 2017)	295.66	0.00		0.00	0.00
TK705D 2m Transceiver	225.00	14.19		2.13	12.06
TOTALS:	63,991.42	\$10,355.49	\$110.83	\$1,569.96	\$8,896.36
Less Accumulated Depreciation	57,238.23				
Equals Book Value at 31.12.21	\$8,896.36				

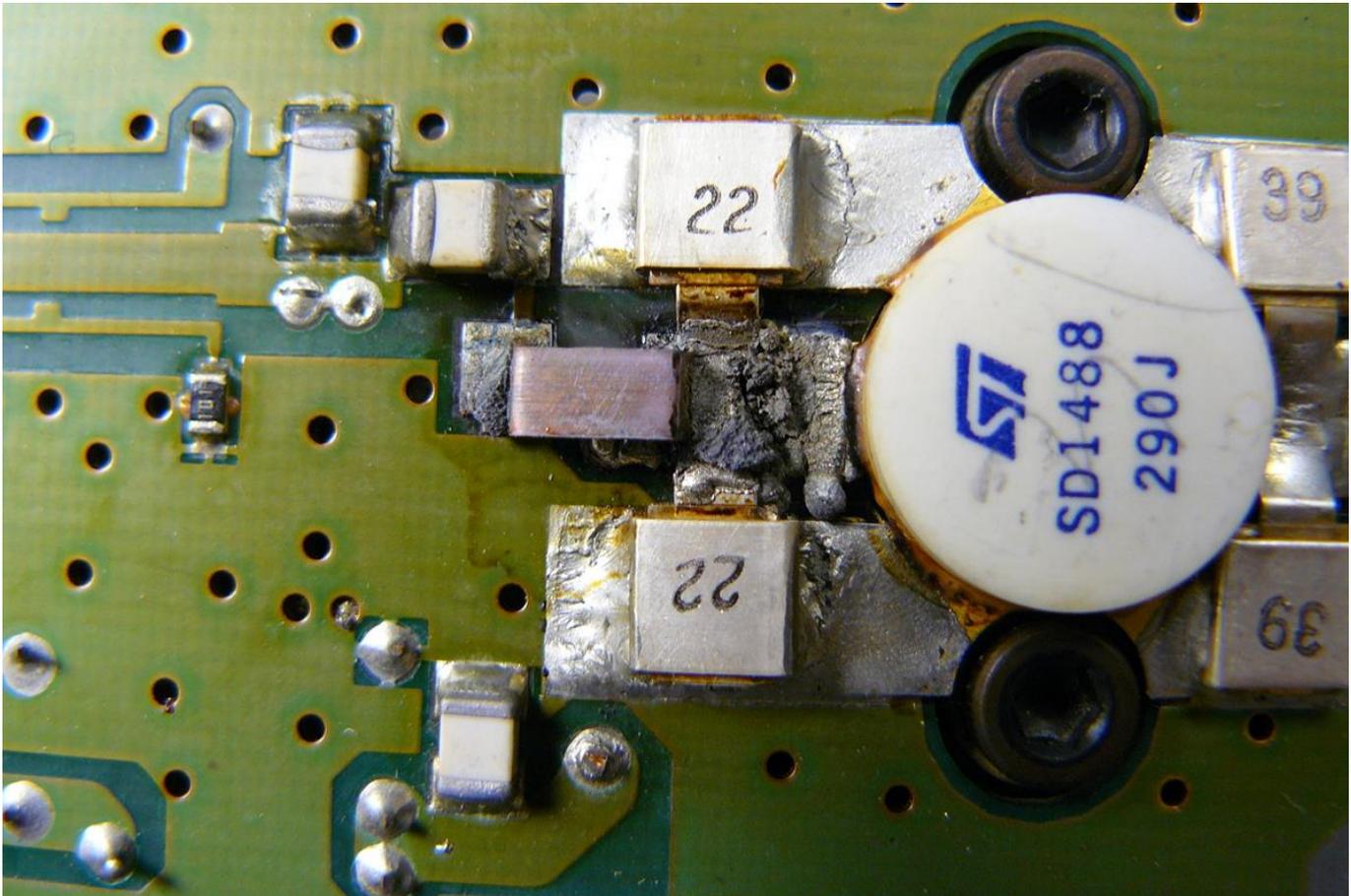

I. W. Brown (Treasurer)


G. W. Petrie (Secretary)


P. D. King (President)

NATIONAL SYSTEM AT HAMILTON OFF THE AIR

During late January 2022, field strength from the NS at repeater at Hamilton was observed to be extremely low. A site visit was arranged, during which the transmitter was found to have no measurable power output, so it was removed for further investigation and bench repair. Examination on the bench revealed the final power amplifier transistor had failed along with a couple of surrounding components which had overheated and burnt the PCB as revealed in the photo below.



Burnt printed circuit board in the '9975 transmitter

An initial challenge to the repair was that PA transistor is now an obsolete device, so a search for a replacement commenced by finding other similar transmitters which could be raided for spares - the first one dismantled was found to also have a failed PA transistor! When a replacement was found, repairs commenced by stripping the damaged and failed components before repairing the burnt printed circuit board. This transmitter, at around 35 years old, is younger than many others throughout the National System, however this opportunity was taken to replace all its electrolytic capacitors while we had it on the bench. As this newsletter goes to print, repairs are nearing completion, and we expect to have Hamilton '9975 back on the air shortly.