

**The Official Newsletter of the
Auckland VHF Group Inc.
Spectrum**



Harry ZL1BK and Simon ZL1SWW, October Microwave Contest

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Auckland VHF Group Inc.

Branch 66 NZART

PO Box 10138, Dominion Rd, Auckland 1446
 Clubrooms: 30 Hazel Ave, Mt Roskill

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Vice President	Not filled			
Secretary (Acting)	Vaughan Henderson	ZL1VH	021 844 804	secretary@aucklandvhf.org
Treasurer	George Raffles	ZL1TUX	021 735 361	treasurer@aucklandvhf.org
Committee	Brendon Reid	ZL1XXX	021 970 785	brendon@aa.net.nz
	Greg Storz	ZL1GSG	09 849 2878	greg.storz@orcon.net.nz
	Darryl Grange	ZL1TCI	021 123 7733	dgrange@ecohousing.co.nz
	Vaughan Henderson	ZL1VH	021 844 804	zl1vh1@gmail.com
AREC Group Leader	Dave Dingley	ZL1TIA	09 828 9394	mardayak@gmail.com
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ZL1BQ Trustee	Matthew King	ZL1YOT	022 649 3310	zl1bq@aucklandvhf.org
Head Repeater Trustee	Vaughan Henderson	ZL1VH	021 844 804	repeatertrustee@aucklandvhf.org
Klondyke Manager	Vaughan Henderson	ZL1VH	021 844 804	6625@aucklandvhf.org
670 Manager	Vaughan Henderson	ZL1VH	021 844 804	670@aucklandvhf.org
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Account Reviewer	Basil Orr	ZL1TOW	021 867 367	
Webmaster	Terry Corin	ZL1BPA	027 697 4686	webmaster@aucklandvhf.org
Club Web Page:	http://aucklandvhf.org			

Club News and Net:

The combined Auckland VHF Group and Auckland Regional Branch News and Net are held on 146.625 MHz and 439.875 MHz at 8.15 pm each Sunday or after the ZL6A National Broadcast on the last Sunday of the month.

Club meetings are held at the Clubrooms at Hazel Avenue, on the second Monday of each month at 7.30 pm. For other details, listen to the News and Net each Sunday evening.

SPECTRUM is the official journal of the Auckland VHF Group Inc. Opinions expressed are those of the authors and do not necessarily reflect club points of view. The closing date for SPECTRUM articles is by the 1st of each month. Articles to be submitted to the editor Peter ZL1UKG
spectrum@aucklandvhf.org

Auckland VHF Group (Inc) Branch 66

The Annual General Meeting

Followed by a General Meeting

Monday 9th November 2020 7.30pm

At the Hazel Avenue Club Rooms
(Located on the left at the end of Hazel Avenue)

The business of the AGM meeting will be:

- To ratify the Minutes of the 2019 AGM Meeting;
- To receive the reports of Officers;
- To elect a President, Vice-President, Secretary, Treasurer, and four committee members for the ensuing year.
- To appoint an account reviewer; an AREC Group Leader; Head Repeater Trustee and Editor for Spectrum Magazine.
- To receive members submissions and remits and deal with any relevant general business.

Please give serious consideration to offering your services to the club.

Subscription Rates for 2020/2021 Financial year

At the August committee meeting, your committee took a hard look at the Group's financial situation and concluded that with rising costs for Insurance and the general overheads involved in running the club, the income from our Trading Table activity is down as is interest from the bank on our term deposit. If we continue as we are, we will have an overall operating loss for next financial year. As a result, we have decided that a small increase in the annual subscription is necessary to help balance the books.

The new subscription is:

Full Members	\$55.00,
Associate Members	\$50.00,
Family Members	\$20.00. (for each additional member to a full member)

Coming Events:

- 07 November Western Suburbs Market Day from 10 am for Buyers
- 05-06 December VHF Field Day Contest from 5 to 11 pm Saturday and 7 am to 1 pm Sunday

Auckland VHF Group Inc.

Minutes for the Annual General Meeting held on 11th November 2019 at the Clubrooms, Hazel Avenue, Mt Roskill

Meeting Start: 7:31
Present: As per the attendance book
Apologies: Terry Corin ZL1BPA

Moved that Minutes of the Last Annual General Meeting as published in Spectrum be accepted

Moved: Peter ZL1UKG Seconded: Ian ZL1AOX
Objection from Laurie about issues in the AGM Minutes

Laurie objected to the minutes, callsigns incorrect, sentences incomplete, need to change ZL1BO to ZL1BQ - Klondyke – “Farnsworth is going ahead before they have been authorised” apparently incorrect. Olsens selling the forest is incorrect. Some heated debate back and forth.

Motion from Ross Boswell “to let the motion lie on the table until we have a list of issues from Laurie to be dealt with at a future meeting”.

Moved: Ross Boswell ZL1DRB Seconded: David Probine, ZL1TND.
2 votes against, Motion Carried.

Presidents Report

We have had some major achievements this year, Klondyke Reinforcements, Digital Presence, Radio Classes. Other achievements include cheerful meetings, great and popular guest speakers, clubrooms projects, fundraising donations.

Thanks to Vaughan - for your help with the repeaters, selling, trading table.
Brendon - rock solid as secretary, club rooms project, manager and for the digital presence project.
George – treasurer, digital banking,
Committee for your support and guidance.

Tasks in progress: Klondyke Cable Tray replacements, Klondyke Fundraising (cover note done for all sources) Project Nights, Coordination with Gribblehurst Hub.

Vice presidents Report

No Vice President, no report.

Secretary Report

Brendon spoke about the Clubrooms External Painting complete with the Stairs – thanks Matt.
Bedding in of the Dropbox system for club documents is complete.
Creation of a modern club website, with updated content, accessibility from mobile devices, searchable on google complete. Traffic has been reasonable with 1-2 general enquiries per month including 1 membership enquiry around every 6 weeks.
– Thanks Terry Corrin for your help Creation of online trading table ecommerce site due for completion December 2019
– Thanks Vaughan for your help.

Financial Report

George discussed that doing the accounts while in a full time job is difficult. The accounts are not ready to be approved at this meeting. He is working on that. Will try to get it to the reviewer later

on this month.

Club Membership 51 this year vs 50 last year

43-44 fully paid up members.

3 Life

2 Honorary

Life Member Colin McKenzie passed away this year

Trading Table Income about the same as last year, slight lower, possibly due to lower trading turnout

Klondyke Donations around \$6000

Power \$80.00 per month at Brynderwyns, \$350 at Klondyke, Clubrooms \$80-100/month.

Expecting the lease will be higher in future with the new owner

New Website has expenses, the sub increase for this year covers that.

Motion: Peter ZL1UKG That ahead of the SGM we publish the reports that have been read out to night along with the differences seen by Laurie in the AGM minutes so they can be voted on at the SGM.

Seconded by Ross ZL1DRB Carried on Voices.

Trading Table Report

Apologies from Vaughan

AREC Report

Laurie ZL1ICU. It has been a difficult year being diagnosed with 6 months to live prior to the AGM, have tried to carry on, have had a lot of back stabbing, been trying to do my job.

Sat 12 Jan BR 66 Tour De Ranges – Kawakawa Bay

Sun Mar 17th St Patricks Day cancelled due to mosque shootings

May 16th AREC combined meeting, supper by Marlene ZL1AYL

May 20th AREC HF Net. And DMR net afterwards

May 31st to Jun 2nd NZART Conference and AREC forums there

June 3rd Email to committee with apologies

July 4th Opened the Clubrooms for a SAR meeting, provided supper.

August 15th AREC report & apology to Soren Low for BR29 combined meeting.

August 19th AREC NET 8:30 PM then DRM NET

October 9th Wednesday – Attended the Heritage Walks – Onehunga, comms and safety.

Nothing in November, Farmers parade is coming up

Its been a hard year for me, recovering for treatment & trying to keep going. Marlene has been ill as well, came to a climax six weeks ago, only just got her back from hospital.

Repeater Report

Not available tonight as Vaughan is away.

General Business

Basil suggested it was impractical for AGM one month after the financial year, asked the committee look at the logistics of the dates, look at constitution and move AGM back or financial year forward, perhaps to 31 June.

Election of Officers

President

Nominated Matt ZL1YOT, by Basil ZL1TOW Seconded Graham ZL1TOF Passed by acclamation

Elected unopposed

Vice President

no nominations.

Secretary

Nominee Vaughan ZL1VH as Acting Secretary

Moved Matt ZL1YOT Seconded Ian ZL1AOX

Elected unopposed

Treasurer

Nominee George

Moved Matt ZL1YOT Seconded Basil ZL1TOW

Elected unopposed

Honorary Reviewer

Nominee Basil ZL1TOW

Moved George ZL1TUX Seconded Darryl ZL1TC1

Elected unopposed

Committee

Nominee Brendon ZL1XXX

Moved Matt ZL1YOT Seconded Ian ZL1AOX

Nominee Greg ZL1GSG

Moved Darryl ZL1TCI Seconded Matt ZL1YOT

Nominee Darryl ZL1TCI

Moved Greg ZL1GSG Seconded Matt ZL1YOT

Nominee Vaughan ZL1VH

Moved Basil ZL1TOW Seconded Matt ZL1YOT

Head Repeater Trustee

Nominee Vaughan

Moved Matt ZL1YO Seconded Brendon ZL1XXX

Elected unopposed

AREC Section Leader

Nominee Dave ZL1TIA

Moved Matt ZL1YOT Seconded Darryl ZL1TCI

Elected unopposed

AREC Deputy

No Nominations

ZL1BQ Callsign Trustee

Nominee Matt ZL1YOT

Moved Ross ZL1DRB Seconded Basil ZL1TOW

1 vote against, carried on voices.

Spectrum Editor

Nominee Peter ZL1UKG

Moved Matt ZL1YOT Seconded Darryl ZL1TCI

Elected unopposed

Klondyke Tower Trustee

Nominee Vaughan ZL1VH

Moved Matt ZL1YOT Seconded Darryl ZL1TC1

850 Manager

Not voted on

AGM General Business

No general business.

AGM Closed 8:15

An SGM was held prior to the August 2020 General Meeting to consider the altered Minutes and Reports of the AGM of November 2019

Present – 14 members as per the attendance book, ZL1XXX via Teams.

Apologies: Basil ZL1TOW, Dennis ZL1TAY, John-Henry ZL1JHW

Moved apologies be accepted: ZL1VH, Seconded ZL1YOT

Carried

Special General Meeting

The Special General Meeting held 10 August 2020 was to consider the following:

1. To approve the minutes of the 2018 Annual General Meeting of the Auckland VHF Group
2. To approve the minutes of the 12 November 2018 General Meeting of the Auckland VHF Group
3. To approve the 2019 Financial Report and Accounts of the Auckland VHF Group

President Matthew ZL1YOT introduced the matters to be dealt with and as there were no questions or discussion, put the following motions:

“I move that the Minutes of the 2018 Annual General Meeting of the Auckland VHF Group held on 12 November 2018, as corrected and re-published in Spectrum for July 2020 on pages 10 to 13 be approved. “

Moved ZL1YOT **Seconded** ZL1TCI **Carried**

“I move that the Minutes of the November 2018 General Meeting of the Auckland VHF Group held on 12 November 2018, as corrected and re-published in Spectrum for July 2020 on pages 8 to 10 be approved.”

Moved ZL1YOT **Seconded** ZL1TIA **Carried**

“I move that the Financial Accounts for the year ending 30 September 2019, as published on pages 6 to 10 of May 2020 Spectrum be approved. “

Moved ZL1YOT **Seconded** ZL1TCI **Carried**

“I move that the Treasurer’s Report for 2018-2019, as published on pages 13 and 14 of July 2020 Spectrum be approved.”

Moved ZL1TUX **Seconded** ZL1YOT **Carried**

There being no further business, the President declared the Special General Meeting closed.
SGM Meeting closed at 2000.

Auckland VHF Group Presidents Annual Report November 2020

Well, that's another year pretty well gone, and what a year it's been. It would be amusing to see some of our members' year planners posted on the club website!

For many of us it's the beginning of a new life. The social and economic consequences may yet devastate us, as they may in other countries. While we may have pretty much escaped the medical infliction rates of those countries it looks like there will be more and more of our businesses and jobs going down the gurgler, with many households unable to meet their mortgage repayments. The government will need to continue to "borrow" buckets of money to keep things moving, and because we are unlikely to ever pay those "loans" back they may have to sell our souls for it. Our land.

This virus has seen us swing into online meetings, which are now becoming familiar to us who are new to the technology. It is also proving convenient for those unable to attend meetings physically.

For me, personally, I am delighted to be back to meeting up with everyone at the clubrooms. But it has irritated me that we have not been able to hold construction nights because I have done very little in the line of RF electronics and would like to get to grips with baluns, converters and parrot repeaters. It is good that radio classes are underway again. I wonder if we should put a presentation together and take it to secondary schools (or even intermediates) to stimulate interest in radio technology that would surely have less competition than general computing technology.

I have been frustrated in my efforts to raise funds for Klondyke maintenance. I guess we can't be good at everything. And I've definitely confirmed I'm not an avid fund raiser!

I would like to thank the others on the committee who have worked diligently and skilfully on their various roles and projects. The tasks they have done are completely beyond my capabilities! Leading this team (usually from behind) has been a pleasure, and I enjoy everyone's company.

Last week I offered to stand down from the presidency if anyone else wanted the position. Then I could harass the new committee for not achieving what I have been unable to achieve. Haha! But they seem to want me to stand again.

Cheers Matthew King
022 6493310

Matthew holds a leg of the 60' hydraulic tower. "It needs a bit of work done on it."



Digital Presence Report for Spectrum

The digital presence team are happy to report excellent progress on the clubs digital face this past year.

Website

The website is ranking well for search terms around Amateur Radio, VHF, Auckland, Ham etc. The site has had good uptime and traffic is increasing slowly but steadily
We have had three contact or membership enquiries off the site in the past year
We have added additional pages

Teams

The big news this year has been taking the club meetings online via Microsoft teams – this has been very successful and we have seen good attendance at both club meetings and Simon ZL1THH's Monday tech sessions.

The install of the system at the club means we can host live, teams or hybrid meetings where some participants are IRL and some are via Teams. The club has its own Teams account now and at the time of writing the new meeting links are being setup.

Google Group

We have setup a google mail group to help everyone stay in touch – this has been working well – please email webmaster@aucklandvhf.org if you want to be added to it.

Future Directions

New Website Pages

We are trailing some new pages on the website around items for trade or sale – please take a look and let us know if you want to load anything

Forum

We are considering creation of a forum which will replace several of the other website pages, bringing them into one community style area – watch this space.

Online Membership Renewals

The club online store has made several sales and has had membership added to it so this can be purchased online by credit card – this will be publicised to members once this is tested and bedded in.

Brendon Reid
Automation Associates Ltd
021 970 785

Auckland VHF Group Inc., 2019-2020 End of Year Treasurer's Report

This report is provided for the End of Year AGM Meeting, but does not include results of the 2020 financial year, as they are still being processed.

The club over the last 2 years, has had a large losses on the books, this is due to maintenance and lease agreement for the Klondyke site. This is likely to continue due to maintenance for the tower is required, and if grants are not received for the projects outlined below. Painting, cable tray and aerials all need to be done. A lot of this work needs to be completed by third party contractors.

The club has cash reserves that are available for emergency payments, but need to look at grants and donations to cover the major work required. These grants need to be obtained before work on the projects start, otherwise the funds must come out of the club funds.

The club will need to look at the activities, and see what it can do and needs to be put on hold until money can be sourced, rather than be impulsive and keep doing things that have not been budgeted for and take money away from important commitments.

The onset of Covid-19 in March has disrupted the operation of the club and changes have been made to make meetings more accessible to members, and providing live meeting sessions from the clubrooms. A wireless Internet connection is has been installed to validate usability of Microsoft Teams as a resource for members that cannot make the meetings. The changes will also give visitors access to the meetings, using Microsoft Teams.

Club Projects;

Some of the Projects the club has in progress, but most of these are not funded.

We need to get these priced and where the money is coming from, (Grants Preferably) before we start them. We cannot use the grants if we start working on the projects.

Klondyke Cable Tray Replacement (Waiting for Pricing) (Urgent)

Klondyke Tower Painting (\$50,000 approx quote was 2 years ago)

Klondyke Aerials Maintenance (Require Estimation)

Nihotapu Hut (Beacon Hut) Beacons and Aerials. (Requires Estimation)

Clark Tower Trailer update (Require Estimation)

Clubrooms, Equipment for Audio – Visual configuration at the clubrooms, (Installed but not Estimated)

Leases to be updated for Klondyke space (Due November 2020)

Klondyke Land Rental (require \$1500.00 per year, Due Mid 2029)

Water supply to clubrooms. (Payment of Water Supply)

Payment of Subscriptions, Goods and services to the club.

The club is losing money on credit cards for purchases using credit cards, approx \$2.00 for full membership. I will proposal that the club gets its full Subscription, for all payment options, as paying by bank transfer. If payment by any other method that takes money from the sale, ie: **Credit Card**, the purchaser will be charged a surcharge to pay for the charges by the supplier. (This is common practice even for government departments, NZ Police, NZ Transport Agency)

Auckland VHF Group End of Financial Year and Annual General Meeting;

A decision needs to be looked at about moving the AGM and / or the end of the Financial year, so there is a longer period for getting the accounts organized and reviewed. I believe 3 months should be a minimum between the end of financial year and AGM. Changing the start of the membership year, and or do we change the month the person joined.

The Membership has slightly increased over the year, and we thank all the members for supporting the club and its activities. The club also needs to have more support for the committee and roles to assist with various projects.

I wish to thank Laurie ZL1ICU and Marlene ZL1MYL for their continued donation towards the costs of the internet connection installed at Klondyke and operation / use and costs associated with the D/Star repeater also located at Klondyke.

Summary

The club needs to get the FULL payment for these services, as the club is adding more services for its members. If we can get more members and grants, then the club cannot continue to spend money it does not have. The club needs to prioritize and work on getting the money first before progressing onto the next project.

Finally, I would like to thank Basil Orr (ZL1TOW) for his work acting as honorary reviewer for the accounts.

George Raffles, ZL1TUX
Treasurer
Auckland VHF Group Inc
5th November 2020

Repeater Report 2020

Annual report on the status and work done on repeaters operated by the Auckland VHF Group.

670 Repeater

This repeater is located in the Airways Corporation building at Ruatowhenua and gave little trouble during the year. One site visit was made in July to check the equipment, coax feedline and antenna. No problems found. Airways Corporation have implemented a site safety plan and we are required to sign off on this when visiting the site and completing the visitor register.

This repeater continues to be used for Internet Repeater Linking (IRLP). My thanks to Ian ZL1VFO who provides the node for this facility. As a sideline, the IRLP facility has helped increase the usage of this repeater – always a plus!

690 Repeater

This repeater is located in Chorus premises on the Bombay Hills. The repeater gives reasonable service but since 2017 has had a damaged antenna. This has resulted in the repeater being “deaf” to the south. A site visit is needed to investigate/repair or replace.

This is proving very difficult to arrange. Although the site is under Vital (was TeamTalk) management, they in turn have contracted Downer to undertake the required maintenance. When TeamTalk became Vital in April 2019, a number of staff changes occurred and finding “someone” who is prepared to give us the necessary authorization to visit the site is proving very difficult. Currently a two-pronged approach using NZART resources is being explored.

850 Repeater

This is currently off the air. Site negotiations with the Department of Conservation to continue to site the equipment at North Head came to an unsatisfactory conclusion during 2017, complicated by the fact that the land is now owned by local Iwi.

An approach to have it located on the Auckland Hospital building did not eventuate and we are currently trying to get approval to relocate this repeater to 400 East Coast Road on the AEM building. The application has been in place for some time and we await a favourable decision.

DMR UHF Repeater

This repeater was established at Quinns Road in the Waitakere's in 2015 as part of the national AREC digital mobile radio network. Frequency is 439.7 MHz with a -5 MHz split. Minor problems with the internet connection mean it's not always available, but generally the reliability is very good. The repeater does not get much use by AREC in Auckland but remains available for use as required. Coverage is primarily the Auckland CBD but can be accessed from the North Shore and southern parts of the central city area.

Brynderwyn Site

Although owned by the Group, the majority of the maintenance at this site is undertaken by members of Whangarei Branch, in particular Don Ewen ZL1DTE and Peter Aitken ZL1TVP.

From this location the 560 2m repeater gives excellent coverage of S.H.1 and surrounding districts. The National System link operates through this site and on to the Bay of Islands. The Auckland Regional Helicopter Trust air-band repeater was removed in 2019, so we have some capacity at this site for another tenant. Our grateful thanks to members of the Whangarei Amateur Radio Club for their assistance in maintaining the site in good condition.

Klondyke Site

This remains the Group's largest site with the National System links to Egmont, Brynderwyn, and Kaimai, the 6652 Repeater and 9875 National System access. This site also has the 2m and 70cm D-Star repeaters, plus a 6m repeater. A new repeater controller produced by Richard Gamble ZL1BNQ was installed on the 6625 repeater during 2016 and is working well.

The original 20+ year old 1802 CMOS repeater controller on the National System, controlling the local UHF repeater as well as the links north, south and east is still in service but remains a potential weak link.

Thanks to Richard ZL1BNQ, a new micro-controller has been built and was trialed at the site in October. The testing found some small software changes were needed and these are currently being implemented.

The remote controlled HF system at Klondyke is again working well, thanks to the removal of a number of switch-mode power supplies in the equipment building. Our tenant Compass Communications has been most cooperative in getting the worst of these replaced

Work done by TBS Farnsworth late 2019 has made the tower structurally sound again. Currently we are fundraising to get additional funds to pay for a complete re-paint. The other urgent work is to replace the cable trays. This latter work is being budgeted for and should get underway before the end of this year.

My thanks to club members who have assisted with work at various times throughout the year at this site.

Beacons

The Group holds licences for a 2m beacon and 70cm beacon which are located at the Nihotupu site in the Waitakere Ranges. The antennas for these beacons and the wooden cross arm they were mounted on came down during a winter storm a few years ago and have yet to be replaced. Thanks to Greg ZL1GSG, we have new beacon hardware ready to go for 2m and 70cm, with a new 23cm beacon also under construction. It is hoped to have these back on the air before the end of 2020.

Vaughan Henderson ZL1VH
Head Repeater Trustee

Trading Table Manager's Report 2020

The 2020 year, as in recent years, has not contributed as much financially to the Group's income as I would have liked. Sales attended were in Hamilton and Western Suburbs where sales of connectors and "make an offer" items made up most of the sales.

A significant development this year has been having the Trading Table on-line via our web site. This has not yet shown the growth in sales we had hoped for, but I am confident it will grow as our ranking in web site searches improves.

The Trading Table on the web site uses Woocommerce and allows me to update and add/delete items easily. It is still a work in progress, and we need to improve the quality of some of the images.

In addition, the .PDF version of the Trading Table list is also downloadable from the web site for people who want to do that.

I still plan to do more with TradeMe to list items we have large stocks of and this in turn should bring in more revenue to help with club projects.

Our regular "Open Days" at the clubrooms on a Saturday morning were popular and it would be good to try and get a small team of volunteers to continue this activity. Currently the clubrooms are only open in conjunction with our committee meetings, general meetings and project evenings.

Finally, my thanks to all those club members who have willingly given of their time to help pack up, transport, unpack and help with sales at the locations away from Auckland. Without your help we could not continue our successful Trading Table operation.

Vaughan Henderson ZL1VH
Trading Table Manager

Minutes of the General Meeting of the Auckland VHF Group Inc.

Held on Monday 12 October 2020 at the Clubrooms, 30 Hazel Avenue, Mt Roskill

Present – 14 members and 6 visitors as per the attendance book. ZL1XXX and ZL1UXB via Teams.

Apologies – ZL1TIA

Minutes of September General Meeting as published on Pages 4 and 5 of October Spectrum be approved: Moved ZL1UKG Seconded ZL1TCI Carried
Matters arising: NIL

Correspondence:

Inward

ASB Bank accounts to Treasurer
North Shore Radio Club newsletter
Papakura Radio Club newsletter
Hibiscus Coast Newsletter
Musick Point Radio Group Newsletter

Outward – nil.

Reports:

NIL

General Business:

George ZL1TUJ thanked the Group for getting the handrails installed up the entrance way steps as this meant that he could again attend meetings.

ZL1VH reported on a successful attendance at the Hamilton Radio Club's Market Day on 5 September. Members were reminded that our November meeting was our AGM and it would be good to have some new people on the committee.

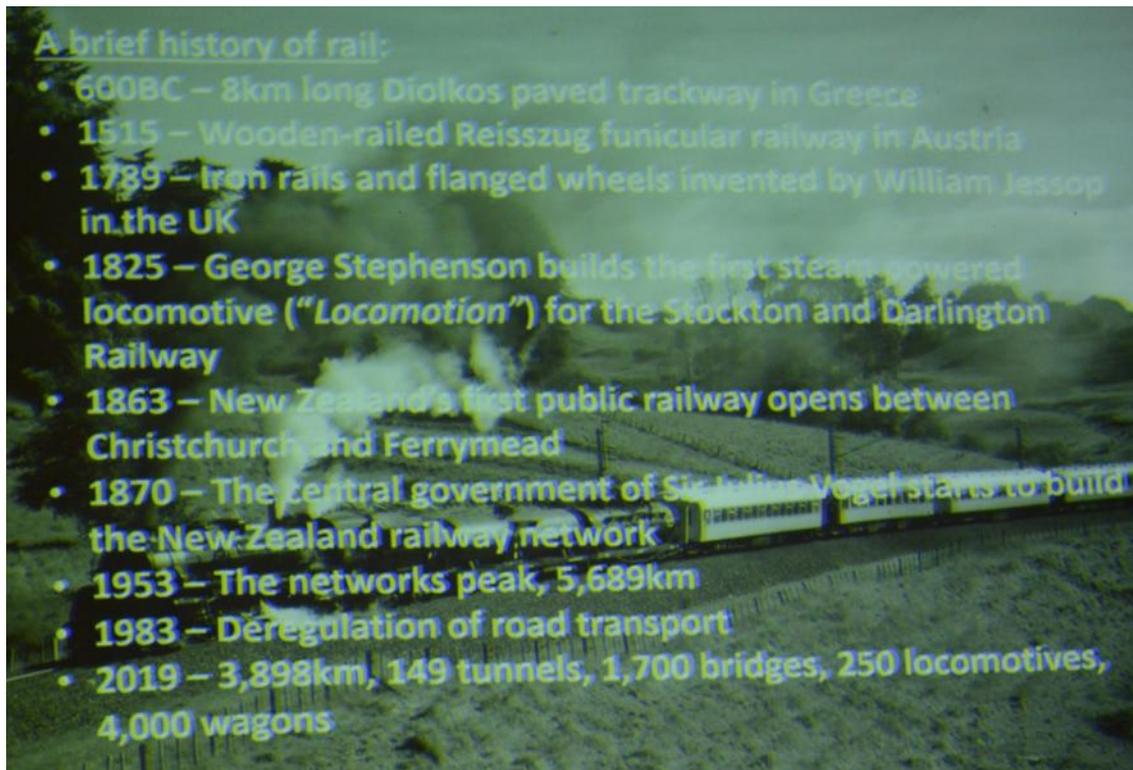
The meeting closed at 1955.

This was followed by a presentation by Soren Low ZL1SKL on the history of railway signaling technology in New Zealand and how KiwiRail uses radio technology to improve its operational efficiency. A report with photos will be in the November issue of Spectrum.

The meeting concluded with supper.

E & O.E. ZL1VH

Soren Low on the history of radio communication for NZ Rail



In the days of steam and coal a train had a minimum crew of three, passenger trains requiring more. There was always the Engine Driver, Fireman and Guard. In the early days the guards wagon was important as the breaking wagon before the days of all goods wagons having pneumatic couplings with individual breaks on each wagon powered from the engine. The Fireman was still required. The early Diesel engines kept the Fireman but the Guard had less to do and was eventually dispensed with. The controls were complex and a crew of two were required to manage them. The modern Diesel engines rely on computer control and presentation which can be managed by the Driver and the crew has been reduced to one.



To provide a safe network the communications had to cover the whole network for single manning of a train. The standard adopted requires a signal level of not less than 1 uV for not more

than for more than 100 m of track. Lots of new repeaters were needed to provide coverage. A “Cell Call” identified which repeater was being used which located the train back to the Control Centre. The new radios on the Engines are able to choose the best repeaters to use from their current location. Train Drivers don’t want to know how to adjust radios. They are supposed to work all the time.



This account was produced from notes made by the Editor during the presentation and from photos projected during the presentation.

Results of the 2020 Microwave Contest – 3/4 October

VHF-UHF-SHF-EHF Contests, as administered by the Auckland VHF Group Inc; on behalf of all VHF groups, including all New Zealand radio amateurs and supported by NZART.

Overall Winner	Station	Points
	ZL1GSG	1109
	ZL1SWW	878
	ZL1TPH	83
	ZL1AOX	76
	ZL4HSV	4

Band winner	Station	Points
23 cm (1296MHz)	ZL1SWW	203
	ZL1GSG	164
	ZL1TPH	83
	ZL1AOX	76
	ZL4HSV	4

Band winner	Station	Points
12 cm (2400MHz)	ZL1SWW	81
	ZL1GSG	81

Band winner	Station	Points
9 cm (3400MHz)	ZL1SWW	162
	ZL1GSG	162
Band winner	Station	Points
	6 cm (5760MHz)	ZL1GSG
	ZL1SWW	162
Band winner	Station	Points
	3 cm (10368MHz)	ZL1SWW
	ZL1GSG	162
Band winner	Station	Points
	1.2 cm (24048MHz)	ZL1GSG
	ZL1SWW	108

Greatest DX	Stations	Distance
23c	ZL1SWW – ZL1RQ	240 km

Active Stations (9 in total)

ZL1AOX, ZL1BK, ZL1GSG, ZL1IU, ZL1RQ, ZL1SWW, ZL1TPH, ZL3DC, ZL4HSV

Operator Comments

It was great to be out there at Pukematekeo. Nice sunny morning and managed to activate 6 Bands. It was more of a activity day then a contest. Unfortunately, most of the activity was in Auckland, but thanks to Royden for activating the Manawatu.

We were active at Mc Cahill Views. This carpark overlooks Auckland to the west. Pretty much activated every band from 1296 MHz to 24 GHz. It was a beautiful day to boot. Bit of a test day and highlight was cracking Alan ZL1RQ on 23 cm which is not an easy path into Auckland at 240 km. Only used the dish feeds for many of the bands which works for close in contacts at 30 + km.

Thanks to all that participated
 Simon, ZL1SWW
 Greg, ZL1GSG



The Ultimate Couch QSO!



Greg Dishing out the Contacts

The web site of this club lists this new repeater for wide spread use. It has an excellent antenna site and has proved popular at the initial 2 W transmit power. It was off the air earlier in 2020 for an upgrade to 25 W transmit power. It may be accessible from NZ during enhanced propagation across the Tasman during Summer.

The Illawarra Amateur Radio Society Inc. (IARS)

is pleased to announce the testing of a Simplex Repeater operating on the 23cm band.

What

- FM Simplex Repeater operating on 1296.850MHz
- RF Power 20 Watts.
- Vertical Omnidirectional Antenna of 11dB gain.

Where

- Maddens Plains, Grid Reference QF55LR.
- Latitude: 34.27Deg South Longitude: 150.94Deg East
- Height: 371 Metres above sea level. (Not including the height of the tower).

Purpose

The purpose for the development of this particular repeater is;

To encourage interest and experimental development in the higher bands such as 23cm.

It can be used to assist amateur radio operators to develop their own station transmitters, receivers, RF amplifiers, pre-amplifiers and antenna design.

Test the operators experimenting with various modes.

It is a beacon which can be used to monitor propagation on the 23cm band.

Basic Description

The general principle of the repeater is that it is simple.

The transmitter stages consist of a 2 Metre exciter, followed by a transverter.

The transverter has an IF input of 144.850 MHz, up to, but no greater than 1.0W or else it may be over driven. The RF output is of the order of 2.0W. The next stage is the RF PA of 25W.

The memory of the controller chip has been programmed to function for a period of 150 seconds (2 minutes 30 seconds) more than ample time to conduct any form of experimental test.

The antenna is a vertical omni-directional antenna with approximately 11dB gain.

Operation of the Beacon

Approximately every 10 minutes a string of Morse Code will be transmitted from the beacon.

The interesting part of this Morse code is that it is part dynamic.

There are two values which are actively monitoring the unit on site.

The first is the Temperature inside the cabinet in degree Celsius

The second is the system voltage currently at the repeater site.

The Morse code message is structured as follows:

VK2RMP experimental beacon test QF55LR TEMP XX.X Deg. SYSTEM VOLTS XX.X

During the Beacon operation the Simple section will not operate.

The beacon will not transmits whilst the simplex repeater operation is in progress and will wait until the simplex process is complete.

Operation Procedure of Repeater

It is a simple process after selecting the Repeater frequency.

It is recommend you wait for at least 10 seconds or press your PTT once for a short test, if a tail and beep comes back to you, your good to go.

If not, it may be that your signal is not getting in OR someone is using it on the input that you cannot hear.

Pressing the PTT quickly to see if it responds (similar to a duplex repeater tail) will not interfere with someone else's transmission, as long as the PTT is quick, and not multiple times, this could be annoying for someone trying to record.

Summary :

One quick **one second** PTT should give you a Tail and a roger beep. If not someone is using the repeater **OR** your signal is not been received by the beacon. If there was no response it may be good to wait for at least 150 seconds (2 minutes 30 seconds) to see if the unit was in use.

Once deciding to commence your transmission it is best to operate the PTT button for about 1 second before speaking or transmitting data or pictures. The reason for this is to stop any clipping at the start of the transmission. The repeater has a 0.5 second noise suppression timer to avoid false triggering. CTCSS was not used to do this as many experimenters don't have encoders fitted to the 23cm gear.

Once you release the PTT there is a one second delay before the recording stops and the current reception cycle is terminated, this is to allow for short signal drop off's during your over. Without this timer, a signal drop off may prematurely terminate your over and begin re-transmitting what you have just transmitted, whilst you are still recording, rather messy.

After this one second delay the repeater will commence to re-transmit your over. When the repeater has concluded your transmission you will hear an audible 'Rodger Beep' of approximately 750Hz.

It is after this Roger beep that a respondent or yourself may commence the next transmission. If you do not hear the 'Rodger Beep' wait until you do.

Please make the transmission long enough to finish the job and short enough not to cause any others to be impatient.

Remember to be patient - including hearing the "Roger beep" - and avoid any difficulties. When transmitting data modes such as RTTY or SSTV, ensure the transmission **DOES NOT** exceed the 150 second (2 minutes 30 seconds) time window, because if you do, the signal **will be unintelligible and fail.**

Keep to the simple operating procedure and you will be able to enjoy our hobby that much more.

73

Notes by Rob Heyer VK2XIC
Vice President.



Amateur Radio Emergency Communication.

**Volunteers in radio communications.
Using our resources to help the community.**

INFORMATION

The Auckland VHF Group has an AREC Group that works closely with Auckland Council Emergency Management. They provide advice, resources and manpower to assist in times of need.

The AREC section is headed by Group Leader David Dingley ZL1TIA.

From time to time the VHF Group has training sessions and exercises. Members also assist with sports events, parades and other community activities. For further information about AREC please see the NZART web site: <http://www.nzart.org.nz/arec/>

JOIN BRANCH 66 AREC

All members of the Auckland VHF Group are encouraged to join the AREC section. Your contribution, large or small is appreciated by all involved. For further information about joining Branch 66 AREC contact the Group Leader:

David Dingley ZL1TIA	828 9394 mardayak@gmail.com
George Raffles ZL1TUX	021 735 361 z11tux@xtra.co.nz

AREC News:

This year's nationwide test of Emergency Mobile Alert will take place on the evening of Sunday 22 November.

Emergency Mobile Alert is a way of receiving information about emergencies in your area. If your life, health or property is in danger, Emergency Mobile Alerts can be sent to your mobile by authorised emergency agencies, without needing to sign up or download an app.

From the **National Emergency Management Agency** newsletter.



AUCKLAND VHF GROUP (INC)

SUPPORT THE EFFORTS OF THE VHF GROUP THROUGH YOUR
SUBSCRIPTION

SUBSCRIPTIONS FOR 2020

THE SUBS GO TOWARDS;

- Maintenance and on-going improvements to beacons, repeaters and linking systems for the national system, including the Klondyke repeater site.
- Providing on-time and free access to spectrum magazine as soon as it is available.
- Providing facilities for good speakers and lecturers at our general meetings.
- Discounted access to our trading table goodies.
- Access to test equipment and technical help when needed.

FULL MEMBERSHIP **\$55.00**

ASSOCIATE MEMBERSHIP **\$50.00**

FAMILY MEMBERSHIP ADDITIONAL **\$20:00**

SEE ATTACHED MEMBERSHIP RENEWAL FORM (next page)

**REMEMBER TO KEEP US INFORMED OF YOUR EMAIL
ADDRESS!**

OTHERWISE WE CANNOT SEND YOU SPECTRUM!



Thought for the month:

“The most difficult thing is the decision to act. The rest is merely tenacity.”

NAME	Mr/Mrs/Miss/Ms	Christian or given	Surname
Address			
		Phone: (home)	
		Phone: (work)	
		Phone (Cell)	
		Email	
Occupation:		Callsign	
NZART Member		Branch assigned	
AREC Member		Branch assigned	
Category			To pay
Membership	Full	\$55:00	\$
New/Renewal/ Change	Associate	\$50:00	\$
Receipt #	Family Add	\$20:00	\$
Donations	Auckland/Klondyke		\$
	Brynderwyn		\$
	Data/D-Star		\$
	IRLP		\$
	Other		
	Beacon / Repeater / Links / Licence donations		\$
		Total	\$
Payment			
Circle one -->	Cash	Cheque	Internet deposit
Invoice/Statement re- quired	Please Advise Treasurer		
Internet	<p>To account ASB 12-3011-0830580-00. Account name is: Auckland VHF Group Inc. Include your Name/Callsign and Sub or RepeatDon etc in particulars field, for us to track. To sponsor a specific repeater, nominate the repeater and a backup repeater for the donation, in case the initial choice has been taken. The sponsorship is a minimum of \$50.00 which covers the licence for a year. Note: Please return the Form to the email or postal address given below to allow us to update our records. (Please Note the Account Number and email may have changed from last year) Email to: treasurer@aucklandvhfgroup.org.nz</p>		
Post	The Treasurer, Auckland VHF Group Inc., PO Box 10138, Dominion Road, Auckland 1446.		
In Person	Bring this form and payment to the next club meeting, 2 nd Monday of the month or to the Committee meeting last Monday of the month.		

The Auckland VHF Group Inc Branch 66 NZART

gratefully acknowledges the sponsorship of Branch 66 Beacons, Repeaters and Fixed Links licence fees and the Group's repeater operations by the following radio amateurs and NZART Branches for 2020

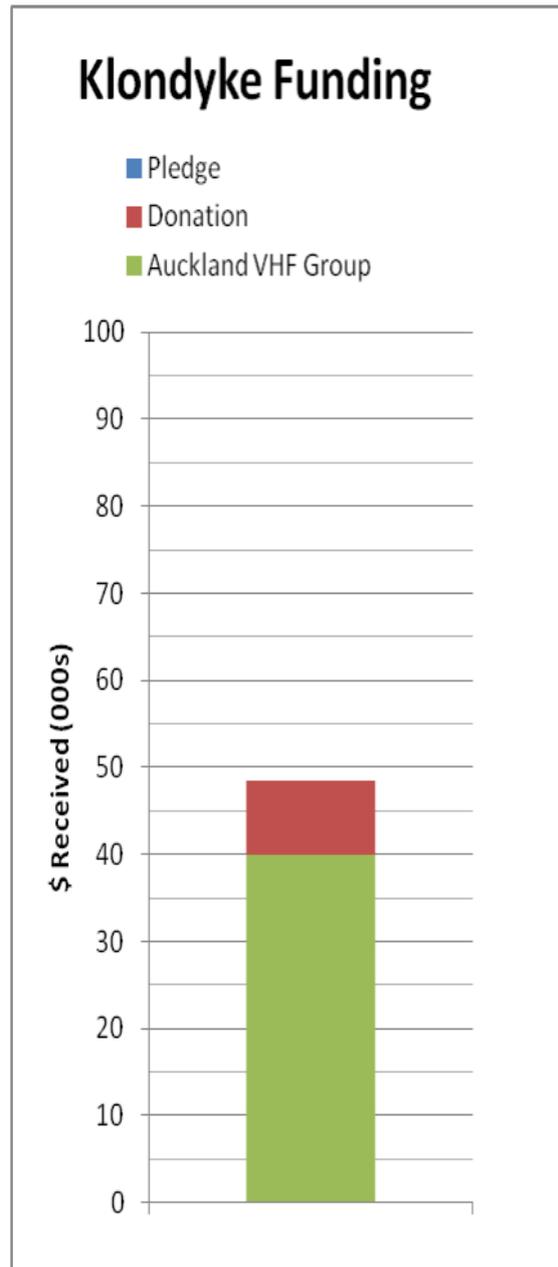
<u>Repeater frequency</u> and name	Repeater location	Sponsorship advised for 2020	Amount paid
53.725 Repeater	Klondyke Road	Gwynne Rowe	\$50
144.253 Beacon	Nihotupu	Stability testing	
145.625 Data Rptr	Klondyke Road	Not operating	
145.650 D-Star repeater	Klondyke Road	Laurie/Marlene Mathews	\$50
146.625 Repeater	Klondyke Road		
146.700 Repeater	Ruaotuhenua	Dennis Thorton	\$50
146.900 Repeater	Mt Puketutu Radio	David Wilkins	\$50
432.253 Beacon	Nihotupu	Stability testing	
438.175 D-Star repeater	Klondyke Road	Laurie/Marlene Mathews	\$50
438.500 Repeater	North Head	Not operating	
439.850 Link Tx to Kaimai	Klondyke Road	Franklin Radio Club	\$50
439.875 Ak Nat Sys Rptr	Klondyke Road	Franklin Radio Club	\$50
439.900 Link Tx to Egmont	Klondyke Road	Franklin Radio Club	\$50
439.950 Link Tx to Brynderwyn	Klondyke Road	Franklin Radio Club	\$50
1291.900 Repeater	217 Glenfield Rd	Soren Low	\$50
		Total Sponsorship	\$500
NZART Inc: Branch/Personal donations			
Papakura Radio Club		\$500	
Auckland Branch		\$100	
Manukau Radio Club		\$100	
George Marr, ZL1TUJ		\$50	
Kylie Peterson, ZL1KM		\$50	
	Donations	\$1300	
Current as at 25/08/2020			

The Auckland VHF Group, Branch 66, would like to thank all those who came forward to sponsor the licence fee for our Beacons, Repeaters or Fixed Links for the year 2020 or donate towards the Group's repeater Operations.

**Klondyke Tower
Donations towards Maintenance**

Target 100,000

Name	Donation	Pledge	Tower	63,245.00	Other	27,268.25
			GST	9,486.75		
Donations 2018 - 2019	6550.00					
			Total	72,731.75	Total	27,268.25
Charles Graves	15.00					
Ian Ashley ZL1AOX	500.00		Auckland VHF Group	40,000.00	40.00	
Keith Dix ZL1BQE	50.00					
Margaret Dingley ZL1AYV	100.00					
David Dingley ZL1TIA	100.00					
Jenny Dingley ZL1TDB	100.00					
Russell King ZL1WITT	20.00					
Basil Orr ZL1TOW	500.00					
Raffle - Meter	339.00					
Martyn Seay ZL3CK	100.00					
Brian Faithfull	50.00					
Mark Howe	20.00					
George Marr ZL1TUJ	50.00					



Total	8494.00	-
Percent	8.49	0.00

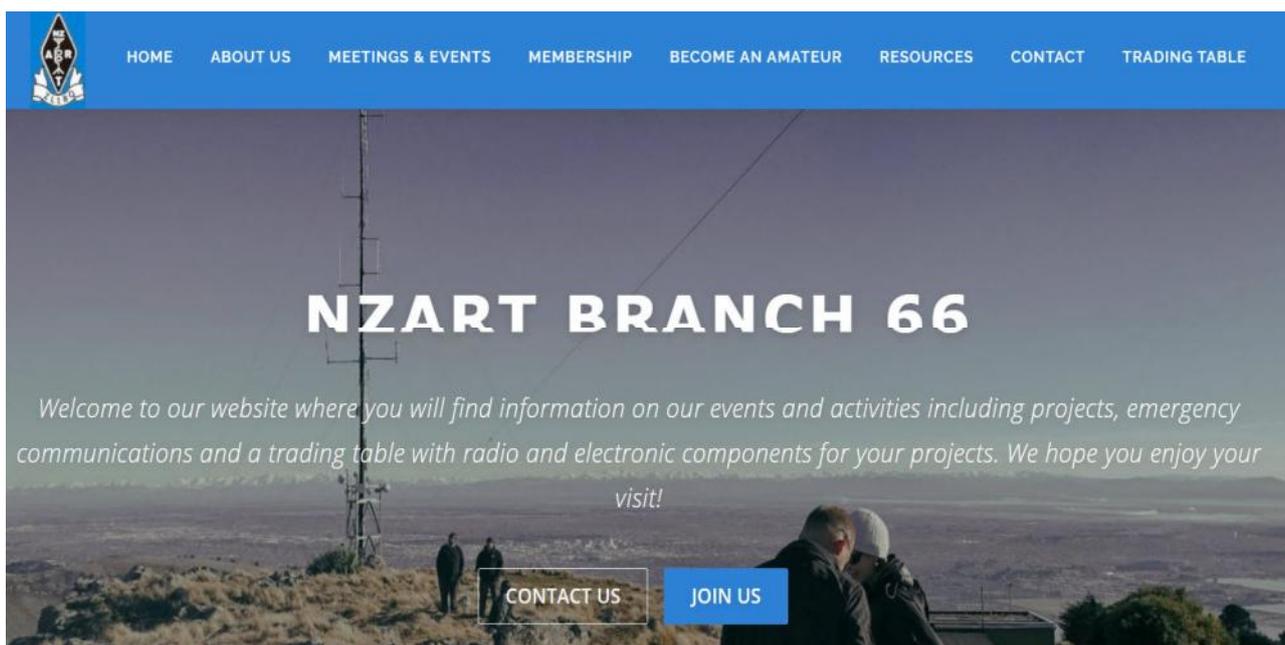
TRADING TABLE

Currently our Trading Table is only open on meeting nights but wait, there's more!

Trading Table is now on line. Navigate your way to our new look web site at <https://aucklandvhf.org/> and click on TRADING TABLE (the most right hand tab).

Wait a few seconds and the on-line version of the Trading Table will pop up. From here you can browse the various sections, dig deeper to look at what's available and even place your order online.

If you prefer to just look at the Trading Table List, just hover your mouse pointer over the TRADING TABLE and a pull down list will appear. From this you can access the full trading Table list and download it in .PDF form.



Recent Additions to our Trading Table Stock

Electrolytic Capacitors SMD	(Packed in bags of 10 for 50c):	
10uF 16V electrolytic	47uF 16V electrolytic	100uF 16V electrolytic
Resistors:		
50 Ohm 0.4W +/-1% tolerance.		10 for 50c
0.25 Ohm 5W wire wound		
0.27 Ohm 3W Wire wound vertical pcb mount		
Siemens Gas Surge Voltage Protection Tubes:		
SVP Tube type B13-A230. 230V D.C. minimum strike voltage.		\$1.00 for 10
2-electrode type with wire leads, pre-bent for 10mm hole spacing.		
ETAL P1200 600:600 Ohm line matching transformer		\$3.00 each
Quartz Crystal: 6.000 MHz HC49SMD package marked CQ6.0000		\$1.00 each
BNC plugs 50 ohm R/Angle for RG58 coax (solder/clamp type)		\$2.50 each
Relays:		
12V coil, DPDT 1A non-latching (EB2-12NU) SMD package		\$2.00 each
12V coil, DPDT 1A 2-coil latching (EB2-12TNU) SMD package		\$2.00 each
LED Holder panel mount 5mm Kingbright nylon in bags of 50		\$3.00 per bag
Lacing Twine black plastic, in 10m rolls.		\$1.00 each
Ceramic feed-thru insulators, 500V rating, solder in.		50c bag of 10
Semiconductors:		
RURP30120	1200V 30A ultrafast switching diode	\$1.00 each
1SS55	Silicon switching diode. 70V 100mA DO-35	10/\$1.00
2N5777	NPN Light detector, Photo-darlington 45V TO-92	\$0.50 each
2N6027	Programmable Unijunction Transistor 40V 300mW	\$0.10 each
2N6122	NPN TO220 60V 4A 40W GP amplifier	\$0.50 each
2N6292	NPN TO220 70V 40W GP amplifier	\$0.50 each
2N6609	PNP TO3 140V 16A 150W audio/driver	\$1.00 each
BUK457-500B	Power MOSFET 500V 9A 150W TO-220	\$2.00 each
SGP15N60	NPN IGBT 15A 600V fast switch TO-220	\$1.00 each
SGP20N60	NPN IGBT 20A 600V fast switch TO-220	\$1.00 each
UDN2965W-2	Dual high power stepper motor driver. 20 to 50V out at 4A SIP package.	\$1.00 each
LM3909N	LED driver/flasher. 8-pin plastic DIL package.	\$0.5each
LM3911N	Temperature Controller IC. 8-pin plastic DIL package.	\$10 .00 each
LM3914N	LED Bar-graph driver. 18-pin DIP plastic package.	\$5.00 each
PIC16C54B	8-Bit CMOS Microcontroller. 18 pin SOIC SMD package Limited quantity	\$2.00 each