

April  
2026

# THE MUSE



In a recent survey of  
3 people, two liked  
this newsletter, one  
preferred crochet

Newsletter of the MUSICK POINT RADIO GROUP (INC.) - NZART Branch 86  
Incorporating The Society for the Preservation of Amplitude Modulation (SPAM)  
and **Green Radios On The Air (GROTA) News**

*Musick Memorial Radio Station, Bucklands Beach, Auckland. Call Signs ZL1ZLD, ZL1ZLF*

<b>Club Open Times</b>		
Sundays	10:00 ~ 16:00	
Wednesdays	10:00 ~ 16:00	
Fridays	19:00 ~ 22:00	
<b>Online</b>		
Musick Point Website	<a href="https://musickpointradio.org">https://musickpointradio.org</a>	Webmaster: ZL1NZ
Musick Point Blog	<a href="https://mprg.zlham.net.nz">https://mprg.zlham.net.nz</a>	
SoftRock SDR (80m / 40m)	<a href="http://spamnz.zapto.org:8901">http://spamnz.zapto.org:8901</a>	
KIWI SDR	<a href="http://musickpoint.ddns.net:8073">http://musickpoint.ddns.net:8073</a>	
<b>Nets</b>		
ZL6AM: 3.850 MHz, AM	Fridays at 20.30	SPAM Net
ZL1ZLD: 7.125 MHz, AM	Wednesdays at 11.30	
ZL1ZLD: 145.575, FM	Tuesdays at 19:30	Musick Point Repeater
<b>General</b>		
Club Meetings	Second Sunday of Month	Except May: 3 <sup>rd</sup> Sunday of Month
MuseLetter Editor	ZL3CK	musickpointradio@gmail.com

## Coming Up...

- Next Meeting: **AGM** - Sunday 12<sup>th</sup> April @ 1pm.
- **AFN Net** - Sunday 5<sup>th</sup> April. starting at 0830.
- **ANZAC Day event** on Saturday April 25<sup>th</sup> 2026 - AM and CW



*Fiddler on the Roof – A Birdseye view of Musick Point Memorial Radio Station*

## From the Chair

As we head towards Easter, it marks the beginning of another 'Club Year' in April, and closing in on another Annual General Meeting. It also means that we are fast closing in on King's Birthday weekend and the NZART Centennial Conference 2026. This celebrates 100 years since the establishment of NZART and is promising to be an interesting conference with, not only, the Annual General Meeting on the Saturday, but also forums covering a wide range of technical and practical subjects. Of course, there will be the Saturday night Centennial Gala Dinner, which has the theme: "Roaring Forties", where you are invited to dress appropriately, if possible, or at least formally. This will include guest speakers, historical reflections and storytelling, besides entertainment. Make an effort to attend, it might be the last time this is being held in Auckland for many years.

Registrations can be made using the link: [NZART Centennial Conference – Celebrating 100 Years of Amateur Radio](#)

Standing in the park, I was wondering why a Frisbee looks larger as it gets closer ..... then it hit me.

There have been some more efforts to tidy and clean up in the building, but it is a long, slow process which is tedious and tiring. Please everyone, make an effort to spend a short time whenever you are there, to help by finding something that needs doing to help. The Conference is only eight weeks away and, as we are hosting visits, by conference attendees, on the Saturday, we would dearly love to show off the club with it being clean and tidy.

A boy runs in from school. "Dad!" he calls out. "I got a part in the school play – I'm playing a man who's been married for 25 years!"

"Oh, bad luck, son," his father commiserates. "Don't worry, maybe next time you'll get a speaking part."

This last Sunday, Dave, ZL1DL and yours truly spent a hot hour or so on top of the tower, the aim being to install a new antenna. We tried to feed a short length of flexible conduit through a 150mm diameter elbow which carries a number of coaxes from various antennas, through the tower floor into the 'tank room' below. From there, it would be fed through that floor into the repeater room and thence to a small 'PC'.

Although the elbow appeared to be only about half full, we spent a lot of time trying everything we could think of just to get the conduit through, unsuccessfully! I was on my knees with one hand well into the elbow, trying to persuade the conduit through, but was met with the hopeless situation that all those other coaxes took up more space going around the bend than they did just entering the elbow. As I write this, I still have tender areas on both forearms where they were forced against the open end of the elbow.

Eventually, we just fed the cable through without the conduit. Success! After that, it was simple, pulling the cable through and getting it to the repeater level. Dave installed the antenna and zip tied the cable in appropriate places. We moved downstairs and Dave then installed the small PC, fired it up and reported success – finally.

My mother taught me to appreciate a job well done. "If you're going to kill each other, do it outside, I have just finished cleaning."

So, let me get this straight. I go to the grocery store and buy:

Two litres of milk in a plastic bottle, 500g of sliced ham in a plastic bag, a loaf of bread in a plastic bag, a pack of serviettes in plastic wrap, a store made salad in a plastic tub, a plastic bottle of tomato sauce and a plastic bottle of mustard, but they won't give me a plastic bag in which to carry it all home because the plastic bag is bad for the environment?

That's it for now, until next month:

73, and call CQ

David, ZL1DRV



Auckland – we keep you moving

## Oops... Rob - ZL4ROB

Hands up - I bricked my Quansheng UV-k5. A moments inattention and I inadvertently installed an incorrect firmware update. The result: "this parrot is deceased". My radio was totally unresponsive to powering on, let alone being able to put it into upgrade mode.

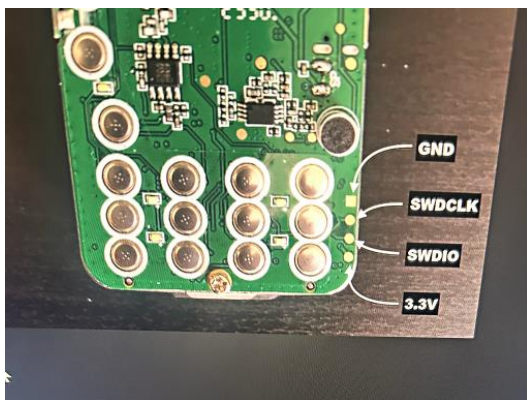
When I had attempted an update using the "Flash with a Browser" method, the progress bar halted at about 75% and the radio became unresponsive. When powering up, there was no flashing of lights or a display of any sorts. It's dead, Jim.

It transpires, that the firmware I had attempted to install was compiled for a different processor chip with a different memory layout. I had overwritten the area where the bootloader resides. The bootloader, being the first code to run at power up, is responsible for getting the radio up and going.

Fortunately, CPUs with internal flash memory have an inbuilt hardware mechanism to provide for programming their memory without requiring any support from internal firmware. One has to have a way of getting code, such as a bootloader into an unprogrammed CPU !



Quansheng UV-K5



PCB showing SWD Connection Points

In the case of the UV-K5 the CPU has a Serial Wire Debug (SWD) port that can be used for programming the internal memory. The SWD port is available as 4 PCB dots on the edge of the UVK5 PCB.

The radio was easy to open to access and remove the board. Using just a small flat bladed screwdriver to lever open the case is all that's required. I temporarily soldered a 4 pin header to the SWD dots.



ST-Link Programmer Attached

To communicate with the CPU, I used a USB connected "ST-Link" in-circuit programmer and debugger. The ST-Link connects to a computer via USB then has a 4 wire SWD interface to connect to the UV-K5 PCB. The ST-LINK obtains power from the USB port of the computer and further provides the 3.3 volts to power the CPU enough to enable memory to be programmed. The radio battery must be removed!

Fortunately, the process for re-flashing the bootloader and application code is documented by Armel (F4HWN) on his GitHub page where he provides PowerShell scripts that you run to somewhat automate the job. Having said that, there is still quite some setup required. Initially I had an incorrect ST-Link driver installed; this caused error codes to be posted. Eventually, all went well and I had a radio that would turn on. As everything in memory had been blitzed, I had to reload a calibration file for the radio, then all was back to good! The parrot lives.

Another Day at Musick Point...



*Ed, ZL1EC wishing for food and entertainment while making jumper cables*



*There is food and entertainment, now get back to work*



*Who said this duct is large enough for more cables?*



*High on a hill was a lonely goat herd  
Is that lederhosen you're wearing, Martyn?*



*900MHz WiFi Ready for Testing*



*Kite lifted antenna – where communication is a breeze*

For the past forty years I've carried a small *Marconi Communications Systems* tag on my keyring. It came from an old broadcast transmitter that had long since been scrapped. I kept the tag when the equipment disappeared, and it has travelled with me ever since through several careers in communications. At the time it was simply a memento from a piece of equipment, but only much later did I realise how neatly it reflected a thread running through my own family history — a thread of signalling, telegraphy, wireless and radio stretching back more than two centuries.



During my years at **Auckland Grammar School between 1974 and 1977**, I developed an interest in amateur radio and sat my licence examination at the **New Zealand Post Office Regional Engineer's office in Federal Street**. Around that same time, while at Grammar, I happened to read the World War I Roll of Honour on the school cenotaph and noticed a name for no particular reason: **Gunner Norman Shrimpton**. At the time it meant nothing to me. I passed the exam, got on the air, and life carried on.

Nearly fifty years later, while sorting through my late father's papers and digging into some family history, the dits and dahs began to line up. Norman Shrimpton turned out to be the son of **Edward Alan Shrimpton**, Chief Telegraph Engineer of New Zealand and President of NZART in 1926–27, the first year of our national association. Edward Alan Shrimpton's mother was **Edith Graves**, whose brother **Edward Graves** — my second great-grandfather — rose to become Engineer-in-Chief of the British Post Office Telegraphs at a time when Morse wire was the internet of its age, binding together an empire with copper and key.

Their father, my third great-grandfather **Captain Anthony Graves**, served with the 32nd Foot during the Peninsular War. As Brigade Major to Wellington's 6th Division he was severely wounded at the Battle of Salamanca in 1812. After his death, his widow **Eliza Graves** emigrated with her daughters to New Zealand aboard the immigrant ship *Captain Cook*, arriving at Lyttelton in 1863 during a smallpox quarantine. Letters written by frustrated passengers to local newspapers describe the experience — one of them signed by **Henrietta Graves**, Edith's sister.

Radio later developed into two rather different worlds: the amateur world of experimentation and conversation, and the quieter world of intelligence signals. In my own family that second world was represented by my great-uncle **Eric Curwain**, my mother's father's brother. Curwain worked for the British Secret Intelligence Service and was operating a radio from the British Embassy in Warsaw when Germany invaded Poland in September 1939, transmitting reports back to London as German aircraft began bombing the city.

My own path into communications began with the New Zealand Post Office repairing **Creed** and **Olivetti** teleprinters — machines that clattered away carrying messages around the country long after Morse had given way to punched

tape and teleprinter circuits. Later I moved into broadcasting, working as a broadcast engineer maintaining AM, FM and television transmitters, while amateur radio remained quietly in the background throughout it all.

That small Marconi tag on my keyring has travelled through most of that journey. The transmitter it came from has long since disappeared into the scrap heap, but it still feels like a connection.

Norman Shrimpton — the Grammar gunner whose name caught my eye on the cenotaph — was killed in France in 1918. His father helped guide NZART in its first year, and his uncle helped shape the telegraph systems of the British Empire. And here I am — **ZL1RKO** — still tapping out my own small contribution in NZART's centenary year. I don't claim destiny, and I certainly don't claim inherited skill, but I do find something quietly satisfying in discovering that for more than two centuries my family's story has been tied in one way or another to communication: dispatch riders, telegraph wires, wartime radios, teleprinters, broadcast transmitters, and finally amateur stations. As NZART marks its first hundred years, perhaps when we build antennas and stations, we are not just connecting circuits — sometimes we connect generations. The signals were already there; I just had to learn how to copy them.

### Charles Graves ZL1RKO

#### Charles Graves

Registered Electrician (Mains Parallel Generation Endorsement)

Electrical Inspector

Director – Latinum Technology Ltd

Waiheke Island, NZ



[charles@latinum.nz](mailto:charles@latinum.nz) |

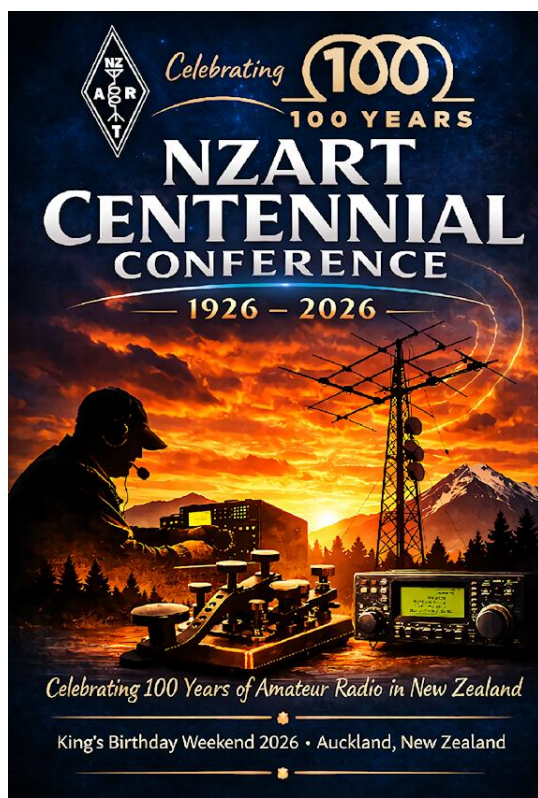


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### Conference 2026

This year, the NZART annual conference celebrates 100 years of NZART. The conference is being held at the Waipuna Conference centre in Auckland; so Aucklanders - we want a big turnout!

Information regarding activities and registration for the conference is available on the [2026 conference website](#)



This set was used on the 80 metre AM desk until it was replaced by the recently obtained 941 refurbished by Phil McGechie. It looks very original with few repairs and modifications. The B+ input choke is missing. The audio output transformer has been replaced making the output impedance 3 ohms in place of the original 600 ohms. The RF gain range has been reduced. And the BFO injection gimmick capacitor has been replaced with a small silver mica capacitor.

For convenience, I decided to power the set from the power supply used for the 40 metre AM receiver. The heaters lit up, but the receiver was dead. I found the B+ to be minus 3.5 volts! This led me to trace the power supply circuits. They were similar, but the B+ and B- came to different pins on the octal socket.

Make them the same. The 40 metre supply is nicely made and some thought had been given to the signals on the octal socket. If a metal tube was to be plugged into the socket on the 80 metre supply the metal jacket would be at B+ potential with respect to the earthed chassis. A shock hazard. The 40 metre supply would have the metal jacket connected to the earthed chassis. That's the one I will go with. I modified the test lead and the 80 metre supply then the supply lead to the 80 metre set. Now all sets work with both supplies.

I checked all the resistors; most have drifted higher in value. What about the Solar "Sealdtite" wax-molded paper capacitors. Checked on the internet I found this from a vintage radio forum:

*"Solar had an interesting history. NYC company that began making dry electrolytic capacitors around 1935, moved to Bayonne NJ and got very big on electrolytics, paper, and mica capacitors. Their tubular wax paper caps were good, but about the same as Sprague, Aerovox, CD, and the like. They also produced a line of capacitor testers which were very good for their day. Around 1940 they came out with "Sealdtite" capacitors which had moulded plastic cases around the paper slugs. Apparently, they had to use a special oil to impregnate the paper which preserved it, rather than caused it to deteriorate as in normal paper capacitors. Sealdtites were about the lowest leakage, highest reliability tubular paper capacitors ever made."*



*Solar capacitors in the mixer stage of 941SWB*

*"The company grew rich on military contracts during WW-2 but in a misguided move decided to purchase a huge plant in Chicago to expand, right before the war ended and their contracts got concealed. Stuck with huge mortgage payments on the new building and no income while the economy shifted back to peacetime production, Solar went bankrupt in 1947 and the court appointed administrators to run the company. They cut quality and laid off most of the engineering staff which predictably destroyed the brand and forced a final liquidation of the assets. After the original Solar company was broken up, the Solar name was apparently picked up by a successor company which used*

a different logo. They made replacement grade dry electrolytics for AA-5 radios and similar products. They seemed to be popular long ago but I have not come across any which are still good today.”

“Among the assets sold in the liquidation of the original company were the patents on Sealdtite capacitors. They were purchased by Sprague which was then developing its line of "bumblebee" capacitors. I do not know if they used any of Solar's technology in the "bumblebee" caps or if they were similar enough that Sprague felt compelled to buy the patents to head off any infringement suits, but it is interesting to think that we might still be using paper capacitors today if they had decided to further develop Sealdtites instead of bumblebees. In my opinion bumblebees were no better than Micamold caps when it came to longevity.”

Looks like the paper capacitors are original. I will check them for leakage and value before replacing the bad ones. As the set works, I measured the performance of the set as I did on serial number 330. I used both power supplies as there is a significant B+ voltage difference (160 & 190 volts with mains at 249 volts). The results for the different power supplies were almost identical. The minimum input to give 12 dB signal plus noise to noise output was about -92 dBm (-91.8 & -92.3 +/- 0.5 dBm). For serial number 330 I got -98 dBm, about 6 dB more sensitive. Overload level occurred at about -40 dBm input when the RF gain control ran out of range and audio distortion began. On serial number 330 distortion began at +10 dBm.

Bruce Churcher, ZL1BLB, lent me a folder of Collier & Beal 941SWB data including a circuit for the power supply. There are four different batches of sets. The first in May 1941 for 18 serial numbers. The serial numbers were applied by The New Zealand Post and Telegraph Department. The second batch came in January 1942 with 33 serial numbers including 6 previously allocated. The third batch came in September 1942 with 12 serial numbers and 4 for 941SWB-2's. The final? batch came in September 1944 for 50 serial numbers. I plan to scan these documents and place them in the MPRG projects web page <https://mprg.zlham.net.nz/projects/>.

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## AM and CW on ANZAC Day event on Saturday April 25th 2026

There will actually be 3 days for the event. As Anzac Day 25 April is a Saturday and the Monday is the holiday in lieu, there is a 3 day weekend available and it looks as though the ANZAC event will run the whole 3 days. It is **AM and CW**, so get your old rigs out and tune them up!

>> **Activity at Musick Point will be confirmed at the next monthly meeting: 12<sup>th</sup> April!**



ZC1 Mk. 1, v. 3, (From: [maritime Radio.org](http://maritime Radio.org) , "the ZC1 " by Chris Underwood ZL2CU)

## Shack Visit-to Gary, ZL3SV Martyn ZL3CK

After many years, the editor finally made it to Motueka to have a delightful visit with Gary at his fabulous QTH in the hills behind Motueka. He showed me around his spectacular property, with fantastic views across to the sea and the north. We spent so much time chatting and looking around we didn't even get into his shack! But plenty of other things to see nevertheless.

The aerial is the most impressive and undoubtedly the biggest in NZ. It's a huge dipole, stretched up and down the hill over bushland, probably a half wave on about 50 KHz. Gary has had this monster for many years and he's looking after that big pine tree support very carefully!



*Gary with the ZL3SV linear*



*Gary checking out his fishpond- about 10,000 goldfish he reckons....*



*Alternative power source- a repurposed "Gentle Annie" motor*



*The Dipole centre support*



*Checking out one of the (very friendly) lawnmowers*

## GROTA update March 2026 K Barnsdale ZL3KB

It's probably true to say army 'manpack radios' have been the sets most favoured by the GROTA team, mainly due to their "lightness".

At 15kg a WS48 set is still not a featherweight, but its more lift-able than a ZC1. Due to the demands of aircraft production in WW2 the use of aluminium for radios was discouraged, sometimes banned, but the Canadians did not seem to have the same restriction. They designed their own manpack radio, the WS58 set which weighed only 5kg but still conforming to the general performance of the WS18 and WS48 manpack sets, namely five-mile range and single man operation. Unfortunately, it did not find favour with the British 'establishment', probably due to it needing a specialized dry battery of 180V, 90V, 1.5V and -21V. Alternatively they did also have a 'static battery', which contained a vibrator HT supply and a wet lead acid battery, but I wouldn't want to drag that around on the battle field!

The March GROTA field trial saw the team occupy sites along Pegasus Bay near Christchurch, and as there were suggestions, we use public transport in this "fuel crisis" time, the lightness of the WS58 made it an ideal set to take to the beach on the bus. Truly a "green" option! The weather turned out to be drizzle, low cloud and fog, so only the brave turned out. We had two WS48 sets present- Des ZL3AK up in cloud on the port hills and Peter ZL3LTP at a N. Canterbury beach, and me with the WS58 on New Brighton pier. Good copy was had between Des & me, but Peter had problems receiving. However, we have proven that Green Radios can be carried on busses! The WS58 radio did OK except it developed an AGC fault making AM signals very distorted, but could be controlled by manual adjustment of the RX aerial tuner. Its back to the repair bench, yet again.

Till next time, keep it green.

Kelvin ZL3KB

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*Peter and WS48 at N Canterbury, with rescue dog*



*WS58 set on N Brighton Pier*

# O'Flattery Award

Snapped in the midst of an apparent tree hug, this months O'Flattery Award nominee was attracted to a tree that was too large at the base to cuddle, so he brought a ladder along to enable him to get to the ideal branch . While it's not for us to judge what you do in your own home, this months recipient is to be congratulated for such a public display of affection.

As usual, we won't identify the club member concerned. By the way; anybody seen Jim recently?



## Free Amateur Radio Buy, Sell and Wanted

"ZL Ham Classified Ads" at <https://zlhs.net.nz>



Ferrite & Iron Powder cores available at: [intelec.nz/passives](http://intelec.nz/passives)

Musick Point Radio Group Inc.  
**Minutes of Annual General Meeting**  
held at Musick Memorial Radio Station on **April 13<sup>th</sup> 2025** at 1310 Hrs

**Present-**

ZL1DRV, ZL1EK, ZL1BQE, ZL4ROB, ZL1TGS, ZL1TOF, ZL1MRT, ZL1OJ, ZL1DL, ZL3CK, ZL1NZ ZL2MOH

**Apologies** received: ZL1MPU, ZL2JDH

**Minutes** of previous AGM April 14<sup>th</sup> 2024- No errors, omissions or matters arising were tabled.  
Minutes accept as circulated- *Proposed* - ZL1NZ, seconded ZL1EK. -Passed unanimously.

**Finance-** The Treasurer's report for YE 31 March 2025 was circulated and read out by ZL1DL.  
Membership has had modest increase over the year. Income surplus accounted mainly by sales of scrap metal. If this is deducted, a small surplus of \$55 is noted.  
Main expenses are data and insurance. These are anticipated to rise this year by an uncertain amount.  
Financial report accepted, subject to satisfactory review anticipated in the near future.

**Annual Subscription Setting-** For a number of years, the subscription has been held at \$40. After discussion on the merits of raising or holding the amount, it was decided to continue with \$40 for the next year. Many members add a donation to their annual contribution, and it was again as last year thought this was preferable to raising the sub.  
*Moved* that subscription for 2024-2025 remain at \$40 - ZL1DRV, seconder ZL3CK. - Passed unanimously.

**Reports** from the Chairman, Newsletter Editor (verbal) and Webmaster(verbal) were given. Discussion followed regarding the impact of NZART's new constitution change (remit 2) on our proposed new constitution, currently in preparation. Decision was to hold over approval of our new constitution until after NZART's AGM conference in June.  
NZART members to consider the remits for their decision next meeting.

**Election of Officers** No prior nominations were received. All position holders agreed to continue in the respective portfolios – no other nominations were received. Elected and other positions were confirmed as below-

<i>Position</i>	<i>Nominee</i>	<i>Nominated by</i>	<i>Seconded by</i>	<i>In Favour</i>
Chairman	David ZL1DRV	ZL4ROB	ZL3CK	All
Secretary	Martyn ZL3CK	ZL1BQE	ZL4ROB	All
Treasurer	Dave ZL1DL	ZL1MRT	ZL1EK	All
Newsletter editor	Martyn ZL3CK	N/A	N/A	All
Webmaster	Neil ZL1NZ	N/A	N/A	All

**AREC-** Rob ZL4ROB is the club's AREC representative. Discussion on the future of AREC ensued.

**General Business- ZL1DL-** Need to improve efforts to keep building tidy and continue decluttering, especially in view of upcoming centenary next year. More effort for internal maintenance needed.

**Appointed- Graham ZL1TOF** as **Building Maintenance coordinator**, Graham to make a jobs list to be put on the club server.

Projects to increase interest in club- discussed, fox hunting raised (again) as possibility.

The Annual General Meeting was declared closed at 1407Hrs

Minutes by ZL3CK

Musick Point Radio Group Inc. Branch 86 NZART  
Agenda for **Annual General Meeting to be held** at Musick Memorial Radio Station  
on **April 12<sup>th</sup> 2026**

**Welcome to Visitors.**

**Present:** Per attendance book – Quorum present?

**Apologies:**

**Minutes of previous AGM April 13<sup>th</sup> 2025** - As circulated

**Errors & Omissions / Matters arising:**

**Finance**

- Annual Accounts: Treasurer’s report
- Set annual club member subscription for the current year

**Reports**

Chairman, Secretary, Newsletter Editor, Webmaster

**Election of Officers**

**Nominations** - No prior nominations have been received.

<i>Position</i>	<i>Proposed</i>	<i>Proposed by</i>	<i>Seconded by</i>	<i>In Favour</i>
Chairman				
Secretary				
Treasurer				
Newsletter editor				
Webmaster				
AREC				

**General Business**

Approval of new Constitution

Other general business, open to the floor.

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**Note:** *Elected Office Holders are required to make the following declaration*

**MPRG Acceptance of Club Officer Position**

Name- \_\_\_\_\_

I hereby accept the position of \_\_\_\_\_ and certify that I am not disqualified from being elected or appointed or otherwise holding office as an officer of the Musick Point Radio Group (Inc) as per section 47 (3) of the Incorporated Societies Act 2022.

Signed \_\_\_\_\_

Date \_\_\_\_\_

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Musick Point Radio Group  
**Minutes of the General Meeting**  
**March 8<sup>th</sup> 2026** Commenced at 1300

Present- ZL's 1DL, 1DRV, 1EC, 1FTH, 1TOF, 1MPU, 3CK,  
Apologies-ZL4ROB

Minutes of February 2026 G.M.-

Matters Arising- Nil.

Approve Feb minutes- Moved ZL1EC, Seconded ZL1TOF, Carried.

Finance- ZL1DL- No significant changes. Slight loss over YTD of \$154.02  
Accept financial statement- Moved ZL1DRV, Seconded ZL1FTH, Carried

Correspondence-

Rotary Club visit request-. - ZL3CK replied with the usual advice to check our website and contact Spark.  
Subsequently, ZL1DL has replied with correct contact details.  
Other inquiries for visits discussed.

General Business-

Jaguar Club Visit on Sunday 22<sup>nd</sup> January very successful, about 12 cars and occupants were hosted. One is a radio amateur as well.

Asbestos removal has been completed. ZL1DRV wondered if the asbestos register has been updated.

Cleaning of walls has continued, and tidying, still much to do.

Conference update - ZL3CK.

Meeting concluded at 1335.

Minutes taken by ZL3CK.