QUA FARC

August 2026

Franklin Amateur Radio Club Inc.
NZART Branch 10

VOLUME 35 ISSUE 8

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Web page: http://www.qsl.net/zl1sa
Webmaster: Steve ZL1TZP

Facebook:
www.facebook.com/groups/1728559367541681/

Committee meets on the first Tuesday of each month (excepting January) at 7.30 pm in the clubrooms.

Subscriptions: Individual $30, Family $40, due December
See club secretary for bank account number

Nets: HF Sunday 9 am, 3.700 MHz (Mike ZL1UOM); VHF Sunday 9.30 am, 146.900 MHz (Steve ZL1TZP); DMR on TalkGroup 5301, Wednesday 7.30 pm (Steve ZL1TZP)

Meetings: Club meetings are on the third Tuesday each month in the clubrooms, 19 Stadium Drive, Pukekohe, at 7.30 pm. Visitors welcome.

NEXT MEETING

The next general meeting is Tuesday 18 August. After normal business there will be an interactive presentation on Zoom or Teams with NZART Awards Manager Stewart Robinson ZL2STR from Nelson.

JUNK SALE

The sale was well supported on 21 July. The club has benefited from sales to the tune of $2600.

There was quite some unsold junk at the end, and that has now been cleared away too. So now the next things to do are improvements to the clubhouse.

NZART

A regional gathering of representatives from Auckland clubs was held at Papakura on July 29. We were addressed by NZART President Warren ZL2AJ. Warren did ask how individual members might communicate there ideas upward. There are multiple ways in which Council communicates its activity to us – in BreakIn, the monthly official broadcast, Infoline and others.

One task, which your editor has realised is a task for artificial intelligence is to prepare an additional resource for those learning for the amateur licence examination. Can we have a set of clues (not the answers) on how to tackle the 600 questions in the exam database? Here is my question asked of Copilot and the gist of the answer…

In 30 words or less give a clue to each of the first 5 questions in the New Zealand amateur radio licence examination database; being guided by answers in the teachers guide.

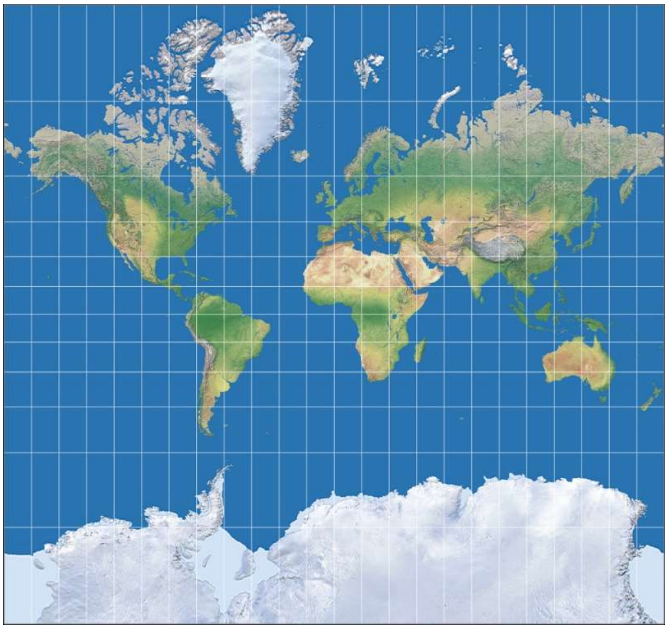
Here are concise, teacher-guide-aligned clues (≤30 words each) for the first five NZ amateur radio exam questions (Cluster 01: Radio Regulations). Sources: NZART Question Bank

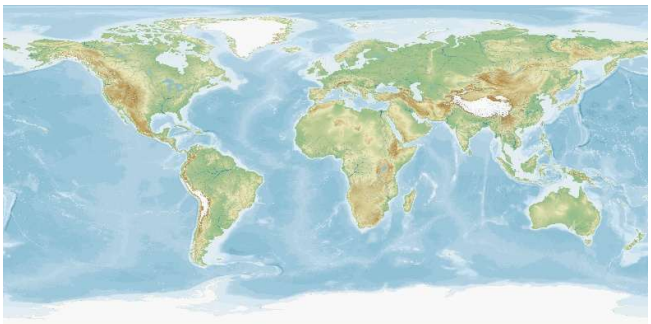
1. Definition of the Amateur Service (01-0)
A service for self-training, intercommunication and technical investigation — focus on learning, experimentation, not commercial or emergency-only use.

2. Who develops International Radio Regulations? (01-1)
Think of the global body managing spectrum and international radio standards — not the UN, but its specialised telecommunications agency.

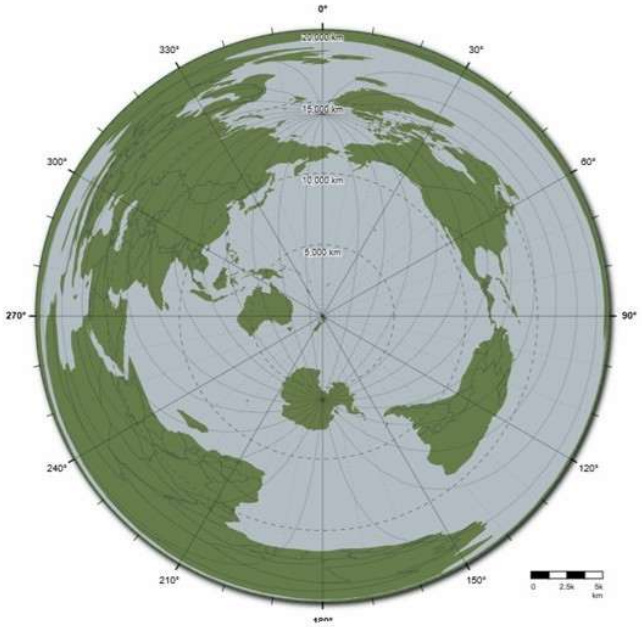
An exploration of map projections

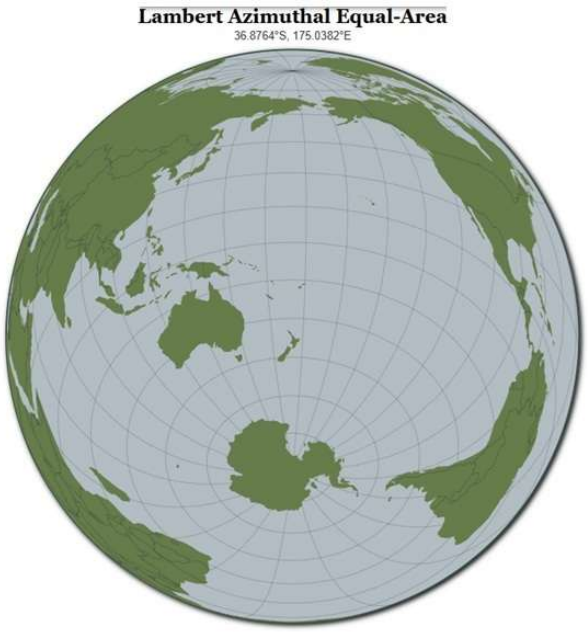
A little while ago your editor got interested in plotting the path of aircraft, based on the spreadsheet data that gets stored in Flight Aware records. The raw data is presented as latitude and longitude. But the latitudes would have to be massaged to fit being mapped on a traditional navigator's map of the world in Mercator projection. The solution was to overlay the graph of position on to a rectilinear world map. In this projection lines of latitude are equally spaced right to the north and south poles. There is still an exaggeration of width as you get to higher latitudes – but no longer exaggeration of height as in the Mercator projection.





Now for amateurs. When we want to send a radio beam to a DX station we need to know the direction to point our beam, and it is handy to know the distance.





In that case an azimuthal equidistant projection (above left) fits our needs. On a web site such as https://azimuthalmap.com/ we can build such a map – which ought to be centred on our own position. These maps exaggerate the size of the distant country, and the shape is greatly distorted as we approach our antipodes in Spain. The Lamberth Azimuthal equal area projection overcomes area exaggeration but still distorts the shape, and of course distance is no longer linear.

These four projections are among the many that you will find in Batemans Atlas – a great exposition of New Zealand and its society. The Bateman Contemporary Atlas New Zealand by Dr Russell Kirkpatrick provides a fascinating insight into what shapes our nation and what may be shaping our future. It provides information

on hundreds of topics of interest, presenting and interpreting the cultural and geographical research in a visually exciting way. Maps come in a variety of projections. The Atlas covers broad subject areas including the physical landscape; the environment and our impact on it; historical and population information; New Zealand's economy and infrastructure; and our country's social and cultural life.

It is as well to bear in mind that when we use New Zealand topographical maps the accepted projection is the New Zealand Transverse Mercator projection. This one has been chosen because as you look from North Cape to the Bluff there is quite a difference in the scale of distance in the Mercator projection where we imagine a light bulb shining through earth's surface to a cylinder wrapped to touch the equator all the way around. Our Transverse Mercator maps have the cylinder wrapped to touch the earth's surface around a line of longitude. New Zealand Transverse Mercator 2000 (NZTM2000) is the official projected coordinate system for mainland New Zealand topographic mapping. The cylinder for projection circles the earth along longitude 173 East. Eastings start 1600000 metres to the east of the reference longitude and Northings have an origin at the south pole. And while sea and air navigators still use latitude and longitude to describe a position, for AREC and LandSAR the convention is to use eastings and northings. If you look carefully at an official New Zealand map parallels of latitude are slightly curved.

As I was completing this article the bimonthly northern regional AREC Teams meeting called for my attention. Here, to start the session was a guest speaker Patrick Bolan KJ7ZSU from Oregon to give a presentation (after midnight his local time) on Geochron. Geochron started 50 years ago with an expensive mechanical world clock that also showed day, night and the grey line on a motor driven belt carrying a map of the world. Now Goechron is digital with many optional layers including weather, aircraft and ships (civilian and military), solar storms, radio frequencies open and more. The user provides his own computer and 4K TV (for the high resolution graphics). Displays are on a Mercator projection that is optionally topographic, political or grey scale and can be zoomed in to continent-sized alternatives. The purchase price of the digital version covers an X-box style unit and there are optional subscriptions for the data layers that the manufacturer has to pay for.



https://www.geochron.com/club-offer/

And an afterthought. The map projection is unlikely to have any discernible distortion if you are looking at a very local area. An example is this track using the in-car navigating GPS to do a quick survey of the roads to the Paerata rail station which was opened just a fortnight ago. The rough looking map below uses an

Excel spreadsheet to overlay a Google-earth picture on a scatter graph of the second by second track of the car. The other map comes from a free online service https://www.gpsvisualizer.com/map?output_home



MOTAT OPEN DAY

September 20th is MOTAT Live Day, concentrating on communications.

The MOTAT web page advises displays will help you learn how to converse with the world around you, and how communication technology has changed over time. They suggest check out the Get Smart exhibition, and discover Aotearoa's journey from room-sized computers to the cell phone in your pocket, from punch cards to coding, and from Morse code to X. The telecommunications space offers a unique hands-on experience with telecom equipment and technology. Try your hand at being a switchboard operator, or have a go with a rotary phone. Have a go at making your own radio with MOTAT's fun make and take activity - you can take home a Bell Colt radio replica. Join the Morse Code hunt or, if you need some down time, visit the Low Sensory Cottage for games and activities. Plus plenty more fun activities suited for the whole whānau!



A group of Franklin's amateurs will attend to offer the Morse experience. Peter ZL1PX and Steve ZL1SPR will be there. Are there other members who would like to join them?

HAMILTON MARKET DAY:

Gordonton Hall, 1024 Gordonton Road (S.H 1B), Gordonton

Saturday 29th of August 2026

50 car parks are available in a parking area at the front of the hall. Additional parking is available in other areas including the side street and a parking area in front of the nearby shops. The area around the hall, or nearby, is suitable for self-contained caravans and RVs. You are discouraged from parking on the main road as it is very dangerous.

The Market Day will have for sale

New and secondhand amateur radio equipment
New and secondhand radio and electronic parts
Secondhand computer equipment.

Venue GPS Coordinates –
Lat 37:40'17.04"S Lon 175:18'28.99"E

DETAILS:-

Vendors - entry from 8am

Buyers - ($2.00 entry raffle) entry from 10am

Table Space - $20.00 per metre - prepaid
$25.00 per metre - on the day

Food and Refreshments will be available

All enquiries to: <branch.12@nzart.org.nz>