



ZL2VH Newsletter – July 2026

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President's Report

With winter now upon us, heading out to Friday meetings or spending much time outdoors is becoming less appealing for many. It's a great time to stay warm and continue enjoying radio activities from home.

Unfortunately, the wet weather is once again causing issues at the clubrooms. Water ingress remains a problem, and while the dehumidifiers are working hard, humidity levels are still very high. I've noticed doors beginning to stick, and there's a developing mouldy smell inside. I will follow up with the Council again, although the guttering design above the brick wall may mean this is not yet fully resolved.

On a more positive note, the **PRS Climie Project 5 fundraising effort** is progressing very well. Full details are available on the front page of the club website, including an option to donate if you wish to support the project. So to their web site to do this: <https://prs4climie.nz>

The project team has already supplied an **ICOM FR-4000 UHF repeater** to John ZL2TWS for evaluation. Initial testing suggests it may be suitable for our needs, which would significantly reduce costs—potentially halving the fundraising requirement if it proves viable.

We are currently seeking approval to proceed with purchasing **UHF duplexers** from: <https://www.duplexers.eu>

These duplexers must handle a **750 kHz offset**, so high-quality construction is essential to achieve the required separation. Alongside antennas, this is expected to be one of the major one-off costs, particularly if we ultimately need to purchase a **Tait TB7300 UHF repeater**.

If everything progresses smoothly, installation of the project could be completed by **Christmas 2026**, subject to weather conditions and availability of people to do the work.

Repeater Report

Repeater: Status

Climie KiwiSDR	On Air
10 m Beacon (28.229 MHz)	On Air
3 cm Beacon (10368.275 MHz)	On Air
D-Star 5425, 860, 1292	On Air
730	On Air
395 (6 m)	On Air

OscarWatch Tracker: A New Satellite Tracking Program from MM9SQL

A new multi-platform desktop satellite tracking application for amateur radio operators, OscarWatch Tracker, has been released and is under active development.

Developed by Peter Goodhall, MM9SQL, and hosted on GitHub, OscarWatch provides an integrated environment for tracking AMSAT and other amateur satellites, predicting passes, managing Doppler-corrected frequencies, and optionally automating rotator and radio control—all from a single map-centred interface.



Key Features

OscarWatch is tailored for VHF/UHF satellite operators working FM CubeSats (e.g., SO-50, ISS), linear transponders (e.g., RS-44, FO-29), and similar modes. It assumes familiarity with basic concepts like azimuth, elevation, and Doppler but automates the calculations and hardware interactions to let operators focus on making contacts.

Visual Tracking: World map with satellite subpoint, ground track, and footprint overlays (with optional motion arrows and greyline terminator). Includes a polar sky plot relative to your QTH. Support for time scrubbing to preview passes without affecting live hardware. Optional DX station grid marker with live Az/EI from the remote location. **Pass Predictions:** List of upcoming passes with TCA (time of closest approach/max elevation), filters for minimum elevation and duration.

Features include a pass planner with multi-station profiles and .ics calendar export, plus a mutual pass finder for two-station coordination.

Frequency Management: Built-in transponder database with live Doppler-corrected uplink/downlink frequencies. Supports RX offsets (separate for Voice/CW on linear modes), CTCSS tones, and easy toggling between modes.

Includes a transponder database editor for custom additions and updates from the published JSON source.

Hardware Integration: Optional serial CAT control for supported radios (including Icom IC-910/9100/9700/705, Yaesu FT-847/817/818/991 series, Kenwood TS-2000 beta) with Doppler tracking, satellite/split modes, and CTCSS handling. Dual-radio support for full-duplex setups. Rotator control for Yaesu GS-232 and EasyComm-compatible controllers (including SPID), with manual park and smart azimuth options for 450° rotators.

Additional Tools: Voice announcements for satellite rising, automatic pass WAV recording, Cloudlog integration for frequency logging, and live telemetry (Az/EI, range, altitude).

OscarWatch does not decode telemetry or serve as primary logging software; it complements existing tools as a pass assistant for home or portable use. TLEs and the transponder database are sourced from tle.oscarwatch.org.

Getting Started

Pre-built binaries for Windows, macOS, and Linux are available on the GitHub Releases page. After installation:

Configure your station location (lat/long/grid) in Settings. Select desired satellites and refresh TLEs. Set up radio and rotator COM ports if using automation. Focus a satellite via the map or pass list to view live data and frequencies.

Detailed operator guides, keyboard shortcuts, and troubleshooting are included in the app's Help menu and the repository's help/ folder. Note that macOS users may need to approve the unsigned app and bundled libraries on first launch.

Supported Hardware Highlights

Radios (serial CAT, native drivers): Icom IC-910/9100/9700/705, Yaesu FT-847/817/818/991 series, Kenwood TS-2000 (beta), with dual-radio options.

Rotators: Yaesu GS-232, EasyComm II (SPID/M2/etc.).

The project emphasizes custom native drivers for reliable satellite-specific behaviour over general libraries like HamLib.

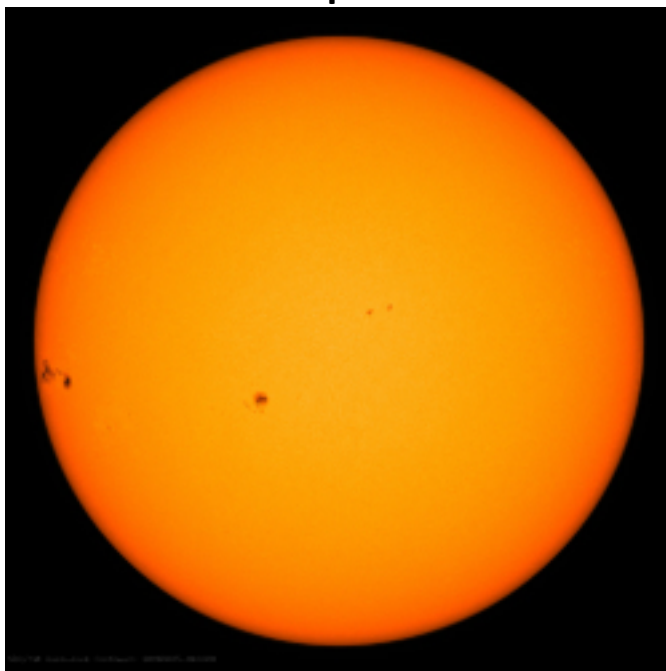
OscarWatch is still evolving rapidly (recent versions added in-app updates,

multi-language support including Japanese, Simplified Chinese, and Brazilian Portuguese, greyline overlays, mutual pass visualizer, and expanded rig/rotator support). Check the GitHub repository for the latest releases, source code, TODO list, and contribution opportunities.

For more information and to download: <https://github.com/magicbug/OscarWatch-Tracker>.

[ANS thanks Peter Goodhall, MM9SQL, for the above information]

The ARRL Solar Report



Solar disk image courtesy of NASA/SDO,
June 25, 2026

ARRL Solar Report for June 25, 2026

Solar activity has remained at low levels, with frequent C-level activity in the SE quadrant of the solar disk. The largest flare of the period was a C3.8 on June 24 from Region 4478, which is the large sunspot that Solar Orbiter had been tracking across the Sun's far side.

This region is still suffering from foreshortening effects, so its classification is low-to-moderate confidence. While the majority of the flaring activity this period came from 4478, Region 4475 also produced several small C-flares as additional trailing spots began to emerge.

Regions 4472 and 4473 continued to decay throughout the period. Region 4479 was numbered this period. No Earth-directed CMEs were observed in available coronagraph imagery.

Solar activity is expected to continue at predominately low levels on June 25 -27 with a high chance for M-flares (R1-R2/minor-moderate) and a slight chance for X-flares (R3/strong), primarily due to the potential of Region 4478.

Solar wind parameters were elevated this period from a mix of negative polarity coronal hole high speed stream (CH HSS) onset and minor magnetic transient influences.

The solar wind speed began the period averaging 350 km/s, then increased sharply on June 24 to ~450 km/s. This was followed by another notable jump in speed, also beginning June 24, ending the reporting period at approximately 600 km/s. Phi was predominantly negative (towards the Sun) but did have an hour-long positive interval late on June 24. Solar wind conditions are expected remain elevated/disturbed through June 27 due to the continued influence of the negative polarity coronal hole high speed stream.

The 10.7-centimeter flux: June 25, 138; June 26, 134; June 27, 143; June 28, 130; June 29, 146; June 30, 149; July 1, 138

Predicted Sunspot numbers; June 25, 101; June 26, 95; June 27, 107; June 28, 90; June 29, 111; June 30, 83.

For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, read [A Quick Guide to HF Propagation Using Solar Indices](#), and check out the [Propagation Page of Carl Luetzelschwab, K9LA](#).

For customizable propagation charts, visit the [VOACAP Online for Ham Radio website](#).

ZL2VH Website: Updates

As more information on radios, programming software, and related documentation becomes available, it is being added to the club's website.

A new page titled **"Radio Files"** has been created. Located alongside the D-STAR page, this new section hosts a range of files contributed to the website. It serves as a central repository for hard-to-find software, USB drivers, and reviewed hardware documentation. Be sure to check it out!

RSM Updates: New licence fees now in effect

The new licence fees announced as part of the Fees Review are now in effect.

The updated fees apply to relevant licence applications and renewals from 1 July 2026. Renewals issued from 1 June 2026 for the licence period 1 July 2026 to 30 June 2027 were issued with the new fees.

New licence fees

The table below shows the licence fees that now apply. Fees are GST inclusive.

Licence Type	Previous Fee	New Fee
Amateur radio and spectrum licences	\$50.00	\$66.00
Land mobile radio licence fee (up to 5 repeaters or pagers)	\$600.00	\$800.00
Land mobile radio licence fee (unlimited repeaters or pagers)	\$1,500.00	\$1,800.00
Standard licence fee	\$150.00	\$190.00

Need more information?

For more information about the new licence fees, please visit the [Fees Review 2025 webpage](#).

For Branch 63 this means an increase from \$350.00 a year to \$426.00. These fees are due on 30 November 2026.

So it's important you support the club with your subscriptions.

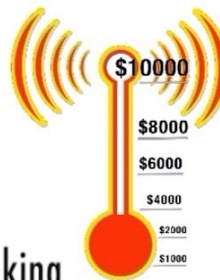
www.prs4climie.nz



The Initiative:
to install a 477mhz UHF
Personal Radio Service (PRS)
repeater at the rugged Mount Climie (860m)
which dominates the skyline south-east
of Upper Hutt in the Remutaka ranges.

The Upper Hutt Ham Club and the PRS-Collective,
a local resilience radio group, support this
as a community-owned and operated asset.

This repeater will empower Channel 5
on the national PRS repeater network:
476.5250 / 477.2750 MHz.



To bring this project to life, we are seeking
community donations to fund the installation.
The total project cost is estimated at \$10,000,
covering the professional equipment required.
Can you support us?

Visit www.prs4climie.nz
www.zl2vh.nz/ for further details.