



QST63

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NEW ZEALAND ASSOCIATION OF RADIO
TRANSMITTERS - BRANCH 63 UPPER HUTT

Branch 63 Clubrooms
Park Street, Upper Hutt



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President's Report

Having returned from my trip to the Northern Hemisphere it's good to be back.

I have included an article with some pictures of the National Hamfest I attended in Newark-on-Trent, and the Duxford Airshow I attended the next day.

A special meeting has been called to discuss the purchase of a new Tait Repeater for 730. The date is Friday 24 October 2025 at 7:30 pm at the clubrooms.

Please read the article: Branch 63 NZART - 730 Repeater history: 1973 – 2025 By John M. Wysocki ZL2TWS September 2025 (see in this newsletter). This article will give you the background to the meeting and why the new repeater is required.

No Climie visits for the last month due to the weather. An attempt may be able to be done before John leaves in early October to install the repaired two dipole stack for 730, but the weather may cause this be later in November.

Please ensure loan equipment is returned good condition. If parts are missing, damaged or otherwise please report this. Don't just hide it and leave it for the next person to find out that the equipment is unusable when next needed.

Repeater Report

Repeater: Status

Climie KiwiSDR On Air – antenna not connected.

10 m Beacon (28.229 MHz) On Air

3 cm Beacon (10368.275 MHz) Off Air

1292 (23 cm) On Air.

D-Star 5425, 860 On Air

730 On Air

395 (6 m) On Air

Branch 63 NZART 730 Repeater history: 1973 - 2025

By John M. Wysocki ZL2TWS September 2025

The Climie FM VHF repeater originally known as, Channel A, and using a 700 kHz offset, went live on the 10th of March 1973. The original repeater hardware was based on the “Climie Transceiver Project” built by Branch 63 members. (Break-In August 1973 Pages 194-207 by Fred ZL2AMJ)

The repeater project took two years of conception, negotiation, planning, designing, constructing, and testing. 230V underground power supply was installed to the hut for Branch 63 exclusive use. TX was 145.600 MHz with RX on 146.300 MHz with 7 Watts power output to the TX antenna feeder cable. The antenna was in two parts with the RX at the top and TX at the bottom of the pole. Each antenna used were 2 x $\frac{1}{2}$ wavelength in phase collinear elements. (3dB gain) A Trap filter was used between the RX and TX before the

antenna. (QST March 1970 Pages 42 to 46). After the installation an improved TX filter was required.

Different antenna and duplexers were discussed and was decided that there was no great advantage making any further changes as the repeater was working to the design specification.

In November 1974 the channel was renamed from Channel A to Channel C. The repeater was often simply referred to as "Climie".

As reported in Break-In June 1979, new features were added:

- 1) S-Meter beep after 3 seconds.
- 2) No input delay time.
- 3) Tail drops after 3.5 seconds.

Comments from users were that the changes were favourable and that the repeater performance had improved.

A new replacement for the rechannelled repeater is being built by Richard ZL2TQF. This eventually became an STSP repeater from my recollection.

Channel A was then used by Masterton branch who went through a restoration of their repeater. (Break-In October 1979)

Channel A through to Channel G were the allocations from 1974 to 1980.

After 1980 wise decisions were made by NZART to move all existing repeaters to between 146 MHz and 148 MHz. The band above 146 MHz was under international attack and New Zealand needed to move quickly to avoid not having that band, as is the case in many countries today.

January / February 1979 Break-In proposed the frequency changes to the following:

Channel A pair 145.500 / 146.200 MHz (Masterton)

Channel B pair 145.525 / 146.225 MHz (Kapiti)

Channel C pair 145.600 / 146.300 MHz (Climie)

Channel D pair 145.650 / 146.350 MHz (Blenheim)

Channel E pair 145.700 / 146.400 MHz (Lower Hutt) [The reason why 700 is still a negative offset]

Channel F pair 145.750 / 146.475 MHz (Hawkins Hill)
Channel G pair 145.800 / 146.500 MHz (Motueka)

Repeater receive on the high side. User TX +700 kHz.

Also found in the archives:

January 1975: 28 MHz ZL2MHF beacon on Mt. Climie on air running ERP of 5 Watts Horizontal. June 1979: 52.51 MHz ZL2MHF beacon on Mt. Climie on air with an ERP of 2 Watts Horizontal.

At the 19th February 1980 Branch 63 Committee meeting Jamie ZL2NN confirmed he had placed an order with Tait for a new VHF Repeater for Mt. Climie. Delivery date was expected in late March 1980.

Branch 63 had hosted the NZART conference in 1979 and decided on a Tait commercially made repeater. Jamie ZL2NN applied modifications for amateur service in May 1980 and continued repeater testing.

FMWG Report - The implementation plan for two metre repeater frequency change was approved by the NZ Post Office in January 1981. (This Plan is detailed in March Break-In 1981 page 30)

One of the first repeaters to be converted to 600 kHz split and the new frequencies will be the Upper Hutt machine on Mt. Climie. Upper Hutt Branch hope to have this done by 7th March 1981.

The Tait repeater was a T266 RX/T267 TX 25-Watt series using 25 kHz channel spacing and +/-5 kHz deviation. This repeater was due to go into service on the new 147.300 MHz frequency with user transmit of +600 kHz around March 1981, one year after Branch 63 took delivery.

The T266/T267 remained in service for 22 years until being replaced by a second hand T800 II Series 2 programmable 50-Watt repeater using 25 kHz channel spacing and +/-5 kHz deviation.

The Mount Climie south hut was opened to share with Wellington Regional Council hosting their CD repeaters in 1993. An LDF-450 feeder cable was dug underground so that the 730 four dipole antenna stack could be connected to the 730 repeater now housed in the south hut.

The T800 II repeater was installed into the south hut around January 2003.

During the years 730 has suffered from QRM and crackle and various antenna and duplexer replacements that were finally tracked down in March 2018 after more antenna damage. No earthing of the antenna pole was the cause. Rain static and charged particles in the cloud covered Mt Climie would discharge into the dipoles and ground via the repeater duplexer. This was fixed in September 2019 with RF earth stakes driven at the base of the antenna. There has been no degradation to the antenna since.

It was decided, after many days of testing, that the T800 II repeater be moved to the North hut with a short 8 metre feeder cable near the antenna stack.

The earth loop between the north and south huts had not helped with the repeater performance being 30 metres separated.

Rodent damage was also a factor with the old 730 equipment rack allowing rodent damage to take place. Subsequently the duplexer suffered damage and was also found to have poor solder connections with it failing in June 2016. All issues were resolved after moving 730 back to its original north hut.

15th February 2020 a new HiTec brand twin dipole stack was installed replacing the traditional four dipole stack. The reports from users living in valleys and beneath Mount Climie was that the signal had increased for them. The change of ERP lobe has shifted to a lower angle radiation pattern more suited to where club membership mostly used 730.

This antenna failed but not caused by previous issues rather resulting from poor quality of the dipole combiner from the HiTec manufacturer. After four years in service the SWR was unacceptable and those antennas have been removed for repair. A new combiner has been made, and dipoles are ready to go back to Climie.

The T800 II failed on the 6th May 2025 after the power block died. A replacement power block was purchased from eBay and 730 was back on air using 50-Watts.

The service spare 25-Watt Slimline repeater was in service during the outage and during the occasional break down since. Slimline was purchased 2003 as

a maintenance spare for both 730 and 5425 repeaters. The PA had also failed due to a bad solder joint in 2017. We borrowed a spare PA in 2017 to keep 730 running at 50 watts while using a single dipole. This single dipole is in use since May 2025 while the twin dipole stack is being repaired.

The T800 II rack has a faulty cooling fan control circuit that noises up the receiver making 730 deaf with the fan connected. Now that the PA has been repaired a 24/7 cooling fan has been connected.

The T800 II has given 99% trusted service since 2003. The repeater was not new when Branch 63 received it with a most probable manufacture date around 1999 and is now 25 years old.

Keeping with our trusted Tait supplier it looks to be the right time to upgrade to a TB7300. As part of this update, 730 can then have remote IP access for diagnostic service, and continued operation for the next 25 years or more.

Link to the August 1973 Break-In article: The Climie Repeater:

<https://zl2vh.nz/assets/pdf/other/break-in-august1973-the-climie-repeater.pdf>

National Hamfest: Newark-on-Trent: 5 September 2025

I was fortunate to be in the UK when they held their National Hamfest last month. Apparently, it is earlier in August but due some scheduling issues where they forgot to book the venue it was held later than usual.

The event is held on Newark-on-Trent, Nottinghamshire (Robin Hood country). The actual event location is the Newark Showgrounds on the WWII old airfield of RAF Winthorpe. Mostly housed in a single large building with a small exterior flea market outside. Free parking, cost of entry was about NZD\$15.00.

Both Yaesu and ICOM had big stands, as well as the major retailers like Martin and Lynch and Son, Moonraker, etc. Although listed as a two-day event it is easily covered in a day. You really need a car to get there as although there is a national train station in Newark there really isn't a way to get to the event location by foot.

I arrived early and queued up with everyone else. I had repurchased my ticket, so entry was easy, with the flea market opening at 9:30 am and the main hall at 10:00 am. Those keen people then queued for the hall opening while I did the flea market such as it was. The prices were good and not overly inflated. Of course, all the transceivers were E or European models, so the frequencies were not suitable for New Zealand. With limited weight anything in our luggage or anything bulky was out of the market for me. Some of the second-hand HF transceivers were well priced though.



Left top – view from outside the main hall before 10:00 am. Right top – flea market offerings. Bottom left- ML&S stand. Bottom right – Yaseu stand.

Duxford Airshow: Battle of Britain 85th Anniversary 6 September 2025

Duxford is north of London (about one hour's drive) and south of Newark (about one hour and half hours' drive south) where the Hamfest was.

As I was in the UK and had the time booked a ticket and attended this event the next day after the Hamfest.

A good line up of aircraft especially the Hurricanes and Spitfires, all flying on the day, along with many others. The museum itself is well worth a visit event if no airshow is on.



Top left – Spitfire Mk 24 powered by the Rolls Royce Griffon engine.

Top right - Hispano Aviación Buchón (Messerschmitt Bf-109) with a Rolls Royce Merlin engine

Bottom left – Boeing B17 Flying Fortress used in the Memphis Belle movie

Bottom right – Spitfire Mk14 powered by the Rolls Royce Merlin engine.

The flying display included eight Hurricanes in formation, the largest number together since WWII. Plus, the same for the Spitfires (nine in total). The so-called big wing. Even the Lancaster turned up as well on the Saturday, initially only intended for the Sunday.



Left – line up of the Hurricane's.

Right – Hurricane.

DSTAR Nets

Two DSTAR Nets are worth listening to if you have the time both are on REF091C. Sometimes 860 is connected to the Reflector 91C, so just tune into that to hear the Nets. Remember these are DSTAR Nets so you need a DSTAR radio or another device like a DV Dongle to hear them.

WIA Net Sundays at 11:00 am NZST

Connie Net* on Mondays at 1:00 pm NZST

*The "Connie net" is an amateur radio network that meets on this reflector and is named in memory of Connie L. Ballantyne, KB0ZSG. Connie passed in 2020.

EME Newsletters

Latest EME Newsletters for September 2025:

<https://eme.radio/432-and-above-newsletter>

For Sale: Antennas

For anyone interested in the antennas contact Jeff via email: zl2jst@gmail.com or Mobile: 027 260 8478.

1. This is a brand new on glass mount antenna wanting \$140.00 (this is AUD\$160.00 new from Strictly Ham). The Diamond Z07M is an adhesive type on glass mount antenna.

Length: Approx. 0.70m

Weight: 290g

Frequency: 144/430MHz (2m/70cm)

Gain: 2.15dBi (144MHz), 5.9dBi (430MHz)

Max. power rating: 60W (FM)

Impedance: 50Ω

Connector: MP (Removable)

Coaxial cable: approx. 5m (2D-LFB-S)

VSWR: Less than 1.5

Type: 1/2 wave radial less (144MHz), 2 x 5/8wave radial less (430MHz)



2. This is a brand new on glass mount antenna wanting \$150.00 (this is \$170.00 new from Strictly Ham). The Diamond Z10M is an adhesive type on glass mount antenna.

Length: Approx. 0.86m.

Weight: 270g

Frequency: 144/430MHz (2m/70cm)

Gain: 2.15dBi (144MHz), 5.5dBi (430MHz)

Max. power rating: 60W (FM)

Impedance: 50Ω

Connector: MP (removable)

Coaxial cable: approx. 5m (2D-LFB-S)

VSWR: Less than 1.5

Type: 1/2 wave radial less (144MHz), 2 x 5/8wave radial less (430MHz)



3. This is a brand new on mobile antenna wanting \$80.00 (this is \$90.00 new from Strictly Ham). The Diamond NR-770H is dual band m mobile antenna with a PL-259 connector.

144/430MHz (2m/70cm) 300MHz band receiving only

Gain: 3.0dB (144MHz), 5.5dB (430MHz)

Max. power rating: 200W

Impedance: 50ohms

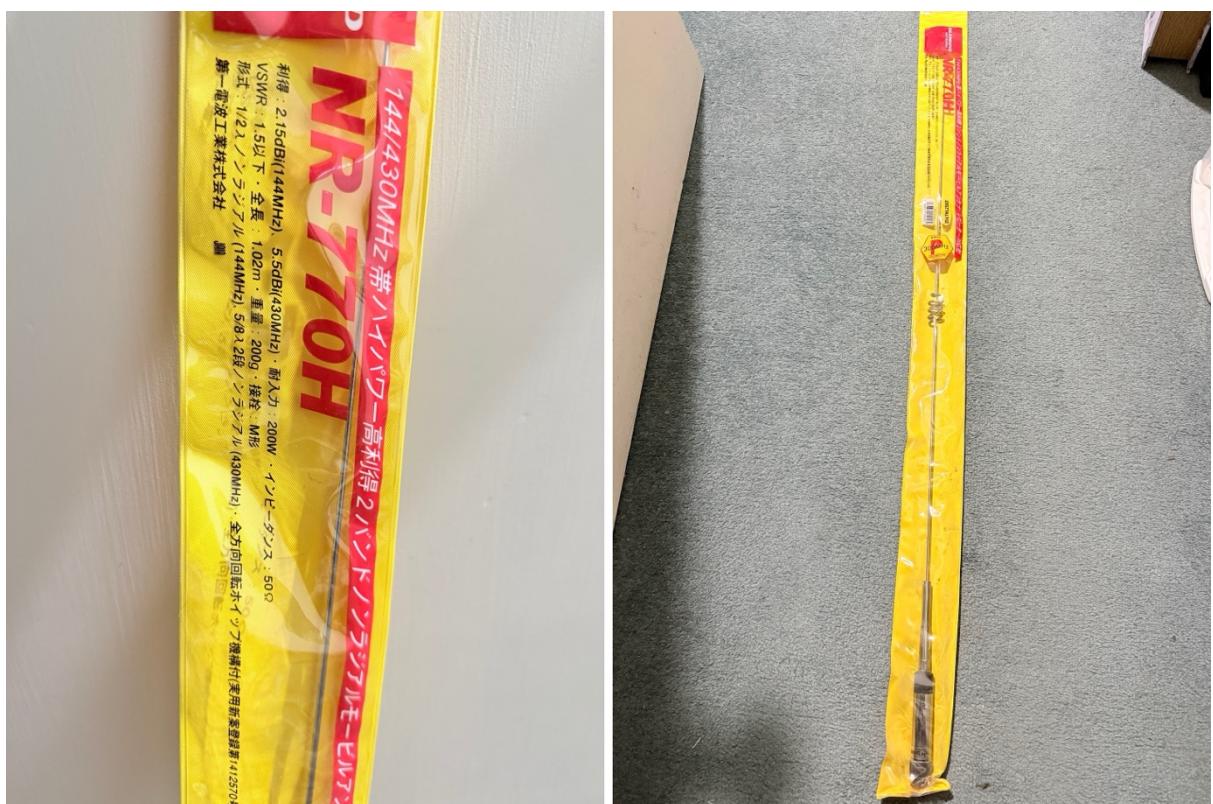
VSWR: Less than 1.5:1

Length: 0.98m

Weight: 210g

Connector: PL-259 plug

Antenna Design: 1/2 wave radial less (144MHz), 2 x 5/8 wave radial less (430MHz).



Eastfest 2025: 18-19 October 2025 Ashburton

Registrations are now available for Eastfest 2025. Please go to the following link and fill out the registration form. A copy will be emailed to you once complete. See you all soon. <https://forms.gle/AJXfP7yPvRsLRTG19>



**EASTFEST
2025**

SATURDAY
18th 9am - 4pm
Sinclair Center,
74 Park Street, Ashburton.

SUNDAY
19th 9am - 2pm
Branch 01 Clubrooms
Ashburton Aviation Museum, Ashburton Airport.

TOPICS INCLUDE • Allstar • Antenna Projects • POTA/SOTA • Logging • Power Systems • Antenna Testing • Arduino • Planning An Activation • And More

FACEBOOK.COM/ASHBURTONARCNZ

SATURDAY AM
Radio & Electronics
Market,
Stall Holder tickets
available.

SATURDAY PM
Presentations by guest
speakers

SUNDAY
Presentations &
Competitions followed by
BBQ Lunch.

TICKETS

**Weekend Pass General
Admission \$20**

**Weekend Pass Non-
Commercial Stall Holder
\$30**