

# Nine Decades of Service

## The History of AREC 1932 to 2022



Amateur Radio  
**Emergency  
Communications**  
Ngā Irirangi Ohotata Tūao

**90 Years of Service**

Serving the Community since 1932



© February 2022

## Napier Earthquake - February 1931



*Sailors from the HMS Veronica recover bodies from the rubble of the Napier earthquake 1931.*

New Zealand amateur radio operators provided communications links for the authorities for four days.

The event demonstrated the need for a back-up communications network for emergency situations.

## Radio Emergency Corps is proposed - 1931

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Norm Laugesen ZL3AS proposed a national amateur radio emergency organisation.

Laugesen (a Police sergeant) liaised with the Police and the Post & Telegraph department, and developed the REC roles and section structure.



## Radio Emergency Corps is proposed - 1931



*Christchurch REC 1932*

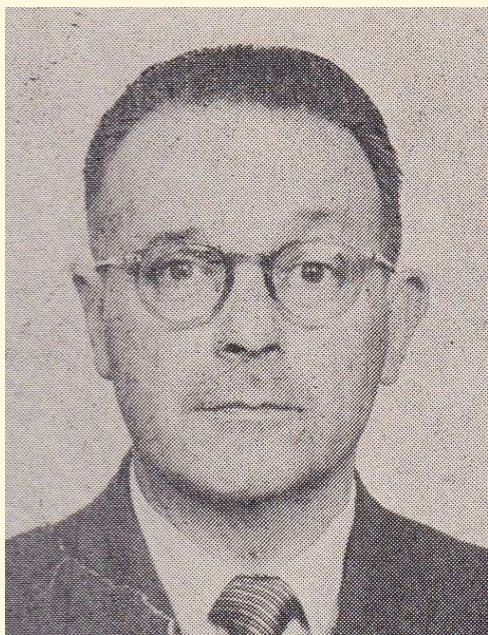
Laugesen established a pilot REC section in Christchurch in late 1931.

The group was called out in January 1932 to provide comms for a search for a missing party at Bealey Spur (near Arthur's Pass).



## Radio Emergency Corps is established - 1932

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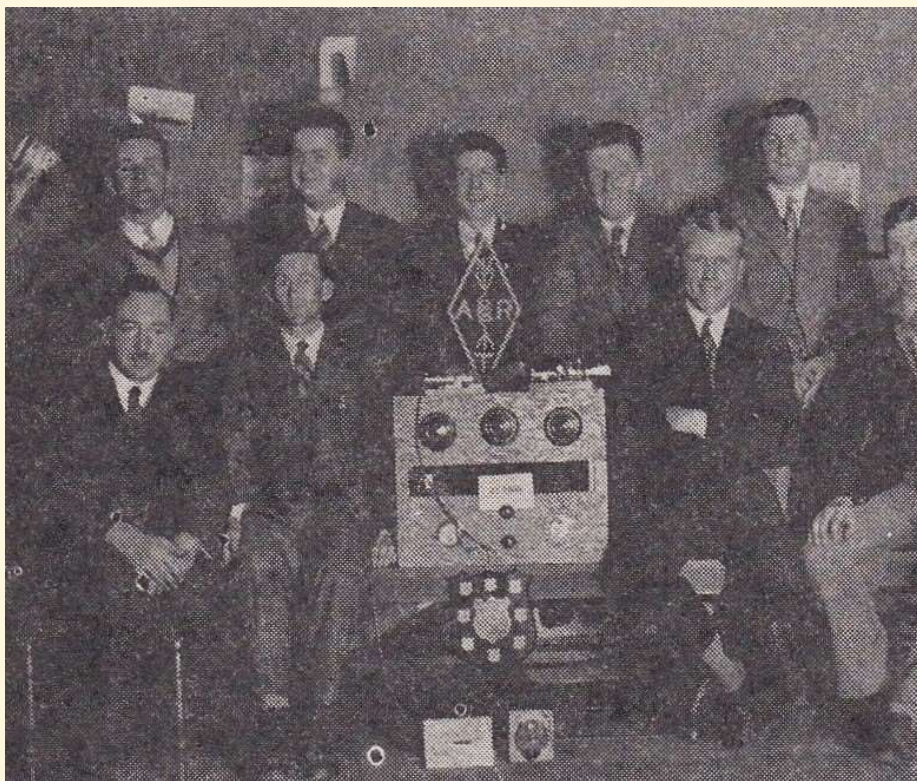


NZART approved the formation of the REC in January 1932 and urged the formation of sections across NZ as soon as possible.

Wally Ashbridge ZL2GP was appointed as the first Officer Commanding of the REC.

Ashbridge was a Captain in the NZ Army Territorial Signals Corps and a senior P&T operator.

## Radio Emergency Corps is established - 1932



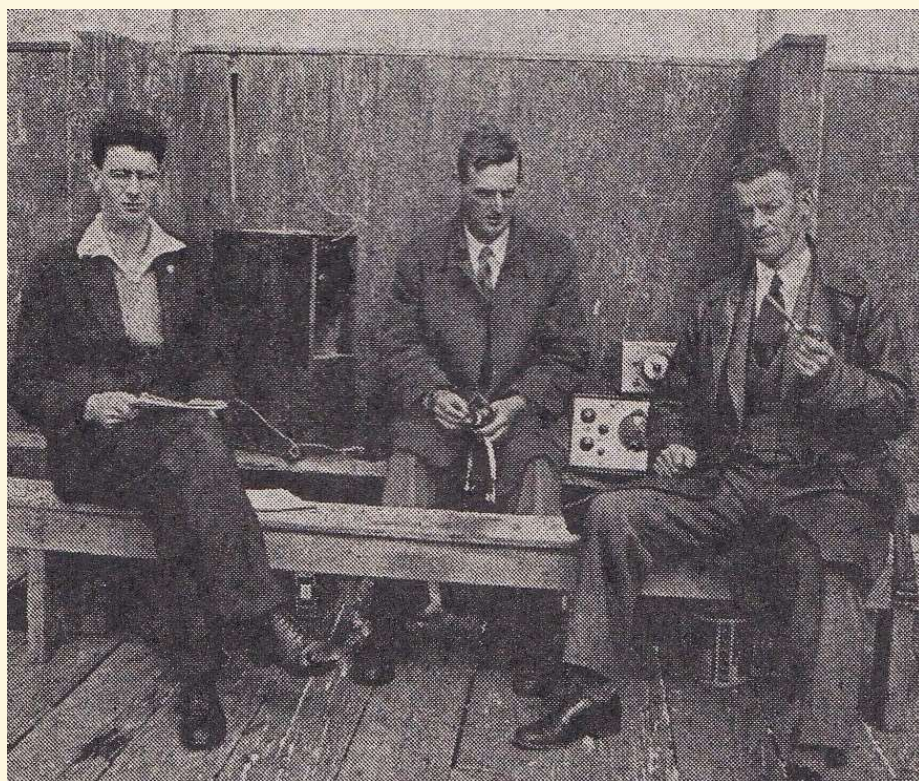
*Otago REC 1932*

By the end of February 1932 amateur radio operators in nine districts had established REC sections.

The initial emphasis was in training members to establish communications from remote sites and in message handling.



## First REC Field Day - March 1932



*Christchurch REC at New Brighton Pier 1932*

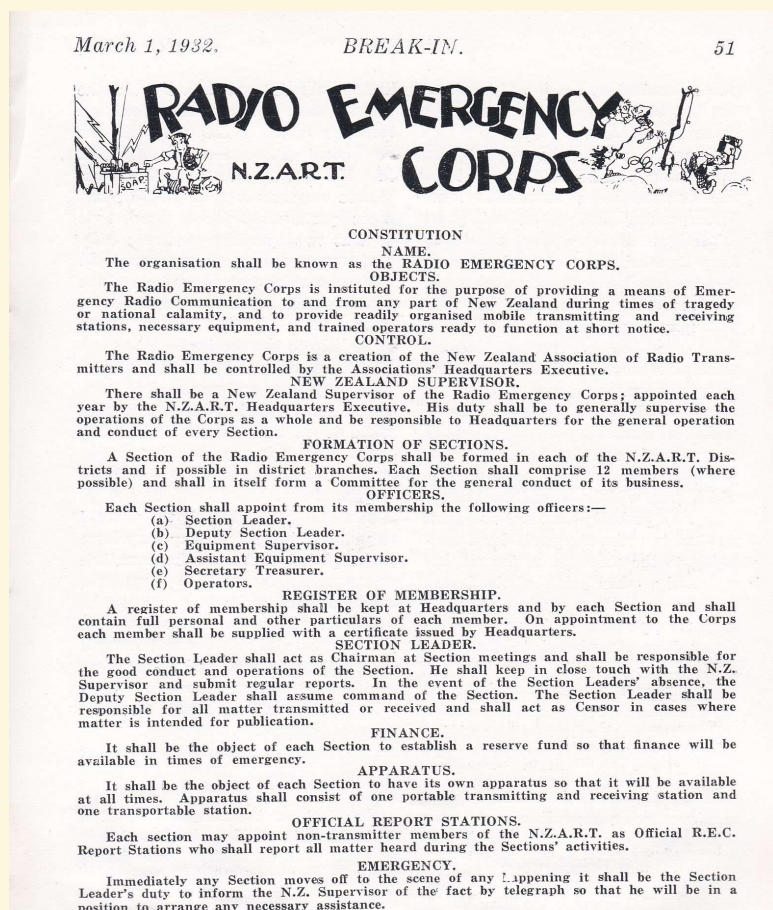
The following month REC held its first Field Day. Nine REC sections and 27 stations participated.

They were required to travel to a specified remote site with their portable equipment, establish comms with other field stations and transfer sealed messages.

REC held Field Days annually except during the World War 2 years.



# Radio Emergency Corps is established - 1932

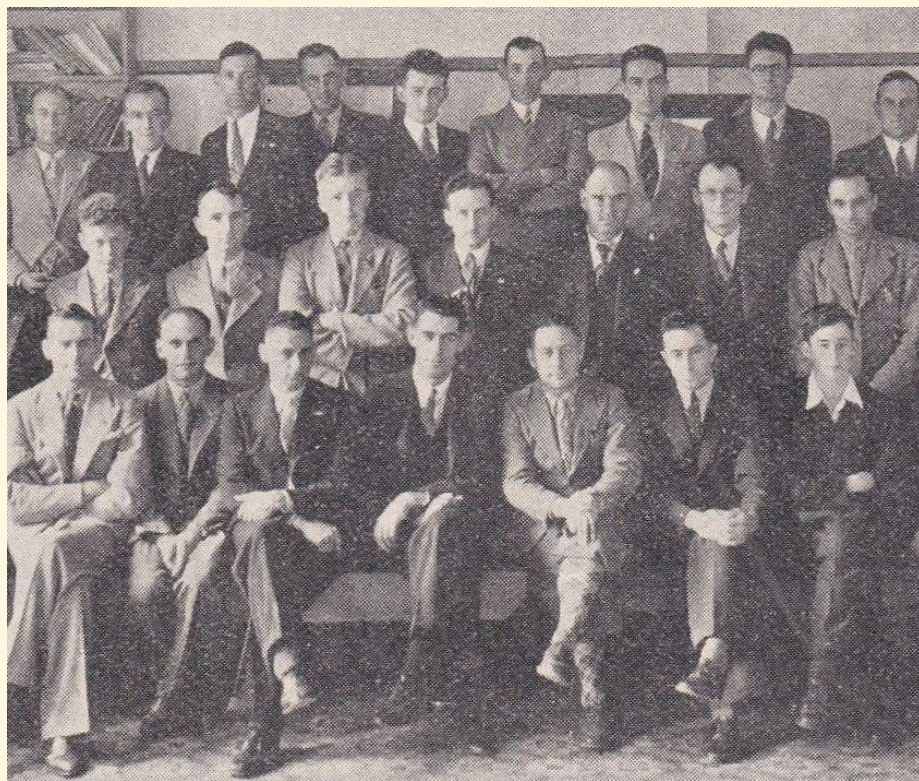


Within days of approval of a national REC NZART published the REC Constitution in its magazine Break-In.

In June 1932 the Post & Telegraph department officially recognised REC and allocated an exclusive frequency band 2.85 to 3.00 MHz.

The first official call-out occurred in October 1932 when REC Wellington was requested to assist in the search for a crashed aircraft at Tawa Flat.

## The First REC Conference 1937



*AREC delegates at the 1937 NZART Conference.*

REC held its first national conference in Dunedin at the end of 1937.

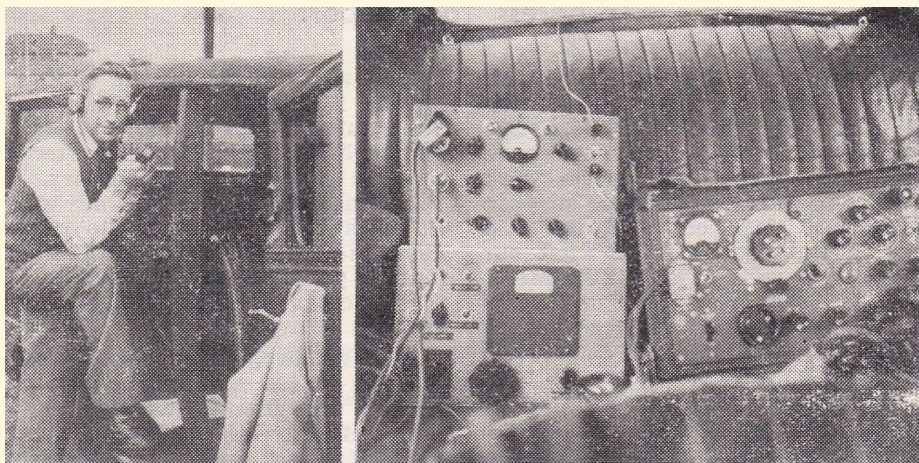
The attendees confirmed the new structure involving Area Officers and Section Leaders.

All REC activity ceased for the duration of World War 2 (1939-1945) although members met regularly to further improve their skills and equipment.



## The Early Years

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*Ray Eaton ZL1GG operating from his vehicle - 1950.*

The REC added the word Amateur to change its name to AREC in 1949.

Initially AREC members constructed their own transmitting and receiving equipment using hard-to-obtain components.

They donated their time and the use of their equipment to provide a needed service.



## Allocation of ZC1s 1949



The War Assets Realisation Board donated 60 ZC1 sets to the AREC in 1949.

The NZ designed radio had provided reliable army service during WW2. It weighed 27 kg.



## Fund Raising



*Napier AREC display 1960*

Being a volunteer non-profit organisation AREC initially had to rely on public support to fund equipment costs.

In 1950 NZART organised an art union (raffle) to raise £1357 for AREC equipment purchases.

From 1958 AREC applied for and received grants from the Search & Rescue organisation.

Until recently AREC has been a 100% volunteer organisation.

## Search and Rescue



AREC has provided communications to the Land SAR organisation since 1933.

A national SAR organisation was proposed by the Federated Mountain Clubs in 1935 and was fully established under the control of the Police by 1937.

The Police took over the funding of SAR from the CAA in 1977.





## Major SAR Operations



1948 Mt Ruapehu (Kaka)

1949 Rimutaka (Core Saddle, Mt Holdsworth)

1953 Tangiwai rail crash

1955 Tararua air crash (Devon)

1957 Ohura, Mt Ruapehu and Tararua searches

1959 Tararua and Waitakere searches

1963 Kaimai air crash

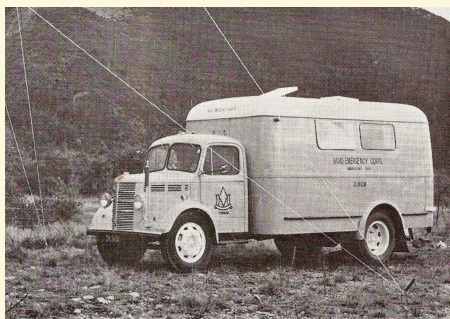
# SAR "Portable" Radios



Equipment used by search teams included:

- ← WS208: CW (converted to AM) 1947-58
- ← Pye TRP-1: AM (amplitude modulation) 1950-66
- AREC Mark 1 (by ZL1KG & EDAC) 1960-66
- AWA TR3: AM 1967-1978
- ← AWA TR105: SSB (single sideband) 1979- 1990
- Codan Cobra 1991-

## AREC Communications Vehicles



The first AREC communications vehicle was constructed by the Southland AREC section in 1970.

Many AREC sections raised local funds and sponsorship to source and equip their own comms vehicles; the Christchurch section had two!



## Civil Defence



AREC has provided communications advice and assistance to local Civil Defence since the 1950s.

Its involvement stepped up in the 1960s when CD were donated 200 AT+E Karphone VHF sets for communications between main Sector Posts. AREC installed and operated these networks during local CD emergencies and exercises.

AREC also provided communications advice to the Ministry of Civil Defence in the 1960s and 1970s.

## Major CD Activities



1948 Gisborne, Manawatu and Balclutha floods

1950 Gisborne floods

1967 Lakes District snowfall

1968 Wahine / Easter storm

1979 Abbotsford slip

1984 Otago and Southland floods

## Christchurch Earthquakes – 2010 and 2011



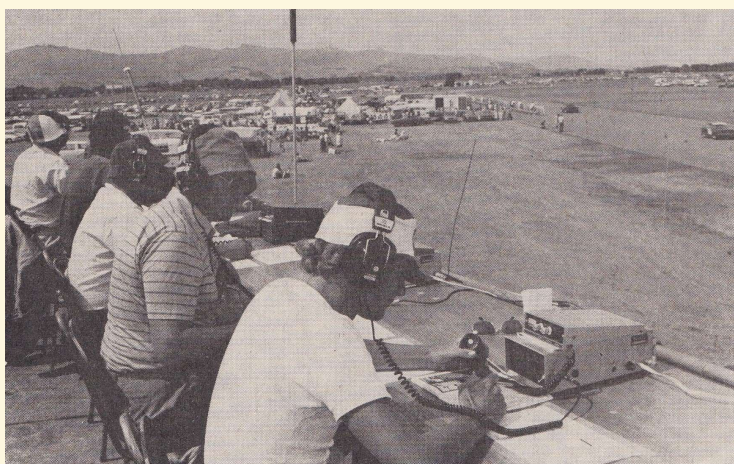
On 4 September 2010 Christchurch city and its environs were hit by a 7.1 earthquake. AREC provided comms for CDEM for 12 days.

A more damaging 6.3 quake occurred on 22 February 2011 and AREC was active continuously for nine days.

At its peak the team was managing and controlling over 150 radios in the field.



## AREC Exercises



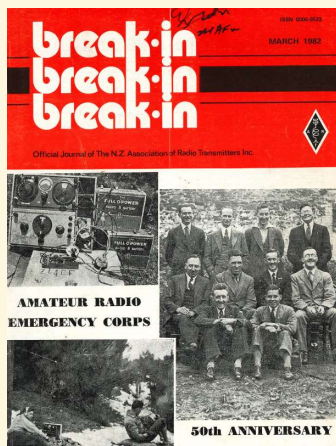
Since the late 1940s AREC have used sports events as exercises to test and improve its ability to provide communications for SAR and CD.

The first AREC exercise was a motor cycle event at Cust (near Rangiora) in 1948. This was followed by the Lady Wigram motor races from 1949 and the British Empire Games marathon and cycle races in Auckland in 1950.



AREC has regularly provided communications for events such as car rallies, motor races, jet boat marathons, horse trials and athletic events.

# Activity Reporting



AREC has reported its activities in NZART's journal since the group's formation in 1932.

There have been five special issues of Break-In focussing on AREC information and two issues recording AREC's history.

Over the last few years Break-In has reprinted pages from the AREC.info online newsletter.





## Activity Reporting

Year	SAR Callout	SAREX	CD Callout	CDEX	Man Hours
1996	58	34	2	26	9500
1998	50	18	5	7	7750
2002	70	29	4	14	8600

By 1988 AREC had 75 sections covering the whole of NZ.

Records of callouts and exercises were usually understated as not all sections reported all their activities.



## National Search and Rescue Award 2001



LandSAR nominated AREC for the 2001 National SAR Award for their long commitment to Search and Rescue in New Zealand, not only for Land SAR, but also for assistance with Marine and Class 3 searches.

AREC was the first recipient of this supreme award.

The award was presented in February 2002.

## Charitable Status 2009



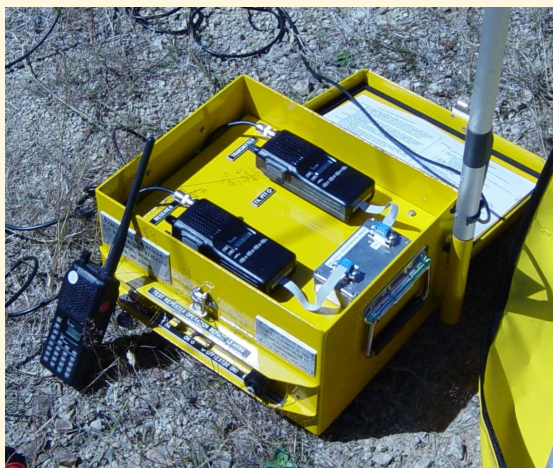
The NZART AREC Emergency Funds Trust obtained charitable status in June 2009.

Trustees were the NZART President, the AREC National Director and the CEO of NZ Land SAR.

Funds are received from the NZ SAR Council and NZ Police to purchase radio equipment.



## Technological Innovation



NZ amateurs have a record of adapting new technologies for AREC use, including:

- STSP repeaters
- Portable crossband repeaters
- Portable digipeaters
- Automatic Position Reporting Systems  
APRS has been developed into the SARTrack™ application for use by NZLSAR teams.





## Digital Mobile Radio Network



Recently AREC has brought the organisation's communications resources into the 21st century with the development of an all-digital radio network.

Wide area linking of the DMR network occurs via direct microwave at 5.8 GHz or via telco-provided internet (cable, fibre, and cellular wireless).



AREC has established a network of low power FM radio transmitters in the Wellington region.

These LPFM transmitters will be available for use by CDEM to communicate information during emergencies to Wellington and Kapiti residents and commuters.



## Service Development

Funded Budget	2020/21	2021/2022	2022/2023	Total
General Funding	\$ 65,000	\$ 65,000	\$ 65,000	\$ 195,000
Management Meetings	\$ 25,000	\$ 25,000	\$ 25,000	\$ 75,000
Remuneration	\$ 311,000	\$ 317,000	\$ 323,000	\$ 951,000
IT Systems	\$ 50,000	\$ 10,000	\$ 7,000	\$ 67,000
Marketing & Fundraising	\$ 8,000	\$ 8,000	\$ 5,000	\$ 21,000
Training	\$ 83,000	\$ 23,000	\$ 22,000	\$ 128,000
Volunteer Management	\$ 40,000	\$ 20,000	\$ 10,000	\$ 70,000
Health, Safety & Wellbeing	\$ 30,000	\$ 2,000	\$ 20,000	\$ 52,000
H&S Signage and PPE	\$ 28,000	\$ 28,000	\$ 10,000	\$ 66,000
Innovation & Technology	\$ 15,000	\$ 15,000	\$ 15,000	\$ 45,000
<b>Total</b>	<b>\$ 655,000</b>	<b>\$ 513,000</b>	<b>\$ 502,000</b>	<b>\$ 1,670,000</b>

In 2020 AREC was granted \$1.67m over three years to transform the organisation into a specialist body providing expert service to its stakeholders.

Workstreams include:

- Business objectives and governance
- SLAs and reporting
- IT systems
- Branding and equipment
- Training and competency assessment
- Health, safety and welfare



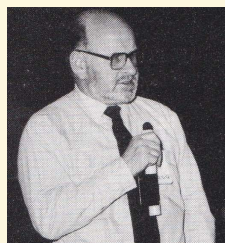
## AREC Officers Commanding / National Directors



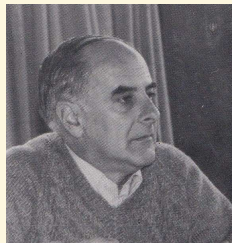
ZL1AN



ZL2CA



ZL2GQ



ZL3RW



ZL3PX



ZL2TYR

1932-34

Wally Ashbridge ZL2GP

1934-38

Hilton Arthur ZL1AN

1938-47

Bill Turnball ZL2CA

1947-49

Allan Frame ZL4AT

1949

Stan Waite ZL1AB

1949-80

Doug Gorman ZL2IY

1980-89

Ron Morgan ZL2GX

1989-1996

Don Mackay ZL3RW

1996-2005

Brian Purdie ZL2TPS, ZL2ADL

2005-2018

Jeff Sayer ZL2TFZ, ZL4JS

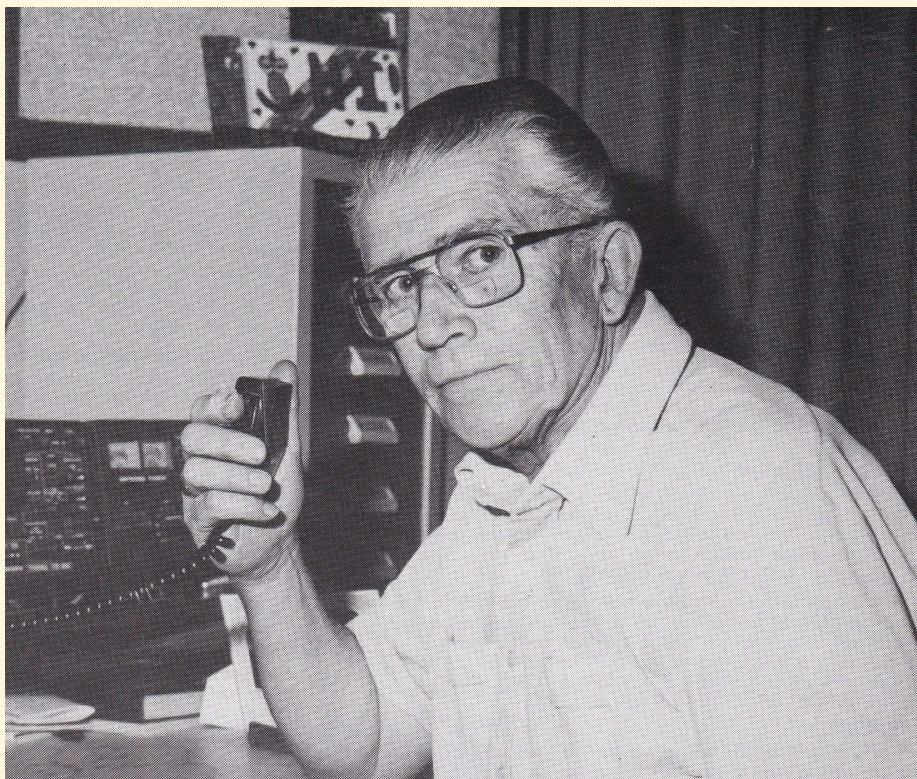
2018-2019

Geoff Chapman ZL3PX

2019-

Don Robertson ZL2TYR

## Doug Gorman ZL2IY



Doug ZL2IY was awarded an MBE in 1963 for services to AREC and SAR.

As NZART Communications Manager he lead AREC from 1949 to 1980.

He was also a Member of the National Communications Advisory Sub-committee that advised the Director of Civil Defence.



## Ron Kingston ZL4MK



In 1992 the Queens Service Medal was awarded to Ron Kingston for his "involvement with AREC since 1974, and involvement in Search and Rescue and Civil Defence".

Ron was also honoured by NZ Land Search and Rescue in March 1996 with the NZ Land SAR Award for "more than 40 years involvement with Search and Rescue". At the same function he was further recognised by the NZ Police with a "Certificate of Appreciation".



## Neville Checketts ZL4OX



Neville ZL4OX was awarded with a QSM in 2005 for services to the community (including AREC and NZ Fire Service).

In 1970 the Southland AREC Section commissioned the first communications vehicle, and Neville was the guiding light of the project.

## Jeff Sayer ZL4JS



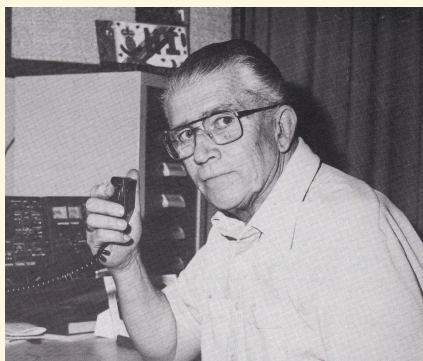
*Jeff Sayer (left) instructs on helicopter evacuation.*

A key AREC leader was Jeff Sayer ZL4JS (previously ZL2TFZ). A professional helicopter pilot, he provided the drive to achieve better coordination between the aviation authorities, the SAR groups and AREC.

Jeff was also instrumental in the funding and installation of three radio repeaters in the Wairarapa area.

He served as AREC National Director from 2005 to 2018 and was awarded the National SAR Award in 2018.

## Honoured Members



*Doug Gorman MBE*



*Ron Kingston QSM*

Doug Gorman ZL2IY was awarded an MBE in 1963 for services to AREC and SAR.

In 1992 the Queens Service Medal was awarded to Ron Kingston ZL4MK for his involvement with AREC, Search and Rescue and Civil Defence.



*Neville Checketts QSM*

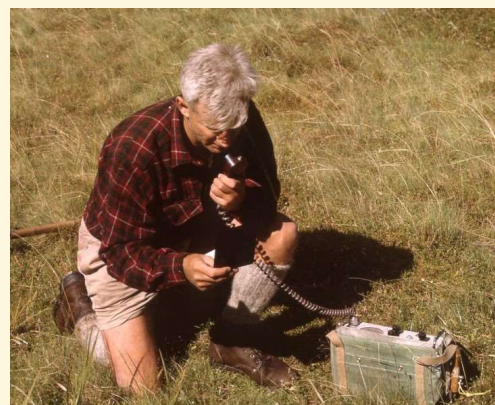


*Jeff Sayer (left)*

Neville Checketts ZL4OX was awarded with a QSM in 2005 for services to the community.

Helicopter pilot Jeff Sayer ZL4JS was awarded the National SAR Award in 2018.



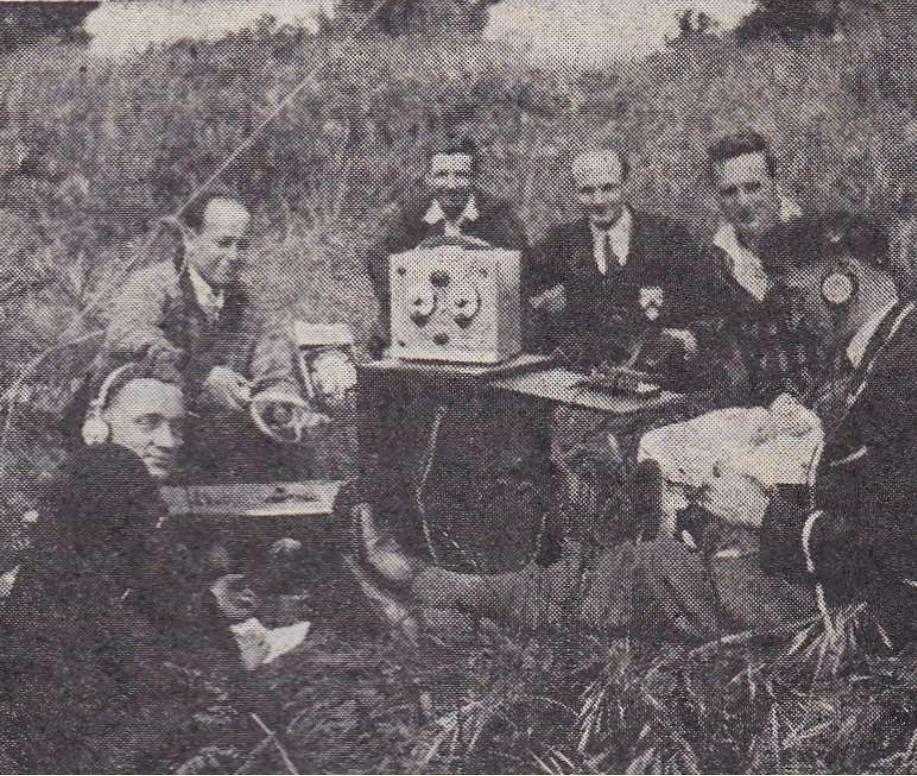


**AN EMERGENCY RADIO STATION IN ACTION**  
 Left: F. Earland 4AM, Myrtle Earland 4GR, Mr R. K. Holland, supervisor P.O., Casey 4CA.





# We Have Come a Long Way



1932



2022

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➤ Researched by Craig Crawford ZL3TLB, NZART Historian 2021

The Service Arm of The New Zealand  
Association of Radio Transmitters Inc



**NOT The End**  
Any questions?



The image features a black background with a series of concentric, thick, gold-colored arcs on the right side. These arcs are arranged in a roughly circular pattern, with the innermost arc being the smallest and the outermost being the largest. The arcs are not perfectly circular, suggesting they are segments of a larger circle. The text "Copyright NZART 2022" is centered within the innermost arc.

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