

WAIKATO VHF GROUP the first 50 years

Presented by:

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to AGM at Matamata on 24 March 2013

The beginning....

- | Enthusiasts having an interest in VHF & UHF met at Cambridge on 16 June 1963
- | Foundation members of this new association named the **Waikato VHF Group** were:

Eddie Amon ZL1ACL, Ron Buckley ZL1AFC,
Peter De Renzy ZL1AFE, Tony Boyce ZL1AFV,
Brian Smith ZL1CJ, Malcolm Prior ZL1DW,
Des Hamblyn ZL1HP, Derek Cleland ZL1IY,
Jack Rentoul ZL1RG, Ian Brown ZL1TAT

The beginning....

- | Our first annual sub: two shillings and six pence
- | Foundation members resolved to meet again in three months at the residence of ZL1AFC
- | A weekly net was commenced on 2-metres, initially on Sunday mornings (changed to Sunday evening in 1965)



Early Projects

Following a 1964 decision to establish a 2-metre beacon, fund raising included:

VSWR Bridge

Approximately 30
of these were sold



VHF / UHF Bridge

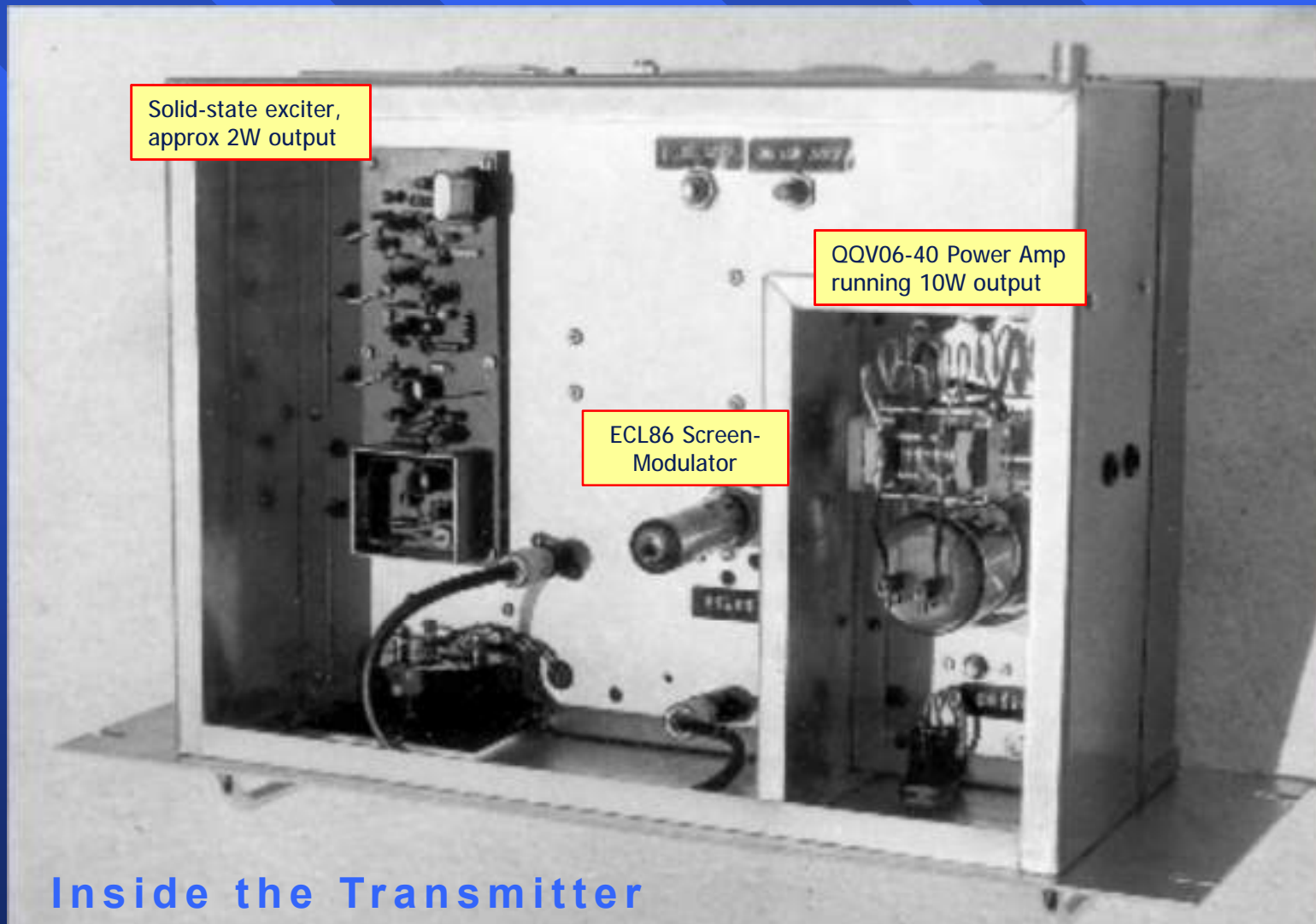
Other projects included: FM receiving adaptor, RF pre-amps, Receiver & transmitter kit PCBs, Crystal boards, Morse practice kit, Packet modem, Sound Card, Elektor magazine (NZ agent for 7 years).

First Beacon

Commissioned April 1972



First Beacon



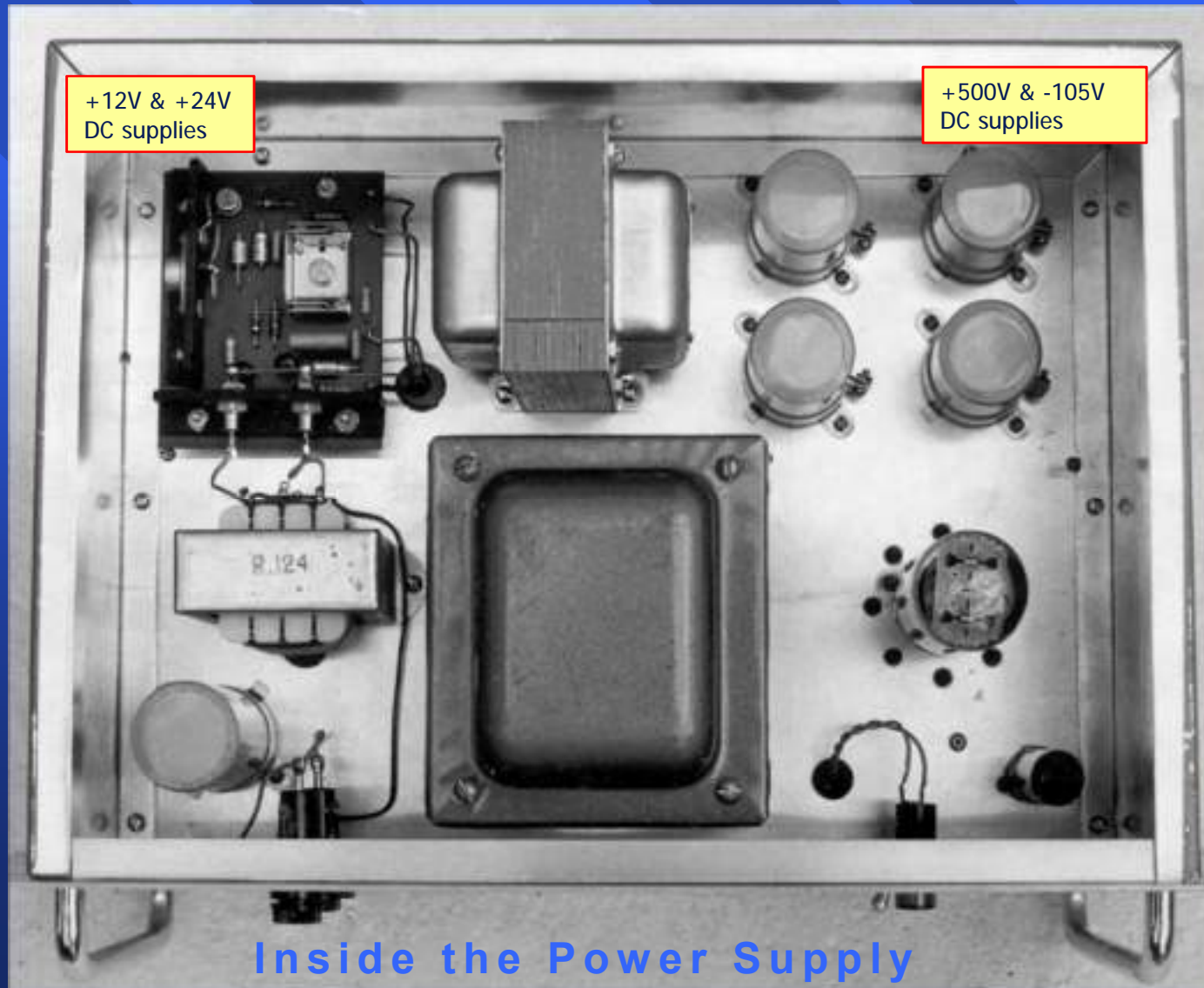
Solid-state exciter,
approx 2W output

QQV06-40 Power Amp
running 10W output

ECL86 Screen-
Modulator

Inside the Transmitter

First Beacon

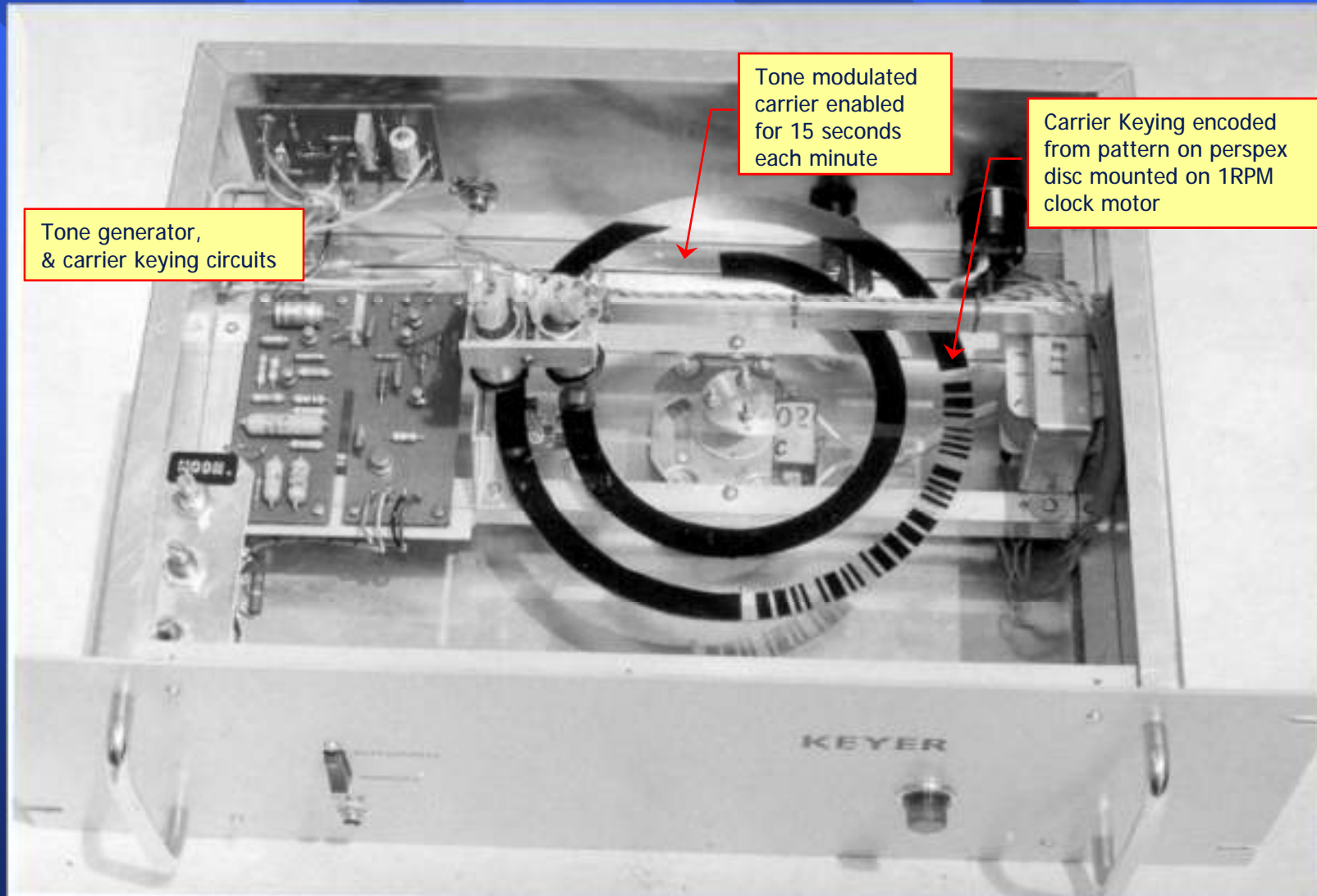


+12V & +24V
DC supplies

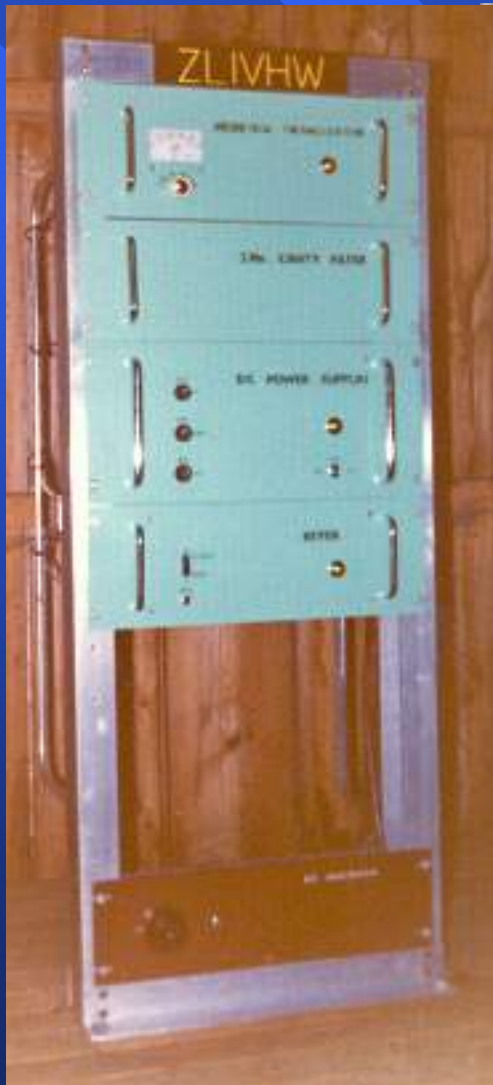
+500V & -105V
DC supplies

Inside the Power Supply

First Beacon



First Beacon



“Clover Leaf” antenna

Hut housing beacon at old quarry site above Omahine Road (Te Poi), and the Ch.B repeater from 1971~1973

Beacons

operating in Hamilton since January 1979



Beacons

operating in Hamilton since January 1979



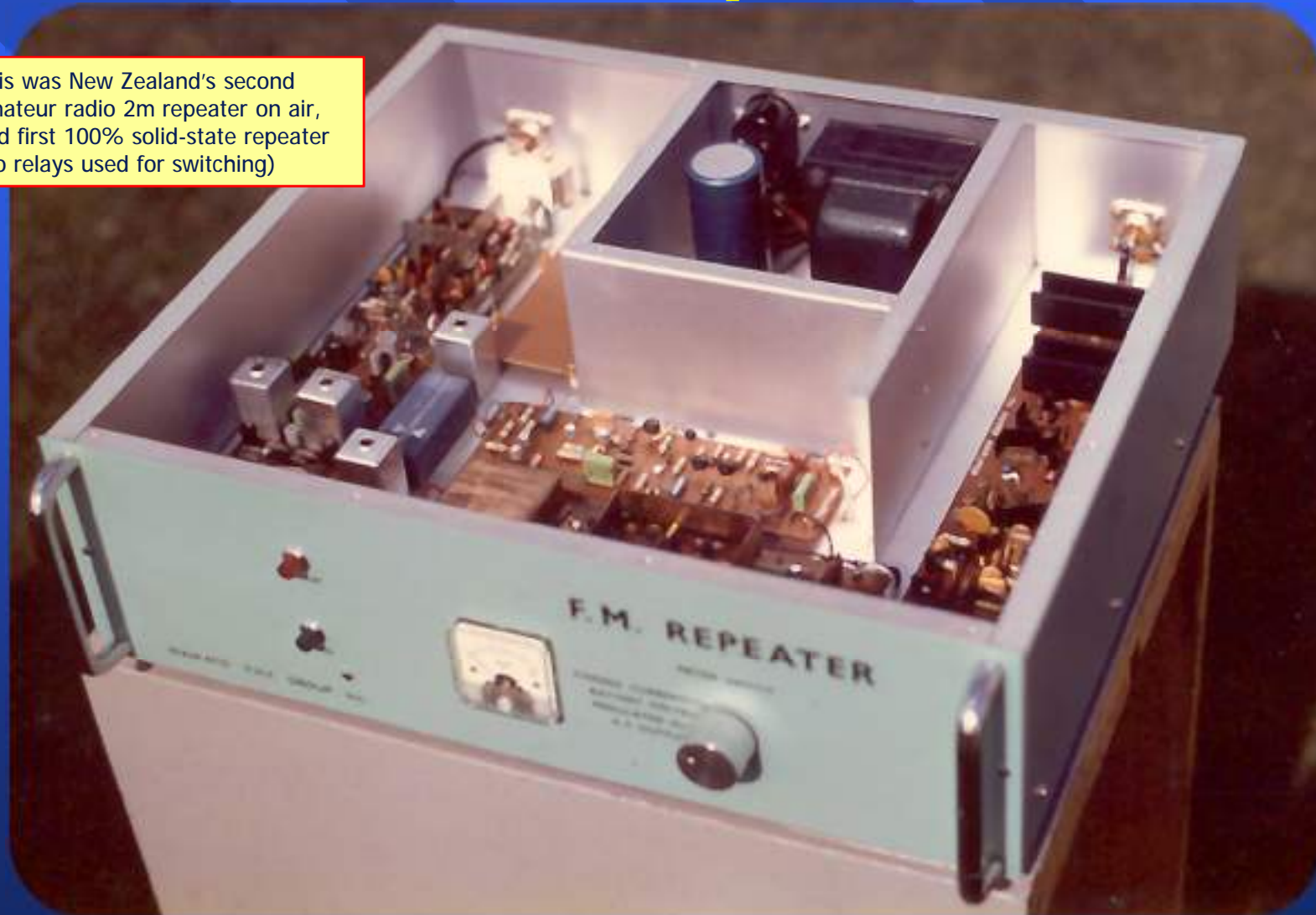
70cm stacked Clover Leaves

2m single Clover Leaf

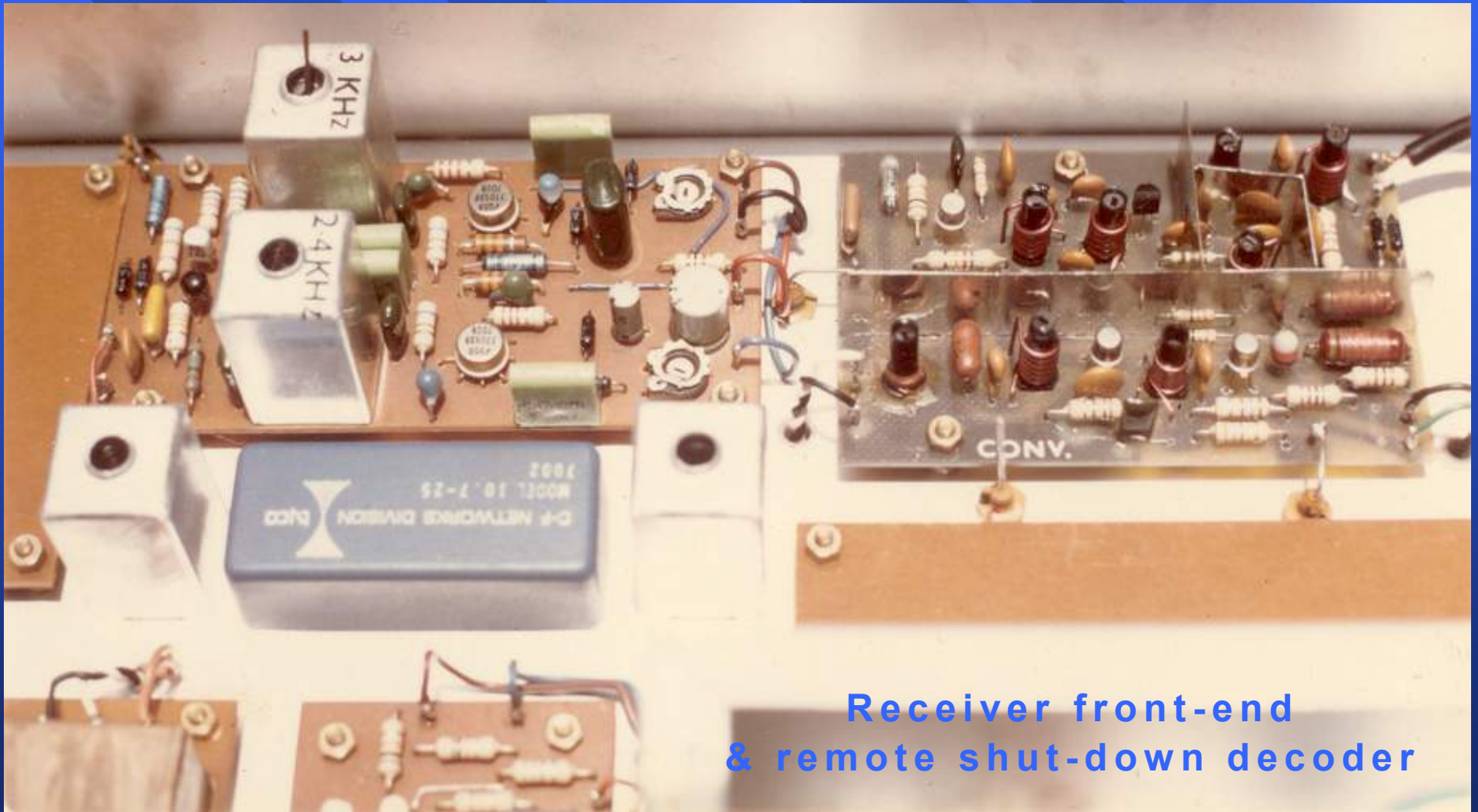
23cm stacked Clover Leaves

First Repeater

This was New Zealand's second amateur radio 2m repeater on air, and first 100% solid-state repeater (no relays used for switching)

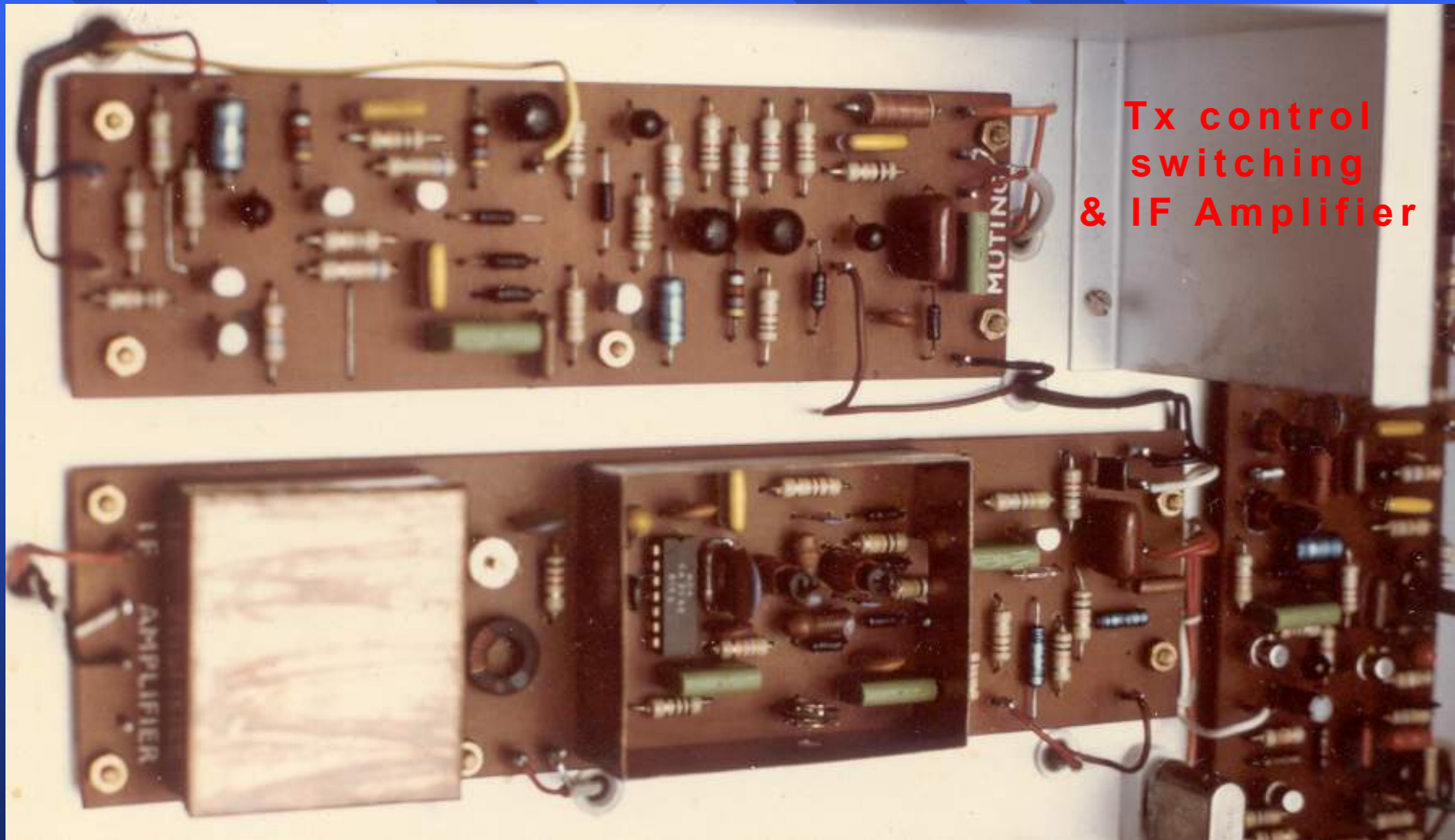


First Repeater



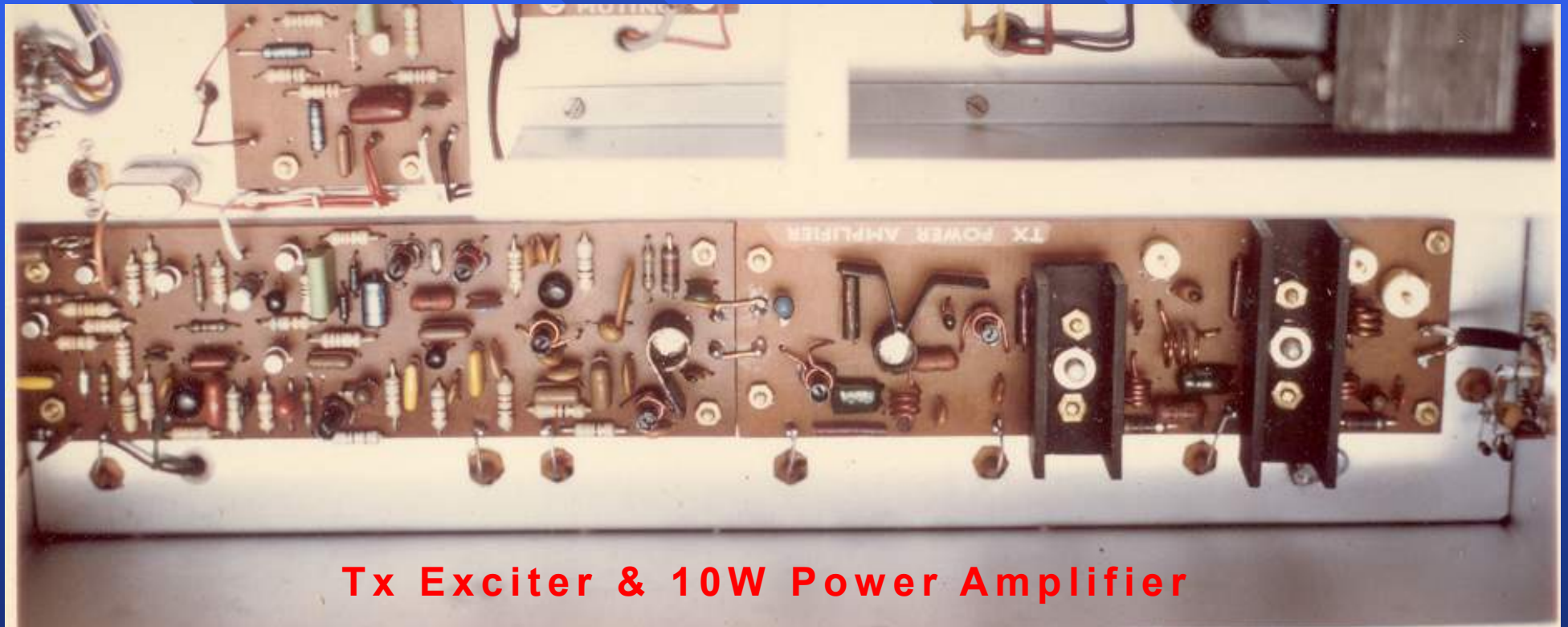
Receiver front-end
& remote shut-down decoder

First Repeater



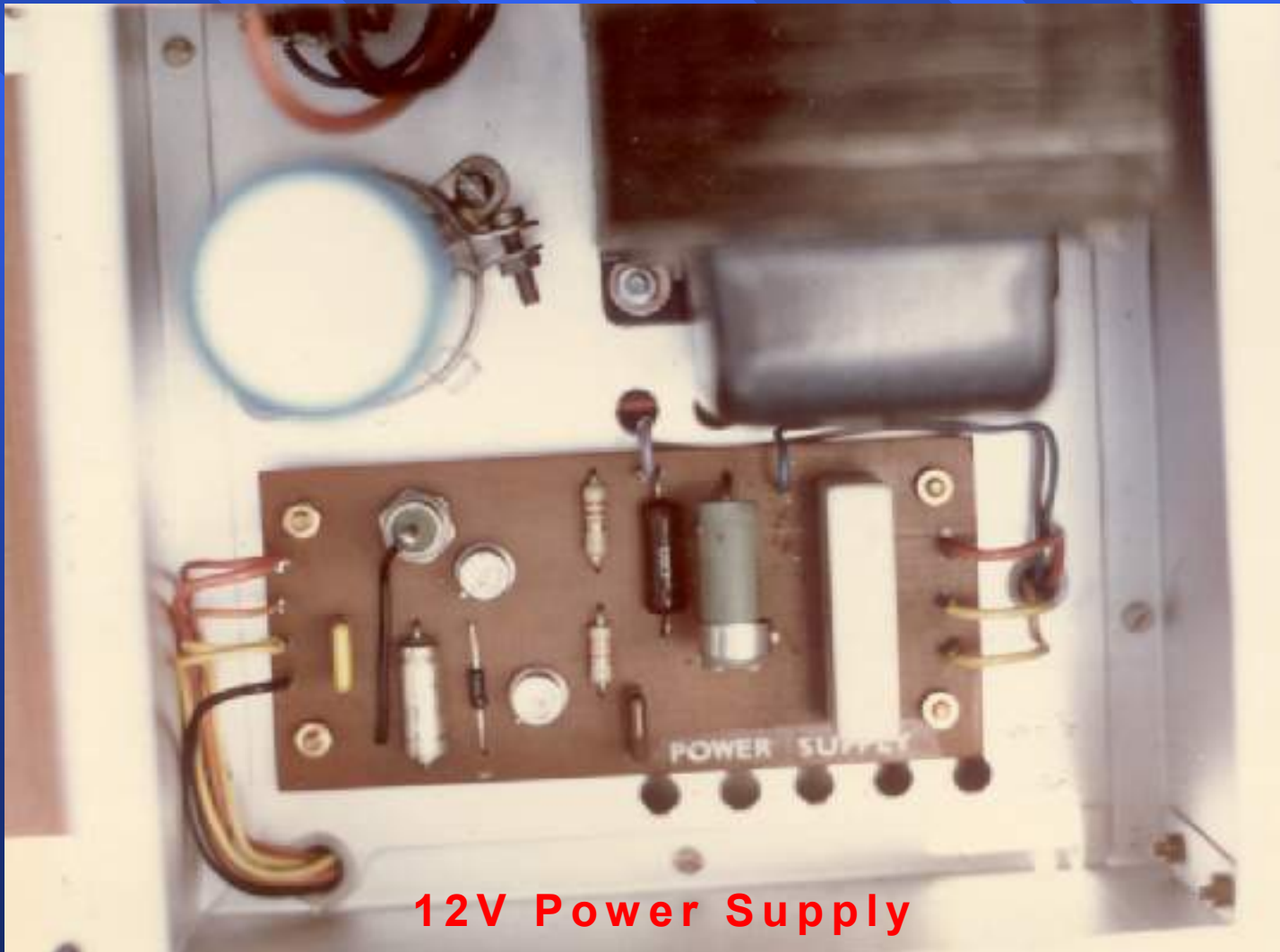
Tx control
switching
& IF Amplifier

First Repeater

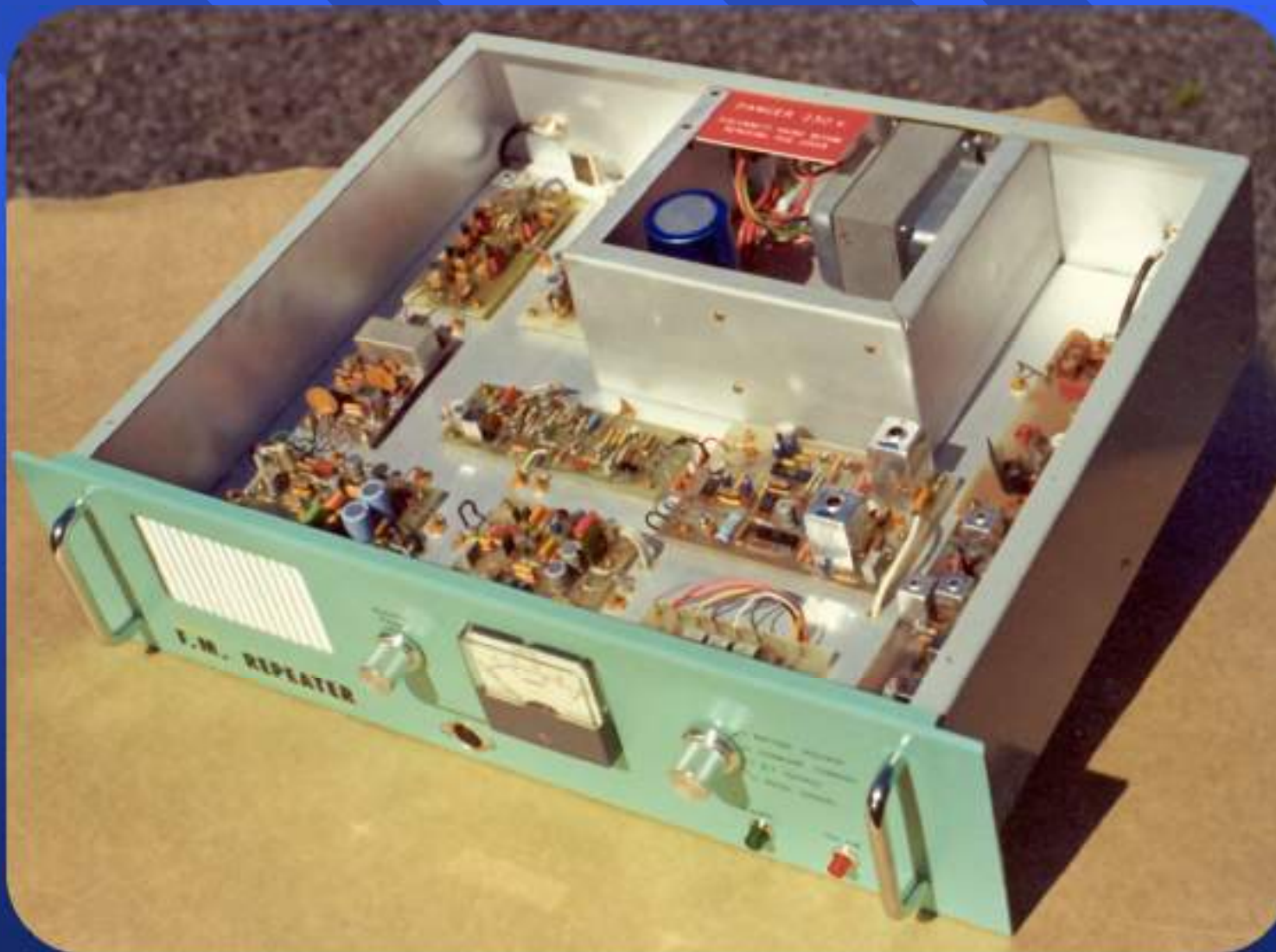


Tx Exciter & 10W Power Amplifier

First Repeater



In 1973 we offered a
REPEATER as a **KITSET**



First Repeater at TE AROHA - 7 April 1973



First Repeater at TE AROHA - 7 April 1973



Receive array, 36m above ground

First Repeater at Te Aroha - 7 April 1973



Transmit array, 20m above ground

Te Aroha



'695
4x Dipole Array
adjacent to
S/E leg

Antennas on new tower

Te Aroha

'840
4x Dipole Array
in front of S/W leg



Te Aroha 1973 to 2011

IRLP Link
This shelf is now used at
Te Uku with '5675



'695 + '840 repeaters plus
power supply (now retired)

Committee
VHF Convention ^1973



Another historical photo, taken at

WVHFG meeting 20 March 1982



Historical Milestones

- | 1967 – Group news broadcast commenced
- | 1971 – Our first 2m repeater "Ch.B" on the air
- | 1972 – April - 145.15MHz beacon on the air
- | 1973 – Easter VHF Convention in Hamilton
- | 1975 – Quarterly newsletter from November,
– "Ch.C" established at Mt Edgecumbe
- | 1978 – We became an Incorporated Society
- | 1979 – Our first lady President appointed, and
distribution of Elector magazine commenced

Historical Milestones

- | **1981** – Subs increased from \$2.50 to \$5.00
- | **1983** – 2m repeater established at Tairua
- | **1985** – Easter VHF Convention again in Hamilton
- | **1986** – We became NZART Branch 81
- | **1987** – Te Aroha linked on trial to Tairua
- | **1991** – National System ULS repeater at Kaimai
- | **1995** – '540 data repeater installed at Kaimai, plus 2GHz Beacon established at Te Uku
- | **1998** – "Raglan" '5675 repeater established

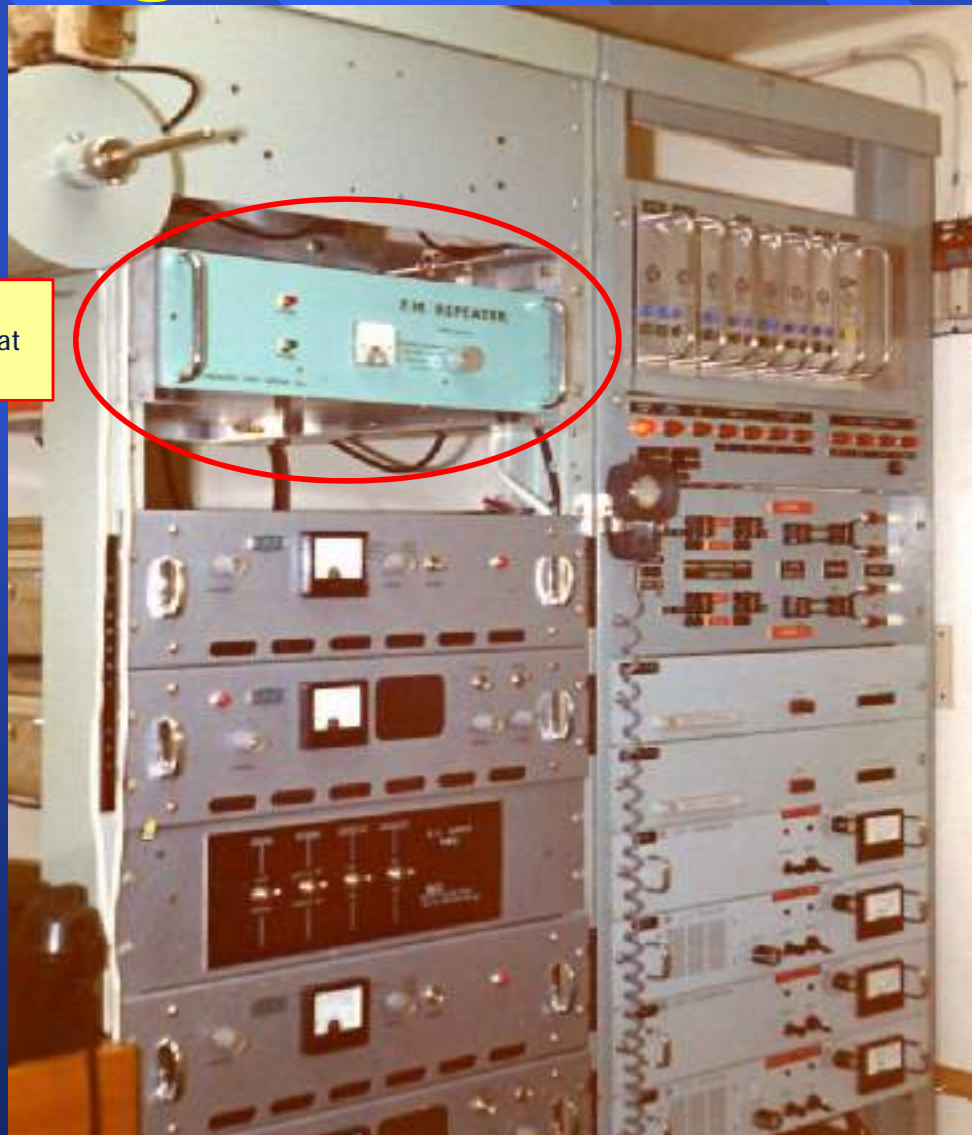
Historical Milestones

- | **2003** – Technology Convention at Hamilton, National System repeater installed at Hamilton
- | **2005** – IRLP installed on Te Aroha '695
- | **2009** – New tower & antennas installed at Kaimai, 2GHz beacon installed at Kaimai in February
- | **2010** – '5675 repeater moved to Te Uku site
- | **2011** – May - Te Aroha repeaters shut down, and '695 commissioned at Te Weraiti
- | **2012** – November – Maungakawa '5575 on air

Some more historical photos

Mt.Edgecumbe 'Ch.E' 1975

Repeater in rack with
commercial installation at
Mt.Edgecumbe



Mt. Edgecumbe 'Ch.E' 1975



Tairua '6975 in 2002



Raglan '5675 installed January 1998



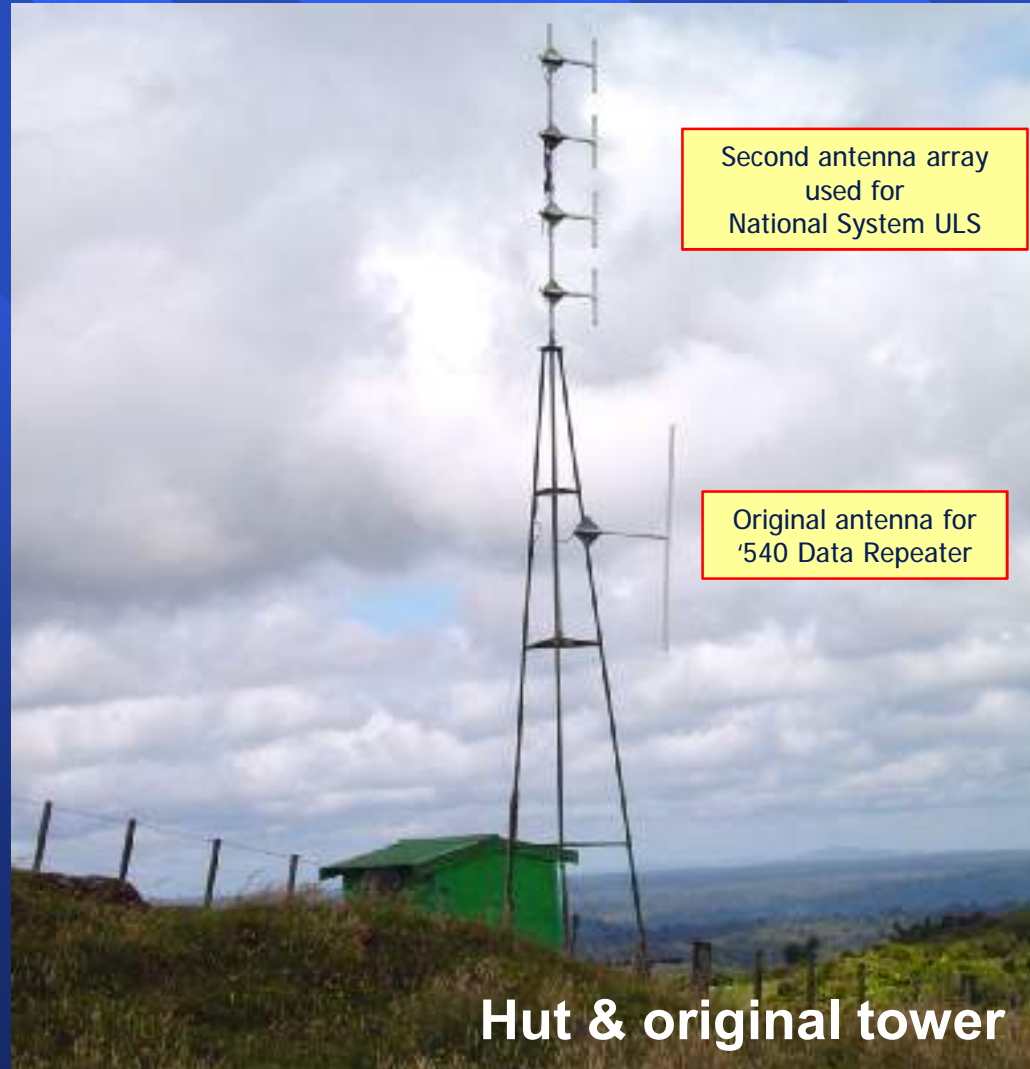
'5675 colinear antenna

Solar-powered installation removed from service in February 2010 before site taken over by wind-farm



Kaimai '540 & '485

(site as established in 1991)



Second antenna array
used for
National System ULS

Original antenna for
'540 Data Repeater

Hut & original tower

And a couple of our present installations

Kaimai '540 & '485



'540 Data Repeater

Kaimai '540 & '485

'3975 prior to NS
Freq. changes



Kaimai '540 & '485



550Ah of 12V for '485

Hamilton '9975



Shares space in commercial installation on Hamilton's southern boundary

Hamilton '9975



Prior to NS frequency changes in 2005

Waikato VHF Group achievements

Since its formation in 1963:

- n This Group has operated continuously for 50 years
- n We established NZ's second 2m repeater
- n Assisted in establishing many other repeaters
- n Jointly hosted three VHF Conventions in Hamilton

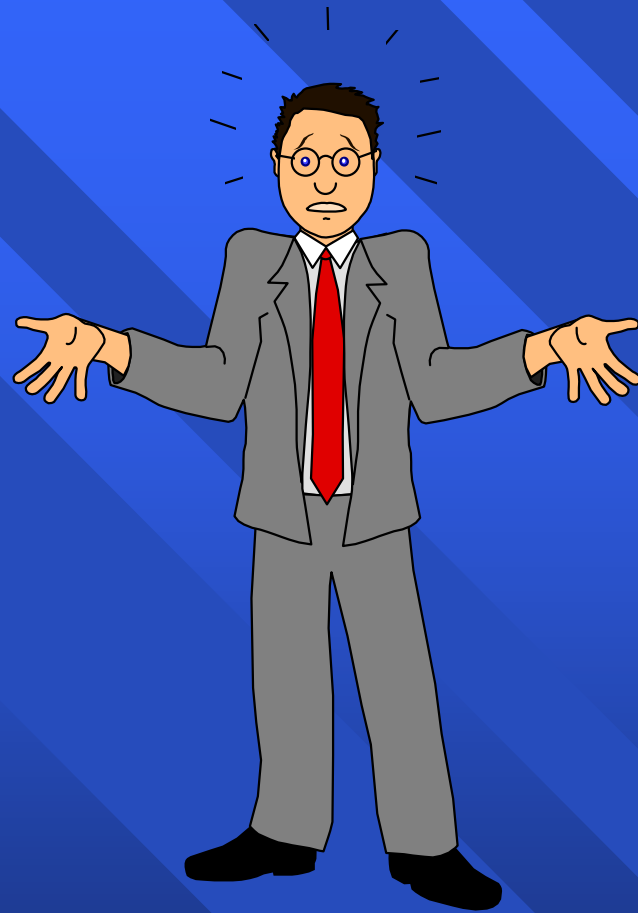
Beacons and repeaters:

- n Operate four long established beacons
- n Presently operate five 2m, & two 70cm repeaters
- n plus eight links-ends connecting these repeaters together, six to create our "WaiPlenty network"

Waikato VHF Group achievements

And now,
into the next 50 years





Thank you for viewing