QUA FARC

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Franklin Amateur Radio Club Inc NZART Branch 10

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Vice President: Gary Landon ZL1WGL
Secretary: Tom McDonald ZL1TO Ph. 09 238 8580.
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Committee: Ted Doell ZL1BQA, Durlene Griffin ZL1ULK
Club examiners: Ian ZL1PZ and Tom ZL1TO.

MEETINGS: The club meets on the third Tuesday each month, in the clubrooms, Stadium Drive Pukekohe at 7.30 pm. Visitors welcome.

The committee meets on the first Tuesday of each month (excepting January) at 7.30 pm in the clubrooms.
Subscriptions $20.00, family $30.00.

Nets every Sunday at 9.00 am on 3.700 MHz and 9.30 am on the 146.900 MHz repeater. 2 metre frequencies are 145.775 MHz, then 146.625 MHz, and 146.900 simplex if repeaters off air.

Newsletter: Editor Tom ZL1TO tom.mcdonald@xtra.co.nz
A copy is sent to members and clubs in the Auckland area. Sent free of obligation by e-mail to anyone interested.

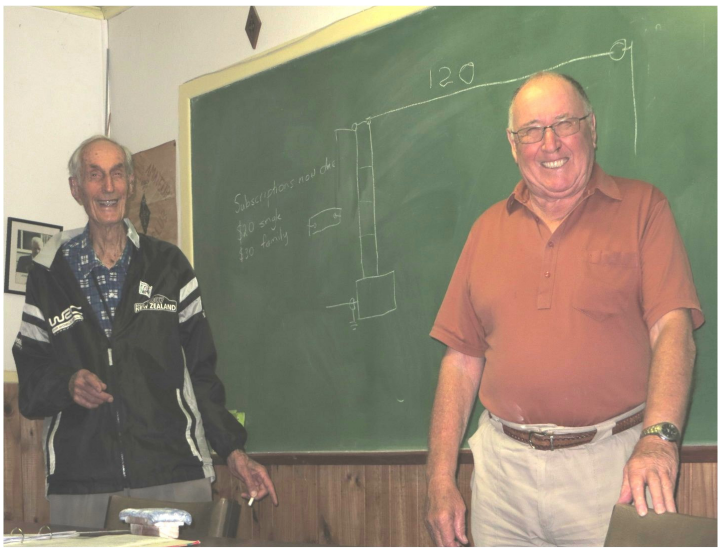
Members antennas for HF

At the general meeting in December three members described the HF antenna systems that they use. As our members tend to live in semirural South Auckland, most of us have enough space to set up a half wave 80 m dipole. The other HF bands being used all have a shorter requirement.

Antenna choice has to be a compromise. While the ideal height for the centre of an inverted V antenna is roughly ¼ of a wavelength everyone of us is using much less. In most cases the position of the house and other obstacles means that the V shape is in plan view rather than a profile view..

Ted ZL1BQA has dipoles for 80m, 40 m and 20 m arranged in a fan in plan view. The centre fed coax feed line is permanently connected to the centre of each radiating leg. Fine tuning is achieved by winding back surplus length on itself.

Bob ZL1BBZ described the AREC HF antenna. This too is a centre fed dipole. However the radiators for each band are connected in series with spade connectors. The centre is supported on a telescoping aluminium pole. A single guy to the top keeps the unit steady as the dipole is always not in a straight line. Fine tuning is achieved by raising or lowering the bottom ends of the two radiating legs.



Above: Ian ZL1PZ illustrates his end fed long wire and transmatch on the blackboard and is joined by Ted ZL1BQA.

Club Notice Board

Tour de Ranges, Saturday 13 January 2018

We are providing three stations for this major cycle race.

The course has been shortened, leaving out the coastal section, due to road damage during the storm of 5 January.

The primary frequency is 146.825 MHz and some operations will be over the Bombay 690 and Mercury Bay 7075 repeaters. It would be appreciated if normal users of these frequencies give consideration to the priority needs of stations providing safety service for the event on Saturday morning.

General Meeting, Tuesday 16 January

This, the first meeting of 2018 has no talk planned to follow the formal part of the meeting. Start time 7.30 pm.

There will need to be some discussion on preparation for the HF Field Days which are just over a month away.

Jock White Field Days 24-25 February

Members who are available to assist the Club's effort will get an opportunity to join the team. The venue and choice of antennas will be up for discussion at the January general meeting.

Ian ZL1PZ is from the old school. His 80 m antenna is a 120 foot (37 m) long wire that is end fed by open wire feeders. Ian chose a section and built so as to be able to fit such an antenna. A transmatch at the base of the open feed wires connects to the transceiver with 50 ohm coax. The same antenna can be used continuously on other HF bands by retuning with the transmatch. Ian also has a log periodic antenna on top of a 10 metre pole for all bands between 20 m and 10 m. Ian will soon make a shift to the Possum Bourne Village where rules will restrict his radio operations to VHF and UHF.

The club thanks these three members for sharing their experience. All are willing to give further advice to others who may wish to follow the designs that they have settled upon.

Minutes of Franklin Amateur Radio Club (Inc) General Meeting held in the Clubrooms Stadium Drive Pukekohe on 19 December 2017.

Chairman Ted ZL1BQA opened the meeting at 1935 hours.

Attendance: ZL1BQA, ZL1TO, ZL1PZ ZL1BBZ, ZL1GAC, Peter Henderson ZL1ULK, ZL1WGL, ZL1TDH, ZL1LL Gordon Armstrong, ZL1UOM.

Apologies: ZL1UOM (for lateness)

The minutes of the November meeting were approved as a true record. ZL1TO / ZL1PZ

Arising from the minutes. Bruce ZL1TDH advised that we stay clear of dry powder fire extinguishers. Rather than at the entrance foyer, one fire extinguisher should be inside the double doors where it less liable to incur misuse. The check each year needs to include weighing and sign off by an organisation such as Firewatch Counties. Discussion on the electrical inspection covered the necessity of the inspector to have liability cover.
The club is to get an independent electrical inspector.
ZL1TDH / ZL1GAC
Bruce ZL1TDH was authorised to see if Peter Hinton will do the electrical inspection. Bruce will also organise the two carbon dioxide fire extinguishers.

Finance
Watercare will send a bill imminently. The contractor is now off site, with the skate park opened two days ago. If reimbursement is not forthcoming the Council will be contacted.
Insurance to FMG $614.88 has been paid.
Donation to VHF Group $200 posted to VHF Group
Term deposit of $19000 matures on 4 January. The interest payment will be $682.13 The present offer for a 1 year term investment is 3.5%
That the term deposit be increased, when it matures, to $21000 by adding $2000 from the current account and the term of the deposit should be 1 year. ZL1BQA / ZL1LL
The finance report was received. ZL1TO / ZL1WGL

Reports
AREC: Our volunteers Tom ZL1TO, Durlene ZL1ULK and Bob ZL1BBZ are on the list for the Tour de Ranges on Saturday 13 January. There may be a few vacancies to fill. Literature has recently been emailed from Richard ZL1BNQ. We have an additional volunteer, Ian ZL1PZ.

Topics at coming meetings: 16 January. The meeting was asked for members to put forward their ideas for future talk topics. The meeting will include arrangements for Jock White field days.

Subscriptions: Are being accepted tonight, and by direct payment as described in QUA. Two subscriptions have been received electronically and another five by cash. A donation was received from ZL1BBZ.

The meeting closed at 2010 hours.

Committee

There was no committee meeting in January.

The next committee meeting is scheduled for Tuesday 6 February, a public holiday. The committee needs to assess whether the meeting date needs to be modified.

Hams on Holiday

Of course hams have other things in their lives, besides radio. Vice President Gary ZL1WGL is well involved with South Auckland Caravan Club, as is member Cliff ZL1RP.

This year the caravaners had a rally to Northland, where they saw in the New Year at Waipu.

Secretary Tom ZL1TO and member Lynnette ZL1LL were part of the Clan Donald contingent at the Waipu Highland Games.

The photo below shows a meet-up between Gary, Lynnette, Diane and Tom at the Clan Donald pavilion.

NEWSLETTERS FROM OTHER BRANCHES

03. The next newsletter is not due until February. Roy, ZL1LK, will be having a Monster Garage Sale at his home on the 14th January starting at 9am. A list of the offering is on page 4 of this edition of QUA.

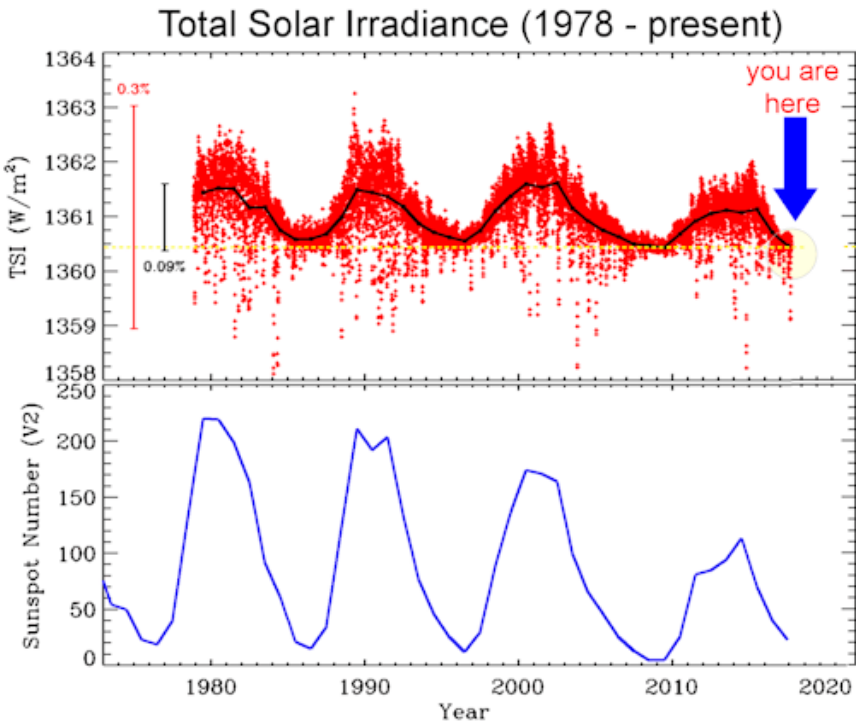
86. Cover picture flying boat and memorial tablet to crew of Samoan Clipper and crew 80 years after their loss. Extensive illustrated article on Captain Musick's triumph and tragedy by Neil Sanderson. Alex Glennie ZL4ACG spoke on history of Awarua Radio at meeting 10 December. H night report by Martin ZL3CK.

The Sun is Dimming

Steve ZL1TWR sent this lead from 'Space Weather"

DECEMBER 17, 2017 / DR.TONY PHILLIPS

On Friday, Dec. 15th, at the Cape Canaveral Air Force Station in Florida, SpaceX launched a new sensor to the International Space Station named TSIS-1. Its mission: to measure the dimming of the sun. As the sunspot cycle plunges toward its 11-year minimum, NASA satellites are tracking a decline in total solar irradiance (TSI). Across the entire electromagnetic spectrum, the sun's output has dropped nearly 0.1% compared to the Solar Maximum of 2012-2014. This plot shows the TSI since 1978 as observed from nine previous satellites:



The rise and fall of the sun's luminosity is a natural part of the solar cycle. A change of 0.1% may not sound like much, but the sun deposits a lot of energy on the Earth, approximately 1,361 watts per square meter. Summed over the globe, a 0.1% variation in this quantity exceeds all of our planet's other energy sources (such as natural radioactivity in Earth's core) combined. A 2013 report issued by the National Research Council (NRC), "The Effects of Solar Variability on Earth's Climate," spells out some of the ways the cyclic change in TSI can affect the chemistry of Earth's upper atmosphere and possibly alter regional weather patterns, especially in the Pacific.

NASA's current flagship satellite for measuring TSI, the Solar Radiation and Climate Experiment (SORCE), is now more than six years beyond its prime-mission lifetime. TSIS-1 will take over for SORCE, extending the record of TSI measurements with unprecedented precision. It's five-year mission will overlap a deep Solar Minimum expected in 2019-2020. TSIS-1 will therefore be able to observe the continued decline in the sun's luminosity followed by a rebound as the next solar cycle picks up steam. Installing and checking out TSIS-1 will take some time; the first science data are expected in Feb. 2018. Stay tuned.

Editorial comment

As amateur radio operators our principal interest in the sun's variability is the sunspot cycle, which brings with it predictable changes in the propagation of radio signals around the world.

It is interesting that the sunspot cycle may also contribute to Earth's climate.

Think about the time scales …

Weather changes day by day, and in some places on earth several times a day.

Climate varies on a longer time scale – months to years.

Ice ages and polar melting appear to reappear in time scales of hundreds to thousands of years.

And in the grand scheme of things our sun at 6 billion years old is about half way through a lifetime that will in the far future see it expand to be a red giant, that will completely envelope earth's orbit.

At right is an illustration from a 2011 paper by workers who have contributed to the thinking at the top of the page. I leave it to you to see what this implies about mankind's contribution to climate.

Do remember that earth's atmosphere is thin; it has a mass equivalent to a layer of water just 10 metres thick over the surface of our planet.

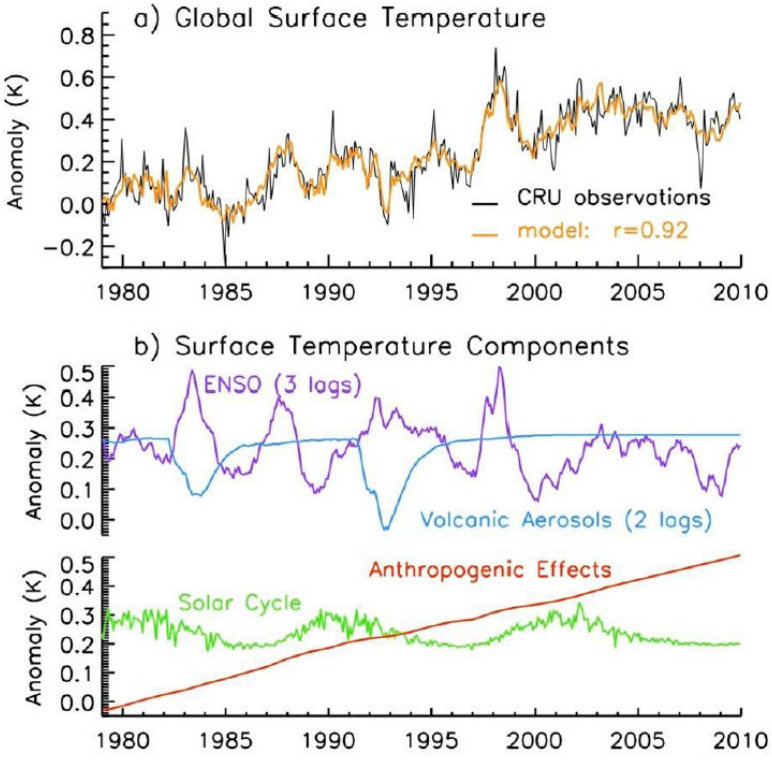


FIGURE 2.1 Global temperature and surface temperature components of Earth's climate. Combined El Niño-Southern Oscillation (ENSO), volcanic aerosols, solar activity, and anthropogenic effects explain 85 percent of observed temperature variance. SOURCE: G. Kopp and J.L. Lean, A new, lower value of total solar irradiance: Evidence and climate significance, *Geophysical Research Letters* 38:L01706, 2011; Copyright 2011 American Geophysical Union.

Used Equipment Sale

from Roy ZL1LK

Sunday 14th January 2018, Start 9am…

Location: 16A Newington Rd, Henderson

Please note: Most of the radios have not been tested. Of the 20% tested, 50% have been found to be in correct working condition, the others that have been tested will need some repairs.

YAESU
1 x FT101 Transceiver
2 x FT101E Transceiver
4 x FR101 Receiver Digital Display
2 x FR101 Receiver Analogue Display
2 x FL101 Transmitter
3 x FT200 Transceiver (only one PSU)
1 x FT301D Transceiver Digital Display
1 x FT301 Transceiver Analogue Display
3 x FRG7 Receiver
1 x FT102 Transceiver
1 x FT980 Transceiver
1 x FT757GX Transceiver
1 x FC757AT Auto Tuner
1 x FR100B Receiver
1 x FL200B Transceiver
1 x FT101 Speaker
1 x FT401 Speaker
1 x VTF250 Inverter
1 x YC355 Frequency Counter

KENWOOD / TRIO
1 x TS700SP Transceiver Digital Display
1 x TS700A Transceiver Analogue Display
! x TS520D Transceiver
1 x QR666 Receiver
3 x R599 Receiver
3 x JR599 Transmitter
1 x TS511 Transceiver
1 x 9R-59DS Receiver
1 x CO1301 Scope
1 x CO1303G Scope
1 x CS1577 Scope
1 x VFO-800
1 x PS900 PSU

ICOM
1 x IC22U
1 x IC-PS20 with on/off switch

Heathkit Radios and Accessories
2 x SB-303
1 x SB-301
1 x SB-400
1 x SB-110
1 x SB-101
1 x SB-300
1 x SB-104A
1 x HW-8
1 x HW-9
1 x HW-16
1 x HW-5400
1 x HD-11
1 x HQ-10B VFO
1 x T-3 Signal Tracer
1 x HO-10
1 x SB-630
1 x SB-10

Hallicrafters
1 x HT-44
1 x SX-117
1 x SX-111
1 x SR-150
1 x SX-101
1 x SX-115

SWAN / SILTRONIX
1 x Siltronix 1011C Transceiver
1 x Siltronix 1011D Transceiver
1 x Swan 250
2 x Swan 500
2 x Swan SS200 (both with PSU)
1 x Siltronix 90 VFO

COLLINS
1 x 75A-4
2 x 51J-4

DRAKE
1 x 2A
2 x R4C
1 x VU3
1 x RV3
1 x 2C
2 x R4B
1 x TR4C
1 x MS4

RACAL
1 x MA7917B
1 x RA1771
1 x MA1075 Remote unit
1 x RAC1025 SSB Converter

OTHER RADIOS
1 x Astro 102BX Transceiver
2 x Hammarlund HQ215 Receiver
2 x Hammarlund HQ-ONE-EIGHTY Receiver
1 x Hummarlund HQ-ONE-SEVENTY Receiver
1 x Hammarlund HQ-ONE-SEVENTY-A Receiver
1 x KW2000 Transceiver
1 x KW2000B Transceiver
1 x KW-Atlanta Transceiver with matching PSU/Speaker
1 x Dansk-Radio RX4000HF Receiver
1 x CEI RS-111-1A Receiver
1 x National NC300 Receiver
1 x National NCX-5 Receiver
1 x AOR AR7030 Receiver
1 x Galaxy GT-550A Transmitter
2 x Galaxy R-530 Receiver
1 x Galaxy RV-550 External VFO
1 x Watkens Johnson WJ8737/RU
1 x Hagenuk E81 Receiver
1 x Johnson Ranger 2 Viking Receiver

DATA TERMINALS
2 x Info Tech M600
1 x Universal M900
1 x PK900
2 x HAL ST8000 HF Modem

TEST GEAR
1 x HP-8553B, 8552A, 149B Spectrum Analyzer
1 x HP-8405 Vector Voltmeter
1 x Rohde and Schwarz ESU BN150021
1 x WG WM-20 Level Tracer
1 x Motorola RF Millivoltmeter
1 x Heath Zenith Test PSU SP-2717A
1 x Simpson Capacohmeter Cap Tester
1 x Philips PM-5131 Function Generator
1 x Feedback FG-600 Function Generator

Plus more….
Also boxes of parts, manuals, filters etc…