



Ragchew

"The Voice of Branch 68"

October 2017

The North Canterbury Amateur Radio Club Inc.
PO Box 14, Woodend 7641



www.ncarcinc.weebly.com



QTH

Meetings are held at the Woodend Youth Centre, unless otherwise advised.

CLUB CALENDAR

Meetings start at 1930hrs, unless otherwise stated.

Host for October - ZL3GM

Branch 68

October 12 General Meeting - speaker Michael Wise ZL3AX on
'Operating from Canouan Island as J87AB'

Branch 01 Ashburton

October 9 General Meeting

Branch 05 Christchurch

October 4 General Meeting - AWAY meeting at Taits 1900hrs

October 19 Day Meeting @ 1300hrs

CARDS

October 18 Regular Meeting

Nets and Frequencies

Canterbury 2M SSB Net 144.200MHz every Tuesday from 2000hrs (vertical polarisation)

Canterbury 6M Net 3850 6M Repeater Thursdays from 2000hrs (vertical polarisation)

Canterbury Area Net 5625 Repeater, 2000hrs on Sundays

National Broadcast last Sunday of the month at 2000hrs on 3.900MHz, National System, 6975 and 705 Repeaters

Secretary: Colin Rowe ZL3COL **Phone** 03 313 2303 **Email:** colingr@xtra.co.nz

Editor: Ron Kautz ZL3RCK **Phone** 021 036 7315 **Email:** zl3rck@gmx.com

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Thanks to **BAYLEYS** for sponsoring
the photocopying of the newsletter.

Tel: 03 311 8020

Presidents Report Oct 2017

Saturday, 30 September 2017

17:26

I must apologise for the lack of attendance at the last club meeting, but unfortunately work commitments got in the way again, I do try to avoid clashing wherever possible, but sometimes it's just unavoidable. DX is quit fickle at the moment, but there have been a few high band openings on 15 and 20 metres later in the evening (from 0930z). It will be interesting to see what this summer season brings. The year is certainly marching on and we have a couple of good speakers lined up for the next 2/3 meeting and by then it's Christmas! Come and hear Michael ZL3AX give his talk next meeting , it promises to be interesting.

That's all for now

73

Don MacDonald ZL3DMC

AREC and CD Report

Nothing of note to report.

Don ZL3DMC/ZK9EG Section Leader



Repeater Report (Oct. 2017 N/L)

Mount Noble 6975 (146.975Mhz) Repeater



675 (Mt. Grey).

A very strong, spasmodic interference appeared on September 14th and has continued almost daily since that date. Efforts are underway to try and locate its source.

Mount Grey 675 (146.750Mhz) Repeater



6975 (Mt. Noble).

This repeater was shut down for two 4-day periods in an effort to try and give the batteries a chance to recover from an extended period of low winds and continuous cloud cover. Unfortunately, the battery voltage remains abnormally low which is giving concerns of possible battery and/or charging system failure. With this in mind the repeater may be shut down until further notice.

Geoff ZL3QR.

Understanding propagation numbers

How To Read Propagation Numbers

The A index (LOW is GOOD)

- 1 to 6 is BEST
- 7 to 9 is OK
- 11 or more is BAD

Represents the overall geomagnetic condition of the ionosphere ("Ap" if averaged from the Kp-Index) (an average of the eight 3-hour K-Indices) ('A' referring to amplitude) over a given 24 hour period, ranging (linearly) typically from 1-100 but theoretically up to 400.

A lower A-Index generally suggests better propagation on the 10, 12, 15, 17, & 20 Meter Bands; a low & steady Ap-Index generally suggest good propagation on the 30, 40, 60, 80, & 160 Meter Bands.

SFI index (HIGH is GOOD)

- 70 NOT GOOD
- 80 GOOD
- 90 BETTER
- 100+ BEST

The measure of total radio emissions from the sun at 10.7cm (2800 MHz), on a scale of 60 (no sunspots) to 300, generally corresponding to the sunspot level, but being too low in energy to cause ionization, not related to the ionization level of the Ionosphere.

Higher Solar Flux generally suggests better propagation on the 10, 12, 15, 17, & 20 Meter Bands; Solar Flux rarely affects the 30, 40, 60, 80, & 160 Meter Bands.

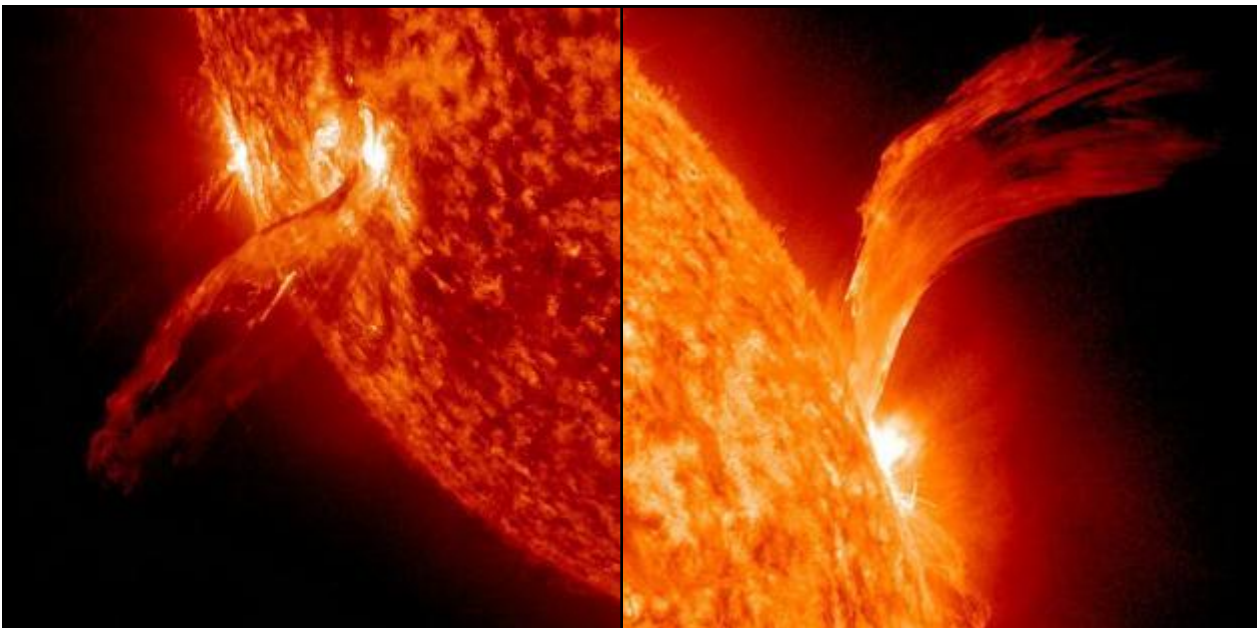
K index (LOW is GOOD)

- 0 or 1 is BEST
- 2 is OK
- 3 or more is BAD

5 is VERY VERY BAD

The overall geomagnetic condition of the ionosphere ("Kp" if averaged over the planet) over the past 3 hours, measured by 13 magnetometers between 46 & 63 degrees of latitude, and ranging quasi-logarithmically from 0-9. Designed to detect solar particle radiation by its magnetic effect. A higher K-index generally means worse HF conditions.

A lower K-Index generally suggests better propagation on the 10, 12, 15, 17, & 20 Meter Bands; a low & steady Kp-Index generally suggest good propagation on the 30, 40, 60, 80, & 160 Meter Bands.



A **vacuum variable capacitor** uses a high vacuum as the dielectric instead of air or other insulating material. This allows for a higher voltage rating and/or capacitance value using a smaller total volume. In addition to the higher voltage rating a vacuum dielectric greatly reduces the chance of arcing between the plates. There are several different designs in vacuum variables, the most common geometry of the capacitor plates is usually inter-meshed concentric cylinders. The meshed cylinders are contained within a ceramic vacuum envelope, similar to an electron tube. Metal bellows are used to maintain vacuum seal while allowing positional control for the moving parts of the capacitor.

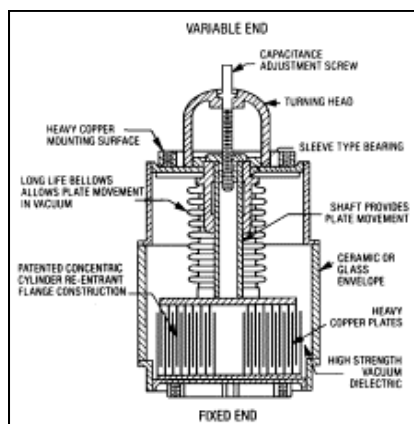
Jennings Radio UCSL 500 pF 3kv Vacuum Variable Capacitor UCSL-500 3,000 Volts

Rated Capacitance 5-500 pF
 Peak Voltage 3 KV
 Current Amps (RMS)
 Maximum 30 amps
 Shaft Diameter 1/4 inch
 Max length .12 in / 104.65 mm (including shaft)
 Max Diameter 2.19 in / 55.63 mm
 Mounting Permanently attached 3-hole flanges on both front and rear ends for mounting

Fixed and Variable Vacuum Capacitors

Properly handled and applied, vacuum capacitors manufactured by Jennings Technology will be highly reliable, long life components. The external appearance of these units, especially those packaged in a ceramic envelope suggest a very robust component. It is indeed a sturdy assembly, but one that is at the same time quite unforgiving if handled incorrectly.

Figure 1 illustrates the construction of a typical Jennings variable vacuum capacitor. Two sets of concentric cylinders, one on a sliding shaft, the other fixed, are enclosed in an evacuated ceramic or glass envelope with OFHC copper seals located at both ends. A flexible metal bellows, attached to a sleeve type bearing, maintains the vacuum while allowing the



capacitance to be varied. The linear sliding motion required to vary capacitance is converted to rotary tuning via a thread shaft; in many ca-

pacitors direct pull tuning is an alternative.

Internal breakdown voltage is primarily determined by the spacing of the opposing plates.

The following are general specifications pertaining to Jennings vacuum capacitors. Current ratings are for normal convection cooling in ambient temperature of 25°C unless otherwise specified.

As shown in the illustration a vacuum capacitor is a complex assembly of constituent parts. It is manufactured with extremely tight alignment requirements between a series of concentric fixed and variable plates, bellows and bearing surfaces. Moreover due to the brazing process utilized to join the glass or ceramic, metal and copper, the copper plates become annealed and very soft. The spacing between these concentric plates is often very tight and on some units as close as 0.010 inch. On most of the units there is an evacuation port also known as a tabulation. Damage to the tabulation can cause the units to loose vacuum. All of these capacitors have to be handled with care. The glass envelope units are more susceptible to breakage and loss of vacuum if dropped or banged. Even the rugged looking ceramic units can sustain permanent damage if dented, dropped, or even banged slightly. A blow in the wrong direction, can cause a shorting of the internal plates, which is non-repairable. Yet when properly installed in equipment, the units are highly reliable and have extremely long life.

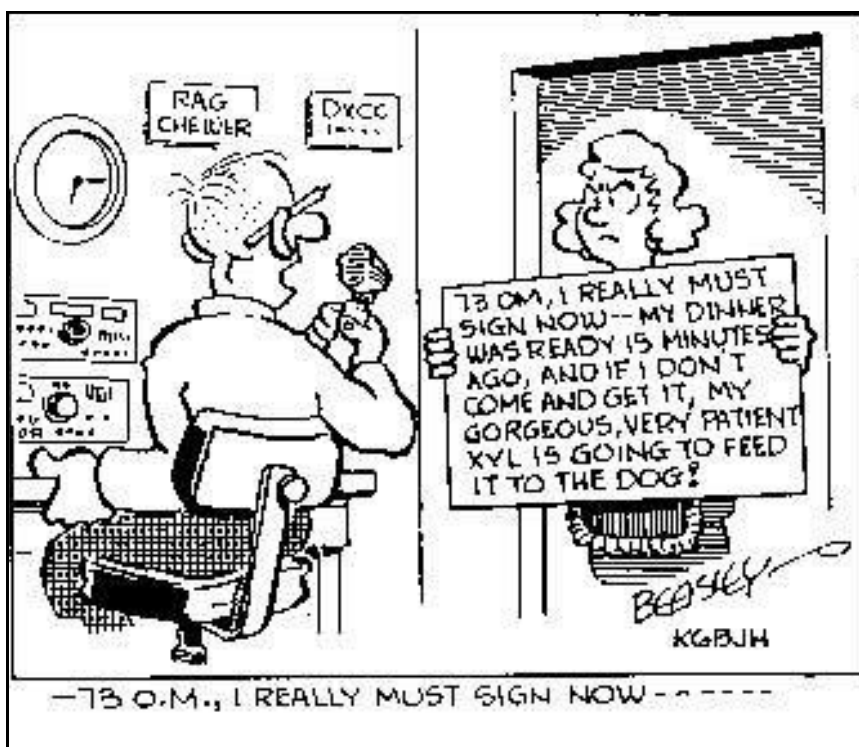


from the Editor...

As a new editor of the Branch 68 Ragchew and this with my 3rd edition I am gradually learning how to manage Microsoft Publisher which is the software used to create Ragchew. My background in desktop publishing from back in the early nineties was with software that ran on Macintosh (Apple) computers such as Adobe FrameMaker and Quark Xpress. I used FrameMaker to maintain an electro technical product catalogue that contained over 40000 products and Xpress for flyers and such. I am finding that Publisher today has a lot of the finesses that only the high end software I used back in the day had. But still it is a learning curve and it will take time to grasp to allow me to get to a level that will allow me to produce a club edition to a high standard. So over time you may start noticing changes in layout, fonts and content presentation as I attempt to hone my skills and get used to presenting Ragchew in an interesting and accessible manner. I am particularly interest in utilizing multiple column layouts with text flow feature similar to the NZART Break-In journal layout.

If anyone has any comments or requests or even articles around our great amateur radio hobby you feel would be useful to be considered for publication in Ragchew then feel free to send information to me:

Ron z13rck@gmx.com



Your Birthday listing in Ragchew

For Branch 68 club members we can list your name and call-sign for the month of your Birthday. Want to be included? then send the editor a note via email to:

Ron z13rck@gmx.com and we will include you in the Birthday line up. Look forward to hearing from you.

*Man Up &
Get Checked!*

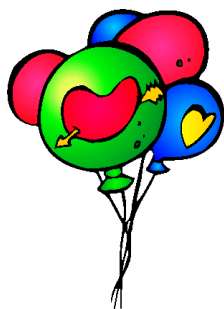


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****October Happy Birthday's****

Colin
Ian

ZL3COL
ZL3CE



CLUB COMMITTEE

President	Don MacDonald	ZL3DMC	03 327 7415
Vice President	Ron Kautz	ZL3RCK	03 312 8615
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Committee	Geoff Gillman	ZL3QR	03 313 7137
	Tony Buckland	ZL3HAM	03 312 5352
	Ron Kautz	ZL3RCK	03 312 8615
	Geoff Gooch	ZL3AL	03 920 2800
	Owen Pimm	ZL3GM	03 310 6070
	Simon Hill	ZL3SI	021 210 1786

SPECIAL INTEREST CONTACTS

AREC	Don MacDonald	ZL3DMC/ZK9EG	03 327 7415
Web Master	Ron Kautz	ZL3RCK	03 312 8615
Repeater Trustees 6975	Geoff Gillman	ZL3QR	03 313 7137
	Brian Holland	ZL4WX	03 312 3344
675	Geoff Gillman	ZL3QR	03 313 7137
	Richard Smart	ZL4FZ	03 385 8355
ZL3RR	Geoff Gillman	ZL3QR	03 313 7137

CALENDAR for 2017**General Meeting - Second Thursday at 1930 (7.30pm)**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
-									12	9	7

Committee Meeting - Fourth Thursday at 1930 (7.30pm)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
									26	23	-

Branch 68 Marketplace**FROM BRANCH 68**

Coax RG58 (per metre) \$1.60

Enquiries to Geoff ZL3QR, phone (03) 313 7137

Club Monograms (cloth) \$9.00 - Club Badges (metal) \$6.50

Enquiries to Denise ZL3HI, phone (03) 313 4907****SUBS DUE BY 30 APRIL******Annual Subscriptions
\$40 Single, \$50 Family**

Payment by instalments can be arranged with the Treasurer.

Bank details for Internet payment. Please include your Callsign / Name.**ANZ Bank: 01 0877 0105044 00****PLEASE HELP THE CLUB and PAY PROMPTLY**