



Western Suburbs Radio Club Inc.

February 2008 Newsletter

ZL1AC, Branch 03 NZART 3000 Great North Road New Lynn, PO Box 15-122, New Lynn. 0600

President: Andrew Barnett ZL2ALW, Secretary: Ragi

Newsletter Editor – John Neill ZL1NE

VHF Club Net Wednesday 07:30pm 146.525 MHz, HF Club Net Fridays 07:30pm 3.623 MHz

Website <http://www.qsl.net/zl1ac>



Club Calendar

Monday	11 th	February	Club Night – ATV update – 7:30 pm
Saturday	23 rd	February	National Field Day
Sunday	24 th		
Monday	10 th	March	Annual General Meeting – 7:30 pm

February Meeting

Our next club night is Monday 11th February and is to be a talk on ATV and the ATV studio progress. We hope to be able to transmit a test signal from the clubrooms. Andrew ZL2ALW has completed a preliminary test which was successful, though the signal was a little weak. On Sunday 27th Jan there was an ATV meeting at the club rooms where it was planned to erect the transmitting antenna to send the signal to the Waitakere transmitter. This was not quite completed and will be worked on at the start of the club evening.

Jock White National Field Day Contest February 23rd / 24th 2008

Jock White National Field Day Contest February 23rd / 24th 2008. If you would like to help over the weekend in putting the club-call sign on the air then the club is interested in hearing from you. As there is less than a month to go come on you will need to get organised very soon. There are a number of keen club members who want to get involved but it needs more people before we can operate a full 80/40 metre station on both CW and Phone.. If you are interested phone Ross on 09 629-0504 or e-mail ross.reddell@xtra.co.nz

Future meetings

If any club members have any ideas for the coming club nights, then get in contact with a committee member and let your views be known?

Annual General Meeting

The AGM for the club will be held on March 10th 2008. All present members (2007-2008) are asked to be present at this meeting, to elect the officers for 2008 / 2009.

AGM Agenda

Agenda	Election of Officers
1 Presidents Introduction	1 President
2 Apologies	2 Vice President
3 Minutes of 2007 AGM	3 Treasurer
4 Treasurers Report	4 Secretary
5 AREC Report	5 Four Committee Members
6 Presidents Report	6 Auditor of Accounts 2006/2007
7 Election of Officers	7 Newsletter Editor
8 General Business	

WOODHILL ENDURANCE EVENT JAN 12/13th 2008.

Unfortunately after a considerable preparation, Ross ZL1VRR had to pull out in running the communications for this event due to a family bereavement. Thanks go to Bob ZL1BBZ and Tom ZL1TO who stepped in and managed the event, and to the Franklin team who filled in for Western Suburbs. The radio base was in the usual woolshed at the end of Fletcher Road. Assisting at various checkpoints and at base were Lynette ZL1LL, Paul ZL4AX, Murray ZL1UHT, Derlene, Ian ZL1RCA, Merv ZL1SK, and Fred ZL1FAV. Over the weekend, 65 horses took part in the endurance horse riding

Franklin Radio Club provided their STSP repeater operating on 146.825 as the WSRC STSP repeater was awaiting repair. Unfortunately this repeater also went a little deaf, so all communications were completed on simplex using 146.825. No problems were encountered using simplex. The weather remained fine all weekend, and with it being so dry there was plenty of dust around to settle on all the vehicles.

All horses and riders were accounted for on both days. On Saturday four events were held, a 50 km, two 30km, and a 25km fun ride.

With fewer horses running than was earlier planned, the day ended earlier and the team was able to pack up and get away round mid afternoon. Thanks to the team for a job well done. The organiser was pleased with our effort on both days.

Report from Ross ZL1VRR / ZK1EK AREC Section Leader Br 03 WSRC.

Cycle 24 Here, Experts Say

With the appearance of Sunspot 981 - a high-latitude, reversed polarity sunspot -- on Friday, January 4, experts at NASA and the National Oceanic and Atmospheric Administration (NOAA) said that Cycle 24 is now here. "This sunspot is like the first robin of spring," said solar physicist Douglas Biesecker of the Space Weather Prediction Centre (SWPC), part of NOAA. "In this case, it's an early omen of solar storms that will gradually increase over the next few years."

Solar physicist David Hathaway of NASA's Marshall Space Flight Centre in Huntsville, Alabama concurred, saying that new solar cycles begin with a "modest knot" of magnetism, like the one that appeared on December 11 on the east limb of the Sun. "That patch of magnetism could be a sign of the next solar cycle. New solar cycles always begin with a high-latitude, reversed polarity sunspot." The region of magnetism that appeared back in December achieved high latitude (24 degrees North) and was magnetically reversed, but no supporting sunspot appeared until 25 days later.

Reversed polarity means a sunspot with opposite magnetic polarity compared to sunspots from the previous solar cycle. High-latitude refers to the Sun's grid of latitude and longitude. Old-cycle spots congregate near the Sun's equator; new-cycle spots appear higher, around 25 or 30 degrees latitude. Sunspot 981's high-latitude location at 27 degrees North and its negative polarity leading to the right in the Northern Hemisphere are clear-cut signs of a new solar cycle, according to NOAA experts. The first active regions and sunspots of a new solar cycle can emerge at high latitudes while those from the previous cycle continue to form closer to the equator.

Solar Cycle 24 Predictions

While experts vary in their predictions on when the solar cycle will peak and how strong it will be, NOAA, in April 2007, in coordination with an international panel of solar experts, predicted that the next 11-year cycle of solar storms "would start in March 2008, plus or minus six months, and peak in late 2011 or mid-2012." In the cycle forecast issued in April 2007, half of the panel predicted a "moderately strong cycle of 140 sunspots, plus or minus 20, expected to peak in October 2011. The other half predicted a moderately weak cycle of 90 sunspots, plus or minus 10, peaking in August 2012. An average solar cycle ranges from 75 to 155 sunspots. The late decline of Cycle 23 has helped shift the panel away from its earlier leaning toward a strong Cycle 24. The group is evenly split between a strong and a weak cycle."

NASA's Hathaway, along with colleague Robert Wilson at a meeting of the American Geophysical Union in San Francisco last month, said that Solar Cycle 24 "looks like it's going to be one of the most intense cycles since record-keeping began almost 400 years ago." They believe the next solar maximum should peak around 2010 with a sunspot number of 160, plus or minus 25. "This would make it one of the strongest solar cycles of the past fifty years -- which is to say, one of the strongest in recorded history." Four of the five biggest cycles on record have come in the past 50 years. "Cycle 24 should fit right into that pattern," Hathaway said.

Amateur Radio and Solar Cycle 24

According to Carl Luetzelschwab, K9LA, "As for improvement in propagation on the higher bands, we still have a way to go before that happens, and it depends on the magnitude of Cycle 24. The Solar Cycle 24 Prediction Panel has published predictions for Cycle 24, but unfortunately the panel did not reach one consensus prediction. If the larger of the two predictions comes true, we should expect consistent F2 propagation on 10 and 12 meters to start toward the end of 2009. If the smaller prediction comes true, this will be delayed about one year."

Luetzelschwab, who writes the column "Propagation" for the National Contest Journal (NCJ), continued: "While we wait for improved high band conditions, don't forget the low bands. Around solar minimum and for the next year or so, the Earth's geomagnetic field is at its quietest. This is good for low band propagation. Thus, right now is the time to start (or add to) your 80 and 160 meter DXCC efforts."

Active Solar Cycles Bring Sunspots, Solar Storms

A sunspot is an area of highly organized magnetic activity on the surface of the sun, and is marked by a lower temperature than its surroundings. The new 11-year cycle, called Solar Cycle 24, is expected to build gradually, with the number of sunspots and solar storms reaching a maximum by 2011 or 2012, though devastating solar storms can occur at any time

While sunspots are good news to Amateur Radio operators, an active solar cycle can disrupt other aspects of life that we take for granted, since violent eruptions occur more often on the Sun during an active period. According to NASA, solar flares and vast explosions, known as coronal mass ejections, shoot energetic photons and highly charged matter toward Earth, jolting the planet's ionosphere and geomagnetic field, potentially affecting power grids, critical military and airline communications, satellites, Global Positioning System (GPS) signals and even threatening astronauts with harmful radiation. These same storms illuminate night skies with brilliant sheets of red and green known as auroras, or the northern or southern lights.

NOAA Administrator and Under Secretary of Commerce for Oceans and Atmosphere Vice Admiral (Ret) Conrad C. Lautenbacher, Jr said, "Our growing dependence on highly sophisticated, space-based technologies means we are far more vulnerable to space weather today than in the past. NOAA's space weather monitoring and forecasts are critical for the nation's ability to function smoothly during solar disturbances."

According to NASA's Tony Phillips, many forecasters believe Solar Cycle 24 will be big and intense. Solar cycles usually take a few years to build to a frenzy and Cycle 24 will be no exception. "We still have some quiet times ahead," says Hathaway.

Club QSL Card

This year there will be a competition to design a QSL card for the club ZL1AC. It should include the club call sign, ATV and WSRC (inc). Put your thinking caps on and come up with a bright and attractively designed card, which we will be proud to send out. There will be a prize for the best one. Details will follow shortly.

Club Nets

VHF Net 146.525 MHz 7:30pm every Wednesday, HF Net 3623 KHz +/- QRM/QRN 7:30pm every Friday. All are welcome to check in on the nets. The full HF Net Roster can be found on <http://www.qsl.net/zl1ac/wsrc-hf-roster.html>.

1-Feb-08	ZL1JL	John
8-Feb-08	ZL1NE	John
15-Feb-08	ZL1ACZ	Barry
22-Feb-08	ZL1WI	Roy
29-Feb-08	ZL1VRR	Ross
7-Mar-08	ZL1MW	Brian
14-Mar-08	ZL1NE	John
21-Mar-08	ZL1ACZ	Barry
28-Mar-08	ZL1WI	Roy

The First QRP* Ops

By Richard Arnold, AF8X

From spies to smoke jumpers, miniaturized radios do their part.



Paraset Radio, a self contained miniature transceiver supplied during WWII to Resistance forces. [Antonio Fucci Fano photo]



"Smoke Jumper" using backpack radio, circa 1930. [The Telegraph Office photo]



Forest Service Key, circa 1930. [The Telegraph Office photo]



Richard Arnold, AF8X, when he isn't on his bike. [Norma Arnold photo]

As a youngster, my fascination with Morse code quite naturally led me to an interest in spy stories where the characters used clandestine radio transmissions from hidden or disguised transmitters. I was surprised to learn that the majority of these rigs had pretty low-output power levels. Also, I learned that "spy radio" was not something new during WWII. In fact in 1917, a German national named Hans Wax, living in New York, was arrested as a German spy. The police discovered a wireless telegraph receiver capable of receiving Morse transmissions from Germany, hidden in a box disguised as another device.

There are many movies showing radio operations during WWII, some by the underground resistance groups, some showing use by secret agents, for example The Eye of The Needle. During this period, many specialized radios were developed. Their design depended on the tactical situation in which they were to be used.

Different Jobs — Different Radios

An early World War II British design was the Mark XV regenerative receiver and 15 W transmitter. After several upgrades the Type III MK II, better known as the "Suit Case Radio" was used until the end of the war in 1945. Output was about 30 W and almost all of these type radios used simple wire antennas.

The British also created some very small portable units that were distributed to the resistance groups in occupied France. Operation of these secret stations was inherently dangerous for the operators. The enemy mobile direction finding units would locate the area of the transmissions and the operator and station had to be transported or disguised very quickly. Therefore the radios had to be very small and portable.

The Australian "Coast Watchers", on the other hand, were equipped with gear commercially manufactured by the Australian company Amalgamated Wireless. The units comprised of separate transmitters and receivers in specially designed cases with rounded corners and strong clip-on covers to enable them to survive, the sometimes rough, trips through the jungles. Power was provided by battery, a pedal-generator, or ac mains. One of the later model 3BZ transmitters covered 10 to 2.5 MHz with a power output of 12 W on CW and 15 W on phone. The usual antenna was a quarter-wave Marconi for fewer than 100 mile communications and a half-wave Hertz single wire for distances up to 500 miles.

Most of these radios, by today's standards, were primitive and not as user friendly as the rigs available today. Even so, they got the job done and the stories about them make interesting reading. Some of them can still be seen in museums and in private collections.

The popularity of these old agent radios is evidenced by the prevalence of the WWII Paraset replicas being built by Amateur operators. The Paraset was a small, low-power CW transceiver supplied to the resistance groups in France, Belgium and the Netherlands during WW II. I was thrilled to have made contact with W0RW using his homebrewed Paraset replica from Colorado. The signal was very good considering the distance between Colorado and Michigan confirms the achievement of low power communication using these primitive rigs.

Smoke Jumper Mobile

While surfing the Internet and looking through the radio museums, I stumbled on this picture with the caption, "U.S. Forest Service key c. 1930s. Used by smoke jumpers with 5 W backpack radio."

This was a facet of radio history I had never heard of. Sure, I have seen movies with fire-fighters using handheld radios, but this picture indicates radio communication in the 1930s used CW to keep in contact with fire watchtowers or control points several miles away. The fire-fighters were able to request help or more equipment and give updates on their progress. The portable backpack rig was described as the model 8, a low-power CW, battery powered transceiver, considered small and lightweight in those days (see picture). Antennas consisted of wires strung up in the trees.

I continued searching the Internet looking for more information, but there is very little available. I was interested in the rigs and their operators, but can only assume that they developed from the military use of wireless during WW I.

* Not all spy radios qualified by today's standard of 5 W or less.

Richard Arnold, AF8X, enlisted in the Air Force right out of high school and spent four years as a Medical Equipment Repairman. After his discharge in 1955, he trained as an electrician and worked in the Detroit area till his retirement in 1984. Since then he has been pursuing his interest in flying and radio. He enjoys riding his bicycle to local parks near his home in Clinton Township, Michigan and operating with his Elecraft K1 and KX-1. He also likes to play golf and is developing an interest in writing.

The new Waitakere Civil Defence Headquarters Open Day
Photos by Ross ZL1VRR



The exterior of the Building from Elcoat Avenue.



The main Operations and Meeting Room.



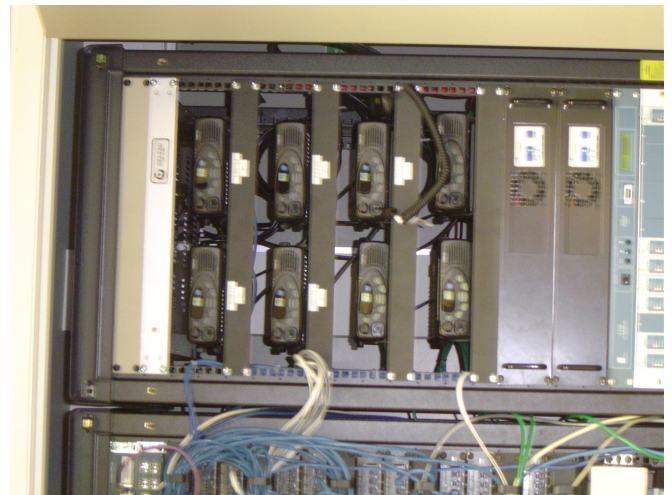
HF Antennae on the Western Side of the building.



Solar Panels and VHF Antennae on the roof.



Radio Operators Console.



Icom radios in their rack which are operated by the Computer consoles.