GUYWIRE

June 2015

A monthly publication of the RARA Inc. except July and August.
If you wish to receive or be removed from the e-mailing please contact the editor/publisher at the RARA e-mail address @ ve5rara@gmail.com
NOTE: all e-mail and web addresses are active hyperlinks

GENERAL MEETING

June 10th @ 7:00 p.m.

Regent Place Library - Regina Market Mall - 331 Albert St.

Solar-Terrestrial Data Panel on RARA website
What does it tell you?

Help the GUYWIRE

The editor and publisher are looking for your input.

1. What would you like to have as a regular topic?
2. Would you like Question and answer section?
3. Do you think a technical article each issue would be of interest?
4. Would you be willing to provide a brief write-up of your station/shack with photos?

Contact the editor or publisher at:
ve5rara@gmail.com

PLEASE HELP US OUT BY PROVIDING SOME GUIDANCE FOR FUTURE ISSUES.

2015 PUBLIC SERVICE EVENTS

EVENT DATE ORGANIZER

UPCOMING

COMPLETED

RPS Half Marathon -April 26th - Terry (VE5TLW)
MS Super Cities Walk April 26th - Rick VE5RJR
Cosmopolitan Connections-May 15-Havey VE5AD
Mayor's Run/Walk for Fitness -May 31 - Terry (VE5TLW)
Run for Women(Mental Health) - June 6 -Rick VE5RJR

Please contact the coordinator directly if you can assist with the event or via ve5rara@gmail.com.

Meewasin Amateur Radio Society
Saskatchewan Hamfest 2015
July 3 to 5, 2015

Martensville
Northridge Community Centre
901 3rd Street North

Save the Date and plan to attend the Saskatchewan Hamfest 2015 taking place in Martensville from July 3 to 5, 2015.

Radio Amateurs of Canada (RAC) AGM;
We are happy to report that the Radio Amateurs of Canada has chosen to have us host the AGM for 2015. For members or non-members, see what your national representative organization has been up to and interact with the RAC Executive and volunteers.

Saskatchewan Amateur Radio League (SARL) AGM;
Saskatchewan is the only province outside of Quebec that has a provincial organization left. Support SARL by attending the AGM and get involved!

D-STAR Training Class;
Friday night will not only be a meet and greet event, but for those that want to learn more of D-STAR, it is a great opportunity to take in the optional D-STAR Class. More details to follow.

Annual Awrds Banquet;
After the busy program on Saturday, sit down and relax to a home cooked meal and enjoy the awards presentations and keynote.

TALK-IN: FM VE5CC 146.970 (-600) 100.0HZ T
FM VE5MBX 145.450 (-600) 114.8HZ T
DV VA5DR B 448.125 (-5M)
DV VE5MBX B 449.500 (-5M)

Coordinates:
52.295542N, 106.649443W

Visit our website at: www.saskatoon-dstar.ca

Common Mistakes in Amateur Radio Usage of Terms

Using mHz instead of MHz to indicate megahertz (one million hertz). Upper case M indicates mega, while lower case m indicates milli (one thousandth). In ham radio usage, we rarely speak of frequencies in mHz. Note that I wrote mega with a lower case m even though the abbreviation has a upper case M. The unit of hertz is with a lower case h but when abbreviated as Hz, it should be upper case.
Using KHz or khz instead of kHz to indicate kilohertz (one thousand hertz). Lower case k should be used for kilo but upper case H is used for hertz. It is common to see upper case K used to indicate 1024 in digital systems.
Using M instead of m to indicate the unit of meter. The proper way to refer to the wavelength of the 144 MHz ham band is 2 m, not 2M. Similarly, the abbreviation for kilometers is km, not kM or KM. The abbreviation for centimeter is cm.
Units that are based on a person's name use an upper case letter in the abbreviation. For example, ampere, volt, watt and hertz are abbreviated as A, V, W and Hz respectively. When the unit is spelled out, it is left lower case (go figure).

While the world does keep on turning when we make these mistakes, accuracy and understanding is improved by proper usage. Did I miss any other common SI errors?

Bob K0NR

EDITORIAL

Field Day is usually the biggest activity the club mounts every year. It has been successfully doing this for the past 68 consecutive years, and in most of those years winning the Field Day trophy for Saskatchewan, but unless something drastic happens, there won't be Field Day this year.

The reason is in the numbers: There are around 250 licensed amateurs in Regina and area. There are 25 members of RARA. That means that ten per cent of hams are carrying the freight for the other ninety per cent when it comes to representing amateur radio to the general public. There is another number that should concern us. It is the number four. On a typical Field Day four hams do the bulk of work to organize and operate Field Day. The problem is that it is always the same four. Understandably they are resentful of the lack of assistance and this year it came to a head.

What can be done to turn things around? Long term solutions could involve a membership drive aimed at getting as many of the 90 percent of hams who are presently not members. Another thing would be to investigate what happens to our "ghost" hams. Over the years we have been conducting classes and have assisted a good number of people in getting their licenses. Have you noticed that a majority of those new hams simply disappear into the woodwork after they get their license. Why?

There are short term solutions to the Field Day problem that we might want to consider. Not having Field Day sends a negative message to the people who are counting on us for emergency communications. If we can't even set up a station for our own Field Day, can we be counted on in a real emergency. We should try to get at least one station on the air, even if it is just the club station. A generator could be set up on the roof outside the club station. There are several other options available. It is only necessary to think outside the box.

Top 10 Reasons why Field Day is better than Sex!

10. It's an acceptable activity you can enjoy outside in a public place.

9. You can spend time with people you actually have something in common with.

8. You can bring your dog.

7. Just doing the best you can is good enough.

6. You won't get in trouble for incorrect procedure.

5. You don't have to do anything to get FD.

4. You can enjoy FD for up to 27 hours.

3. You don't have to take any pills ahead of time.

2. Making more than one contact is encouraged.

1. The only thing you might catch is, the operating bug!

by VE5MC

Websites of Interest

Planet Ham is a website designed to aggregate blogs produced by Amateur Radio enthusiasts. The aim is to provide a central directory of Amateur Radio blogs so that interested browsers can visit subscribers sites and read about the various aspects of the hobby in detail.
http://www.planetham.com/
-credit DX Zone

For a listing of famous hams and ex hams go to:
http://www.dx-qsl.com/famous-ham-radio-operators.html

Last Months Puzzler

Who is considered the patron saint of Amateur Radio?

Answer:

During the German occupation of Poland, the priest Fr. Maximilian Kolbe, SP3RN was arrested by the Germans. The Germans believed his amateur radio activities were somehow involved in espionage and he was transferred to Auschwitz on May 28, 1941. After some prisoners escaped in 1941, the Germans ordered that 10 prisoners be killed in retribution. Fr. Kolbe was martyred when he volunteered to take the place of one of the condemned men. On October 10, 1982 he was canonized by Pope John Paul II as Saint Maximilian Kolbe, Apostle of Consecration to Mary and declared a Martyr of charity. He is considered the Patron saint of Amateur radio operators.

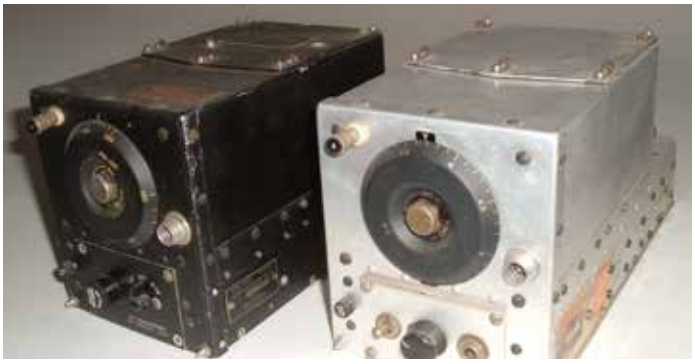
This Months Puzzler

When would you use the Q signal QRK?

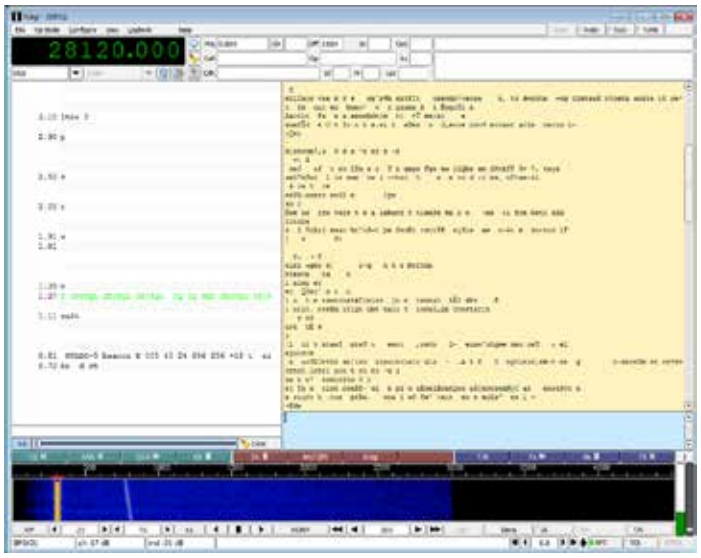
Answer next issue

Here Is One For The Old-Timers

Can you identify the radio equipment in the picture?



UK radio amateurs use PSK31 satellite transponder



PSAT PSK31 Transponder received by Peter Goodhall 2E0SQL May 26, 2015

After building a 28 MHz 1/4 Wave Ground Plane antenna to replace his dipole Peter Goodhall 2E0SQL was able to receive his 10 watt signal through the PSAT CubeSat PSK31 transponder for the first time on Tuesday, May 26.
Peter Martinez G3PLX posted a report to the RSGB Tech Yahoo Group reproduced here with permission:

Finally got my own signal back via PSAT just now and proved that the uplink frequency control works. The PSAT uplink receiver is about 300 Hz low of 28120 kHz which means that when the satellite is heading straight towards me at +600 Hz Doppler, my transmitter needs to be 900 Hz low.
If I chose to place my own signal on a downlink frequency of 1000 Hz, the transmit audio tone would have to be down at 100 Hz which is too low for my SSB transmitter. So I have chosen 1500 Hz in the downlink.

I will try again on the next few passes. I am just sending "Test de G3PLX via PSAT" continuously

at the moment and not listening for replies. Still not getting a strong downlink SNR so the power control loop isn't kicking in.

Bob Bruninga WB4APR has made a request to developers of PSK31 software to open their PSK31 frequency tracking to accommodate more than 1 Hz per second Doppler shift. Current implementations can do 1 Hz/s but completely fail at 3 Hz/s.

PSK31 Transponder Frequencies:
PSAT: 145.825 MHz FM 1200 baud AX.25 telemetry – digipeater currently off
PSAT PSK31: 435.350 MHz FM downlink, 28.120 MHz SSB PSK31 uplink. W3ADO-5 PSK TLM beacon on 315 Hz
BRICsat: 437.975 MHz 9600 baud telemetry every 20s

BRICsat PSK31 435.350 MHz FM downlink, 28.120 MHz SSB PSK31 uplink. W3ADO-6 PSK TLM beacon on 375 Hz

Guide to using the PSK31 transponder http://amsat-uk.org/beginners/how-to-work-psk31-satellites/

ParkinsonSAT (PSAT) http://www.aprs.org/psat.html

Fldigi PSK31 software http://www.w1hkj.com/Fldigi.html

Keplerian Two Line Elements (TLEs) 'Keps' for satellites launched in last 30 days http://celestrak.com/NORAD/elements/tle-new.txt

Adding new satellites to SatPC32 and Gpredict http://amsat-uk.org/2013/11/23/adding-new-satellites-to-satpc32/

VE5UHF Repeater

A few months ago we mentioned that RARA has taken over ownership of the VE5UHF repeater. Now here is the story of what has been done since.

Bringing The VE5UHF Repeater Back To Life

Lyle Ve5ee

I volunteered to look after the VE5UHF repeater because of the unique remote base system and that it was a UHF repeater. This way I could get my hands on and head around this electronic radio marvel. How could a repeater be made to call up other repeaters on a different band and TX/RX with other hams? I had to look into this mysterious piece of radio equipment.

Harvey VE5AD and myself went up to Embury House (also known as the shoe box or six pack building) one warm day in March to look things over and see what we were up against. Well the repeater was old and dusty. A MSR-2000 commercial UHF repeater was found under all that dust with a built in power supply sitting on the floor. On a 19 inch rack was mounted the Sinclair duplexer (small compared to the VHF ones) and the 7K controller. Resting on top of the controller was the TM-241A Kenwood VHF transceiver connected to a Doug Hall Remote base interface. In front of the rack was a bandpass filter inline with a diplexer as this repeater uses a single GP-9 VHF/UHF antenna. All this looked like it came from the 1980's but I like old stuff. Outside we found a broken VHF/UHF antenna that had come down on the roof. Well, all we needed was a ladder to get up on the penthouse roof and change that broken diamond antenna. That was enough excitement for one day so we decided to come back with a work party and the new antenna plus a ladder.

(continued on page 7)

The work crew at VE5UHF

Returning with the work party in April which consisted of Harvey 5AD, Allan 5LAT, George 5UU, Ron 5BW, Malcolm 5ZG and myself with the antenna plus ladder. We soon found that the ladder was a no go up the stairs and plan B was needed. Asking the caretaker Nick if he had a ladder up there in March and the answer was no. But this time, asking Nick, the no turned in yes as the elevator people had just used one and it was still up there. We soon had the ladder and antenna up with the help of all the guys.

On testing the repeater, it sounded good and strong. Tired and hungry, we left for a well desired meal.

It wasn't till the next day I discovered the remote base feature of this repeater not working. I planned another trip to Embury House this time to see what gives with the VHF transceiver and Doug Hall unit. The VHF transceiver would not turn on from the remote base but did manually, and the display was all scrambled and unreadable. I took the VHF transceiver home and looked it up on the internet and found that the internal battery could be a problem in this radio. Ok easy to change right! No. As I was taking the front display off, 9 pins that seat against 9 solder pods broke off.....Ok no panic just see what the Ontario swap and shop has for this radio. Yes, 3 were available and the lowest price one got the job as a remote base repeater 2 meter radio.

After a week and $85 dollars, another trip up to the UHF site, this radio worked great after a little setup. I did check the 2 meter range and Moose Jaw, Weyburn, Wolsely, Last Mountain and Elbow repeaters all ID back. I had a long chat with Murray VE5MC from Moose Jaw on the UHF repeater and he has the same antenna on his 50 foot tower. We did see the time out time doing it's job every 20 minutes or so. All seems to work as it did when originally installed. The VHF radio is set at 5 watts out and the UHF radio is 30 watts out. It was a fun project and I want to thank all who were involved because without you I couldn't do it all myself.

73's Lyle

VE5UHF Repeater Remote Base Facilities

The VE5UHF repeater has remote base capabilities which will allow it to be switched up and connected to many VHF repeaters within its range. To do this, just turn on the Remote Base feature (dial 12*) and then dial up the desired repeater code. Each code ends with a "*".

For instance, to dial up the Avonlea repeater, just go on VE5UHF and dial 12* and then 706* and you will be connected to it. You will hear voice confirmation. Please remember to disconnect (13*) when done.

The repeater has a ten minute timeout timer.

GENERAL COMMANDS

To hear the greeting, ID and time announcement
Dial 4*

To hear the time announcement
Dial 5*

To hear announcement of frequency and offset
Dial 11*

TO TURN ON THE REMOTE BASE FEATURE
Dial 12*

TO TURN OFF REMOTE BASE CONNECTION Dial 13*

TO USE THE REMOTE BASE CONNECTION dial the desired number from the list in the adjoing column:

Codes, Locations,Frequencies
and ID's
listed on next page.

CODE	LOCATION	FREQ.	ID
652*	SIMPLEX	146.520	
655*	SIMPLEX	146.550	
664*	REGINA NORTH	146.640 –	VE5REC
667*	WOLSELEY	146.670 –	VE5WRG
670*	WEYBURN	146.700 –	VE5WEY
673*	LUCKY LAKE	146.730 –	VE5XW
679*	MOOSOMIN	146.790 –	VE5MRC
682*	MOOSE MOUNTAIN	146.820 –	VE5MMR
685*	LAST MOUNTAIN	146.850 –	VE5AT
686*	WOLFPOINT MT	146.860 –	N7WF
688*	SWIFT CURRENT	146.880 -	VE5SCC
691*	WYNYARD	146.910 –	VE5HVR
694*	MOOSE JAW	146.940 –	VE5CI
697*	SASKATOON	146.970 –	VE5CC
700*	UNITY	147.000 –	VE5URC
703*	STRANRAER	147.030 –	VE5UB
7060*	FOXWARREN MB	147.060 +	VE4PCL
706*	AVONLEA	147.060 –	VE5ARG
708*	CANORA	147.080 +	VE5RJM
710*	WHITETAIL MT	147.100 +	W7WZW
712*	REGINA	147.120 +	VE5YQR
718*	ESTEVAN	147.180 +	VE5EST
721*	REGINA ARES	147.210 +	VE5MCV
727*	KENASTON	147.270 +	VE5DPR
733*	THEODORE	147.330 +	VE5CNR
736*	EYEBROW	147.360 +	VE5YMJ
738*	SYDNEY MT	147.380 +	W7DXQ
580*	ISS LINK (NA)		
4580*	ISS LINK (EU)		

Notes:
When done using the system, be sure to turn off the Remote Base Function (13*), especially when using ISS frequencies.

The system is not heavy duty so avoid lengthy transmissions.

Photos from the Mayor's Run/Walk on page 9 and photos from the Mental Health Run on page 10.

Mayor's Run/Walk
May 31

photos by Chelsea

Run for Mental Health June 6th

photos by Chelsea