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# WAVELENGTH

Official bulletin of  
 Scarborough Amateur Radio Club, Inc.  
[www.ve3we.com](http://www.ve3we.com)

PARTICIPATE – LEARN – ENJOY

March 2008

Volume 2 Issue 3

President:	Bernadine Dinnard-Williams	Sunday	<b>SARC Nets</b> 28.730 Mhz
	VE3YDB		CW 10:00 AM
Vice-President:	Open		SSB 10:30 AM
Past President:	Bill Catlender	Tuesday	147.060 MHz (VE3RPT)
	VE3ILE		7:30 PM
Secretary:	Ray Chow	Thursday	28.730 MHz
	VE3ZXC		SSB 7:00 PM
Treasurer:	Lambert Philadelphia		
	VE3LYP		Everyone is invited to check in on CW before the
Membership:	Joe Ditta		nets start.
	VA3JDX		
Communications:	Open		These are open nets. All licensed hams are welcome.
Field Day:	Rod Long		Come and join us.
	VE3SOY		
Education:	Ralph Muecke		We also want to emphasize that 28.730 MHz is our
	VE3CIW		calling frequency. Please monitor and/or call your
Examiner:	Nick Blacklock		friends. 7:00 PM is a good time.
	VE3EBC		
Assistant Secretary:	Rudie Toroian		
	VE3OUA		
Archives:	Gord Hogarth		
	VE3CNA		
Elmer:	Tony Fegan		
	VE3QF		
Security:	Gord Gault		
	VE3UFF		

## SARC 62nd Anniversary

Anniversary Night for the Club is slotted for **April 28th (please note date change)**. This is a very special event - please plan to attend.

# Upcoming events

The community centre is closed for Easter Monday, March 24, so we have rescheduled the meeting to March 31. Nick VE3EBC will be our speaker.

March 31 is also the last day for nominations for Amateur of the Year. See the [awards section of our website](#) for details.

Brian Smith from the Ontario DX Association will be visiting our club on April 14. He will introduce the film "Black Propaganda".

We have rescheduled our 62nd Anniversary Night to April 28 - more details to come.

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Thanks to Bill VE3ILE for forwarding the latest instalment of Dan's column.

## Build Something!

by Dan Romanchik KB6NU

A couple of years ago, a group of us were talking on the club repeater, and the talk got around to building stuff. One of the guys said, "You cant really build anything anymore." I almost fell out of my chair. That's simply not true. Heathkit may be just a fond memory, but there are still many companies out there selling kits that are not only fun to build, but are useful additions to the ham shack.

Here are a couple of sources:

- Elecraft ([www.elecraft.com](http://www.elecraft.com)). In my mind, Elecraft has become the premiere ham radio kit company, if not the premiere ham radio company, period. The new K3, for example, outperforms just about anything on the market by many accounts. Personally, I have built the KX-1, which is a real blast to operate from a park bench or to take on vacation. I also have and use the W1 wattmeter.
- TenTec ([radio.tentec.com/kits](http://radio.tentec.com/kits)). While

perhaps known more for their ready-made rigs, they also sell a line of single-band transceivers and receiver kits.

- QRP Kits ([www.qrpkits.com](http://www.qrpkits.com)). QRPKits.Com sells kits that were originally projects of the Northern California QRP Club. My current General Class students are going to build the DC40A kit (\$40) as an exercise in building and as a way to learn about how radios work.

Below are some other companies whose kits have good reputations, but with which I have no personal experience:

- Small Wonder Labs ([www.smallwonderlabs.com](http://www.smallwonderlabs.com))
- Wilderness Radio ([www.fix.net/~jparker/wild.html](http://www.fix.net/~jparker/wild.html))
- Milestone Technologies ([www.mtechnologies.com](http://www.mtechnologies.com))
- Almost All Digital Electronics ([www.aade.com/index.html](http://www.aade.com/index.html))
- FAR Circuits ([www.farcircuits.net](http://www.farcircuits.net))
- Jackson Harbor ([home.att.net/~jacksonharbor/ham.htm](http://home.att.net/~jacksonharbor/ham.htm))
- QRPme ([www.qrpme.com/](http://www.qrpme.com/))
- Linear Amp UK ([www.linamp.co.uk](http://www.linamp.co.uk))

QRP clubs are also a good source of cool kits. The problem with QRP clubs is that they order parts only for a very short run of kits. Once they sell out, the kits are no longer available. Even so, here are some clubs that are worth checking out:

- American QRP Club ([www.amqrp.org](http://www.amqrp.org))
- Four State QRP Club ([4sqrp.com/kits/kits.htm](http://4sqrp.com/kits/kits.htm))
- NORTEX ([www.kk5na.com/nortex.htm](http://www.kk5na.com/nortex.htm))

Ready to rock and roll? Here are a couple websites that you might want to check out before you dive in:

- Electronic Construction from A to Z ([www.mtechnologies.com/building/atoz.h](http://www.mtechnologies.com/building/atoz.h))

[tm](#)). This site includes a page that lists all the tools you'll need to become a successful kit builder.

- Crystal Sets to Sideband: A Guide to Building an Amateur Radio Station ([www.qsl.net/k3pd/book.html](http://www.qsl.net/k3pd/book.html)). This site not only discusses kit building, but also radio theory.
- The Art of Kit Building ([ww2.netnitco.net/users/wt9w/kit%20building.html](http://ww2.netnitco.net/users/wt9w/kit%20building.html))

I hope that I've whetted your appetite for building a kit or two. They're a lot of fun to build, and you really do get a rush from operating a radio or using a piece of test equipment that you built yourself.

What have you built lately? Let Dan know. Email him at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).

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## Linked Repeaters

by Bob Chrysler VE3IEL

In our area there are three linked repeater systems of which I am aware. In our present club there are quite a few members that only have VHF and UHF capabilities. I am writing this article in order to give a little extra information about some of the repeater systems that exist here.

First let me mention the TFMCS Linked Repeater System. I think it was first on the block. The Toronto FM Communications Society, that operates the local area repeaters, VE3RPT, VE3TWR, VE3SIX, VE3TFM, and provided a hub for various other repeater links, has cooperated with other repeater operators, or clubs, to create links to other areas, other than just Toronto. The TFM Linked Repeater System is far reaching. The VE3RPT link to Buffalo is very old. My understanding is that Buffalo repeater W2EUP is on the TFM Link by way of the VE3RPT hub. The VE3RPT hub is separate from the VE3RPT 2 metre repeater. The equipment is in the same bunker. I believe that the hub equipment even shares the same rack as most other equipment

used at the VE3RPT site. The idea is to have amateur radio linking to other hubs, and other repeaters. This is accomplished by using standard amateur radio frequencies that are not in general use by other amateur radio users. These signals are beamed to other hubs; and, on to other repeaters beyond Toronto.

Let me list the repeaters linked to our area by the TFM Linking System. I already mentioned Buffalo's repeater W2EUP. Some Amateurs may even be able to reach this repeater directly if their equipment is capable of doing so. For most, however, it probably only is reachable through the TFM Linked Repeater System. Ridgeway VE3RAC is linked. Hamilton VE3NCF is linked. Downsview VE3RAK is linked. Pefferlaw VA3PTX was linked; and, may be linked again. Haliburton VE3TBF, often referred to as the blackfly repeater, is linked. Huntsville VE3MUS is linked. Little Current VE3RQQ is linked. St. Joseph VE3SJI is linked. Sudbury VE3ONL is linked. North Bay VE3NFM is linked. Whitney VE3ZWM is linked. Barry's Bay VE3RKA is linked. Pembroke VE3NRR is linked. Renfrew VE3ZRR is linked. Ottawa VE3HPY is linked. Foymount VE3UCR is linked. Maynooth VE3WPR is linked. Coe Hill VE3YAC is linked. Colborne VE3RTY is linked. Peterborough VE3PBO is also linked. Other than Toronto, there are linking hubs in Haliburton, Maynooth, Foymount; and, branches from various repeaters to other repeater. All TFM members, and others, have to do is call up the code for the required hub; or, continue calling up a repeater they wish to use. This is an ideal network ready for use during emergencies or for traveling hams that want to contact another area. Look up: [tfmcs.org](http://tfmcs.org) for further information about this Amateur service.

The next is the VE3ULR Linked Repeater System. Many individual repeater groups have joined together to make the ULR Repeater Linking Network. Repeater

VE3ULR, itself, is located near Aurora. It too uses a hub system. This system is also far reaching. Toronto repeater VA3CTV is linked. Brantford VE3TCR is linked. Delhi VE3WAT is linked. London VE3MGI is linked. Shetland VE3SRT is linked. Kitchener VE3KSR is linked. Shelburne

VE3ZAP is linked. Port Elgin VE3PER is linked. Collingwood VE3MTR is linked. Parry Sound VE3RPL is linked. Edgar VE3TTB is linked. Lindsay VE3LNZ is linked. Peterborough VE3PBO is also linked on this system by a different route. Coe Hill VE3YAC also linked to this system by a different route. Campbellford VE3KFR is linked. Kingston VE3KER is linked. Picton VE3TJU is linked. Cobourg VE3RTR is also linked. Other than Aurora, there are hubs at Kitchener, London, and Cobourg. Again there are branches reaching out beyond these central hubs. If you wish to learn more about this system, write to: VE3ULR Repeater Association P.O. Box 1026, Station "F", Toronto, ON M4Y 2T7.

Next, I shall get to the VE3YYZ Linked Repeater System. On this system no access codes are required to access other repeaters on the system. All repeaters are on when a PL tone of 103.5 is used. VE3YYZ itself can be turned off by the controller for certain schedules. This is the Linking System that was used by our own local Toronto ARES group last Thanksgiving time. It worked extremely well for the simulated emergency test that was held then. Other than the Toronto repeater of VE3YYZ, Hamilton VE3UHM is linked. King City VE3UKC is linked. Parry Sound VE3UPS is linked. Huntsville VE3UHN is linked. Orillia VE3UOR is linked. Cobourg VE3MXR is linked. Oshawa VE3USH is also linked. The repeaters mentioned here are all UHF repeaters. This, as you can see, is an extremely easy system to use if you have UHF equipment. For further information about this system, I suggest you e-mail: [chuckd@bigfoot.com](mailto:chuckd@bigfoot.com).

As you no doubt have noticed I have kept this article to Linked Repeater Systems. I have not mentioned which ones are equipped with auto-patches, or IRLP capabilities, or even emergency power. I have also not mentioned the codes that some systems require. You can often find representatives of these systems at local Hamfests. I have also not mentioned the VE3KCR Linked Repeater System. To my knowledge this system has no link to the Toronto area. It, nevertheless, has a far reaching coverage. I understand that the main repeater VE3KCR operates with an effective

radiated power of 2100 watts. Its antenna is 550 feet up. On this system the strongest signal to the receiving site get forwarded. For further information about the VE3KCR Linked Repeater System contact the: Chatham-Kent Amateur Radio Club, VE3KCR, P.O. Box 284, Chatham, ON N7M 5K4.

I know, yes, what about the SSPB Linked Repeater System? I would like to write another article completely about this interesting and novel system. If you want to get ahead of me, go to: <http://www.va3sf.com/amateurrptr.htm>

OK, apartment dwellers, hand-held enthusiasts, and FMers, there is a world of opportunity out there for you. To steal a quote from the movie Roadie, "it'll work if you let it."

Yours, Bob VE3IEL

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## DX news

QST de W1AW

DX Bulletin 11 ARLD011  
From ARRL Headquarters  
Newington CT March 6, 2008

To all radio amateurs

This week's bulletin was made possible with information provided by NC1L, the OPDX Bulletin, DXNL, 425 DX News, The Daily DX, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites.

Thanks to all.

CONGO, 9Q. Station 9Q1EK has been active on 160 meters around 0450z and 15 meters around 1000 to 1300z. QSL via SM5DJZ.

NAURU, C2. Dick, C21DL has been active using RTTY on 20 meters around 2230 to 0130z. QSL via DJ2EH.

GERMANY, DA. Operators Axel, DH8AK, Sebastian, DO6ELW, Dirk, DK4DJ and Henning,

DK9LB will be QRV as homecalls/p from Fehmarn Island, IOTA EU-128, from March 14 to 21. They will also activate Lighthouse Marienleuchte - Old Tower, ARLHS FED-151, and Lighthouse Marienleuchte - New Tower, ARLHS FED-016. Activity will be on 80 to 10 meters using SSB, PSK31 and SSB on 2 meters. QSL to home calls.

IRAN, EP. Sadegh, EP3HF has been QRV on 15 meters around 0930z and then 17 meters around 1000z. QSL direct.

CLIPPERTON ISLAND, FO. A large group of operators are QRV as TX5C until March 17. Activity is on 160 to 6 meters using CW, SSB and RTTY. QSL via N7CQQ.

ST. VINCENT, J8. Babs, DL7AFS and Lot, DJ7ZG are QRV as J8/homecalls until March 20. Activity is on 80 to 6 meters using mostly SSB, RTTY and PSK. QSL both calls via DL7AFS.

BELGIUM, ON. Members of the radio club OSA are active during 2008 as ON70REDSTAR in commemoration of the Red Star Line shipping company. QSL via ON4OSA.

DENMARK, OZ. Look for DK9LO to be QRV as OZ/DK9LO from Romo Island, IOTA EU-125, from March 8 to 21. QSL to home call.

EGYPT, SU. Mustapha, DL1BDF plans to be QRV from the EARA club station SU0ARA from March 11 to 19. Activity will be on all HF bands. He hopes to obtain permission to operate on 80 meters as well. QSL via SU1KM.

ICELAND, TF. Look for Alex, RA3MR, Artem, RD3MA, Dmitry, RA3MF, Helen, RV3ACA, Valery, RZ6AU and Serge, UA1ANA to be QRV as TF/homecalls and TF/RK3MWL from March 11 to 18. They will also use the special call TF4Y in the upcoming Russian DX Contest. Activity will be on all bands with an emphasis on the newer and low bands. QSL all calls via RV3ACA.

GABON, TR. Alain, TR8CA has been active on 160 and 80 meters using CW from around 0500 to 0600z. QSL via F6CBC.

ANTIGUA AND BARBUDA, V2. Chris, M0AJT is QRV as V26CC until March 14. Activity is on the HF bands using mostly CW with some SSB. He

plans to be an entry in the RSGB Commonwealth contest. QSL to home call. In addition, Bob, W4OWY and Mark, W9OP are QRV as V25WY and V25OP, respectively, until March 18. Activity is on 160 to 10 meters using CW, SSB and RTTY, with an emphasis on 160 and 80 meters if conditions permit. QSL to home calls.

ST. KITTS AND NEVIS, V4. Nick, G4FAL is QRV as V4/G4FAL from St. Kitts, IOTA NA-104, until March 10. Activity is on 80 to 10 meters using mainly CW. This includes an entry in the RSGB Commonwealth contest. QSL to home call.

TURKS AND CAICOS ISLANDS, VP5. Nigel, G3TXF plans to be QRV from Providenciales using special call sign VQ5XF in the RSGB Commonwealth contest. Outside the contest he may be active as VP5/G3TXF. QSL both calls to home call.

VIET NAM, XV. Shim, XV3AA is QRV from Danang until March 10. He is active using PSK31 on 20 meters and 17 meters SSB. QSL via JA6UHG.

TOKELAU, ZK3. Udo, DL9HCU is QRV as ZK3HC until March 16. He has been active on 20 and 17 meters at various times. QSL to home call.

OPERATION APPROVED FOR DXCC CREDIT. The following operation is approved for DXCC credit: Equatorial Guinea, 3C7Y, 2007 operation.

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## Propagation Forecast

Propagation Forecast Bulletin 10 ARLP010  
From Tad Cook, K7RA  
Seattle, WA March 7, 2008

To all radio amateurs

Following five days of no sunspots, we saw one (number 984) on March 5 and 6, but it is fading off the west limb of the earth-facing portion of the Sun. Solar activity is still very low.

Last week we reported, in error, that an opening on 6 meters extended to VP6DX. The openings were actually on 10 meters.

Last week saw a geomagnetic disturbance on February 28 through March 1, caused by solar wind streams from a coronal hole. The far north saw dramatic aurora displays, and the Planetary A index on those last days were 22, 27 and 19. But the far-north College A index, measured near Fairbanks, Alaska on the same dates was 27, 44 and 44.

It seems the geomagnetic activity, which is stronger in the far north because of a concentration of magnetic lines of force at the poles, had a bit of a hangover compared to the Planetary A index and the mid-latitude A index (17, 18 and 13). The A index at 44 is dramatically high, and the storm hung over for an extra day compared to the lower latitudes.

At the start of every month we've been calculating a new average based on the previous three months of sunspots. This seems like it may be a way to spot solar minimum in less time than looking at 12-month smoothed numbers.

- May 06 39.7
- Jun 06 28.9
- Jul 06 23.3
- Aug 06 23.5
- Sep 06 21.2
- Oct 06 24.1
- Nov 06 23.1
- Dec 06 27.3
- Jan 07 22.7
- Feb 07 18.5
- Mar 07 11.2
- Apr 07 12.2
- May 07 15.8
- Jun 07 18.7
- Jul 07 15.4
- Aug 07 10.2

- Sep 07 5.4
- Oct 07 3
- Nov 07 6.9
- Dec 07 8.1
- Jan 08 8.4

January 2008 is the new figure, because it is a three-month average, and January is the middle-month, now that we can average all the sunspot numbers for December, January and February.

The numbers still seem to suggest a possible sunspot minimum last October.

For the next week, NOAA and the US Air Force predict a planetary A index of 5, 15, 15, 10, 10, 15 and 10 for March 7-13. Geophysical Institute Prague predicts unsettled to active conditions March 7, active geomagnetic conditions March 8, and unsettled conditions March 9-13.

Peter Morrison, EI9ES advises that he likes IonoProbe, a shareware program from Afreet Software that sits in your computer system tray and monitors sunspot numbers, solar flux, and geomagnetic indices.

The tool was written by VE3NEA, and you can download it from <http://www.dxatlas.com/>.

Also at that site are other interesting and useful programs, including Morse Runner, a CW contest simulator that reminds me of the old Doctor DX program produced years ago for the C-64. Using it seems almost like being on the air.

Spring Equinox, always a good time for HF propagation, is less than two weeks away. Let's hope for sunspots to go with it.

If you would like to make a comment or have a tip for our readers, email the author at, [k7ra@arrl.net](mailto:k7ra@arrl.net).

For more information concerning radio propagation, see the ARRL Technical Information Service web page at,

<http://www.arrl.org/tis/info/propagation.html>.

For a detailed explanation of the numbers used in this bulletin see,

<http://www.arrl.org/tis/info/k9la-prop.html>. An archive of past propagation bulletins is at <http://www.arrl.org/w1aw/prop/>. Monthly

propagation charts between four USA regions and twelve overseas locations are at <http://www.arrl.org/qst/propcharts/>.

Sunspot numbers for February 28 through March 5 were 12, 0, 0, 0, 0, 0, and 13 with a mean of 3.6. 10.7 cm flux was 70, 69.8, 68.6, 69.2, 68.4, 68.3, and 69.3 with a mean of 69.1. Estimated planetary A indices were 22, 27, 19, 8, 5, 4 and 8 with a mean of 13.3.

Estimated mid-latitude A indices were 17, 18, 13, 8, 4, 3 and 7, with a mean of 10.

