Arc Over

Fox River Radio League
PO Box 673
Batavia, IL
60150-0673

March, 2004

President's Traffic *by Bill Schaben, W9AX*

Well, here we go again. The ARRL has petitioned the FCC to change the amateur radio licensing structure. You can find the ARRL comments and the proposal on its wed site and in the March issue of QST. Their reasoning was to make the entry level license more reflective of what amateur radio is like (rather than VHF only) by allowing them more (lots more) HF privileges. Also, it proposes that the Tech and Tech-Plus licenses be upgraded to General Class and the existing Advanced class be upgraded to Extra.

I find myself with mixed feelings about this. On one hand I see the benefit of getting more hams. I don't have the numbers, but I feel that us old timers are not being replaced with hams that have the same feelings about ham radio. On the other, I feel that the ham radio is getting to be the "send in the form" license system.

Years ago, there was a push to get incentive licensing. It was based on the sweat and reward system — you sweat to get the next higher ticket and you received greater privileges. Then the ARRL proposed and got the No Code Tech license allowing someone to get on the air (VHF only) with the hope they would want to get on the HF bands.

I think now that there is no code requirement; (except for Extra) the ARRL can correct the misconception they had with the no-code back then. They thought at the time that the code represented a block for many to get their license. And that by offering them a no-code way in that they would join the hobby and eventually pick-up the code and move to the HF ranks.

I would support the ARRL proposal if it had more of an incentive flavor to it. I can see a Novice class license with limited HF telegraphy and phone privileges. Let's not give them the whole candy store at once.

One other item I take issue with is the statement that "New hams are eager to volunteer for public service opportunities..." From what I see is the same group of OT's are the ones doing the public service activities. I don't think we are doing our job to get the newer ones there and changing the licensing structure won't help.

If the ARRL proposal is correct or not will be debated as much as the previous proposals. I may not have the right answer. And. as someone once said, "Opinions are like belly-buttons, everyone has one."

Remember, this month's meeting will be at the PRISCO COMMUNITY CENTER 150 W. Illinois Street, (South East corner of Lake and Illinois) in Aurora. Visit the Club Web Site (http://www.frrl.org/) for a map.

See you at the meeting …
Bill

About the FRRL

The Fox River Radio League, Inc., is a general interest amateur radio club serving the central Fox River Valley area. Records indicate the club has been in existence since at least 1924, and has functioned continuously ever since. We are an ARRL Special Service Club, an Illinois not-for-profit corporation, and a 501©(3) tax exempt organization as specified in IRS Statutes.

We sponsor training classes for new hams, license examination sessions, an annual hamfest, and participate in various public service events. If you have a specialized amateur radio interest, chances are you can share it with one or more of our club members.

The Fox River Radio League meets on the 2nd Tuesday of every month at the Prisco Community Center in Aurora, Illinois. The meeting begins at 7:30 PM. After conducting business, coffee and snacks are served while we socialize. Following the break, a program of interest will be presented. All persons interested in amateur radio are invited to attend. Families are welcome. *We hope to see you there!*

License Exams

The Fox River Radio League, Inc., in conjunction with the ARRL VEC, conducts amateur examinations on the 3rd Tuesday of January, Marcy, May, September and November in the basement of the Prisco Community Center, 150 W. Illinois Street, (South East corner of Lake and Illinois) in Aurora, IL. at 7:30 PM. No advance registration is required, but please be sure to bring your license (if you have one) and a photocopy of it, original CSCEs and a photocopy (if needed), some form of photo identification, and the fee of $12.00. (The FRRL receives no portion of this fee.)

The next exam is scheduled for Tuesday, March 16, 2004, at the Prisco Community Center in Aurora.

FRRL Dues

Annual dues are payable no later than the January Club Meeting each year. Persons joining during the year will have their first year's dues prorated to the nearest yearly quarter.

Regular dues are $20.00 a year, Senior Citizen dues are $12.00. Family dues are $30.00. You can also help support the FRRL Repeaters by joining as a combined Club/ Repeater member for $30.00. Repeater dues are $20.00.

Check with the Treasurer for details and additional dues rates.

Nets

Net Name	Freq.	Day	Time
FRRL	147.210	Tuesday	7:30 PM Local
10-10 CW	28.150	Monday	8:00 PM Local
10-10 SSB	28.720	Monday	8:30 PM Local

THE MARCH MEETING WILL BE HELD AT THE PRISCO COMMUNITY CENTER. PLEASE CHECK THE FRRL WEB SITE FOR A MAP TO THE MEETING LOCATION AT 150 WEST ILLINOIS STREET IN AURORA.

Fox River Radio League
Founded 1924

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Bill Erickson HF Challenge *by Mike Urso, K9FE*

March is here and the scores are already coming in with some amazing totals. ***Limited class*** has 2 entries.
Gary, K9MMS (48/7 +13dx) now has company with Lawrence, KB9YYZ turning in his first Limited (CW-QRP) score (7/0 +0dx). Nice start Lawrence. Soon Gary will have to start looking over his shoulder.

The ***Operator class*** has 6 entries. NT3J, Ted Jennings (34/4 +12dx) in PA is active. Remember he has slightly different conditions from us and may have some good numbers.

The ***QRO class*** has 5 entries. Dick, AH6EZ, (50/11 +108dx) is jumping farther ahead with some great DX this month. With 108 countries already he is going to be hard to catch. He is even turning in a lot of contacts using his new KX-1 QRP rig. Joe, NA9A, (1/0 +18dx) is a sleeper. I think he is laying in the weeds quietly waiting to pounce. I think I heard he had a QSO with an all-time new country for his ham career.
Welcome to WB9O, John (38/4 +17dx) for his entry into the Challenge.

Mike, K9FE, is just plodding along with his short 40 vertical and indoor antennas. Not a lot of time on the radio this month but at least the house RF indicator has been taken down and boxed for next Christmas. A little RF in the upper floor of the house was lighting the banister Christmas lights while they were unplugged. It did force me to run the RF numbers to see just how much radiation was present. I find out that as long as you were under 6 feet tall in the upstairs hallway that it was still safe on 15m at 500-watts. However, on 10m you had to be less than 3 feet tall at that power level. It was actually fun to run the calculations and look at the safety graphs. If you think that there is any chance your RF radiation could be a problem it is your responsibility to insure the safety of the occupants of the antenna area.

The reported DX heard is amazing. Antigua V2, Marshal Is. V7, Crete T20, Norfolk Is. VK9N, Monaco 3A, Haiti HH, Mongolia JT, Mauritius 3B8, Tonga A35, Ascension Is. ZD8, Zimbabwe Z22, Zambia 9J2, The Gambia C56, Sao Tome & Principe S9, Poland SO2, Bulgaria LZ0, British Virgin Is. VP2V, Senegal 6W, Argentina AY1, Angola D2, South Cook Is. ZK1, Cote d'Ivoire TU, Tokelau ZK3, Belize V3, Nicaragua YN, Brazil PY, Jamaica 6Y, and South Orkney AY1ZA (NA9A's all time new country). These are some great DX sites, some common and some not.

Remember, just because you started in one class doesn't mean you are tied to that class all year. You can go from ***Limited*** to ***Operator*** to ***QRO*** easily. Going backwards poses a problem since you cannot use your ***QRO*** contacts for ***Operator IF*** they were gotten with higher power than the class you want to be eligible to be in. Remember the 250-watt output power limit on the ***Operator*** category.

Remember to get your updated ***totals*** to me by the 15th of each month to have them included in the ***Arc Over***. If you are a day late of so, don't worry, I'll still get them in. Send them to **challenge@frrl.org**. Also include a list of rare and not so rare entities you have worked so we can all be a part of the HF hunting. The bands may seem dead, but make sure you try…you never know how the propagation can change.

Here are the current standings, as of Feb. 15. (The Rag Chew and QRO Class standings are on page 7.)

Operator Class	States/Provinces	DX Countries	Total
W9DTR	40/8	28	76
K9COE	44/5	12	61
KB9YSI	38/8	10	56
W9CEO	35/1	13	49
NT3J	33/4	12	49

Limited Class	States/Provinces	DX Countries	Total
K9MMS	45/6	5	56
KB9YYX	7/0	0	7

Share the Excitement!

by Dick Illman, AH6EZ

Here is what I have heard of recently. If you had fun with ham radio, share it. If you have not been having fun with ham radio, why not?

Aaron, KC9FJC, a new 12 year old ham has been showing up on our 2m repeater in the afternoons and evenings. His Boy Scout Leader got him into ham radio. Please welcome him to ham radio.

John, W9DNJ got his General Class license and has been having fun on 40m SSB, and even CW.

Dick, AH6EZ has over 25 states and 8 countries worked with the Elecraft KX1. He operated with a short 20 foot wire antenna from Lake Geneva and worked Colorado and Alberta.

Let me know of fun you are having with ham radio by email (AH6EZ@aol.com), on the Fox Repeaters, or telephone 630-584-4388. I will share it in the next Arcover. If I do not receive any input for this column, I may discontinue it.

March Program Notes

by Dick Illman, AH6EZ

Since last month's Columbia Shuttle and Mars Rover program, the Spirit and Odyssey rovers have been doing great.

The March program at the Prisco Center will be about RF Exposure and how you can determine if you are both legal and safe.

Mike and Denny will be doing the April program about the FRRL Field Day while I am in England trying to work across the pond back to the USA. Hopefully I will be able to link up with IRLP to tell people when I will be on the air so you can listen for me.

Fox Repeater and IRLP Update

by Dick Illman, AH6EZ

Check out the *Repeater Operator's Guide* on the Banquet CD.

We still have intermittent "grunge" interference on the UHF repeater that we think is being generated locally at the repeater site.

There is an uncoordinated repeater, KD9FA, perhaps in Oaklawn, that is only 15 KHz above our coordinated repeater (147.225). They are much closer than the allowed 40 miles. We have measured that they are on frequency but may have deviation as high as 8-10 KHz. We need to document interference from this repeater. This includes a written document with your call, the date and time, your approximate location, your equipment and antenna, and the nature of the interference (just opening your squelch or covering up our repeater's signal. Please send periodically to me or provide your notes at the next meeting to me or a board member.

Please remember that FCC rules and good operating procedures apply at all times on our repeaters. A copy of the sections of the rules that apply to repeaters is included in the Operator's Guide mentioned above. Please review them, and remember to listen before transmitting and identify your station.

Happy 70th Birthday to the ARC-5

by Bob Roehrig K9EUI

Most of you are no doubt wondering "what is an ARC-5?" The ARC-5 is a version of the most manufactured radio set in history. It was originally designed in 1934 and known as the Type K command set for the U.S. military although production did not start until just prior to WW2. These sets were used by the military until the 1960s. Over 1.4 million sets were made in the 1940s and thousands of them became available to hams on the surplus market after the war (even Radio Shack sold military surplus radios). These command sets were perhaps the most used surplus sets by hams around the world and complete books were written on their modifications and uses.

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ARC-5

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These sets were originally designed for use in military aircraft. Fighters used one each transmitter & receiver and the bombers used as many as 4. Both the transmitters and receivers plugged into racks, with the power connectors on the rear panel. In the bombers, the receivers were usually remote controlled by the pilot (The transmitter frequencies were preset prior to flight).

The sets are lightweight aluminum construction, yet extremely rugged and stable in operation and were used for both AM voice and CW. Each receiver had its own dynamotor power supply and the transmitters were powered from a single dynamotor located on the separate modulator chassis.

The ARC-5s were also known as CBY-xxxxx or SCR-274N sets, depending on the branch of service they were intended for. They came in either a black wrinkle finish or plain aluminum. There were basically 5 each different transmitters and 5 different receivers (each covered one band). Total frequency coverage was 190kHz to 9 MHz for the receivers and 2.1 to 9.1 MHz for the transmitters. There were also VHF sets that were part of the command set series.

Their popularity among hams is due to the fact that the surplus price on these units was frequently below $10.00 each, they were small and lightweight (many saw mobile use), few modifications were needed to make them work as a "civilian" radio, and they were quite sensitive and stable. (See photo, below).

The only downside to the receivers was that since they were intended for use with headphones, they only had one stage of audio so the volume was a bit wimpy when used with a speaker. All that was needed to get a receiver working was to add a headphone jack, a BFO switch, and a RF gain control to the blank panel on front of the set. Then you built a simple power supply to attach to the 3 leads where the dynamotor originally sat.

The transmitters needed no modifications except for the necessary power supply. They would feed either a low impedance resonant antenna (50 to 75 ohms) or with the use of the built-in loading coil, could feed a random length wire antenna. Other than the loading coil, the only adjustment was to set the VFO frequency - so this was the first no-tune transmitter ever used. With the right power supply, the transmitter could run 100 watts input. The other attractive thing about these sets was the final tubes (1625's) were so plentiful that they sold for as little as 25 cents apiece!

These command sets are now prized by collectors and still available although the prices have increased over the years. Command sets for 80 and 40 meters make a great setup for CW operators and their performance today is still hard to beat.

An ARC-5 Command Set in pristine condition.

CQ Contest

By Gary Hornbuckle, K9MMS

This month's column will be rather short. There are no new contest results to report in which FRRL member participation was found. At the FRRL Banquet, KB9YSI / Bill and I had a brief discussion about "CQ Contest." Bill offered some helpful suggestions about the contents and format. We agreed that the contest announcements probably should be revised to just include a list of contests with associated website links -- interested readers can consult the "web" for details. This will also serve to make more room for other articles .

I have again been wondering if there is sufficient interest in radio contesting by the ArcOver readers to warrant continuing this column – should it be included monthly, at 2 or three-month intervals, or discontinued altogether? Are there some particular areas of radio contesting that you would like to see covered in the column? Your feedback on this would be appreciated – this is your newsletter– what is your preference on this subject? Please send any comments and/or suggestions to me at K9MMS@aol.com. All comments are welcome (pro and con).

Sorting out the various Canadian sections (provinces and territories) can sometimes be a bit confusing. Canadian multipliers are not treated the same for all contests. The March/April 2004 edition of the National Contest Journal (published by ARRL) contains a helpful (?) article on the subject -- "Canada Explained." I was going to include a copy of a table from that article, but I discovered it contained a few errors. Apparently, even the article explaining Canada needs more "explanation." Anyway, the article cited that its primary information source was the December 2003 NCCC (Northern California Contest Club) newsletter – "The JUG." For a copy, go to http://www.nccc.cc Hopefully, between these two references, all of us can "decipher" Canadian entities as they relate to amateur radio.

Some of the radio contests that are scheduled to take place during March and April are listed below. For more information on any given event, check the Internet via the referenced links.

ARRL International DX Contest – SSB Mar 6, 0000 Z – Mar 7, 2400 Z
http://www.arrl.org/contests/rules/2004/intldx.html

Wisconsin QSO Party – CW and SSB Mar 14, 1800 Z – Mar 15, 0100 Z
http://www.warac.org/

Oklahoma QSO Party – SSB / CW / Digital Mar 13, 1400 – 2000 Z and Mar 14, 1400 – 2000 Z
http://www.okdxa.org/

North American RTTY Sprint Mar 14, 0000 Z – 0400 Z
http://www.ncjweb.com/

YL International SSB QSO Party Mar 13, 0000 Z – Mar 14, 2400 Z
http://www.qsl.net/yl-issb/

Russian DX Contest – CW and SSB Mar 20, 1200 Z – Mar 21, 1200 Z
http://www.rdxc.org/

Spring QRP Homebrewer Sprint – CW / PSK31 Mar 22, 0000 – 0400 Z
http://www.njqrp.org/data/qrphomebrewersprint.html

10 – 10 Mobile Contest Mar 20, 0000 – 2359 Z
http://www.ten-ten.org/

CLARA & Family HF (Canadian) – CW & SSB Mar 27, 0000 Z – Mar 28, 2400 Z
http://www.qsl.net/clara/contest.html

CQ WW WPX – SSB Mar 27, 0000 Z – Mar 28, 2400 Z
http://www.cqwpx.com/

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CQ Contest
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VHF Spring Sprints – CW and SSB
http://www.etdxa.org/vhf.htm
144 MHz – Apr 05, 7 – 11 PM -- **local time**
222 MHz – Apr 13, 7 – 11 PM
432 MHz – Apr 21, 7 – PM
50 MHz – May 08, 2300 Z – May 9, 0300 Z

Missouri QSO Party – CW and SSB Apr 3, 180 Z – Apr 4, 0500 Z
http://www.qsl.net/w0ma

Montana QSO Party – CW / SSB / Digital Apr 3, 2300 Z – Apr 4, 2300 Z
no URL listed

QCWA QSO Party – CW / SSB / Digital Apr 3, 1900 Z – Apr 4, 1900 Z
http://qcwa.org/2004-qso-party-rules.htm

Lighthouse Spring Lites QSO Party – All Modes Apr 10, 0100 Z – Apr 18, 2359 Z
http://arlhs.com

QRP ARCI Spring QSO Party – CW Apr 10, 1200 Z – Apr 11, 1900 Z
http://2hams.net/ARCI/index.htm

YU DX Contest – CW and SSB Apr 17, 1200 Z – Apr 18, 1200 Z
http://solair.eunet.yu/~yu1ab/awards/rules.htm

GACW DX – "Mr. Samuel Morse Party" Apr 17, 1200 Z – Apr 18, 1200 Z
http://gacw.no-ip.org (info and software)

Holyland DX Contest – CW and SSB Apr 17, 0000 – 2359 Z
http://www.iarc.org/

Erickson HF Challenge Standings as of 2/15/04 — Rag Chew and QRO Classes

Rag Chew Class	States/Provinces	DX Countries	Total
AH6EZ	44		44
K9FE	23		23
K9COE	14		14
NA9A	1		1

QRO Class	States/Provinces	DX Countries	Total
AH6EZ	50/11	108	169
WB9O	38/4	17	59
W0HED	36/2	2	40
K9FE	18/3	15	36
NA9A	1/0	18	19

Lessons Learned about QRP

By Dick Illman – AH6EZ

With my somewhat limited antenna farm in my back yard, I usually use my trusty Heathkit SB1000 amplifier to work DX. The exception being digital modes such as PSK and more recently QRP. I have occasionally operated QRP since 1996 with my 5 watt Index Laboratories 160-10m SSB/CW transceiver. Certainly lots of hams have used QRP for years for both local and DX contacts.

Last year, as a club, we constructed Bill Erickson's unbuilt Elecraft K1 rig and I made several contacts including five Field Day QSOs prior to handing off the club's rig to Bill Muhr. I think that I was bit by the QRP bug.

The tiny Elecraft KX1 kit (see photo, below) started shipping last September but it was not until we began planning a trip to England and Scotland that I decided to enter the ranks of the QRP enthusiasts. I ordered the 4 watt CW only 40m and 20m rig and built it in two evenings. I have been having a blast with the little rig ever since. I thought that I would share some of my lessons learned about operating QRP.

First of all there are two primary ways to operate QRP. Using a full sized antenna and using a small compromise antenna. With a smaller transmitted signal and perhaps a lower quality receiver, both of these situations require added skill and different techniques.

My KX1 operates on the full 40m, 30m, and 20m bands. My QRP lessons learned focus on those bands. Although we are approaching the bottom of the sun spot cycle, I think that QRP is still viable.

Lesson 1: Celebrate when your RST is 559. At least you are being solidly copied. Sometimes the RST is the most important part of a QRP QSO.

Lesson 2: Answer any CQ. You do not know if they are running QRP or a kilowatt.

Lesson 3: If you hear a weak signal, call them because they might be operating QRP also. I had a nice chat with a guy in Tennessee running a 50mw Rockmite rig in a campground.

Lesson 4: Hang out around the QRP frequencies because fellow QRP enthusiasts expect weak signals.

Lesson 5: Some guys with very strong signals only want to talk to equally strong signals.

Lesson 6: Although end fed wire antennas are easy to carry around, when set up, there can be localized noise sources.

Lesson 7: When your signal is weak, send somewhat slower. A longer dot or dash is more audible than a shorter one.

Lesson 8: Don't be afraid to have a mixed mode (CW/SSB) QSO on 40m. I had a great QSO with Calgary Alberta from a hotel room in Lake Geneva. My 20 foot wire was 10 feet off the ground. It helped that he had a 2 element beam at 100 feet.

Lesson 9: When you get a 339 RST, repeat your information.

Lesson 10: If you are trying to bust a DX pile up, timing is everything.

Lesson 11: Calling CQ near the QRP frequencies is more productive. Remember to use your RIT to tune in crystal controlled signals such as the Rockmite or other homebrew rigs.

Lesson 12: If you are throwing a fishing line and weight up into a tree at night, consider using a flashlight or moonlight to see what the heck you are doing. Or wear a helmet.

Lesson 13: Operating near the end of a CW DX contest can be pretty productive because everyone has already worked each other and they are desperate to work anyone. I worked 12 countries in an hour or so on 20m in the ARRL CW DX Contest.

Lesson 14: Patience, patience, patience. This ***is*** rocket science.

Send Address Corrections to:
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60174-3835

FRRL Event Calendar

March, 2004

April, 2004

Handy Web Links

FRRL Web Site	http://www.frrl.org/
ARRL Main Site	http://www.arrl.org/
ARRL Central Div. Site	http://www.central.arrl.org/
ARRL IL Section Site	http://www.central.arrl.org/illinois.html
ARRL IL Section News	http://www.arrl.org/sections/?sect=IL
ARRL Contest Page	http://www.arrl.orgcontests/
Contest Calendar	http://www.hornucopia.com/contestcal/
Callsign Lookup (QRZ)	http://www.qrz.com/
Vanity Callsign Info	http://www.vanityhq.com/
IRLP Main Page	http://www.irlp.net/
AMSAT	http://www.amsat.org/
FCC Services	http://wireless.fcc.gov/services/amateur

ArcOver FRRL Newsletter

The ArcOver is published monthly by the Fox River Radio League, Inc. Articles and letters are always welcome. The normal deadline for material is six days prior to the end of the previous month. Articles can be sent by email to kb9ysi@arrl.net or via U.S. Mail. Contact the Editor for details and submission guidelines.

Local Area Repeaters

W9CEQ—147.210 Mhz. *
+600 KHz, 103.5 access tone
Owned by FRRL

W9CEQ—444.300 Mhz. IRLP Node # 4850
+5 Mhz, 114.8 access tone
Owned by FRRL

W9ZGP—146.580 Mhz.
+1.08 Mhz (147.660)
Owned by NIARC

KB9RYA—145.470 Mhz.
-600 KHz, 103.5 access tone
Owned by Kane County OEM

W9XA — 224.40 Mhz, +5 Mhz, IRLP Node #4846
— **443.65 Mhz**, +5 Mhz
— **1292.00 Mhz**, -20 Mhz (1272.00)

* Weekly FRRL Net—Tues. Eve. at 7:30 pm local time.