



ACORN Newsletter

February 2016



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Androscoggin Amateur Radio Club (AARC)
 P.O. Box 1, Auburn ME 04212-0001
<http://www.w1npp.org/>

Club Repeaters

Auburn, Me.	Poland Springs, Me.
146.610 PL 88.5	147.315 PL 103.5
D-STAR 443.300	

ANDY Club Officers

President: Tim Bubier WT1A
 Vice President: Cory Golob KU1U
 Treasure: Ivan Lazure N1OXA
 Secretary: Dick Knight N1NYW
 Trustee: Tim Bubier WT1A
 Newsletter Editor: Harold Hartley N1LLU

Andy Club Meeting (NEW TIME)

Wednesday Feb 3rd 2016 1830 EDT
 Meeting held in Potvin Room
 99 Campus Ave. Lewiston, Me.

ARES/RACES

Wednesday Feb 17th 2016 1730 EDT
 Androscoggin ARES/RACES meeting
 Androscoggin Unified EMA Office
 Basement of Central Fire Station
 2 College Street Lewiston, Me.

Andy Club Breakfast

Wednesday Feb 24th 2016 0730 EDT
 Held at the Ramada Inn Pleasant Street
 Lewiston, Maine

On Air ARES/RACES NET

Weekly ARES/RACES Net is every Thursday at 1900,
 on club 146.610 pl 88.5, plus Weekly Training net
 follows. Digital will be part of training net.

Dues are due by March 31, 2016

**Please, if you can not come to the Meetings
 please mail your \$10 to Ivan, N1OXA,
 THANKS**

**Ivan Lazure
 440 Webber Ave.
 Lewiston, Me 04240**

January Secretary's Report

by Dick Knight N1NYW

The Androscoggin Amateur Radio Club held a meeting January 6, 2016 at the Potvin Room at the St. Marys' Medical Arts Building 99 Campus Avenue, Lewiston Maine. In attendance: wn1i, kc1ddx, ke4ucw, w1ltx, w1lwt, k1wtx, kb1doi, wa1eoj, n1dot, wb1hfy, n1wfo, kb1zlv, kc1amq, kc1aih, n1oxe, wt1a, kd1ow, n1oxa, ku1u, n1nyw.

The meeting was called to order by Tim Bubier wt1a at 7:02 p.m. Dave n1oxe made a motion to approve the Secretary's report as printed in the ACORN. Miriam kc1aih seconded the motion. Vote: approved. Ivan n1oxa gave the Treasurer report, Miriam kc1aih made a motion to approve the report, seconded by wn1i. Vote: approved.

Jerry k1wtx relayed a message from David we1u that he is concerned about the stability of the antenna at the Poland repeater site. Those at the meeting who were there at the antenna raising say the antenna is anchored just fine. Tim wt1a reports the rent is still being negotiated.

Tim reports that it is official, again this year the ARRL State Convention will be held at our hamfest in Lewiston. Walter Rawle will do a talk, the subject to be determined. Also CMP will send a speaker. Bob w1ltx is working to get "freebees" to give away at the hamfest. Jerry k1wtx will sign up vendors as usual. Yaesu has volunteered to send a speaker to talk about System Fusion, no confirmation yet from Yaesu.

In Tims message from the President in the news letter he mentioned holding a workshop(s) to give new hams hands on help. He hopes to have the first workshop at the Convention in March.

Our club President is going to an ARRL Cabinet meeting and asked if there are questions from club members that he could pass along to the ARRL. Let him know your questions and concerns.

A clarification from Cory about Tim's Presidents Report, Cory wants to explore including people from other radio services like GRMS and FRS in the club as

a stepping stone to becoming ham operators. Another subject in the Presidents Report, presentations or demonstrations. After some discussion, it was decided that these talks should be given before the business meeting at 6 or 6:30 p.m. Contact Tim if you would like to do a talk.

Tim informed the club that the Sheriffs office tried and failed to sell some used radios so they donated them to our ham radio club. The radios can be returned or programmed for the ham band(s). If you are interested, contact Tim.

Miriam kc1aih make a motion to adjourn that was seconded by Bob w1ltx. Vote: approved. Meeting adjourned at 8:07 p.m.

December DX Notes

_by Earl Gilmore N1SVB

The month of December we made 49 DX contacts which represents 33 countries.

YT90IARU, Serbia; V31JQ, Belies; HB0IARU, Lichtenstein; OL90IARU, Czech Republic; HP90IARU Panama; SO1WS, Western Sahara; M0NKR, England; TZ4AM, Mali; LZ1YG, Bulgaria; SP3EWP, Poland; 9H5BZ, Malta; TM21COP, France; J52HF, Guinea Bissau; ZD7FT, St. Helena; ZW400BEL, Brazil; DQ0YOTA, Germany; 3B9FR, Rodriguez Is. 3Y8YOTA, Tunisia; 9A2DQ, Croatia; XM7100AS, Canada; ZS6TVB, So. Africa; A25LC, Botswana; V5/DD0VR, Namibia; KP2/ U. S. Virgin Is.; OP2A, Belgium; CQ980IARU, Azores; 3DA0TM, Swaziland; FY5HB, French Guyana; S52V, Slovenia; R170G/3, Russia; CE1OEB, Chile; 2M0DDS, Scotland; OF9X, Finland; 3D2AG/p, Rotunda; P490IARU, Aruba

We made one Pacific contacts in December. We contacted 3D2AG/p on Rotunda Is.

There are several DXpeditions taking place in February 2016. Some haven't been assigned a call sign so they will use the listed prefix followed with another call

sign.

Feb. 01 to Feb. 09	VP8SGI	So. Georgia Is.
Feb. 02 to Feb. 10	FS/	St. Martin Is.
Feb. 04 to Feb. 11	V31JZ/p	Belize
Feb. 05 to Feb. 25	V47KA	St. Kitts & Nevis
Feb. 06 to Feb. 07	FO/	French Polynesia
Feb. 08 to Feb. 17	7P8C	Lesotho
Feb. 08 to Feb. 18	C6ABB	Bahamas
Feb. 09 to Sep. 18	V5/	Namibia
Feb. 10 to Feb. 14	CE0Y	Easter Is.
Feb. 10 to Feb. 22	5V7TH	Togo
Feb. 10 to Feb. 26	F5/	St. Martin Is.
Feb. 10 to Mar. 01	6W7/	Senegal
Feb. 11 to Mar. 01	3B8HD	Mauritius
Feb. 13 to Feb. 19	3D2PW	Fiji
Feb. 13 to Feb. 21	V47TR	St. Kitts & Nevis
Feb. 14 to Feb. 19	VP8IDX	Falkland Is.
Feb. 15 to Feb. 25	HR/8	Honduras
Feb. 16 to Mar. 12	PJ7AA	Sint. Maartin is.
Feb. 17 to Feb. 23	J7/	Dominica
Feb. 18 to Feb. 24	V63DX	Micronesia
Feb. 18 to Mar. 04	3XY1T	Tonga
Feb. 21 to Mar. 04	V26IS	Antigua
Feb. 25 to Mar. 25	S9BK	Sao Tome & Principe

ARRL international DX Contest, CW
(Feb. 20 - 21 2016)

The above DXpeditions are accurate to the 15th of the month. For later additions visit NG3K web page.

President's Report

by Tim WT1A

Greetings All,

Many things going on in the ARRL and here locally about which I would like to report. I'll start with what's going on now with the club. Coming right up is our annual hosting of the State ARRL convention and hamfest at the Ramada coming up on March 25 and 26. We received our official letter of approval for the event on January 14, and we are now proceeding with plans. Anyone with ideas for vendors or speakers should contact Jerry, K1WTX, Cory, KU1U, or myself. Ivan and Jerry have worked to update all the paperwork

associated with the hamfest and we are attempting to increase the number of commercial vendors in attendance, although that is a struggle due to a number of factors.

On the national front in the ARRL, I was able to attend the New England Cabinet Meeting held in Springfield, MA, on January 9. This is a conference open to all ARRL Section Managers and affiliated club presidents from around New England. There were a number of topics covered at that conference that should be of interest to you, whether or not you are an ARRL member. First discussed was the "changing of the guard" at ARRL headquarters. Kay Craigie, N3KN, who has served at the League's president since 2010, stepped down after nearly 30 years of service to the League. On January 18, the Board of Directors elected First Vice President Rick Rodrigue, K5UR, to a 2-year term as the 16th president of the ARRL. Long-time ARRL headquarters employee David Sumner, K1ZZ, is also stepping down in May from his current position of CEO after 44 years of service to the League. His replacement is expected to be named sometime this week. Finally, COO Harold Kramer, WJ1B, is also retiring this year. Membership in the League was up in 2015 but with the increase in dues, that may not be the case for 2016. Meanwhile staffing at League headquarters is expected to remain about the same.

The FCC was the next topic of discussion. It appears that they have now consolidated all their online information into one, new website at www.fcc.gov. Enforcement activity is now searchable on the website and there is now a link on the home page to lodge a complaint about interference. The consensus at the meeting was that some enforcement is currently being done, but not nearly enough. The League is currently trying to use its contacts in Congress to try to push the FCC a bit on enforcement.

Grow lights continue to be one of the largest problems for hams. Retailers such as Lowe's, Home Depot and Walmart continue to sell ballasts that are both out of compliance and being sold to homeowners when the devices are clearly labeled as not for residential use. Powerline noise is another issue of concern with many utility companies either not possessing the proper equipment to locate and diagnose the issue, or just not being well-trained in doing so. There seems to be a wide variation in the capabilities and responsiveness to complaints depending on the utility. I pointed out that

local EMA offices may be of some assistance in that we maintain special relationships with the electrical providers and that we have a vested interest in communications, especially with our RACES/ARES hams.

Another area of interest when it comes to hams is that a proposed rules change at the FCC would regulate WiFi modems by restricting modification of their firmware. This would potentially affect hams using the modems to create mesh networks. The proposal is named NPRM-15-170, for those wishing to read more. There is also a proposal to open the LF bands of 630 and 2200 meters up for amateur use. So far there has been no action by the FCC but utility companies have been in opposition of this proposes because some of their control systems, many of which are way out of date, currently use parts of those bands.

Another item of interest to New England hams but one that would most likely not affect us here is the military's announcement that it will be upgrading the PAVE-PAWS radar system located on Cape Cod. The upcoming upgrades could affect repeaters on the 440 MHz band in that area and as far north as the southern tip of Maine. Amateurs are the secondary users of that band so any changes that the military decides to make will have to be compensated for by us hams. This could affect input and output frequencies for repeaters in particular. The last set of upgrades eventually shutdown some 440 repeaters in that area.

A controversial area of change regarding frequency usage is that 146.520 MHz is now open for use during VHF contesting. This contradicts the tradition reservation of this as the "National Calling Frequency" and has drawn a lot of negative feedback. The League's reasoning for allowing this change was the underutilization of that frequency nationwide, and the fact that the change will only affect one or two weekends out of the year. The logic behind the change was that it might encourage more hams to at least monitor that channel during the contest(s) to see what they can hear.

Attracting and retaining new hams was also a very popular topic at the meeting. It seems that we are like pretty much every other affiliated club in New England and probably around the country, in our desire and need to get new hams on the air, attending meetings and keeping their interest. Some key take-away points were to capture youth interest, starting as early as 4th to 6th

grade, and to emphasize emergency communications, digital modes and the "Maker's Faire" aspects of the hobby.

Drones were another topic of lengthy discussion, particularly about their usefulness for such things as tower inspections and carrying lines over trees. The FAA registration process was outlined with some giving their personal experiences in that regard.

We were given a very nice presentation on the W1 QSL outgoing buro by KV1J. I later tried to solicit him or another buro volunteer to come speak at our convention. That is still in the works.

Finally, the topic of hamfests and their dwindling attendance was discussed at length. It seems that we are not alone in our frustration in trying to entice retail vendors, such as HRO. Much larger hamfest have seen a drop in attendance both by hams and vendors all over New England. Many of the organizers have been told by vendors that they will not consider a hamfest a profitable venture for them unless the expected attendance is in the range of 500 or more. Ours has been fluctuating in the 300-400 range, putting us just below this artificial level for profitability. We will continue to solicit vendors in response to feedback concerning the need to have more new equipment available for sale, including entry level radios, HTs, power supplies and antenna tuners.

The repeater committee has been working hard to come up with recommendations to support our three repeater sites. We will have a proposal put together for the club to vote on this upcoming meeting.

One last item of note: We have discussed doing regular hands-on demonstrations and talks either prior to our business meetings. Starting this upcoming meeting, we will now begin our meetings at **6:30 pm** starting with a presentation. For February, Walter, VE1AWS, has a recount of his experience with DXpeditions to Sable Island off the coast of eastern Canada. Sable Island is considered a separate entity under DXCC and is currently ranked #50 on that award's Most Wanted list. Come early and enjoy this talk.

That's about it from me. Hope to see you all at both the January 27th breakfast meeting and the February 3rd business meeting.

What is a PL tone

By Cory KU1U

One of the first on air occurrences a newly licensed ham encounters is getting on a local repeater. Most repeaters require a "PL tone" to access it. While the new ham may have heard of PL tones in their studying, do they fully understand what one does? Lets explore the topic of Sub Audible Tones.

Veteran hams reading this may be wondering, why did Cory say Sub Audible Tones and not CTCSS? That is because there are two types of Sub Audible Tones. The more common sub audible tone is referred to as Continuous Coded Squelch System (CTCSS). These are usually referred to in Hertz. The Poland 147.315 repeater has a CTCSS of 103.5 Hz. Without that tone, a ham will not be able to use the repeater. Think of sub audible tones as a key to the door; You can hear the person on the other side of the door, but without the right key, you cannot open the door. What this means is when a person uses a CTCSS tone when they transmit, *everyone* can hear the transmission, but if you do not have the right tone in your radio for the repeater, the repeater will not hear you.

Lets try another example on CTCSS tones. If you blow a dog whistle, humans do not respond to this because they cannot hear that frequency range. Dogs, however, will go ballistic when you sound the whistle because the frequency falls within their range. The right frequency will get you the needed response.

So I have talked about CTCSS, so what is a PL Tone? PL Tone is a brand name of Motorola that stands for Private Line. Ironically Private Line is not as private as you may think since everyone can hear your conversation without a tone. A PL Tone is CTCSS, they just renamed it for marketing. When you sit down for lunch, you do not ask somebody to pass the Sodium Chloride (NaCl) right? You ask them to pass you the (table) salt. Think of CTCSS as the scientific name and PL Tone as a brand name.

Now lets move on to Tone Squelch (TSQL). We typically program radios to have CTCSS on transmit, we ignore any tone on the receive. We are in a new generation of radios where Digital Voice is gaining ground. Our club has supported three Yaesu Fusion repeaters. With Fusion, the way we have set up all of our repeaters, whatever signal the repeater hears, it sends the same signal out, in other words, Analog In-Analog Out, Fusion-In, Fusion-Out. If a ham does not have a digital capable radio, then they will hear the digital hash if their radio is programmed without Tone Squelch. The reason the club advises that hams reprogram their radio for Tone Squelch is that they will *only* hear analog signals on their radio when one is present. That radio only listens for an 88.5 Hz tone, if somebody is on Fusion, it will not be heard, if somebody is accidentally using a 100.0 Hz tone, it will not be heard.

CTCSS tones range from 67.0 Hz up to 254.1 Hz. In the commercial world, you may see these tones listed with a two letter abbreviation, examples are 67.0 Hz being listed as XZ or 88.5 being listed as 1Z, etc. Different companies also try to put their own spin on CTCSS. Most manufacturers list it as CTCSS or Tone or T, Yaesu uses Tone Encode (ENC) on their radios. The other type of sub audible tone is Digital Coded Squelch (DCS). To no surprise Motorola calls this tone DPL (Digital Private Line). This type of sub audible tone can confuse people because the tone itself is digital, however, the voice carrier is analog. DCS tones are listed as 3 digits and range from 023 to 754. Perhaps we will discuss DCS in the future, but it does not see much use as CTCSS is the prevailing standard for amateur operation.