



Drumlins' Rumblings

RACES-ARES August 2015 KB2KBY Dave Taylor

August? Holy crow, the summer is almost over! Didn't I just frantically do July's newsletter article just on time for N2ZVP, yesterday? Hi. If we translated the speed of time to say the winter it should be March but is only January when it is winter. Here it is August and it was the end of June, I thought. Hi. Better get over my "summer-going-to-fast slump" and start typing. Hi. (As if you read these articles anyway. Hi. Surprise me some time and tell me in an eyeball QSO. Hi.)

Okay!, **there was a BIG MISTAKE in July's newsletter** article. I thought I was technologically savvy using my cell phone calendar app to type the date for the Canal Town Day parade. All of the club members are well aware of my computer savvy-"nyet," nil, what?, nonexistent, etc. Well, that savvy proved itself with the cell phone as well. I read the cell calendar wrong! What do they call these cell phones? Smart phones! THAT should have a red flag for me. The phone is way smarter than I am. Hi. But I am afraid the gray cells didn't help me out "seeing" the red flag. Over this kid's head. Hi. Anyway: **CANAL TOWN DAYS is Saturday SEPTEMBER 19th**, as KC2TNJ, who knows me all too well and my brain power, informed me, "You made a mistake." TNX, KC2TNJ. It is a good thing the club members are looking out for me or I'd mess something else up. KB2KBY did it again. Have a good laugh on me. Hi hi. I am sure good for that. Hi. Get that bloody correction done on your calendars, please!. Thank heavens Halloween and the Pumpkin Patrol dates don't change. (Right? Hi.)

As I type, it is very early. In fact it is not even August. What? KB2KBY going off on the deep end of QRN or QRM? Well, thank heavens I am not but sure makes you think so. Huh! Actually it is the end of July and this kid is nearly bound for "6-land" or California for those don't know or remember. I have a sister out in San Jose and my last family sibling. She is my "younger-older sister" as I am the baby of the family. Yes, I don't look like any "baby" but the term has always stuck with the last kid in the family. Dofe, our Dad's nickname for her (real name Dorothy), has been out in 6-land since 1969. (Those who have kept up with my ranting in the newsletters may even remember Dad's nickname for me? Bonus answer if correct.) Mom visited twice and Dad once when they were alive. This kid, "my little baby brother," as Dofe always liked to introduce me, as the last of

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Drumlins' Meeting

August 19th, 2015 - 7:30 PM
Wayne County EOC
7336 Rt. 31, Lyons, NY
Doors open at 7:00 PM, Talk-in:
146.685

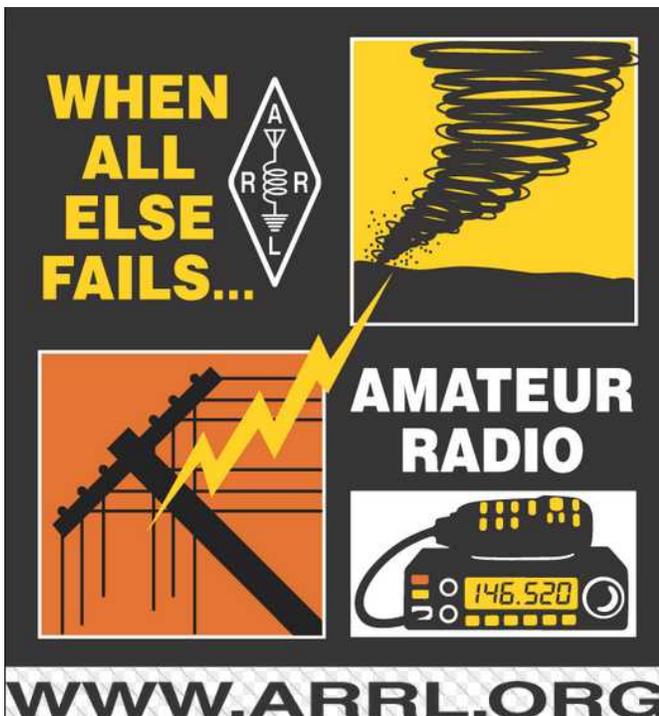


RACES-ARES August 2015 continued

three brothers, has never been there. I bow my head in shame, as Dofe reminds me of this particular fact every time she comes EAST. That was only last summer if you remember when I visited MA for my "older-older" brother's internment in August 2014.

Well, the XYL and I decided when some of Mom's (my "in-law" but accurately a Mom to me), estate money came our way, to make plans this last January to finance this trip. We're flying out and taking the train back. My August article is due before I get back. So here I am. Surprise, surprise, surprise! (Quiet, Gomer!)

This will most likely be our only trip out West and the only way my arthritic body will see the West Coast and the Rocky's and the Mid-West coming home. I'll tell you how it went on my return. 50 years ago I had passed the same territory high in the air but took a slight detour to Seattle-Tacoma WA on the way from Chicago to Alaska. 50 years ago I was alone getting out of the Northeast and Mid-Atlantic states for the first in my life. This time the XYL will be at my side, not in my mind and letters as the last time for a long 13 months. So I-we-are looking very forward to this trip. I will be out of the valley of shame with Dofe getting out there too. Hi. Whew! Finally!



I can tell you nothing of the August 8th Wreckit hospital exercise at this time. I'll hear the report at the meeting just like you. I do know with the new modes and digital forms being used for the first time in this hospital exercise, they will be mastered as those involved have the solid ground to adapt easily with the technological advancement. (Better than I with the cell phone. Hi.) I depart in confidence as we have come a long ways in our EmComm in five years. That confidence is a good feeling to have. I was reminded of this, this past Sunday running into one of my former students. She was getting remarried and introduced me to her soon to be husband. He noticed my 79th USASA SOU hat I was wearing and I told him of my unit in Shemya AFB near the end of the Aleutian Islands. He was an Air Force vet in communications and was working for an agency training personnel at County EMOs. What a small world. Here he is talking to the RO/EC of Wayne County. Serendipity! for sure! I have him coming for a visit at our EMO and the shack after my return from 6-land for a tour and hopefully meet George Bastedo. He said very emphatically, any EMO that didn't use their amateurs for EmComm were in big trouble. Yes, there are those out there who DO KNOW our value. I

think KB2KBY's chest went further out than his tummy with the pride in that statement. Hi. Believe me that is not easy, as you know. Hi.

Well, some really big bird walking this month. I was afraid sitting down and not having enough? Hi. Sometimes I don't think my gray cells remember myself. Hi. CU at the DARC meeting and we all can get caught up. Holy cow, enjoy what is left of August!

73 & 88, Dave KB2KBY

Wayne RO/EC

August Program PL Tones

- September 1st, PL tones go live on 146.745 and 146.685 repeaters. Both repeaters will be using 71.9 Hz.
- CANAL TOWN DAYS Saturday SEPTEMBER 19th CONTACT: Dave KB2KBY C: 315-871-8767 (I do text.) H: 315-597-4293 (Leave a message.) kb2kby@rochester.rr.com



September Rumblins
Deadline is: September 9th,

NY State RACES - HF NET
Sunday 0900
3.993.5kHz SSB/LSB

If you have an article that you would like to share with the rest of the club, please submit them to me and I'll work on getting it in the newsletter!
Email address: wdotcher@tkcontrols.com
Snail Mail address:144 Berg Rd
Ontario, NY 14519

Upcoming Public Service Events

CANAL TOWN DAYS Saturday
SEPTEMBER 19th

2015 Hamfest Schedule

Lockport Amateur Radio Hamfest 1/31/2015 South Lockport Fire Company 146.820- (PL 107.2)	Winter Hamfest 2/28/2015 Big Flats American Legion hall None
Hamfest and Electronics Fair 3/8/2015 Levittown Hall 146.850 (PL 136.5)	DRUMLINS ARC HAM-FEST 4/18/2015 VFW Memorial Post 6778 146.685 (No PL Tone)
East Greenbush ARA Hamfest 5/9/2015 East Greenbush Fire Company 147.270 (PL 94.8)	RARA Rochester Hamfest 6/6/2015 Barnard's Exempt 360 Maiden Lane 146.610 pl 110.9
Cortland Hamfest & Technology Fair 6/13/2015 Cortland County Fairgrounds 147.180 (PL 71.9)	Ithaca Hamfest 2015 8/1/2015 Trumansburg Fairgrounds 146.970(-) PL 103.5
KLARA Hamfest & Campout 8/15/2015 Howard Community Center 145.190 (PL 110.9)	40th Annual Elmira International HamFest 9/26/2015 Chemung County Fairgrounds 147.360+ (no PL tone)
Hamfest and Electronics Fair 10/25/2015 Levittown Hall 146.850 (PL 136.5)	MBARC Fest 5/31/2015 QWL Building - Downstate Correctional Facility 146.970 (PL 100)

PL Tones explained

Copied From Eric J. Grabowski 2009 Ham Tips 11, KH6CQ, District Emergency Coordinator, Hawaii ARES

Sub-Audible Tone and What You Need to Know About It

In the late 1960s and early 1970s when VHF amateur radio FM repeaters were still a novelty, some repeater owners put sub-audible tone decoders on their receivers to restrict access to their dues-paying members. The tone frequency was a highly guarded secret and you couldn't get it unless you were a member in good standing of the group. These systems were called closed repeaters or private repeaters and were the subject of much criticism from proponents of open repeater systems, i.e., repeaters that simply used carrier squelch.

Today, most open repeaters now use sub-audible tone decoders to mitigate co-channel interference and extend their coverage areas; however, there are a very few that remain closed to the general amateur radio community for one reason or another.

The Name Game

Before we get into the merits and pitfalls of using sub-audible tone encoding and decoding, you should understand that the generic name for encoding and decoding by means of a continuous sub-audible tone is Continuous Tone Carrier Squelch System (CTCSS). In the 1960s Motorola introduced this technology into their land mobile radios and called it Private Line (PL). Other manufacturers followed suit but with their own

trade names. Table 1 lists the more prominent ones. Some two-way radio technicians use the nickname buzz when referring to sub-audible tone because on radio receivers not designed with PL in mind, the low-end audio response didn't roll off fast enough to eliminate the sub-audible tone and a buzzing sound was heard whenever the transmission being received contained a sub-audible tone. Most Hams refer to sub-audible tone as PL, probably because it rolls off the tongue better than CTCSS

What PL Does and Does Not Do

Contrary to popular belief, PL does not provide you with a private channel for your communications. Since most commercial users never correctly understood this feature it's not unusual that some Hams don't get it right either. Using PL means that you will not hear the transmissions of other stations unless they are transmitting the same sub-audible tone your receiver is set to receive. It does not mean that other users cannot hear you. Quite the contrary; all users with carrier squelch will hear your transmissions.

Not all Radios Support all PL Tones

Although sub-audible tone encode and decode is a common feature in modern radios, you should be aware that every radio does not

VE Testing

Drumlins ARC / Laurel VEC Testing

August 19th, 2015

Testing will start at 7:00 PM (At the Drumlins Amateur Radio Club meeting)

CONTACT for individuals registering in advance is: Sabrina Hamill, WD2STK - (585)727-2091

The Squawlsland ARC (SIARC) has VE testing at the Ontario County EOC-911 center on County Road 46 near the fire training area every other second Wednesday of the month at 6:30 PM. VE sessions are held prior to their meeting. The VE testing is headed by Dave Foster, AB2WZO of SIARC. The SIARC website (www.SIARC.us) can be used for directions and information.

VE Testing At RIT

RARA conducts amateur radio license testing on the 3rd Saturday of each month from September through April and at the Rochester Hamfest.

Testing is conducted at Rochester Institute of Technology, Building 9, Room 3139 ([click for map](#)). Registration is at 10:00 AM. Bring a pen and pencil, two forms of ID including one with a picture. If you are upgrading: Bring your original, and a copy, of your current amateur radio license; or unexpired Certificates of Completion. RARA provides free testing sessions as a public service. Handicapped applicants are always welcome, Please notify us in advance if you need any special accommodations.

PL Tones explained, Cont'd

Copied From Eric J. Grabowski 2009 Ham Tips 11, KH6CQ, District Emergency Coordinator,
Hawaii ARES

Sub-Audible Tone and What You Need to Know About It

support all of the standard PL tone frequencies listed in Table 2. Some radios do not provide a few of the standard tones, while other radios provide different or additional tones.

Applications and Benefits of Sub-Audible Tone

While the use of a sub-audible tone is still mostly associated with gaining access to conventional repeaters, there are many other applications in which PL encode and decode features can be used to great advantage. Here are some examples.

Enabling PL decode on a repeater's receiver can prevent undesired signals, including random noise, from keying the repeater.

Enabling PL encode on a repeater transmitter can benefit users in a couple of ways. Users who hear more than one repeater on the same RF frequency can use their PL decoder to screen out the undesired repeaters. In addition, users who scan multiple RF frequencies or mobile users who travel through high noise areas can improve the reliability of their scanning because their radios will not be tricked into stopping by false signals.

In a linked repeater system, using full PL (encode and decode) on the link receivers and transmitters prevents false keying due to interference on the link receiver's input. In addition, turning the PL encode off while the link transmitter identifies minimizes the number of IDs that will be heard by users.

Remote base systems can use multiple receivers to cover a large area. Each receiver is activated by a different PL tone. This prevents more than one receiver from being simultaneously activated by a station within range of more than one of the receivers.

To use PL effectively you may want to program multiple memory channels with the same RF fre-

quency but different PL tones.

Enabling full PL on the UHF simplex frequency used for a cross band repeater is an excellent idea. It reduces the likelihood that undesired signals will key the repeater. Using full PL on handheld radios keeps distractions to a

minimum by minimizing chatter. For example, if two ARES teams are working in close proximity they can share the same RF channel but use different PL tones so that they only hear the transmissions pertaining to their team. If you do this, you must check to make sure the frequency is clear before you transmit. You can do this by pressing the Monitor button on your radio. This temporarily disables the PL decoder so you can hear if someone else is already using the frequency.

Summary

PL encode and decode, once considered an elite and expensive option, is now a standard feature in most modern radios. There are two main reasons that we use PL. One is to limit the amount of radio traffic heard to those stations in a particular group of users. Another is to allow users who use the scanning feature of their radios to mitigate incidental interference thus achieving a better scanning experience. Using PL does not give you a private communications channel. It simply means that you won't hear anyone who is not using your PL tone. Everyone without PL as well as only those with your PL tone will hear all of your transmissions. Once you understand what PL can and cannot do, you'll come to appreciate how handy it is to have this feature in your FM handheld and mobile radios.

PL Tones explained, Cont'd

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Sub-Audible Tone and What You Need to Know About It

Table 1
Trade Names for CTCSS

TRADE NAME	LMR COMPANY
Private Line — PL	Motorola
Channel Guard — CG	General Electric
Quiet Channel — QC	Radio Corporation of America
Call Guard — CG	E. F. Johnson
Private Channel — PC	Standard Radio Corporation
Quiet Talk — QT	Kenwood

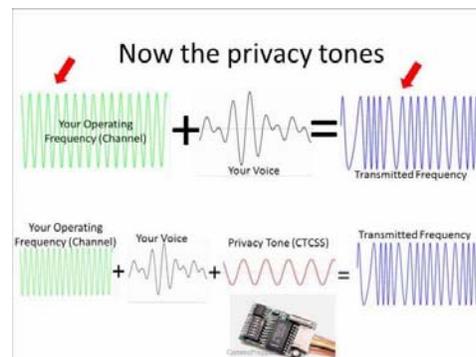
Table 2
Tone Codes and Standard Sub-Audible Frequencies in Hertz

CODE	FREQ
XZ	87.0
WZ	89.3
XA	71.9
WA	74.4
XB	77.0
WB	79.7
YZ	82.5
YA	85.4
YB	88.5
ZZ	91.5
ZA	94.8
ZB	97.4
1Z	100.0
1A	103.5

CODE	FREQ
1B	107.2
2Z	110.9
2A	114.8
2B	118.8
3Z	123.0
3A	127.3
3B	131.8
4Z	136.5
4A	141.3
4B	146.2
5Z	151.4
5A	156.7
5B	162.2
6Z	167.9

CODE	FREQ
6A	173.8
6B	179.9
7Z	186.2
7A	192.8
M1	203.5
8Z	206.5
M2	210.7
M3	218.1
M4	225.7
9Z	229.1
M5	233.6
M6	241.8
M7	250.3
0Z	254.1

In a communications receiver designed for CTCSS, a high-pass audio filter is supposed to block CTCSS tones (below 300 Hz) so they are not heard in the speaker. Since audio curves vary from one receiver to another, some radios may pass an audible level of the CTCSS tone to the speaker. Lower tone frequencies generally are less audible



Drumlins Leaders 2014-2015

President	Glen Bruemmer, KC2YGH	315-398-3266
V-President	Al Cook K2MPE	315-483-8717
Secretary	Sabrina Hamill, WD2STK	315-210-8078
Treasurer	Walter Dutcher II, N2ZVP	585-224-5581
Program	Jay Hamill, KC2TCM	315-210-8078
Program Asst	Dave Taylor, KB2KBY	315-597-4293
Director 3 yr	Dave Mette, W2ACC	315-781-5363
Director 2 yr	Bill Tegtmeyer, KD2DNO	315-904-1012
Director 1 yr	Richard Hamill, KC2TNJ	315-986-8589
Repeater Chair	Jeff Jensen, N2MKT	315-879-1588
Membership	Bill Tegtmeyer, KD2DNO	315-904-1012
Newsletter	Walter Dutcher, N2ZVP	585-224-5581
Club Trustees	Jeff Jensen, N2MKT Sabrina Hamill WD2STK	315-879-1588 315-210-8078
Website	Richard Hamill, KC2TNJ Justin Toarmino KD2HBQ	315-986-8589

Radio Club Contacts

Drumlins Amateur Radio Club Ltd. (DARC)

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Monroe County ARES

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Rochester Amateur Radio Association (RARA)

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Rochester DX Association (RDXA)

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Rochester Radio Repeater Association (RRRA)

Brad Allen, KB2CHY kb2chy@frontiernet.net

Rochester VHF Group (RVHFG)

Dave Hallidy, K2DH K2DH@frontiernet.net

XEROX Amateur Radio Club (XARC)

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Squaw Island Amateur Radio Club (SIARC)

Steve Benton, WB2VMR sbenton2@rochester.rr.com

Antique Wireless Association (AWA)

Lynn Bisha, W2BSN lbisha@rochester.rr.com

Fisherman's Net Amateur Radio Club

Jim Sutton, N2OPS jim@atrym.org

Genesee Valley Amateur Radio Assn

Bill Boyd, N3DSP N3DSP@lafireline.net

WAYNE COUNTY RACES

VHF NET

TIME-FREQUENCIES

SUNDAY EVENING 8:35PM

PRIMARY:

146.685 (PL 71.9)

WA2EMO REPEATER

Secondary

146.745 (PL 71.9)

WA2AAZ REPEATER

Voice and Digital

FLDIGI MT63-2KL

ONTARIO COUNTY RACES

VHF NET

TIME-FREQUENCIES

SUNDAY EVENING 8:00PM

PRIMARY:

145.450 (PL 110.9)

W2ONT REPEATER

ALSO MONITORED

146.820

(PL 110.9)

Club Address

Dave Taylor KB2KBY

228 W. Jackson St.

Palmyra, NY 14522

Packet:

kb2kby-1 thru WA2EMO-14

Email:

KB2KBY@rochester.rr.com