The Radio Hill Gazette

A publication of the Schaumburg Ham Radio Club (SARC)
November 2017

From the Editor

Welcome to another edition of the Radio Hill Gazette. As I write this its Thanksgiving Day morning, a turkey is in the oven, and I'm looking forward to another wonderful lunch with my family. I wish and hope all of you have a safe and happy Thanksgiving with family and friends.

In this edition of the RHG we have a great article from Joel Gray, N9LQ, on his experience with the ARRL SS CW contest, and an article from Leo about the annual Schaumburg Public Safety Day. Another article from Matt AC9IG on PL tones and the reason behind there usage.

So enjoy, and thanks to the contributors for this months RHG.

Mike K9KQX

From the President

Last month I challenged everyone to try something new with our hobby. At the club meeting this month I checked up on progress by asking about what new thing our members had tried. There were plenty of great responses including operating on new modes, checking in on various nets, working on (and inside of) radios. I'm also glad to see that some battery charger kits put together by Kent generated a lot of interest in building equipment. It will be great to see how these turn out in the coming months.

This time of year we give thanks to our friends and family for all the things they do and provide for us. While you do this I'd like you to take a moment to consider this within our club. Kent's contribution of of designing and packaging kits for the club is just one example of something that we can give thanks to. There are so many members that work on things for the club behind the scenes. They may not have an report at every meeting, but they are there making things happen. So the next time you're participating in a club activity take a moment and consider who's running the net, who set up the chairs for the meeting, or how our meeting spaces have been reserved and see if you can acknowledge our members' hard work.

Happy Holidays!
Matt
AC9IG

Miscellaneous activities / updates

Construction Project Gary N9VU

Next CP meeting will be Saturday, December 9th and December 23rd from 8am till noon.
Location is at the Schaumburg Tennis Plus, 1416 Payne Rd, Schaumburg, IL

Kent W9KAO had the 12V PB battery chargers available for $20 during this past session. Gary N9VU wishes to relinquish his Chairmanship role; Chris AC9GN and Rob N9MVO are available to help fill Gary's vacancy on a temporary basis.

EMCOMM Bob Langsfeld WB9TZC reports:

AMATEUR RADIO EMERGENCY SERVICE 2017 SIMULATED EMERGENCY TEST RESULTS

The Friday night SET NET was on 146.52 conducted from the Hoffman Estates Emergency Operating Center.

There were 14 check ins with good signals except for one station who was using a cross polarized antenna, and another who was plagued by inter-mod at O hare airport. Six check-ins were ARES members. Four stations did not have HF capabilities. Four stations did not have emergency power of some sort. One formal message was passed to Palatine.

The Saturday morning SET NET was on 145.230 simplex conducted from the Schaumburg emergency Operating center.

There were 11 check-ins all with good signals except for the Lake County EOC who we could not hear. There were 5 ARES members. All but one station had emergency power of some type.

The Hoffman Estates EOC was operational at the same time as a relay station and passed traffic to the Schaumburg and Lake County Emergency Operating Centers.

We involved three local served agency EOC's and one EOC from a neighboring county.

The Saturday afternoon 213 Form Message training segment was hosted by John K9WIC from Hoffman EMA. There were 7 students present for the training and a short practice session followed.

Thanks to all those who staffed the EOCs and checked in:

K9WIC N9NBH K9AJK WQ9M WB9C AC9PH AC9GN K9BTF N9SSU KD9HIK KB9RGU KD9GOL K9KQX WA9PEB KA9HLX KC9VO N9MVO KB9CLT WX9PAL KD9JGU KE4GEN K9DFS KD9FMN K9UD KD9FIA

Non Hams Norm and Adreanne who assisted in the EOC. We logged 58 training hours and participated in three nets

Bob Langsfeld WB9TZC ARES EC serving Cook County - Schaumburg & Hoffman Estates

Hoffman Estates/Schaumburg ARES EC
WB9TZC Bob Langsfeld

Repeater updates - Kent W9KAO reports he's working on a time-out for repeater control. When the microcontroller falls into do-loop, the Raspberry Pi allows him to utilize a hanging indication land for automatic reset. 3.3V to 5.0V translation between the two systems is necessary and project should be ready for installation shortly.

President's Report - Matt AC9IG thanked Leo N9NBH for organizing the Tech class and thanked the two new Hams attending tonight. Jim Campbell WB9RGU offered two new HTs for these newly FCC licensed students.

Public Service - Rob N9MVO: Rob N9MVO: All Public Service events are over for the year. Next years public service events start in April and May of 2018

Social: Roger Ryan W9RDR. Not present at last meeting

Education: Leo N9NBH reported his fall TECHNICIAN Class are underway, and the last Class is scheduled for December 2nd. Two Hams have already passed there technician class. Leo indicated there is interest in a General Class course, so he will be investigating if the Library can accommodate us at a later time in the comming year.

Net Check-ins – Leo N9NBH

SARC Net Check In's For Thursday, Nov 9th, 2017:

The following hams checked in to the net this evening.
N9NBH Leo (Net Control)

N9MVO	Rob	
N9VU	Gary	
AB9Q	Jim	
AC9EM	Steve	
KD9RGU	Jim	
K9EYT	Ray	
KD9FIA	Al	
WQ9M	Mark	
K9NIB	Vince	
W9KAO	Kent	
ND9D	Allen	
N9NBH	Leo	net control
W9RKK	Robert	
KD9HIK	Dennis	
KD9HOK	Greg	

The question for the evening was: Have you used the antenna modeling program: MMANT-GAL?

Total Check Ins 14 plus net control

VE Testing Results

Tom Doyle, K9MF Reports
NEXT EXAM: October 7th at Schaumburg Park District CRC;
Results for Sept 2nd. 2017, test session:

NUMBER NEW LICENSE

CLASS	TESTED	UPGRADE
Technician	4	4
General	3	3

Extra	1	1
Total:	8	8

****TECHNICIAN****

Raman, John	KD9JQL
Mirek, Szymon	KD9JQN
Lishka, Edward J.	KD9JQO
Schilling, Steve R.	KD9JQP

****GENERAL****

Bolm, James L	N0RWL
McGovern, William E.	KD9JQF
Pivaral, Alrick O.	KB9UVT

****EXTRA****

Gates, Cory L.	KD9JOV

All of us at SARC would like to congratulate all those that received or upgraded their license this month, and we welcome you to the amateur radio community. Hope to hear you on the air. Should you have any questions, come join SARC at our regular monthly meeting on the 3rd Thursday of the month or stop in at one of the Construction Meetings. Check the SARC website for times and locations.

ARRL Sweepstakes – How to get your WAS award in a weekend

Joel, N9LQ

For those of you who don't know about it, the ARRL sponsors the longest running ham radio contest every November called Sweepstakes. On the first weekend of November they hold the CW event, and then on the third weekend they hold the SSB version. Both contests are identical except for the mode. The objective is to work as many stations in the US, Canada, Puerto Rico, and the US Virgin Islands as possible. The ARRL has divided up this territory into 83 sections, and one of the fun challenges of the contest is to see if you can get a "clean sweep" by working each section at least once. Your score is tallied as 2 points per contact (QSO), and each of the 83 sections counts as a multiplier. You get to operate for 24 hours of the 30 hour contest period.

It is a fun contest for those of us without tall towers and high gain antennas. A low dipole and 100 watts is sufficient to make a lot of contacts, and put up a respectable score. There is even a QRP category for those who like to keep it at 5 watts or less. Sweepstakes has one of the longest contest exchanges which does require an effort to make sure you copied it accurately. There are free logging programs available (N1MM+ is the one I use) which can help you keep an accurate log.

If you haven't tried participating in this contest, or any contest, consider giving it a try. It can be a little bit intimidating the first time, but with a bit of time and practice, you may find yourself becoming very comfortable with it, and really start to have some fun. How would you like to earn your WAS award for both CW and SSB in two weekends in November? Participating in Sweepstakes makes that very possible.

I have really enjoyed this contest in past years, so this year I decided to again enter the CW SS in early November. My goal this year was to try and go for as many contacts (QSO's) as possible, and not worry about getting the clean sweep. The destruction in Puerto Rico and the Virgin Islands made it less likely to be able to get the sweep this year.

My calendar was wide open, so I was also able to mount a more serious effort than I am usually able to do for a contest. I actually made an hour by hour operating plan for whether I would be sleeping or operating, and what bands to be targeting. I wound up working 23 hours of the allowable 24 because I didn't realize I would need to take a couple of 30 minute breaks on Sunday to move around. Oops! This was also my first SS using high power (1500 watts) which made for a different experience as well.

A quick explanation of "running" vs "searching and pouncing" (S&P) is in order for those of you not familiar with the terms. Running refers to calling CQ in the contest, and then the people who are S&P'ing give you a call. Typically the guys who are running get more QSO's in the log faster than those doing S&P. However, in SS, there are only so many participants, and if everyone is running, nobody makes any contacts. As it turns out, to maximize your score you need to do both.

My goal at the start was to resist the compulsion to chase the Sections for multipliers or "mults" in search of the clean sweep. In past years, I have been highly distracted by that challenge. I would have to say this year I was "mostly" successful. I started out running on 20m, and had a good go of it. Switching to 40m and 80m later, both bands also produced long, productive runs. In between the runs I would sweep (S&P) through a band, and then do a quick look at the mult window in my logging program, and take a crack at a few of the rare ones that were spotted. I am pleased that I didn't get sucked into any extended dog fights though. I ended Saturday night at about 1:30am when things went soft with 483 contacts in the log. Sunday I kept to the same strategy. I enjoyed getting called by a QRP station in Northern New York (NNY) on Sunday morning. This was one of the most rare sections this year and many hams were unable to bag this one. This saved me having to waste time in a pileup to try and get him. I was also lucky to get through to Puerto Rico late in the day on Sunday. I did see the Virgin Islands spotted a couple of times on 15m and took a quick listen, but didn't hear well so didn't waste time there either. I probably should have though, as that's the one section I missed for the sweep. These three sections were the real challenge this year, NNY, VI, and PR. I was happy to see so many of the other "rare" sections from past years well represented this year.

Usually when running, if I go for a while without a contact, I bail out and search and pounce (S&P) instead. This time I hung in there a bit longer, and a couple of times was rewarded when my rate picked back up, and

sometimes for an extended period. I've got to learn to be more patient. (or maybe just get a second radio to play with when it's slow!)

I loved the quiet atmospheric conditions here on 40 and 80 on Saturday night. Propagation was also quite interesting for this contest. On Saturday night, it seemed like I was getting as many 40m spots from Europe as the US! That's not too common for my station. It probably also pushed me to move to 80m a bit too early. Completely different late Sunday with the line of storms to the south of me, so I tried to stay off 80m as long as I could. I also noticed some pretty funky signals on the band. Chirps, clicks, drifting, some fuzzy distortion, and some unique "fists" as well. Not sure if that's a conscious strategy for a distinctive signal, or just vintage gear!

My antennas are modest; I have a fan dipole aimed NE-SW, and a second one aimed NW-SE. A foot pedal allows me to easily switch directions while keeping my hands on the keyboard. I found it helpful in many cases to improve the signal path to complete the contact.

I found myself almost quitting on Sunday afternoon when my rate dropped way off. Started to feel the long hours in the chair, and not quite enough sleep, but hung on until the end. One good piece of advice that experienced contesters have shared with me over the years is the importance of BIC (butt-in-chair) time. I tried to remember that as the contest approached the last hours.

Overall, I would have to say I accomplished what I set out to do, and had fun doing it.
Getting the sweep would have been icing on the cake, but it was not to be this year. For what it's worth, last year I got a sweep in both the CW and SSB contests running 100w into dipoles. This year with 1500w, I didn't get it. That's just the way it goes; better luck next time!

Anyway, here are my results from this years CW SS.

Class: SO Unlimited HP

QTH: IL

Operating Time (hrs): 23

Band	QSOs
80:	211
40:	369
20:	315
15:	15

Total: 897 Sections: 82 Total Score: 147,108

If anyone has any questions, or wants give contesting a try, I'd be happy to try and help. My email is joelgray77@gmail.com. Hope to see you on the air!

73, Joel
N9LQ

Schaumburg Public Safety Day

Leo N9NBH

The Village of Schaumburg held its annual Public Safety Day on Saturday, Sept. 30 from 11 AM to 2 PM at Fire Station 51 and was attended by an estimated 400 residents including adults and children. The event is held each year to promote Fire and Crime prevention awareness and includes various Fire and Police displays. Additional displays were provided by Alexian Brothers Medical Center, Commonwealth Edison, NICOR Gas, Lutheran Services Comfort Dogs, the Village of Schaumburg Community Development Department and the Schaumburg Amateur Radio Club (SARC) Emergency Communications Team. These displays promote awareness of their organizations and the services which they provide to the community. The SARC EmCOMM Team's display was staffed by Dennis KD9HIK, Jim KB9RGU, Jim KC9UFB, Leo N9NBH, Bob WB9TZC, John K9WIC. Included were a Winlink and D-Star radio station, a Display to showcase its service to the Village and its various communications capabilities.

EMCOM Alternate Repeaters and Simplex mode Frequencies

While where on the subject of Public Safety, various repeaters and simplex frequencies have been identified for use in emergency communications. Below is a list of those as posted on the N9RJV.ORG website.

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET						Frequency Band Amateur Radio VHF / UHF			Description Nov 2016 Schaumburg Amateur Road Club
	Channel Configuration	Channel Name/Trunked Radio System Talkgroup	Eligible Users	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode A, D or M	Remarks
1	Linked Repeater	SARC 1 vhf	SARC EM_COMM	145.2300 W	none	144.6300 W	107.2	A	Echo Link Node 575848
	Off at this time	SARC 1 uhf	SARC EM_COMM	442.2750 W	none	447.2750 W	114.8	A	Allstar Node 27833
2	Simplex	SARC 2	SARC EM_COMM	145.2300 W	none	145.2300 W	107.2	A	
3	Simplex	SARC 3	SARC EM_COMM	146.5200 W	none	146.5200 W	none	A	National Calling Channel
4	Simplex	SARC 4	SARC EM_COMM	147.4200 W	none	147.4200 W	107.2	A	
5	Simplex	SARC 5	SARC EM_COMM	146.4900 W	none	146.4900 W	107.2	A	
6	Repeater	SARC 6	SARC EM_COMM	147.0150 W	none	147.6150 W	107.2	M	Elk Grove ARES primary rptr
7	Repeater	SARC 7	SARC EM_COMM	146.7600 W	none	146.1600 W	107.2	A	CFMC Repeater WA9ORC
8	Simplex	SARC 8	SARC EM_COMM	446.2500 W	none	446.2500 W	none	A	
9	Repeater	SARC 9	SARC EM_COMM	444.8750 W	none	449.8750 W	114.8	A	NIPSARS Repeater KA9LOY
10	Repeater	SARC 10	SARC EM_COMM	443.5750 W	none	448.5750 W	114.8	A	MOTO 1 Repeater K9MOT
11	Repeater	SARC 11	SARC EM_COMM	443.7250 W	none	448.7250 W	114.8	A	MOTO 2 Repeater N9KNS
12	Repeater	SARC 12	SARC EM_COMM	442.8000 W	none	447.8000 W	114.8	A	N9EP Repeater
13	Repeater	SARC 13	SARC EM_COMM	444.1250 W	114.8	449.1250 W	114.8	M	SARC Fusion Repeater N9RJV

Tips for Simplex Communications

With Simplex, challenges due to antenna height limitation between stations, and limited power by handhelds radios. Below are a few tips to help facilitate communications between stations operating simplex.

POWER

- Increase your radios output power level You can run an amplifier with an hand held radio
- Switch to a mobile radio
- More power means more battery capacity
- Have extra batteries
- Bring a higher capacity battery
- Consider power pole connectors for cables
- You may need a charger for long deployments

ANTENNA

- Use an optional high gain hand held antenna
- Use a roll up JPole antenna
- Or use a omni or a beam base station antenna
- Don't forget some extra coax and adaptor connectors

HEIGHT

- Hold the hand held above you head and use an external mic
- Seek high ground to transmit
- Use a painter pole for an external mast to support an antenna
- Secure the mast to an existing structure (like a sign post)
- A drive on antenna base is helpful
- Mark all guy lines with hi visibility tape

PL Tones and their purpose

Matt Walsh AC9IG

Earlier this month our repeater was accepting input without a PL tone. While this was temporary and quickly fixed it sparked an interesting discussion at our last club meeting. One of our club members was excited to see that his older 2m rig that did not have a tone generator was able to get into the repeater. This prompted the question: Why do we use PL tones? Let's take a look at the use of PL tones over time.

As amateur radio operators we all know that the radio spectrum is finite. We see this again and again. In June of 2009 (in the United States) we shut off all of our old analog television transmissions and switched entirely to digital. As TV viewers most of us got clearer digital pictures, some of us had lingering problems due to changes of propagation because some of our favorite channels were also switched to different frequencies. The FCC, on the other hand, regained the use of what were previously UHF TV channels 52-69 (approximately 700MHz-800MHz). This spectrum was then auctioned off and a large portion of it became part of our “4G LTE” phone service. This whole process is happening again, although this time it will be much more transparent to us at television viewers. Many TV channels have recently be reassigned to lower UHF channel numbers or VHF channels to again free up more space in the UHF spectrum that has been auctioned off for other uses. And, of course, we all know that the ARRL puts a lot of effort into defending the frequency allocations that we have as ham radio operators.

With this limitation on spectrum, there is a need (commercially) to squeeze as much use out of it as possible. As mobile commercial radios became more and more common in the 50’s each company wanting to make use of mobile radios would apply for a license and be assigned a frequency. For example with two companies, A+ Taxis would receive one frequency and Speedy Delivery would receive a different frequency.

As these radios became more and more popular, we quickly ran out of spectrum. The engineers at Motorola realized that there is a lot of “dead air” on these channels. For example the taxi company above a dispatcher would contact a taxi to be dispatched and that taxi would respond all over the air. This entire exchange might take 15 seconds. Then that frequency sits idle until the next taxi dispatch comes along which could be several minutes later. This brings up the question: Can we do something to share that “dead air” between multiple companies. The Motorola solution was trademarked as Private Line, which is where we get the name PL tones. The name Private Line is a little misleading. We’ll look at how it works to see why.

The private line system, or more generically Continuous Tone-Coded Squelch System (CTCSS), add an audio tone to the transmitted audio to differentiate between users. A filter in the receiving radio would then listen for it’s assigned tone and only open the squelch (turn on the speaker) if that tone was heard. This effectively blocked any traffic on the radio from reaching the wrong users. Specific tones were selected for various technical reasons including making sure no tones were harmonically related and ensuring that the spacing was sufficient for the filtering circuits that could be constructed. The exact numbers vary by manufacturer but there are typically around 40 tones available between 67 and 250Hz.

Despite the name of “sub-audible” tone that is sometimes used to describe this system, the tones are actually in the range of human hearing. So most receivers included a filter to remove the tone before passing the signal to the audio amplifier. Some very low cost radios omit this and rely on a speaker with a fairly poor frequency response to filter the tone, which may not always be 100% effective.

The problem with the name of Private Line is anyone with a radio that does not listen for PL tones would receive all of the traffic on the frequency they are tuned to, thus not making the system very private. An additional problem is that only one user (company) can transmit at a time. In the example above with a taxi service and courier, if the taxi service was transmitting everyone at the courier service would be unable to transmit until the taxi service completed their conversation. A user on the courier’s radio would see that his radio is unable to transmit, but they would not hear any audio coming from their radio. These problems were initially solved with a “listen before transmit” rule and mechanical interlock on the push to talk button and were eventually upgraded to an electronic lock-out when the channel was already busy. This type of sharing arrangement would cause some delay in passing traffic, but this was generally acceptable because of the lower costs associated with sharing the frequency vs. owning your own frequency.

PL tones changed how commercial licenses were typically allocated. Now Motorola, or another radio distributor would hold the license, and would sell radios with different PL tones for each one of their customers. This was typically done as some sort of subscription or monthly charge and included the use of the distributor's repeaters in the area. This method required some planning as users that had a lot of traffic to pass over the air could not easily coexist with users that had very sporadic traffic.

A lot of commercial radio equipment makes its way into the amateur radio community as it is obsoleted by either age or evolving FCC regulations. These radios can often be converted to work on ham bands via reprogramming or changing out some components. So as the first few rounds of PL-capable radios made it into amateur hands we began experimenting with these new features.

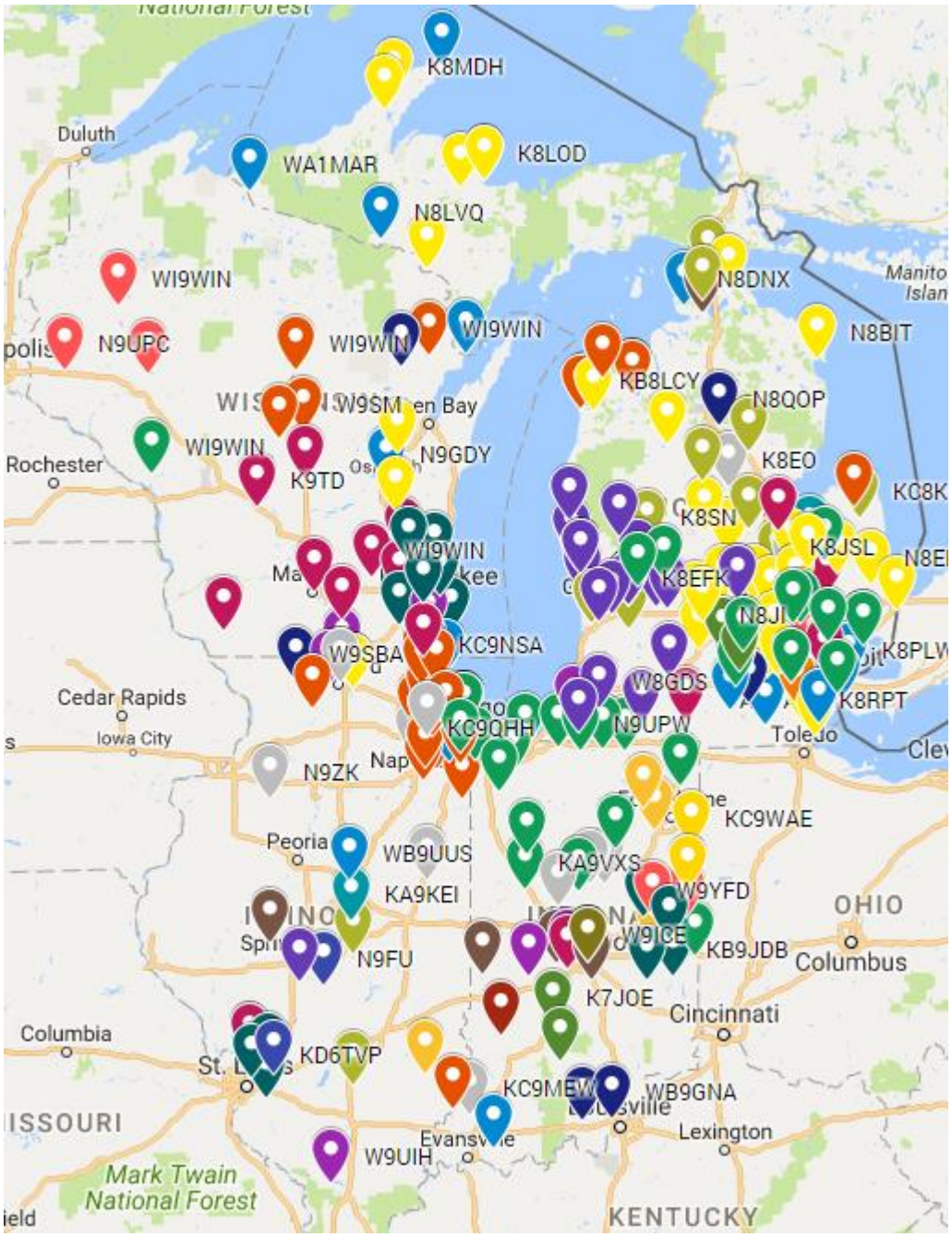
The first radios that made use of PL tones required you to change out physical components of the radio to change the PL tone. This caused two problems. First, it was impractical to operate a radio on more than one repeater if they had different PL tones, especially in a mobile station where changing components may not be practical. Second, needing all of the appropriate components for different PL tones could become prohibitively expensive.

(This paragraph is the author's opinion based on observations of the ham radio community, and the resulting system described in later paragraphs) While the PL tones could be deployed in a similar way as it had been done in the commercial sector (for example the Schaumburg and Dupage amateur radio clubs could have one repeater, but use different PL tones) the amount of traffic on amateur repeaters never approached the levels that would necessitate this. Additionally, commercial radio services often communite short, specific messages, whereas amateur repeaters are often used as more of a general discussion forum with much longer messages being passed. Try to imagine two clubs holding a net on the same repeater being shared by separate PL tones. The longer messages and discussions would make it nearly impossible to both clubs to get their traffic passed in a reasonable amount of time. (End of author's opinion)

Given the situations described above ham operators found it better to use PL tones to help cut down on interference from nearby repeaters. This was accomplished by assigning all repeaters in the same geographic area the same PL tone, and those in a neighboring community a different PL tone. In practice, this range extends to the roughly limits of the repeater's transmit area. But atmospheric conditions occasionally allow for VHF and UHF radio waves to travel much further than expected. In this case a user of a repeater located almost halfway between Kenosha and Schaumburg might be able to key up both repeaters simultaneously, but unintentionally, even though they are expecting to use the Kenosha repeater. By adding a PL tone to their transmission the repeater in Kenosha will respond to their transmission, but the repeater in Schaumburg with a different PL tone will not respond, leaving the frequency available for users who are more local to the Schaumburg area.

The maps below are color coded by PL tone. You can notice a rough grouping of colors showing mainly brown near Chicago and Green near Milwaukee. This serves as a nice visual representation of the Schaumburg-Kenosha discussion above. Keep in mind that there is no official governing body forcing repeater operators to use specific PL tones in specific areas. It is only by general agreement and some oversight by repeater coordination groups that we have assigned PL tones to as you see below.

2m repeater PL tones by color



70cm repeater PL tones by color

Local and Regional Nets

In this new section of the RHG we'd like to build a list of HF, and VHF/UHF nets that might be of interest to our club members. Please send submissions to Leo N9NBH or Mike K9KQX

SARC	Technet	Tuesday's 7:30 CST	K9IIK 145.230mhz
SARC	Club Net	1st,2nd, 4th, Thursday 8pm	K9IIK 145.230mhz
TALARC Amer Legion		2nd Sat, 12 noon	14.275Mhz
TALARC Amer Legion		3rd Sun 5pm	7.245Mhz
TALARC Amer Legion		Wed	3.862 Mhz
EN52 Net		Wed 7PM	50.130Mhz
SUHFARS Do nothing net		Sun 9:00PM	443.250 +5Mhz 114.8hz PL

SARC March Club Notes

Schaumburg Amateur Radio Club Business Meeting Nov 16, 2017

Matt Walsh President AC9IG opened the meeting at 7:00PM.

Attendees:

Chris Brewer	AC9GN	Leo Ribordy	N9NBH	Vince Asta	K9NIB
Cliff Sowka	K9QD	Dennis Calvey	KD9HIK	Danny Kafka	KD9HIL
Robert Kocourek	W9RKK	David Lemke	KD9JGT	Matt Walsh	AC9IG
Mike Sorensen	K9KQX	Bob Langsfeld	WB9TZC	Ken Krzywicki	KD9HIJ
Orson Baker	AB9WQ	Kevin Willard	KB9QVX	Mark Scriven	WQ9M
David Hug	KD9CVI	Kent Ochs	W9KAO	Bill McGovern	KD9JQM
Jim Campbell	WB9RGU	Dirk F. Smith	K9DFS/W0RI	Leo Ribordy	N9NBH
Ray Baker	K9EYT	Rick Cook	KC9PLO	Rob Glowacki	N9MVO
Frank Giampa	N9QPD	Edward Lishka	KD9JQO	Wake Wacaser	AF9I
Steve Karson	AC9EM	DJ Traxler	WA9UBR		

Rebecca Hopkins brought Pineapple cake. All gone within minutes.

Treasurer's report: Chris Brewer AC9GN reports: Beginning balance for the month was $4,550.00. Income was $579.94. Expense was $1,087.48 for data-line and Plum Grove site's repeater hardware. Ending balance is $4,047.46. Paid Membership is currently 50.

President's Report: Matt AC9IG thanked Leo N9NBH for organizing the Tech class and thanked the two new Hams attending tonight. Jim Campbell WB9RGU offered two new HTs for these newly FCC licensed students.

SARC Repeaters: Kent W9KAO reports he's working on a time-out for repeater control. When the microcontroller falls into do-loop, the Raspberry Pi allows him to utilize a hanging indication land for automatic reset. 3.3V to 5.0V translation between the two systems is necessary and project should be ready for installation shortly.

Secretary's Report: Cliff Sowka K9QD: Approval of Meeting Minutes as published in the RHG.

RHG: Mike Sorensen K9KQX received a well authored article and requests members to provide information for the next edition.

Construction Project: Gary N9VU not present. Kent W9KAO had the 12V PB battery chargers available for $20 during this past session. Gary N9VU wishes to relinquish his Chairmanship role; Chris AC9GN and Rob N9MVO are available to help fill Gary's vacancy on a temporary basis.

Social: Roger Ryan W9RDR not present.

Education: Leo N9NBH reported his fall TECHNICIAN Class is underway with two students already passing their FCC exam with two classes remaining.

VE Testing: John Shoefield provided the following report:

VE Test Results for November 4 Exam

Bolm, James L	N0RWL	General
Raman, John	KD9JQL	Tech
McGovern, William E.	KD9JQF	General
Mirek, Szymon	KD9JQN	Tech
Lishka, Edward J.	KD9JQO	Tech
Gates, Cory L.	KD9JOV	Extra

Pivaral, Alrick O.	KB9UVT	General
Schilling, Steve R.	KD9JQP	Tech

Tech	4
General	3
Extra	1
Total	8

Next examination date: Dec 2, 2017. Results were delayed because of the holiday.

Public Service: Rob N9MVO reports our next public service events will begin April and May of 2018.

EMCOMM: Bob Langsfeld WB9TZC reports:
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The Saturday afternoon 213 Form Message training segment was hosted by John K9WIC from Hoffman EMA. There were 7 students present for the training and a short practice session followed.

Thanks to all those who staffed the EOCs and checked in:

K9WIC N9NBH K9AJK WQ9M WB9C AC9PH AC9GN K9BTF N9SSU KD9HIK KB9RGU KD9GOL K9KQX WA9PEB KA9HLX KC9VO N9MVO KB9CLT WX9PAL KD9JGU KE4GEN K9DFS KD9FMN K9UD KD9FIA

Non Hams Norm and Adreanne who assisted in the EOC. We logged 58 training hours and participated in three nets

Bob Langsfeld WB9TZC ARES EC serving Cook County - Schaumburg & Hoffman Estates

Programs: Cliff Sowka K9QD: presentation tonight is a short video on IC Fabrication while the ballots are tabulated. Need a presentation for the December meeting and considering tutorial on Solar Weather and how to interpret the data.

Ebay Sales: Gary N9VU. Not present.

Absentee Ballots: Cliff K9QD earlier in the month transmitted a SARC_ALL request for Absentee Ballots: We mailed three requests in accordance with the Bylaws; two ballots were retrieved from the club's PO Box this afternoon and included in the vote tonight.

New Business: Leo is considering offering General Class and will contact the Library District to determine what the facility availability would be for a January start. Steve AC9EM needs to hear from new members in order to activate their access to the SARC-All (Google Groups) Reflector.

Matt AC9IG Adjourned Regular Business Meeting and Opened annual Elections session. Call for Election Ballots; distributed to all members in good standing and present tonight plus two Absentee Ballots were counted.

Kent Ochs Chairman of the Board W9KAO announced the Vote outcome:

President	Matt Walsh	AC9IG
Vice President	Russ Schmidt	KC9NUV
Secretary	Cliff Sowka	K9QD
Treasurer	Chris Brewer	AC9GN
Director (3 Yr Term)	Leo Ribordy	N9NBH
Director (3 Yr Term)	Frank Giampa	N9QPD

Special Recognition Awards: Bill Smead K9IIM (SK) Construction Project award and Member of the Year as determined by the member's wright-in entries tonight will be announced during the annual Christmas Party in January.
Adjourn 8:00 PM

Submitted: November 17, 2017 Cliff Sowka K9QD Secretary.

SARC Board of Directors Meeting

Schaumburg Amateur Radio Club Board of Director's Meeting Nov 1, 2017

Kent Ochs W9KAO Chairman opened the meeting at 7:00PM.

Attendees:

Chris Brewer	AC9GN	Leo Ribordy	N9NBH	Cliff Sowka	K9QD
Gary Bernstein	N9VU	Matt Walsh	AC9IG	Leo Ribordy	N9NBH
Kevin Willard	KB9QVX	Dirk Smith	K9DFS	Frank Giampa	N9QPD

Treasurer's report: Chris Brewer AC9GN reports: Beginning balance for the month was $4,550.00. Income was $579.94. Expense was $1,087.48 for repeater equipment and data-line. Ending balance is $4,550.00. Dirk moved to approve the report, Gary seconded; So moved. Paid Membership is currently 50.

President's Report: Matt AC9IG nothing to report.

SARC Repeaters: Kent W9KAO reports he visited the Plum Grove site to install the lightning suppressors. Equipment cabinet assembly underway: audio levels need adjustment, 6db attenuator installed and we're showing about 45W out of the Duplexer. Next task is to integrate automatic restarts by sensing the status lamp to help detect lock-up failures and restart.

Secretary's Report: Cliff Sowka K9QD: Approval of published Meeting Minutes

RHG: Mike Sorensen not present. Dirk reminded the Board our RHG editor is in need of articles. Club leadership should ask our membership to become better contributors for the monthly communication. Many members find the RHG a valuable resource and we're fortunate to have a heavy talent pool of technical knowledge; just need members to come forward and support the RHG with contributions to the monthly publication effort.

Construction Project: Gary N9VU reports that he is wishing to find another member take charge of event so that he can spend more time on his projects. Chris AC9GN offers to supplement the effort for the current time. Kent W9KAO has gathered parts for charger kits and needing documentation. Cost is $10 each.

Social: Roger Ryan W9RDR not present.

Education: Leo N9NBH reported fall TECHNICIAN Class is underway. No-charge classes begin 10:30AM and end 12:30PM. Hoffman facility is where classes are being held; sign-up through the Schaumburg Library site. TECH classes started Oct 14th.

VE Testing: Dirk reports two attended and both passed. Are any club members with Extra Class willing to become Volunteer Examiners for us? General Class license holders can also contribute but their status would limit exam reviews to General Class student applications. Extra Class holders will therefore be more flexible in the cases were applicants wish to take the Extra test.

EMCOMM: Bob Langsfeld WB9TZC not present. Leo provided some of Bob's previous notes:

ARES SET is scheduled for Thursday November 2 through Sunday Nov 5th

I plan on opening the Schaumburg EOC and the Hoffman Estates EOC for the Simulated Emergency Test.

NOV 3 17:00 to 21:00

The Hoffman Estates EOC will monitor 146.52 Simplex and be taking check-ins.

NOV 4 10:00 to 12:00

The EM COMM team will operate 145.230 Simplex and 444.125 repeater +5 114.8 pl from 10 am on Saturday to Noon from the Schaumburg EOC and the Hoffman Estates EOC.

Lunch Break

NOV 4 13:00 to 14:00

At 1 pm regroup at the Hoffman Estates Police Department for a Message Handling training session lead by John Zietlow.

NOV 4 14:00 to 16:30

At 2 pm we will use what we learned and send simulated emergency messages formatted in a modified IS-213 format, followed by a Hot Wash.

Send a message to SM, SEC and DEC.

This should conclude by 4:30 in the afternoon.

SENERIO

A massive communications area wide blackout has occurred. All normal communications channels and the internets are down. Commercial power is also out.

The Schaumburg and Hoffman Estates EOCs and the St Alexis Medical Center are running on emergency generator power.

Gasoline and Diesel Fuel are in short supply. (no filling stations with power)

Be ready with charged batteries. Note batteries may need to be recharged due to the duration of the outage. However there are natural gas generators that do not have fuel supply concerns at some locations.

Be prepared to operate simplex. Most ham radio repeaters are not operational unless they are connected to an external generator like the EOC and Hospital.

NET CHECK IN

Please try to make contact on simplex Friday on 146.52 SARC 3 or Saturday using 145.230 SARC 2 (simplex on the repeater output). If you check in on the 2 meter repeater SARC 1 net control will ask

you try to make contact on simplex. If unsuccessful than try the UHF Fusion repeater 444.125 SARC 13 The repeater is on emergency generator power.

SARC EMCOMM Members are asked to staff the Schaumburg EOC on Saturday from 10 to noon. Please contact Bob WB9TZC to set up who will be at the Schaumburg EOC.

HOFFMAN EMA Members please contact Bob WB9TZC to fill the Hoffman EOC operating schedule.

SARC MEMBERS and **AMATEUR RADIO OPERATORS** please check in on Saturday and attend the afternoon training and skills practice.

Programs: Cliff Sowka K9QD: presentation for November will be a short video presented while the election results are tabulated. Need a presentation for the December meeting.

Ebay Sales: Gary N9VU. There are no items currently listed for sale.

Absentee Ballots: Cliff K9QD transmitted a SARC_ALL request for Absentee Ballots: We have received three Absentee Ballot requests as of this moment.

Once a member certifies they're in good standing and unable to attend the November meeting the Secretary will send USPS ballots to be executed and returned to the club's PO Box in time for the November Meeting elections. Mail Nov 2nd Add Frank as Director to ballot.

New Business: Some members would like us to offer General License class. Leo is considering the effort and will contact the Library District to determine what the facility availability would be for a January start.

Christmas party will continue to be held at Buena Beef Jan 18th.

Adjourn 8:26 PM

Submitted: Nov 1, 2017 Cliff Sowka K9QD Secretary.