



# SHORT SKIP

Volume 65 Issue 2

February 2017

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## REPEATERS

Freq	Location
147.000	Merrillville
147.240	St. John
442.075	Merrillville

All Lake County ARC Repeaters are open to all amateurs. All repeaters must have a PL of 131.8 set in order to access.

## From The Parade Stand

by Tim, N9CA, LCARC Vice-President



First I want to thank Bill Leaming N4GIX for the fantastic program at our January Friday the 13th Club Presentation. Bill's day job is writing the software for "Commercial Pilot Aircraft Flight Simulators". We had some technical difficulties due to bad Friday the 13th Karma but Bill pulled it out. Thanks again Bill!

Second Congratulations to Dan Ulloa KD9ARD our very own LCARC Net Control and LCARC Board member who won the LCARC 2016 Highest Club Participation Award.

Dan receives a free year membership to the LCARC and of course it goes without saying, a firm and hearty hand shake.

Good News! With the addition of another new person, I now have 8 people taking OUR LCARC Technician License Class on Tuesday evening at the Lake County Public Library. Feel free to stop by. I will be doing a "shout out" on our LCARC 2meter repeater and 70cm DMR Gary-Local. Keep your ears ON!

Upcoming contests you may want to know about;

"ARRL School Club Round Up". This is not just for schools though the main focus is for elementary, middle, high, and college Clubs to get on the air and contest. For them to rack up the points they need to work individual Hams also. Working Phone and CW it runs Monday through Friday February 13-17 from 13:00 UTC to 23:59 UTC. Visit [www.ARRL.org](http://www.ARRL.org) and type "CONTEST" into their upper right search box for more specifics. ARRL has suggested special frequencies so Clubs and everyone can find each other.

Why is this "School Club Round Up" important to me you may ask?. Simply, we need to keep these young people motivated to stay in the hobby. It will be fun. Personally, I'll be on the air looking for them. How about all of us?

10-10 International SSB Contest: February 4th - 5th 0001 UTC until 23:50 UTC. 10-10 was formed in 1962 as a not-for-profit Club promoting the use of 10 meters. They have issued 75,000 10-10 numbers to date. You apply to them to get your unique 10-10 number which is yours for life. Visit [www.10-10.org](http://www.10-10.org) for details and to get your 10-10 number.

AGCW Straight Key Party: February 4th 1600 UTC - 1900 UTC. Visit [www.AGCW.org](http://www.AGCW.org) for details.

International DX Contest: CW on 160,80,40,20,15,10 meters. February 18th Saturday 0000 UTC to 2359 UTC on Sunday.

International DX Contest: Phone on 160,80,40,20,15,10 meters. March 4th Saturday 0000 UTC to 2359 UTC on Sunday March 5th.

BTW, did you know this:

- How many new US ham licenses were issued in 2016? Just over 30,000. We are GROWING !
- How many hams are licensed in the US as of January 1st 2017? 801,424 the highest count ever.
- Which state has the most Ham licensees? California 104,739
- Which has the fewest? North Dakota with 1556.
- How many US hams are female? 15%

Well that's enough for now. 73 - Tim N9CA - 2017 President LCARC

# Meeting Minutes

January 13 2016

Called to order at 7:30PM

Minutes were read and accepted as read

Treasury's report was read and accepted as read. Jim has filed the State not for profit report, the Federal Tax report and earlier this year the Business entity.

Classes for Amateur Radio started Jan 3 with 7 people in class.

WACM Dan chaired 8 club members submitted logs with 12 club members participated in contest with 85 confirmed contacts for 4 days with 6 members able to receive certificate with Mark K9MQ coming in 1st place.

George to do spot light on members and will get with John to do articles.

Net Dec 1 had 13 check-ins and Jan 5 had 12 check-ins, Jan 19 will be next net.

Red Cross nothing to report.

Introductions were made with 14 members attending

Program started at 7:40 with Bill N4GIX doing a program on flight simulators used to train pilots for commercial, military, and private pilots. Bill is a software programmer to develop screens used in simulators.

Meeting adjourned at 8:45PM

## February Program

Bill Leaming N4GIX Club VP has a program planned for February: "Programing Your HT The Easy Way"

Got questions? Bill may have your answer.

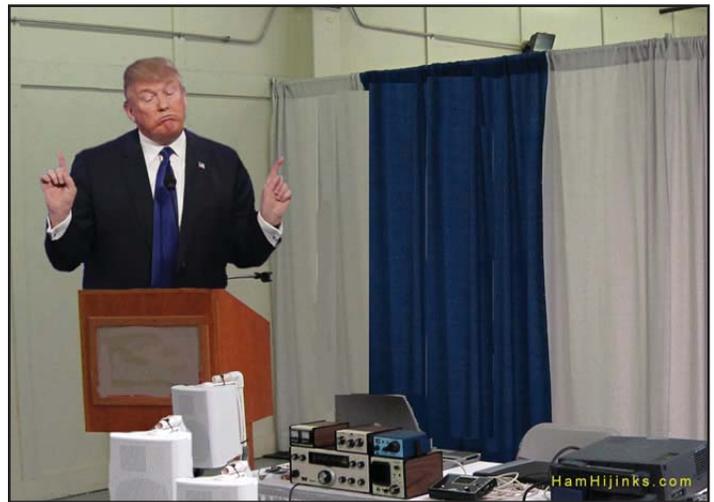
## Chicago Area Nets

Looking for a net? This link will bring up a GOOGLE spreadsheet listing many nets in the Chicago area. It is maintained by Ben, KC9UNS and one should contact him with additions/deletions/other changes. <http://tinyurl.com/chicago-ham-nets>

You can also find this link on the club web site at: <http://lcarc.weebly.com/nets.html>

## Trump Promises Greatest Propagation Ever

By K5PO, on the scene



NEWINGSTEAD, VT – Newly inaugurated President Trump wasted no time reaching out to members of the amateur radio community. On Monday, President Trump was the keynote speaker at a banquet co-sponsored by radio equipment manufacturer Peanut Whistle Transmitters Inc. and the National Radio Retransmission Legion (NRRL). Trump was a surprise late addition to the speaker lineup for the annual two-day "Radio in America" gathering at the NRRL's headquarters.

"We invited him as a courtesy, but honestly didn't expect he'd show up. I assume he's a very busy man," said NRRL president Bob Gilligan. "But then I received a call yesterday from the Trump administration who informed us that the President would most certainly meet with such great communicators. We were shocked! To fit in the President we had to cancel Wiley Roger's planned panel discussion on his hypothesis that blue-colored wire has increased his DX performance."

President Trump's speech to the 27 attendees lasted a little over three hours and ranged in topics from installing antennas atop Trump Tower to the low sunspot cycle. When Peanut Whistle Transmitter Company's Chief Counsel asked Trump if he had any plans to improve propagation as we approach a new low in the sunspot cycle, President Trump had no reservations in stating, "My administration will bring amazing propagation to all of you. To all American hams. It'll be the best. The best propagation. So big. They'll be so much DX, we'll be exporting it to other countries. You've never seen propagation like the propagation we'll have."

Trump closed the banquet with the announcement that he'll immediately sign an executive order to increase sunspot counts to 1000 within the next 100 days. Ham Hijinks inquired with NOAA Space Weather Scientist Ramish Pental about how the administration would go about this executive order. He quickly replied, "It literally makes zero sense. I have no idea whatsoever."

### HamHijinks.com

Check out the Hoosier DMR Best Practices Guide at <http://tinyurl.com/nbvo7xh>

# Digital Mode Interface

By Mark, K9MQ



There are quite a few choices on the market when it comes to obtaining a digital mode interface to run JT65, PSK31, RTTY, and other modes. As an ARRL Technical Specialist, I received two inquiries from club members this month requesting assistance with trying some new digital modes. Some of the difficulties that one of them was experiencing was not quite understanding how their interface exactly worked which resulted in not configuring the correct settings.

There are three types of external digital mode interfaces. The most basic one is nothing more than a cable between your sound card output and microphone jack on your radio with an audio isolation transformer in the middle. The receive audio must be fed into the computer from the headphone/speaker jack. These are popular interfaces to homebrew. While this is the simplest interface, you must turn the VOX on and disconnect your microphone every time you want to operate digital.

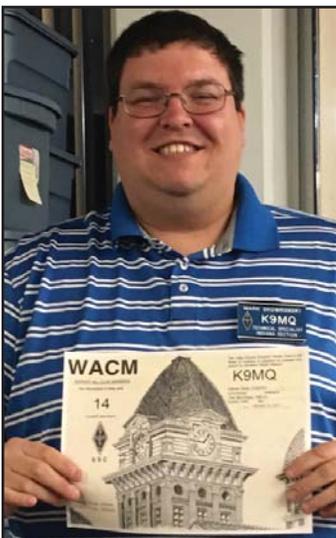
The second type of interface is controlled by a serial/comm port. Common ones are West Mountain Radio's Rigblaster, MFJ's Sound Card Interface, along with many others. This interface usually plugs in between the radio microphone jack and microphone. An audio cable goes between the interface to the soundcard output. A

serial cable is used by the interface to switch the radio into transmit mode when commanded by the digital mode software and audio is fed into the transmitter. Receive audio is still sent back to the computer from the rig's headphone/speaker jack. With this type of interface, you don't have to plug/unplug cables when you want to switch between operating phone and digital. Most of these interfaces now have a jack on the back, so you can plug it into the key jack on your rig and use it to send CW in "CW Mode". Configuring the serial/comm ports in the software, sometimes can be a challenge. Some of these interfaces now have built in sound cards. If yours does not, spend a little extra money and purchase a separate USB soundcard that you can dedicate for digital modes. This will help keep the dings and other Windows noises your computer makes off the air while you transmit. Most digital mode software these days allow you to easily select another soundcard within the software.

Tigertronic's Signalink USB is third type of interface. This interface has a built-in soundcard and VOX circuit. You usually plug this interface into the accessory or data port on the back of your radio. The only connection between the interface and the computer is a USB connection. Since the soundcard is built in, you do not need an additional cable to send the receive audio back to the computer. In your digital mode software, you should select the Signalink soundcard for receive and transmit audio. You do not have to configure any serial/comm ports since Signalink has a built-in VOX circuit. A possible downside to this interface is that it's fed in thru the accessory/data jack. Some radios require that the digital/data mode button (such as "DIGU") be selected for any audio to be transmitted thru this jack. Keep in mind that some rigs will not allow you to select filters when in digital/data mode or won't allow the microphone to be used if you wanted to use voice keyer software. Since there is no serial/comm port, you cannot use this interface to send CW in "CW" mode. If you do have a need to send computer generated CW, you should use the MCW (modulated CW) mode in your software with the transmitter in "USB" mode.

The Rigblaster type of interface gives you the most versatility, however it is also the most complicated to setup. With the Signalink, it is an easy setup, but you may be losing needed features depending on the limitations of your rig. Your best bet is to read your rigs manual concerning the data/accessory jack and do further research before purchasing. A Rigblaster may be the best interface for Radio A, but for Radio B a Signalink may be a better choice.

## WACM 2017 Winner



Congratulations to Mark, K9MQ winner of the 2016 WACM (Worked all Club Members) award. Mark topped all with 14 members.

While this may not seem a great number, this was a short-time contest and must have been made only with other club members and only on one (or more) of the club's repeaters.

Job well done.

Perhaps Dan, KD9ARD will host another WACM sprint in 2017? How about it Dan?



Yehh - I'm paid up  
my dues are paid for  
another year.

Are yours?

# Five Common Mistakes New Hams Make

by Bob KØNR

In this Shack Talk article, we'll take a look at some common mistakes new radio amateurs sometimes make. This short list comes from working with a gaggle of new hams over the years and trying to help them get started in ham radio.

## 1. Programming the radio incorrectly



The typical amateur radio is loaded with features. The capabilities of these radios are amazing but they add additional complexity to the radio. Typically, a new Technician is focused

on getting a VHF or UHF radio programmed up for use on the local repeaters. Remember FOT (Frequency, Offset and Tone) all have to be set properly to access a repeater. See my article *Hey, Why Can't I Access the Repeater?* for more information on that topic.

Programming your transceiver can usually be done from the keypad, but using a spreadsheet-like software utility and USB cable makes loading a long list of channels much easier! You'll probably want to program your local repeaters and standard simplex frequencies for your area.

You'll probably want to load up the memory channels with a bunch of local repeater and simplex frequencies. The best way to do this is to use the software and programming cable for the radio.

Sometimes these are included with the rig, sometimes they are optional and have to be purchased separately. If you can find someone in your area that has the same model of radio, ask them for their programming file. It can save a lot of time and effort.

## 2. Failing to speak clearly into the microphone



With most radios, you need to hold the microphone (or handheld radio) a few inches from your mouth. You need to speak clearly and aim your voice at the mike. Handheld radios usually

have a little hole in the plastic where the microphone picks up the sound. Make sure you are talking at that hole, not some other place on the radio.

Be aware of where the tiny FET mic port is located on your HT and speak across that area with the radio a few inches from your mouth. Ask for audio reports and adjust your distance and voice volume accordingly.

Some radios are more sensitive than others when it comes to audio level. And it is possible to have too much audio, so ask other hams for a signal report. Ask specifically about your audio level... loud enough, too loud? For most of us, that's the only way we are

going to find out how we sound.

## 3. Expecting magic from an HT

Handheld transceivers (HTs) are awesome! They pack so much radio into such a small device: typically 2m/70cm transmit, wide-band receive, memories, scanning, CTCSS, DTMF, built-in battery and rubber duck antenna. No doubt an HT is handy, but it is a "pipsqueak" of a radio...5 watts output power and a compromised antenna. By itself, such a radio is limited in range to a few miles depending on local terrain. They really shine when operating through a repeater or from a high elevation.

Maybe it's because we are all used to good cellphone coverage that we expect the same thing from our handheld radios. A key difference is that Verizon, AT&T and Sprint have tons of cellphone towers spread across the region which provide that good coverage. Ham radio has quite a few repeaters available to us but not densely spaced. So don't expect the HT to hit every repeater in your state... it won't.

What to do? Be aware of the repeaters that provide the best coverage for where you are located and use them. Upgrade the antenna on your HT. If you are operating inside a car, use an external antenna on the roof. For additional tips, see my *FM VHF Operating Guide*.

## 4. Not listening enough

Hemingway said "I have learned a great deal from listening carefully. Most people never listen." This is true in ham radio. Dial around on the bands and listen to what's going on. Try to figure out who the best radio operators are and follow their example. You can learn a lot about operating procedures just by listening.

On VHF/UHF, find some of your local nets and listen in. (Just do an internet search for "ham radio" "net" "your city name".) Nets are a scheduled on the air meeting with a wide variety of purposes, everything from public service to technical discussions. You don't have to check into the net, just give it a listen and see what you can learn.

## 5. Not getting on the air.

I kept this one for last but it is the most important one on the list.

Some new hams get their license, buy a radio, stuff it into the closet and never get on the air. Big mistake. One reason is that they get into ham radio for use in case of a major calamity. "When the stuff hits the fan, I'll get the radio out." Of course, that will be too late...you'll be sitting there reading the manual trying to figure out how to contact someone. You really need to get familiar with the radio well before a disaster happens.

Another reason new hams don't get on the air is that it's overwhelming. Where

Get on the air! Don't wait, do it now. The longer you delay the less likely you are to become engaged with the ham community in

## Boy Scout Radio Merit Badge to Include RDF

ARRL Letter Jan 5, 2017



Boy Scouts' Radio Merit Badge Requirements to Include Amateur Radio Direction Finding Option

The Boy Scouts of America (BSA) have updated the requirements for the Radio Merit Badge for 2017, although a formal announcement is pending the publication of the 2017 Boy Scouts Re-

quirements pamphlet. A new option for the Radio Merit Badge is Amateur Radio Direction Finding (ARDF). ARRL ARDF Coordinator Joe Moell, K0OV, said he's "really excited" about the move, and he credited Jamboree on the Air Coordinator (JOTA) and K2BSA trustee Jim Wilson, K5ND, with being the "spark plug" behind the ARDF addition.

"Jim visited a training session at the USA ARDF Championships in Texas last April and realized what an excellent activity that on-foot hidden transmitter hunting can be for Scouts," Moell recounted. "Working with Brian Coleman, KB0MAP, Jim authored the new ARDF Radio Merit Badge syllabus, which was then reviewed by several leaders of US ARDF community."

A first draft of the new merit badge pamphlet is anticipated later this month or in early February. Moell said the new merit badge requirements should become effective just in time for the July 2017 National Scout Jamboree in West Virginia, where an ARDF course and equipment will be available to Scouts of all ages. He also hopes there could be a role for ARDF in JOTA.

The Radio Merit Badge ARDF option combines orienteering and foxhunting, and opens a new interactive component to this program. Other new Radio Merit Badge options include cellular telephones and different types of radio modulation.

Key requirements being dropped from the Radio Merit Badge include open, closed, and short circuits, as well as schematic symbols and components, because these are covered in the Electricity and Electronics Merit Badges.

The BSA also made some minor editorial changes and reordered requirements for the Amateur Radio option. The radio broadcasting option now includes internet streaming, regulations, and power levels. A medium-wave and shortwave listening option includes both types of listening, as well as listening via streaming services on a smartphone.

The BSA has posted a list of frequently asked questions (FAQs). Scouts are encouraged to follow the new requirements, although the guidelines may allow use of the previous requirements in some cases.

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### Logbook of The World to No Longer Accept Contacts Signed by TQSL Versions Earlier Than 2.0 01/03/2017

As of 1400 UTC on January 16, ARRL Logbook of The World (LoTW) no longer will accept contacts that have been digitally signed by versions of TQSL earlier than version 2.0. Users of earlier versions are encouraged to upgrade as soon as possible, as older TQSL versions contain uncorrected defects and display inaccurate error messages.

The current versions of TQSL for Windows, OS X, and Linux are available online, <https://lotw.arrl.org/lotw-help/installation/>

your area.

Where do I start? Who do I talk to? Good questions. You might start by talking with a local ham you know. Ask them to get on a quiet simplex frequency and just chat with you. I've done this for new folks...its just a safe way to get some air time.

One challenge we have is that many repeaters are pretty darn quiet. It is common to not have anyone listening and not much chatter on a repeater. For example, my UHF repeater sometimes sits there all day long without anyone talking on it. So if you just get on the repeater and say your call sign, you might not get a reply. Don't take it personally.

What can you do? Well, listen a lot. Put your radio on scan and try to find frequencies that have activity. Find out when the local nets are scheduled and listen then. When you feel comfortable, go ahead and check into the net. When you do find a repeater or simplex frequency that seems active, go ahead and make a call. Don't be afraid to say "This is KF0XYZ looking for a signal report. Anyone around?" You are more likely to get a response if you make a specific request.

For some additional ideas on getting started, see I Got My License, Now What?

Thanks for reading another Shack Talk article. I hope to work you on the ham bands soon. 73, Bob KØNR

## Shortwave Radio Pirates Year in Review

*RadioHobbyist.org*

Overall, 2016 was another great year for shortwave pirate radio listeners. If you're interested in hearing pirates, the best ways to keep up to date on what is being heard is via the [HFUnderground.com message board](#), as well as the real time [Ryver chat](#). Rather than finding out about a transmission after it is over, you can tune in while it is still on the air.

Also checkout [RadioHobist.org](#).

## Norway to Switch Off FM Radio!

*CBC News*

Norway is set to become the first nation to start switching off its FM radio network next week, in a risky and unpopular leap to digital technology that will be closely watched by other countries considering whether to follow suit.

Critics say the government is rushing the move and many people may miss warnings on emergencies that have until now been broadcast via the radio. Of particular concern are the two million cars on Norway's roads that are not equipped with digital audio broadcasting (DAB) receivers, they say.

For the complete story go to: <http://www.cbc.ca/news/world/norway-fm-radio-switch-off-digital-1.3923612>

# The Art of Making a Nixie Tube



A Nixie tube (or cold cathode display, is an electronic device for displaying numerals or other information using glow discharge.

Inside the nixie tube

The glass tube contains a wire-mesh anode and multiple cathodes, shaped like numerals or other symbols. Applying power to one cathode surrounds it with an orange glow discharge. The tube is filled with a gas at low pressure, usually mostly neon and often a little mercury or argon, in a Penning mixture.

Although it resembles a vacuum tube in appearance, its operation does not depend on thermionic emission of electrons from a heated cathode. It is therefore called a cold-cathode tube (a form of gas-filled tube), or a variant of neon lamp. Such tubes rarely exceed 40 °C (104 °F) even under the most severe of operating conditions in a room at ambient temperature. Vacuum fluorescent displays from the same era use completely different technology—they have a heated cathode together with a control grid and shaped phosphor anodes; Nixies have no heater or control grid, typically a single anode, and shaped bare metal cathodes.

OK, so I am an old gear head but I found this video AMAZING. **Click the link below** to view the video. If you have not seen a Nixie clock or other device, do an Internet search and be amazed. — ed.

## The art of making a nixie tube

# Where Electricity Comes From

by Dave Barry

"Electricity originates inside clouds. There, it forms into lightning, which is attracted to the Earth by golfers. After entering the ground, the electricity hardens into coal, which, when dug up by power companies and burned in big ovens called 'generators,' turns back into electricity...where it is transformed by TV sets into commercials for beer, which passes through the consumers and back into the ground, thus completing what is known as a "circuit".....Dave Barry

# Area Ham Sets Up Beer Night on DX Cluster

by K5KVN on the scene

LEXINGTON, Ky. — Raymond Sutler and friends had a “heck of a time” last night thanks to a website meant for posting reception of distant amateur radio stations. Sutler and his radio buddies weren’t concerned with radio propagation, though.

“One time, I saw Indonesia spotted on 20 meters but I needed him on 40,” said Sutler. “So, I spotted him on the cluster and added a message asking him to please move to 40. And he did!”

That was the inspiration for what happened yesterday. “I mean, if that station in Indonesia saw the message, I figured my friends would see messages, too,” he said.

Ham Hijinks obtained a screenshot of the messages, confirming that a beer night was, indeed, arranged on the DX Cluster:

Time	Info	Country
15:31	Can U bring corn dogs	United States
15:32	Yes. Who got beer?	United States
15:32	59 back of beam. Thx	Aruba
15:34	Hey Joe - I'll get beer	United States
15:34	Your the man.	United States
15:35	Heard in PA	Oman
15:35	Game is on tonight, too	United States
15:35	Ok - 1830 at my QTH!	United States

HamHijinks.com

