

M.C.W.A.

Vol. 17, # 12

Our 39th Year
Since 1978

December 2017

VE TESTING

Contact: Steve Maresso, KB9OLD at 847/
477-3518

Testing is conducted quarterly at 7:00 PM on the third Tuesday for the months of February, May, August, and November. Walk-ins are welcome until 8:00 PM. No appointment is necessary.

Testing requirements:

1. Cost for 2017 is \$15.00 (Cash or check made payable to ARRL). If initial test element is passed, the person testing may continue take the next test element(s) at no extra charge during the given session. Retesting of an element failed during the same testing session will require payment of an additional \$15.00 test fee.
2. Must show original and provide copy of Amateur Radio license and/or CSCE (if upgrading).
3. Must show a valid Government Issued Photo ID (Passport, Driver's License or State ID card) for identification.
4. Social Security or FRN number required.
5. Location: Free Methodist Church, 934 N. Seminary, Woodstock, IL 60098

Wednesday Night 6 Meter Net

Just as a reminder the 6 meter net/forum is held every Wednesday at 7-9:00 pm on 50.180 USB. Earlt check-ins at 6:45

See you on Frequency.
Pierre K9EYE
Net Control

MEETING NOTICE

December 5, 2017

Socializing: 6:30 PM

Meeting: 7:00 PM

Crystal Lake Bank
5100 Northwest Hwy (Rt. 14)
Crystal Lake, IL 60014

PROGRAM: FM Communications
and More

By: Tom, W9NBG

Thanks ! The estate of N9ANG donated a pair of Drake Twins to MCWA. Disposition not known at present. Come to December meeting and find out.

Good Bye ! This is my farewell issue of the MCWA News. It's been a fun trip for the past 10 years plus the years from 1978-1980 when I did newsletter for MCWA. Frankly, am to the point where I've lost the desire to continue this monthly effort and just out of ideas. So, this is my last issue of this newsletter. Bye all !

Saturday Breakfast Saturday morning
Dec 2nd. - 8:00-8:15 am Talkin: 146.415

Where: In the rear dining area at Green St. Cafe, 1 block south of Rt 31 and Green St. (downtown McHenry).

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“CONSISTENT”

As I look over the last month of my log, one word seems appropriate---CONSISTENT. Yes, the bands have been consistently challenging. There were many days of zero sunspots. Even on such days, DX was available. A few days ago, I talked with CE2ATS on 10m. The signals were moderate to strong each way.

I have enjoyed working DX operations such as 3C1L, J5T, 5K0T, TO2SP and 5K1B. The VK9MA group had difficulties reaching certain areas due to the very challenging conditions. Nevertheless, each DX operation did a fine job under the current conditions. It has also been fun working the 150th Canada Anniversary stations across the provinces.

As we travel across the last month of 2017, look for such calls as XW4ZW, A31NM, ZC4MK and 6V1A. A good percentage of the ham community will be gunning for 3Y0Z later in January. A number of other interesting calls will be heard on the bands. In light of the challenging conditions, some of the announced DX operations have indicated that they will be employing some of the lower HF bands. In other words, be ready for lower band operation as the days grow darker and the conditions diminish at times.

Due to wind storm damages, I went up to higher elevations today over the house and into the trees to repair antennas. These warmer bonus days are likely to fade as we get into the second week of December. Forecasters are predicting cold and snow for late December and January and possibly throughout the winter. So I do encourage you to exercise caution and get your antenna tweaking done soon.

Speaking of consistent, I do want to thank N9AVY for his work on the newsletter over many years. His work will be missed as he retires from editor role with this December edition.

I also want to extend a good Christmas and a Happy New Year to all club members and their families..... 73 Dave KA9OZP

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STRAY The "Cloud" is just some else's computer. KM4TIN de eham

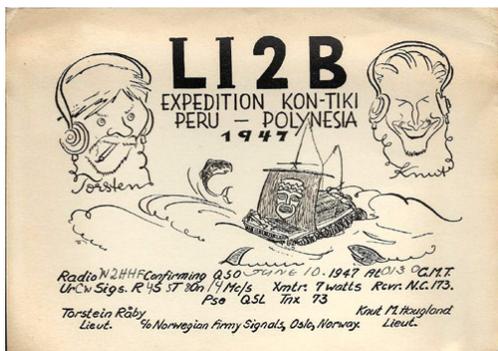
Kon Tiki Kon Tiki expedition's transmitters were powered by batteries and a hand-cranked generator and operated on the 40, 20, 10, and 6-meter bands. Each unit was water resistant, used 2E30 vacuum tubes, and provided approximately 6 watts of RF output; the equivalent of a small flashlight

Two British 3-16 MHz Mark II transmitters were also carried on board, as was a NC-173 receiver. The NC-173 fell into the salt water on the way to the beach, was dried out and it worked fine. National ran full page magazine adds about that

They said they were so low to the waterline, the swells would be above their head and it was like being inside an aquarium looking over , seeing fish swimming in the swells.

Propagation was much better in Cycle 19 than it is today. During WWII people in U.S. were listening to German tanks using 5 watt transmitters.

The trip lasted 101 days.



Officers & Staff

President.....	Mike Metroka, WB8BZK
	wb8bzk@arrl.net
Vice President	Mike Ricketts, ND9G
	mike.nd9g@gmail.com
Secretary	Dan Larson, KD9AHQ
	Dan@dreamfactorymedia.com
Treasurer	Joe Robin, N9OK
	n9ok@arrl.net
Programs	Volunteers ???
Past President.....	John Dewey, KA9CAR
Director	Jack Hudson, W9MU
	jack@w9mu.net
Director.....	Pierre Berube, K9EYE
News	Jerry Heien, N9AVY
	n9avy@arrl.net
Webmaster	Ken Farver, KB9I
Librarian	Jeff Schmidt, KC9WSJ
VE Commander	Steve Maresso, KB9OLD
Social Media Director	Dave Whaley, NT9E

STRAY One computer talking to another over the airwaves is not a QSO between two Ham Operators but two computers.

W4KVV de eham

STRAY In my humble opinion, ham radio need not be an expensive hobby to be effective or to enjoy the ones self...A \$500.00 radio, and a proper wire antenna will do wonders...

K2LGO de eham

STRAY Bought new pick-up truck. Did not think about ham radio. All aluminum body. Goodbye mag mounts! Sad face here.

K7NSW de eham

STRAY If I cover myself with brown sugar honey, does that make me a glazed ham?

N0LOH de eham



FROM THE EDITOR'S DESK

ARRL seems that ARRL is touting yet another "entry level" license. Is this really necessary? It appears that ARRL is looking to boost an already sagging membership. Looks like just another "bone-headed" idea to that should never have got out of committee.

While we're at it, we might as well as uncongratulate the League on its "partnership" with Red Cross. From what appeared in a thread a Redditt, it appears that the actual number of volunteers sent to help in Puerto Rico after the hurricane was more like 22. From the Redditt thread the League was more interested in photo ops, just like Red Cross, than actually helping.

Now it also Seems ARRL is on the bandwagon pushing minimalistic contacts with digital modes like FT-8. Seeing a lot of chatter on various websites about how FT-8 stations are encroaching on other modes and causing QRM. To this Editor it would appear that we're one step away from eliminating Operators. In the future, Operators will be unnecessary... there go more ARRL members down the tubes.

Now that I've bashed ARRL, I should qualify for the Wayne Green, W2NSD/1 Award! Some ol' Wayne is smiling.

To sum it all up today's ARRL just isn't what it once was and I believe ARRL is out of touch with the Amateur Radio Community which is why so many Amateurs left the League over the past couple decades.

Yet another bonehead move by ARRL. On Nov. 17, the ARRL SM in IL sent on a list of a new licensees en masse to all Section News subscribers. Really ???

"This is a list of newly licence Amateurs since 2017-11-03. I have removed their addresses but provided City, Zip and Callsign so that clubs can locate, recruit and Elmer these new amateurs. These are sorted by Zip ?

ARRL Int'l Grid Chase During 2018 there will be credit given on LoTW for grids worked. Already duplicate by many clubs like European PSK Club and PODXS 070. Seems like the League could have come up with something more creative.

YASME Foundation Excellence Award 2017 award to the WSJT DevelopmentTeam for FT8 (putting FT-8 on 17m at 18100 which was a much used frequency now dominated by FT-8) which should have the award rescinded for that bonehead move. Other recipients were certainly more deserving.

145.41 Like a social disease the jammers are still with us on the repeater. Why they continue is a either a mystery or the sign of sick minds. This has gone on for several years and at least one has been cited by FCC which seemed little more than a



slap on the rest. Everyone on the repeater has accused KC9ONA & W9RCM as alleged offenders. While they continue to deny these allegations in print where they play the blame game. See: <http://www.eham.net/ehamforum/smf/index.php/topic,111588.0.html>

Will it ever end? Probably not because the jammers are sick people who get their jollies from depriving others of enjoyment. There will be bad karma for those jammers.

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Millennials Are Killing Ham Radio

I just wanted to write this to start the conversation in order to disrupt amateur radio's status quo, in response to KONR's blog, "[Is The Internet Destroying Amateur Radio?](#)" This was a great analysis by Bob, and it really paints a picture of the current state of the hobby, including the apparent distaste for internet-connected amateur radio technologies.

And also because nobody else has had an article with this title, so why not? Despite being clickbait, the title isn't wrong. Millennials are definitely killing ham radio, just like [they're killing everything else](#). Here's how.

Full disclosure: I am 25 years old. Also and this blog is a rant, full of unverifiable anecdotes and wild propositions, probably a few spelling errors, and many incoherent thoughts. Opinions are my own. QRZ OM's beware.

The Maker Movement

The Hobbist Computer movement of the 80s (all of you with a TRS-80) is now the hacker/maker movement, automating life with microcontrollers, tiny computers, and data centers.

Amateur radio is to The Baby Boomer and Generation X's youth as IOT is to Millennials and Gen Y.

Interest in "talking to people on the radio" is waning; it's about talking to machines, and enabling machines to talk to us.

That's why the maker movement is such a hit, especially now as commercial entities have also entered the fray with off the shelf IoT devices. I'm thankful for the the ARRL for realizing this critical market, and repping ham radio at many Maker-faires and Hackercons.

Homebrewing on the Decline

China controls hardware development and manufacturing. We (the US (Silicon Valley)) specialize in software. Homebrewing hardware from scratch isn't going to be a thing in the next 20 years, because the ashes of failed electronic appliances from which many a ham radio Phoenix was born are no longer durable, salvageable, salvageable goods – once dead and broken, they're trash.

Now is the time of software homebrewing, and the idea of ham radio as a means to an end.

The evidence:

Heathkit, despite their resurrection, can't figure their \$h!+ out. They just can't. Other kit companies (like Ramsey) have shut down, as well as Radioshack.

Elecraft stopped making thru-hole kits in favor of assembly projects with pre-populated surface-mount PCBs. Many other outfits stopped kit building entirely, because it's just cheaper to have China do all of the fab and assembly.

Software defined radio, in general, is dominating the radio communications market, both from a hobbyist perspective (RTLSDR, HackRF), an academic one (GNURadio, USRP) to commercial and military (to name a few: cell phones, air-band radios; weather, civil air, and tactical radar systems; radio observatories; [MANET](#); [JTIDS](#))

The non-traditional sense of ham radio is quickly becoming a centerpiece, if not a regular side-item, of [Hackaday](#) articles, makerspaces, and makerfares.

However, I will admit the [Ham Nation Pineboard project](#) is particularly popular, and is doing a great thing bringing tubes back into focus and captivating/inspiring viewers to try it themselves, but I'm going out on a limb saying it's probably most popular with their target demographic...a young person might be following along but it's not changing the face of the hobby anytime soon. One of the student members of W0EEE (Missouri S&T) is a die-hard tube fanatic, but to everyone else, he's the tube guy.

Speaking of which – target demographic. The target demographic of every single amateur radio show, podcast, club, media outlet, society, magazine, livestream, or otherwise, is not young people.

The ARRL however, has been making a lot of good strides to engage the new generation of hams (1)(2)(3)(4), yet still, the ARRL can only do so much to interest younger people, which takes away resources from engaging their demographic core of white male retirees. For example – why no youth editor? I was the last one, before my editor, Khrystyne K1SFA, left the ARRL, which left a hole requiring them to kill the Youth Editor ([the articles still remain on their website](#)), and The Amateur Amateur ([which still exists at his website](#)). But why no top-level Youth Coordinator? Why not a report on the effort of, or a collaboration between, our Section Youth Coordinators in the [ARRL Field Organization Structure](#)? Are we all just relying on [Carole Perry](#)'s and the late [Ellie and Rip Van Winkel](#)'s of the ham radio world to inspire and educate young people about ham radio? Surely there's opportunity for ARRL, as well as every ham radio club out there.

Kids LOVE Digital Modes! Right?

No. From my experience over the last seven years, digital Amateur Radio is not intrinsically exciting to young people, as many have been touting. It is a lot better than voice and CW, but still exists the fact that as an individual, it's a troubling process to decide where to spend your (mother's) money – \$300 on a DSTAR radio, \$100 for a DMR, both full of people talking about how robotic they sound, or \$400 for an HF station to do digital data modes, full of canned responses (PSK31) or hardly any response at all (FT8).

These are also communication between people, which begs the titular question posed by K0NR. People-to-people communication is trivial, and although some young hams (me) find it really cool to talk to people beyond shouting distance with the raw elements of a radio station, what's much more interesting and impactful to the next generation is the idea of people-to-machine communication. In other words, Digital Voice is dumb, Digital Data is smart, and the only ways to utilize digital data are explicitly NOT provided by the commercial manufacturers of amateur radio(1), but instead by Adafruit, Ubiquiti; HackRF, RFSpace, and USRP; and soon [FaradayRF](#), among others.

The Next Big Things for Ham Radio

Remote Operating for HF

Here's where I disagree with K0NR's analysis.

Perhaps more importantly, we can't really stop the impact of new technology. Oh, I suppose the amateur radio community could petition the FCC to restrict [internet assisted] use of ham radio. There could be regulations that limit the use of the internet being interconnected with Part 97 radio operation.

I believe that remote operating, and other internet-assisted means of ham radio operation, are critical to youth engagement.

RemoteHamRadio is the shining example of where ham radio operating is heading. they have an awesome [Youth Program](#), allowing young people that are:

- 25 years old or younger
 - A General class or higher license
 - A member of the ARRL
 - Interested in or Experienced with in DXing/Contesting
- to operate remote online stations for free.

[Remote Hams](#) is a totally free alternative, but it's up to the host to restrict operation, which is frustrating when you're clicking through servers, only to find it's locked by membership to whatever radio club is hosting it.

Finally [WebSDR](#) and [OpenWebRX](#) are always open to everyone to receive tons of spectrum, remotely.

Despite that, it's ultimately a much MUCH better solution in the short term for young hams to operate remotely, than it is to persuade their mom's to fork up a relative ton of money for a radio, antenna, a pole if no trees are around...etc.

Because young people do not often have access to the the kind of money an HF radio station requires, I strongly believe to captivate more young people, we need to do more of one of these two things.

Promote your club's shack, your own shack to young people.

Put your shack on a remote service provider for others to use when you're not.

For young people to join the hobby, it's critically important to bring ham radio where the young people are, which is, for the most part, the internet.

If I knew this when I was younger, my mom would have been around \$900 richer!

Ham Radio Hackathons

One thing I'm thinking of starting up are Ham Radio Hackathons. I mentioned it [in a previous blog](#) which has surprisingly gotten a lot of traction with my [tiny contingent of readers](#).

A hackathon isn't a coding competition. It's explained well in [this Medium article](#). It goes even further than that, not limited to coders and engineers, but open to thinkers, doers, philosophers, system engineers, math people, teachers, students, artists, stakeholders...anyone with an interest in solving a problem with technology.

Ham radio has a bunch of problems with technology

[ED. This is a read at your own risk article because it may affect your sanity.]

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It's far behind the curve. We're spitting out digital modes faster than K9PG can work a sweep, but compared to what's already on the shelf, why would anyone bother with ham radio?

When I think about software like Log4OM, LOTW, eQSL, and HRD, I get frustrated. It's great software, and many volunteer hours have poured into their development, but it's so feature dense, developed in vacuums, hard to use, buggy, and lacking in UX. A good example of software is Fldigi – it's fast, and light...hence *FL*digi. APRS is really nifty, especially aprs.fi, but a person needs too much stuff or really expensive radios to get on it via RF (most people seem to be going direct to APRS-IS anyway) and getting into the development side of it is making me pull my hair out, just starting with the fact it's based on the Bell 202 modem invented in 1972!!! Are you \$#!++!n& me!? I mean, what a fantastic utilization of resources...in 1978. [It's time for something fresh, now.](#)

There are dozens of ham radio websites stuck in 1990 (two of them are in K0NR's blog [\(1\)](#)[\(2\)](#)...I'd almost argue that ham radio is killing the internet!), it seems like every ham radio developer has to repeatedly reinventing the wheel with logging programs, everyone still uses email reflectors, tons of ham radio apps just crash upon startup, the Digital Voice debate (when we should really focus on digital data, breaking through the baudrate limitation, and interlinking everything), the logistical challenges of testing (3 VEs to proctor a test in person, c'mon...that's not to say I don't disagree with the lack of practical on-the-air knowledge in the newbie amateur radio generation; however I don't think that's not a fault of the amateur, that's a fault on the lack of elmership to personally show them how it's done).

What gets us excited is contesting, [YOTA](#), giant spectrum monitors, networking, automation, IOT, SDRs, remote ham radio operation, and the general advancement of radio technology, which is abreast of the core of amateur radio's mission statement. But, how are we going to be at the cutting edge, when things like Wifi, LTE, Zigbee, P25, etc has passed our tech up? If anything, hackathons could stir up a lot of discussion and disrupt the status quo, for example baudrate limitations or, as Bob seems hopeful for, regulatory snafu's regarding remote operations.

I think hackathons are, right now, the best opportunity to identify and start solving the technical and even social problems of ham radio.

I'm helping plan such ham radio hackathon (hamathon?). Let me know if you're interested. I foresee a pre-Hamvention hackathon/thinktank event much like [Four Days in May](#) and [Contest University](#), as well as standalone events accompanying the larger ARRL conventions like Pacificon, Huntsville Hamfest, Hamcation, and so on.

Does this mean Ham Radio is Dying?

No. Licensing is on the rise, contest log submittals are in constant growth, the HF bands are dense with stations, and the amount of hype behind AMSAT launches, ISS contacts, and High Altitude Ballooning is massive.

But it is changing.

Over the next twenty years, I expect "traditional" ham radio to stick around. these are things like contesting, homebrewing, working satellites, chatting on repeaters, DXing, tropo, special event operating emcomm/pub service, digital modes, and on and on, anything you can see on https://en.wikipedia.org/wiki/Amateur_radio. All the things you know and love will still be around so long as you are alive and kicking.

But what will happen after the big hump of 40-80 year old hams passes on? To know what ham radio will be like in 20 years, we need to know what the 10-30 age range is up to now. Here's my analysis from being a kid to now being a person who promotes ham radio to kids:

[Ed. When this appeared on FB there were a lot of questions about the author's sanity]

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Age 10-13

Very few kids are getting experience using ham radio to communicate, through scouting and parenting (like [the Lee family](#).) This is also a target age range to learn basic programming skills through game-like tools like <https://scratch.mit.edu/> and blinking lights with Arduinos, in between watching YouTube, and playing Nintendo Switch and mobile games.

Age 14-18

Scouting is the main common interest for hams this age. A majority are getting experience making a contact with a ham radio, but won't go much further. We see a few superhams, like [Marty KC1CWF](#), [Skyler KD0WHB](#), [Chris KD8YVJ](#), and [Bryant KG5HVO](#) starting to pop up out of the noise, already having some incredibly noteworthy accomplishments. This is the range where youth are finding themselves: their likes, dislikes, capabilities, skills, talents, hormones, etc. If ham radio was a part of this part of their life, it'll likely be a part for the rest of it too.

Age 18-26

Most hams from this range have already been hams before, coming into the hobby around age 12-15, and so they continue their interests in their post-high school career, whether or not it includes college.

College draws a few newcomers too, especially thanks to the Collegiate Amateur Radio Initiative, and the individual education and licensing initiatives at collegiate ARCs like W0EEE.

I think we also get a lot of licensee's in this age range from drone hobbyists, wireless/IOT programmers, and networking gurus who want to experiment with more range out of their devices.

This was the majority of hams at YOTA. [From my YOTA experience](#), the most captivating events were the ISS operation, SOTA excursion, and operating the OE2YOTA special event. However, when prior to everyone getting a Raspberry Pi and a Mikrotik router to link up to HamNet, many groups of hacker-hams chugging through command line interfaces doing who-knows-what was seen throughout the rest of the week.

Overall, young people are growing up in the age of automation, machine learning/AI, IOT, ubiquitous fast internet, cell-phones, and wifi, and extremely low-cost, high performance processing and computing (Arduino, STM32, MSP430; RasPi, BeagleBone, etc etc). Contrast that with Baby boomers and Generation X, who grew up in the age of a radio, TV, the maturation of computers and the internet, and the beginnings of technology miniaturization.

With that said, I don't think ham radio is going away, but it will become more remote, more transparent, more available, and more technologically matured, but as always, like K0NR says, ham radio is all about having fun messing around with radios.

And that will never change.

73 es gud 5.8GHz DX in 2037,
a Millennial

Yes, D-STAR supports digital data, but a specific D-STAR radio is required, and its maximum speed of 128kbps at 1.2GHz is ridiculously slow. The alternative to data rates that slow comes at a fraction of the cost, which does come at a fraction of the range for a comparative setup, but that's addressed by directional antennas, or COTS high-power Wifi radios & dish antennas. Featured image background composited from <https://twitter.com/theindiealto>

<http://n0ssc.com/posts/583-millennials-are-killing-ham-radio> ...Agree, yes or no ? Really don't care because I needed to fill space.