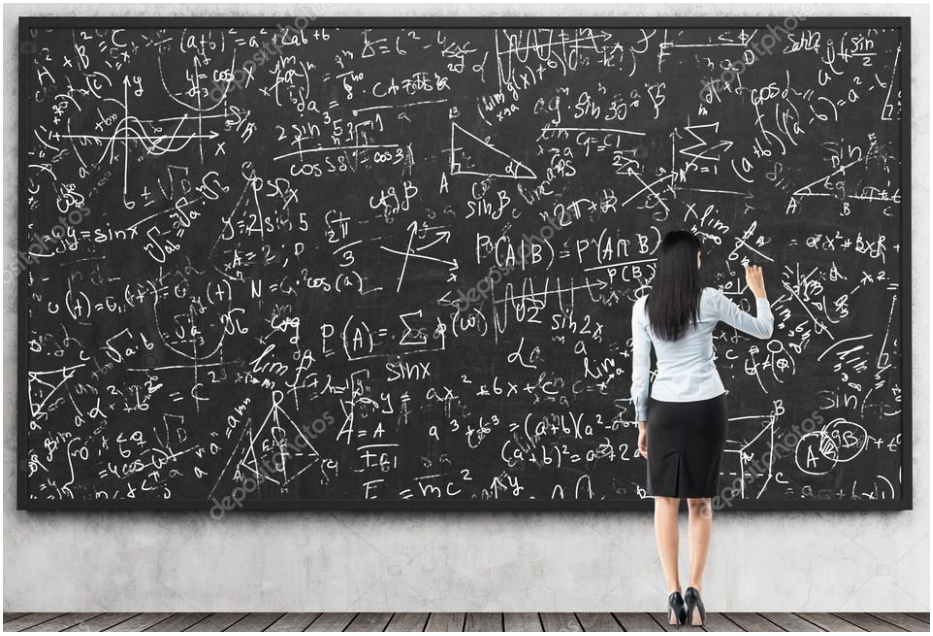
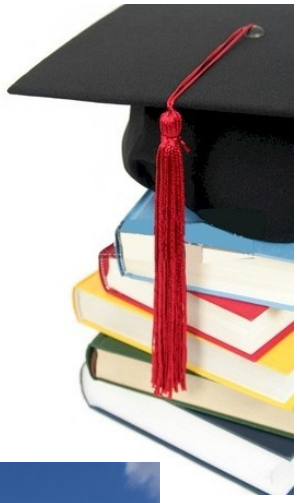
Microvolt

Monthly newsletter of the Utah Amateur Radio Club

July 2026





What exactly is an *education*, and is it important? Is it a level of formal schooling attained in a person's lifetime, or an indication of how smart a person is? Or is it an accumulation of knowledge? Do experience and wisdom factor in to a person's education? How much education is required to effectively participate in amateur radio? Is that question even meaningful, given the spectrum of knowledge and operating practices demonstrated by current licensees? Let's take a look at how education relates to amateur radio in today's world.

Cover – Education

If we define education as the number of years of classroom study achieved, it appears that zero is what's required to obtain an amateur radio license. It's reported that the four youngest people to have passed the American Technician exam were five years old. Two of them had apparently graduated from Kindergarten by their exam dates, and at least half of them needed to have the exam read to them.

The fact is, neither the FCC nor the ARRL or any of the VECs (volunteer examiner coordinators) record the ages of those who take amateur radio exams, so the information provided for the ones we're aware of comes from the word-of-mouth announcements by the VEs (volunteer examiners) at exam sessions or people acquainted with the licensees, such as their parents or a local club. Three of those four youngest Technician licensees are Veronica Harrington KC6TQR, Colton Ragsdale KEØCRD, and Neil Rapp WB9VPG. The youngest ever reported in Utah was Jessica Dowding KD7PIO, who held back until the ripe old age of six.

A technical education

A rapidly diminishing number of amateurs pine for the days in which a person was required to demonstrate a relatively deep technical understanding to pass any ham radio exam. Today's budding amateur is not required to know much about electronics beyond Ohm's Law, and many experienced licensees feel that trend is moving in a direction that will likely damage the craft. They often state that a high level of education or knowledge has always defined the cornerstone of amateur radio.

But is that technical cornerstone as relevant in today's amateur world? Many say No, due to the large shift by new hams toward applications in emergency communication and disaster preparedness. While amateur radio once provided the technical community with a continually fresh legion of skilled tinkerers, ham radio no longer appears to be on the forefront of technological innovation. On the other hand, the current craft does encourage the production of an army of volunteers skilled at emergency communication as a subset of preparedness.

Training rather than education

So, today's "educated" amateur appears more like an informed and willing volunteer than a professional craftsman, and that's alright. The education that's obtained by many licensees of the 21st Century tend to focus more on operating a net, organizing disaster aftermath volunteers, and teaching preparedness skills. The training for these and many other skills that accommodate amateur radio often originates with ARES (Amateur Radio Emergency Service), a sub-organization of the ARRL (American Radio Relay League). Many hams enlist in other organizations, such as CERT (Community Emergency Response Team) and the Red Cross, who are not necessarily focused on amateur radio, but help fill their hunger for preparedness training.

Moonlighting

In spite of the education evolution in amateur radio, many still find the craft a haven for technical learning beyond what's required on the exam. The technology of radio has not disappeared, so the opportunity for many hams to learn about its roots and true nature still exists. Although Morse code proficiency is no longer required for amateur radio examinations, more people enjoy the "code" today than ever before. People are also finding hobby joy in digital operations, such as FT8, Winlink, and mesh networking.

It doesn't end with the license

Passing your Technician license exam is when the real learning begins. As many are fond of saying, ***The amateur radio license is a license to learn***, meaning that it's a beginning, not an ending to one's quest. As a licensed operator, you are certainly free to allow your education to stagnate, but one of the attractions of the craft is the endless ocean of knowledge that can be explored.

Microvolt editorial staff

Editorial – The transfer of knowledge

When considering an education, we typically refer to our own quest for learning. This time, let's take a look at the learning we might provide others. After all, is it not better to give than to receive?

We've discussed two forms of knowledge transfer, elmering and formal instruction in previous *Microvolt* articles. There are, of course, many ways of sharing your mental information with another person. Spock had his way, but we Earth beings must rely on communication by mouth, signage, email, internet, body language, and yes, ham radio. A pat on the back is a common sign of acceptance or approval in the western world. Even a smile or a nod might say the same.

When your kids were growing up, you likely wanted to pass on to the next generation all the good things you've learned. How did that work out for you? Did your own parents share with you everything they had learned in life, or did they miss a few things?

It seems that an overwhelming majority of those in the teaching profession do not say that they chose their vocation to get rich off a teacher's salary. Therefore, their incentive or reward for choosing education as their way to make a living must be rooted in another reason. Indeed, most seem to find that the sharing of their knowledge and life's lessons are some of their own greatest rewards. Of course, it's also nice to be paid for doing it. As some put it, ***If you enjoy your job, you'll never work a day in your life*** (paraphrased from Mark Twain).

Emergent knowledge transfer

There are times when the knowledge that needs to be transferred or conveyed is not book-learning or academic, but a little more time-sensitive. If a friend is suffering a cardiac arrest, for example, and you've called 9-1-1, the dispatcher is likely going to ask you to provide some critical details. These include breathing, heart rate, temperature, bleeding status, along with some static demographics, such as age, gender, and weight. This information is important to help the responder understand the emergent conditions of the patient, to help determine the subsequent steps.

During an incident, an emergency, or a disaster, this kind of time-critical information could mean the difference between life and death. As an amateur radio operator, you might be well-trained in radio protocol, but have had little medical training. Still, your skills can provide a lifeline for a helpless person who is suffering from a medical episode. At that time, your transfer of ***health and welfare*** regarding an injured person is an effective example of information-passing.

One last note regarding the passing of information, especially during message-handling. Some have become so mired in the letter of the law that they go to great lengths to ensure that they are passing along every word precisely as dictated to them. If that strict adherence makes sense, then by all means be exact in your transmission. ***But when somebody's life is at stake, and you're hyperventilating, and you miss a non-critical word that you should have conveyed, let it go***. By the time you've re-sent the correction, the patient could have died. World War III is not hinging on your transmission, and there's no need to exercise pedantic bit corrections over self-important messages.

Anything to add? Email ***editor@utaharc.org***

Letters to the editor

Dear Editor:

Just curious, why do most ham rigs require 13.8 volts? Is there something special about that value?

Ed in Salt Lake City

Dear Ed:

Historically, lead-acid car batteries had six cells, each of which presented 2.1 volts, and 6 x 2.1 volts = 12.6 volts, the typical "fully charged" voltage. Effectively recharging these cells required 2.3 volts each, and 6 x 2.3 volts = 13.8 volts. Because 12 volts falls within the 15% tolerance of the 13.8 volts required by many rigs, a 12-volt supply or battery can be used instead of an AC-converted power supply. Furthermore, most automotive alternators charge near that voltage (often a little more) to bring the lead-acid batteries up to working voltage in a reasonable amount of time without overheating.

Dear Editor:

At the moment, I can only get one coax cable to go from my room to the roof. So, can I use a single coax for two antennas?

Scott in Riverton

Dear Scott:

If you're not using an antenna switch to select between the multiple antennas, the antennas will be electrically in parallel, reducing the feed point impedance. That lower impedance might not affect a receiver nearly as much as it would a transmitter, which will be more sensitive to the lower impedance. For example, say you connect two ideal dipoles to a single coax. That means your feed point impedance is 73 ohms ÷ 2 = 36.5 ohms, which presents 50 ohms ÷ 36.5 ohms = 1.37:1 SWR at the feed point, not bad. Assuming a lossless feed line (worst case, since a lossy feed line can make the feed point impedance appear better), that can easily be handled by most transceivers. But if your antennas both exhibited 50 ohms, that would result in a 2.0:1 SWR, which is the fold-back threshold for most rigs.

Dear Editor:

I just heard that Technician exam will be changing or updated soon. Does that happen with the other two license class exams? Do they get updated on a regular basis, or is this a one-time thing?

Byron in South Jordan

Dear Byron:

In an effort to keep up with technology, stay current with products (devices and software), and maintain some semblance of relevance to modern terminology, all the exams are constantly being changed, updated, and corrected. Each of the three exams get updated every four years, according to this schedule:

Technician : 01 July 2026
General : 01 July 2027
Extra : 01 July 2028

Then the next round of updates will start in 2030.

Dear Editor:

I know I'm probably asking a lot, but what's a good portable HF radio to get started with?

John in Millcreek

Dear John:

I encourage you to focus on your antenna before selecting a transceiver, but since you asked about an HF rig, let's go with that. Sounds like you're new to the world of portable operation like POTA, so let's take QRP off the table first. I highly recommend these nine, most of which have been discontinued:

Yaesu FT-857D	Kenwood TS-50S	Yaesu FT-897D
Yaesu FT-100D	Icom IC-706MKIIG	Yaesu FTX-1
Yaesu FT-891	Icom IC-7000	Icom IC-7100

Send your questions to ***editor@utaharc.org***

Club news

In keeping with tradition, the June 2026 club meeting was dedicated to a discussion on Field Day. James Bennett KK7AVS was recently appointed UARC Field Day Chair for this year, and has taken on the full responsibility of the event. He kicked off the meeting by announcing the recent passing of Ray Smith KK7LAT, and even asked us to pause for a moment of silence prior to the discussion.

James introduced Mike McAinsh KI7MTI, who gave a little history on Field Day and its purpose as a rapid deployment exercise independent of shore power.

Also, Mike was savvy enough to locate these years-apart photos (to the right) of Linda Reeder N7HVF at Field Day, caught on camera.

You can see the meeting video here, thanks to James KK7AVS. BTW, you can view past many club meeting presentations on our YouTube channel.

2026 UARC Steak Fry

The annual UARC Steak Fry will take place this year ***Saturday 18 July 2026*** at **Murray Park, Pavilion #1**, 420 E 5300 S. We can start setting up as early as 4:00 pm, but ***dinner is served at 5:30 pm***. We bid a fond farewell to the dilapidated picnic tables, broken trip-hazard pathways, and scary restrooms of the Spruces, which have served us for so many years. Cost is $15 per person.

Fall 2026 UARC Potluck

You and your family are invited to a potluck dinner ***6:30 pm Thursday 10 September 2026*** at the Salt Lake County Facilities Management Cafeteria, 2001 S State St, room S1-100. Details are posted on our website. We'll have announcements, club business, including elections, and door prizes, but no presentations or speeches.

2026 UARC Homebrew Night

The annual UARC Homebrew Night is a club meeting dedicated to showing off what you've been working on the past year. It's at ***7:30 pm Thursday 08 October 2026***, this time at the Salt Lake County Facilities Management Cafeteria, 2001 S State St, room S1-100. Bring your latest antenna or electrical or go-box project, and we'll photograph your handiwork, along with your smiling face, and get them into the next *Microvolt*.

2026 UARC Christmas Dinner

You and your family are invited to the annual UARC Christmas Dinner ***6:30 pm Thursday 10 December 2026*** at Golden Corral, 665 E 7200 S in Midvale. Details will be posted on our website. We'll hold our annual elections that night, plus have announcements and door prizes, but no presentations or speeches.

For your information

Field Day 2026

The annual 2026 Field Day will take place from noon Saturday 27 June through noon Sunday 28 June 2026 at Payson Lakes. We're looking for volunteers to help with setting up and running the stations. We can also use your help with the antennas and other gear.

UARC 2026 Steak Fry

The annual ***UARC Steak Fry*** will be held this year 5:30 pm on Saturday 18 July at Murray Park, Pavilion #1, 420 E 5300 S. Those helping with setup can arrive starting 4:00 pm.

License courses

Salt Lake:

Technician : Tuesdays

General : Tuesdays 7:00 pm to 9:00 pm

147.160+ MHz (127.3 Hz tone)

Orem:

Extra : 5 Tuesdays, 6:00 to 9:30 pm

14 Jul, 21 Jul, 28 Jul, 04 Aug, 11 Aug

Visit **psclass.orem.org** to register ($10)

Orem City EOC, 56 N State St, 2nd Floor

HamStudy.org account required

*This course will **not** be live-streamed*

Email **nojiratz@hotmail.com** for info

Eagle Mountain:

Technician : 5 Thursdays, 7 to 9 pm

14 May, 21 May, 28 May, 11 Jun, 18 Jun

Email **ki6oss6365@gmail.com** to register (free)

Eagle Mountain City Hall, 1650 Stagecoach Run

Exam sessions

Salt Lake County:

- Email Garth Wiscombe W7PS **w7ps@arrl.net**

  29 Jun, 27 Jul, 31 Aug, 28 Sep, 26 Oct

Utah County:

- Wed 15 Jul 7:00 pm : **Provo** : **signup**
- Wed 19 Aug 7:00 pm : **Provo** : **signup**
- Sat 19 Sep 10:00 am : **Eagle Mtn** : **signup**
- Sat 26 Sep 10:00 am : **Spanish Fork** : **signup**

Club repeaters

Farnsworth Peak : 146.620– MHz (no tone)

Scott Hill : 146.620– MHz (no tone)

Lake Mountain : 146.760– MHz (no tone)

SDRs and beacons

Northern Utah WebSDR : **sdrutah.org**

KK7AVS SDR : **k7xrd.club**

N7RIX SDR : **sdr.n7rix.com**

K7JL beacon 28.2493 MHz

HF remote and club transceiver stations

If you'd like to learn how to get started using the remote stations, visit the **HF Remotes link** on **the club website**:

https://user.xmission.com/~uarc/HFRemote.html

How you can help!

Email **uarc@xmission.com** to reach the club leadership. Email **editor@utaharc.org** to add content.

Spotlight – Rick Allred KM7AIF

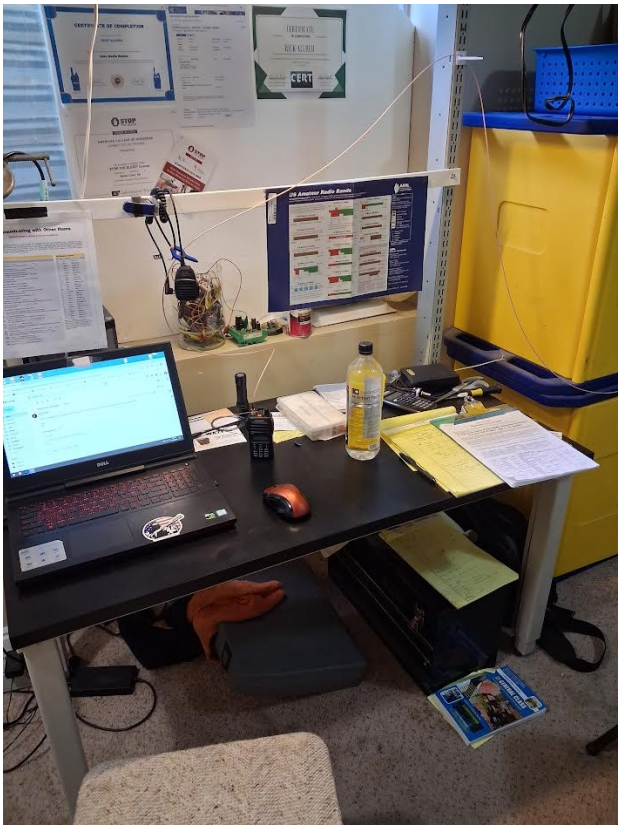
Rick Allred KM7AIF is fairly new to amateur radio. He's already shown great enthusiasm for the craft, especially as it relates to emergency service.

After Rick finished high school, he joined the US Army, taking additional training in engineering and installing heavy equipment. The Army training served Rick well afterwards in his civilian life, leading him to travel throughout the country, installing heavy equipment. Rick said that it was hard work, which kept him away from his family for long periods of time, but he earned a good paycheck by doing it.

When Rick retired at age 67, he was ready to find a hobby that would keep him active. He came across information about amateur radio on YouTube, and thought that would be a perfect one. After studying the Gordon West Technician Class preparation book, Rick went to a VE (volunteer examiner) testing session by Steve Whitehead NV7V at a fire station in Provo, which he found on HamStudy.org, and passed the test, missing only one question, and became a licensed ham in April of 2025.

Next, Rick purchased a Yaesu FT-65 handheld radio and bought a J-pole antenna from Carl Pockrus, WE7OMG. He placed the antenna on the roof of his house and tried to make contacts. However, when he called out, he never got an answer, even when using repeaters. Rick began to wonder if he'd chosen the wrong hobby, but then stumbled upon the Salt Lake Crossroads Amateur Radio Club's social net, which changed everything. They meet on-air Monday through Friday at 7 pm, and that was what he was looking for. He especially enjoyed talking with JoAnn Haines AE7AK, and joined her “un-social net” on Saturday nights.

Rick is also active in the Crossroads’ Communications Net on Wednesday evenings. On the club's recent simplex net, held only when there's a 5th Wednesday in a calendar month, Rick won a tube receiver for guessing which city and park within that city club president James Bennett KK7AVS was transmitting from.



On 18 April 2026 Rick joined James and Mike KI7MTI at the Amateur Radio Day station that Crossroads set up at the Day-Riverside Library in Salt Lake City. James introduced Rick to communications over 20 meters at the event and demonstrated that he was able to make a contact with a station in San Francisco. That was enough to infect Rick with the HF bug, and so is now studying for his General license.

Rick is enthusiastic about preparing for emergencies. During the Crossroads’ May meeting at the Glendale Library, Rick showed off his go-kit and talked about the various items included in his compact first-aid kit. As a new member of UARC Rick attended his first meeting in May and found Noji's presentation entertaining.

Rick and his wife Laurie have three children, one girl and two boys, who are all grown. In his spare time, he likes to read and hike. He also plans to start a garden this summer. Rick, on behalf of UARC, welcome to the club and to ham radio, and good luck on getting your General license!

– 73, Linda Reeder N7HVF

Tech Corner – Two ultimate HF chokes

If your HF station is plagued by noise, this might be the article for you. Just to be clear, not all noise that you hear is the same; in fact, noise sources are so abundant that it's often necessary to remove them individually. The noise that I'm attempting to reduce or eliminate in this case is *common-mode* noise, the undesirable signal your coax is picking up on the outside of its shield. It often originates from solar inverters, generators, Wi-Fi routers, surge-protected power strips, and defective wall and laptop chargers.

We've discussed an effective common-mode choke in a previous article, but its construction was a little more involved than some people wanted to tackle. In this discussion I'm presenting the two best contenders for the title of ***ultimate common-mode choke***. They're the "ultimate" chokes because they're the most effective across most of the HF spectrum, they're very inexpensive, and they're simple to make.

The specifications for these chokes come from extensive research performed by Steve Hunt G3TXQ, and others who have confirmed and validated Steve's findings. He shows that the most effective ferrite materials for high frequency common-mode choking are either 31 or 43, with 43 providing less overall reactive impedance (you want more resistive and less reactive), but greater bandwidth (frequency coverage across the HF band). Additionally, the construction for the RG-316 choke originates in part from a video by Paul Kline W2PAK.

Parts list (for the RG-316 / FT140-43)

One FT140-43 ferrite toroid

One 3-foot RG-316 cable with PL/SO ends

Two 14″ zip ties

Parts List (for the RG-58 / FT240-43)

Two FT240-43 ferrite toroids

One 6-foot RG-58 cable with PL/SO ends

Four 14″ zip ties

The construction

Install a couple of zip ties around the FT240-43 toroid pair to keep them together while winding. Construct each choke the same way. First, slip the RG-316 coax through the FT140-43 toroid and the RG-58 through the two stacked FT240-43 toroids, and zip-tie the coax to the toroids.

Two ultimate HF chokes, cont'd

Left : all the parts needed for both chokes, including zip-ties

Next, ***tightly*** wind five turns of each coax around one half of the toroid or toroid pair. Slip the coax into the toroids for the fifth turn, but complete the fifth turn on the opposite side. Complete the remaining five of the ten windings on the other half of the toroids, then secure the ends of the coax with another zip tie. Quickly enough, the choke constructions are finished.

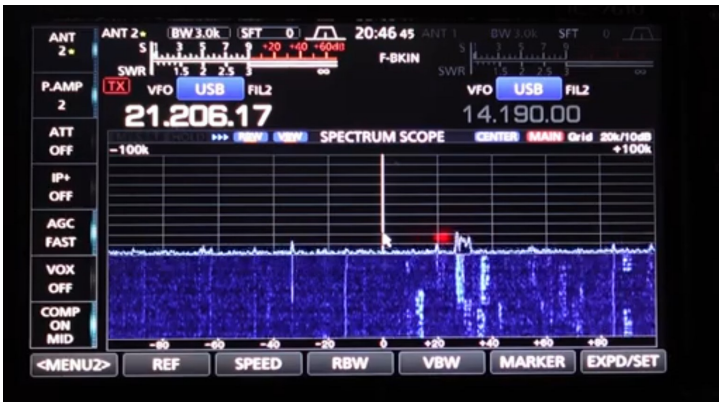
Because three feet of coax was all I needed for the RG-316 coax, I was tempted to use a three-foot length of RG-58 (in the "all the parts needed" photo on the previous page) for the other one. But, three feet turned out to be two feet too short for the double-toroid, and that's why I had to use a six-foot length.

Two ultimate HF chokes, cont'd

Testing the chokes

What tells the story better than a pair of "Before" and "After" photos? Using an Icom IC-7610 and its waterfall on 15 meters, the (double-toroid RG-58) choke is connected right on the rear of the transceiver. LMR-400 coax is then connected between the choke and a roof-mounted Hustler 5-BTV vertical. The noise level went from about S4 to nearly SØ (you can see the vertical marker on the S-meter below).

Before



After

Finally

Please understand that not all noise is created or received equally. These two chokes are very good for ***filtering common-mode noise***, not *every kind of noise*. So, if your noise level is high because of some other issue, these chokes might not work for your situation at all. Then again, that's the beauty of these chokes, that they're inexpensive and easy to build, so if they don't filter out your particular noise, you won't have lost much time or money in the project.

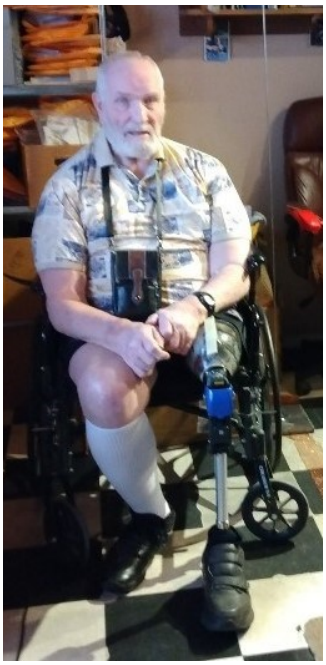
But if your station is being bombarded by common-mode noise whose source is difficult to remove, like that from a neighbor's noisy solar inverter, then one of these chokes might just be in your future. And because they exhibit less than 1 dB of insertion loss, you can keep them attached permanently if you need. Besides being easy to build, a feature of these chokes is their high resistive choking impedance at HF compared with their reactive impedance.

Noji Ratzlaff KNØJI

Silent key – Ray Smith KK7LAT

Ray Smith KK7LAT, friend and a West Valley City amateur, passed away on Tuesday 02 June 2026 after a courageous battle with pancreatic cancer. Just last year we featured Ray in *Microvolt* for his own spotlight, so this passing came sadly too soon afterwards.

In 2022, Ray's cousin Ben Booth N7RXL got Ray interested in getting his amateur radio license. After studying hard, Ray passed the Technician Class exam in March 2023, then got his General Class ticket the following September. After purchasing a Baofeng UV-5R, Ray met other hams in UARC on the radio. He contacted Carl Pockrus in American Fork, and purchased a J-pole from him. Later, James Bennett KK7AVS came to Ray's home and installed a flag pole antenna, which Ray uses for VHF and UHF. James also obtained a CB antenna modified for 10 meters and installed it in Ray's office. With that antenna, Ray has made over a hundred contacts around the world, including stations in Argentina, Mexico, Hawaii, Japan, Alaska, and several Canadian provinces.



Thomas Partridge KC7DKR wrote,

I got to know Ray over the Ham radio. Ray even gave me my first HF radio to get on the world wide bands. I will always remember how kind he was and how helpful he was. RIP, Ray KK7LAT.

Your friend, Thomas.

An excerpt from Ray's obituary:

Ray was an avid outdoorsman and enjoyed many wonderful activities with his family and friends. Whether it was primitive hunting with muzzle loader or bow, archery, golf, diving in various locations around the world, horseback riding throughout Utah, fishing on the Strawberry, or cruising with family, he always found joy being out in nature and spending time with his wonderful family and dear friends. His loyal companion, Azar, known as his faithful co-pilot traveled everywhere with him; just one of the many loving pets that touched his life and gave him so much pleasure. The last couple of years he enjoyed making new friends around the world on his ham radios and re-learning morse code.

You can read Ray's obituary here.

Strays – Know-it-all

Have you ever met a ***know-it-all***?. Maybe you know one right now. So, exactly what ***is*** a know-it-all, and is it ok to be one? If somebody really does *know it all*, is it wrong to label the person that way? The fact is that men are more likely than women to be know-it-alls because of their naturally competitive nature.

In most American contexts, ***know-it-all*** or KIA is a derogatory term for a person who seems to understand quite a bit about a subject, pretends to possess superior knowledge on it, and then attempts to broadcast that pretense to a wide audience. The attitude that often accompanies this disposition is *arrogance*, an artificial inflation of self-importance, often shown by dismissing input and opinions from others. In other words, being around a person like that is often unpleasant.

How to handle a know-it-all

A know-it-all can be found at club meetings, activities, and on the radio. You can often recognize their behavior by dismissive and argumentative responses. They're more interested in hearing themselves than listening to you. According to some online psychology texts, know-it-alls are not necessarily narcissists, but often have narcissistic tendencies; they ***need to be right***. Many don't even realize they're treating others the way they do, and the cure in that case is to gently confront the person with their behavior.

Many KIAs tend to interrupt a point, dominate conversations, or make baseless claims. These prompts might help return the discussion to the topic:

- *How can you be so sure?*
- *Hold that thought. I'd like to give my point of view.*
- *Could you share the data that led you to that conclusion?*
- *How else could we look at this issue?*
- *I'd like to finish my point before we continue.*
- *I feel my expertise is undervalued when I'm constantly being interrupted.*

Also, do not get angry. If they feel that you're trying to outsmart them, they tend to argue harder. Pick your battles; let minor issues go. Focus on the topic at hand, not on *changing the person*.

Subject matter expert

At this point in this seemingly unimportant topic, it's probably best to clarify one thought. A person who truly does possess knowledge, experience, and maybe even a little wisdom about a subject is somebody we call a ***subject matter expert***, or SME. Fortunately, most SMEs are not know-it-alls. The truly knowledgeable person feels secure in his or her background, and does not rely on false pride to compensate for any lacking knowledge or skill. More often than not, the SME will acknowledge that he or she does not know the answer to a question, and is willing to entertain new thoughts and opinions on the matter.

Ok, maybe you're a person who truly ***does*** know everything about a subject. The rest of us congratulate you, and hope that you're willing to share your vast knowledge with us less-knowledgeable folks. If you're one of them, you're in a unique position to lead by an example of humility and vulnerability. Your willingness to help the rest of us will be rewarded by others following your example.

Your own role

You're likely not a know-it-all, yet you're just as likely not an SME either. As you upgrade your license, gain knowledge and valuable experience, and begin mentoring (elmering) more and more newer hams, you'll likely start feeling more confident in your new knowledge. But that's when the danger starts; you can turn your new-found confidence into arrogance and pride, or you can dedicate yourself to maintaining humility, staying ready to learn new ideas and consider concepts that are new to you. It's your choice.

Checklist – Ready for Field Day

It seems like we make it all the way out to Field Day every year, only to slap ourselves on the forehead because we had forgotten to bring something. Well, just in case you need some reminders, here's an abbreviated list that might help:

General

___shelter (RV, tent, somebody else's)
___stakes
___hammer
___paracord, rope
___canopy
___table
___table cloth
___garbage bags
___chairs
___knife
___generator, fuel, electrical cords
___lantern, head lamp, flashlight
___duct tape
___step ladder
___broom
___tools (crescent, hex, pliers, screwdrivers, etc.)
___note pad, pen
___batteries (AA, AAA, etc.)
___first-aid kit (band-aids, gauze, tampons, etc.)
___camp meds (Tylenol, Ibuprofen, Imodium, etc.)
___work gloves

Radio gear

Note: if you bring an HF radio and antenna, be sure to clear them with the club leadership before you transmit on them, to limit the interference potential, in spite of our amazing bandpass filters!

___HT (handheld transceiver), battery, charger
___other transceiver, microphone
___power supply, battery
___power cabling (AC, DC)
___speaker, headset
___tuner
___coax, barrel connector
___antenna
___masts, tripod, supports
___guy ropes, flags, stakes
___Anderson Powerpole kit (crimper, etc.)
___antenna analyzer

Personal

___food (we'll only provide the Saturday dinner)
___potluck contribution
___utensils, plates, cups, napkins
___ice
___sleeping bag
___pillow
___blanket
___warm clothing (shirts, pants, socks, sleep, etc.)
___hat, beanie
___coat, gloves
___hydration day pack
___ear plugs
___toothbrush, paste
___shaving needs (razor, cream, shaver, etc.)
___antiperspirant
___comb, hair spray
___toilet paper
___lip balm
___hand sanitizer
___wipes
___CPAP equipment
___sunscreen, aloe
___insect repellant
___money (cards, cash)
___phone, charger
___medicine (prescription, OTC)

Remember, you don't need to bring ***everything*** on this list, but it ***might*** jog your memory of some things you ***will*** need. Did we omit anything important?

– UARC Leadership

Microvolt is the official monthly publication of the Utah Amateur Radio Club, Inc. (UARC), 3815 S 1915 E, Salt Lake City, UT 84106. Copying is permitted with proper credit to *Microvolt*, UARC, and authors. Online repository located at **https://user.xmission.com/~uarc/Microvolt**

We encourage you to submit original high-resolution pictures, articles, software and hardware descriptions, appropriate humor, and responses to editorials. Email the content, pictures attached, to the editor at **editor@utaharc.org**

The **Utah Amateur Radio Club** was organized under its present name in 1927, with its beginnings dating back as early as 1909, then becoming affiliated with the American Radio Relay League in 1928. UARC is a 501(c)(3) non-profit organization and holds a club station license with the call sign ***W7SP***, a memorial to Leonard "Zim" Zimmerman, amateur radio pioneer in the Salt Lake City area.

The club meets each month except July and August. The meetings are usually held on the second Thursday of the month at 7:30 PM in the University of Utah Warnock Engineering Building, Room 2230.

Club membership is open to anybody interested in amateur radio; a current license is not required. Dues are $20 per year. Pay on the website or send dues to club secretary James Bennett, 4960 W 5400 S, Kearns, Utah 84118. Email address changes to him at **kk7avs@gmail.com**

Tax-deductible monetary contributions are appreciated. Send directly to club treasurer Shawn Evans, 1338 S Foothill Dr, #265, Salt Lake City, Utah 84108-2321. For in-kind contributions, please contact **uarc@xmission.com** to make arrangements.

UARC maintains the 146.620– and 146.760– repeaters, which are administered by the UARC Repeater Committee. Direct comments and questions to any committee member. The 146.760– repeater is on IRLP node 3352.

Call the **UARC Ham Hotline** at **801-583-3002** for amateur radio information, including club, testing, meeting, and membership information. Leave a message, and we'll make an effort to return your call.

2026 UARC Board

President Adam Stribling, KK7NJJ
Exec. Vice President: Jeri Brummett, WJ3RI
Vice President: Bruce Fereday, KF7OZK
Secretary: James Bennett, KK7AVS
Treasurer: Shawn Evans, K9SLE
Media Editor: Noji Ratzlaff, KNØJI
Program Chair 1: Mike McAinsh, KI7MTI
Program Chair 2: Daland Speirs, KC7LNR
Historian: Linda Reeder, N7HVF
Immediate Past President: Marvin Match, KA7TPH

For-late breaking news listen to the UARC Information Net, Sundays at 8:30 pm on 146.620– or visit the announcement page.

We are grateful to our internet service provider XMission, for the donating our web hosting. For account information go to https://xmission.com/ or call 801-539-0852

EIN: **99-0407768**

Utah Business Registration: **575790-0140**