Tri-Lakes Monument Radio Association

Just having fun messing around with radio!

WØTLM Radio Association

Newsletter

May 2025

In this issue:

A Word About the Newsletter

The Newsletter welcomes submissions of articles or other items of interest to WØTLM members. Contributions may be articles, commentary, photographs, notification of events, fun things, reports of interesting radio activities, and more!

It's YOUR newsletter. Let's hear from YOU!

Email Editor

From the Prez
Bob WØHTH

Boost Your On-Air Skills

Welcome to the May edition of the Tri-Lakes Monument Radio Association Newsletter. In April, we have sprung ahead with our clocks and had another informational presentation for our club meeting. The Colorado Connection folks really opened our eyes to an extensive network of repeaters throughout our state. Your VHF/UHF radios should have all the CC repeaters programmed into them. Check out the Tech Topics Tab on the club's website https://www.w0tlm.com/tech-topics for some CHIRP programming files and other programing information. You will have no problems communicating statewide.

As we look forward, May is a busy month for us in the Amateur Radio world. Several of our members will be making the trek to Xenia, Ohio to attend the annual Hamvention. Plenty of seminars and of course vendors. As well, good food is abundant, paired with the opportunity for face-to-face QSOs with fellow hams from around the world! Check out https://hamvention.org/ for more information, such as local repeater frequencies for onsite and traffic information.

Don't forget about our communications support for the Greenland Endurance Ride, May 17 & 18. Our support for this special equestrian event is always an enjoyable and gratifying time for participants, either on horseback or on the radio. Tricia, KØTRD, our club's Community Events Director, will serve as net control for the event. We will be using the club's portable repeater. This event provides a terrific opportunity for you to get on the air and refine your skills. If you have an interest in assisting, contact Tricia at tricia4wd@gmail.com.

If you want to keep up to date on the weather, the daily SkyWarn Weather Net is at 12:30 PM local time via the Cheyenne Mountain Repeater Group on 147.345 MHz. You will get the latest weather forecast for our region and any potential severe weather updates.

Since I seem to be mentioning repeaters so much, the theme of this month's newsletter is our own weekly radio net with particular focus on encouraging participation. You will

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Hot Announcements

- ***May Monthly Meeting:*** Mon, 19 May, 6 - 9 PM, Monument Chamber of Commerce meeting room. Doors open for Connect Time from 6:00 PM to 7:00 PM. Come meet other members, socialize, & have fun! **Speaker:** Amanda Alden K1DDN, ARRL Colorado Section Manager. **Zoom simulcast link** for meetings: https://w0tlm.org/w0tlm-club-meeting You will be placed in a waiting room until the host activates your entry. Please display name & call sign.

- **Endurance Ride Ops:** Sat-Sun 17-18 May, Greenland Open Space. Volunteer to help track equestrian riders and keep them safe. Contact Tricia KØTRD for more information.

From the Prez, continued

find great articles from Fred, KCØGLF on how easy it is to be net control and Dan, NØOLD on volunteering. A weekly amateur radio net plays a significant role in the amateur radio community for several reasons. Let me expand on some of those reasons.

Education and Training: Firstly, our club's mission is focused on education and training. What better way to fulfill that mission than serving as net control. Get radio-active and sign up for our weekly net as Net Control. Consider your time as Net Control to be On the Job Training. A possible barrier to volunteering may be a fear of making mistakes; however, we consider mistakes a sign of good honest effort. We would rather see members attempt to do something than to sit on the bench and watch the Ham Universe go by. With input from several previous net control operators, the Net Control script, which we provide, has undergone several iterations. With that, we have attempted to make it easy to understand and read. Check out Tri-Lakes Net - Net Control | W0TLM for details. What is the most challenging part of Net Control? It is the Question of the Night! Not to worry. It can be as simple or as thought provoking as you like. When I was Net Control last month, my question was " Where is your favorite place to get PIZZA?" Just about everyone had a different place to go or to just make it at home. Ultimately, you don't have to be perfect; just plan on having fun.

Emergency Communications: Secondly, many of us decided to get licensed to enhance and improve our communications resources as part of good ol' Emergency Preparedness. In any case, whether that be a storm, fire or zombie apocalypse, regular nets help operators practice procedures that can be critical during real emergencies. It keeps communication skills sharp and ensures our equipment is functional.

Historically, emergency communications support from amateur radio operators has been a key to helping ensure the safety of our communicty residents. Our regular net, while fun and relaxed, helps develop important on-air skills. (Waldo Canyon Fire, courtesy of ColoradoEncyclopedia.com, 2012).

Skills Enhancement: Our net is intended to be a low-pressure environment, especially for newer operators. Participation will help you get over that mic fright and gain confidence. The net truly gives you the opportunity to get familiar with standard net protocols, phonetics and on-air etiquette, all of which encompasses the verbal skills aimed at making you a better ham operator. Remember we do not expect perfection, just a good honest effort. We want to help improve **YOUR ON-THE-AIR SKILLS**.

Readiness: In addition to verbal skills improvement, the weekly net is a simple way to just test out your gear. You will get some feedback on the performance of your equipment, signal quality, audio, and antenna. Participation in the net provides and promotes consistent on-the-

Continued...

air activity and familiarity in the use of a local repeater. Yes, you will be able to identify and troubleshoot any issues. After the formal net is completed you will have the chance to continue conversation or ask for assistance.

Camaraderie: At club meetings we often joke that we are a social club with a radio habit. The weekly net certainly contributes to that phrase. Our intent is to build a local Amateur Radio Community. Nets build camaraderie and great interaction between newcomers and more experienced members. It is a time to build relationships and connect with some friendly and supportive hams with the outcome of building a strong and supportive Amateur Radio Community.

WØTLM has a long history of camaraderie and socializing. It's all part of the fun! The weekly net is part of the glue that holds us together as an organization and helps to forge productive relationships among our membership. (Photo by Dan NØOLD, WØTLM Foxhunt Picnic, 2017).

Contribution: Lastly, volunteering for NCO allows you to support our club. Remember, our club does not charge membership dues even though it is typical for many clubs to collect membership due. While every member of the club has gifts and talents, not necessarily related to radio, you can make your contribution by considering how you can add value to our club by volunteering for Net Control. Serving as net control is a simple and easy way to make a great contribution to the club. By signing up early to be Net Control you will alleviate a lot of stress from our Net Manager, Stephen, KZØQ who is ever so diligent in soliciting volunteers to be Net Control. Special thanks to Stephen for his time in managing the net as well, thank you to all past Net Control operators.

Remember it is not the class of license that the operator holds, but rather the class of the operator who holds that license.

73

-- Bob WØHTH, President

Got feedback or suggestions for our WØTLM leadership?

Drop a note on our officers with your comments or recommendations for WØTLM.

It's YOUR club. Let's hear from YOU!

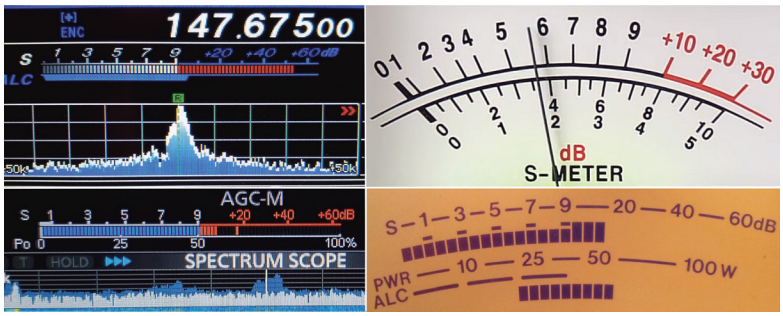
Email Leadership

Tech-Knowledgy
Loren KEØHZ

Let's Talk dBs

In the recent February Tech-Knowledgy column I stated:

> "A 3 dB reduction in power is a 50% reduction in power or 1 S-unit. (You may be thinking I just made an error because you've heard that an S-unit is 6 dB. That's true on your S-meter because that is measuring voltage and a 6 dB reduction or increase in voltage is equivalent to a 3 dB change in power. Perhaps this topic will be a future Tech-Knowledgy article.)"



What do S-meter values really tell you about the strength of received signals? What does a one S-unit change imply exactly?

If you were thinking I really did make an error, you were correct. Here is that future article I promised, and it comes with an apology for two errors. The first error is that a portion of the statement above is **not true**. The second error I made was not checking my assumed fact and relying on a faulty memory from decades ago. The statement I should have made reads as follows:

> A 1 S-unit increase on a receiver represents a 6 dB increase (a quadrupling) of the power of a received signal. This 6 dB power increase results from a doubling of the voltage of the received signal.

Recognizing that this may seem confusing, we're going to have to use a little bit of math to prove this statement. Before your eyes glaze over the equations that follow try to stick with me to the end. There are some very useful purposes to apply this to so hang in there.

Here's the Wikipedia definition of a decibel:

> *A decibel (dB) is a logarithmic unit used to express the ratio between two values, commonly in power, intensity, or amplitude. The standard definition and equation used in electronics is a power ratio expressed as*
>
> $$dB = 10 \log (P_1 / P_2)$$

Continued...

Let's Talk dBs, continued

Your mobile phone probably has a calculator where you can check this work. To prove the statement about the S-unit let P_1 equal 4 times (a quadrupling) the value of P_2. The solution below shows that this is 6 dB.

$$dB = 10 \log (P_1 / P_2)$$
$$dB = 10 \log (4/1) \quad [P_1 \text{ is quadruple } P_2]$$
$$dB = 10 \log 4$$
$$dB = 10 \times 0.6$$
$$dB = 6 \text{ dB}$$

Now let's figure out the power increase if we measure a voltage that doubles. The Power Law you learned when studying for your Technician license says power equals voltage time current (P=EI). We also know from Ohm's Law that current equals voltage divided by resistance (I=E/R).

For clarity I'm going to use V for voltage instead of the Power Law and Ohm's Law use of E (for EMF). Using both the Power Law and Ohm's Law relationships and substituting the relationship for current, we can see that

$$P = V \times I = V \times (V/R) = V^2/R$$

We can now substitute V^2/R for each power variable. Because the value of R is the same in the numerator and the denominator we can eliminate the Rs in the dB equation, as follows:

$$dB = 10 \log ((V_1^2/R) / (V_2^2/R)) = 10 \log (V_1^2/ V_2^2) = 10 \log (V_1/V_2)^2$$

Using a rule of logarithms that $\log X^2 = 2 \log X$, and recalling that V_1 is twice V_2

$$dB = 2[10 \log (V_1 / V_2)] = 20 \log (2) = 20 \times 0.3 = 6 \text{ dB}$$

We've confirmed that the doubling of the voltage results in a power increase of 6 dB or 4 times the power.

A useful rule to remember is that 3 dB represents a doubling of power. 3 dB + 3 dB (6 dB) is a quadrupling of power. 3 dB + 3 dB + 3 dB = 9 dB. The quadrupled power is doubled again to 8 times the power.

Let's think about how this can be useful knowledge. In the February Tech-Knowledgy column we talked about the minimal impact of small dB losses in your transmission lines regarding how your signal may be received by others. To raise your received signal by 1 S-unit at the other end of your QSO that 6 dB voltage increase in the receiver represents a 4 times power increase of the power received! If your system is putting out 100 watts now, a 400 watt signal would be required at the receiver for that 1 s-unit change. This fact may help you conduct a cost/performance trade-off for any amplifier you may be considering before dropping a load of cash!

Continued...

Let's Talk dBs, continued

Here's another practical example of where some dB math comes in useful. Let's say that you want to add an amplifier to a QRP rig you've been using to boost your signal. You've found a candidate amp that is capable of 100 watts, and it has a specified gain of 15 dB. Will your 5-watt transmitter drive that amplifier to its full 100-watt capability? Let's plug the numbers into the dB equation we started with above.

$$15dB = 10 \log (P_{out} / P_{in}) = 10 \log (100/P_{in})$$

The trick to solving this equation for P_{in}, the required power input to achieve 100 watts output, is remembering the quotient rule of logs

$$\log (P_1 / P_2) = \log P_1 - \log P_2$$

Applying this logarithmic rule results in

$$15dB = 10 \log (P_{out} / P_{in}) = 10 (\log 100 - \log P_{in}), \text{ or simply}$$
$$15dB = 10 (\log 100 - \log P_{in})$$

Divide through by 10 to eliminate it from the right side, and isolate log P_{in}

$$\log 100 - 1.5 = \log P_{in},$$

and computing log 100 yields

$$2 - 1.5 = 0.5 = \log P_{in}$$

At this point, to solve for P_{in} we must raise 10 to the value of log P_{in}. 10 raised to the log Pin equals P_{in}. That is, 10 to the power 0.5. Again, using your calculator

$$10^{0.5} = P_{in} = 3.16 \text{ watts}$$

Can it do the job? Use your understanding of decibels to know for sure!

Congratulations, your 5 watt QRP transmitter outputs enough power to drive the new amp to its maximum output of 100 watts. If the gain of this amp had been 12 dB you would have needed 6.3 watts and you wouldn't be able to drive the amp to its max power output. How did I calculate that? A 3 dB change (15 dB – 12 dB) is twice the power. 2 x 3.15 is 6.3!

The formulas above work to calculate attenuation as well as gain. In the earlier example if P_2 is 2 times P_1 (power ratio is ½ instead of 2) the attenuation is -3 dB. On your calculator go ahead and check that 10 log (.5) is actually -3. You run into this -3 dB in numerous places. The bandpass of a filter is typically specified at the frequency where the signal is attenuated 3 dB (known as the break point, cutoff frequency, or corner frequency). The beamwidth of a directional antenna is the angle between the points where the signal is 3 dB less than the peak gain.

Again, apologies for any confusion I may have caused with my previous errors in the February article. Working through these equations awakened quite a few dormant neurons for me, and I hope you find this useful. To close, here are a few calculations to possibly commit to memory to make your dB calculations simpler.

Continued...

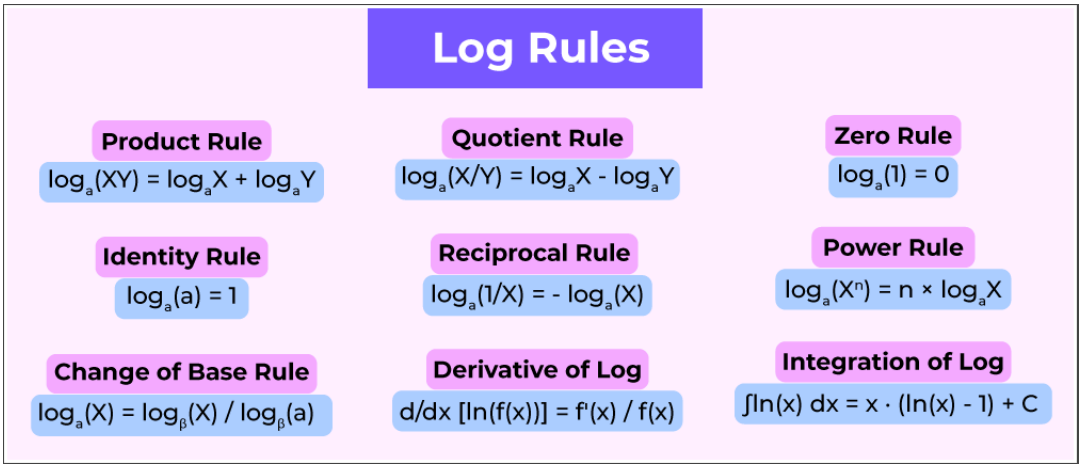
Let's Talk dBs, continued

- 2 times increase of power is 3 dB. Halving the power is a –3 dB reduction.
- 10 times increase in power is 10 dB. 0.1 power is a –10 dB reduction.
- 100 times increase in power is 20 dB. 0.01 power is a – 20 dB reduction.
- For each 10 dB power change you are either adding a zero or adding one decimal place.
- 2 times increase of voltage is 6 dB. Halving the voltage is a –6 dB reduction.
- 10 times increase in voltage is 20 dB. 0.1 voltage is a –20 dB reduction.
- 100 times increase in voltage is 40 dB. 0.01 voltage is a –40 dB reduction.
- For each 20 dB voltage change you are either adding a zero or adding one decimal place.

To further simplify your calculations, you can combine these rules. For example, a 13 dB increase in power is 10 dB + 3 dB. Starting at 10 watts, increasing 10 dB would be 100 watts plus another 3 dB doubles it to 200 watts.

Note: A nice site for log rules is found at https://www.geeksforgeeks.org/log-rules/

73
-- Loren KEØHZ



Event Calendar
May-October 2025

WØTLM Upcoming Events

May 2025

- May 19 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building
- May 17-18 — Endurance Ride Op — Greenland Open Space area - Volunteer!
- May 24 — WØTLM VE Session — Monument Library (Registration required)

June 2025

- June 16 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building
- June 28-29 — ARRL Field Day — Fox Run Park, Pavilions 4 & 5

July 2025

- July 4 — July 4 Parade Op — Downtown Monument
- July 21 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building
- ~~July 26 — PPRAA Megafest — Lewis Palmer High School~~ **CANCELED**

August 2025

- Aug 18 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building

September 2025

- Sept 20 — Annual Club Picnic — Fox Run Park, Pavilions 4 & 5
- (Note: No regular monthly meeting; picnic replaces monthly meeting.)

October 2025

- Oct 4 — Extra License Class Kickoff
- Oct 20 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building

Are you ready to upgrade to Amateur Extra license? Or, just want to understand more?
WØTLM has got you covered with our upcoming Extra License Class!
October 4 - November 15, 2025
Stay tuned for more information coming soon!

Got an Event for the Newsletter?

If you have a recommendation for an event to include in our newsletter, let us know. We'll add it to next months listing.

It's YOUR newsletter. Let's hear from YOU!

Email Editor

Photo of the Month
Blast from the Past

From 2010 to 2013, WØTLM worked closely with local BSA Troop 6 to license more than 20 scouts plus many of their parents. These photos from 2011 depict some of the scouts participating in a WØTLM workshop on soldering in which each scout completed a simple time difference of arrival (TDOA) circuit to connect to their HTs and perform direction finding of RF signals. Many of these scouts also participated in other projects, such as building tapemeasure Yagi antennas for 2 meters and using them in a competitive foxhunt event that was a cover feature for QST magazine in 2012.

Licensed Troop 6 scouts follow instructions for constructing circuits using through-hole component soldering.

James KDØMFO helps Ethan KDØMFP solder a component onto a TDOA device printed circuit board.

Many of these scouts, now in their late 20s, have maintained or upgraded their FCC licenses over the years. Seen here are:

- Brandon Hippe KDØPWF
- Michael Merola KDØLLC
- Cole Turner WØCOL (Gen)
- Andrew Premovich KDØLLG (Gen)
- Jeremy Meadows KDØMWT
- Hayden Lingle KDØMWR (exp.)
- Ethan Bucknall KDØMFP
- Kent Griffith KDØMFR

(Photos by Bob KØNR)

Got an interesting photo for the Newsletter?

If you have a fun, historical, or just interesting image to include in our newsletter, let us know. Technology, people, situations, gear, just about anything.

It's YOUR newsletter. Let's hear from YOU!

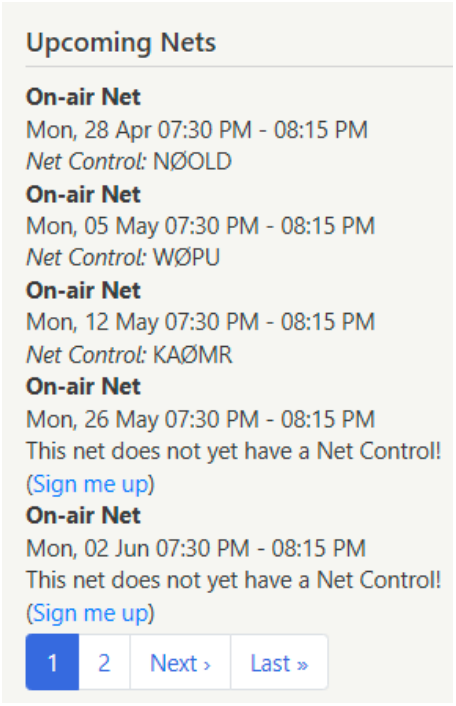
Email Editor

Operating Tips
Fred KCØGLF

Five Observations from a First-Time Net Control

This article is directed at those of you, who like me just a few days ago, would be considered a “Net Control virgin.” Have you participated in a weekly net and wondered what it would be like to be Net Control, only to have your lack of experience as a ham or your life schedule hinder you from volunteering? Are you nervous talking on the radio, or do you fear you might say the wrong thing if you are Net Control? Maybe you’ve never taken the time to even call in for one of our weekly nets, or possibly you have just completed your training course, aced your test (of course!), and have recently received your Technician’s License and now you want to get involved. If any of these apply to you, please read on as I provide five personal observations about being a first-time Net Control.

1) Signing up to be Net Control is Extremely Easy! In fact, there are multiple ways that you can sign up to be Net Control. The easiest way is to click the “Sign me up” button on right side of the Tri-Lakes Net page of the WØTLM web-site (https://w0tlm.com/tri-lakes-net). You can pick an open date that works for you and simply press the button! If that is too difficult, our Net Manager, Stephen (KZØQ) always sends out reminder emails about the net, and you can easily volunteer by responding to one of his emails.



Just click “Sign me up” for the net date you want! Too easy! https://w0tlm.com/tri-lakes-net

2) If you can read, you can be Net Control! In addition to the plethora of great information on the Tri-Lakes Net web page, the best thing you will find as a new Net Control is the script. (Note: For those former Net Controls who may still be reading, please note that the Net Control script was re-vised on February 16, 2025, so if you have one in your ham binder, you may need to do a remove and replace.) The script makes being Net Control easy as pie. You simply follow the script, and you will be good to go!

3) Our club members could not be more supportive and encouraging! I suspect one of the biggest fears new Net Controls have is that they might say the wrong thing while running the net. While this is a common feeling, I can assure you that it is totally unnecessary. We are so fortunate and blessed to be a part of a club that values training and experience. Not only do we have great Elmers who will stop at nothing to provide excellent mentorship to anyone that needs it, but several of them are likely to be on the net that you are running. In-stead of worrying about what they may think of your performance, you should know that they

Continued...

are there to help if you don't understand something or the net goes "off script." All our members who participated in my first Net Control were so encouraging and complementary!

4) Literally the hardest part of being Net Control is coming up with the "Question of the Night." No. Seriously. The hardest part about being Net Control really is coming up with the "Question of the Night." The nice thing is that you can pick a question, the answers to which you are comfortable engaging in a short conversation. As an HT-only ham, it wouldn't make sense for me to pick a question like, "What's the most impressive piece of equipment in your Ham Shack?" because I probably wouldn't have any idea what they were talking about. But I could, and did ask, "What is the best/coolest/most amazing event you have ever attended, witnessed, or participated in?" That's a discussion I can engage in and feel comfortable. Again, the web page has a lot of great information including past questions. Not only will this help prevent duplicates, but it may spark some ideas for your own Question of the Night when you are Net Control.

5) I suggest making a spreadsheet so you can record all the participants Call Signs, names, locations, and any notes you want to make. Next to the script, this spreadsheet was the most important thing I did to set myself up for success. As people called in, I wrote down their pertinent information. I knew exactly who was on the net and made personal notes to help facilitate any conversation I wanted to have with other hams. It is a simple thing that paid great dividends!

BONUS: You don't need an amateur radio suite to be Net Control! While many hams have amazing suites of equipment and antennas that will allow them to communicate across the globe, my ham radio suite consists of a Yaesu FT-65 HT that I purchased as part of a package deal at the Ham Radio Outlet in Denver after I received my Technician License. Everyone has their own reasons for getting into amateur radio. Mine was primarily for emergency communications with my extended family in the local area if the cell network went down. My HT works just fine for that, but it also worked just fine using it to be Net Control. We are fortunate that Brian (NØXLF) and Scott (NØOBA) allow us to use their repeater for our net. If you only have an HT and can communicate with the NØXLF repeater, you too, can be Net Control!

My net control station. This is all you need!

In closing, my first time being Net Control was a wonderful experience! The resources provided by the club made it very easy, and the support and encouragement from club members were a great motivation. If you've never been Net Control, I'm confident it will be a great experience for you, too! Not only will it improve your confidence on the radio, but it will ensure that guys like Dan (NØOLD) get a well-deserved break from being Net Control. As that Elmer told me at that first meeting, if we all took one Net Control each year, we would each only have to do it once.

73
-- Fred KCØGLF

Guest Article
Dan NØOLD

Why Volunteer for WØTLM Net Control?

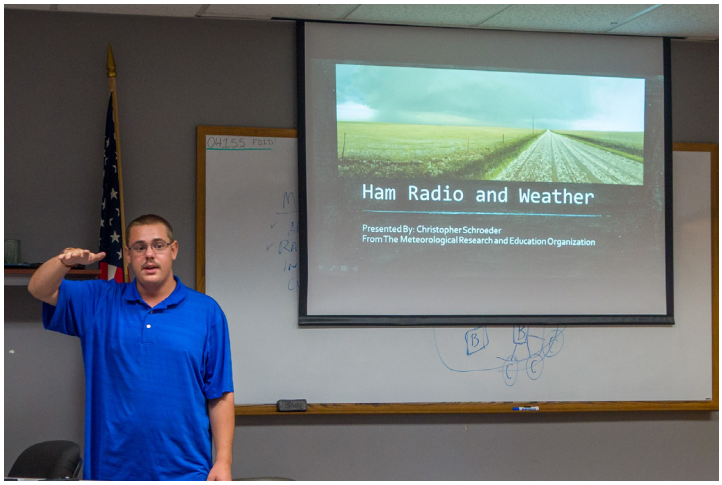
The first question I'd ask is: Why not? The weekly W0TLM net is the first choice where club members connect over the airwaves. For new hams, it's a welcoming, low-pressure environment to get on the radio without worrying about slip-ups. It's a friendly space for everyone—beginners and seasoned operators alike—to interact, build skills, and learn to operate with confidence and professionalism.

We're all busy—it's just how life works. Whether you're new to the hobby, juggling family and kids, or retired with a "never bored" mindset, time is tight. But here's the good news: serving as Net Control takes just one hour of your week. That's it!

What's the Point of the Net? The W0TLM net serves many purposes. At its core, it's a vital resource in a real emergency—a hub for sharing information, requesting help, passing messages, checking in, or simply staying connected with like-minded people. Located in northern El Paso County, our club's net could become a lifeline if disaster strikes.

Picture this: a major emergency hits, and the club needs to run a net 24/7 for a day—or even several days. Having a team of trained, confident Net Control operators ready to step up could make all the difference. It's not just about keeping the bands organized; it could literally save lives, fulfilling the highest ideals of amateur radio.

Why It Matters: You don't need to watch much news to know disasters happen. We live in a heavily forested area prone to wildfires—just think of the Waldo Canyon and Black Forest fires as recent wake-up calls. A major rail line runs through Monument, mostly hauling coal but occasionally carrying hazardous materials or military equipment headed to Fort Carson, Peterson Space Force Base, or the Air Force Academy. Derailments, like the 2023 East Palestine, Ohio incident, are a real risk. And don't forget our extreme weather—tornadoes, although rare, even touch down here from time to time. Hail is all too often a damaging and dangerous occurrence.



Chris Schroeder WXØCAS presents at a WØTLM meeting on weather spotting and ham radio communications.

Any of these events could knock out cell phone service, leaving us stranded. That's where ham radio steps in as our reliable backup.

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Why Volunteer for WØTLM Net Control? continued

A Club That Thrives on Volunteers: W0TLM is a fantastic club with a rich history of community involvement—think events like the 5K Run for Hope, the Monument July 4th Parade, and more. These efforts succeed because members step up, bringing their equipment, expertise, and time to help others. Volunteering isn't just a nice-to-have; it's a core value of our club.

WØTLM club members providing communications support for the Monument Run for Hope 5K event for suicide prevention and awareness.

I've been involved with W0TLM for 15 years, either as Net Control manager or an active Net Control officer. That time on the net taught me how to operate a radio in an organized way—following a script, guiding others, and keeping things running smoothly. It's been a rich experience, and I'd volunteer in a heartbeat to help during a real emergency.

Ready to Step Up? We only need about 40 people a year to serve as Net Control, since the third Monday of each month is reserved for our in-person club meetings. Here's my challenge to every active member: sign up to be Net Control just once a year. Imagine if we had so many volunteers that some had to wait for the next year to get a slot! Let's build a long list of people eager to contribute. This club gives us so much—free membership included—so why not give a little back with our time?

Please, join in and make a personal contribution to W0TLM. You valuable time. It's worth it.

73
-- Dan NØOLD

Sign up today to serve as Tri-Lakes Net Control. We can all do our part!
Its easy. It's fun. It's rewarding. It will help to hone your communications skills.

Click here to sign up at the WØTLM website.

Want to write a piece for the Newsletter?

Share your knowledge or your story with your clubmates!
Write a guest article for the Newsletter.

It's YOUR newsletter. Let's hear from YOU!

Email Editor

Member Comments

KDØYMC

I have done the net several times over the last few years. It's a great opportunity to get on the air and to develop skills to run a directed net. If you are going to do any ARES or CERT type activities (or other public service events), you will need to know the protocols and the patterns for a directed net. It is very important to have structure so it comes naturally if asked to lead. I have worked on directed nets from the Pikes Peak Hill Climb, the Pikes Peak Marathon, a few running and biking events, and our club supported equestrian event in Douglas County.

-- Robert KDØYMC

KFØRIG

I think being net control helps one to develop the skill to handle pile ups in POTA/SOTA activations.

-- Matt KFØRIG

KFØMCB

I think net control is pretty fun and easy do. The hardest part, honestly, is thinking of a question for the net. I try to volunteer whenever I know I'm not busy as it helps the club out and it is good practice at handling traffic.

-- Logan KFØMCB

WØSTU

What changes to the net would increase your participation as net control or as a check-in station? What would you like to see (or hear?) that would make the net more enjoyable or interesting to you? Let us hear from you in a comment for the June issue of our newsletter. Just click the green button below to email us with your ideas.

-- Stu WØSTU

Got a comment for the Newsletter?

Share your thoughts with your clubmates about anything club, radio, or technology related! Drop your comments on the Newsletter.

It's YOUR newsletter. Let's hear from YOU!

Email Editor

Just for Fun

Ham Cryptogram!

What is a Cryptogram?

A cryptogram is a simple substitution cipher. In a substitution cipher, each of the letters in the original message is systematically replaced by another letter. So for example, all of the A's in the original message might be replaced by M's in the encrypted message. Anywhere there is an M in the encrypted message, you would replace it with an A to return to the original message.

How to Solve Cryptograms

Here are a few tips that should help you get started:

Pencil in a possibility. Fill in all examples of that letter in the puzzle, then see if you have created a dead end and need to go back. For example, say you have decided that the letter S is an I, but then you discover that one of the encrypted words reads XSS. You know that there is no word in the English language that ends with two I's, so you need to find a different substitute for the S.

Consider letter frequency. Typically, the most common letters used in English are: E, T, A, O, I, and N. These will be the letters you are most likely to find in most cryptograms.

Solve any single letter words first. In English the only single letter words are A and I.

Look for common, small words next. The most commonly used words in the English language in order of frequency are: the, of, and, to, in, a, is, that, be, it, by, are, for, was, as, he, with, on, his, at, which, but, from, has, this, will, one, have, not, were, or, all, their, an, I, there, been, many, more, so, when, had, may.

Two optional hints are provided as links below... IF you need them!

Here is Our Ham Cryptogram:

P qpv jpazc ciujplcj zt tcvucfu sqc tchnut ijcehuvt bcr funuj yfus uxztlua zf spbt lqpl szhh ehcs bcrj vzfa.

See Hint #1

See Hint #2

View the solution here. Don't peek!

Admin & Info

News Items of Interest

Amateur Radio Emergency Preparedness Act Re-Introduced

U.S. Senators Roger Wicker, R-Miss., and Richard Blumenthal, D- Conn., and Representatives August Pfluger, R-Tex., and Joe Courtney, D-Conn. announced their joint re-introduction of legislation in the Senate and House to restore the right to Amateur Radio operators to install the antennas necessary to serve their communities. The legislation would reduce HOA restrictions on antennas.

Among other provisions, this legislation would:

- Prohibit homeowner association rules that would prevent or ban Amateur Radio antennas;
- Specify an approval process for installing Amateur Radio antennas;
- Provide a Federal private right of action to Amateur Radio operators in disputed cases

Read more about this Act at ARRL News: https://www.arrl.org/news/amateur-radio-emergency-preparedness-act-re-introduced

HamSCI Call for Operators and Monitors 2025

HamSCI, Ham Radio Science Citizen Investigation, is preparing now for a series of meteor scatter (MS) experiments later this year and need amateur radio operators to help.

While the target storms are in August (Perseids) and December (Geminids) preparation and testing is already underway. This is a combination 'special event' and a contest to generate contact data during meteor scatter events using 10 meters and 6 meters.

Read more about this activity at ARRL News: https://www.arrl.org/news/hamsci-call-for-operators-and-monitors-2025

First Amateur Radio Contacts from SpaceX Dragon

Rabea Rogge, LB9NJ/KD3AID, a private astronaut on the crew of the Fram2 mission, has conducted the first amateur radio contacts from aboard a SpaceX Dragon capsule. The Fram2 flight sets many firsts, including being the first crewed mission to do polar orbits of the Earth, and Rogge became the first German woman in space.

Read more about this story at ARRL News: https://www.arrl.org/news/fram2-astronaut-conducts-first-amateur-radio-contacts-from-spacex-dragon

Admin & Info
WØTLM Officers & Appointees, Etc.

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License Class Directors: Stu Turner WØSTU & Bob Witte KØNR
Newsletter Editor: Melissa KFØPLU - We need someone! Get info.
Community Events Director: Tricia Olson KØTRD

Repeaters:

WØTLM-R
447.725 MHz
-5.0 MHz offset
100.0 Hz CTCSS

NØXLF-R
147.075 MHz
+0.6 MHz offset
131.8 Hz CTCSS

Colorado Connection KBØVJJ
145.130 MHz
-0.6 MHz offset
88.5 CTCSS

Take Your License Exam!

Next WØTLM Volunteer Examiner Sessions:

May 24, 2025 10:30 am
Monument Library Meeting Room

All license level exams offered, Technician, General, & Extra.
Pre-registration is required.

Register for a Session

Net Control Officers:

May 5: **Hans WØPU** *(Thanks Hans!)*
May 12: **Monte KAØMR** *(Thanks Monte!)*
May 26: Need NCO
Jun 2: Need NCO

Volunteer today to be the NCO for an upcoming net! It's easy!

Sign Me Up for NCO! ***Read the Easy NCO Script***

King Sooper Fundraising!
Earn easy $$$ for WØTLM!

Connect your King Soopers card to the **Community Rewards Program** and select our club as the nonprofit organization. The club will receive quarterly payments based on purchases. It costs you nothing and is a wonderful benefit for the club. Log into your account (tied to your King Soopers Card) or create an account if needed. Select *Community Rewards Program*, Type in *Tri-Lakes Monument Radio Association* (or use our account number, **KM150**). Press "Enroll" and you will receive a confirmation. It is that easy! Please sign up today to benefit WØTLM!

Admin & Info
Local Education Events & Resources

Digital Library of Amateur Radio & Communications (DLARC)

For anyone who is not familiar with DLARC... you really should check it out: Free Texts : Free Download, Borrow and Streaming : Internet Archive

DLARC is a library of materials and collections related to amateur radio and early communications. It is funded by a grant from Amateur Radio Digital Communications, a private foundation, to create a digital library that documents, preserves, and provides open access to the history of the amateur radio community.

This free resource combines archived digitized print materials, born-digital content, websites, oral histories, personal collections, and other related records and publications. The goals of DLARC are both to document the history of amateur radio and to provide freely available educational resources for researchers, students, and the general public. -- 73 Bill WT0DX

WØTLM Radio Gear Loans

Portable Station: Icom IC-7300 HF+6m and Kenwood TM-V71A VHF/UHF transceiver. Both mounted in Gator case. Coax, vertical antenna available for 10 - 80 meter bands. Optional large telescoping mast. Email WØSTU for queries.

Other small items and tools available. Contact Chip KØCHP for queries.

WØTLM Presentations

Our WØTLM website features a tremendous array of presentations on numerous subjects. If you find one that you need more info on just contact the Elmering crew: w0tlm-elmer@w0tlm.org

There are no stupid questions!

The WØTLM Elmer Team has the answers. Our volunteer Elmers will help you with anything ham radio related. If you have more than a question or two and would like to be paired with a friendly Elmer, please let us know and we'll connect you. Email us:
w0tlm-elmer@w0tlm.org

Solar Activity

Solar Flare Alerts: Sign up for Space Weather Alerts and get instant text notifications when solar flares are underway. There are numerous sites and ways to check and see where and what the chances are of that great contact. One to check is W5MMW solar site. Check it out. Also these sites provides solar data: NØNBH SpaceWeather.com

RM HAM University

Check out the offerings and sign up here.

- May 3 DMR Tech Net (7:00 pm)

Upcoming education events TBD. Check website.

Visit the RM Ham U website for past presentations. They have an abundance of information shared amongst the ham community!

Upcoming Events & Hamfests

5/16-18/2025 Hamvention Xenia, OH, Greene Co. Fairgrounds
The largest ham radio convention in the world!

~~**7/26/2025** PPRAA Megafest Lewis Palmer High School~~
Megafest 2025 has been canceled by PPRAA.

09/19-21/2025 Duke City Hamfest, Albuquerque, NM

10/05/2025 BARCFest Boulder County Fairgrounds, Longmont, CO.

10/23-26/2025 ARRL Rocky Mountain Division Convention.
HamCon Colorado 2025. Grand Junction, CO.
See the event flyer on the next page and sign up today!

Admin & Info
Local Education Events & Resources

Whether you're a seasoned ham operator, a curious newcomer, or a tech enthusiast, this is the event you won't want to miss.

Date: October 23-26, 2025
Location: Hilton DoubleTree - Grand Junction
Learn More: https://www.hamconcolorado.com

Why Attend?

- **Inspiring Keynotes** – Hear from industry leaders and innovators in amateur radio.
- **Hands-On Workshops** – Learn new skills, build kits, and get on the air with expert guidance.
- **Exhibits and Vendors** – Explore the latest equipment, gadgets, and technologies from top brands.
- **Networking Opportunities** – Connect with fellow radio enthusiasts and clubs.
- **Special Events** – Participate in contests, prize drawings, and more!
- **DX University** – Learn some of the biggest "trade secrets" from the best DXers in the business.

Who Should Attend?

- Amateur radio operators (all levels)
- Emergency communication teams
- Electronics and tech hobbyists
- Families and anyone curious about amateur radio

Mark Your Calendar and Register Today! Early Registration is only $25!
Visit www.hamconcolorado.com for event updates, registration details, and hotel accommodations.
Don't miss out—HamCon Colorado 2025 is your gateway to the world of amateur radio!
Follow us on Facebook for the latest news and announcements.

Call for Papers and Forum Speakers

Passionate about amateur radio? Submit your proposal to speak at HamCon and share your expertise with the community.

About the Event: HamCon Colorado is one of the premier gatherings for amateur radio enthusiasts, featuring workshops, exhibitions, networking, and forums. Whether you're an experienced operator or a beginner-friendly mentor, contribute to our community's growth. We will also be producing a professional proceedings document to publish your works!

Forum Topics of Interest

We welcome a wide range of topics, including but not limited to:

- Emerging Technologies in Amateur Radio
- Antenna Design and Optimization
- Digital Modes and Software Tools
- Emergency Communications and Preparedness
- Portable and QRP Operation Techniques
- Satellite Communication and Space Exploration
- DIY Projects and Homebrewing Equipment
- Licensing, Operating Tips, and Contesting Strategies
- Youth Engagement and Education in Ham Radio

We look forward to hearing your ideas and welcoming you as a speaker at the HamCon Colorado, Rocky Mountain Division Convention!

Submission Guidelines

Deadline for Submissions of Forums: September 23, 2025
Deadline for Submissions for Publication: August 31, 2025
Proposals should include the following information:

- Title of Presentation
- Presenter Name(s) and Contact Information
- Brief Bio of Presenter(s)
- Abstract (150–250 words) outlining your topic and its relevance
- Audio/Visual and Technical Requirements

Send your proposals via our Indico tool at: https://forum.hamconcolorado.com
You will need to create an account to be allowed to post.

Questions? For more information, visit our website: https://www.hamconcolorado.com
Or contact us directly at forum@hamconcolorado.com

Classified Ads

Member Gear for Sale

LDG AT600 Proll Tuner
with ICOM cable, in original box
https://www.ldgelectronics.com/at-600-proii
$275.00
Contact Rex WDØAJG wd0ajg@gmail.com

ICOM AT180 Auto Tuner
with ICOM cable, in original box
https://www.icomjapan.com/lineup/options/AT-180/
$250.00
Contact Rex WDØAJG wd0ajg@gmail.com

Dell Docking Station for XPS (Micro USB power)
WD19S180W, includes the power brick (not shown)
Dual monitor, USB3, network, etc.
Make Offer
Contact Rex WDØAJG wd0ajg@gmail.com

Samsung 24” monitor - 1920 x 1080, used, on stand
$35
Contact Rex WDØAJG wd0ajg@gmail.com

Got an advertisement for the Newsletter?

Provide one or more photos of the item (.jpg or .png preferred).
Provide a complete description of the item.
Include a characterization of the condition of the item.
Include an asking price, indicate whether negotiable.
Ads expire monthly and will not be repeated without a resubmission.

It’s YOUR newsletter. Let’s hear from YOU!

Send Your Ad

WØTLM Radio Association