

Tri-Lakes Monument Radio Association

Just having fun
messing around with radio!



Newsletter

March 2025

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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



Springing Forward

Here we are in March, getting ready for the seasonal temperatures of Spring and whatever that may bring. Our club now has an approved budget for the year, along with a new Constitution. More importantly, as one of the primary missions of our club is education, a new Technician and General License class has begun!

March License Class

The class kick-off session was Saturday, March 1, 1:00 PM at Woodmoor Barn Community Center. Thanks to the efforts of Stu, WØSTU and Bob, KØNR, our club has been offering classes for over 15 years. In just the last 10 years alone we have successfully helped over 420 new amateur radio licensees earn their Technician license and over 120 folks upgrade to the General license. In 2023 we identified the need for providing a class for the most coveted Amateur Extra Class license, and sure enough we successfully minted 28 new Extra's.

These classes also bring a lot of attention to our club. Club members actively participate as Elmers for the students. These relationships build and encourage new "hams." Remember you may be the only amateur radio operator someone may meet. This exposure to our membership leads many of the class graduates to decide to participate as members of our club or even to serve as officers...like me! Further, a primary benefit of these classes is that part of the tuition that is paid goes to support our club financially.

I am sure you can see that this focus on education and licensing has significantly contributed to the success and life blood of our club. Allowing us to pursue our other organizational goals. This is how we can continue to support communications for local community events such as the Endurance Ride coming up in May, and of course, our social events like Field Day and the club picnic. Don't forget we still do not collect dues for membership. We plan to continue

Continued...



Hot Announcements

- **License Class Student VE Session:** Saturday March 29, 10:30 AM. Priority seating for license class students. All license level exams offered. Pre-registration required for all: <https://w0tlm.com/exam-team>
- **March Monthly Meeting:** Mon, 17 March 06:00 PM - 09:00 PM. Doors open for Connect Time from 6:00 PM to 7:00 PM. Come meet other members, socialize, & have fun!
Zoom simulcast link for the meeting: <https://w0tlm.org/w0tlm-club-meeting> You will be placed in a waiting room until the host activates your entry to the meeting. Please display name & call sign.

From the Prez, continued

course offerings again in the fall with our current thought of this being another Amateur Extra license class. Please let us know of your interest in this class.

Revised Net Script

In our efforts for continuing improvement, we have updated and revised the Net Control Station script for conducting our Monday night on-air net. We hope that this will make it even easier for you to direct the Net. If you have not yet participated in the net or even been a net control operator, [step up to the plate](#). This script should make it almost effortless for conducting the net. Don't worry about making mistakes, we consider that a sign of a good honest effort.

You Can Help!

We have a great club with an equally great membership that enables our club to continue to grow. With that thought in mind, please consider participating in the activities framed by our Leadership Team. We simply have too many one-deep positions, and we would like to build our team's bench. Our most pressing needs are in the areas of audio visual set up for club meetings, Treasurer assistance, and Newsletter support. We are not looking for you to jump right in and perform the duties required, but rather get some on-the-job training and eventually step in as back-up or even the primary person responsible for these position duties. Our goal is to have smooth transitions in the future for all of our elected offices, appointees, and committees.

As always, thanks for your support. Remember, it's not the class of license that the Amateur holds, but the class of the Amateur that holds the 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-Knowledge

Bob KØNR



Handie-Talkie or Walkie-Talkie?

(First published on the [KØNR Radio Site](#))

In ham radio, we often use *Handie-Talkie* or *HT* to describe a compact, handheld transceiver. My first exposure to the term Handie-Talkie was when I became a licensed radio amateur in 1977. As a student at Purdue University (W9YB), the absolute coolest VHF radio to have was the Motorola HT-220. Even a used one commanded a high price so they were out of my price range and I never owned one. These were 6-channel crystal-controlled transceivers...back then you had to set up the radio with the particular 2m frequencies you wanted to use. Because it was such an iconic radio, there are many HT-220 enthusiasts still around with websites with tons of useful information. See the HT-220 Page.

Motorola trademarked the name Handie-Talkie and used that nomenclature for many years with its line of portable radios. However, this trademark has expired, so now Handie-Talkie is a generic term.

The First Handie-Talkie

But the HT-220 was not the first Handie-Talkie, so I started poking around to find out how this name originated. Back in World War II, the SCR-536 was a portable "hand-held" transceiver developed in 1940 by Galvin Manufacturing (later Motorola, Inc.) I put "hand-held" in quotes because, by today's standards, it was a Hand FULL. But most people consider the SCR-536 to be the first modern, self-contained HT transceiver. The [Wikipedia article for the SCR-536](#) describes the radio quite well. The radio put out about 360 mW of RF power on 3.5 and 6.0 MHz (Oops, I mean 3500 to 6000 kilocycles) using Amplitude Modulation (AM). The circuitry relied on smallish vacuum tubes, creating quite a design challenge. Motorola has a page on its website that talks about the origins of the radio. IEEE Spectrum also published an excellent article: [The SCR-536 Handie-Talkie Was the Modern Walkie-Talkie's Finicky Ancestor](#). The January 2005 issue of QST has an interesting article by Gil McElroy, VE3PKD, [A Short History of the Handheld Transceiver](#). It provides more history and insight into this fun topic.



The SCR-536 Handie-Talkie



The Motorola HT-220 Handie-Talkie

Continued...

Handie-Talkie or Walkie-Talkie? continued

The First Walkie-Talkie

A few years later (1942), a backpack portable radio was introduced, called the SCR-300. I always assumed that the backpack-style radio would have come first and the more compact radio SCR-536 would be later. (Actually, there were previous backpack radios, such as the SCR-194). This new backpack-style radio was referred to as a *Walkie-Talkie*. According to the manual, the SCR-300 was “primarily intended as a walkie-talkie for foot combat troops”. I suppose the emphasis was on how you can walk and talk, with a radio on your back.

This article: [SCR-300 WW2 Radio Backpack: The “Walkie Talkie” That Shaped the War](#) describes this radio as a game-changer for frontline troops. The radio weighed a heavy 35 pounds, and used Frequency Modulation (FM) on 40 to 48 Megacycles.

Of course, with technology development, there is always the question of “who was first”? The SCR-194 that predated the SCR-300

might be considered the first walkie-talkie. However, the SCR-300 and the SCR-536 seem to get all of the glory, probably due to their impact on the war effort. However, take a look here if you want to dig deeper: [TALK the WALK or WALK the TALK: Who actually developed the first Walkie-Talkie?](#)

This article describes the development and use of the SCR-300 and mentions some of the limitations of the SCR-194: [SCR-300 History Development Employment and Details Final Draft](#). This is a big file with many photos but worth reading if you have the time.

Today’s Terminology

Fast forward to today and we see that the HT and Handie-Talkie nomenclature is common in the amateur radio world. The photo to the left shows a modern 2m/70cm HT, the Yaesu FT-4X.

The term “walkie-talkie” has morphed to something quite different and is used generically to describe a handheld radio. This term covers a wide range of radios, from low-cost Family Radio Service (FRS) radios to higher-quality professional radios. This is quite different from the original Walkie-Talkie, a backpack radio weighing 35 pounds.

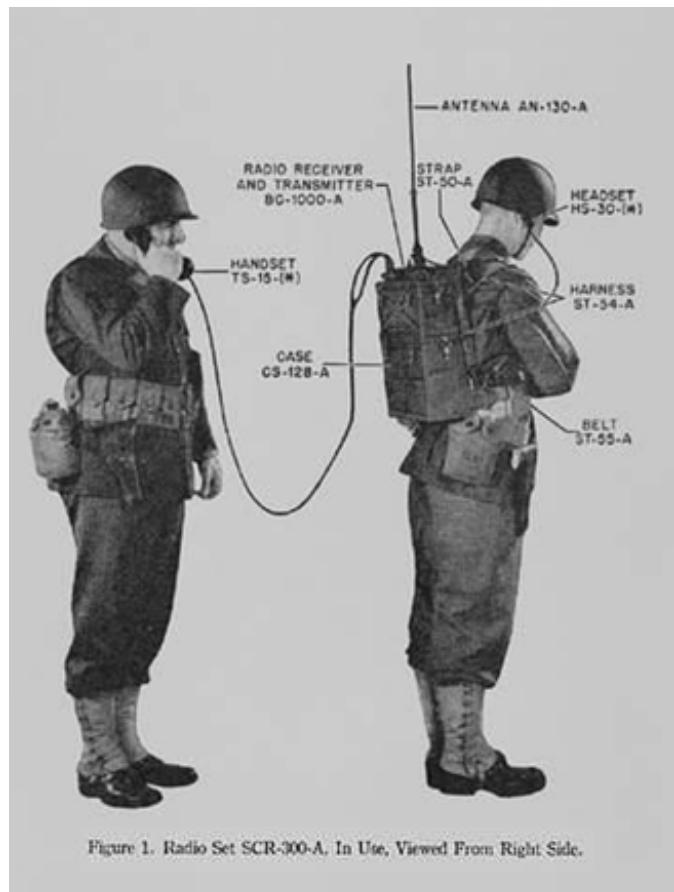


Figure 1. Radio Set SCR-300-A. In Use, Viewed From Right Side.

The SCR-300 Walkie-Talkie transceiver



The Yaesu FT-4X

Handie-Talkie or Walkie-Talkie? continued

The military has progressed with improved communication technology, still using backpack-style radios, now referred to as manpack radios. These are amazing radios that pack extensive capability into a relatively small package. The AN/PR-158 shown below covers 30 to 2500 MHz in frequency, satellite comms, advanced encryption, narrowband and wideband modes: AM, ASK, FM, FSK, PSK, CPM, GMSK, and plenty more. This radio weighs 12.7 pounds with the battery installed, so a lot lighter than the old SCR-300.



A modern military manpack radio (AN/PR-158)

So that's a quick tour through some radio terminology along with a bit of historical perspective. I discovered there is an infinite supply of information out there on the history and technology of military radios. If you want to dig deeper, go for it!


73
-- Bob K0NR

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](#)



W0TLM
Newsletter



Event Calendar

March-August 2025



WØTLM Upcoming Events

March 2025

- Mar 1 License Class Kickoff Woodmoor Barn
- Mar 17 Monthly Meeting Tri-Lakes Chamber of Commerce Building
- Mar 29 VE Session Monument Library ([Pre-registration required](#))

April 2025

- Apr 5 License Class GOTA Woodmoor Barn
- Apr 21 Monthly Meeting Woodmoor Barn (Note change of venue)

May 2025

- May 19 Monthly Meeting Tri-Lakes Chamber of Commerce Building
- May 17-18 Endurance Ride Op Greenland Open Space, Spruce Mt.

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

August 2025

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



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.

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Email Editor



Photo of the Month License Class Kickoff!



March 1, 2025: Stu WØSTU and Bob KØNR provide license class students an introduction to ham radio at Woodmoor Community Center Barn. Parallel classes are underway for the Technician license and for the General license, each with the goal of exam success at the WØTLM session on March 29th. Good luck students! Photo by Joyce KØJJW.

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.

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Email Editor



Operating Tips

Stu WØSTU



Stick to the VHF/UHF Band Plans

A topic that is often overlooked or poorly understood by new ham operators is the frequency use band plan recommended by regional frequency coordination bodies. While the FCC imposes a [regulatory band plan](#) with which most hams are intimately familiar, more detailed voluntary band plans are established by local frequency coordinators to help ensure efficient use of spectrum and to help avoid RF interference between stations using different modes or operating for different purposes. While voluntary, operator adherence to such local band plans is considered good amateur practice, and you should make certain that you are familiar with our local Colorado regional band plan.

CCARC

The Colorado regional frequency coordinator is the Colorado Council of Amateur Radio Clubs (CCARC). This body is comprised of representatives from amateur radio clubs around the state, including WØTLM. The responsibilities of CCARC include the establishment of Colorado detailed band plans, the coordination of repeaters across the state to avoid interference, and the establishment of amateur radio policies for the state. Let's take a look at the basics of our CCARC band plan for the 2-meter band (below) and consider some implications for typical on-air operations.

Frequency (MHz)	Type	Sub-band	Usage
144.000-144.050	Non-channelized	-	CW/EME
144.050-144.100	Non-channelized	-	CW Weak Signal
144.100-144.275	Non-channelized	-	CW and SSB Weak Signal
144.275-144.300	Non-channelized	-	Propagation Beacons
144.300-144.500	Non-channelized	-	Satellite/OSCAR
144.500-144.900	Coordinated	Repeater	Repeater Inputs
144.900-145.100	Non-channelized	-	Weak Signal, FM Simplex, Digital
145.100-145.500	Coordinated	Repeater	Repeater Outputs
145.500-145.800	Non-channelized	-	Miscellaneous and Experimental Modes
145.800-146.000	Non-channelized	-	Satellite/OSCAR
146.000-146.400	Coordinated	Repeater	Repeater Inputs
146.400-146.595	Channelized	FM Voice Simplex	FM Voice Simplex
146.595-147.405	Coordinated	Repeater	Repeater Outputs
147.405-147.585	Channelized	FM Voice Simplex	FM Voice Simplex
147.585-148.000	Coordinated	Repeater	Repeater Inputs

Continued...

Stick to the VHF/UHF Band Plans, continued

CCARC 2-meter Band Plan

The CCARC 2-meter band plan on the previous page specifies sub-bands for various uses within the regulatory band of the FCC. Sub-bands are designated for repeater use, for simplex use, for CW and SSB use, and other special mode operations. Notice the following characteristics related to the most common operations on 2 meters:

- Repeater input and output sub-bands are assigned to provide 600 kHz separation for repeater offsets. For instance, our local NØXLF repeater with output frequency of 147.075 MHz is located in the repeater output sub-band 146.595 – 147.405 MHz, and its input frequency of 147.675 MHz is located in the 147.585 – 148.000 MHz sub-band, providing the repeater’s positive offset.

With repeaters, the frequency pairs are predesignated, so you are automatically complying with the CCARC band plan when you use a repeater. No-brainer.

- Sub-bands are designated for FM voice simplex operations, unique from other sub-bands. For instance, two channelized sub-bands for simplex voice are 146.400 – 146.595 MHz and 147.405 – 147.585 MHz.

So, when communicating by simplex voice, you should use a frequency within one of these two specified sub-bands. However, that’s not the complete story with simplex...

- Further, 26 specific frequencies within the voice simplex sub-bands are designated as standard-use channels for simplex communications, depicted to the right. These 26 channels include the national calling frequency for 2 meters on 146.520 MHz, and all specified channels are separated by 15 kHz to accommodate nominal FM signal bandwidth. This avoids overlapping of adjacent channel FM signals in the spectrum, eliminating interference.

You should be certain to use only these 26 designated CCARC voice simplex channels for 2-meter band simplex operations in Colorado.

Frequency	Frequency	Frequency
146.400	146.535	147.480
146.415	146.550	147.495
146.430	146.565	147.510
146.445	146.580	147.525
146.460	146.595	147.540
146.475	147.420	147.555
146.490	147.435	147.570
146.505	147.450	117.585
146.520 call	147.465	

- A sub-band is designated for use with CW and single sideband mode, 144.100 – 144.275 MHz.

Single sideband (SSB) signals on 2 meters should be transmitted only in the “CW and SSB Weak Signal” sub-band. No channelization is specified for this sub-band, so any frequency may be used with awareness of the nominal 3 kHz bandwidth of the USB signal above the tuned frequency position to avoid interference with other stations.

Continued...

Stick to the VHF/UHF Band Plans, continued

When operating with voice FM or SSB, be sure to avoid transmitting within any of the other special sub-bands such as those designated for satellite communications (145.800 – 146.000 MHz), propagation beacons (144.275 – 144.300 MHz), CW / Earth-Moon-Earth (EME) communications (144.000 – 144.050 MHz), or others.

CCARC 70-centimeter Band Plan, and Others

You will find a similar CCARC band plan for the 70-centimeter band on the CCARC website linked at the end of this article. The 70-centimeter band has a wider variety of sub-bands, but just like 2 meters there are sub-bands for repeater pairs facilitating the standard 5 MHz offsets. There are 48 voice simplex channels designated within two “wideband simplex” sub-bands: 440.700 – 441.275 MHz, and 445.700 – 446.275 MHz, including the 70-centimeter national calling frequency of 446.000 MHz.

Links and References

Notice at the top of the CCARC website band plan pages that links are provided to other local band plans from 10-meter to 23-centimeter bands. While most of our VHF and UHF operations will be on the commonly used 2-meter and 70-centimeter bands, be sure to reference the CCARC plans and stick to them if you explore operations on those other bands. You may want to check out these links:

- [CCARC 2-meter band plan](#)
- [CCARC 70-centimeter band plan](#)
- [CCARC home page](#)
- [Choose Your 2m Frequency Wisely – KØNR Radio Site article](#)
- [What Frequency Do I Use on 2 Meters? – Ham Radio School article](#)
- [What Frequency Do I Use on 70 Centimeters? – Ham Radio School article](#)

Stick to the band plan, both the regulatory FCC band plan and our local CCARC voluntary band plan. It's good practice and keeps our use of the available spectrum organized and polite.

73

-- Stu WØSTU



Want to provide some operating tips for the Newsletter readers?

If you have some good operating tips for any type of operating, share them with your clubmates here! We can all learn from one another.

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

Email Editor



Guest Article

Emil AEØZC



Rally Colorado 2024 Comms Support

A short story written from the viewpoint of a newbie Ham Radio operator during two hot summer days in Rangely, Colorado, Saturday, July 20 and Sunday, July 21, 2024.

The call came from then-president of WØTLM Tri-Lakes Radio Club, Tricia KØTRD, during a monthly club meeting at the downtown Monument, Colorado Chamber of Commerce. The club meeting minutes that I read later served as a reminder.

I did not immediately register for the event because I did not yet own an antenna or a compliant mobile transceiver; that is, a VHF/UHF device with enough power to ensure continuous communications in remote backcountry. As soon as I owned the equipment needed and was sure I had the time open (Four days, Friday-Monday as it turned out because Rangely was about a 6-hour drive each way), I registered online for the event.

Numbers

The total mileage for both racecourses at the end of 2 days of racing was 270 miles, including paved and unpaved sections. The maximum speed limit on paved road sections was 65 mph, and for the offroad sections, the speed limit was either 30 or 40 mph.

From my point of view, and even when playing back my race videos, it appeared that the racecar's speed was much higher than 30 or 40 mph on the unpaved roads. If I had to guess, the racecars seemed to be traveling at 60 mph, because the course was winding and uneven. With all the thick dust that was constantly being raised on turns and straightaways, visibility was poor in a lot of places. At times, it was very difficult to read the large numbers posted in 4 locations on the sides of the racecars. That caused me to use my phone's camera to capture photos and short videos when the racecars were approaching AND when they were in view the fraction of a second as they passed in front of my location each day.

In 2 days of this event there were no significant injuries and only a few roll-overs, owing to very competent course management and the race driver's strict following of all the safety rules and regulations.



The Rally is a point-to-point race against the clock in production-based vehicles sponsored by the American Rally Association.

<https://www.americanrallyassociation.org/rally-colorado>

Continued...

Rally Colorado Comms Support, continued

Every time a car passed, it was required of ham radio marshals to log the car numbers - and their times - as they raced by. This was relatively easy in the beginning when there were only one or two racecars on the course because the radio was quiet most of the time. However, we also had to log the start and finish times of each racecar, and as more racecars were released, the radio became very busy at times.

It was an intense listening experience for a new ham like me, hearing and interpreting radio traffic on two frequencies calling off different pieces of information, and occasionally answering directed questions from my group's Comm Captain during the long-middle part of each course. Occasionally I had to stare at my log sheet and ask myself, *did racecar number so and so pass at such and such a time?* Because I was making short videos, it was easy to refer to my phone camera to make sure that I was logging the right information.

The order that each car passes each ham radio marshal is very important in rally races. If any racecar shows up out of the correct order, it means something happened after the last time their location was logged and/or reported. Depending on what happened, the race might have to be stopped, and a search might need to be started for a missing racecar.



Keeping the log of all the passing car information and radio traffic was a challenge!

This seemed to have happened once about half-way through the 2nd race day, and a series of ham radio marshals were quickly contacted over the air to check their written logs and radio back exactly when a racecar had passed our locations. (Marshals are normally directed NOT to call-in racecar numbers or times to keep the radio clear, and instead to only log these events on their log sheets). It turned out that a marshal somewhere near to my location had apparently been "asleep at the switch" and had not logged a car's number or passing. After this was figured out by Net Control, the race continued, avoiding a potentially very time-consuming interruption.

Unknown Vehicle Reported on the Racecourse

At the end of Sunday's 1st race during the middle of lunch, my Comm Captain asked for a volunteer to drive away from their assigned location to assist with finding an unknown vehicle that was reported by one of the official race vehicles. I had finished my lunch and decided to help. We spent about 30 minutes driving slowly and searching along the racecourse between blockages to find evidence (fresh tire tracks, maybe a warm campfire) of the alleged unknown vehicle or its occupants. We did find some tire tracks in a clearing, but could not determine their origin, so the search was called off, and after we returned to our respective locations, preparations for the 2nd Sunday race resumed. (Afterward, it was decided to add another check & verify procedure to try to prevent this from happening again.)

Stay Safe

Ham Radio Marshals are directed to always stay in their vehicles during the races for safety, but if something happens that sends you out, you are required to call-in and state how long you intend to be out of your vehicle; upon return you are also required to call-in and say you were back inside. Ham Radio Marshal's vehicles are positioned somewhere next to their section of the course depending on a few things, including safety, course terrain, marshal's line-of-sight to the approaching and

Rally Colorado Comms Support, continued

passing cars, radio transmission quality, and how well the marshal's vehicle blocks the course from side roads and trails. That means some marshals are located relatively close to the passing cars, and others must be a couple of hundred feet away. A balance of observing car numbers and avoiding potential accidents or collisions must be achieved at each observation post.



The Race Sequence

The ham radio marshals formed a long line behind our Comm Captain in a parking lot off the course. We practiced a quick radio protocol and then drove along the course, dropping off marshals at their assigned locations.

Following the drop off, and after everyone was in place, we performed another radio check. Then three different official vehicles traversed the course, each with a unique radio call-in requirements. These vehicles assessed the route and safety, caution tapes and blocks, and other route characteristics. It also helped me to judge my position and how cars would look as they approached. This helped me reposition my vehicle for better observation and safety.

Because one of our two racecourses was particularly dry and dusty during preliminary course tests a couple of days before the weekend, the race officials agreed with the assessing team's recommendation and decided to lengthen the release time between racecars from 1 to 2 minutes. I was glad of that because it was my first rodeo / rally event, and I felt I needed the extra time to make sure I was doing all the things that I had to do between racecars.



We had been instructed to keep idle radio chatter at a minimum to make sure that important information could be conveyed and heard during the race. We were reminded during our pre-race Zoom calls to continue virtual radio silence in the waning minutes after each of the 4 race events, because things could still happen in closing the course and lots of idle talking might mask an important radio call from our group's Comm Captains, Net Control, Start or Finish Radio operators.

Food and Accommodations

A much-appreciated lunch (sandwich, snack and cold beverage) was provided free both days for race volunteers. On Saturday night, there was a free BBQ event and get-together for all the race teams and all the volunteers. That was a welcome and fun event that most everyone attended.

Hotels and campgrounds were available nearby, and volunteers were also able to register and stay at the local community college dormitories each night, if desired. I opted for the dorm, but I am leaning toward using my camper in 2025 as, of course, I plan to volunteer again!

73

-- Emil AEØZC

Member Comments



NØOLD

Why choose WØTLM? I have a lot of hobbies. Ham radio is one of my important ones. Why? The WØTLM club has a very active membership in many areas of ham radio such as SOTA, POTA, Digital Comms, CW, Volunteering for July 4th Monument Parade, Run for Hope, and others. A cornerstone is the great leadership the club enjoys and most recently Tricia, KØTRD and now with Bob, WØHTH. A very successful 2025 Tech Day is the latest example where volunteers made the day happen. There were many including Loren, KEØHz and Hans, WØPU. Last, the Ham Radio School classes by Stu, WØSTU, Bob, KØNR, and the many Elmers who assist with that is superb for adding new high energy hams who are eager to learn and engage. I feel very fortunate to belong to such a great ham radio organization.

-- Dan NØOLD

KØNR

Joyce and I are living up in the mountains now (Trout Creek Pass area) but one of the things we've stay involved with at WØTLM are the license classes. These classes continue to evolve as new learning methods become available to us. One thing that has not changed is that most students benefit from personal interaction, so we have maintained that as part of the class. In particular, we have a fantastic group of Elmers that come to the class and engage with the students. Thank you, Elmers, for doing this. It really makes a difference!

-- Bob KØNR

WØSTU

I'm excited about kicking off our 32nd WØTLM license class offering! That's right... 32 license classes now in over 15+ years. These years of consistent class successes, the more than 550 new and upgraded hams that our club has produced over the last decade, and the funds raised to continue our mission are representative of a truly spectacular track record that our club can be proud of.

We particularly appreciate the volunteer Elmers in our current class effort! Please relay your thanks to these members when you encounter them: Hans WØPU, Shel KFØUR, Loren KEØHZ, Dick KØRWE, Tricia KØTRD, Larry N9HSW, and Bill NØWRJ. We could not do it without you, folks! Thank you for your efforts to help our students.

-- 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

Find the Differences!



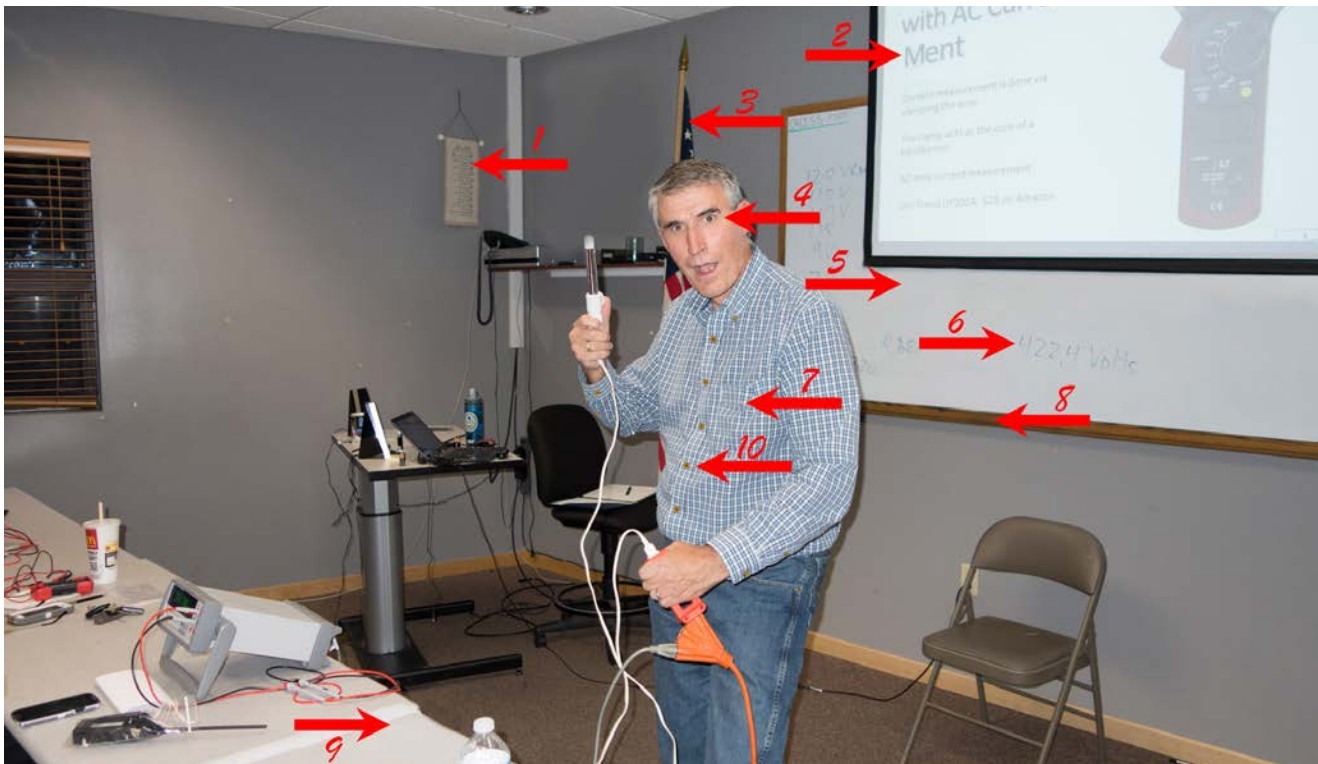
Can you find 10 differences between these two images?
Some are subtle! Solution is on the next page. Don't peek!



Just for Fun

Find the Differences

Solution



Bob KØNR demonstrates the use of a clamp meter using his favorite curling iron appliance, circa 2011. Photo by Dan NØOLD.

List of image changes:

1. Wall hanging position changed
2. Slide word changed
3. Flag & pole reversed
4. Glasses on / off
5. Screen is longer / shorter
6. Number on white board changed
7. Call sign tag on / off
8. Eraser present / missing
9. Meter present / missing
10. Buttons different colors

Admin & Info

WØTLM Officers & Appointees, Etc.



President: Bob Fenkel WØHTH
Vice President: Loren Andersen KEØHZ
Secretary/Treasurer: Barb Evans KØBE

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Leadership Committee:

- Bob Fenkel WØHTH
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- Barb Evans KØBE
- Larry Kral NØAMP
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Education Program Cmte: [Larry NØAMP](#) & [Hans WØPU](#)
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:

March 29, 2025 10:30 am
Monument Library Meeting Room
(Limited seating, class student priority)

June 9, 2025 10:30 am
Monument Library Meeting Room

[Register for a Session](#)

Net Control Officers:

Mar 3: Logan KFØMCB
Mar 10: Need NCO
Mar 24: Need NCO
Mar 31: Need NCO

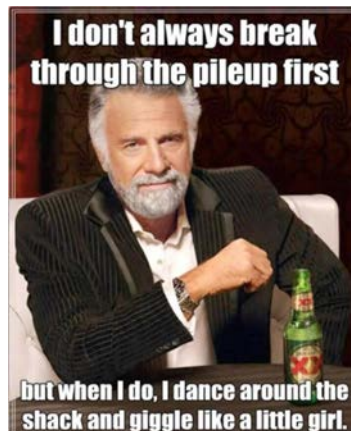
Volunteer today to be the NCO for an upcoming net! It's easy!

[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!



Tri-Lakes
Monument
Radio Association,
WØTLM
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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 WTODX

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: w0t1m-elmer@w0t1m.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: w0t1m-elmer@w0t1m.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](#).

- 03/15/2025 **Antenna Workshop**
Doug K2AD and Willem AC0KQ
- 04/26/2025 **Grounding and lightning protection**
Mike K7AIH

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

Upcoming Events & Hamfests

4/5/2025 [LARCFEST](#). 8 am start time. Longmont, CO.

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

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



HamCon Colorado 2025

October 23-26, 2025 - Grand Junction, CO

ARRL Rocky Mountain Division Convention



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.

Admin & Info

Local Education Events & Resources



Announcing the 2025 Young Ladies Radio League Scholarships



FOR IMMEDIATE RELEASE

Media Contact: Diane Ortiz
VicePresident@ylrl.net

February 13, 2025 — The **Young Ladies Radio League (YLRL)** has announced the Memorial Scholarship program for 2025. The scholarship program is aimed at women Amateur Radio Operators studying radio, communications, electronics or Amateur Radio related arts and sciences.

The Young Ladies Radio League (YLRL) is an international non-profit organization of women Amateur Radio enthusiasts. It was founded in 1939 and is the longest running YL club in the world. The YLRL is sponsoring three memorial scholarships for 2025:

The Ethel Smith K4LMB Memorial Scholarship—\$2,500 award

The Mary Lou Brown NM7N Memorial Scholarship—\$2,500 award

The Martha “Marte” Wessel KOEPE Memorial Scholarship—\$1,500 award

The YLRL believes that education in the fields of radio, communications, electronics and Amateur Related arts and sciences will play an important role in shaping the world’s future. Through these Memorial Scholarship, YLRL hopes to encourage female students to learn more about Amateur Radio.

“YLRL is committed to investing in women in Amateur Radio, and we believe that every act of volunteerism through Amateur Radio — even a small one — helps turn the world into a better place,” said Vicki Zumwalt, President of YLRL. “We hope that our scholarships will not only encourage students to learn more about science, technology, engineering but also inspire them to take pride in being an Amateur Radio operator and to encourage others to do so as well.”



To qualify, students must be female, have an Amateur Radio License, meet the requirements listed on the YLRL.net website and apply using the online application. Applications are due by April 30, 2025. Winners will be announced in July 2025.

Application link: <https://YLRL.net/Scholarships>

Classified Ads

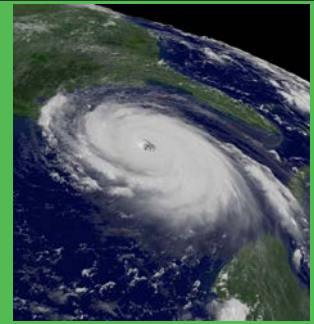
Member Gear for Sale



Are you a ham who also likes to read adventure fiction?

- Do you know anything about hams who also do CB?
- Would you like to read a section of my upcoming novel about Hurricane Katrina to help fact-check?
- If you have an hour to share in March, write to me and I'll send you more details about this project to gauge your interest.

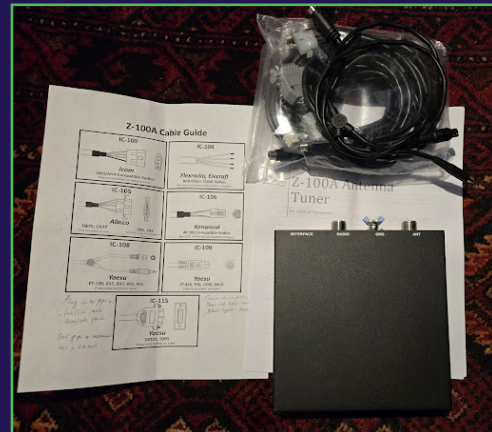
Lisa KB8JLI LHatfield0786@msn.com



LDG Electronics Tuner Z-100A <https://www.ldgelectronics.com/z-100-a>

Local Pickup in Woodmoor. \$125.00

Contact Hans WØPU w0t1m@hansmail.org



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





W0TLM
Radio Association