Tri-Lakes Monument Radio Association

Just having fun messing around with radio!

WØTLM Radio Association

Newsletter

August 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

Outdoor Radio Opportunities!

Greetings WØTLM Members!

I am often told most folks only read the first paragraph of an article. So, here's the most important news for the month. August 16-17 will be the next opportunity for our members to serve as Communications Support for the second Equestrian Endurance Ride in Greenland Open Space. Please contact Tricia KØTRD to sign up. Get your chef's hats ready for the First Annual Tri-Lakes Monument Radio Association CHILI COOK OFF! Our picnic on September 20 will be a Chili feast. Test your recipes and plan on another fun event!

August is the perfect time to embrace two of our favorite Colorado things to do, the great outdoors and ham radio! With long daylight hours, warm weather, and stunning Colorado scenery, this month practically begs us to grab our radios, head for the hills, and combine adventure with amateur radio through **Parks on the Air (POTA)** and **Summits orn the Air (SOTA).**

Whether you're hiking to a summit with your QRP rig and a lightweight antenna or setting up a full POTA station from a shaded campsite, these programs offer the best of both worlds: fresh air, exercise, and the thrill of making contacts in scenic, remote locations. Oh yeah, bugs, bears, deer and the occasional raven picking up the ground radials from your antenna. But it is also a great way to introduce friends, family, maybe even a Park Ranger, to ham radio in a relaxed, natural setting.

If you've never tried a POTA or SOTA activation, now is a great time to give it a go. You don't need fancy equipment, a simple wire antenna, a battery-powered rig, and a

Continued...

Give POTA a try this summer! It's great outdoor fun on the radio!

Hot Announcements

- ***August Monthly Meeting:*** Mon, 18 August, 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! **Presentation:** Topic is currently TBD.

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.

- **WØTLM Annual Chili Cookoff:** Sat 20 September, 12-5 pm.
- **Rocky Mountain Ham Radio Summer Swapfest:** Sun August 24, 9 am - 1 pm. https://www.rmham.org/the-swapfest
- **WØC SOTA Campout:** Fri-Sun, 26-28 September. Rocky Mt. Mennonite Camp (See ads.)

From the Prez, continued

little planning can take you far. And if hiking isn't your style, there are plenty of drive-up parks and summits that still qualify. You may even want to hunt POTA/SOTA parked in your chair in a nice, air-conditioned room.

Speaking of hunting POTA, now is the time of year when there are plenty of Special Event Stations (SES) on the air, especially at parks. I recently sought out the 13 Colonies Special Event in July; many activations were from parks, historical battlegrounds and monuments which are all certified POTA activations. This month is the International Lighthouse and Lightship Weekend, August 15-17. Many of these SES are listed as POTA sites. I really enjoy Special Events and collecting the QSL cards that go along with them.

Speaking of Special Events, these are "Marconi Days." This is a yearlong event and tribute to the father of wireless radio, Guglielmo Marconi. These present a great way to score some DX contacts. You will also find other events such as the International Amateur Radio Union, IARU's 100 Anniversary Special Events.

Want to discover more local or regional August activations? Check out these resources:

- **ARRL's Special Event Station database**—search by date or keyword https://www.arrl.org/special-event-stations
- **qsl.net Special Events archives** for ongoing calls worldwide https://www.qsl.net/va3rj/spevents.html

Whether you're chasing ILLW lighthouse stations or dialing into II4LDMA's tribute to Marconi, August offers great opportunities for special-event chasing. Don't forget to leverage POTA/SOTA weekends for fun portable activations!

I will be looking forward to hearing many of you on the air from trailheads, campsites, and summits this August. Be sure to share your activation photos and logs with the group!

Stay safe, have fun, and keep those batteries charged!

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

Looking for more of a challenge? We have a wealth of qualified SOTA peaks in our area, so get out and climb a bit! Or, relax at home and chase the climbers by tracking their activations.

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

How Bad (Good?) is My SWR?

I may be a glutton for punishment when I agreed to write some articles for this Tech-Knowledgy column. But, I thought what a great opportunity to take on some confusing or complicated topics we hams have encountered. In this one I'm going to take on a myth about SWR and just how good that ratio needs to be. This is also a continuation of an understanding decibels theme I started in the Tech-Knowledgy column, *Let's Talk dBs,* in the May 2025 issue. Let's dive in.

I'll bet if you asked a few Hams the title question about SWR, you will get a broad range of responses; from, "You've got to do something about it before you wreck your transmitter!", to "You'll make a lot more contacts if you can get it down as close to 1:1 as possible", to the other extreme, "Don't worry about it!". My thought is that either extreme may be correct for your situation but not so much the one about making more contacts.

So, let's get a *little* technical. This column is called Tech-Knowledgy after all.

SWR (Standing Wave Ratio) is a measure of how well the power from your transmitter is being transferred to your antenna. Any mismatch between the transmission line and the antenna causes some signal to be reflected back toward the transmitter creating a standing wave. The ratio is the difference between the maximum voltage and the minimum voltage along the transmission line. This is the Voltage SWR or VSWR. We could also measure the transmission line's current (ISWR) or field strength (FSWR), but VSWR is the most common, and it is frequently shortened to just SWR. However SWR is measured, the ratio will be the same.

I'm going to throw in a couple of equations here, just to help with definitions. The good news is that we're not going to be solving them. Trust me when I say that doing this with complex impedances gets messy.

The reflection coefficient is defined as: $\Gamma = \frac{Z_L - Z_0}{Z_L + Z_0}$

Where:
- Z_L = Load impedance (antenna)
- Z_0 = Characteristic impedance of the transmission line (usually 50 ohms)

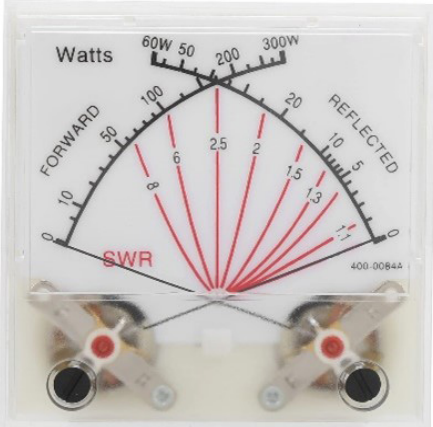
SWR is calculated from the reflection coefficient (Γ): $\mathrm{SWR} = \frac{1 + |\Gamma|}{1 - |\Gamma|}$

Where Γ is the ratio of reflected voltage to forward voltage.

Continued...

How Bad (Good?) is My SWR?, continued

Now that we've defined SWR, let's look at its impact on the signal we're putting out of our antenna. In the Tech-Knowledgy column, *Know Your Coaxial Cable,* in February 2025, we discussed losses in our coax transmission lines but we did not consider high SWRs when calculating those losses. Some of that reflected power will be dissipated in the transmission line. The combination of those losses is defined as effective loss (L_{eff}).



An SWR meter often displays forward and reflected voltage or power measurements, with SWR read at the crossing point of two needle indicators.

The equation for effective loss (in dB) that includes the loss in the transmission line (Matched Loss) and loss resulting from the SWR is:

$$L_{\text{eff}} = \text{Matched Loss} \times \left(1 + \frac{|\Gamma|^2}{1 - |\Gamma|^2}\right)$$

Thankfully we have an online calculator from Coax Loss Calculator / KV5R.com, so we don't have to do this manually. Let's look at the impact of SWR on our signal. For comparison, we'll use 91 ft of RG-8X with a Matched Loss of 1.0 dB and a transmitter output of 100 Watts at 14.3 MHz.

Case #1: Although unrealistic, let's start with an SWR of 1:1. Power loss due to coax is 1 dB, a 21% loss equating to 79.4 Watts at the antenna. There is no SWR Loss. (Note: I selected Line Length for a Matched Loss of 1.0 dB.) That 1 dB loss equates to a 21% loss of power in the transmission line.

Parameters:				Results:	
Line Type:	Belden 9258 RG-8X		Matched Loss:	1	dB
Line Length:	91	Feet / Meters	SWR Loss:	0	dB
Frequency:	14.3	MHz	Total Loss:	1	dB
Load SWR:	1.0	:1	Power Out:	79.428	Watts
Power In:	100	Watts	Power Loss:	21	%
	Calculate	before using ERP Calc.			

Case #2: A SWR of 1.5:1 results in increased dB loss of 0.067 dB and a Power out of 78.2 Watts. That's a 1.2 Watt (or 0.066 dB) power reduction at the antenna due to the SWR.

Parameters:				Results:	
Line Type:	Belden 9258 RG-8X		Matched Loss:	1	dB
Line Length:	91	Feet / Meters	SWR Loss:	0.066	dB
Frequency:	14.3	MHz	Total Loss:	1.067	dB
Load SWR:	1.5	:1	Power Out:	78.225	Watts
Power In:	100	Watts	Power Loss:	22	%
	Calculate	before using ERP Calc.			

Continued...

***How Bad (Good?) is My SWR?*, continued**

Case #3: Let's raise the SWR to 3:1. The resulting Total Loss 1.5 dB is approximately a 0.5 dB greater loss in the transmission line than with an SWR of 1.5:1. When considering that to reduce your signal by 1 S-unit at a distant receiver, you would have needed to reduce the output 6 dB this SWR is not much of an impact. (Again, refer to the Tech-Knowledgy column, *Let's Talk dBs,* in the May 2025 newsletter.)

Parameters:				Results:	
Line Type:	Belden 9258 RG-8X		Matched Loss:	1	dB
Line Length:	91	Feet / Meters	SWR Loss:	0.504	dB
Frequency:	14.3	MHz	Total Loss:	1.504	dB
Load SWR:	3	:1	Power Out:	70.726	Watts
Power In:	100	Watts	Power Loss:	29	%
	Calculate	before using ERP Calc.			

There is an additional factor to consider that may cause the actual power loss to be greater. Solid state final amplifiers don't like high SWR and can potentially be damaged by high reflected power. That reflected power causes higher voltages or currents on the power MOSFETs that results in them overheating.

If you are running a 100W commercially built transmitter, it is very likely that there is a protection circuit that begins to reduce the power output as the SWR rises. From what I've been able to find, commercial transmitter SWR protection begins to reduce its power output at an SWR of around 2:1. At 3:1 this reduction is minimal. It gets much more aggressive in reducing power around 5:1.

Case #4: Now let's look at a 10:1 SWR. This results in a total loss of about 3 dB, or a reduction in power at the antenna of just over one-half. Your transmitter is probably letting you know in some way that it is not happy. If you've home-brewed an amplifier and operated too long in this condition, you've probably let the smoke out those solid-state devices. If it happens to be a tube final, it may survive but grudgingly so.

Parameters:				Results:	
Line Type:	Belden 9258 RG-8X		Matched Loss:	1	dB
Line Length:	91	Feet / Meters	SWR Loss:	2.424	dB
Frequency:	14.3	MHz	Total Loss:	3.424	dB
Load SWR:	10	:1	Power Out:	45.453	Watts
Power In:	100	Watts	Power Loss:	55	%
	Calculate	before using ERP Calc.			

One practical upshot that can be gleaned from these examples is that of the random wire antenna. A random wire is not tuned perfectly for any band, and it usually requires the use of an antenna tuner, as the SWR will be elevated. Still, significant power can be radiated with the random wire.

Final Thoughts:

- A perfect SWR does not necessarily mean that you are transmitting effectively. A 50Ω dummy

Continued...

load's SWR may look great but you are just heating up oil or a heat sink, not transmitting power. We haven't considered antenna efficiency at all, just the power getting delivered to that antenna.

- If you are using an antenna tuner external to your final amplifier, the SWR value on its meter is approximately the SWR seen by the transmitter or amplifier. It is detuned slightly by the coax transmission line that you should keep as short as possible.

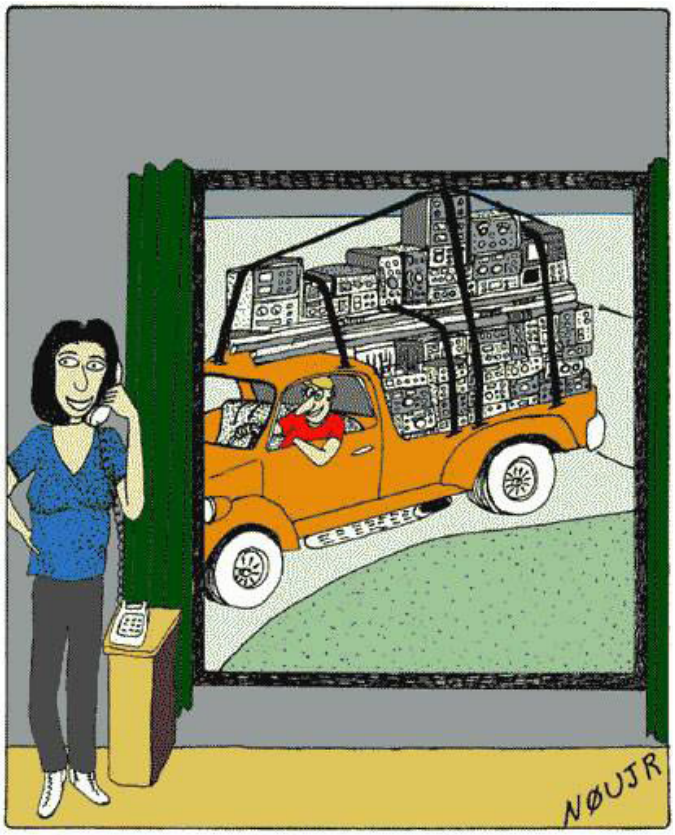
- If you have a very long transmission line from your shack to the antenna and want to increase your Effective Radiated Power (ERP), you could do a couple things: 1) replace the coax with one with lower loss, or 2) place the antenna tuner at or near the point where the transmission line connects to the antenna. The Reflected Power occurs at the impedance mismatch, so nearly all the loss is from the Matched Loss from the forward power. There is virtually no Reflected Power going back down the feedline, so there is no loss due to the reflected power between the tuner and the antenna.

Happy transmitting,

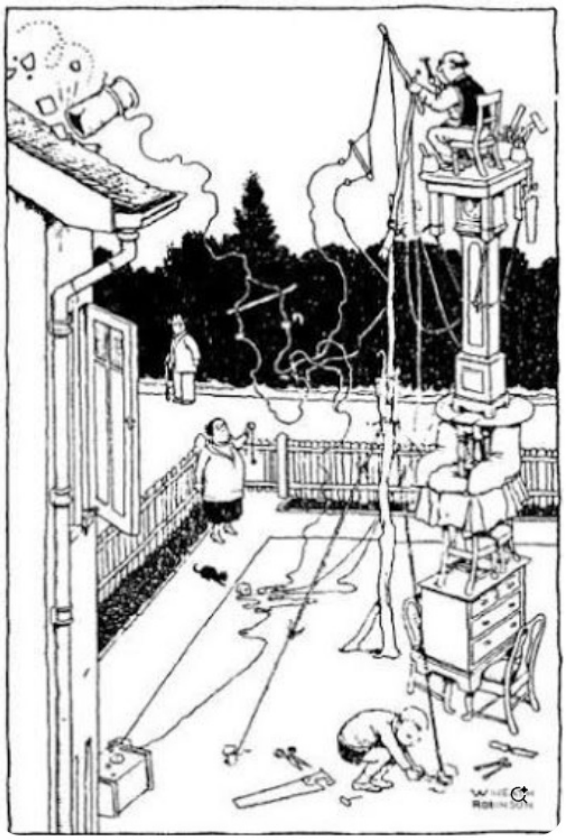
73
-- Loren KEØHZ

Note: Andrew Barron, ZL3DW, wrote an article back in 2012 that has several useful charts and explains much of the same above in far greater detail. *SWR Myths and Mysteries* https://www.qsl.net/zl3dw/pdf/SWR%20myths%20and%20mysteries.pdf

KV5R Coax Loss Calculator: https://kv5r.com/ham-radio/coax-loss-calculator/



"No Greg went to the ham auction this afternoon, to get rid of a couple old radios that were cluttering up the place...Oh I think I hear him pulling in now!"



The quest for a higher antenna.

Event Calendar
June-November 2025

WØTLM Upcoming Events

August 2025

- Aug 16 — WØTLM VE Session — Monument Library (Registration required)
- Aug 16-17 — Endurance Ride II Op — Greenland Open Space (Register to help!)
- 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 Start — Oct 4 kickoff - Nov 15 exam; Earn Extra!
- Oct 20 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building

November 2025

- Nov 15 — WØTLM VE Session — Monument Library (Registration required)
- Nov 17 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building
- Nov 17 — Annual Officer Election — Tri-Lakes Chamber of Commerce Building

December 2025

- No monthly meeting or other club events in December.

January 2026

- Jan 19 — Monthly Meeting — Tri-Lakes Chamber of Commerce Building
- Jan 24-25 — Winter Field Day — TBD club plans

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
WGØAT SOTA Gear

I'm Beta testing an Elecraft AX3 30m-10m base loaded HF whip antenna at my favorite crow's nest RF site on Mt. Herman at about 9000 feet. Using my KH1 running less than 5 watts, I worked coast to coast, plus Chris F4WBN in France, using a 13-foot counterpoise with the AX3 antenna mounted on my trekking pole!

Note: The AX3 has a camera mount 1/4"-20 nut on bottom for conveniently field mounting on your trekking pole or screw-in tripod legs for picnic table POTA setups. Check it out at:

AX3_AX3 30-10 Meter Whip Antenna – Elecraft

- Steve WGØAT

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

WØTLM Newsletter

Operating Tips
Bob KØNR

Simplex, Duplex, Offset and Split

Some time ago, a ham on twitter posted about a “2m SSB simplex contact” he had made. Another ham replied with “2m SSB is just that. The word simplex is not needed.” The second ham is incorrect…not all 2m SSB contacts are simplex. Most of them are but not all. More importantly, I think this exchange highlights some common confusion about terms such as simplex, duplex and repeater operation.

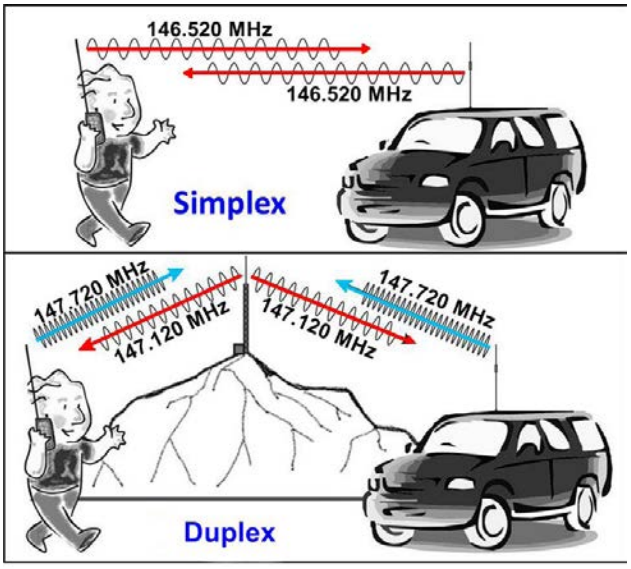
Terminology

Simplex – In the amateur radio context, simplex operation means the radio stations are communicating with each other directly, on the same frequency. Both stations take turns transmitting and receiving on the same frequency with no repeater or other device in between.

Duplex – Duplex operation means that a radio station transmits on one frequency and receives on a different frequency.

Full Duplex – Operating duplex with the ability to transmit and receive simultaneously.

Half Duplex – Operating duplex, but having to switch between transmit and receive (no simultaneous transmit and receive capability)



Examples of simplex vs. duplex operations. The repeater station (lower image, on mountain) is full duplex, instantly retransmitting a received signal. Each user’s station is half duplex, unable to transmit and receive simultaneously, but shifting between the transmit and receive frequencies.

Repeaters

Very often simplex and duplex operation are associated with FM on the VHF and UHF bands. If you are talking to another ham directly, on one frequency, with no repeater involved, that is simplex operation.

FM repeater operation uses two frequencies: the repeater receive frequency and the repeater transmit frequency. The repeater’s job is to take the signal it hears on its receiver and retransmit it on the transmit frequency. Repeaters operate in *full duplex* mode, because they receive and transmit at the same time. The repeater user is usually operating in *half duplex*, using two frequencies but switching between transmit and receive. Some FM

Continued...

Simplex, Duplex, Offset and Split, continued

ham radio gear can operate in full duplex mode (usually employing two different ham bands) but most equipment is half duplex only.

We refer to a repeater by its transmit frequency, which is the frequency the user listens on. When the user transmits, the radio automatically changes frequency as required by the repeater's offset (the difference between its transmit and receive frequencies.) The repeater offset is sometimes referred to as the repeater split.

HF Operating

The vast majority of HF operation is simplex operation. We dial up a particular frequency and chat back and forth on that same frequency. However, duplex operating is also used on HF, typically referred to as *working split.*

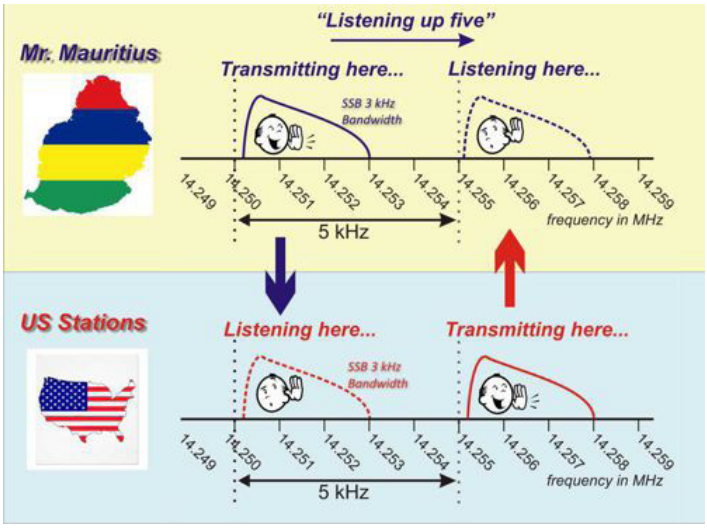


Illustration of split operations with a DX station.

A DX station may have a large number of stations calling him, creating a "pile up" on frequency. His ability to make contacts slows dramatically as this huge pile of stations calling him creates interference on his frequency. The DX station can't hear the particular station he's trying to work and the station he is trying to work also has trouble hearing the DX station. A common practice is for the DX station to listen on a different frequency, typically a few kHz up from his transmit frequency. The DX operator will say something like "listening up 10" to indicate he is listening 10 kHz higher than his transmit frequency. Or he may just say his receive frequency explicitly ("listening 14.180 MHz"). The idea is that the DX transmit frequency will always remain clear so everyone can hear the popular station. Everyone hears the DX pull a callsign out of the pile, when the contact is complete and when he's ready for the next call. Things get easier for the DX station as the calling stations tend to spread out and he can tune around a bit to find a particular station he wants to contact.

Most modern transceivers have split mode capability with dual VFOs. The red arrow points to the split button on this Kenwood transceiver.

Making this happen is a bit tricky and requires the use of two VFOs on the transceiver. Most modern transceivers have this capability. The calling stations set one VFO to the DX station's transmit frequency and adjust the other VFO to be on the receive frequency specified by the DX station ("up 10"). The transceiver is set to listen on the first VFO and transmit on the second VFO. This is usually called split operation in the transceiver manual. If your radio does not have split operation, it is going to be very difficult to contact a DX station running split.

Continued...

Simplex, Duplex, Offset and Split, continued

On the HF bands, split operation is an example of half-duplex operation. I suppose it could be full duplex under some circumstances but in most cases transmit and receive will not be simultaneous.

VHF CW/SSB Operating

Excluding FM repeater use, most VHF and UHF operating is also simplex. VHF operators can operate split just like the HF case but I can't recall actually hearing this on the air. A strong band opening on 6m behaves a lot like HF, so a large DX pileup could benefit from going duplex.

A linear translator retransmits SSB or CW signals, similar to an FM repeater but for linear modulation. There are very few linear translators being used on earth but they are a form of SSB operating that is not simplex. Linear translators actually retransmit a range of frequencies, not just one, so that multiple users can be supported by one translator. Linear translators are commonly deployed in space as satellites.

Satellite Operating

Satellites use one ham band for the uplink and another ham band for the down link. For example, the FO-29 satellite uses 145.9 – 146.0 MHz for the uplink and 435.8 – 435.9 MHz for the downlink. Similar to a repeater, the satellite operates full duplex, transmitting the signal that is heard on the receiver (uplink). Ham satellites use different modulation types, including FM, SSB, CW and digital formats. It is the most common example of "non-simplex" SSB operating on the VHF bands.

Satellite duplex operations can be conducted with an HT and a dual-band antenna, usually a directional. Here KØNR operates half duplex, using a 2m/70cm dual band Yagi to make a satellite contact. The satellite, like a repeater, typically operates full duplex to instantly retransmit on one band signals received on the other.

It is highly desirable for the satellite user to also operate full duplex (usually with headphones to avoid feedback). That way, the user can determine how well he is getting into the satellite, operate with minimum power and just do a better job of avoiding interference to other users. The FM birds can be worked with just a handheld transceiver (HT), making portable operating easy. However, only a few HTs have the ability to operate full duplex, so a lot of satellite operating is done using half duplex.

Summary

To wrap up then, simplex is a term that applies on all of the ham bands, because it is the simplest way to communicate. However, it is not the "opposite" of using a repeater. Duplex is also a term that applies in a variety of cases, including repeater operation, working split on HF or VHF and working crossband via satellite.

73
-- Bob KØNR

Guest Article
Lisa KB8JLI

To Ride a Storm Surge

An excerpt from a novel about emergency preparedness, and more.

This is an excerpt from my new book, To Ride a Storm Surge, a novel about an unprecedented storm and devastating family dynamics. The goal of all three of my novels is to get people to actually do their own disaster preparation, and do it today. (I learned this first from Scott, KDØYBJ).

Free for club members: Here is a link to a 16-page PDF you can download and print to remind you of tasks you meant to do, or maybe you could share it with a family member or friend to help more people be more self-sufficient "when 9-1-1 isn't coming." (I will also have spiral-bound copies if you want to buy one sometime.)

The book's narrator is a middle school girl named Jessie (who already appeared in my other two books as an adult who lives in Colorado and deals with a wildfire and a bomb cyclone that may sound familiar to you). Spoiler alert: this excerpt from the novel highlighting the help of amateur radio operators comes near the end, when Hurricane Katrina has passed by, and people all along the Gulf Coast were trying to figure out what to do next. So the spoiler is, "yes, they survived." Here, you will recognize the name Bob, who is really KØNR. And Joyce, KØJJW also read a draft!

I hope you enjoy this taste of the novel. If you would like to read more, please see my website: www.LisaHatfieldWriter.com

73
-- Lisa KB8JLI

Meanwhile, we had waiting to do, so we sat a table at the edge of the food tent.

Refugee people straggled in at all hours. We told them our stories, and they shared theirs.

"I heard Robin Roberts came back to town. She brought Good Morning America with her, and all the cameras and everything." I didn't know who she was, but apparently everybody else did. "Her

Continued...

mom and her sisters are okay, I heard."

I decided to help some more with the kitchen truck, but they said they had enough helpers, so for a while I played tag with Chandler and his brother Preston who had some energy to burn. Then I wandered over to the amateur radio table again near the loud generator and the RV. Anything to distract my brain from all the buildings wrenched apart, the bleak, brown landscape, and the rotten, moldy smell. And the waiting!

The same man was there, Bob. He must have slept on the ground, too, or maybe in the RV. He looked a little less clean now, and more wrinkled, and he had headphones on his head, but only on one of his ears. The other headphone was pushed back. When he saw me walk up, he smiled. "Aren't you the one with the dad in an 18 wheeler?"

"Yes!" He remembered us! "Have you heard from him?"

He smiled but shook his head. "Not since last night, according to the documentation, but I'll tell you as soon as we do." He looked down at his notebook and flipped some pages back. "Your name is Jessie DeGroot, isn't it?"

I nodded. He took good notes in that notebook.

"How about you wait around with us for a while? I'll show you our emergency communications station."

That sounded great.

Dad had showed me his CB radio in his truck cab lots of times, but at this ham station, they had so many other kinds of radios, antennas, batteries, cords, microphones, note books, and pencils. They had a news station turned on, and Bob, the other hams, and I just listened for a while. I felt so grown up.

One of the men said, "You know, I've been listening to the national news since Monday, and I haven't heard them say hardly anything about here. Only hearing about New Orleans, and it's sounding pretty awful over there, no kidding. They're in dire straits. But…"

A lady who also wore her headphones on one ear said, "Not Pass Christian, or Waveland, or Bay St. Louis?"

"No, not really," he said. "New Orleans has people still trapped in their homes, still surrounded by the flood water, though it's been four, or is it five, days since the storm. The hams are helping call in rescues to people still trapped up on their roofs. No water to drink or anything."

"The storm surge couldn't drain away like it did here," said someone else.

"That's part of the problem," the man said. "Not only did they get the storm surge, but then the levees broke, and now the rancid water is trapped on the low side of those levees."

A lady said, "Well, some of the city is built below sea level, so the water can't drain out once it

Continued...

To Ride a Storm Surge, continued

flowed in there. At least when we had 30 feet of water washing inland, it was inclined to slide back down below sea level again."

"They're going to have to use pumps to pump all the water back uphill into the Gulf or Lake Pontchartrain? Or who knows," someone said.

"Oh my," the lady said. "I can't imagine sitting and sleeping on a sloped roof for four days." She shook her head. "In the roasting sun!"

They all sighed.

She said, "But you say, they're not saying much about the damage here? Or Long Beach? Or even Gulfport or Biloxi? We got hit with the same hurricane."

I even spoke up then. "The eye of the hurricane was right over us." Everyone nodded at me in agreement.

"Don't you know it, young lady," he said. "I heard Chipper say we just went from the 21st Century to the 18th Century in nine hours."

The lady said, "That is a sobering thought."

"But he also commented that since it was a daytime storm, instead of in the nighttime, that did save a lot of lives. People who were stuck at least had daylight to help find a way out, sometimes."

The lady said, "Yes, but it lasted nine hours with those ferocious winds. That's longer than anything I've seen before."

Bob, the gray-haired man nodded, put up one finger for us to wait a second, and put both headphones back over his ears to listen to something. He took a few notes in his documentation book. "Hey, Miss Jessie? Could you come over here a minute?" I listened closely. "We got word he's close by. In fact, you might want to stick right by me for a bit." He asked a question into the microphone and wrote a note, then looked at me. "He's on his way to the interstate exit, Miss Jessie."

See more information about Lisa's books at: www.LisaHatfieldWriter.com

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.

Sign up here to serve as WØTLM Net Control.

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

What compelled your AI image vote?

KB8JLI

I voted for the *'A Most Deligtful Cabin Evening'* because it was so idyllic, and I'm not sure if the AI or the (what is the term for the creator in this case... not the artist.... the programmer?....) did a great job of idealizing the scene. Maybe that is what AI is best for... fantasy.

— Lisa KB8JLI

KCØGLF

I enjoyed seeing all of the AI images in the last newsletter, and I appreciate all of the great submissions! My favorite was *'A Most Delightful Cabin Evening,'* as I generally enjoy the thought of a log cabin in the mountains on the banks of a stream. While it appears isolated, and is certainly off the cell phone grid, the occupants would be connected to the world through their amateur ham shack, and the placement of the full moon at the apex of the antenna highlights this connectivity!

— Fred KCØGLF

KØHID

I liked the mountains in *'A Most Delightful Cabin Evening,'* — captures our Colorado home and radio hobby. I liked many of the images. I tried my own AI built images, but didn't like any of them. Thanks to those who submitted entries.

— Heidi KØHID

KDØYMC

I selected artwork that spoke to me because it evoked an emotion or a memory for me, similar to regular art that I like. For *'A Most Delightful Cabin Evening,'* my first pick, it gave a sense of comfort along with a bit of nostalgia, the kind that a Rockwell painting would evoke. Also, it reminded me of one of my favorite poems by Robert Frost, *Stopping By The Woods On a Snowy Evening.*

— Robert KDØYMC

WØSTU

Thanks to everyone who participated and voted in the ham radio AI image exhibit! Many of you found that most AI engines are not yet well trained on representing ham radio transceivers. Some work-arounds are usually necessary to get a more accurate depiction. Perhaps more representative radios will come with enhanced models and training algorithms. I hope you enjoyed this *'Just for Fun'* activity. The results follow this page.

— 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!

Just for Fun

Ham AI Image Exhibition and Contest!

Voting results and entrants in the WØTLM A.I. Ham Imagery Exhibition and Contest!

Here are the creators and awards for our AI Ham Imagery Exhibition. A weighted sum was computed for each entry (3 x 1st choice votes + 2 x 2nd choice votes + 1 x 3rd choice votes), and the results rank ordered based on the weighted sum (rounded figures reported). Yes, it is just for fun, but we hope you enjoyed the game. Congrats to all our participants, and thanks for playing along!

#1: A Most Delightful Cabin Evening
Kevin Scofield KDØVHD
Best Overall Image (30% #1, 30% #2, 6% #3)

#2: DX Flames
Kevin Scofield KDØVHD
2nd Runner Up (6% #1, 12% #2, 30% #3)

#3: Sunrise SOTA
Steve Galchutt WGØAT
1st Runner Up
(6% #1, 24% #2, 12% #3)

Just for Fun

Ham AI Image Exhibition and Contest!

#4: Late Night DX
Kevin Scofield KDØVHD

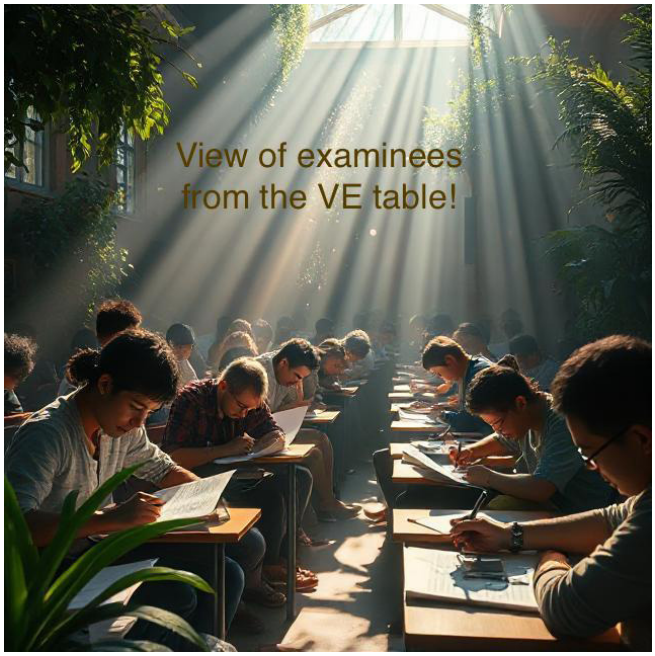
#5: TLM Range Riders
Tricia Olson KØTRD

#6: Dilbert Style Ham Radio
Bob Witte KØNR
Honorable Mention (12% #1, 6% #2, 12% #3)

#7: Who Left the Hummingbird Feeder Out?
Bob Fenkel WØHTH
Honorable Mention (6% #1, 12% #2, 6% #3)

Just for Fun

Ham AI Image Exhibition and Contest!



#8: VE Examinees from the VE Table
Barb Evans KØBE

#9: K9 POTA
Tricia Olson KØTRD

#10: EMCOMM!
Lisa Hatfield KB8JLI

Just for Fun

Ham AI Image Exhibition and Contest!

#11: Untitled
Melissa Carter KFØPLU

#12: Field Day at Tarryall
Kevin Scofield KDØVHD

Congratulations to:

Kevin KDØVHD (1st & 3rd place image)
Steve WGØAT (2nd place image)
Bob KØNR (Honorable Mention)
Bob WØHTH (Honorable Mention)

You've won a free subscription to the WØTLM Newsletter for the remainder of 2025!

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:

August 16, 2025 10:30 am
Monument Library Meeting Room

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

Register for a WØTLM Session

PPRAA VE Session Listing, Colorado Springs (every 2nd Saturday of month).

Net Control Officers:

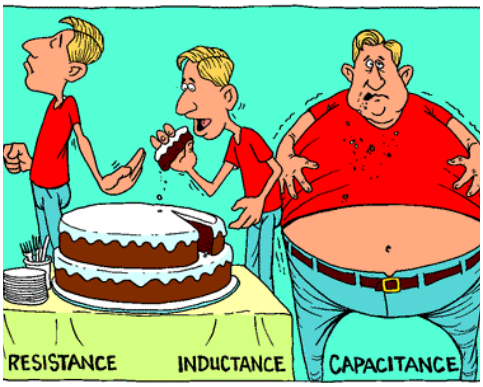
Aug 4: Dan NØOLD
Aug 11: Need NCO
Aug 25: Need NCO

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

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.

June 2025 and beyond: Programs TBD.

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

Upcoming Events & Hamfests

08/24/2025 RMHam Summer Swapfest Adams County Fairgrounds, Brighton, CO.

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

09/26-28/2025 WØC SOTA Campout, Divide, CO (See ads page)

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 & Announcements

WØC SOTA Campout:

WØC is the *Summits On The Air* association for Colorado. At our September 26-28 campout we will conduct SOTA activations on various peaks, contacting one another and other stations. We will also enjoy SOTA camaraderie around the evening camp fire and during meals. It's a lot of fun, so come join us!

- **Where:** Rocky Mountain Mennonite Camp near Mueller State Park, east of Hwy 67. (~330 CO Road 62, Divide, CO 80814)
- **When:** September 26-28, 2025. Arrive Sept 26 4:00 pm, depart Sept 28 11:00 am.
- **Accommodations:** Multiple heated rustic cabins with bunk beds available, 6 bunk beds per cabin at $19.50 per person per night. 24 hour access to heated bath house 30 yards or less from cabins. Other options available if bunk houses do not meet your needs.
- **More Info:** Email Matt KFØRIG zimbelmanguitars@gmail.com

FOR SALE:

Kenwood TH-D74 with fast-charge base. Orange protective case, Nifty manual and two batteries.

Asking $425

Contact Rex WDØAJG

Continued...

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

FOR SALE: Off-grid Ham Radio Outpost & Trailer:

- 2014 Forest River RP 17, Toy Hauler, “like new”, only been camping one time
- 2000W Inverter Charger
- AGM Battery Bank
- 2 Solar Panels
- ICOM 7300 HF
- ICOM 5100 VHF
- HF and VHF roof mounted antennas
- Satellite TV receiver (DISH Network) complete
- 2 #100 propane tanks
- 2 #37 propane tanks (mounted)
- 2 65 Gal. fresh water containers plus pump
- plumbing w/ heat patches for winter camping

Many other items included to make this unit independent from the grid for long periods. The trailer has been raised to allow for approx. 11” ground clearance, to access remote and rugged locations. Amenities make it suitable for a “bug out” resource or communications hub. Viewing by appointment only.

If interested please contact Jim Terbush 703-946-5883 or email me at jimterbush@gmail.com
Asking $10,000--