THE ROUND TABLE
Monthly Newsletter Of The Denver Radio Club
Since 1917 January 2026

President's Message

By Kevin Schmidt, K0KPS

Greetings and Salutations,

Well, we finally closed the door on 2025. Now my wife and I would like to wish you and your family a Happy New Year as we open that new door. May it be a happy, healthy, and prosperous one for each and every one of you.

The Denver Radio Club is appreciative for all the support all of its members provide for the club. In 2025, the club was able to hold a few hybrid club meetings on the third Wednesday of the month. Some topics are harder to hold in person than others with topics that a wide variety of our speakers provide. We will continue to work towards having more of them this year. I personally would like to see more topics on using some of the features that our repeaters have such as All Star and C4FM. I would like to hear what the membership would like to see presented. Email me with any and all your suggestions at President@W0TX.org.

Many activities that were held in person were greatly successful. Field day in June was well attended. DRC Saturdays were also a great hit. POTA (Parks on the Air), Colorado QSO day, and the VHF/UHF antenna build were a few of the Saturday topics. We held the Holiday Party in December at a new location and venue. If you joined us, I hope you had a good time.

This year the ARRL has deemed it the Year of the Club. They want to spotlight things that clubs do to communicate with members and best practices. I would like to see our club step up in this endeavor. Along this avenue, the Board of Directors has approved the formation of a committee to improve Membership Involvement. The goal of this committee is to find, discuss and present possible solutions to the Board of Directors to increase membership participation in your club. We all would like to make this club something that meets the needs of all the members. If you would be interested in joining this committee, which would meet virtually once a month, please contact either Pete at AB8WN@W0TX.org or Brian at KF0AWC@W0TX.org. We are soliciting both committee members and suggestions.

Finally, the ARRL is still working on getting passed the Amateur Radio Emergency Preparedness Act through Congress. This act would allow antennas at HOA regulated communities. If you haven't already signed the electronic petition, please do so at Send-A-Letter.org/HOA. It's a simple and quick way to send a letter to your Senators and Congressman that you support the legislation. It takes about thirty seconds to complete the form.

That's all I have for you this month. Again I wish you and your family a Happy New Year.

Kevin
KØKPS

Who's New In The DRC?

BY KELLY SOBANSKI, KB8OGP

The DRC is a very active club in the Denver metro area and we'd like to have all of our members listen for these new calls and welcome them to the club and repeaters. Welcome to our newest members:

Chad Weis - KF0UUC	Kyle Lindahl - KF0VWZ

Congratulations to Kyle for passing both Tech and General in December!

We have a number of activities throughout the year and we'd like very much for you to participate in serving your community. If you have questions please feel free to ask on any of the repeaters or see the contact information on the last page of this publication.

Also, please join us once a month at the regular club meeting on the 3rd Wednesday at 7:00 p.m. For new hams we have the Elmer session which starts at 6:00 p.m. before the regular meeting.

Lastly, please share any license upgrades or vanity calls via membership@w0tx.org!

DRC - Blast From the Past

PROVIDED BY WOODY LINWOOD, W0UI

Summer, 1983 - Bob Swanlund's house atop Squaw Mountain - Woody/w0ui Jeep CJ5 below fire lookout tower

Question of the Month

By Bill Rinker, W6OAV

Can I use 30 gauge wire for a stealth antenna?

The answer can be found on page 3 of the July 2010 issue of the *Roundtable*: https://w0tx.org/RoundtableArchive/2010-RoundTables/RT201007(JUL).pdf

A Greyline Propagation Q and A

By Bill Rinker, W6OAV

Greyline is very popular with DXers. Greyline can create unique propagation paths, enabling communication with distant regions that might be difficult to reach under normal propagation conditions. The Greyline path offers less signal attenuation and lower background noise than "normal" propagation paths. Understanding the mechanism of Greyline allows using it strategically for enhanced DX communications. This document discusses the various mechanisms of Greyline.

What is the Greyline?

Greyline is the line that separates day and night. It is a fuzzy line due to earth's atmosphere bending sunlight. See Figure 1. The earth's tilted 23.5 degree axis of rotation causes the Sun's position to change throughout the year, affecting sunrise and sunset times. This, in turn, affects the Greyline's speed and position on the earth. During summer when days are longer, the Greyline moves slower across Colorado compared to winter with shorter days. Greyline speed varies across Colorado approximately 900-1,000 mph in the summer and approximately 1,100-1,200 mph in the winter.

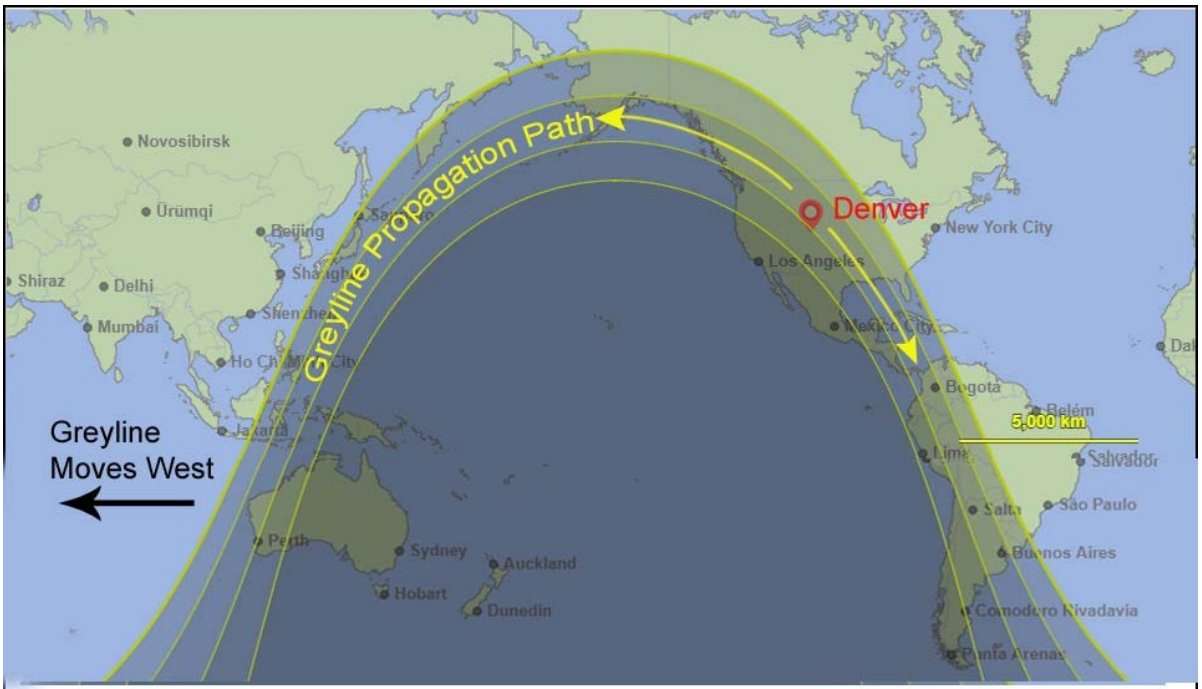


Figure 1 - Greyline at 4AM MDT on Longest Day (June 21)

Earth's tilted 23.5 degree axis of rotation axis also causes the Greyline to change shape. During the Northern Hemisphere summer solstice (June 21st, see Figure 1), the Greyline reaches its northernmost point at approximately 86.5 degrees North latitude. During the Northern Hemisphere winter solstice (December 21st, see Figure 3), the Greyline reaches its southernmost point at approximately 86.5 degrees South latitude.

Why do Greyline Maps Look Strange?

Figures 1 through 4 show the "standard" Greyline propagation maps used by hams. These Greyline maps use a World Mercator projection as their base format.

The World Mercator projection is a specific way of representing the Earth on a flat map. Imagine wrapping a cylinder around the Earth, touching it at the equator. The Mercator projection then projects the Earth's features onto this cylinder, and then unwraps it to create the flat map. This mapping was developed in 1569 by Flemish cartographer Gerardus Mercator. Originally it was designed for nautical navigation, as it accurately portrays compass bearings as straight lines. Figure 1 is a World Mercator projection of the earth shown in Figure 1a.

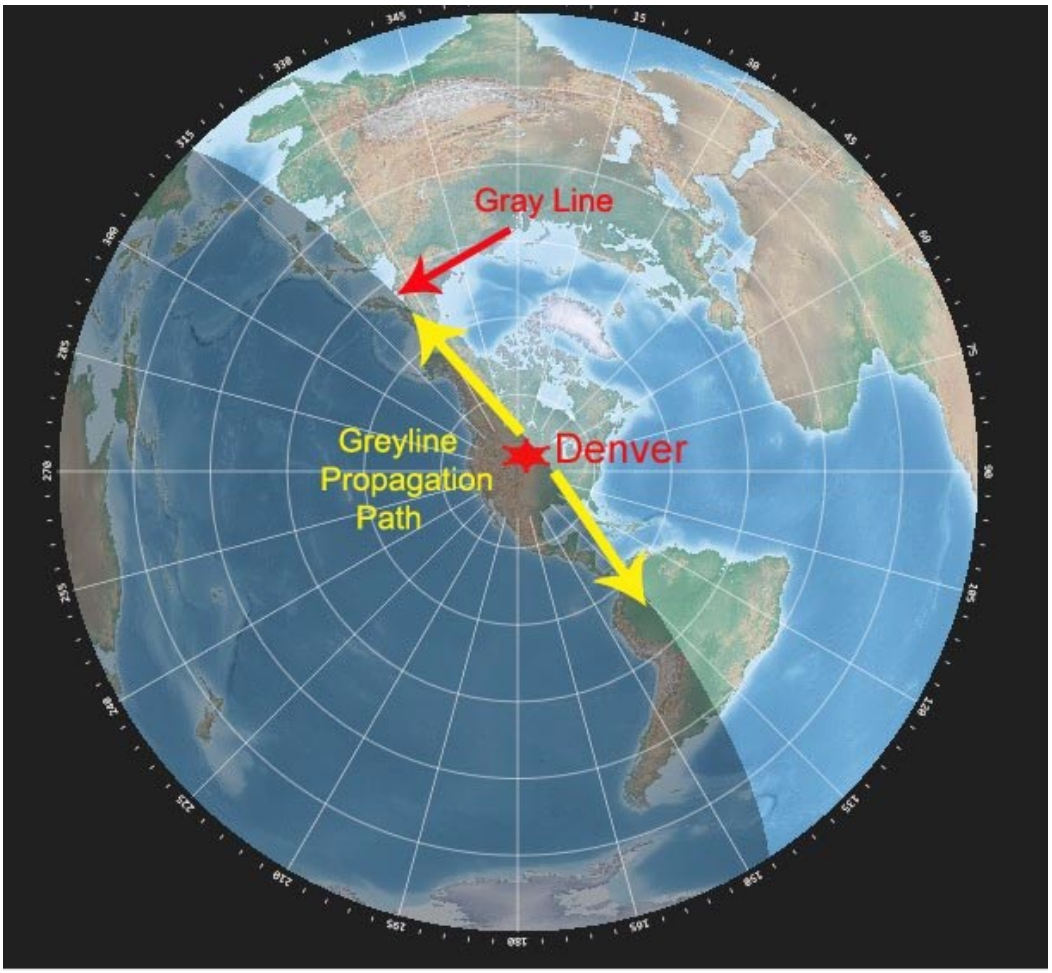


Figure 1a - View from space of Greyline shown in Figure 1

Figure 2 - Greyline at 9PM MDT on Longest Day (June 21)

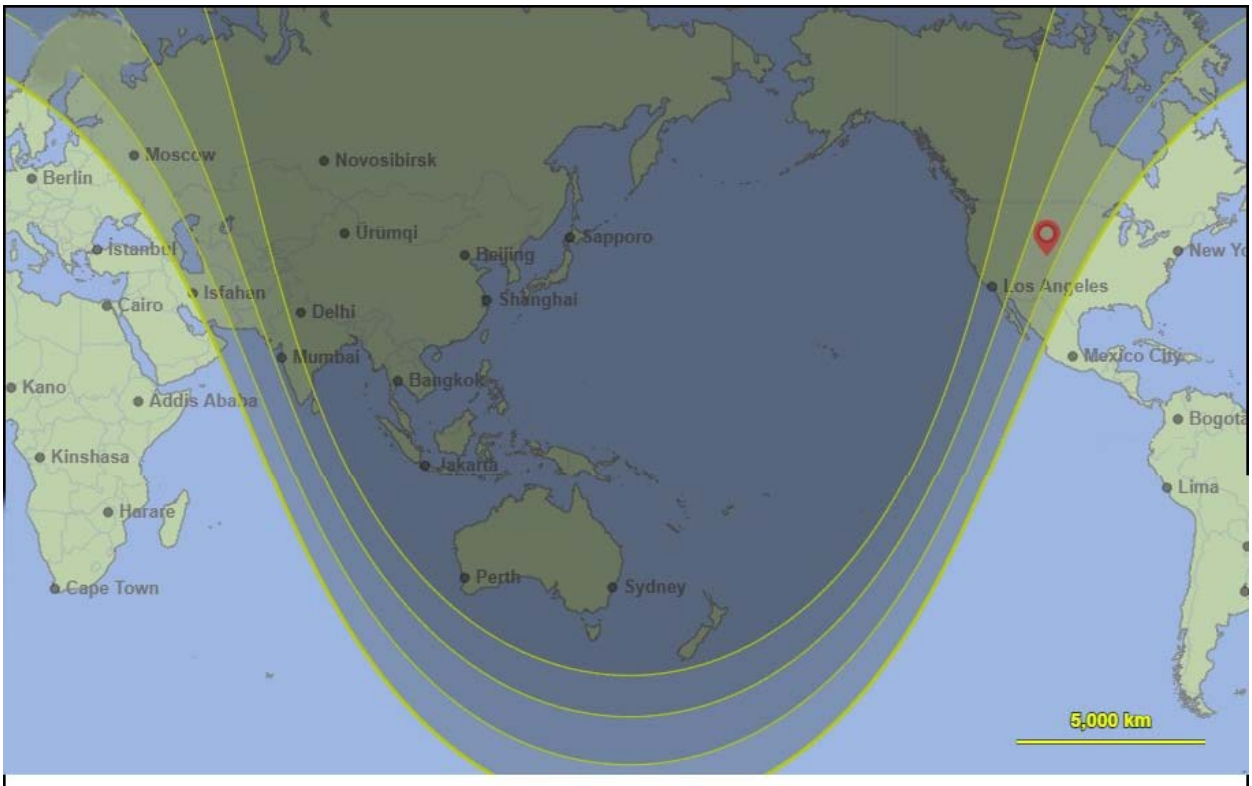


Figure 3 - Greyline at 6AM MST on Shortest Day (December 21)

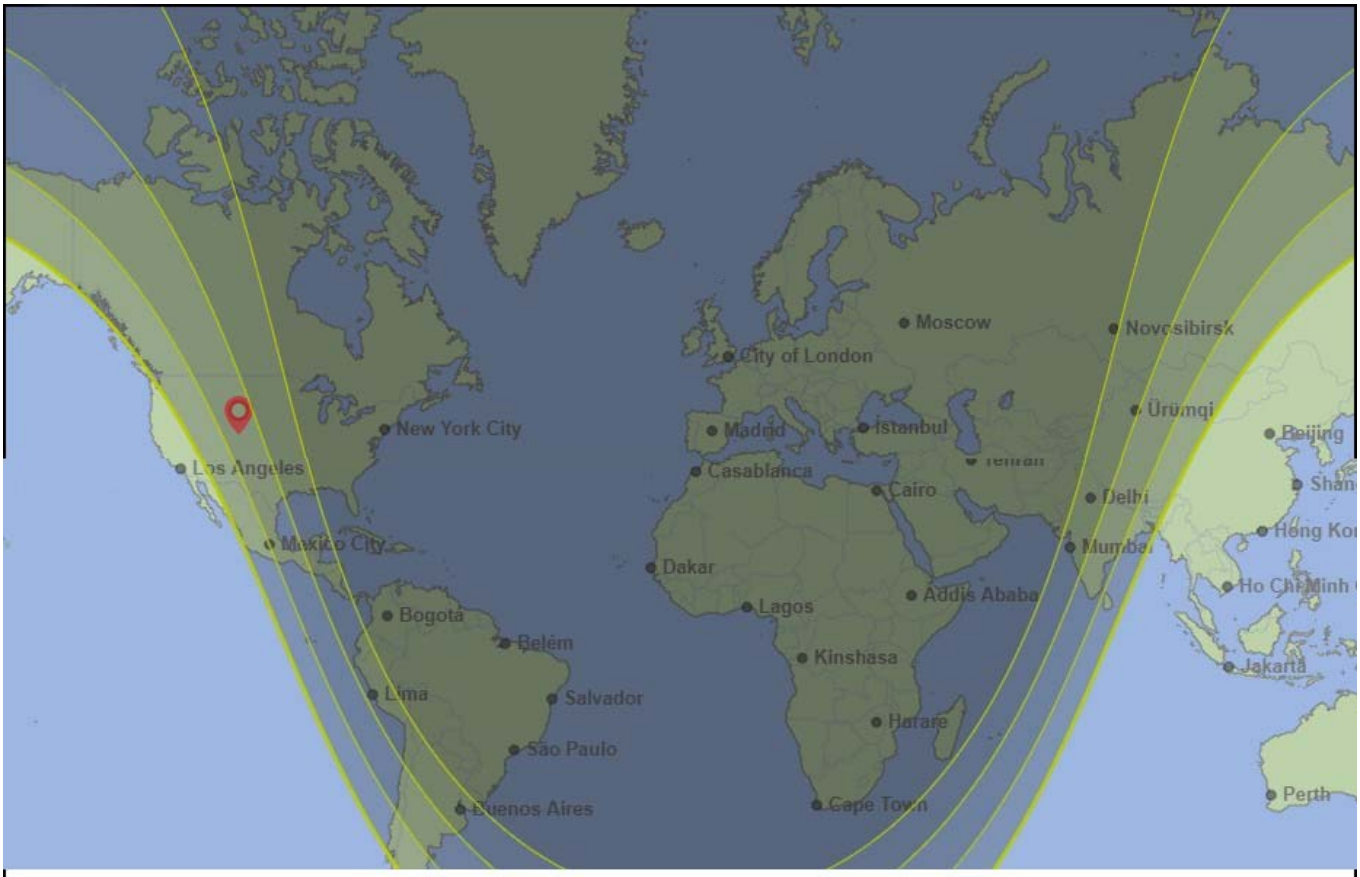


Figure 4 - Greyline at 8PM MST on Shortest Day (December 21)

What is Greyline Propagation?

Greyline propagation is a type of radio propagation along the Greyline. During Greyline propagation (at dawn and dusk) lower frequency radio waves can travel over further distances along the Greyline than they can outside of the Greyline. The is because the D layer, which absorbs lower frequency radio waves, quickly disappears on the sunset side due to the lack of sunlight, while it hasn't yet formed on the sunrise side. As a result, radio waves can reflect off the F region of the ionosphere and travel over long distances. Also, as shown in Figure 5, during Greyline the D and F layers are in a very drastic transition state which makes the Greyline a very low loss RF path.

Greyline propagation is most common at lower frequencies, such as the 160, 80, 60 and 40 meter bands. However, it can also occasionally occur at higher frequencies, such as the 20 meter band.

Why Operate Greyline Propagation?

Greyline propagation can enable contacts with stations on 160, 80, 60 and 40 meters that are normally out of reach by thousands of miles. These signals travel along the Greyline and suffer less attenuation. Greyline propagation can be challenging to operate, but it is also rewarding. For example, looking at the Greyline in Figure 1, a Denver station in the morning might be able

to work stations via 160, 80, 60 and 40 meters in Australia, the south pacific and South America. Looking at Figure 2, in the evening the Denver station might be able to work stations on the same lower bands in Europe and Africa. During other times of the year Greyline propagation offers new DX possibilities as it moves between the summer and winter solstice positions.

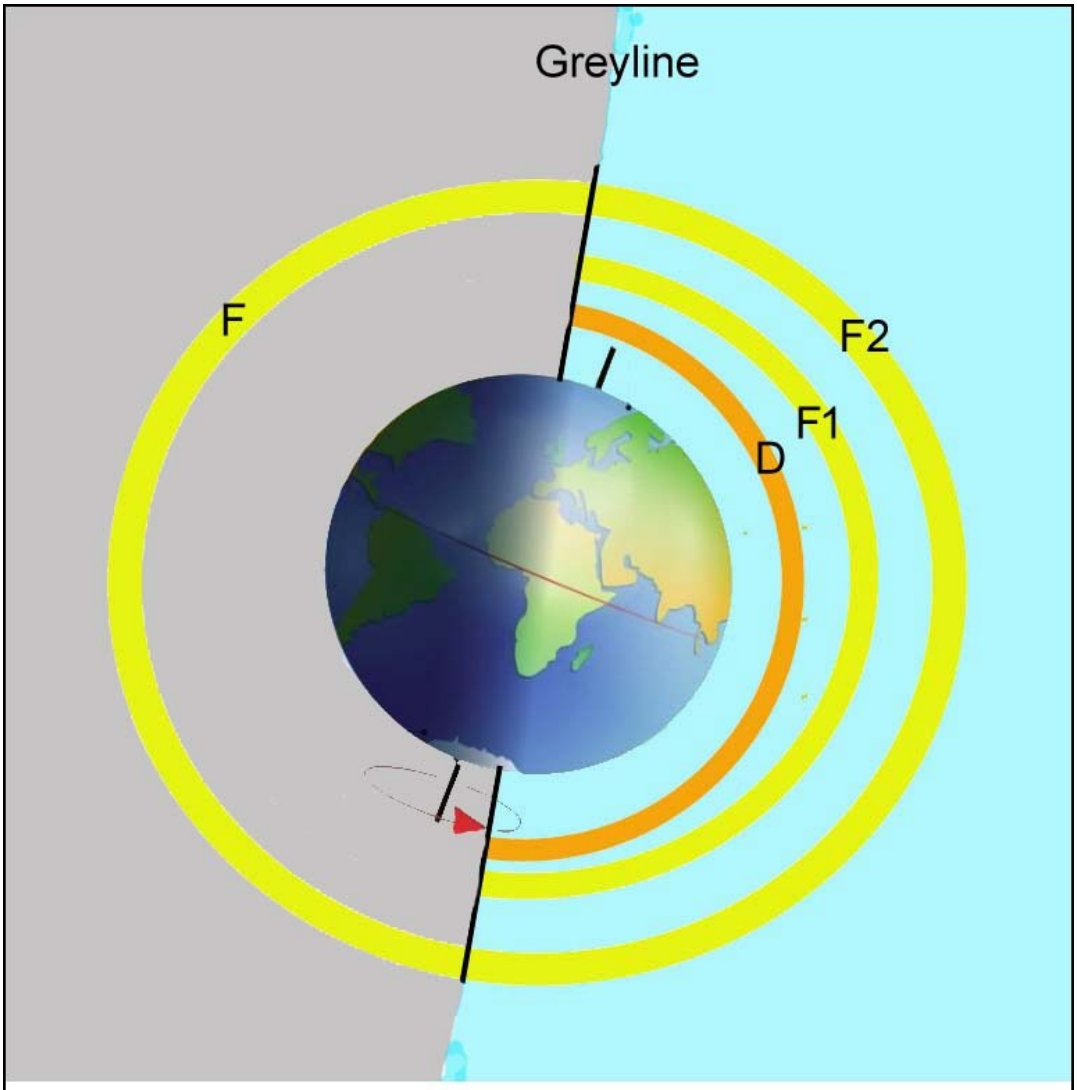


Figure 5 - Layer changes at Greyline

Do Seasonal and Daily Variations Affect Greyline Propagation?

Seasonal and daily variations can significantly impact Greyline propagation making it challenging and yet rewarding. Seasonal and daily variations are:

- Winter vs Summer: During winter, the Greyline tends to be more pronounced and stable. The longer nights and lower solar angles can result in better propagation conditions. In contrast, during summer, the Greyline may be less distinct, leading to different propagation characteristics.
- Sunspot Activity: Seasonal variations also coincide with changes in solar activity, particularly the solar cycle. High sunspot activity can enhance ionization in the iono-

sphere, positively affecting Greyline propagation.
- Ionospheric Conditions: The ionosphere's behavior varies seasonally, impacting radio wave propagation. Changes in ionospheric density and absorption can influence the effectiveness of Greyline communication.

How do the Ham Bands Respond to Greyline?
The following is an overview of the propagation characteristics of each band during Greyline propagation:
- Signal Strength: 160 meters offers the strongest signal due to minimal D-layer absorption, but its lower frequency can be impacted by noise and daytime interference. 80 meters provides a good balance between strength and noise. 60 and 40 meters have lower noise but weaker signals.
- Propagation Distance: 160 meters can potentially reach farther due to its low frequency and ability to hop obstacles. 80 meters offers moderate range. 60 and 40 meters are primarily suited for medium distances.
- Noise Level: 160 meters suffers from the highest noise levels, while 40 meters offers the cleanest signals. 80 and 60 meters fall in between.
- Average Greyline Opening: These are just rough estimates. The actual times can be significantly shorter or longer depending on the many factors such as season, solar activity, geomagnetic storms, etc.:

160 meters:

Summer: Occasional Greyline openings on 160 meters can occur around 30-60 minutes before sunrise and 15-30 minutes after sunset under ideal conditions (strong solar activity, equinoxes).

Winter: Greyline openings on 160 meters become extremely rare or completely absent in due to the limited daylight hours and unfavorable ionospheric conditions.

Equinoxes: Spring and fall equinoxes offer the best chance for Greyline openings on 160 with slightly longer potential windows around sunrise and sunset compared to winter.

80 meters:

Summer: Opens for Greyline around 15-30 minutes before sunrise and remains open until 45-60 minutes after sunset.

Winter: Opening time might be delayed by 15-30 minutes, and the closing time might be advanced by 30-45 minutes compared to summer

60 meters:

Summer: Opens for Greyline around 30-45 minutes before sunrise and remains open until 15-30 minutes after sunset.

Winter: The opening time might be delayed by 30-60 minutes, and the closing time might be advanced by 30-60 minutes compared to summer.

40 meters:

Summer: Opens for Greyline around 45-60 minutes before sunrise and remains open until 30-45 minutes after sunset.

Winter: The opening time might be delayed by 30-60 minutes, and the closing time might be advanced by 30-60 minutes compared to summer.

Overall considerations:

- 160 meters for maximizing signal strength and long-distance potential but be prepared for noise.
- 80 meters for a good balance between strength, clarity, and range.
- 60 meters or 40 meters if noise levels are a major concern and you don't need the absolute maximum distance.

Do All Stations Need to Be in Greyline to Communicate?
Not necessarily. Greyline propagation is a favorable condition that can enhance communication between stations, but it is not a prerequisite. Communication can still occur between stations if only one station is located within the Greyline zone. However, the strength of the signal will be reduced compared to Greyline-to-Greyline communication, but it may still be strong enough for successful communication.

Resources
There are many resources available on the Internet. A very popular resource is Simon's World Map. This free map is available for Windows 7/8/10/11 and requires minimal computer resources.

Simon's World Map displays a real-time world map with a variety of features, including:

- Current time and date anywhere in the world.
- Sunrise and sunset times.
- Greyline map.
- Current positions of satellites and the International Space Station.
- Moon phase.
- Weather data.
- Country prefixes.
- Maidenhead squares.

The map is customizable meaning that a DXer can enter different times and dates to see when Greyline will enable propagation to areas of interest. W6LG's YouTube video listed below demonstrates how to work with Simon's World Map and Greyline. Simon's World Map (version 1.5.4) can be downloaded from: https://www.sdr-radio.com/world-map

Another powerful live Greyline map (from which Figures 1 through 4 were developed) is *In-The-Sky.org* available at https://in-the-sky.org/twilightmap.php#google_vignette

YouTube Greyline References:
What Is Long Path Via the Grey Line? What is the Grey Line? G4ELI's Simon's World Map, Jim W6LG:
https://www.youtube.com/watch?v=plD7R2A_MNg
All about the Greyline:

https://www.youtube.com/watch?v=h8ebGdaHMTo&t=17s
Gray-line Propagation Explained:
https://www.youtube.com/watch?v=mXdkBnI3dMU&t=13s
Revisiting the Greyline:
https://www.youtube.com/watch?v=xYbUOuFjSj0
Greyline Propagation - Ham Radio HF DX at Twilight:
https://www.youtube.com/watch?v=4b4QrGCZLm0&t=2s
What is Grey Line Propagation in Amateur Radio?:
https://www.youtube.com/watch?v=8QgpBCqtweE
Greyline propagation part 2 in a different perspective:
https://www.youtube.com/watch?v=3-6OoziWtn4

Additional References:
Working The Greyline:
https://www.qsl.net/w2vtm/grayline.html
An Introduction to Greyline DXing - ARRL Pub:
https://www.qsl.net/w/wa3mej/Articles/Propagation/GENERAL%20PROP/An%20Introduction%20to%20Gray-Line%20Dxing%20.pdf

End Fed Half Wave Antennas

By Bill Rinker, W6OAV

End Fed Half Wave (EFHW) antennas are a topic that generates discussions among hams. Some hams find them very effective, while others have had less success. There are a variety of factors that can influence how well an EFHW antenna performs in a particular situation. The following is an expansion of the *Roundtable* EFHW article published in September 2023.

There are three basic types of EFHW antennas: resonant single band, resonant multiband and non-resonant single band/multiband. The first half of this article discusses resonant EFHWs followed by a brief discussion of non-resonant EFHWs.

PROs and CONs of EFHWs
The following is a breakdown of the pros and cons to help one decide if an EFHW antenna is a right choice:
Pros:

- Easy to build: EFHW antennas are simple cost affective designs that can be made with readily available materials.
- Multi-band operation: A single EFHW antenna can operate on multiple bands, eliminating the need for separate antennas for different bands.
- Compact design: EFHW antennas don't require a lot of space, making them a good option for limited space applications.
- No ground plane: Resonant EFHW antennas can be used without a ground plane or counterpoise.
- Adaptable: Can be horizontal, vertical, sloper, inverted V, or inverted L.
- Stealthy: Their small footprint design and minimum hardware allows for a more discreet

setup, which is beneficial in areas with antenna restrictions.
- Portability: EFHW antennas are lightweight, easy to carry and deploy, which is ideal for portable operations (SOTA and POTA) and field days.

Cons:
- Matching: An impedance balun (transformer) is required to match the antenna's high impedance to the coaxial cable (the transformers are easy to assemble or available for purchase).
- Tuning: While some EFHW designs are resonant across multiple bands, some may require tuning for optimal performance on specific bands.
- Radiation angle: Compared to a dipole antenna, multiband EFHW antennas typically have a higher radiation angle with several lobes on the upper bands, which may not be ideal for all communication applications.
- Possible RFI: May require a short 0.05 λ counterpoise or ground connection to resolve.
- Possible matching network “flash over” at high powers.
- Isolation: A 1:1 balun or common mode choke is important to isolate the feed line and prevent common mode current issues.

Overall, EFHW antennas are a versatile and cost-effective option for hams. Understanding the pros and cons will help one decide if an EFHW antenna is a good fit for their needs.

Single Band EFHWs vs Multiband EFHWs

The differences between single band and multiband EFHWs are (See Figure 1):

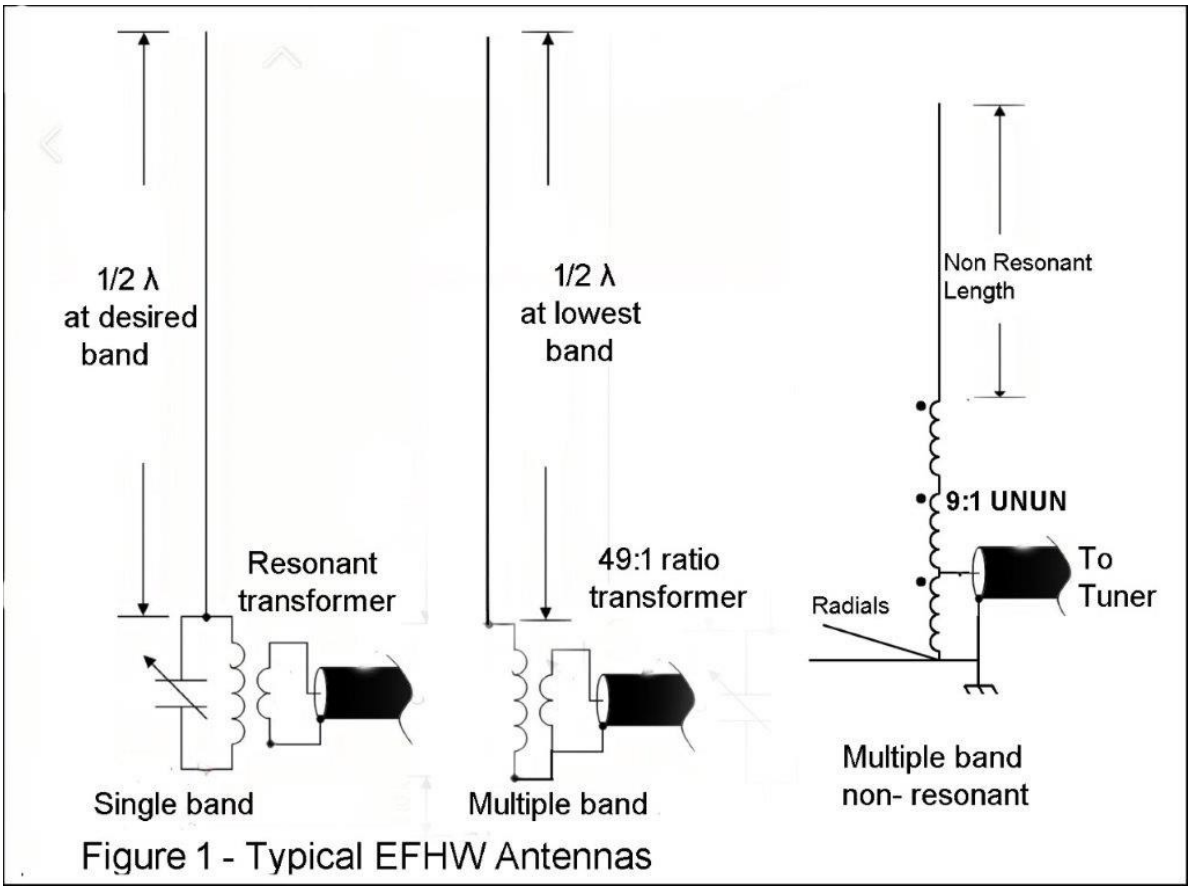


Figure 1 - Typical EFHW Antennas

Single Band EFHW Antennas:

- The antenna element is 1/2 λ long which is very efficient and produces a nice low RF pattern.
- Requires a matching network which is a tuned transformer with a 32:4 or 32:6 turns ratio, providing a 64:1 or 28:1 impedance transformation respectively.
- Is generally simpler to install and tune, as the matching network only needs to be optimized for a single band.
- Does not normally require a tuner (depending on the surrounding environment).

Multiband EFHW Antennas:

- The antenna element is 1/2 λ long for the lowest band.
- A broadband matching network is often used instead of a tuned circuit. This typically consists of a fixed-ratio transformer, such as a 49:1 or 64:1 impedance transformation, without any tuning components. The broadband matching network allows using the 40 m EFHW antenna on 40, 20, 15, and 10 meters with no tuner, and 12 and 17 meters with a tuner.
- Some designs also incorporate a parallel input capacitor around 100 pf to help improve the SWR across the operating bands.

Non Resonant EFHW Antennas

The above discussed the traditional EFHW antenna that uses a resonant 1/2 λ element, which results in a very high impedance (around 2000-6000 ohms) which requires a matching transformer to feed it with 50 ohm coax. However, there is another type of EFHW antenna that uses a non-resonant or "random" wire length. (Figure 1). This non-resonant EFHW antenna exhibits a lower impedance, typically around 450-600 ohms, which can be more easily matched to 50 ohms using a simpler 9:1 UNUN transformer.

The advantage of the non-resonant EFHW is that it can cover a wider frequency range without the need for retuning, as the wire length is not resonant on any specific amateur band. This makes it a more broadband and space-efficient antenna option.

The trade-off is that non-resonant EFHW antennas may have slightly lower efficiency compared to a resonant 1/2 λ EFHW, due to the losses in the matching transformer.

So, in summary there are non-resonant EFHW antennas that use a random wire length instead of a resonant 1/2 λ element. This provides some advantages in terms of broadband operation and compact size, though with potential efficiency trade-offs.

Writer's comment: Several years ago, I installed a stealth non-resonant EFHW. It consisted of 30' of invisible 26 gauge wire with a clear plastic insulator hanging from a thick tree branch. The EFHW was fed via a homebrew 9:1 UNUN with a small ground level auto tuner hidden by a bush. I cannot say that the antenna was highly efficient, but I was able to work DX on all bands from 40 to 10 meters.

References (Commercial EFHWs and transformers):

Commercial EFHW Antennas
https://www.vibroplex.com/contents/en-us/d9175.html
QRP Guys Portable Multi-Band End Fed Antenna

https://qrpguys.com/qrpguys-multi-band-end-fed-antenna
MFJ-1982MP, End Fed, 1/2 λ, 80-10M, 300W, Wire Antenna
https://mfjenterprises.com/products/mfj-1982mp
HyEnd Antennas
https://www.hyendcompany.nl/home#main
My Antennas
https://MyAntennas.com

References (Theory & How to Build):
A Deep Dive into End-Fed Half-Wave Antennas
https://batteryeliminatorstore.com/blogs/ocf-masters-articles/a-deep-dive-into-end-fed-half-wave-antennas
The End Fed Half Wave Antenna
https://www.aa5tb.com/efha.html
The End Fed Half Wave Antenna- Steve Dick, K1RF
https://www.youtube.com/watch?v=jgepJi53iqw
End-fed Half Wave - the perfect antenna for your POTA or Field Day station
https://www.youtube.com/watch?v=YwffN-qZzhY
Build EFHW 6–40 Meter Multiband HF Antenna
https://earchi.org/92011endfedfiles/Endfed6_40.pdf
EFHW Coupler & Calculator
https://m0ukd.com/homebrew/baluns-and-ununs/end-fed-half-wave-antenna-tuned-coupler-efhw/
Build an EFHW Antenna from a Kit – ARRL
https://www.arrl.org/end-fed-half-wave-antenna-kit
Build a random EFHW and make amazing contacts
https://youtu.be/D_-aNzrIXWs?t=23
Random Wire Antennas using a LDG 9:1 UNUNS
https://www.youtube.com/watch?v=IpGzBPtkxRg
How-To Build, Cut & Tune an EFHW Antenna!
https://www.youtube.com/watch?v=DxhT9uObigs
Recommended Random Wire Antenna Lengths
https://udel.edu/~mm/ham/randomWire/

Monthly DRC Lunch - Reminder

By Pete Sobanski, AB8WN and Kevin Schmidt, K0KPS

Join us on the third Wednesday of each month at 11:30 a.m. for lunch at Sunrise Sunset. The address is 1424 S Wadsworth Blvd, Lakewood, CO 80232. No reservations are required. If you are interested in meeting and talking about radio, or other topics, don't hesitate in coming by.
w0tx.org/2024/06/09/denver-radio-club-lunch

Who Invented the "Walkie Talkie" / HT?

By Bill Rinker, W6OAV

Today, most of us use highly sophisticated handheld transceivers (HTs) for our ham activities. But have you ever wondered if hams were involved in the early development of this important communications technology? It should come as no surprise that pioneering ham operators did play a key role.

There are two innovative hams who made significant contributions to the origins of the modern HT:

Canadian Donald L. Hings (VE7BH)

The first true portable two-way radio that could be used by one person was invented by Canadian Donald L. Hings in 1937 while working for CM&S. (Figure 1). Hings developed a 12 pound "waterproof field 2-way radio" that he called the "packset". This was the first portable two-way radio that could be called a "walkie-talkie". This early version of the walkie-talkie allowed for real-time, mobile voice communications between aircraft and ground stations.

When Canada entered World War II in 1939, CM&S sent Hings to Ottawa to further develop his invention for military use. Over the next few years, Hings created several improved models, including the successful C-58 Walkie-Talkie. By the end of the war, over 18,000 of Hings' walkie-talkies had been produced and used by Allied forces. Hings is credited as the first to invent the actual "walkie-talkie" device in 1937.

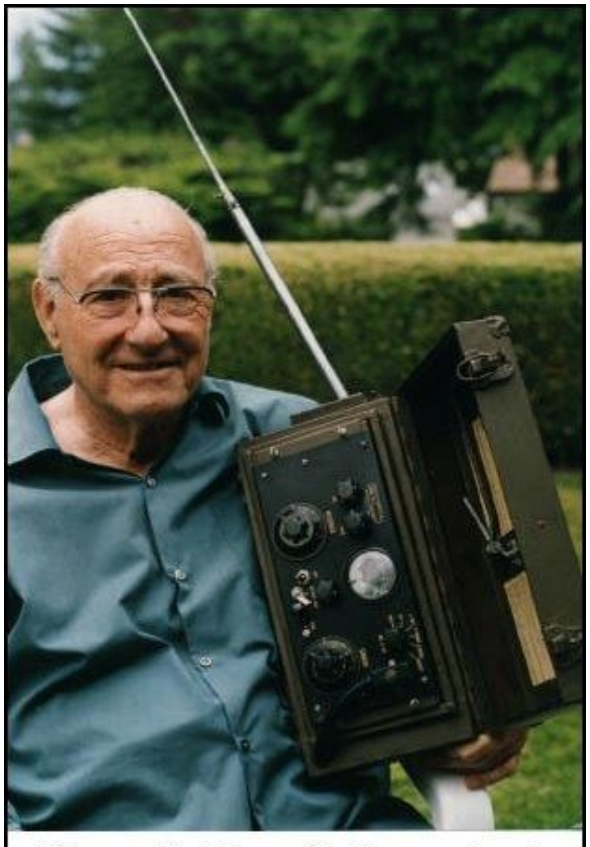


Figure 1 - Hings & his packset

The term "walkie-talkie" was later coined in 1941 when a Toronto newspaper reporter referred to Hings' C-18 Canadian military prototype as a "walkie-talkie". Hings' pioneering work in wireless communications was recognized when he received the Order of Canada in 2001 for the device's significance to the war effort.

After the war, Hings moved to Burnaby, British Columbia where he established an electronics R&D company, Electronic Labs of Canada. He continued researching and inventing in communications and geophysics until his retirement. Hings held over 55 patents in Canada and the United States and was the inventor of the klystron magnetometer survey system. He was inducted into the Telecommunications Hall of Fame in 2006.

Alfred J. Gross (W8PAL)

Gross worked for the Galvin Manufacturing Company, later known as Motorola. (Figure 2). He investigated the unexplored frequency region above 100 MHz. Between 1938 and 1941, soon after the invention of the walkie talkie in 1937 by Donald Hings, he created and patented his own version of the "walkie-talkie". Gross's walkie-talkie soon caught the attention of the Office of Strategic Services (OSS), the forerunner of the CIA. On the outbreak of war, Gross was recruited to design a two-way, ground-to-air communications system for use behind enemy lines which became known as the super secret Joan-Eleanor system. This system was a very important and innovative communications technology that played a significant role in the clandestine intelligence and special operations activities of the OSS during World War II.

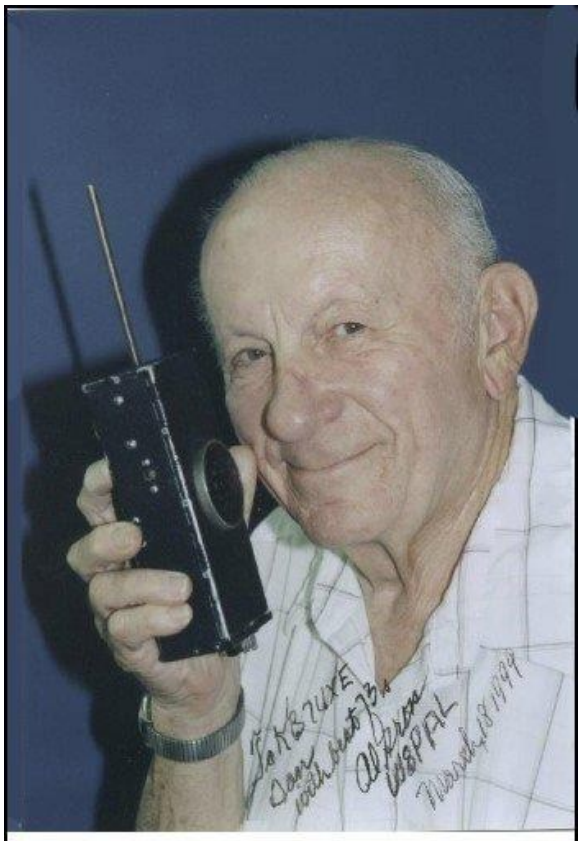


Figure 2 - Al Gorss & his Walkie-Talkie

The Joan-Eleanor system consisted of two main components - the "Joan" handheld SSTC-502 transceiver used by the agent in the field, and the "Eleanor" SSTR-6 receiver/recorder unit on a high-flying aircraft. The Joan unit operated on 260 MHz FM. It was a small, 4 pound handheld device with a dual triode tube design and a simple folding dipole antenna.

The Eleanor equipment was installed in the rear compartment of a de Havilland Mosquito aircraft, which would fly at high altitude (over 30,000 ft) to receive the agent's transmissions. The agent would transmit their report in plain speech at a pre-scheduled time, which would be recorded on a wire recorder aboard the Eleanor aircraft.

This allowed for real-time communication between the agent and the aircraft, without the need for Morse code or encryption/decryption. The VHF frequency used was chosen because it could not be effectively monitored by the Germans at the time. The ground range was limited but the range to the aircraft was over 30 miles.

The Joan-Eleanor system was specifically developed for the OSS's "Red Stocking" operations, replacing bulky suitcase radios previously used by agents. It was classified as top secret by the U.S. military and not declassified until 1976.

After the war, Gross continued to innovate in wireless communications, holding over 40 patents related to his work. He is recognized as a pioneer in the field of portable radio systems and a key contributor to the development of the iconic walkie-talkie.

So, the next time you use your trusty HT, remember the innovative hams who played a key role in bringing this essential piece of communications equipment to life. (There is no record as to when hams began to refer to “walkie talkies” as “HTs”. The term "HT" became more widely used and accepted among hams around the 1940s).

References:

Donald Lewes Hings:
https://www.youtube.com/watch?v=KvajiN1naxg
Al Gross:
https://www.youtube.com/watch?v=hpNWMhcSlJU
Joan-Eleanor system:
https://en-academic.com/dic.nsf/enwiki/8424198
Red Stocking and Joan-Eleanor Operations:
https://harringtonmuseum.org.uk/red-stocking/
OSS Technology Film - Joan and Eleanor:
https://www.youtube.com/watch?v=ycCxRPWPidc
The full history of the “walkie talkie” is available at:
https://www.repeater-builder.com/motorola/pdfs/scr300.pdf

From the Archives

April 1958

ROGERS RADIO CO

IT'S SPRING TIME AND
TIME TO SPRING DOWN TO ROGERS FOR BARGINS

EIMAC A54.	$ 99.75
EIMAC AF67	$ 140.00
PE 103 DYNAMOTOR	$ 25.00
JAMES 500MA VIBRATOR SUP.	$ 35.00
GONSET SUPER SIX	$ 40.00
WEBSTER BAN SPANNER ANTENNA.	$ 24.95
VIKING MOBILE.	$ 89.00
VIKING MOBILE VFO.	$ 30.00
NC 2-40D	$ 169.50
PRO 310 DEMO	$ 495.00
NATIONAL NC 125.	$ 125.00
HALLICRAFTERS S85.	$ 85.00
WRL GLOBE CHAMPION 150	$ 150.00
CUSTOM LINEAR PR 6146's.	$ 100.00
JOHNSONS RANGER.	$ 200.00
WRL GLOBE CHAMPION 300	$ 425.00
WRL GLOBE CHIEF.	$ 54.95
WRL UM1 MODULATOR KIT less tubes	$ 32.50
WRL 600 WT ANTENNA TURNER KIT.	$ 69.50
WRL GLOBE SCOUT.	$ 65.00
CENTRAL ELECTRONICS 20A.	$ 200.00
HEATH KIT DX 100	$ 175.00
JOHNSONS VIKING VALIANT demo	$ 375.00
VIKING NAVGATOR new	$ 199.50
COLLINS 32V-1.	$ 275.00
JONES MICRO MATCH.	$ 25.00
PROP PITCH MOTORS.	$ 25.00
COAX SWITCHES 6 POSITION	$ 10.00

WØGQY MEL
WØEHE HARRIS

WØTYB BETTY
WØRQI LA RUE

ROGERS RADIO CO.

TA 5-5142

1648 WAZEE

DRC's Emergency Response Info

In the event of a disaster in the metro area, please monitor our repeaters on 145.490/448.625 (primary) and 449.350 (secondary).

The emergency Net Control Operator will provide information and/or requests to members for assistance.

W0TX Repeater Directory

Kings Soopers Reward Program - Help the DRC.

kingsoopers.com/i/community/community-rewards

citymarket.com/i/community/community-rewards

Random Site Of The Month

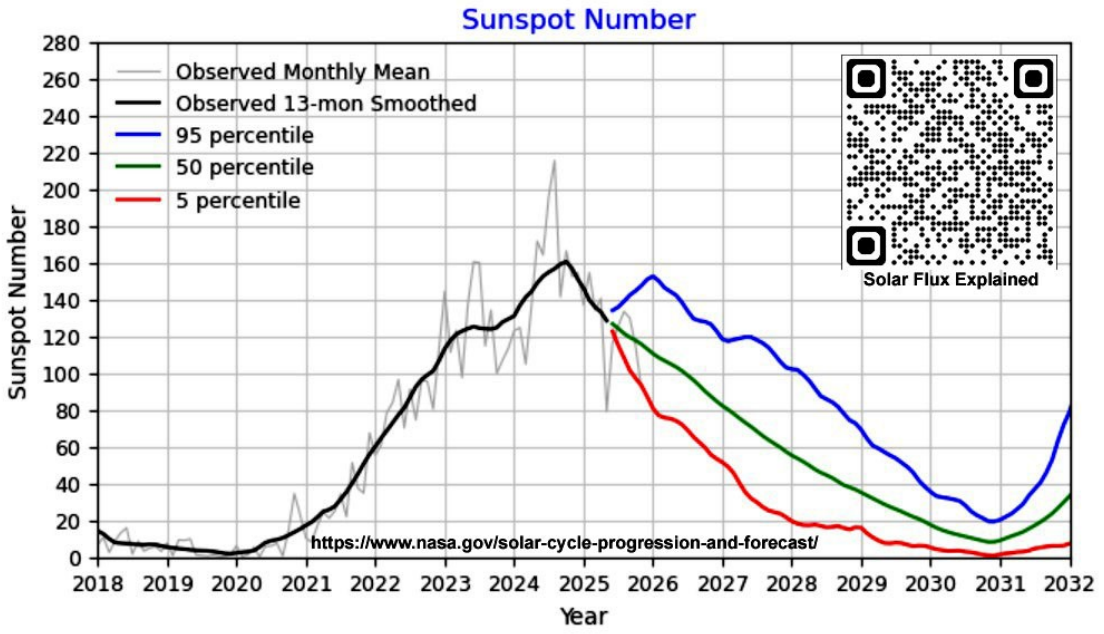
Rainbow Canyons ARC Quartzfest 2026

The Round Table Archive and Article Index

w0tx.org/roundtable

Propagation Forecast

By Bill Rinker, W6OAV



Upcoming Events

Hamfests & Conventions

Event	Date	Location	Sponsor Website
RMHAM Winter Swapfest	Feb 15th	Adams County Fairgrounds	rmham.org/the-swapfest

Upcoming QSO Parties

The following are the Contests not sponsored by the ARRL. Please submit additions for future issues.

State/Province	Start Date	End Date	Sponsor Website	Notes
British Columbia	02/01/2025	02/02/2025	Orca DX and Contest Club	
Minnesota	02/01/2025	02/01/2025	Minnesota Wireless Association	
Vermont	02/01/2025	02/02/2025	Radio Amateurs of Northern Vermont	
South Carolina	02/22/2025	02/23/2025	SC QSO Party	
North Carolina	02/23/2025	02/24/2025	North Carolina QSO Party	
Idaho	03/08/2025	03/09/2025	Idaho QSO Party	
Oklahoma	03/08/2025	03/09/2025	Oklahoma QSO Party	

The Round Table needs you!

We are looking for an individual who can take over the editing of the Round Table. The new person will work with the current editor to transition the publishing approach away from Microsoft Publisher (Microsoft is stopping support for Publisher in 2026.). If you have questions or are interested in helping with producing the Round Table, please email roundtable@w0tx.org. Thank you!

Source: qsoparty.eqth.net/index.html See contestcalendar.com/contestcal.html for a larger QSO parties list.

Attention

The DRC Board of Directors meetings are held on the 4th Wednesday of each month via Google Meet and are open to any member. If you wish to attend, please contact a board member prior to the meeting night for specific information.

DRC Repeaters

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz	**Metro Denver Area Coverage**
2m	145.490MHz (-) 100Hz PL	**Linked to 70cm / 448.625MHz. Primary frequency during emergency net.**
2m	147.330MHz (+) 100Hz PL	**Local area. Does not TX a PL.**
1.25m	224.380MHz (-) 100Hz PL	
70cm	447.825MHz (-) DCS~073; NB 12.5; +/- 2.5	**Saint Anthony's. Note: This is a narrow band repeater requiring DCS.**
70cm	448.625MHz (-) 100Hz PL	**Linked to 2m / 145.490MHz. 1° disaster net freq.**
70cm	449.350MHz (-) 100Hz PL	**Wide area coverage with Echolink, node # 4140. Secondary frequency during emergency net.**
70cm	449.775 MHz (-)	**Yaesu digital, C4FM, Wires-X, DN, VW & Data. No analog FM. W0TX Room 40931.**
70cm	446.7875MHz (-)	**BrandMeister Repeater: Slot 1 – Wide Area Traffic, Slot 2 – Local Talk Group 310804**

DRC's Trading Post

Don't forget you can find locally-sourced, ham-grown merchandise at: w0tx.org/trade

JANUARY 2026

DRC Net Sundays at 8:30 p.m. on 145.490 / 448.625 (no PL)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Straight Key Night	**2**	**3** Full Moon
4 Kids Day RTTY Roundup	**5** RTTY Roundup	**6**	**7** **Learning Net** 7:30 p.m. 145.490 / 448.625 (No PL)	**8**	**9**	**10** Last Quarter
11	**12**	**13**	**14** **Learning Net** 7:30 p.m. 145.490 / 448.625 (No PL)	**15**	**16**	**17**
18 January VHF New Moon	**19** January VHF 	**20** January VHF	**21** DRC Lunch 11:30 @ Sunrise Sunset, Lakewood DRC Monthly Meeting Elmer 1800 Meeting 1900	**22**	**23**	**24**
25 First Quarter	**26**	**27**	**28** **Learning Net** 7:30 p.m. 145.490 / 448.625 (No PL)	**29**	**30**	**31**

See arrl.org/contest-calendar for additional details about contests.

DRC Board of Directors

President	K0KPS	Kevin Schmidt	303-475-9234	president@w0tx.org
Vice-President	N6WHV	Dick Nelson	Check Roster	n6whv@w0tx.org
Secretary	WW0LF	Orlen Wolf	303-279-6264	secretary@w0tx.org
Treasurer	WW0LF	Orlen Wolf	303-279-6264	treasurer@w0tx.org
Board Member	KF0AWC	Brian Diem	970-218-5543	kf0awc@w0tx.org
Board Member	K1DBC	Doron Ben Chaim	720-254-1561	k1dbc@w0tx.org
Board Member	AB8WN	Peter Sobanski	720-884-7470	ab8wn@w0tx.org
Board Member	K4RNY	Ronnie Bock	303-519-8510	k4rny@w0tx.org
Board Member	KB0CHT	Jeff Irvin	Check Roster	Check Roster

DRC Staff and Volunteers

Benevolent		Carolyn Wolf	303-279-1328	benevolent@w0tx.org
Club Librarian	WG0N	Dave Baysinger	303-987-0246	wg0n@arrl.net
Digital Committee	Open			digital@w0tx.org
Education Coordinator	Open			elmer@w0tx.org
EmComm Coordinator	Open			emcomm@w0tx.org
Field Day Chairman	N6WHV	Dick Nelson	Check Roster	fieldday@w0tx.org
Membership	KB8OGP	Kelly Sobanski	Check Roster	membership@w0tx.org
Net Control	KS0E	Alex Acerra	Check Roster	net@w0tx.org
Public Relations	K0AXP	Dave Verlinde	248-515-2371	publicrelations@w0tx.org
RT Managing Editor	AD0UZ	Brennan Pate	Check Roster	roundtable@w0tx.org
RT Associate Editor	W6OAV	Bill Rinker	Check Roster	Check Roster
Hamfest Manager	KE0YKV	Bill Worthington	720-626-5485	drcfest@w0tx.org
Tech. Committee Chair	N0XRX	Mark Thomas	720-438-0848	tech@w0tx.org
Trustee	WW0LF	Orlen Wolf	303-279-6264	trustee@w0tx.org
VE Team	K0RAP	Robert Pickett	720-336-0114	k0rap@w0tx.org
Website & YouTube	K1DBC	Doron Ben Chaim	720-254-1561	websiteadmin@w0tx.org

Please Let Us Know

Over the years we occasionally hear from hams who have read the Round Table in other states and countries around the world. We appreciate the comments and we would like to know where you are located. So if you live outside the Front Range or Denver Metro Area and read the newsletter either online, email or hard copy please send a short note via email with your *City, State* or *City, Country*.
We will publish it at a later date in our new regular feature called Round Table Round World.
To respond to this request send your information to roundtable@w0tx.org.

Subject: I'm located in…

Editor's Note

DRC members - this is your newsletter. Please email your club or amateur radio related suggestions to the editor. Members are the heart of The Denver Radio Club, so if you have an expertise or an interest in a particular segment of ham radio that you'd like to write about, you may email your submissions to roundtable@w0tx.org. The submission deadline is the 25th of the Month. ~ Editor