



# THE ROUND TABLE

Monthly Newsletter Of The Denver Radio Club

Since 1917

January 2021

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## PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members,

Well, here it is, 2021 at last. There is no argument that everyone hopes 2021 will be much better than 2020...how could it be much worse?

That being said, Cathy and I wish each and every one of you a Happy New Year and a much better and prosperous 2021!

Thanks to Bob Witte (K0NR) for a very interesting program "Having Fun With VHF", our December program. We hope to have Bob return this year for another presentation.

January Meeting Announcement

By Robert White, K0RCW

The new ICOM 705 is a game changing all mode QRP HF and VHF/UHF portable SDR radio. Those using this 2.4 pound radio out-of-doors will find it draws relatively little current so it is solar friendly and it can be used for pedestrian mobile operations. The unit puts out up to 10 watts using an external DC source or up to 5 watts using the included ICOM HT interoperable battery pack. A full 10 watts is nice for hitting our club repeaters from remote locations, as well as DSTAR capability and APRS/GPS capabilities useful in the field. I will take the radio out for a spin with the Alex Loop and share some video clips and experiences operating for our January meeting.

Thanks to all of our new members who have recently joined the DRC. Your support is very much appreciated. Please come to meetings and events and stay active. Your name and call will be posted in this edition of the Round Table.

73 for now,

Gerry  
W0GV  
President



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## WHO'S NEW IN THE DRC?

BY BOB WILLSON, KC0CZ

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 personally to make them feel welcome. Welcome to our newest members:

David Doherty - KD0JUB	Nick Birney - KF0CVB
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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.

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## TECHNICAL COMMITTEE REPORT

BY BILL RINKER, W6OAV

There were no meetings scheduled for November and December. All projects are on hold due to the virus and the winter weather. However, the tech committee members are discussing possible projects for the upcoming year.

The following is an overview of current issues for the Tech Committee.

### DRC/TSA Aurora Site.

Goal: Work with the TSA relative to establishing a "communications room" for the DRC.

Status: This project shelved until Covid-19 is over.

### Replace 220 Repeater Antennas

Goal: Improve coverage for the repeater.

Status: WW0LF is constructing the coax harness. Once completed, a work party will be scheduled.

### Install a Remote 6 Meter Receiver

Goal: Investigate the possibility a remote receiver to resolve the high noise level at Station 4.

Status: WG0N and W0GV will check out conditions at a possible site.

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## LEARNING NET REPORT

BY FRED HART, AA0JK

Our amateur radio learning net purpose: We are here to help introduce, and promote, a variety of topics of interest to all amateur radio operators.

Our intent is to help participants get more active, involved, and engaged in amateur radio.

Topics of interest we encourage:

### Personal Communications

- Getting started in the various modes, of communications.

### Emergency communications

- Participation in public service.
- Training in emergency communication for volunteers.

Radio electronics, and technology



- Kit building, understanding signal propagation. and building antennas.

We strive to put experienced members-volunteers, at the forefront, as a regular source of knowledge-sharing in the Denver Radio Club. We hope members participating in the DRC learning net will find it rewarding to share experiences, and learning, that will motivate more of our amateur radio community toward lifelong journeys as Hams.

If you have experience in, and have a passion for, any amateur radio related topics, please consider providing the DRC with presentations that will motivate other Hams to share your interests.

December Topics we have discussed:

- ARRL "On The Air" November / December
- Antenna Basics
- CQ – Fishing For Contacts
- General Class Upgrade
- SkyWarn and Storm Spotting
- Noise Canceling
- Installing your radios in your cars / trucks
- WinLink
- YOTA

Great topics from our group. We certainly enjoy everyone's participation. Thanks to all.

If you are listening and don't yet have your license, you can contact us at the [W0TX web-site](http://w0tx.org), [w0tx@w0tx.org](mailto:w0tx@w0tx.org), or [elmer@w0tx.org](mailto:elmer@w0tx.org).

If we don't have the answer here on the net, we have a lot of experienced Hams in the club that can help.

Getting that first Technician license? Upgrading to General or Extra? We're here to help. You may also find Dave Casler's Amateur Radio Licensing Guides helpful: <https://dcasler.com/ham-radio/>

We would encourage those who have been Hams for several years to also join us. Your experience and input is welcomed.

Finding your place in the amateur radio community - -> Are you looking to be more involved, learn new skills, find a mentor or friends to share your amateur radio interest? Check out your local Denver Radio Club, and start making the most of your amateur radio license.



<http://www.arrl.org/public-service>

Use your communication skills to help keep your community safe!



<https://www.weather.gov/marine/ham>

During severe weather events, amateur radio operators bring significant resources to storm spotting, including an established communications system that can function in an emergency. They provide real-time information to partners like emergency management and forecasters at the national weather service. The data received from hams helps issue weather watches, warnings, and advisories.



<http://www.warrenares.org/home/skywarn-weather-spotting>

What topics would you like to discuss? Join us Wednesday nights, 7:30 PM, 145.490, 100 Hz PL tone & linked to 448.625, 100Hz PL tone.

73,

Fred  
AA0JK

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## STARLINK SYSTEM EXPLAINER

BY JEFF IRVIN, KBOCHT

I came across this great video that explains how the Starlink system works from the perspective of a beta tester. Very well done!

<https://youtu.be/y5twSyF6s2I>

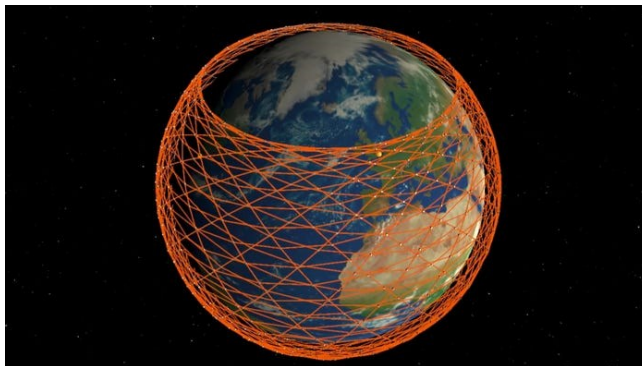


Image Credit: [Mark Handley](#)

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## SENSORGNOME MOTUS

FROM MATT WEBB VIA GERRY VILLHAUER, W0GV

The following message is from Matt Webb, after his presentation at our DRC meeting. If you would like to help Matt by placing a station at your qth, please email him at: [matt.webb@birdconservancy.org](mailto:matt.webb@birdconservancy.org). He will be happy to guide you through what is needed to place a SensorGnome Motus station at your location.

From Matt, "Thanks again for having me to speak at the DRC meeting back in November! It was a great opportunity to connect with radio people and I received several emails from people who are interested in building a SensorGnome Motus station to have at their home! That would be really cool if there are several more stations that go up from this meeting."



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## FCC AMATEUR RADIO LICENSE FEES

BY FRED HART, AA0JK

The FCC's proposed in late August to impose a \$50 fee on virtually all amateur license applications (including renewals).

The proposal is part of a much larger package of fee changes pursuant to a law approved by Congress in 2018 which, according to the Notice of Proposed Rule-making (MD Docket 20-270), "fundamentally changed the structure of the Commission to process applications."

The NPRM says the new law requires it to collect fees on amateur license applications, among others. The new fee scheduled is supposed to be based on "direct labor cost" of the Commission to process applications: however, the NPRM also notes that applications in the amateur and other personal radio services are "highly automated." In addition, the FCC no longer prints and mails physical licenses to hams, so there are no costs incurred there. It considers a \$50 fee for processing applications to be "normal." And in terms of businesses, that would be accurate. But we are individuals, many of whom are retirees on fixed incomes, or at the other end of the age scale, young people who we are trying to attract to amateur radio. For these hams, \$50 is a lot of money! And it may seriously impact a decision to apply for or renew an amateur license.

Since the law requires the FCC to impose a fee on amateur license applications, but gives it flexibility in setting those fees, we would encourage the Commission to make that fee as low as possible – say \$1 (or \$10 for a 10 year license term). This would keep the FCC in compliance with the law while not discouraging either young people or seniors from becoming or remaining active hams.

We hope the ARRL will be as proactive in opposing excessive license fees as it has been in trying to hold onto our 3.3-GHz band.

Are you an ARRL member? If not, you should be. They represent us in matters as in the above topic. Let them know your thoughts on the matter of a \$50 fee.

## JANUARY MEETING ANNOUNCEMENT

By ROBERT WHITE, K0RCW

The new ICOM 705 is a game changing all mode QRP HF and VHF/UHF portable SDR radio. Those using this 2.4 pound radio out-of-doors will find it draws relatively little current so it is solar friendly and it can be used for pedestrian mobile operations. The unit puts out up to 10 watts using an external DC source or up to 5 watts using the included ICOM HT interoperable battery pack. A full 10 watts is nice for hitting our club repeaters from remote locations, as well as DSTAR capability and APRS/GPS capabilities useful in the field. I will take the radio out for a spin with the Alex Loop and share some video clips and experiences operating for our January meeting.



## CCARC GUIDELINES ON HOTSPOTS

PROVIDED BY JEFF IRVIN, K8OCHT

From: Colorado Council of Amateur Radio Clubs, Inc.  
 Original Post / Source: <https://www.ccarc.net/hot-spots/>

Hotspots, low-power internet-connected transceivers, are a growing trend in amateur radio. Examples are OpenSpot, ZumSpot, JumboSpot, Nano-Spot, Nano-Node, and many others, using one or more of the popular digital voice modes (DMR, D-STAR, Fusion, etc.) as well as analog FM voice.

The CCARC Frequency Coordinator recommends that hotspots be deployed in the 70 cm band using one of the following frequencies:

Hotspot Channel	Frequency
1	438.4500 MHz
2	438.4750 MHz
3	438.5000 MHz
4	438.5250 MHz
5	438.5500 MHz
6	438.5750 MHz



7	438.6000 MHz
8	438.6250 MHz
9	438.6500 MHz
10	438.6750 MHz

These frequencies are intended for short distance operation using low power (<1W) devices. Use of high-power transmitters, amplifiers and high-gain antennas are discouraged to minimize conflicts with other users.

Most hotspots operate simplex and should use one of listed frequencies for both transmit and receive. If a hotspot is operating full duplex, the receive frequency on the hotspot should be 5 MHz lower. For example, a full-duplex hotspot transmitting on 438.450 MHz would use a receive frequency of 433.450 MHz.

These frequencies are available to users on a shared basis. Hotspot usage is not coordinated by the CCARC and no protection from co-channel interference is implied. Radio amateurs are encouraged to cooperate with other users on the band and to use the minimum transmitter power necessary to carry out the desired communications, consistent with FCC Part 97.

Please refer to the [70 cm band plan](#) for additional information on 70 cm band usage.

## NEW COAX - WORSE SWR

BY BILL RINKER, W6OAV

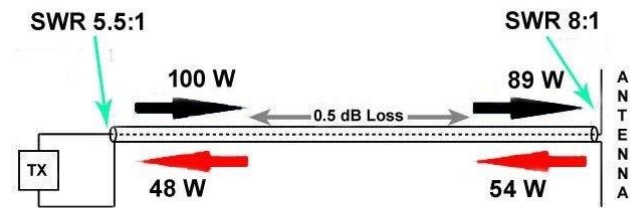
Here's a question heard often: "I replaced my old cheap coax with expensive top of the line low loss coax. Now my SWR is worse. Why?"

Here's the answer. The amount of coax loss will affect the SWR value at the transmitter end of a coax line. The more the coax loss the more inaccurate the SWR value will be at the transmitter end of the coax. Figures 1 and 2 explain how this occurs. Figure 1 shows SWR values with lossy coax to an antenna having a high SWR. Figure 2 shows SWR values with low loss coax to the same high SWR antenna. Note the different SWR values. The lossy coax makes the SWR look better than the good coax.



This example shows transmitting 100 watts through a coax with 3 dB loss. Only 50 watts reaches the antenna. With an SWR of 8:1, 60% or 30 watts of power is reflected. This is further attenuated by 3 dB meaning that only 15 watts of reflected power arrives at the transmitter. The resulting SWR at the transmitter is 2.6:1.

Figure 1 - SWR values with lossy coax



This example shows transmitting 100 watts through a coax with 0.5 dB loss. 89 watts reaches the antenna. With an SWR of 8:1, 60% or 54 watts of power is reflected. This is further attenuated by 0.5 dB meaning that 48 watts of reflected power arrives at the transmitter. The resulting SWR at the transmitter is 5.5:1.

Figure 2 - SWR values with low loss coax

## USE YOUR HF SWR METER ON VHF/UHF

BY BILL RINKER, W6OAV

If you have an HF SWR meter and you want to measure VHF/UHF SWR, you do not have to buy an expensive VHF/UHF SWR meter. There's a way you can obtain a reasonably accurate VHF/UHF SWR reading with an inexpensive HF SWR meter. What you do is connect the HF SWR meter as usual to your rig and antenna. With the SWR meter switch in the forward power position, key the transmitter and set the meter's adjustment for full scale. Now, un-key the transmitter and, without touching any controls, reverse the coax connections so that the rig is now connected to the "ANT" side of the SWR meter, and the antenna is connected to the "XCVR" side. Key the transmitter again. The SWR reading you see on the meter will be very close to your real SWR. The closer to 1:1 your SWR is, the more accurate the measurement will be.

So, why does this method work so well? Let's look at the way SWR meters normally work. Figure 1 shows a simple diagram of a basic SWR meter. A basic SWR meter is comprised of two detector circuits (balanced bridges), each of which consists of pickup loops (L1 and L3), and detector diodes (D1 and D2). Detector 1 detects reflected power and Detector 2 detects forward power. The RF travelling in L2 is capacitively and inductively coupled into L1 and L2. D1 rectifies the reflected RF energy and D2 rectifies the forward RF energy. The resultant DC voltages are fed to the meter via the forward/reflected power switch. R1 and R2 are the 50 ohm bridge balancing resistors. The remaining components are DC filtering circuits.

So, why are most HF SWR meters inaccurate at VHF and UHF? Well, at HF, the matched precision of the electric components required isn't too stringent. Also, minor mechanical differences between L1, L2 and L3 won't impact the accuracy that much. However, at VHF and UHF all electronic and mechanical components of one detector must completely match their equivalents in the other detector. This requires precision matched electronic components and even more importantly precision matched mechanical components. This is what makes VHF/UHF SWR meters expensive.

By using the procedure described at the beginning of this article, you are actually using only Detector 2 to measure both forward and reflected RF. Thus, the electric and mechanical components for both forward and reflected measurements are now totally matched since they are the same components used for both measurements. Note: The accuracy may not be as good on UHF as it is on VHF. However, the measurements will be good enough to allow one to determine the resonant frequency of an antenna by measuring the SWR in different portions of the band. Also, if impedance matching is available at the antenna, the matching can be completed by adjusting for minimum reflected power.

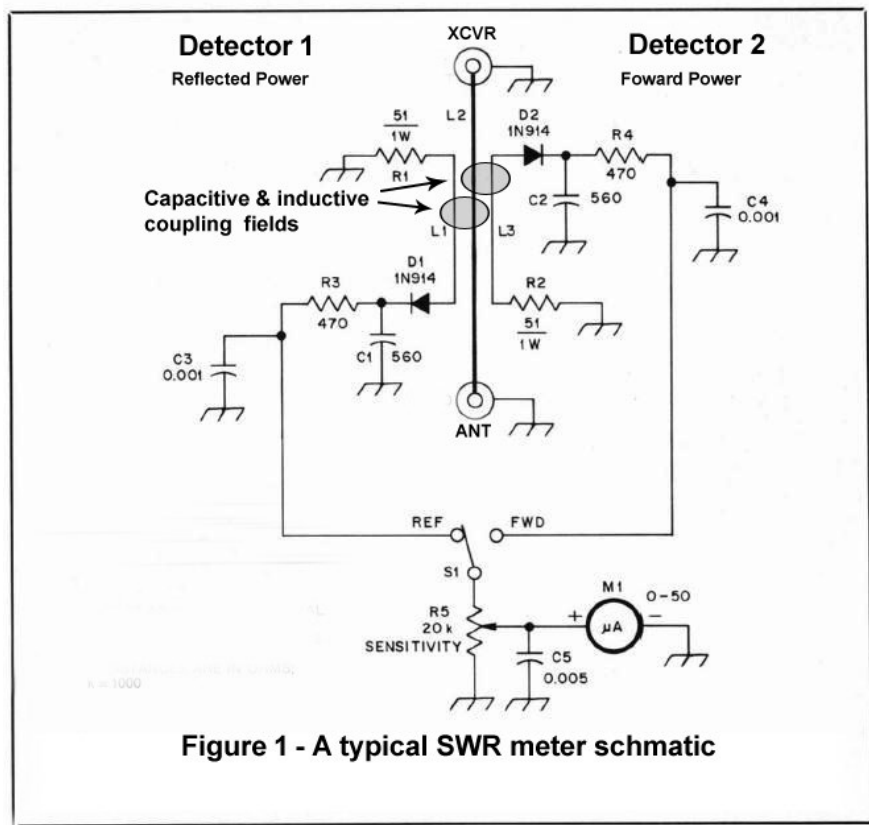


Figure 1 - A typical SWR meter schematic



**PAST ROUND TABLE PAGES**

PROVIDED BY WOODY LINWOOD, W0UI

A page from the September 1956 multi-page edition. It is the second oldest known remaining Round Table.

-5-

preceding week's winner was ~~W~~L0, Larry Hodgson, who snooped out Jack Finley, ~~W~~EIH. Seems as though Jack was chasing jack rabbits in the middle of a farmers field. Three weeks ago, the hunt was won again by Swede Johnson, who found ~~K~~AQR, Jack Warkins, on top of a high hill, supposedly feeding bubble gum to some fish that were jumping almost into the car to get it. Seriously, though, you fellows with mobiles that haven't been out on one of these hunts are missing a lot of fun and excitement. So, get busy and get that loop built and come on out to 3rd and Clermont on Thursday nights at 7:30, and join in the fun.

**FOR SALE**

Mobile transmitter for 10 meters, trunk-mount, completely self-contained, including heavy-duty 6-volt dynamotor, vibrator supply for receiver, starting and control relays, co-ax antenna relay. A beautiful job - originally commercial two-way radio. With control box, 50 amp.

fuse & mount, all cables & plugs, \$60.00. Anyone interested please call ~~K~~CXS, Peter Rosenbaum, WE 5-5649.

**FRANK WALLACE**

Frank, ~~KN~~EBV, is putting some of the old-timers in the shade. Frank is running 50 watts and is now trying for Asia, which will round him out for WAC. Frank contributes his success to hard work and a 15-meter, 1-element beam. Good work, Frank.

**THE MONTROSE RADIO CLUB**

The Montrose County Amateur Radio Club of Montrose has set up a net which is in operation every Sunday morning at 800 hours on 7198 k.c. They invite anyone interested in getting in on the net to give them a shout. This should be of particular interest to you novices, since this falls at the top end of your portion of the band. The net is for traffic handling purposes. So if any one has traffic for Montrose or beyond, here is a good way to get it in there. They are par-

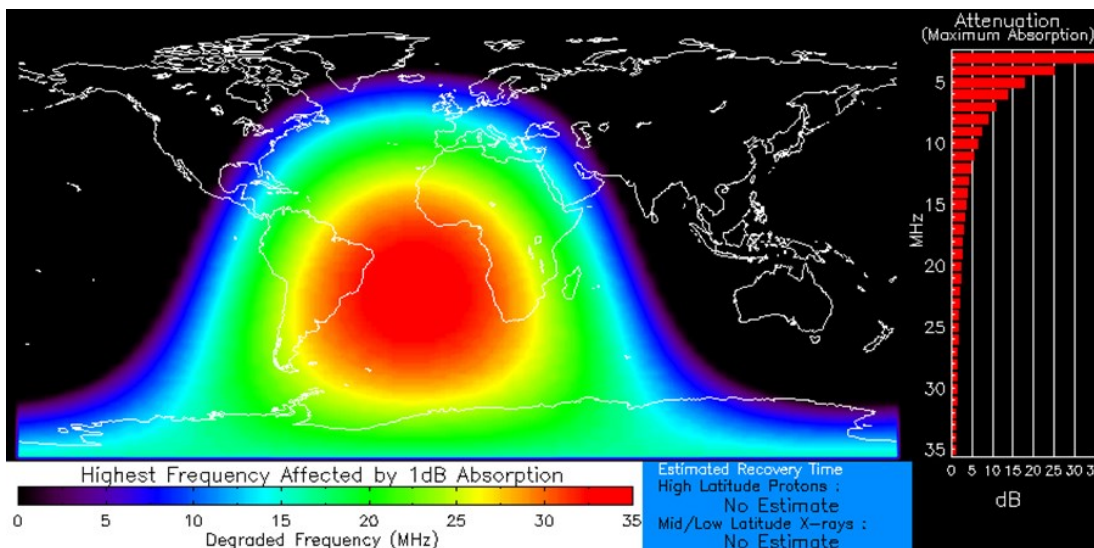
# SOLAR GEOPHYSICAL ACTIVITY REPORT

PROVIDED BY FRED HART, AA0JK



## The Sun Erupts IN A Big Way

Enter December with a major solar flare and CME. Earth-orbiting satellites detected the largest solar flare in more than three years. NASA's Solar Dynamics Observatory recorded this extreme-ultraviolet eruption as a M4.4 category blast.



X-rays and UV radiation from this flare ionized the top of Earth's atmosphere, producing a shortwave radio blackout over the South Atlantic. Ham radio operators and mariners noticed strange propagation effects at frequencies below 20 MHz, with some transmissions below 10 MHz completely wiped-out.

Remarkably, this flare was even bigger than it initially seemed. The blast site was located just behind the Sun's southeastern limb. As a result, the explosion was partially eclipsed by the body of the sun. It might have been an X-class event.

This eruption sent ripples through the Sun's atmosphere when the M-class flare sent shock-waves throughout the solar plasma.

The flare also hurled a significant coronal mass ejection (CME) into space, observed by the Solar and Heliospher-

ic Observatory (SOHO).

This was a major outburst in the early stage of the new cycle 25. If this foreshadows the Sun's early cycle we're in for some interesting times ahead.

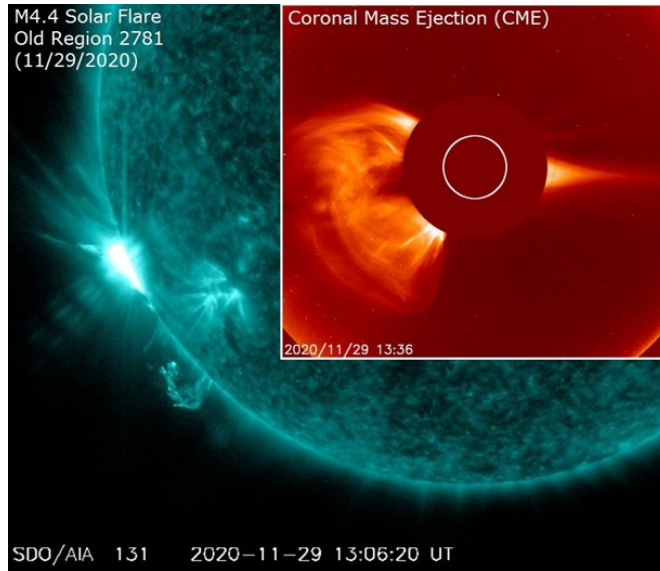


Image Credit: SDO/AIA

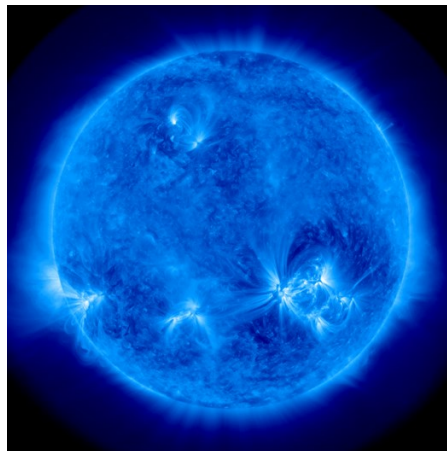


Image Credit: SDO/AIA. SFI 104, SSN 6.

Saturday, September 5th

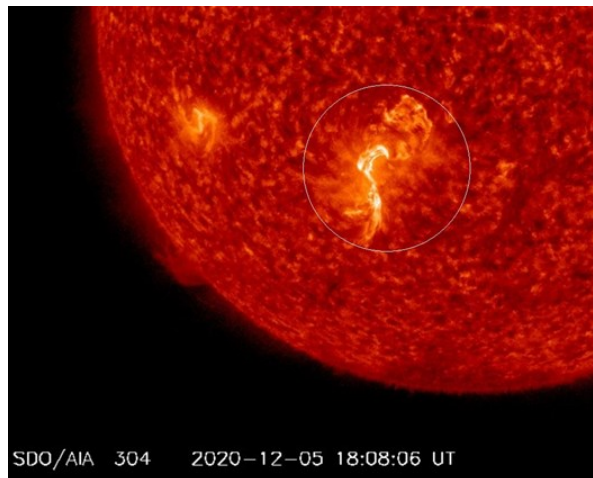


Image by SDO/AIA.



A minor eruption took place around region AR2790 on Saturday the 5th. This particular event did not produce a noteworthy CME, but still an area of activity to keep an eye on over the following few days.

December 7th -

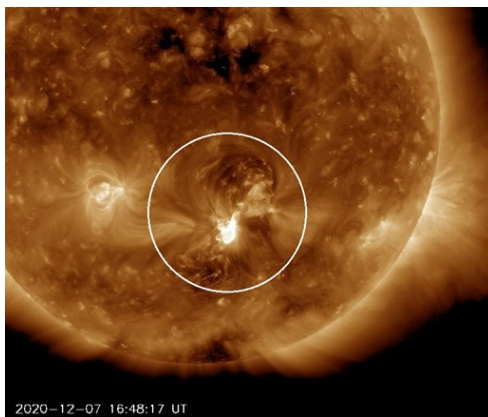
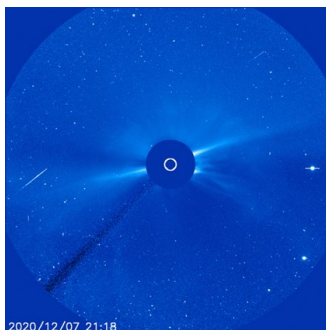


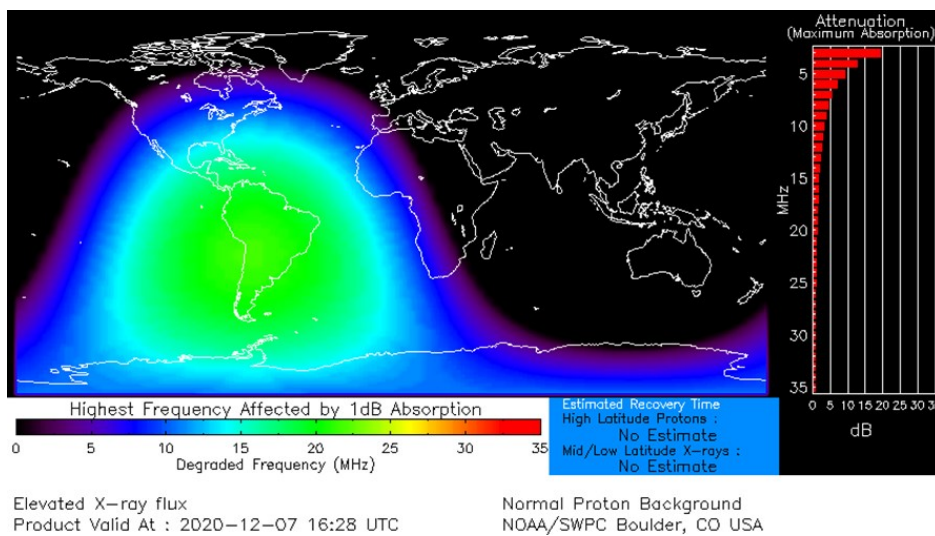
Image Credit: SDO/AIA

An eruption measuring C7 in X-Ray strength was detected around region AR2790. A coronal mass ejection (CME) was produced and had an Earth directed component. It was expected to reach Earth during the second half of December 9th. The combined impact could spark geomagnetic storms as strong as category G3, although lesser G1.to G2-class storms were more likely.



December 8th - Earth-directed solar flare and CME: Sunspot AR2790 was more potent than it looked. December 7th @ 1632 UT, the relatively small spot unleashed a C7-class solar flare, and hurled a CME toward Earth. Extreme ultraviolet cameras on-board NASA's Solar Dynamics Observatory recorded the explosion.

A pulse of X-rays from the flare ionized the top of Earth's atmosphere, causing a minor shortwave radio blackout over South America. Affected frequencies were mainly below 10 MHz. Ironically, the flare itself was a source of strong radio emissions. Ham radio operators may have heard a 'roar' of solar static during the blackout.



Now for the interesting part: The explosion almost certainly hurled a coronal mass ejection (CME) toward Earth. Preliminary images from the Solar and Heliospheric Observatory (SOHO) show a halo CME leaving the Sun a few hours after the flare:

NOAA analysts were modeling the storm cloud to confirm an Earth-directed component, and to estimate its potential arrival time. Their best guess was Wednesday-Thursday (Dec. 9-10) and creating an impact of a G1-class geomagnetic storm.

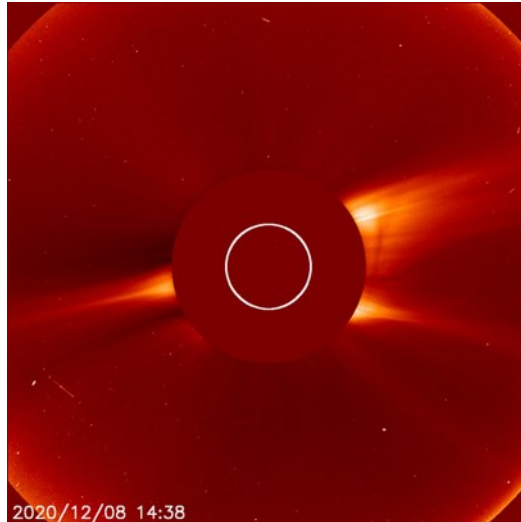
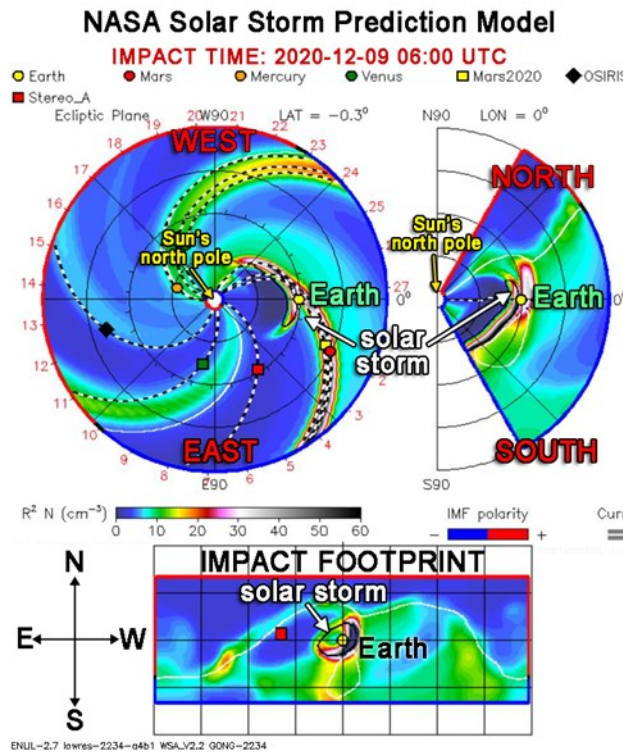
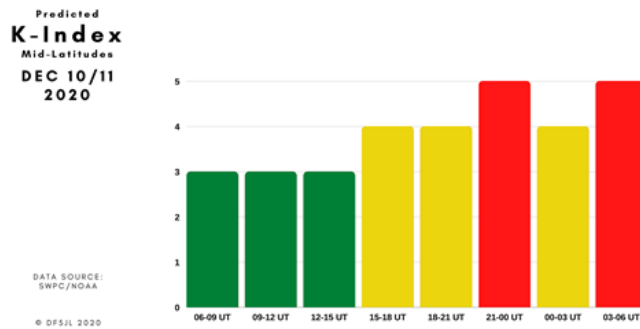


Image: LASCO C2



The eruption was coming on the northern active region, it was a traditional field lift, and current sheet collapse, releasing its outer plasma. The eruption was spanning transequatorial heliographic latitudes. HF radio disruptions were expected at the deep mid-latitudes for approximately 48 hours.

December 10th -



High noise levels were being heard on 7 Mhz.

The predicted solar storm fizzled. As predicted, a CME hit Earth’s magnetic field. But the impact did not cause a geomagnetic storm. Why didn’t the CME cause a storm?

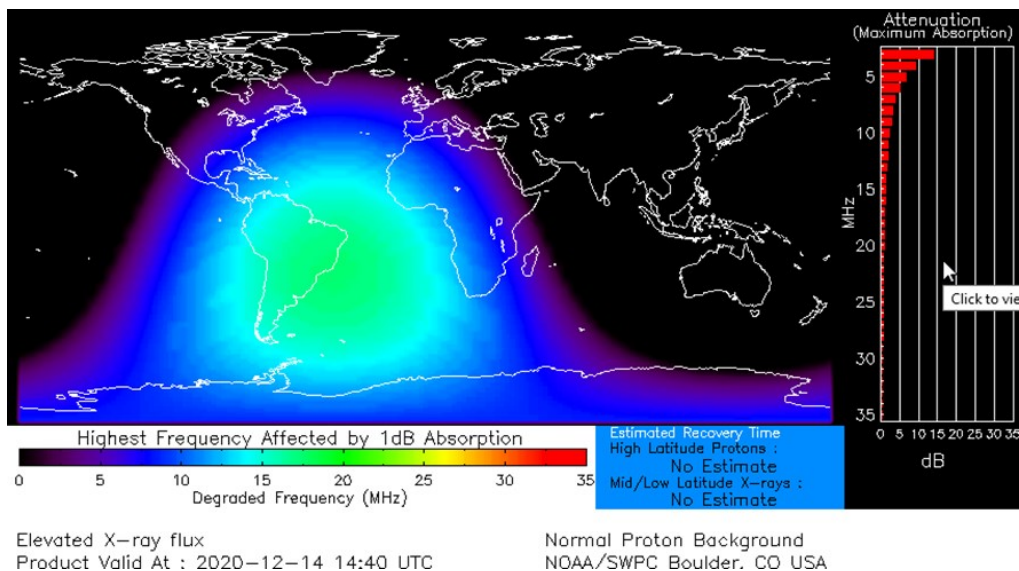
Every CME brings with it a magnetic field from the Sun, if that magnetic field points south, it opens cracks in Earth’s magnetic field, allowing solar wind to flow inside, and fueling auroras. On the other hand, if the CME’s magnetic field points north, it seals cracks in Earth’s magnetic field, blocking the solar wind and quenching storms.

This CME brought a storm-killing the north magnetic field. So, even though the velocity of the solar wind in the CME’s wake flirted with a high value of 600 kmv/s, it was ineffective at causing geomagnetic storms.

December 14th - No significant eruptions. The most prominent coronal hole was at the southern pole extension, and it remained at high latitudes. Despite not erupting significantly, the active regions were looking complex. The leading groups did not have a significant number of sunspots. It was being monitored as it turned into Earth view. Solar flaring remained low with E-class flares only.

December 15th - A number of active regions were being monitored, an active flare, and CME, plus there was a trans-equatorial reach on the southern coronal hole. A C-class solar flare on the incoming region on the south that erupted, pumping an impressive wave through the corona. Activity is definitely on the rise.

Sunspot AR2792 unleashed a C4-class solar flare. The explosion caused a minor shortwave radio blackout over South America and hurled a CME into space. The CME would not hit Earth. It was too far off the Sun-Earth line. Nevertheless, NOAA analysts were computer-modeling the storm cloud to evaluate the slight chance of a glancing blow.





December 21st - The Sun was showing low-level activity during the week. The geomagnetic field was remaining quiet. No solar flares, no geomagnetic storms, and no erupting filaments. Despite the low activity, a bright thin coronal rope filament was being fed by an active region to the south.

An incoming active region coming around on the east limb, was showing solid sunspot umbra, and it was a grouping surviving the long turning trip around the back side of the Sun. An active area we had seen during the previous month.

A minor G1-class geomagnetic storm was forecast for the 23rd, as a fast-moving stream of solar wind was expected to hit Earth's magnetic field. The gaseous material was flowing from a northern coronal hole in the Sun's atmosphere.

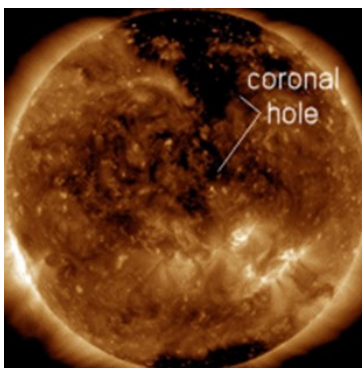
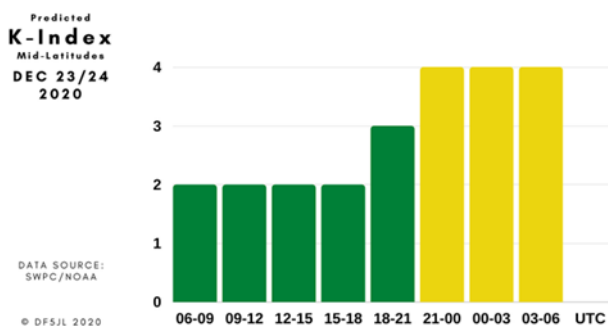
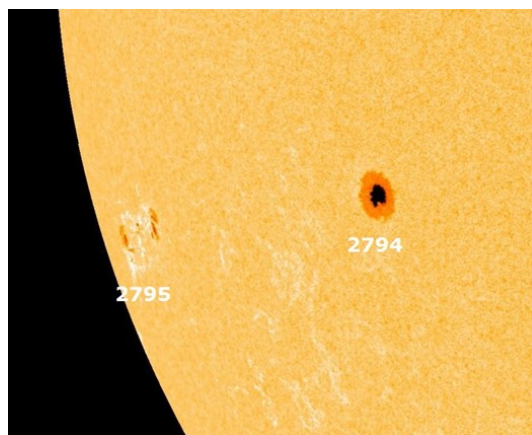


Image Credit: SDO/AIA

The solar wind arrived. Arriving a day earlier than expected, the stream of high-speed solar wind hit Earth's magnetic field on the 22nd. The gaseous material was flowing from a northern hole in the Sun's atmosphere. Minor G1-class geomagnetic storms were expected during the following 24 hours period, as Earth moved deeper into the plasma stream.



A new active region in formation was turning into view off the southeast limb. AR 2795.



AR2795, has increased 10-fold in size. It was crackling with minor B-class solar flares. Stronger flares were possible if the expansion continued apace.

Conditions - QUIET. Solar wind speed remained elevated due to coronal hole influence. Intervals of unsettled conditions were anticipated to continue.

Propagation Information:

Solar-Terrestrial Data - <a href="http://www.n0nbh.com">http://www.n0nbh.com</a>											
20 Dec 2020 1545 GMT		VHF Conditions			HF Conditions			Condition		K-In A-In	
SFI	81	SN	0	Item	Status	Band	Day	Night	Quiet	0-2 0-7	
A	5	K	1	Aurora	Band Closed	80n-40n	Fair	Good	Unsettled	3 8-15	
X-Ray	A5.7	PIntry			6n EsEU	Band Closed	30n-20n	Fair	Fair	4 16-29	
304A	106.0	@ SEM			4n EsEU	Band Closed	17n-15n	Poor	Poor	5 30-49	
Ptn Flx	NoRpt	2n EsEU			Band Closed	12n-10n	Poor	Poor	Major storm	6 50-99	
Elc Flx	NoRpt	2n EsNA			Band Closed	Geomag Field		VR	QUIET	Severe storm	7-9 >100
Aurora	1/n=1.99	EME Deg			Fair	Sig Noise Lvl		S0-S1	SFI A-In K-In Prop Opng		
Aur Lat	67.5°	MUF			ES - SEASON BREAK	MUF US Boulder		19.04	>180 <8 <3	E-W open	
Bz	-0.4	MS			0 MIN 6 12 18 UTC MAX	Solar Flare Prb		1%	>180 <8 >3	N-S open	
	SW 369.8					(C) Paul L Herrman 2013			>250 >30 >3	Aurora	

(For current information see the [W0TX web page](#) )

Geomagnetic Forecast: Issued on 2020 December 24 1230 UTC. Prepared by the U.S. Dept. of Commerce, NOAA, Space Weather Prediction Center

Solar Activity Summary: Solar activity was very low. A few B-level enhancements were observed from Region 2795 (S18E60, Cao/beta) as it continued to exhibit slight growth during the period. Region 2794 (S17E33, Hsx/alpha) remained unremarkable. No Earth-directed CMEs were observed.

Forecast: Solar activity was expected to be very low, with a slight chance for C-class flares, on 24-26th of December.

73,

Fred  
AA0JK

**~Editor's Note:** We would love to publish a monthly column profiling DRC members' stories about how they got into the ham radio hobby, their interests and backgrounds. The purpose of the column is to introduce DRC members to each other and to find commonalities between them. Please use Microsoft Word set to Arial and 10 point, and submit your story to [drc.editor@gmail.com](mailto:drc.editor@gmail.com).

### DRC's EMERGENCY RESPONSES

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.

[WOTX Repeater Directory](#)



#### Note to DRC Members:

Our club depends on the involvement and participation of YOU, our members. Do you have a skill or interest that could help the club. Maybe you want to volunteer to be on a committee? Like to write? Have ideas for improving what we do? Speak up and let someone know, all ideas are welcomed and participation is always helpful. ~Editor

RANDOM SITE OF THE MONTH  
[Loyal Books](#)

#### THE ROUND TABLE ARCHIVE

Go to: <http://www.wotx.org/roundtables.htm>

#### THE ROUND TABLE ARTICLE INDEX

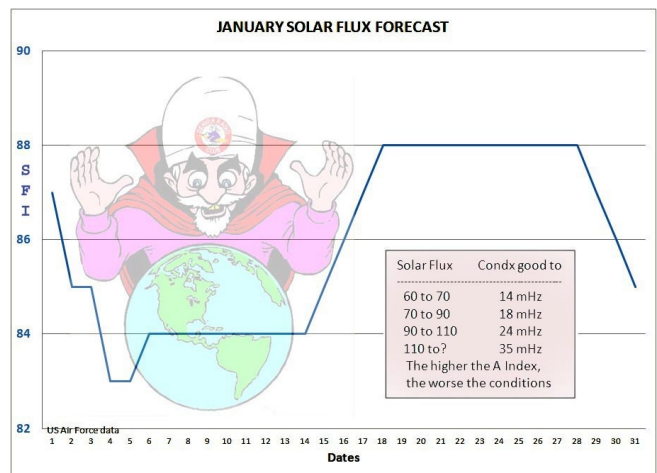
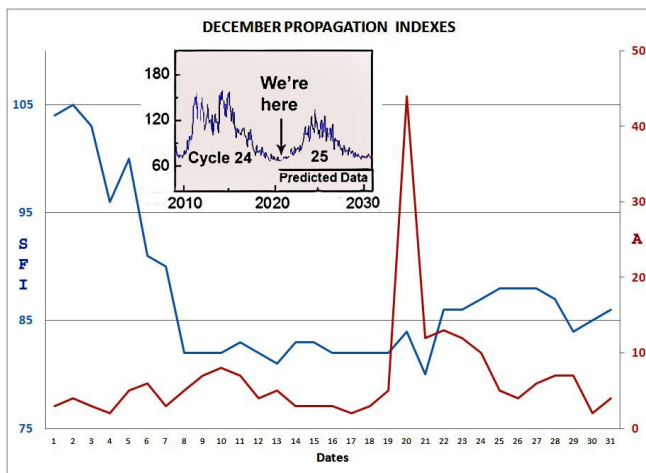
Go to: <http://www.w0tx.org/RoundtableArchive/-RoundTables-Index.pdf>

## PAST & FUTURE PROPAGATION CONDITIONS

By Bill Rinker, W6OAV

The charts below show the Solar Flux and "A" indexes for last month and the forecast for this month's Solar Flux index.

Refer to the September 2010 *Round Table* for more complete information on interpreting these charts, which is available at: [http://www.w0tx.org/RoundtableArchive/2010-RoundTables/RT201009\(SEP\).pdf](http://www.w0tx.org/RoundtableArchive/2010-RoundTables/RT201009(SEP).pdf)



**UPCOMING EVENTS**  
**HAMFESTS & CONVENTIONS**

Event	Date	Location	Sponsor Website
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All cancelled.

**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
Alaska	01/15/2021	02/15/2021	<a href="#">NCDXA Alaska "RST" QSO Party</a>	
British Columbia	02/06/2021	02/07/2021	<a href="#">Orca DX and Contest Club</a>	
Minnesota	02/06/2021	02/06/2021	<a href="#">Minnesota Wireless Association</a>	
Vermont	02/06/2021	02/07/2021	<a href="#">Radio Amateurs of Northern Vermont</a>	
South Carolina	02/27/2021	02/28/2021	<a href="#">SC QSO Party</a>	
North Carolina	02/28/2021	03/01/2021	<a href="#">North Carolina QSO Party</a>	

**ATTENTION**

**SUPPORT THE DRC FROM YOUR AMAZON PURCHASES**

You can now support your Denver Radio Club when you make purchases from Amazon.com. Amazon Smile donates 0.5% of your purchase to the non-profit (501.c.3) organization of your choice. This is at no additional cost to you. To support the DRC just visit [smileamazon.com](https://smile.amazon.com). Select Denver Radio Club, Inc. as the organization you want to support and proceed with your order as usual. Amazon Smile will credit the DRC automatically. Thank you for your support.

**DRC's Trading Post**

Speaking of purchasing don't forget you can find **locally-sourced, ham-grown** merchandise at:  
<https://www.w0tx.org/trade.htm>







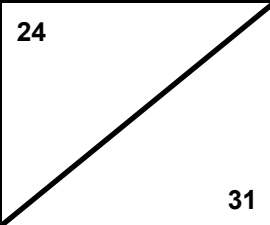

**DRC REPEATERS**

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	2m / 20m gateway. Useable by Technicians on 2m.
2m	145.490MHz (-) 100Hz PL	Linked to 70cm / 448.625MHz. Primary frequency during emergency net.
2m	147.330MHz (+) 100Hz PL	Local area. Has voting receivers. Does not TX a PL.
2m	147.330MHz (+) 131.8Hz PL	Test mode operation. Send signal reports to Tech Committee.
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

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<b>JANUARY 2021</b>							<i>DRC Net Sundays at 8:30 p.m. on 145.490 / 448.625 (no PL)</i>
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
					<b>1</b> <b>Straight Key Night -</b> 0000 UTC - 2359 UTC  	<b>2</b> <b>Kids Day -</b> 1800 UTC - 2359 UTC  <b>RTTY Roundup -</b> Begins 1800 UTC	
<b>3</b> <b>RTTY Roundup -</b> Ends 2359 UTC	<b>4</b>	<b>5</b>	<b>6</b> <b>Learning Net</b> 7:30 p.m. 145.490 / 448.625 (No PL)   Last Quarter	<b>7</b>	<b>8</b>	 Full Moon	
<b>10</b> <b>10 Meter</b> Ends 2359 UTC	<b>11</b>	 New Moon	<b>13</b> <b>Learning Net</b> 7:30 p.m. 145.490 / 448.625 (No PL)	<b>14</b>	<b>15</b>	<b>16</b> <b>January VHF -</b> Begins 1900 UTC	
<b>17</b> <b>January VHF cont.</b>	<b>18</b> <b>January VHF -</b> Ends 0359 UTC	<b>19</b>	<b>20</b> <b>DRC Online Meeting</b> Elmer 6 p.m. Meeting 7 p.m.    First Quarter	<b>21</b>	<b>22</b>	<b>23</b>	
  <b>31</b>	<b>25</b>	<b>26</b>	<b>27</b> <b>Learning Net</b> 7:30 p.m. 145.490 / 448.625 (No PL)	<b>28</b>   Full Moon	<b>29</b>	<b>30</b>	



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Website & YouTube	N0LAJ	Bill Hester	Check Roster	<a href="mailto:w0tx@w0tx.org">w0tx@w0tx.org</a>

**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 [drc.editor@gmail.com](mailto:drc.editor@gmail.com).

*Subject: I'm located in...*

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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 [drc.editor@gmail.com](mailto:drc.editor@gmail.com). The submission deadline is the 25th of the Month. ~ Editor