THE ROUND TABLE

Monthly Newsletter Of The Denver Radio Club

Since 1917 February 2021

President's Message

By Gerry Villhauer, W0GV

Hello DRC Members,

I hope you all are doing well and staying safe. I got my first COVID vaccination a couple weeks ago and now am waiting for the upcoming date for the second shot. Not much of a negative reaction from it for me.

We have had some technical issues with the 147.330 West repeater. Those issues have been corrected; The repeater is back operating normally.

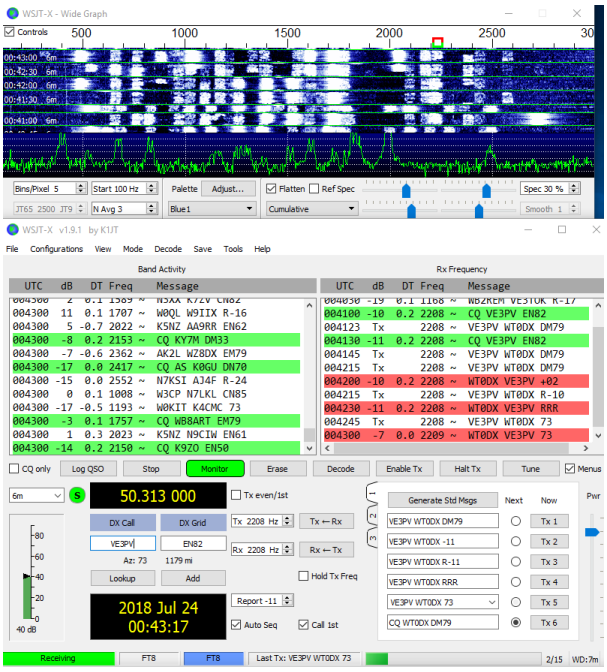
We are making steady progress adding a remote receiver to the 6-meter repeater to improve coverage and eliminate receive noise problems. The remote receiver is in place and tested. Next and final step is to interface the remote receiver to the transmitter. If you have 6-meter capabilities, we hold a net on Sunday mornings at 10 0'clock. All are welcome to join in on the fun.

Due to the ongoing pandemic and the Jeffco Fairgrounds decision not to support activities that are not animal or agriculture in nature; The DRC Board had decided to cancel our annual Hamfest for 2021. We are open to suggestions for a venue location for 2022 and beyond.

Thanks to Robert (K0RCW) for a very well received program on the new ICOM 705 radio at our January virtual meeting. Lots of good information and suggestions were presented.

Our February program presentation is: Introduction to Digital Modes

Presentation: An overview of current digital modes, including the software, hardware and operating techniques. Recommendations will be provided on how to get started on FT8, the most popular operating mode. Meteor Scatter using MSK144 will also be covered as it uses similar software and messaging protocols. New modes for low frequency operation will also be discussed. A live demonstration of making contacts will be presented at the end of the meeting.



Bio: Bill WT0DX is located in Parker, CO and has made over 10,000 digital contacts using 5 different modes since 2010. He has worked all 50 states and over 150 countries from his stations.

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

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 Smay - W3DPS	Karen Meyer	James Johnston - K0FNR
Ken Choyce - KF0BYS	Thomas Ladek - WA0JUW	Andrew Caudill - KF0CUC
Jeffrey Holmes - N0PSO	Tom Rodgers	Douglas Rodgers - KE0USS
Linda Gates - KE0CKI	Ray Bowman - W7ESM	Josh Rodgers

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.

Technical Committee Report

By Bill Rinker, W6OAV

There were no meetings scheduled for January and February. 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.

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.

January Topics we have discussed:
ARRL – On The Air
Ham Radio Mobile Installation:
hamradioschool.com/going-mobile-install-a-station-in-your-vehicle-part-1/
hamradioschool.com/going-mobile-install-a-station-in-your-vehicle-part-1-continued
Going Mobile, Part 2 – Solving RFI Problems:
hamradioschool.com/going-mobile-part-2-solving-RFI-problems
Mobile Radio Install: youtu.be/TmKBqVXF1eM
K0BG.com
QRN – Finding and eliminating noise: youtu.be/0_919kOA45U
ISS slow scan TV: ariss.org/contact-the-iss.html, youtu.be/LHY5mxcuSIs
Antennas for satellite communication
Bal-un's and Un-Un's
ARRL – Baluns and what they do. W7EL
Wolf-River Coil: wolfrivercoils.com
Fox Hunt N0CFM: HOMING IN – Radio Direction Finding, Foxhunting, ARDF, homingin.com
Ham Radio Satellites: How do I get started and what gear do I need?: youtu.be/0EL5Kn7KIak
HT Antenna Solutions: youtu.be/9DvE-X7J75Y
HF Setting-Up a new station.
Your First Amateur Radio HF Station
ARRL item #0079
Chameleon Antenna Factory Tour: youtu.be/LSc2TNnHUwc
D-STAR: dstarinfo.com
SOTA: amateurradio.com/which-ht-for-high-rf-sota/
schnizer.com/SOTAblog/equipment/lightweight-2m-yagi-sota/

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, w0tx@w0tx.org, or 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

The DRC Has a New Echolink Server!

By Bill Rinker, W6OAV

After many years of faithful service, our Echolink server began to show its age with various issues starting to occur. The server was built years ago around old obsolete equipment as a test to see if the club wanted to add Echolink to the system. The club did and the test server remained on line.

Figure 1 shows the new server which Scott, N0OBA, was nice enough to build and configure. The server consists of an Alinco DR-435 VHF Transceiver, an Alinco DM-120MVT power supply, a RIGblaster interface and a Dell computer E/W Windows 10 (donated by Scott). Thank you very much Scott for the donation and all the time you spent building and testing the server. Also, a thank you goes to Dave, K0HTX, who has hosted the server for many years.

All user commands remain unchanged.

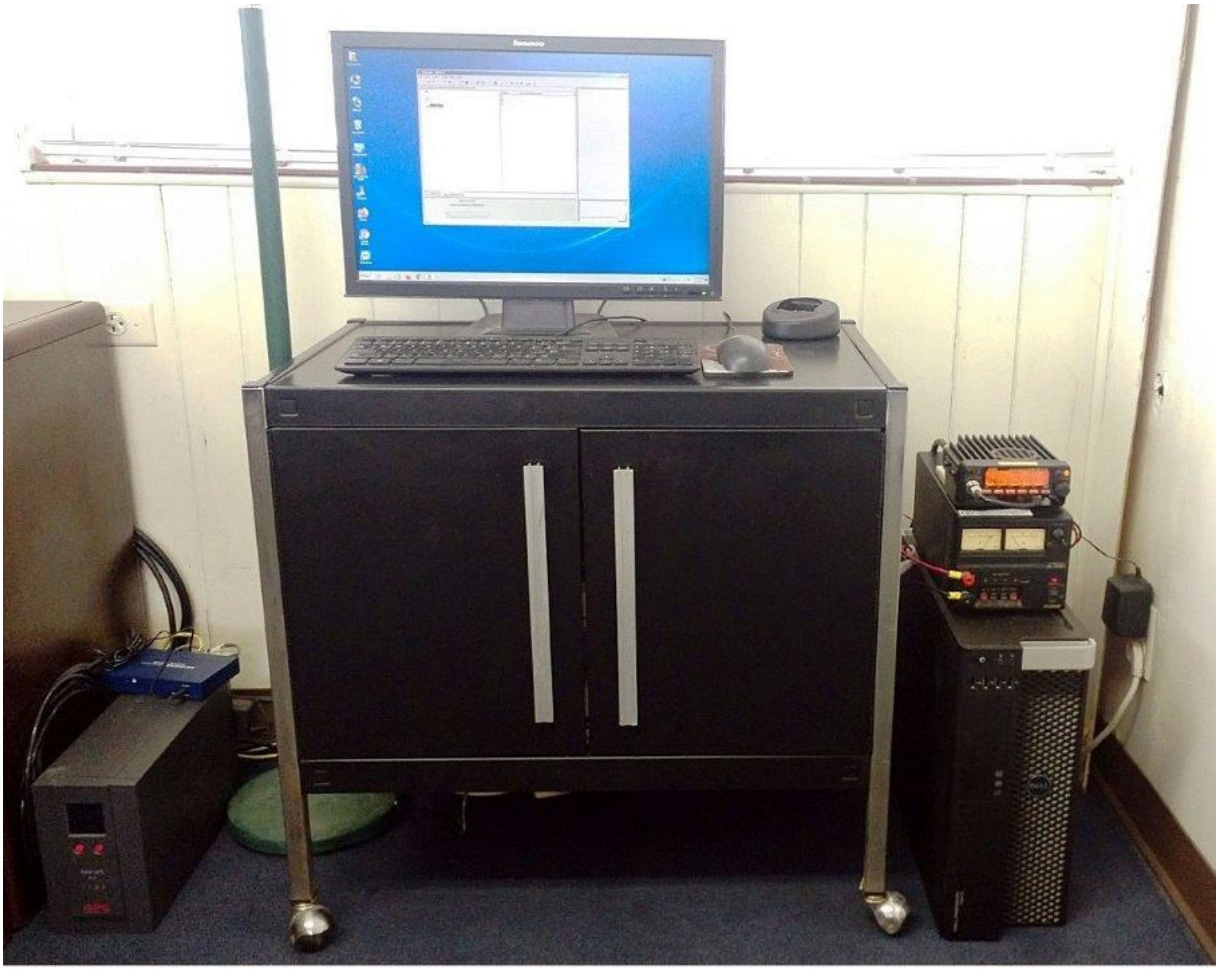


Figure 1 - The new DRC Echolink server

RTTY, Power Line Noise, Etc.

Information Provided By Harold Hallikainen, W6IWI
Written by Editor

Harold, a DRC member, has a fun site he's built over the years. There are various posts and notes about a smattering of topics, including RTTY, power line noise, Reverse Beacon Network, MUF, finding hams in your neighborhood, etc. Head over there and check it out: w6iwi.org

VE Session Results

Tom Kocialski, KC2CAG

Our VE Team conducted another successful exam session at the Fabulous Industry Denver training room again. All five candidates passed the Element 2 exam so we will have five new Tech licensees happily using the airwaves:

Bill Turner - KF0DGW
Lael Martin - KF0DGX
Josh Jalowiec - KF0DGY
Gemma Huang - KF0DGZ
Roger Haney - KF0DHA

We try to use a very small team to maintain proper COVID 19 protocols, but I called in a few reinforcements for this session as I expected a larger group of candidates. As always, not every candidate who expressed an interest showed up, but that's OK and that's why we always target two or more candidates per test session. In addition to yours truly, VE Team members supporting the exam were Troy Lerner, KF0AFQ (our host at Industry!); Doron Ben Chaim, K1DBC; Bill Rogers, WZ0S; and Fred Hart, AA0JK. Many thanks to them for giving up a Saturday morning.

WB0DBK / WB5FXW

By Brennan Pate, AD0UZ

The January QST showed a few pages from the March 1971 QST. Figuring the note about WB0DBK (see below image) was referring to a Colorado location I took a few minutes to look up the call sign.

It appears the call belonged to Frank A. Hegwer. 1930 – 2011. legacy.com/obituaries/alamogordonews/obituary.aspx?pid=148264526. I'm guessing that the "home station" refers to his work at the High Altitude Observatory in Climax, CO. archives.ucar.edu/exhibits/hao/facilities/climax-observatory

WB0DBK changed his call to WB5FXW, per the winter '72 Radio Amateur Callbook, archive.org/stream/Winter_1972_Radio_Amateur_Callbook/Winter_1972_Radio_Amateur_Callbook_District_0_djvu.txt

Strays

For the second straight year W4LHV has won a *ham* as a Christmas office party door prize.

— . . . —

What's the elevation of the highest "home station" in the U.S.? WBØDBK's shack is at 11,200 ft. Any challengers?

— . . . —

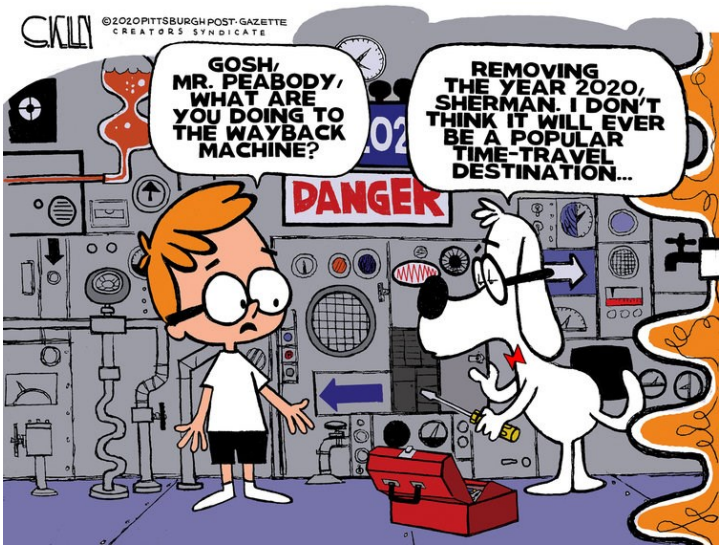
After 40 years of operating with not more than 2-watts input, W4ZRJ has finally gone high power. He now has a new solid state transceiver running 5 watts input!

— . . . —

"CQ Kansas," a 5-minute program devoted to amateur radio and short wave listening, is broadcast each Saturday evening on radio station KFH (1330 kHz), Wichita, Kansas. The program host is KFH News Editor Mike McGee, WAØJPX.

Is W3SDX the oldest active amateur? Raymond received his Novice license at the age of 72 and became General class 10 months later. Now, at the age of 92, he is active on 6- and 2-meter phone and 15-meter cw.

Provided By Fred Hart, AA0JK



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.

ticularly interested in getting a good, reliable station in Denver to answer roll call every Sunday.

RONALD A. MILLER

Ron Miller, WØQVJ, joined the Air Force in June. During his first few weeks of basic training, he suffered a broken ankle and is now in the base hospital in Illinois. His address there is: Airman 3/C Ron Miller, AF26257935, 3310th Field Hospital, c/o Ward A-1, Scott Air Force Base, Illinois. He would appreciate hearing from any of his buddies in the club. So, come on some of you fellows. Turn loose of those mikes and keys long enough to drop Ron a line.

FOR SALE

Viking I with VFO, has been TVI'd. Includes high-pass brute force filter in AC line. Has separate speech amplifier and modulation indicator, also crystal mike. 10-meter amphenol beam with modified prop-pitch motor and transformer, two Selsyn motors, 26 ft. of 8-wire control cable and 65 ft. of RGU-13. Call George Harriman, WØEMQ, at FL. 5-4128 or drop over to 260 Colorado Blvd.

ROGERS RADIO CO.

Mel, WØGQY, and Betty, WØTYB, have gotten moved into their new location at 1648 Wazee. The move was accomplished without too much difficulty. However, in the process, Mel forgot that his climbing days are waning, and proceeded to step off

SWR Varies with Different Power Levels

By Bill Rinker, W6OAV

Here is a question that has been asked more than once. “I’ve noticed that when I transmit different power levels to measure SWR, the measurements are different at different power levels. The higher the transmitted power the more different the SWR. Why?”

To understand this issue we must 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 detectors circuits (balanced bridges), each of which consists of pickup loops (L1 and L3), and detector diodes (D1 and D2). Detector 1 detects reverse 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.

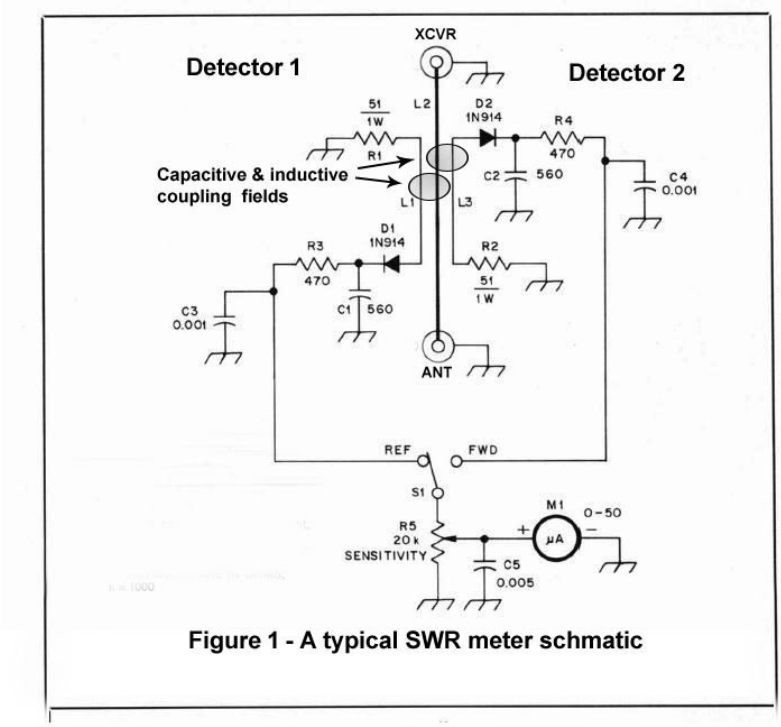


Figure 1 - A typical SWR meter schmatic

Figure 2 (next page) shows why different SWR measurements occur with different power levels. Figure 2 shows the typical nonlinear characteristic Forward Bias (FB) curves of D1 and D2 relative to input power levels. As the input voltages to the diodes increase the (FB) voltages of the diodes increase nonlinearly and more importantly not equally. Note that at the lower voltage inputs (A) the (FB) curves of both diodes are fairly close. However, as the input voltages increase the (FB) curves increase at different rates. D2’s (FB) curve is much higher than D1’s (FB) curve. Since these voltages drive the SWR meter’s forward and reverse meters the relationship between the readings will change as the difference between the (FB) curves change.

SWR measurements should be made with the lowest power that produces a useful reading. This normally gives the most accurate readings. Also, this cuts out the possibility of interfering with another QSO.

Testing diodes to find matching (FB) curves is expensive. Consequently, diodes with matching (FB)

curves are normally only found in expensive SWR bridges.

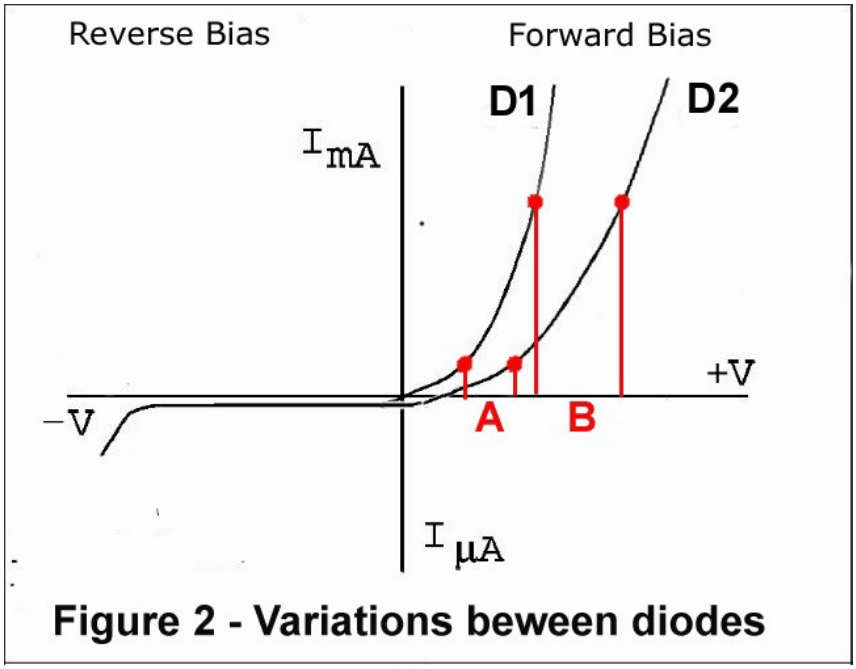


Figure 2 - Variations beween diodes

No Outside HF Antennas Permitted? No Problem!

By Bill Rinker, W6OAV

In today's world, many hams are moving into apartments or homes where outside antennas are not permitted. Today's Internet can be used to resolve the antenna issue. There are many worldwide free online receivers and transceivers available on the Internet. There are also many fee based high powered "big gun" stations available. Let take a look at some of these.

Online Receivers

There are many free worldwide all frequency tunable SDR receiver sites available via the Internet. Some sites do require establishing an account and others do not. No special software download is required. Basically any browser will work. Figure 1 shows a typical "sdr.hu" screen. Links to the most popular remote SDR receiver systems are:
http://kiwisdr.com/public/ At this writing has 571 receivers available.
https://www.globaltuners.com/ Has 48 receivers available.
http://www.websdr.org/ Has 177 receivers available.
https://skywavelinux.com/ Lists best online receivers around the world.

A nice description of online SDR receiver sites is available at hamradiosecrets.com.

As a side note, over the years I had used the "sdr.hu" receivers when testing an antenna, determining an antenna's coverage pattern or when comparing different antennas. When making these measurements its great watching the different remote receivers' S meters around the US or overseas. This sure beats having ham operators far away attempt to accurately describe what they're seeing on their radios during a test!

Online Transceivers

If one wishes to operate free worldwide HF transceivers, they can go to the "RemoteHams" site at remotehams.com/online.html. "RemoteHams" is a community of on-line worldwide transceivers. Many hams throughout the world make their transceivers available to other hams via the internet. At the time

of this writing there are 256 remote transceivers on line. (Now 272, *Ed.*)

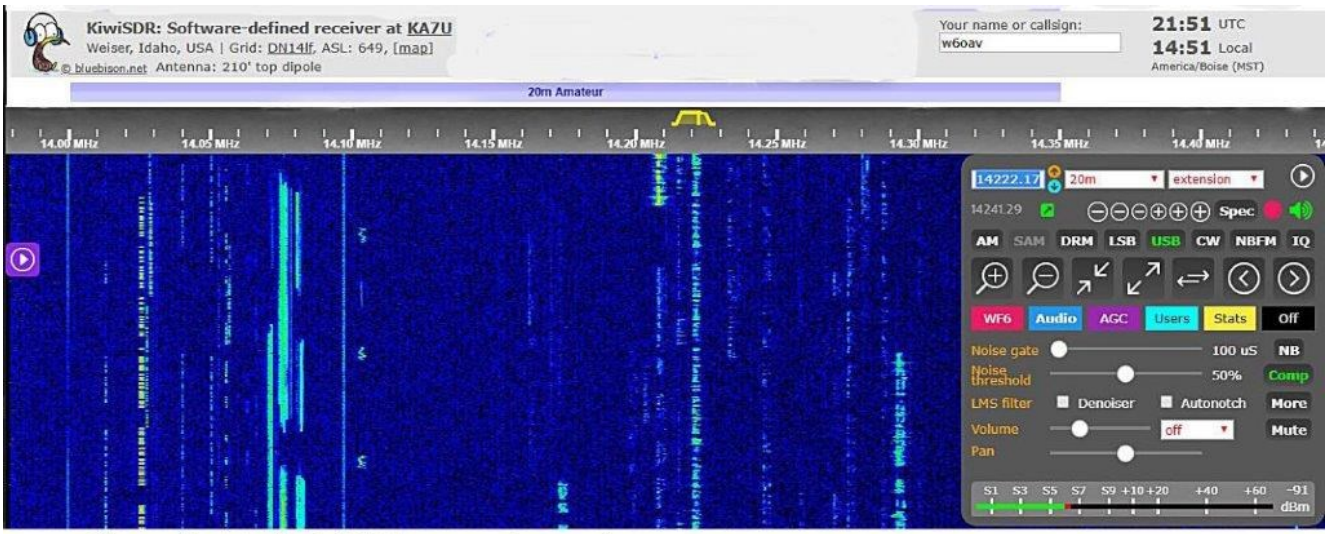


Figure 1 – Typical SDR.hu remote receiver screen.

Gaining access to the “RemoteHam” system is easy: 1). Sign up - includes emailing a copy of your ham license, 2). Download and install the client software and 3). Log in and select a desired transceiver. The client (see Figure 2) allows:

- Connecting to the remote transceivers on the system.
- Displaying a virtual radio front panel on your computer monitor, tuning and adjusting the transceiver controls.
- Managing audio to and from the transceiver.
- Sending and receiving CW via the computer keyboard.

Figure 2 - Typical “RemoteHam” client screen.

A quick start “RemoteHam” tutorial is available at youtube.com/watch?v=W1wlmawAP5k&t=79s.

Online Powerhouse DX Stations
If you are a serious operator, there are many “big gun” stations available with remote controlled transceivers, beams, power amplifiers, etc. No special hardware or software is required. The stations can be operated via PCs or smart phones. There is a yearly and a per minute charge for the service. View at remotehamradio.com. Tutorials are available at remotehamradio.com/tutorials.

So, the Internet does open up the HF world to those that can’t install outdoor HF antennas!

Solar Geophysical Activity Report

Provided By Fred Hart, AA0JK

A new year, and a new solar cycle has begun. The forecast calls for stormy space weather. After 3 years of deep solar minimum, new solar cycle 25 is gaining strength. Sunspot counts have suddenly increased, heralding solar flares, geomagnetic storms, and hopefully better band conditions for the radio amateur. Happy New Year!

Departing sunspots AR2794 and AR2795 had stable magnetic fields that posed little threat of strong flares.

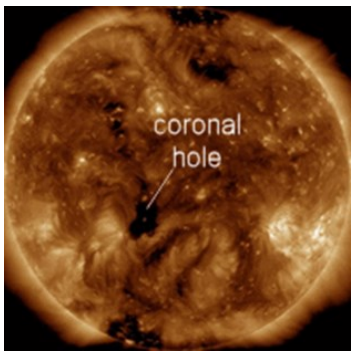


Image Credit: SDO/AIA

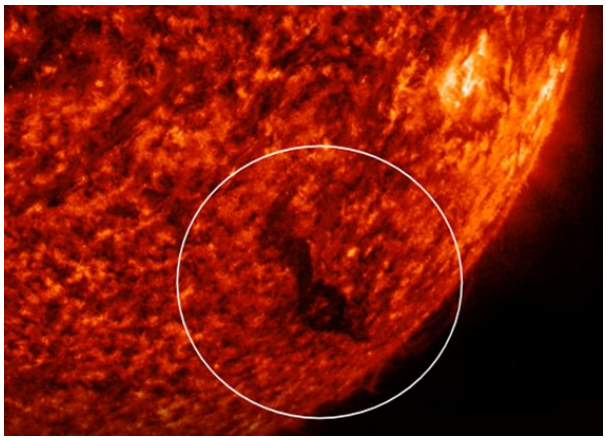
Solar wind flowing from this southern coronal hole was expected to reach Earth on January 5th.

An impressive sunspot complex was crossing the center of the Sun's disk. Active region AR9289 covered 880 millionths of the solar disk, an area five times larger than the surface area of Earth. The sunspot's tangled beta-gamma magnetic field harbored energy potential for M-class solar flares.

Earth reached its closest point to the sun for 2021, a phenomenon called perihelion. 91,400,000 miles away. In six months, Earth will reach aphelion, our farthest distance away.

Two explosions on the Sun, on January 2, 2021. Two dark filaments of magnetism erupted in the Sun's southern hemisphere.

Geomagnetic storms predicted. NOAA forecasters said there was a chance of minor G1-class geomagnetic storms on January 6th when a double CME was likely to strike Earth's magnetic field.



The double eruption hurled a closely-spaced pair of CMEs toward Earth. The first CME was slow-moving, the second was faster. This could have caused the two CMEs to pile one on top of the other, intensifying their impact. NOAA forecast models suggest an arrival at Earth on January 6th.

Dark filaments are twisted tubes of magnetism containing solar plasma. They look dark only because the plasma inside is a bit cooler than the underlying sun.

Often snaking hundreds of thousands of kilometers through the sun's atmosphere, these sinuous filaments can become unstable and erupt, hurling their contents into space. This is what happened on January 2nd.

January 5th - A coronal hole stream containing sectors of south pointing Bz was moving past Earth. A minor (G1) geomagnetic storm watch was in effect for the following 24 hours.

January 8th - Solar sector boundary crossing. Earth was about to cross a fold in the heliospheric current sheet. January 10th - a vast wavy structure in interplanetary space separating regions of opposite magnetic polarity. The crossing was expected to cause geomagnetic activity around Earth’s poles, and disrupting HF radio propagation.

Magnificent eruption misses Earth. NOAA's GOES-16 satellite was looking at the Sun on January 8th, when a huge filament of magnetism launched itself into space. Debris from the blast formed the core of a bright coronal mass ejection (CME), recorded by the Solar and Heliospheric Observatory (SOHO). NOAA analysts said the storm cloud would not hit Earth. Nevertheless, this eruption was noteworthy because of its dimensions one of the biggest in several years.

Interplanetary shock wave sparks a shock wave surprising forecasters. The shock wave hit Earth’s magnetic field on January 11th. The impact hit just after 08:30 UT but did not trigger a geomagnetic storm. However, strong magnetic fields downstream of the shock-front opened a crack in Earth's magnetosphere.

The shock wave was not expected. In retrospect, perhaps, it should have been. On January 8th, the huge filament of magnetism launched itself off the surface of the Sun. At first the blast did not seem to be Earth-directed. However, the event produced a glancing blow from the debris.

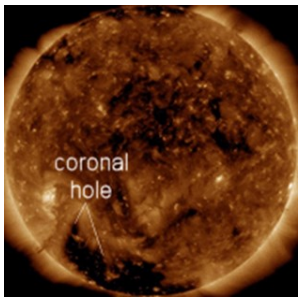
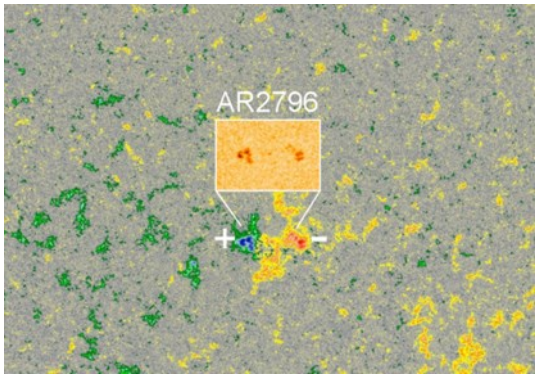


Image Credit: SDO/AIA

Solar wind flowing from this southern polar crown coronal hole, was expected to brush Earth's magnetic field on January 18th.

January 16th - The sun sputters back to life after a quiet period. Solar Cycle 25 really is underway. Breaking a string of 12 spotless days, a new sunspot (AR2796) was emerging in the sun's southern hemisphere. Note the inset in this magnetic map from NASA's Solar Dynamics Observatory (SDO):



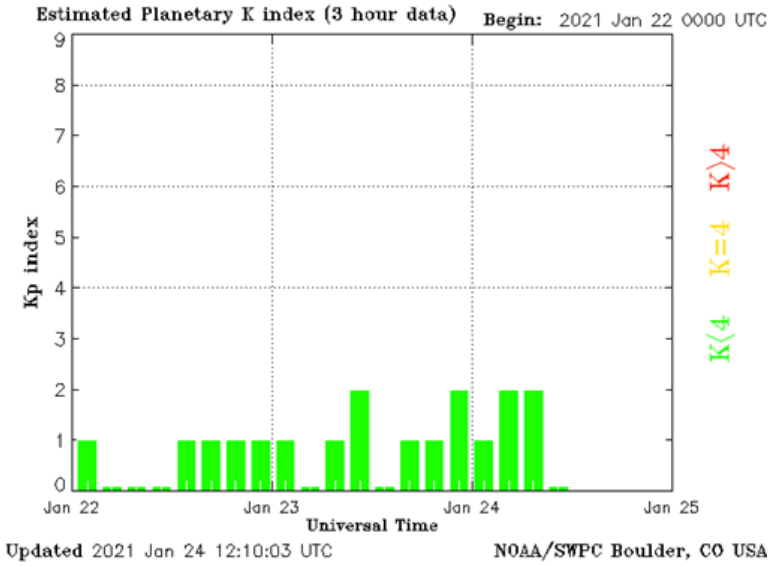
The +/- polarity of this sunspot marks it as a member of new Solar Cycle 25. Old Solar Cycle 24 sunspots would be the opposite, -/+, according to Hale's Law.

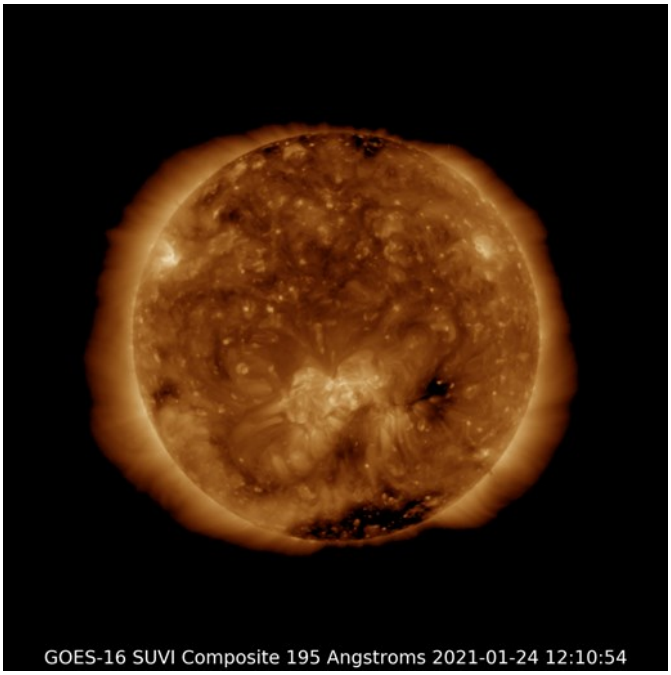
AR2796 was small, and posed no threat of strong flares. It may not have been the only sunspot, however. NASA's STEREO-A spacecraft was monitoring an active region just behind the sun's eastern limb. It posed a larger sunspot group soon to appear.

January 17th - Not much solar activity, polar coronal holes were crossing into center disc longitude.

Looking to the eight o'clock position there were a number of sun spots, appearing to be a complex groups just behind the limb. This area would be rotating into view during the following week. Solar wind and geomagnetic conditions were quiet.

January 20th - Earth was entering a stream of solar wind flowing from a northern hole in the sun's atmosphere. Forecasters expected wind speeds to top 600 km/s on January 20-21, possibly fast enough to spark a minor G1-class geomagnetic storms.





January 23rd - The sunspots have gone silent. No flares and they have entered decay. Only minor filament activity with minor CME's going off on the limbs, and the solar wind was calm. The central coronal hole was facing Earth on the 22nd, and its solar wind was expected to arrive on the 24th. It was only a moderate stream.

Solar-Geophysical Activity
Issued: 2021 January 23, 2200 UTC
Prepared jointly by the U.S. Department of Commerce, NOAA,
Space Weather Prediction Center, and the U.S. Air Force.
Geophysical Activity Forecast:

The geomagnetic field was expected to be at quiet levels.

Solar activity has been at very low levels.

There were 3 numbered sunspot regions on the disk.

Solar Activity Forecast: Solar activity was expected to be very low with a slight chance for a C-class flare.

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.

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.

W0TX Repeater Directory

amazonsmile
You shop. Amazon gives.
Search for Denver Radio Club @ smile.amazon.com

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

Earth Cam

The Round Table Archive

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

The Round Table Article Index

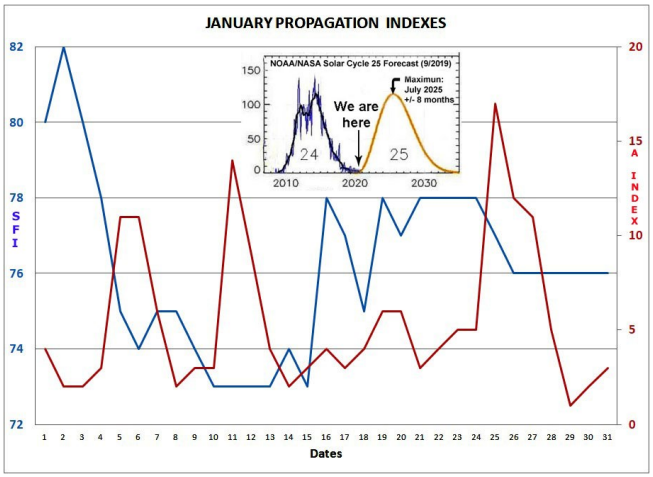
Go to: http://www.w0tx.org/RoundtableArchive/-RoundTables-Index.pdf

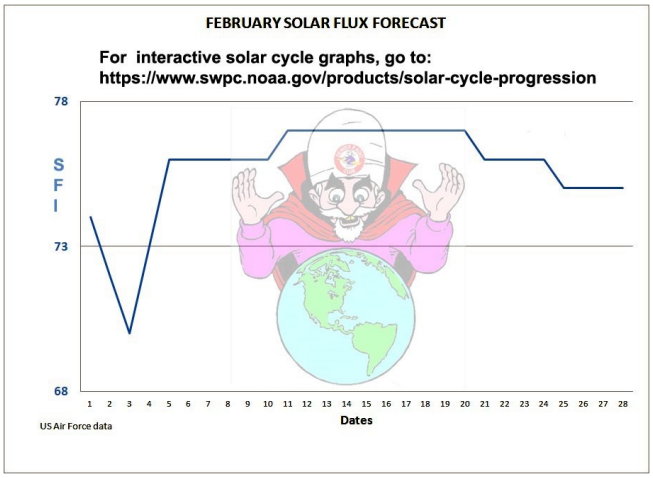
Past & Future Propagation Conditions

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





Upcoming Events
Hamfests & Conventions

Event	Date	Location	Sponsor Website

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
British Columbia	02/06/2021	02/07/2021	Orca DX and Contest Club	
Minnesota	02/06/2021	02/06/2021	Minnesota Wireless Association	
Vermont	02/06/2021	02/07/2021	Radio Amateurs of Northern Vermont	
South Carolina	02/27/2021	02/28/2021	SC QSO Party	
North Carolina	02/28/2021	03/01/2021	North Carolina QSO Party	

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. 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**

FEBRUARY 2021

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	**2** 	**3** **Learning Net** 7:30 p.m. 145.490 / 448.625 (No PL)	**4**  Last Quarter	**5**	**6**
7	**8** **School Club Roundup** Starts 1300 UTC	**9** **School Club Cont.**	**10** **Learning Net** 7:30 p.m. 145.490 / 448.625 (No PL) **School Club Cont.**	**11** **School Club Cont.**  New Moon	**12** **School Club Roundup** Ends 2359 UTC	**13**
14 	**15** 	**16**	**17** **DRC Online Meeting** Elmer 6 p.m. Meeting 7 p.m.	**18**	**19**  First Quarter	**20** **ARRL DX - CW** Begins 0000 UTC
21 **ARRL DX - CW** Ends 2359 UTC	**22**	**23**	**24** **Learning Net** 7:30 p.m. 145.490 / 448.625 (No PL)	**25**	**26**	**27**  Full Moon
28						

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

DRC Board of Directors

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Board Member	KB0CHT	Jeff Irvin	*Check Roster*	*Check Roster*

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Trustee	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
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Website & YouTube	N0LAJ	Bill Hester	*Check Roster*	w0tx@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 drc.editor@gmail.com.

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 drc.editor@gmail.com. The submission deadline is the 25th of the Month. ~ Editor