



ROUNDTABLE

The Denver Radio Club Newsletter

Since 1917

February 2020

PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members,

January, for the most part, has been unusually warm. January in Denver was typically "Stock Show Weather" and bone chilling cold... Not this year for sure! We all made it through the holiday activities; maybe we can relax a bit before the next rush.

Since the news about the possibility of Jefferson County closing the Fairgrounds, members have been asking what we will do about our Hamfest. We are taking a wait and see position; in hopes that it will not close. We are watching for any developments and will act on firm news, not rumors.

As reported last month, our new 220 repeater is up and operating. I recently purchased a radio that has 220 capabilities and I try to put out a call as often as I can. The Technical Committee has plans to enhance the performance of the repeater with an antenna upgrade. We are waiting for better tower climbing weather to make the improvements. We are also searching for a good radio or two, which the club feels worthy to recommending for purchase by members. If you are in the market for a 220 radio, or any other radio, beware of the really cheap radios. They are "Really Cheap" for a reason, which is typically not a good thing.

Thanks to Robert White (K0RCW) for his presentation on a Raspberry Pi 4 based portable and solar powered station. As promised, Robert's presentations are always interesting and his style makes them even more enjoyable. Thanks Robert! We look forward to your next program.

The program for our February 19th meeting will be presented by Larry Irons (K0LAI). Automatic Packet Reporting System (APRS) has developed and spread immensely since its first testing in the mid-1980s. APRS integrates amateur radio, GPS, and GIS maps and is a registered trademark of Bob Bruninga, WB4APR. The use of APRS has grown out of packet radio to disseminate live data to everyone on a network in real time. It gives tactical situational awareness of everything on the net. APRS is fully integrated with the Internet and can send and receive email and text messages even to non-amateur devices such as cell phones. K0LAI will introduce the hardware and software necessary to use APRS including a live demo of these features.

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 Roundtable.

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:

Beverly Bonner	Martin Fasang - KC0WRS	Edward Worthington - KE0YKV
Bruce Kelly	Thomas Mark Ehr - KE0WHY	Richard Budinger - WA9IPK
Ezekiel Bonner - KZ0EKE	Brant Zirker - W0BKZ	Richard Myers - KK0COP
Kevin Perdue - KC9PDX	Brian Dotson - KN4RDF	Robert Perry - KD7EPZ

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.

JANUARY MEETING - WHAT'D I MISS?

By BRENNAN PATE, AD0UZ

PHOTOS BY FRED HART, AA0JK

The evening started off with the usual greetings, intros from the six visitors, salutations from the 59 attendees and Gerry's (W0GV) updates on club business.

Cathy (N0CRZ) then provided a summary on the successes of the club's Christmas party. There were 98 paid attendees this year and the food was good, as usual.

The presentation for the evening was from Robert (K0RCW) on the Raspberry Pi 4 and WSTJ-X. Robert went over the Pi 4's board layout, ports, history, ham radio applications, operating systems and what to buy for a nice setup.

He also talked about setting up a WSJT-X remote station, the parts needed for said station and went over lessons learned.

At the end he took questions and had his equipment on display. The presentation did a good job of describing the capabilities of the devices and what's possible with them.



SPEAKERS NEEDED

BY BILL RINKER, W6OAV

We are looking for folks who are interested in giving a presentation at any upcoming DRC meeting.

If you are interested, contact Bill at w6oav@arrl.net.

**TECHNICAL COMMITTEE REPORT**

BY BILL RINKER, W6OAV

The following is an overview of current issues discussed at the January meeting.

DRC/TSA Aurora Site.

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

Status: The Board is attempting to establish a permanent TSA contact.

Internet Access at Station 4.

Goal: Obtain permanent access to the Fire station Internet.

Status: KE0HFH will configure DRC access to the Fire station internet in January.

Station 4 Remote Power Control.

Goal: Troubleshoot and repair the system.

Status: WG0N will troubleshoot after internet access is established at Station 4.

C4FM Repeater to Wires-X.

Goal: Install the Wires-X system once internet access is established.

Status: KE0HFH and KF0UV will install the Wires-X equipment in January.

Routine the 6 Meter Repeater.

Goal: Clear any performance issues (reports received of varying audio and lack of receive sensitivity).

Status: WW0LF, W0GV and N0ETV will routine and reconfigure the repeater ASAP.

LEARNING NET REPORT

BY FRED HART, AA0JK

Our group gathers here to discuss, and respond to topics aimed at enhancing a better understanding of our hobby. The net is open to all and we encourage your participation.

Topics:

- ARRL's [On The Air](#), a new magazine for the new Ham.

- D-Star: <http://dstarinfo.com/>

- <https://youtu.be/bRxFrJW5pLl>

- <https://youtu.be/sOyY3FPZ65k>



- Satellite Operation & Making contacts (K7AGE video)
 - <https://www.youtube.com/watch?v=YXOeO2RH31k>
- Heavens Above satellite tracking: <http://heavens-above.com/>
- A Vector Network Analyser "Getting Started Manual":
 - http://www.gunthard-kraus.de/fertig_NanoVNA/English_NanoVNA_V1.4.2_final.pdf
- DMR Getting Started:
 - <http://www.va3xpr.net/getting-started/>
 - <https://youtu.be/li86AR8fPXE>
- Automatic Packet Reporting System: <http://www.aprs.org/>
- Making common-mode chokes For RFI

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 via w0tx@w0tx.org or elmer@w0tx.org.

We are always looking for additional net control operators. If you would like to participate we can help you with the basics of becoming a net controller. This is a great opportunity to learn and get experience running a net.

Net controllers are always needed to perform Emergency Communications services. The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. <http://www.arri.org/ares>. In the event of emergencies such as floods, fires, or other public service, the amateur radio community is always ready to help. If you have an interest in participating, when the need arises, learn and train now to be prepared. For additional information contact our EmComm Coordinator: Mike Vespoli (KE0HFH) at emcomm@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. We would encourage those who have been Hams for several years to also join us. Your experience and input is welcomed. What topics would you like to discuss? Join us Wednesday nights, 7:30 PM, 145.490, 100 Hz PL tone & linked to 448.625, 100 Hz PL tone.

(Note: The third Wednesday of the month is devoted to the DRC club meeting. Elmer Session: 6 PM, Main Meeting: 7 PM. See the [W0TX web site](#) for additional information.)

73,

Fred
AA0JK

ELMER SESSION START TIME

The Elmer Session Starts at 6 p.m. before the regular 3rd Wednesday DRC Meeting! All are welcome. Meet in Hearing Room # 2.

Come join in on the sharing of information.

FEBRUARY MEETING PRESENTATION

BY LARRY IRONS, K0LAI

Automatic Packet Reporting System (APRS) has developed and spread immensely since its first testing in the mid-1980s. APRS integrates amateur radio, GPS, and GIS maps and is a registered trademark of Bob Bruninga, WB4APR. The use of APRS has grown out of packet radio to disseminate live data to everyone on a network in real time. It gives tactical situational awareness of everything on the net. APRS is fully integrated with the Internet and can send and receive email and text messages even to non-amateur devices such as cell phones. K0LAI will introduce the hardware and software necessary to use APRS including a live demo of these features.



QUESTION OF THE MONTH

BY BILL RINKER, W6OAV

Question:

I replaced my 75 meter Hamstick mobile antenna with a larger Screwdriver antenna. Even though the Screwdriver has a much larger loading coil and is longer, the SWR is higher. What's wrong?

Answer:

Absolutely nothing is wrong. In this case, a higher SWR indicates that the Screwdriver is more efficient than the Hamstick. Let's see why this is true.

Figure 1 (next page) shows the schematic of a mobile antenna. The value of the capacitance C_a is determined by the length of the antenna and the environment around it. The value of the inductance L_I is mainly determined by the size and length of the coil windings. C_a and L_I form a resonant series circuit and thus determines the resonant frequency of the antenna. The value of coil resistance R_c is mainly determined by the wire resistance of the coil. The value of ground resistance R_g is determined by the conductivity of the ground beneath the antenna. The value of the radiation resistance R_r is determined by the size and configuration of the antenna. The radiation resistance of an antenna is defined as the equivalent resistance that would dissipate the same amount of power as is radiated by the antenna.

The goal of designing an efficient antenna is to keep coil resistance R_c as small as possible. The smaller the resistance of R_c , the more the current that will flow through R_r . (Ohm's law for series circuits). The stronger the RF current that flows through R_r the stronger the radiated RF field.

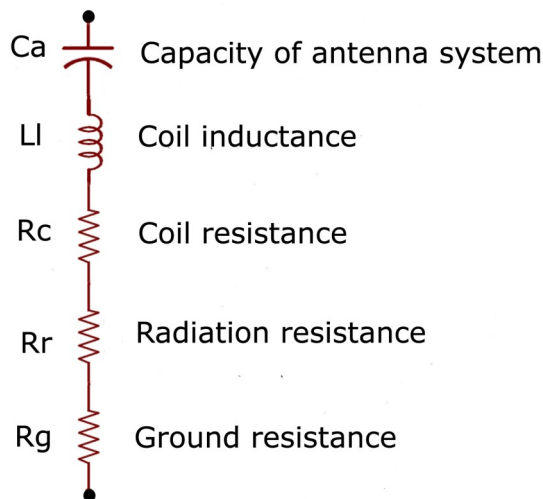


Figure 1 - Schematic of HF Mobile Antenna

Switching to the Screwdriver decreased the value of coil resistance R_c . Thus the antenna efficiency increased as more current now flows through the radiation resistance R_r .

Figure 2 shows typical mediocre and good 75 meter mobile antennas. Due to the small size of a 75 meter mobile antenna, the radiation resistance R_r is usually around 1 ohm. Consequently the coil resistance R_c must be kept as low as possible. In the marginal antenna the coil resistance R_c is very high (36.3 ohms) making the total input impedance close to 45 ohms. Consequently, the SWR looks pretty good. However, the antenna's efficiency is not good (2.1%). Replacing the coil with a one having larger coil wire and a better form factor decreases the coil resistance R_c to 12.1 ohms. This drops the input impedance to a much lower value (16 ohms). The resulting SWR is approximately 3.2 to 1. However the efficiency is now much better (5.8%)!

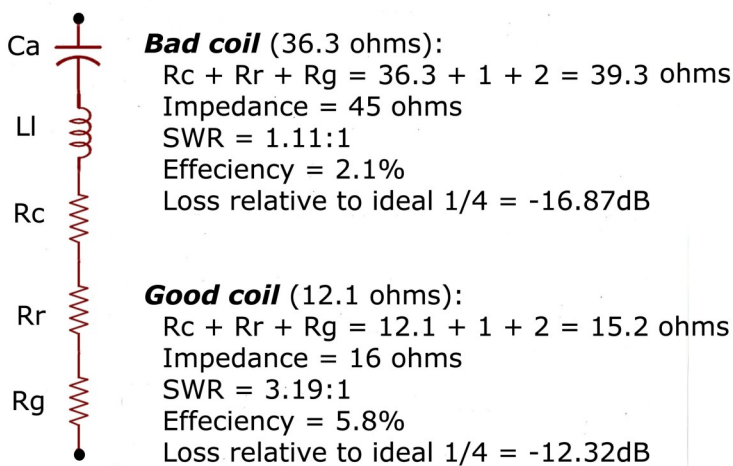


Figure 2 - Mediocre vs Good 75 M Mobile Antenna

Notes:

- Ground loss resistance R_g typically varies between 2 and 10 ohms, but can be much higher.
- A properly designed HF mobile antenna will have an input impedance of between 12 and 35 ohms, lower at 75 meters and higher at 10 meters. So, if an HF mobile antenna shows an SWR of 1 to 1 then there are unwanted losses in the antenna system.

HAM PODCASTS

BY BILL RINKER, W6OAV

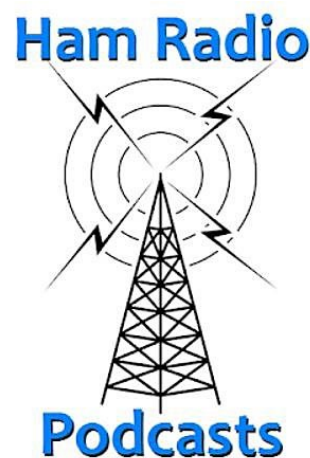
There are many ham related podcasts available on the Internet. These podcasts cover about every aspect of ham radio. They are interesting and extremely informative.

So, what is a podcast? A podcast is a form of "audio broadcasting" over the Internet. A podcast is a digital audio file, usually an MP3. It can be played on a computer or any portable media device that can play music. A podcast can be either streamed or downloaded from the podcaster's website, from iTunes, or via iPhone and Android podcast apps. And, most podcasts are FREE!

One can subscribe to their favorite podcasts which will allow new podcasts to automatically be downloaded to their preferred device.

The following is a list of many ham podcast websites. This list is by no means complete. (Note: Many of these podcasts are also available via iTunes or smart phone podcast apps).

ICQ Amateur / Ham Radio Podcast - <http://icqpodcast.com/>
 Practical Amateur Radio Podcast - <http://myamateurradio.com/>
 Solder Smoke - <http://soldersmoke.blogspot.com/>
 Radio Amateur Information Network - <http://www.therainreport.com/rainreport.shtml>
 Linux Ham Shack - <http://lhspodcast.info/>
 Ham 360 radio - <http://hamradio360.com/>
 QSO Today - <http://www.qsotoday.com/>
 100 Watts and a Wire - <http://100wattsandawire.com/>
 ARRL Audio News - <http://www.arrl.org/arrl-audio-news>
 DX Zone Podcast - http://www.dxzone.com/catalog/Internet_and_Radio/Podcast/
 Resonant Frequency - <http://rfpodcast.info/Podcast/>
 Ham Radio Now.tv - <http://www.hamradionow.tv/>
 Amateur Radio Newsline - <http://www.arnewsline.org/>
 The Doctor is in - <http://www.arrl.org/doctor>
 Everything Hamradio- <http://www.everythinghamradio.com/>
 Ham Talk Live - <https://www.spreaker.com/show/ham-talk-live>

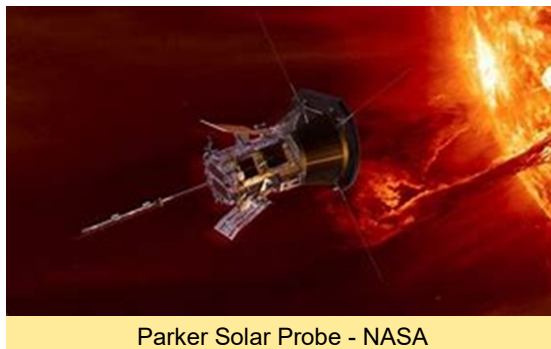


So, download your favorite podcasts, sit back, relax and learn many interesting things!

(Editor's Note: Thunderbird, an open source, cross-OS (email) program works well for listing recent podcasts via an RSS feed and makes it easy to download MP3s to your computer.)

SOLAR GEOPHYSICAL ACTIVITY REPORT

PROVIDED BY FRED HART, AA0JK



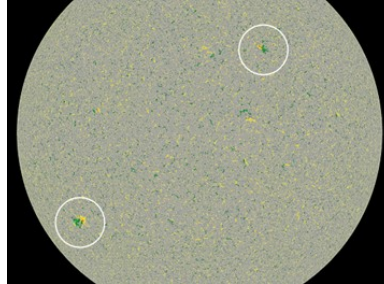
Parker Solar Probe - NASA

A NEW DECADE. WHAT WILL 2020 BRING US?

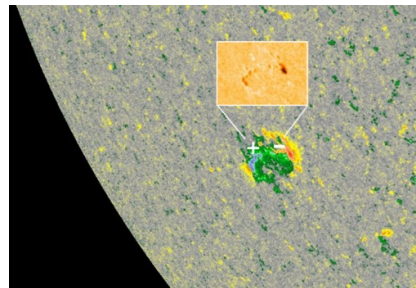
The past year, 2019, showed a decline in Cycle 24 sunspots. Long periods with no sunspot activity at all. Expect many more spotless days in the months ahead, but with more Cycle 25 sunspots thrown into the mix.

Cycle 25 Sunspots Emerging

The last weeks of December brought signs of the new Cycle 25. Two, one in each hemisphere.

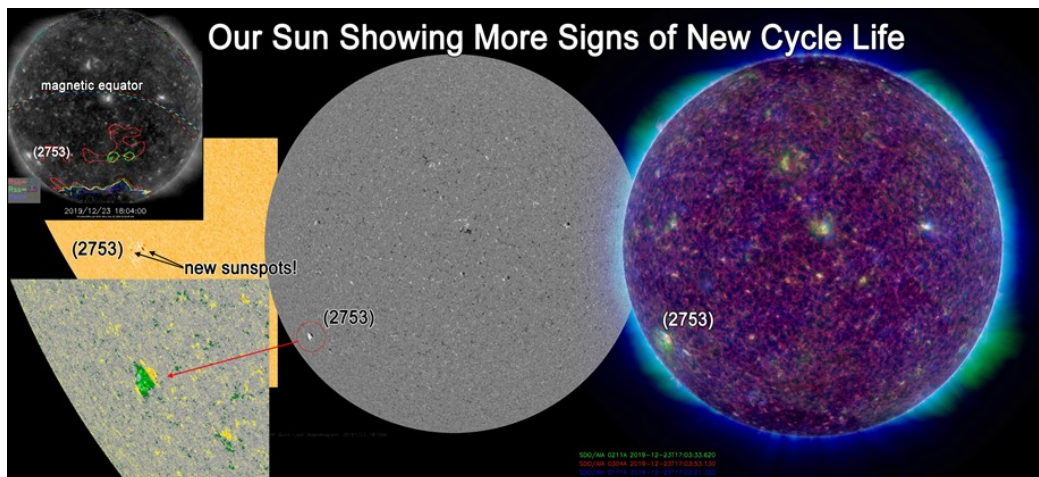


AR2753 and AR2754 broke a 40 day stretch of a blank, spotless Sun. How do we know these are new-cycle sunspot? Its magnetic polarity tells us so. Southern sunspots from old Solar Cycle 24 have a $-/+$ polarity. These sunspots are the opposite polarity: $+/-$. These sunspots are therefore a member of new Solar Cycle 25.

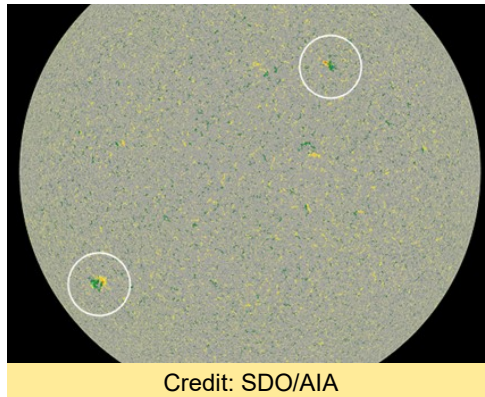


Forecasters expect the next solar cycle to slowly gain strength, and reaching a peak in July 2025. Image credit: SDO/HMI.

Signs of Life! - Not even a week had passed since we saw a new cycle sunspot, and now more. Our first multi-spot group of solar cycle 25! This high-latitude region AR2753, was far from the magnetic equator. This is yet more evidence the Sun is waking up, right on time.



It's not just the latitude of the bright regions that indicate the new solar cycle is about to start, it's also the closing of the equatorial coronal holes. That the holes are closing, tells us the fields are getting very dipolar. Once the dipole field peaks, it's off to the races for cycle 25, and we can expect increased improvement in HF conditions.



Two new sunspots appeared on the solar disc, one in each hemisphere. Solar cycle 25 is really coming. This map of solar magnetic fields from NASA's Solar Dynamics Observatory shows their location: HFUnderground.com Propagation Data and Tools <https://www.hfunderground.com/propagation/>

Prepared jointly by the U.S. Dept. of Commerce, NOAA, Space Weather Prediction Center, UPDATED 2020 January 24 1230 UTC.

Summary: Solar activity was very low with no spots observed on the visible disk. An area of enhanced plage, with possible spot development, was observed near N04E41. No Earth-directed CMEs were observed in coronagraph imagery.

Forecast: Solar activity was expected to be at very low levels January 24-26.

Notes: GEOMAGNETIC INDICES AND CONDITIONS (Kp and Ap Indices)

THE HANDYMAN'S GUIDE TO SOLAR/GEOMAGNETIC CONDITIONS, by Paul Harden, NA5N <https://www.qsl.net/w2vtm/solar.html>

Six and Ten meter openings were elevated as solar wind disruptions occurred in Earth's upper geomagnetic field.

Elevated solar wind streams containing periods of southward Bz were helping to disturb our geomagnetic field.

Propagation openings had local Hams making Six meter contacts into Tennessee and Kentucky.

73,

Fred
AA0JK

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](#)



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
[ARRL's Hamfest & Conventions Calendar](#)

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

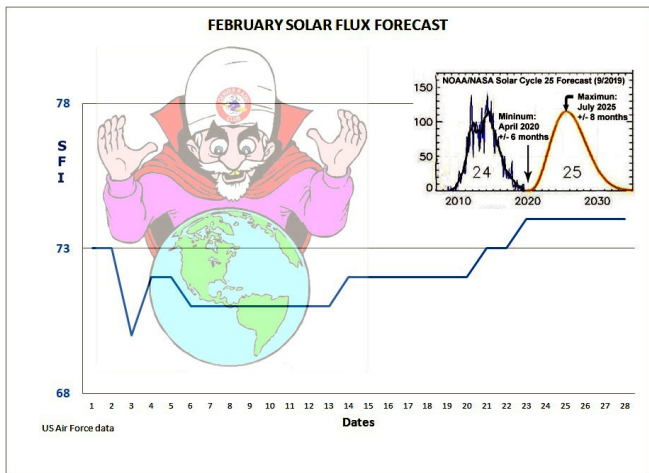
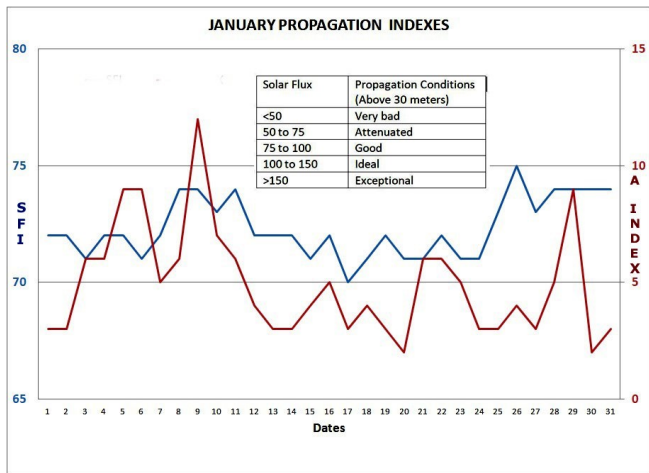
THE ROUNDTABLE ARTICLE INDEX
 Go to: <http://www.w0tx.org/RoundtableArchive/-RoundTables-Index.pdf>

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 *Roundtable* 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
The Swapfest	02/16/20	Adams County Fairgrounds	Aurora Repeater Association

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	02/01/2020	02/02/2020	Orca DX and Contest Club	
Minnesota	02/01/2020	02/01/2020	Minnesota Wireless Association	
Vermont	02/01/2020	02/02/2020	Radio Amateurs of Northern Vermont	
South Carolina	02/22/2020	02/23/2020	Columbia Amateur Radio Club	
North Carolina	02/23/2020	02/24/2020	Raleigh Amateur Radio Society	
Idaho	03/08/2020	03/09/2020	Idaho QSO Party	
Wisconsin	03/09/2020	03/10/2020	West Allis Radio Amateur Club	
Oklahoma	03/14/2020	03/15/2020	Oklahoma DX Association	

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 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.
70cm	446.7875MHz (-)	BrandMeister Repeater: Slot 1 – Wide Area Traffic, Slot 2 – Local Talk Group 310804



HAM RADIO OUTLET
WORLDWIDE DISTRIBUTION

HRO 12 STORE BUYING POWER WORKS FOR YOU!!








www.hamradio.com

8400 E. Iliff Ave #9, Denver, CO 80231

303-745-7373 800-444-9476

24 HOUR FAX 303-745-7394

e-mail: denver@hamradio.com

FEBRUARY 2020							<i>DRC Net Sundays at 8:30 p.m. on 145.490 / 448.625 (no PL)</i>
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
						1  First Quarter	
2 	3	4	5 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	6	7	8	
9  Full Moon	10 School Club Roundup Starts 1300 UTC	11 School Club Cont.	12 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL) School Club Cont.	13 School Club Cont.	14 School Club Roundup Ends 2359 UTC 	15 ARRL DX - CW Starts 0000 UTC  Last Quarter	
16 ARRL DX - CW Ends 2359 UTC	17 	18	19 DRC Meeting Elmer 6 p.m. Meeting 7 p.m.	20	21	22	
23  New Moon	24	25	26 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	27	28	29	

DRC BOARD OF DIRECTORS

President	W0GV	Gerry Villhauer	303-467-0223	w0gv@hotmail.com
Vice-President	AD0GX	Kevin Schmidt	303-475-9234	ad0gx@arrl.net
Secretary	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
Treasurer	N0CRZ	Cathy Villhauer	303-467-0223	crazycathy56@gmail.com
Board Member	WY0J	Jan Alan Dickover	303-697-0725	jad.wy0j@gmail.com
Board Member	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
Board Member	WG0N	Dave Baysinger	303-987-0246	wg0n@arrl.net
Board Member	KB0CHT	Jeff Irvin	Check Roster	Check Roster

DRC STAFF AND VOLUNTEERS

Benevolent		Carolyn Wolf	303-279-1328	Contact owolf@mines.edu
Club Librarian	WG0N	Dave Baysinger	303-987-0246	wg0n@arrl.net
Education Coordinator	AA0JK	Fred Hart	303-420-3536	elmer@w0tx.org
EmComm Coordinator	KE0HFH	Michael Vespoli	303-215-8862	emcomm@w0tx.org
EmComm Coordinator	AD0UZ	Brennan Pate	303-578-6283	emcomm@w0tx.org
Field Day Chairman	K1DBC	Doron Ben Chaim	720-254-1561	k1dbc@arrl.net
Membership	KC0CZ	Bob Willson	303-659-0517	rwillso2@centurylink.net
Net Control	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
Public Relations	K0AXP	Dave Verlinde	248-515-2371	w0tx@w0tx.org
RT Managing Editor	AD0UZ	Brennan Pate	303-578-6283	drc.editor@gmail.com
RT Associate Editor	W6OAV	Bill Rinker	Check Roster	Check Roster
Hamfest Manager	N0CRZ	Cathy Villhauer	303-467-0223	drcfest@w0tx.org
Tech. Committee Chair	W6OAV	Bill Rinker	Check Roster	Check Roster
Trustee	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
VE Team	KC2CAG	Tom Kocialski	720-284-1911	kc2cag@arrl.net
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 RoundTable 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 RoundTable RoundWorld.

To respond to this request send your information to drc.editor@gmail.com.

Subject: I'm located in...

EDITOR'S NOTE © 2020 Denver Radio Club. Articles in the RT may be reprinted with permission for non-commercial or educational use only.

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

Sunday August 16st - Jefferson County Fairgrounds

DENVER HAMFEST

Denver Radio Club, WØTX 2020



Since 1917

**DEALERS FLEA MARKET PRIZES
FORUMS FCC EXAMS FOOD INDOORS**

More Tables & Less Crowding

Admission: \$6 (Children under 13 free w/adult)
Tables: Advance Purchase: \$12 (Paid by Aug 12)
At the Door \$16

Hourly Door Prizes - Main Drawing at Noon
(Must be present to win)

Doors Open: 8:30 AM - 1:00 PM
License Testing/VE Exams at 10 AM
(Vendor Set-Up Starts at 7:15 AM)

Talk-In: 145.490-/448.625- PL 100.0Hz
GPS: Lat 39d 43' 19"N Lon 105d 10' 15"W

Handicapped Parking & Access Available

WWW.WØTX.ORG



Jefferson County Fairgrounds
15200 West 6th Avenue Golden, CO

For more info visit our website or contact:
Cathy Vilhauer, N0CRZ 303-467-0223 E-Mail: drcfest@wøtx.org

Advance Table Reservation Form

Make checks payable to: Denver Radio Club, do not mail cash!

Payment is required with reservation and must be received by August 16, 2020 to obtain the \$12 per table advance registration price

AC Power is limited, available on a FCFS basis. Reservation confirmations will be emailed. Vendor badges & tickets will be provided at the Hamfest. Tables must be claimed by 8:30 AM or they will be subject to resale - no refunds

Save the upper portion of this flyer for your records

Name: _____ Call: _____

Org: _____ Phone: _____ Email: _____

of Tables _____ @ \$12.00 each = _____

of Vendor Admissions _____ @ \$6.00 each = _____

AC Power: yes no Total Enclosed : _____

Special Requests: _____

Please mail all reservations to: Denver Radio Club, 6511 W 74th Ave., Westminster CO 80003

DENVER HAMFEST
Denver Radio Club 2020
August 16th

Early Bird Discount Registration is Available Now! at
<http://www.hamconcolorado.com>

HAMCON COLORADO 2020 ROCKY MOUNTAIN DIVISION

MARK THESE DATES ON YOUR CALENDAR!

August 7 - 9, 2020

FRIDAY *Separate Event* - DX University 8AM – 5PM \$50 includes Lunch

ALL DAY SATURDAY & SUNDAY Many engaging technical sessions & forums Numerous club, organization and manufacturer exhibits!

MEALS MUST BE PURCHASED IN ADVANCE TO HEAR THE SPEAKERS

Booked so far are Riley Hollingsworth K4ZDH & Rick Roderick K5UR

SATURDAY

- ◆ Kickoff Breakfast with speaker (TBA)
- ◆ Afternoon Delicatessen Buffet with a nationally known Speaker (TBA)
- ◆ Evening Meet and Greet Buffet with ARRL Officials and a Keynote Speaker
- ◆ Midnight Wouff Hong Ceremony (Details TBA)

SUNDAY

- ◆ Breakfast with a nationally known Speaker (TBA)
- ◆ BBQ lunch with a nationally known Speaker (TBA)

MORE FOR YOU!

- ◆ Show your CW skills and coordination in a QLF (Details TBA)
- ◆ Show your skills in a challenging CW Pileup Contest (Details TBA)
- ◆ Operate W1AW/Ø – HF/VHF/UHF All modes including Digital on fantastic hardware
- ◆ Hourly prize giveaways
- ◆ Hospitality Suite sponsored by Mile High DX Association and Grand Mesa Contesters of Colorado



CU Denver South - 10035 S Peoria St. - Parker, CO