ROUNDTABLE

The Denver Radio Club Newsletter

January 2015 Since 1917

PRESIDENT'S MESSAGE

By Gerry Villhauer – W0GV

Season Greetings DRC Members,

I hope you had a Merry Christmas and a very blessed holiday Season. I keep telling Cathy we will do "that" when cold weather comes and things slow down. I think I will quit saying it! It just does not happen; winter seems just as busy as summer.

Our Annual DRC Holiday Party has come and passed. If you attended, I hope you agree it was a big success. We had 78 members and visitors in attendance. The food was good and what a variety! I don't know how anybody could not find something to their liking. The fellowship was definitely a highlight of the evening. It is always good to see some folks that you may not have visited with since the previous party. For me, there is not enough time to talk to everyone like I would like to.

Thanks to our visitors, I certainly hope we all made them feel welcome. Bob, KC0CZ, was busy signing up new members and renewing current members. Thanks Bob, you do a great job with our membership.

The program was well received and very well presented. Thanks to Larry Irons, K0LAI, for the interesting stories and pictures on his travels to some very interesting places around the world that most of us will never have the opportunity to see in person. Larry, I have heard several comments on the air about your presentation, it was certainly a big hit with the group. THANKS!

This brings us to the final activity of the evening, the drawing. We had some very nice prizes. I thought the books were particularly interesting and of course, who does not like cash; or as we call it "universal gift certificates".

As we continue to grow in numbers, next year we will be removing some tables after people finish eating, and bringing in more chairs for the program and drawing. I have already discussed that with the restaurant management.

As we start the New Year the Round Table has a new Editor. Jessie King, N0HI, is taking over the editor duties effective this issue. We owe a great deal of our success as a club to George McCray, AG0S. George has taken the Round Table from a two page news letter to the color publication that it is today. Believe me, that was a monumental task. THANKS GEORGE! George will continue to be an advisor and Jessie will be aided by our Assistant Editor, Bill Rinker, W6OAV.

Our next meeting will be January 21st. The program will be presented by Robert White, K0RCW. Robert will discuss the latest advancements of the Raspberry Pi projects, which are growing at a phenomenal rate. He will be telling us about the introduction of the A+ and B+ project boards and updates on ham radio applications including live demonstrations shown on the big screens at the meeting facility. Mark your calendars now…don't miss it.

73 and Happy New Year!
Gerry, W0GV
President

INSIDE THE ROUND TABLE

DECEMBER MEETING - WHAT'D I MISS?

By Bill –W6OAV

There was a large turnout of 78 people for the annual Christmas Dinner. All enjoyed a good dinner and conversations. After dinner, Gerry, W0GV, began the meeting with attendee introductions. The meeting was then turned over to our guest speaker Larry, K0LAI, who has been a geophysicist for 37 years.

Larry gave a very interesting PowerPoint presentation titled "Radio Echo Sounding". The term Radio Echo Sounding was used in the 70's and 80's to describe the use of radar to map ice thicknesses and to detect objects buried beneath the ice.

Larry (K0LAI)

Larry described his two journeys to Antarctica via Hawaii, Pago Pogo and New Zealand and his experiences in Antarctica.

The highlights of Larry's presentation were:

- The nature of Radar reflections caused by ice layers, crevasses and rocks.
- The training required before going to the Antarctica.
- A travel log with photos of Larry's stops on his 10,400 mile trip from Nebraska to Antarctica.
- A description of the radar and other sensor equipment and their mounting in and on the C130.
- Descriptions of McMurdo, Scott Base, South Pole Station and the Ross Ice Shelf.
- Pictures of Antarctica wild life and their habits.
- Examples with descriptions of radar mapping recordings.

Full Room

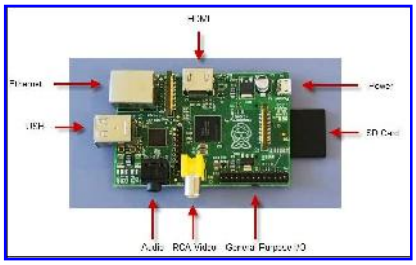
After many questions from the audience, the meeting was turned over to W0GV, who coordinated the door prize drawings. Many attendees went home with nice gifts! All went home with full tummies!

JANUARY MEETING PRESENTATION

By Bill – W6OAV

Interested in learning about a powerful low cost credit-card sized computer, called the Raspberry Pi, that plugs into a computer monitor or TV, and uses a standard keyboard and mouse? If so, plan to attend the January meeting.

Robert, K0RCW, will discuss the latest advancements of the Raspberry Pi phenomenon including the introduction of the A+ and B+ project boards.



Board Ports

He will have all three basic units available for inspection. Robert will also give an update on some of the various ham radio applications available to run on the Pi under Debian Linux as well as demonstrate the boot up and basic layout of the Pi through the HDMI video connection at the DRC meeting room.

Raspberry Pi Board

Don't forget to join in Wednesday nights at 7:30p.m. for the DRC Learning Net !

145.490 / 448.625 Repeaters

Watch the RoundTable for any changes to Learning Net Schedule

Who's New In The DRC

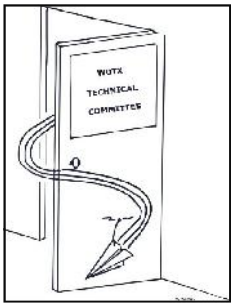
The DRC is a very active club in the Denver metro area and we'd like to have all of our members listen for these new calls and personally to make them feel welcome.

Steve Baker	AA0SB
James R. Fariello	KE0CKF
Cary Bishop	KE0CNS
Kevin A Perdue	KC9PDX

Welcome to our newest members. 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 p.m. For new hams we have the Elmer session which starts at 6:00 p.m. before the regular meeting.

More information can be found on the Denver Radio Club website at http://www.w0tx.org.

No Tech Committee Report For December



Reports from the Tech Committee are on hold pending relevant information to share with the general membership.

Efficient Use of DRC Echolink

By Bill –W6OAV

Have you noticed the longer delays between "overs" when a remote station calls in on our Echolink but not when a club member initiates an outgoing Echolink call? This is because the local initiator transmitted the Echolink access code before setting up a call. The access code reconfigures the Echolink timers to decrease the "overs" time.

To decrease the long delays on an incoming call, after answering the calling station, transmit the Echolink access code. The repeater will respond with "Echolink is on" and the long delays will be shorter. So, why is this?

The transmission of the Echolink access code causes the Courtesy Timer to decrease from 1.5 seconds to 0 seconds. This is done to decrease the "over" time since there is already an inherent approximate 2 second delay in the Echolink network. Also, if the remote caller is using an Echolink Smartphone app an additional approximate 2 second cell phone provider delay occurs.

The transmission of the Echolink access code access code also extends the repeater Timeout Timer from 3 minutes to 10 minutes. This can be important if the incoming call is from a remote Echolink repeater with several users wishing to talk to Denver.
If the remote repeater, like our 449.35, does not drop between their "overs" the extension to 10 minutes prevents 449.35 from timing out with long incoming transmissions.

Note: All DRC members should have received the Echolink access code in their welcome packet. If you need the access code, email me at w6oav@arrl.net. Please do not pass out the access code to non DRC members as Echolink is a privilege of DRC membership.

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 compile a list and publish it at a later date.

We will not include or retain your name, call or email address.

To respond to this request send your information to N0HI@arrl.net.

Subject: I'm located in…

Thank You

SOLAR UPDATE

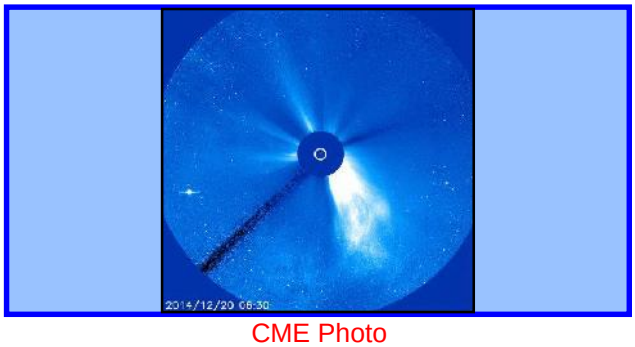
By George – AG0S
December 20, 2014

X-FLARE – Big sunspot AR2242 erupted on Saturday, Dec. 20th @ 00:27 UT, producing an intense X1.8-class solar flare. NASA's Solar Dynamics Observatory (SDO) captured the explosion's extreme ultraviolet flash as seen in the photo.

A pulse of X-rays and UV radiation from the flare reached Earth just minutes after the explosion. This "solar EMP" ionized our planet's upper atmosphere and blacked out HF radio communications over Australia and the South Pacific. Below 10 MHz, transmissions were strongly attenuated for more than two hours.

Coronal Hole
Photos Courtesy of SpaceWeather.com

The explosion, recorded by the Solar and Heliospheric Observatory, hurled a CME (Coronal Mass Ejection) into space as seen in the photo. The small black disc in the photo is a bit larger than the diameter of the sun. By comparing the size of the solar disc and the extent of the CME one can deduce the magnitude of the solar flare.



CME Photo
Photos Courtesy of SpaceWeather.com

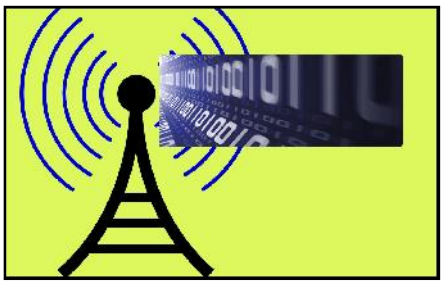
Although the instigating flare was Earth-directed, it appears that the CME is not. The bulk of the cloud sailed far south of the sun-Earth line, missing our planet.

CAN A TECHNICIAN CLASS HAM USE THE DRC 2 METER TO 20 METER PACKET GATEWAY?

By Bill, W6OAV

I recently had a Technician class ham mention that he wished he could use the club's 2 meter to 20 meter packet gateway (W0TX-7). However, he felt that since he wasn't licensed for HF operation, he could not use the gateway. This is not true.

When a Technician uses the gateway, they are on 2 meters only. The gateway, licensed for HF operation, is retransmitting the call and packet data along with the gateway call on HF. Both are operating within their own license privileges.



Check out page 91 in the September 2010 issue of *QST*. W0TX-7 is the center piece for an article on NET105. NET105 is a packet network on 14.105 MHz consisting of many nodes and gateways around the country. The network's purpose is to provide a system for handling keyboard chats, message handling and emergency communications when required. The network provides access to VHF systems around the country and internet telnet access to worldwide nodes.

Call me on any of the DRC repeaters, should you be interested in learning how to use the gateway. I plan to write an article soon on how to use the gateway.

~ ATTENTION ~

There will be a one-day Technician one day class on Saturday February 7, 2015. The class starts at 8 a.m. and ends at 5 p.m. The examination will follow the class at 5 p.m.

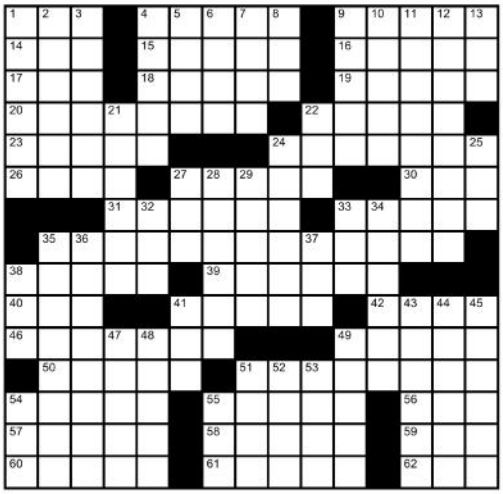
A General upgrade one-day class will be held on Saturday February 28, 2015 starting at 8 a.m. and ending at 5 p.m. The examination will follow the class at 5 p.m.

NOTE: Registration is required for both classes, No Walk Ins! Contact Will Perkins W1ZRV@arrl.net for class information and registration. Class information is also posted on the ARRL website. Class location is the LDS Church, 6564 West Jewell Ave. Lakewood, Co.

The following puzzle is provide courtesy of Chris Codella, W2PA. The URL for his website is http://www.w2pa.com. The solution for the puzzle is on page 6.

by Chris Codella, W2PA

Chasing DX



Across

1. Old freq. units

4. HH-land

9. Fourteen ____ (weight)

14. Enable, as a weapon

15. Over

16. Signs

17. Expected

18. John Glenn's ride

19. "that _____ for the course"

20. With 22, 55, 56, and 61 across - What you collect for 35 across

22. See 20-across

23. The 18 and 21 MHz bands?

24. "Is that really necessary?"

26. New fangled rigs (abbr.)

27. Work on GUIs and others

30. This began, the July after 24-down

31. An ARRL section official, in 1-land (abbr.)

33. All but KH6 and KL7

35. You need more than 999 for this award

38. Power units

39. One of the things Elmers do

40. School org.

41. One place where the DX might be listening?

42. Heading 180 from NC

46. 9H operator, probably

49. Early radio parts manufacturer

50. 1960's TV host, with Martin

51. Open wire (line)

54. Equipment reviewer, sometimes

55. See 20-across

56. See 20-across

57. What many towers are made of

58. The word that explains a UK prefix assignment

59. Digital ckt. family

60. Hamshacks, on Field Day

61. See 20-across

62. Beam heading to work PY from W2

Down

1. "... no space ___ ."

2. Trimmed, as a dipole (if not a bush)

3. It moves with a signal

4. What an amp also does in the shack

5. Prefix with VOX

6. What an un-keyed transmitter is

7. Some are green, some black, some orange

8. Gives a callsign

9. Nickels and dimes

10. Org. in charge of 43-down

11. What a DXPedition station spends most of the time doing

12. Non-digital, in G-land

13. DOS background job (remember?)

21. Non-ham pesky visitor on FD

22. C in F-land

24. A peak year in cycle 19

25. Some Ukraine prefixes

27. It's between the DSP and the speaker

28. How some DF antennas look

29. Listings for selling small VHF xcvrs

32. MHz predecessor

33. Those in Chile

34. House current, familiarly, if imprecise

35. Like 38-down, but for (other) digital modes

36. Keeps your rig's rock steady

37. A good signal report, in ancient Rome

38. Speed on CW

41. Biggest non-amateur user of radio in the early days

43. Awards for performances by hams in space?

44. Warm tubes and solder resin, among others

45. Pamper

47. What a birdie in your RX sounds like?

48. G-land noblemen

49. Tower-top antenna supports

51. Repeated, it's part of FO0-land

52. 7O city

53. The part of a part you solder

54. Use 3-Down to give out one of these

55. Cute 1960's mobile hamshack

The Denver Radio Club
Is an ARRL
Special Service Club
Support your hobby
Join the ARRL TODAY

Fact of the Day

Audio

The term 'audio' is widely used by both the general public and engineers, but what exactly does it apply to? Is the sound of your voice audio or does it only become audio when it is converted to waves of electrical energy by a microphone? The term 'audio' applies equally to acoustic waves (*sound waves*) and to representations of acoustic waves by waves of any type or form of energy, such as electrical waves, radio waves, light waves, magnetic waves; or by any mechanical representation of those waves, such as waves in the groves of a phonograph (*gramophone*) record. The audio frequency spectrum includes only frequencies that can be heard by humans. Frequencies below about 20 Hz are felt as vibrations more than they are heard as sound, so they are arguably not audio. Frequencies higher than about 20 KHz can be heard by very few humans, so they also are not audio. However, despite the technical meaning of the term, the Hi-Fi marketing industry commonly refers to frequencies both below and above human hearing as audio.

C	P	S	■	H	A	I	T	I	■	C	A	R	A	T
A	R	M	■	E	N	D	E	D	■	O	M	E	N	S
D	U	E	■	A	T	L	A	S	■	I	S	P	A	R
E	N	T	I	T	I	E	S	■	O	N	A	L	L	■
T	E	E	N	S	■	■	■	M	U	S	T	Y	O	U
S	D	R	S	■	D	O	H	C	I	■	■	I	G	Y
■	■	■	E	M	A	S	T	M	■	C	O	N	U	S
■	D	X	C	C	C	H	A	L	L	E	N	G	E	■
W	A	T	T	S	■	A	D	V	I	S	E	■	■	■
P	T	A	■	■	U	P	S	I	X	■	T	O	S	C
M	A	L	T	E	S	E	■	■	■	M	E	S	C	O
■	R	O	W	A	N	■	B	A	L	A	N	C	E	D
R	A	V	E	R	■	M	O	D	E	S	■	A	N	D
S	T	E	E	L	■	G	R	E	A	T	■	R	T	L
T	E	N	T	S	■	B	A	N	D	S	■	S	S	E

What if the Weather Changes?

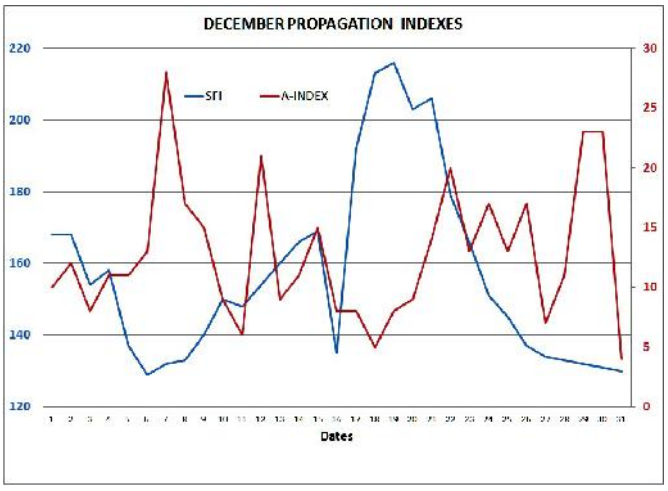
As every Coloradoan knows our winter weather can take a sudden change for the worse. If we should experience a turn in the weather on the day of our monthly DRC meeting it may be necessary to cancel the meeting. If this should happen listen for meeting status reports on 145.49 or 448.625 MHz repeaters during the afternoon on the day of the meeting.

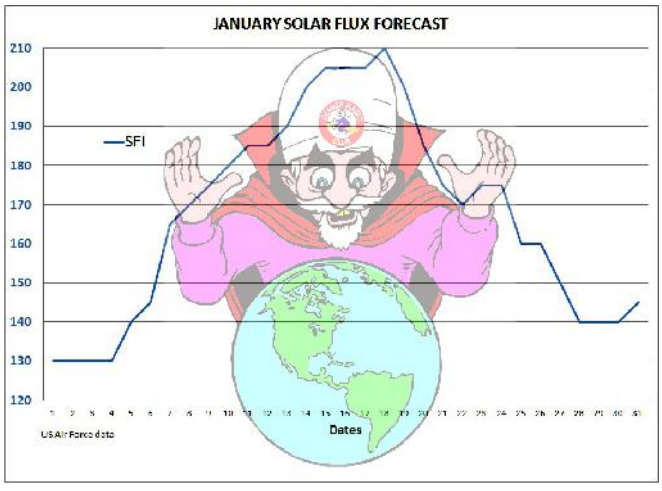
Past & Future Propagation Conditions

By Bill – 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. Issues of the *Roundtable* are available at http://www.w0tx.org/RoundtableAccessPage.htm.





UP COMING EVENTS

HAMFESTS & CONVENTIONS

*The following are the HAMfests & Conventions which have been registered with the ARRL so far. More information can be found on **www.arrl.org/hamfests**.*

2015

January 17 – NCARC Hamfest
Loveland, CO
Larimer County Fairgrounds
(In the 1st National Bank Building)
http://www.ncarc.net

February 8 – The Swapfest
Brighton, CO
Adams County Fairgrounds
http://www.n0ara.org

April 4 – LARCFest
Longmont, CO
Adams County Fairgrounds
http://www.w0eno.org

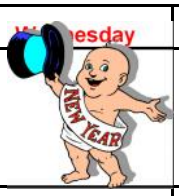
ELMER SESSION START TIME

The Elmer Session Starts at 6 p.m. before the regular DRC Meeting!

Come out and join in on the sharing of information.

JANUARY 2015

DRC Net Sunday's at 8:30 p.m. Local on 145.490 / 448.625 (No PL)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 ARRL Straight Key Night	2	3 ARRL RTTY Round-Up Begins 1800 UTC
4 ARRL Kid's Day 1800 to 2359 UTC ARRL RTTY Round-Up Ends 2400 UTC Full Moon	5	6	7 *Learning Net* 7:30 p.m. *145.490 / 448.635 (No PL)*	8	9	10 Save The Eagles Day 
11	12	13 Last Quarter	14 *Learning Net* 7:30 p.m. *145.490 / 448.635 (No PL)*	15	16	17
18	19 Martin Luther King Day 	20 New Moon	21 *DRC Meeting* Elmer 6:00 p.m. General 7:00 p.m.	22	*23*	24 ARRL January VHF Begins 1900 UTC
25	26 ARRL January VHF Ends 0359 UTC First Quarter	27	28 *Learning Net* 7:30 p.m. *145.490 / 448.635 (No PL)*	29	30	31

Check www.ARRL.org for Contests and Rules!

DRC Board of Directors

President	W0GV	Gerry Villhauer	303-467-0223	w0gv@arrl.net
Vice-President	K0HTX	Dave Gillespie	303-795-8225	k0htx@comcast.net
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Board Member	AC0UA	Jason Smallwood	*Check Roster*	*Check Roster*
Board Member	K0BAT	Art Thayer	303-340-2657	artthayer@comcast.net
Board Member	W0JMC	Jack McComb	303-885-9098	w0jmc@arrl.net
Board Member	K0LAI	Larry Irons	303-763-8112	*Check Roster*

DRC Staff and Volunteers

Trustee	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
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TSA Coordinator	KA0BBQ	Barry Wilson	*Check Roster*	ka0bbq@arrl.net
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Swapfest Manager	KB0A	Bryan Steinberg	*Check Roster*	drcfest@w0tx.org
Field Day	AC0UA	Jason Smallwood	*Check Roster*	sjason67@msn.com
Tech. Committee Chair	W6OAV	Bill Rinker	*Check Roster*	*Check Roster*
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Education	AA0JK	Fred Hart	303-420-3536	elmer@w0tx.org
Web Master	N0LAJ	Bill Hester	*Check Roster*	*Check Roster*

DRC Repeaters

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	
2m	145.490MHz (-) 100Hz PL	**Linked to the 70cm - 448.625MHz machine.**
2m	147.330MHz (+) 100Hz PL	**Local Area, Members Auto-Patch 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 the 2m - 145.490MHz machine.**
70cm	449.350MHz (-) 100Hz PL	**Wide area coverage with Echolink Node # 4140.**
70cm	446.7875MHz (-)	**MotoTRBO Repeater | Slot 1 – DMR-MARC WW, Slot 2 – Local**

Editor's Note

DRC members - this is your newsletter. Email your club or amateur radio related suggestions to the editor. Members are the heart of The Denver Radio Club, 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 N0HI@arrl.net. The submission deadline is the 20th of the Month. **Editor**