



ROUNDTABLE

The Denver Radio Club Newsletter

Since 1917

December 2015



PRESIDENT'S MESSAGE

By Gerry Villhauer – W0GV



Hello All,

I cannot believe it is December already and approaching the holiday season again. WOW! Where does the time go? I made a trip to Sheridan, Wyoming a couple of weeks ago. It sure is beautiful country up there but the driving conditions were not great. I experienced rain, snow, sunny skies and of course that Wyoming wind.

The big event this month is our annual DRC Holiday Party. As usual, our party is on the regular meeting night; Wednesday, December 16th. The party will be at the Golden Corral, 3677 S. Santa Fe Drive, Sheridan, CO. Please come around 5 p.m. and purchase your meal. Around 6:30 p.m. we will start the program followed by several prize drawings and good fellowship. The program will be an exciting one presented by Rita Baysinger (N0UEW). Rita is a Public Information Office for wild land fires and was dispatched to several very large fires this last season. She will have lots of pictures and stories to tell about her experiences and will share information that may surprise you. Even if you live in an urban area, you may be exposed to the dangers of wild land fires and not be aware of it.

Thanks to Larry (K0LAI) for the November meeting presentation on programming your radio with various software programs including demonstrations. Thanks Larry, I have heard good comments from members on your presentation. We strive to come up with interesting and informative presentations for our meeting. If you have a subject that you think would be fitting for a presentation or if you have seen a program elsewhere that would be suited for our needs...PLEASE let me or Bill (W6OAV) know about it. We will attempt to schedule the presenter for one of our meetings.

Thanks to Will (W1ZRZV) for providing a one day Tech License Class and thanks to the DRC VE Team for providing the testing service. We have 18 new techs in the area who are anxiously awaiting their call signs to be issued.

Thanks to all of you who recently joined and made the DRC "Your Club". Please stay active on the air, come to meetings, programs and events. Your name and call will be listed in the body of the Round Table.

73 for now, and see you at the party!
Gerry (W0GV), President



INSIDE THIS ISSUE			
November - Meeting, What'd I Miss?	2	Solar Report	12
Who's New In The DRC?/ Tech Committe	3	Looking Back At The DRC	13
December Meeting Presentation	5	Solar and Propagation Charts	15
Learning Net Report / Elmer Report	6	Events and Contests	16
Attic HF Antennas	7	DRC Repeaters	17
VE Session Report	9	DRC Calendar	18
Remember When?	11	DRC Board & Staff	19



NOVEMBER MEETING - WHAT'D I MISS?

By Bill, W6OAV

There were 37 attendees. After introductions, Orlen (WW0LF) explained suggested changes to the club bylaws. The attendees voted for approval. Orlen then announced the schedule and the program for the upcoming Holiday dinner. Jim (N0USN) followed suggesting that we think about what the club should do relative to its 100th anniversary. Jim presented several ideas which he will present to the board.

The meeting was then turned over to the guest speaker, Larry (K0LAI). His PowerPoint titled "Radio Programming" covered the following topics:

RT Systems:

- Overview of the company.
- Programming hardware and software needs.
- Available hardware and software packages.
- Review of the RT Systems' website.
- Live demonstrations:
- Programming an FT-60.
- Cloning another FT-60 from the original FT60.

TravelPlus:

- Overview of the program.
- Demonstration of the program features.
- Importing data into the RT Systems software.

Chirp:

- Overview of the program.
- Open Source and free.
- Using their website to configure the software.
- Programming methods and tips.
- Importing data into the RT Systems' software.

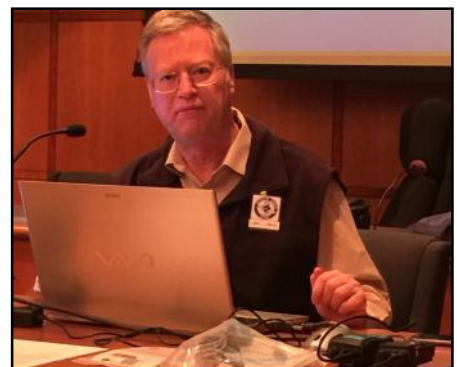
There was a lot of interest in the presentation as evidenced by a very lively question and answer session.



"Early Birds"



Orlen (WW0LF) Introductions



Larry (K0LAI) Programming with Software

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.

Mark Iverson	KE0GDS
Calvin Call	KD0ZAM
Justin Parsons	KE0GIA
Tom Schweich	KJ6BIT
Brian Noble	KC0YRM
Heather Noble	KD0DCW
Pam Luwish	KE0GTE

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 7:00 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>.

TECHNICAL COMMITTEE REPORT

By Bill, W6OAV



The following is an overview of the subjects discussed at the November Technical Committee meeting. The project coordinators' call signs are in red.

AllStar Link Voter System (W6OAV)

Goal: Discuss the feasibility of establishing an AllStar Link Voter network.

Status: W0GV will install the main server Asterisk software and get familiar with it. He is looking for someone familiar with Linux to assist him. N0ETV is building a compact remote AllStar Link unit.

Voter System Expansion - East (W0GV)

Goal: Locate additional remote sites.

Status: On hold as the tech committee investigates the

feasibility of building an AllStar Link voter network.

145.49/448.625 Repeater - Controller and Radio Upgrade (AC0UA)

Goal: Replace the S Com 7k with a preprogrammed S Com 7330 and replace the Sytnors with Kenwoods.

Status: AC0UA has completed the project. All is working with one exception. The repeater will drop out for about a minute when users are on the UHF side. This is caused by a timeout timer in the UHF receiver. AC0UA will deactivate ASAP.

DRC/TSA Aurora Site (W0GV)

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

Status: W0GV has met with various TSA members. TSA is in the process of selecting a representative for the DRC.

Packet Gateway (W6OAV)

Goal: Re-design the gateway for more reliability.

Status: Kantronics sent a new firmware upgrade which W6OAV installed in the KAM XL TNC. However, the firmware tests can't be performed since the gateway is shut down (See next item below). The club has a Time-wave PK900 to replace the KAM should future tests show that the new firmware is not reliable.

Noise at Station 4 (WWOLF)

Goal: Locate, document the power line noise source(s) and contact Xcel to correct.

Status: WWOLF is gathering the equipment and will coordinate the tests. In the meantime, the HF side of the gateway is disabled as the gateway is "deaf" due to the extreme HF power line noise level.

Establish a DRC YouTube Channel (KB0A)

Goal: Provide access to various DRC videos.

Status: KB0A has obtained a channel. Unfortunately, he is shown as the owner. He will get the ownership transferred to the DRC.

Low Level Hum on 6 Meter Repeater

Goal: Identify and correct the source of the hum.

Status: Hum has mysteriously disappeared. KB0A will continue to monitor.

Fusion Repeater Upgrade (KB0A)

Goal: Equip the Fusion repeater with a Wires-X link unit to connect it to the Wires network.

Status: Equipment purchased, waiting for delivery and setup.

~ Editor's Note: The Technical Committee meeting is open to members of the DRC. It is held in the Arvada room, starting at 6:00 p.m. on the evening of the DRC monthly meeting.

A HAM RADIO OPERATOR'S NIGHT BEFORE CHRISTMAS

Provided By Fred, AA0JK

T'was the night before Christmas,
And all through two-meters,
Not a signal was keying up
Any repeaters.

The antennas reached up
From the tower, quite high,
To catch the weak signals
That bounced from the sky.
The children, Tech-Pluses,
Took their HTs to bed,
And dreamed of the day
They'd be Extras, instead.
Mom put on her headphones,
I plugged in the key,
And we tuned 40 meters
For that rare ZK3.

When the meter was pegged
by a signal with power.
It smoked a small diode,
and, I swear, shook the tower.
Mom yanked off her phones,
And with all she could muster
Logged a spot of the signal
On the DX Packet Cluster,
While I ran to the window
And peered up at the sky,
To see what could generate
RF that high.

It was way in the distance,
But the moon made it gleam -
A flying sleigh, with an
Eight element beam,
And a little old driver
who looked slightly mean.
So I thought for a moment,
That it might be Wayne Green.

But no, it was Santa
The Santa of Hams.
On a mission, this Christmas
To clean up the bands.
He circled the tower,
Then stopped in his track,

And he slid down the coax
Right into the shack.
While Mom and I hid
Behind stacks of CQ,
This Santa of hamming
Knew just what to do.
He cleared off the shack desk
Of paper and parts,
And filled out all my late QSLs
For a start.
He ran copper braid,
Took a steel rod and pounded
It into the earth, till
The station was grounded.
He tightened loose fittings,
Re-soldered connections,
Cranked down modulation,
Installed lightning protection.
He neutralized tubes
In my linear amp...
(Never worked right before --
Now it works like a champ).
A new, low-pass filter
Cleaned up the TV,
He corrected the settings
In my TNC.
He repaired the computer
That would not compute,
And he backed up the hard drive
And got it to boot.
Then, he reached really deep
In the bag that he brought,
And he pulled out a big box,
"A new rig?" I thought!
"A new Kenwood? An Icom?
A Yaesu, for me?!"
(If he thought I'd been bad
it might be QRP!)
Yes! The Ultimate Station!
How could I deserve this?
Could it be all those hours
that I worked Public Service?
He hooked it all up
And in record time, quickly
Worked 100 countries,
All down on 160.

I should have been happy,
It was my call he sent,
But the cards and the postage
Will cost two month's rent!
He made final adjustments,
And left a card by the key:
"To Gary, from Santa Claus.
Seventy-Three."
Then he grabbed his HT,
Looked me straight in the eye,
Punched a code on the pad,
And was gone - no good bye.
I ran back to the station,
And the pile-up was big,
But a card from St. Nick
Would be worth my new rig.
Oh, too late, for his final
came over the air.
It was copied all over.
It was heard everywhere.
The Ham's Santa exclaimed
What a ham might expect,
"Merry Christmas to all,
And to all, good DX."

*~1996 Gary Pearce (KN4AQ)
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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 n0hi@arrl.net.

Subject: I'm located in...

DECEMBER MEETING PRESENTATION

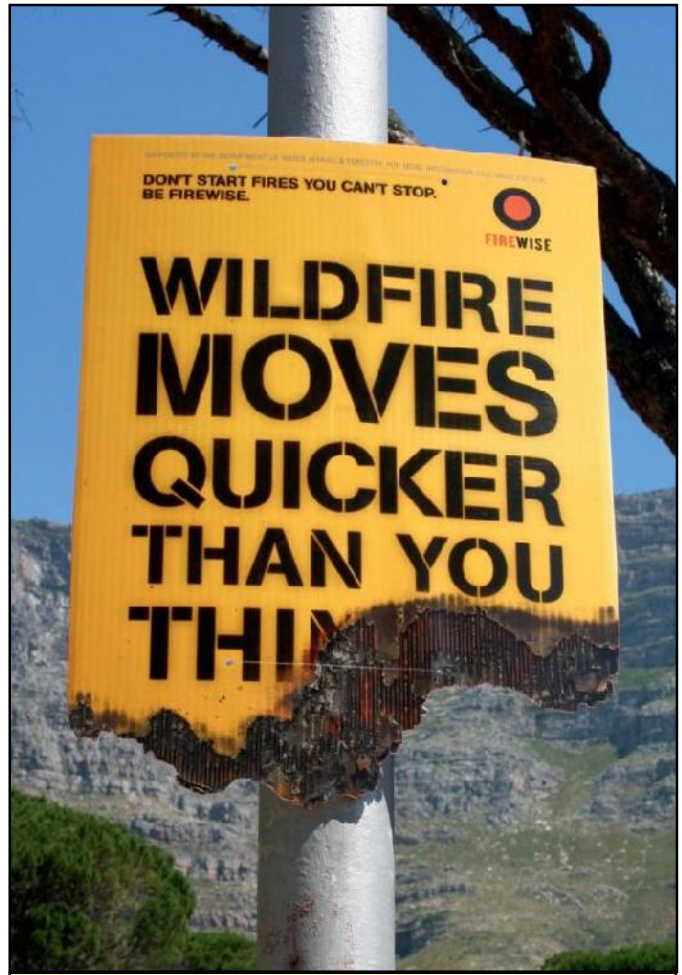
By Rita, N0EUW

The last two summers in Colorado have been lush and green. The Front Range and the mountains have been free from the devastating wildfires that plagued the state the previous two years. If the wind had not changed the Waldo Canyon Fire above Colorado Springs could have burned all the way to I-25. The Black Forest Fire burned so fast and hot that houses literally exploded before flames ever reached them.

Many people live in what firefighters call the Wildland Urban Interface and don't even know it. There are simple and inexpensive ways to protect your home and property in the event of a wildfire nearby. I'll explain some of the dynamics of wildland fire where it crosses the path of homes and where to get information to pass on to your friends and relatives who may be in harm's way and not even know it.



Rita (N0EUW)



Fire Danger

It's Time Once Again For The Annual Holiday Meeting & Dinner

When: December 16th

Where: Golden Corral Buffet Restaurant
3677 South Santa Fe Drive
Shrigan, CO

Time: 5p.m. Dinner / 6:30p.m. Presentation and Drawing

For map & directions check www.w0tx.org



W0TX LEARNING NET REPORT

By Fred, AA0JK

Great participation on the Learning Net. Thanks to all that are making this a great gathering of Hams wanting to contribute to the hobby. Your questions, answers, and discussions are welcome and appreciated by all. Welcome to those newly licensed participants. The group is growing and we enjoy your input and the opportunity to help fellow Hams enjoy this hobby. We all learn from your questions and participation.



Learning net group topics:

- Operating in QRM when other stations cannot hear each other.
- Experiences with different radios and accessories. ZS6BKW antenna, modified G5RV. It is a center-fed doublet (fancy name for a dipole).
- Programing your radio. Available software and its use.
- Static grounding.
- Mobile antennas.
- Raspberry Pi projects.



Check out topic postings on yahoo learning net group web site.

Everyone have a great holiday season. We're looking forward to the New Year and furthering our hobby.

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. Questions can also be submitted on the YAHOO Learning Net web page. (<https://groups.yahoo.com/neo/groups/HamLearningNet/conversations/topics/376>)

Here you will also find information from past activity that you might find of interest.

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. (Note: The third Wednesday of the month is devoted to the DRC club meeting.

See w0tx.org for additional information.)

W0TX ELMER SESSION REPORT

By Gary, KD0SQA

There was discussion and questions about antenna tuners and a couple of different styles of HF antennas and some associated mobile and base station HF radios.



Gary (KD0SQA)



Ready For The Elmer Session

WHAT IF THE WEATHER CHANGES?

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.

ATTIC HF ANTENNAS

BY BILL, W6OAV

Many newer neighborhoods have covenants restricting outside antennas. These covenants have forced many hams to become very creative when installing HF antennas. Some hams are fortunate enough to be able to “hide” HF antennas behind trees, in trees, etc. However, most hams have to resort installing antennas in the attic. The most common attic antenna is the dipole as they are easy to install and work well. Other less common attic antennas are the loop and certain types of bi-directional beams.

This article details what I have learned after installing and using various types of antennas in my attic since 1986.

DIPOLES

It did not take long to discover three things when attempting to install resonant dipoles:

- Attempting to install a resonant full sized half wave dipole can be a real problem. They cannot be cut to formula length and installed since the attic environment (wiring, plumbing, vent pipes, insulation, etc) detunes them, usually to a lower frequency. Retuning the dipoles in the confines of an attic can be a real chore. The problem can be compounded if one has to go down to the shack to check the SWR after each antenna length change.
- Where the antenna length must be reduced to fit the attic, coil loading must be used to maintain resonance. Not only does this present the tuning problems mentioned above, it also results in an antenna that has coil loss, matching problems and narrower bandwidth.
- If multiband operation is desired, either individual dipoles with or without coil loading or a multiband dipole with traps, must be used. Either results in a lot of work and the problems mentioned above.

So, what is the best way to avoid the problems mentioned above and still have an efficient multiband attic dipole? Install a non-resonant dipole. Make the antenna as large as possible and feed it with either 450 ohm ladder line (available at HRO) or with a 4:1 balun and the best low loss coax possible. Ladder line has virtually no loss no matter how high the SWR. Good low loss coax will have a bit of loss depending on the frequency and the length of the coax. For example, **Figure 1** shows that the loss of 100’ of good RG213 increases from 0.6 dB to 0.9 dB at 28 mHz when the SWR increases from 1:1 to 3:1.

Non-resonant dipoles will load with a good tuner. They will work very well on all bands above the antenna’s physical half wave length and will work well on bands below the antenna’s physical half wave length. For example, a dipole approximately 33’ in length (a half wave on 20 meters) will radiate very well on 20 meters and above and well on 30 meters and down. Depending on the size of the dipole, there even may be gain on the higher bands. For example, a 33’ dipole will show some gain on 12 and 10 meters.

LOOPS

Loops work very well in attics. Their radiation pattern is hard to predict. The size and shape of the loop will determine the actual pattern. A loop has two advantages over a dipole. The loop will normally be somewhat quieter than a dipole. Also, they often will outperform a dipole due to their larger capture area. Just as with a dipole, install the largest loop possible and feed it with ladder line or very low loss coax. Use a balun with the coax.

Some hams will install an auto tuner at the dipole or loop antenna’s feed point in the attic. This allows coax instead of “clumsy” ladder line to be used between the attic tuner and the ham shack. It also keeps the SWR loss close to that of ladder line.

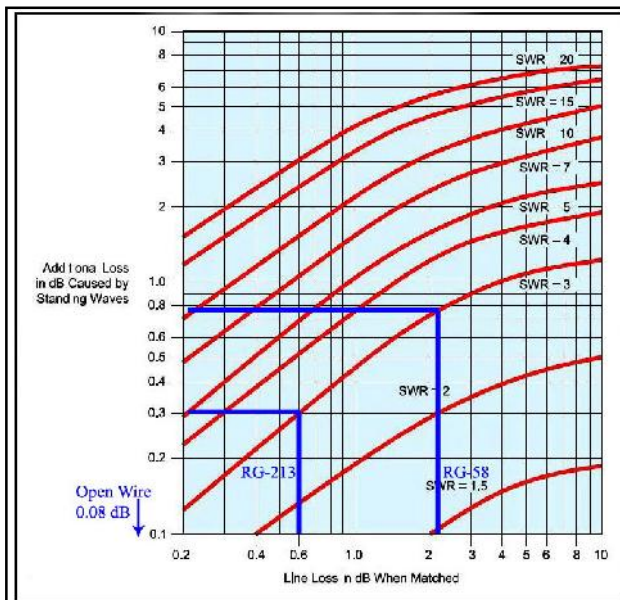


Figure 1 - Additional loss caused by SWR for 100’ @ 28 mHz

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BEAMS

Beams in the attic are a problem as there usually is no way to rotate the beam (and rotating the house isn't an option!). Some hams may have room for a bi-directional wire 8JK HF beam (Developed by W8JK). **Figure 2** shows a typical 20 through 10 meter 8JK beam which would fit in most attics. As with a dipole, the wire lengths are not critical. They should be close to the wavelengths shown in Figure 2 for the lowest band to be used. The 8JK beam will load and work well with a good tuner on all frequencies above the lowest band for which it was designed.

The 8JK has fairly broad figure 8 radiation lobes and a fair amount of gain. **Figure 3** compares a dipole and 8JK radiation patterns on 20 meters. The 8JK has about 4 dBd gain on 20 meters to about 6 dBd gain on 10 meters.

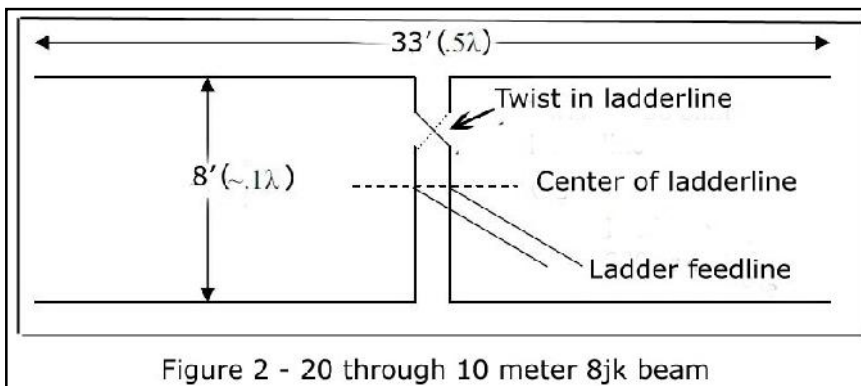


Figure 2 - 20 through 10 meter 8jk beam

MY STATION SETUP

My HF attic installation consists of a 35' dipole above a wire 8JK beam. The dipole and 8JK beam are fed with 450 ohm ladder line and a tuner. A remote controlled relay allows switching the ladder line between the two antennas. The dipole works well on 75 meters through 10 meters. The 8JK beam works well on 20 meters through 10 meters. Tests with remote stations comparing the dipole against the 8JK do indicate that the 8JK has about 4 dBd gain on 20 meters to about 6 dBd gain on 10 meters.

Both of my antennas physically run north and south providing good coverage to the east and west. Keep in mind that antennas in a one story house will have a high angle of radiation. Antennas in a two story house will a little lower angle of radiation. I've literally worked the entire world using 100 watts with these antennas in a two story house.

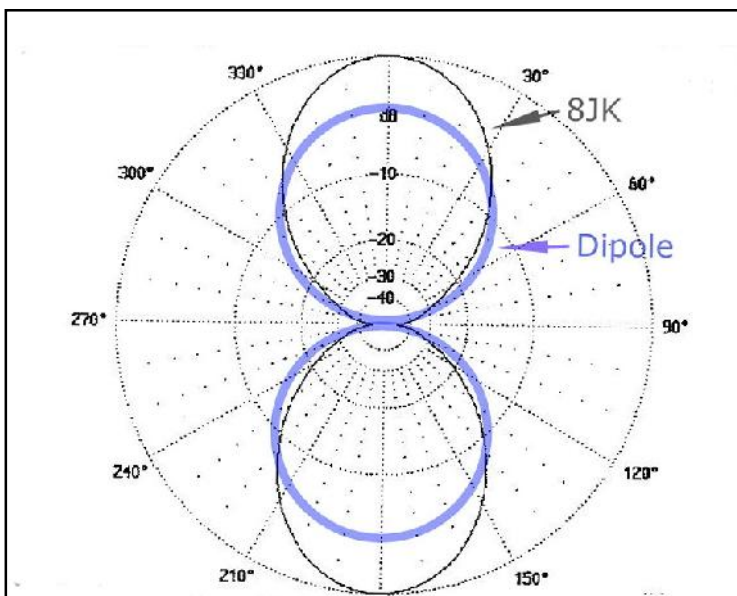


Figure 3 - Comparison of dipole and 8jk patterns

GUTTER ANTENNAS

As a side bar, hams have successfully loaded rain gutters. See WMOG's article in the October 2009 issue of the *Roundtable* which is available at www.w0tx.org.

CONCLUSION

As mentioned earlier, the SWR losses caused by ladder line and good coax are minimal. A popular misconception is that the power reflected by an antenna mismatch is absorbed by the tuner rather than being radiated. This is not true. The tuner will re-reflect the power back to the antenna where it will be radiated. The only loss will be that caused by the ladder line or coax as described earlier. A very good mathematical and pictorial reference on this subject can be found in *Reflections II* by Walter Maxwell, W2DU. This reference also validates the material presented in this article.

In summary, do not spend time attempting to resonate an attic antenna. Just install the largest possible dipole or loop. Then feed it with 450 ohm ladder line or very good coax with a balun and a good tuner. Also, keep in mind that running more than 100 watts could be a safety issue. You don't want to set your attic on fire!

W0TX VE SESSION REPORT

By Tom, KC2CAG

**W0TX VE TEAM**

Outside it was crisp and cool. The day's sunshine didn't do a great job of melting the ice on the north parking lot of the LDS Church, so getting inside was a minor challenge. A bigger challenge awaited the crowd inside.

I stepped into the room and surveyed the crowd. Yeah, Will-The-Wizard's students were all there: 15 anxious guys, two confident gals, and a lone USAF vet who walked in to challenge the exam after some self-study. We'll see about that.

I greeted the VE Team members. Some had already arrived, and some were still wandering in. I sat 'em down on the long set of tables, menacingly facing the apprehensive crowd. The Boss was there, so I sat him at the head of the table. Scanning the room, sure enough, I spotted his moll, Crazy Cathy, lurking in the back. She keeps him on a short leash. I took the next seat, guarding the cash box. Big Robert sat on my left, ordering and re-ordering the piles of exam booklets and answer sheets. With The Boss on my right and Big Robert on my left, I knew the cash box was safe. They kept a close watch on me, too. Freddy the Forecaster was next in line at the team tables, followed by Kevin, Wally, and finally Young Mel. Young Mel knows everything about VE Exams, except sometimes where they are to be held. Over the years I've pried every secret to running a great exam session from that guy.

Let the games begin. One by one they checked in with The Boss. His steely eyed gaze made sure that their faces matched their credentials. He scanned their 605's to make sure all was tidy and accurate, and logged them into the Roster. Yeah, they were all looking for that magic entry ticket into the ham world. After that, I also scanned their papers. I saw they came from far and wide for this gig. The mountain town of Pine. The rich guy suburb of far away Castle Rock. The windy plains of Sheridan, Wyoming. These guys really wanted it bad. I relieved them of their test fees. Money. Crispy, green money. All mine to hold for a day or two. I knew I'd have to send all the loot to Maria shortly, but it was mine for now. Big Robert gave 'em their exam booklets and answer sheets, and warned them not to write in the booklets. Nobody wrote in their booklets. Nobody messes with Big Robert. They sat down in silence to work the exams. Silence, except for the Team's munching on the goodies provided by The

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Wizard as a reward for being here. The Wizard himself was pacing the room, confident in the eventual success of his gang of students. Or was he?

One by one they returned their exams for a thorough review by the Team. One by one, the scores showed passing grades, including a few perfect scores. All passed, even the self study guy. Score another big one for The Wizard. A couple of the guys decided to challenge the next exam. Give 'em credit...they came close, but no cigar this time. The Wizard will sure see to it that the next time, it won't even be close for these guys.

One by one they picked up their CSCE's and DRC club info sheets, and left, grinning and looking forward to their first contact.

The Team picked up the pieces, helped fold the tables, and generally put the room back to where it looked like no one had been there. The LDS congregants would never know that right there, that night, eighteen brand new hams were turned loose to wait for their licenses and a chance to get on the air.

The End

Notes:

- Will - The-Wizard = Will (W1ZRV)
- The Boss = Gerry (W0GV), DRC Club President
- The Boss' moll = Crazy Cathy (N0CRZ)
- Big Robert = Robert (K0RCW)
- Freddy the Forecaster = Fred (AA0JK)
- Kevin = Kevin (AD0GX)
- Wally = Wally (AC0T)
- Young Mel = Mel (K0MEL)
- The Narrator = Tom (KC2CAG), DRC VE Team Lead



LOTS OF CONCENTRATION!



**Big crowd, lots of success!
Congratulations to everybody.**

REMEMBER WHEN?

BY BILL, W6OAV

The purpose of this article is to bring back memories to old time hams like me and to let newer hams know what ham radio was like in Denver during the 60s and 70s.

Many hams that lived in Denver during the 60s and 70s have fond memories of Bob Swanlund (W0WYX). Bob and his wife Margaret lived on top of Squaw Mountain. In the 50s they leased land from the Forest Service and built a stone house just below the Forest Service lookout tower. (See Figure 1, taken by WG0N). Bob and Margaret moved into the house in 1960. The house featured two large living room picture windows overlooking the plains.

Bob shortly began to fill the lower level of the house with communications systems for commercial companies, the FBI, the Colorado State Patrol, etc. Bob maintained most of the equipment and outside antennas. Bob's house became known as the "House of Radios" and was the highest manned radio complex in the nation for many years.

In the early 60s before repeaters existed, Bob would act as net control for a weekly 10 meter/6 meter/2 meter band net. He would announce where he was listening on each these bands and then rebroadcast the check-ins on a specific frequency. When repeaters appeared, he welcomed the installation of the 146.94 repeater. Bob was also involved in relaying weather net traffic.

Bob and Margaret always welcomed visitors. As a side note, I was stationed at Lowry in 1961/62 and with several other Air Force hams visited them several times. They would offer us sandwiches and Bob would then show us the latest installations. Margaret would open a window, knock on the frame and many wild birds would land looking for handouts. She was their friend!

Located on Page 13 in this issue is an article from the October 1960 issue of the Roundtable. The article, written by a well-known, long time DRC member K0PGM (SK), is a nice bio of W0WYX.

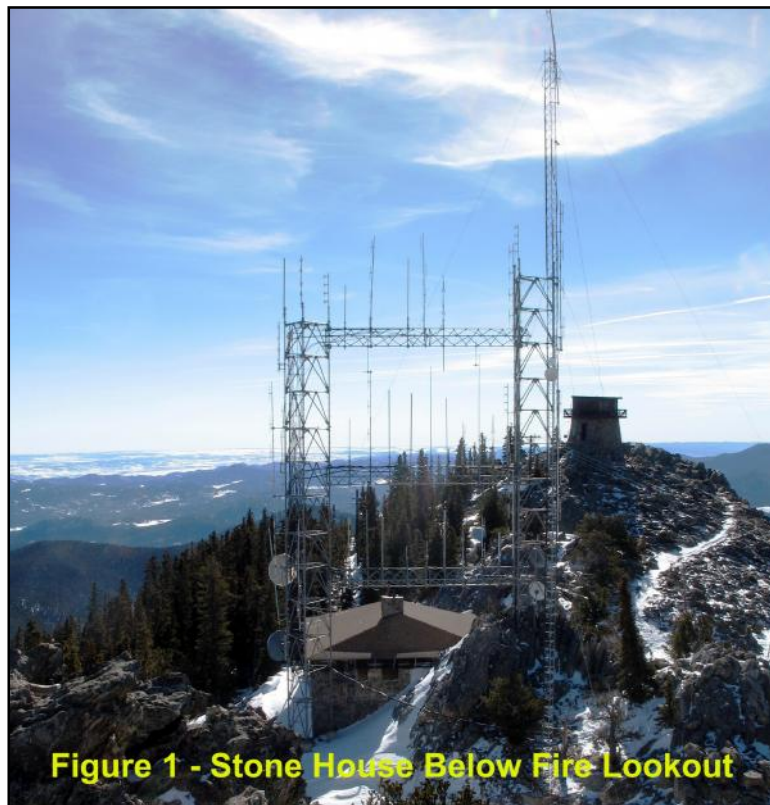
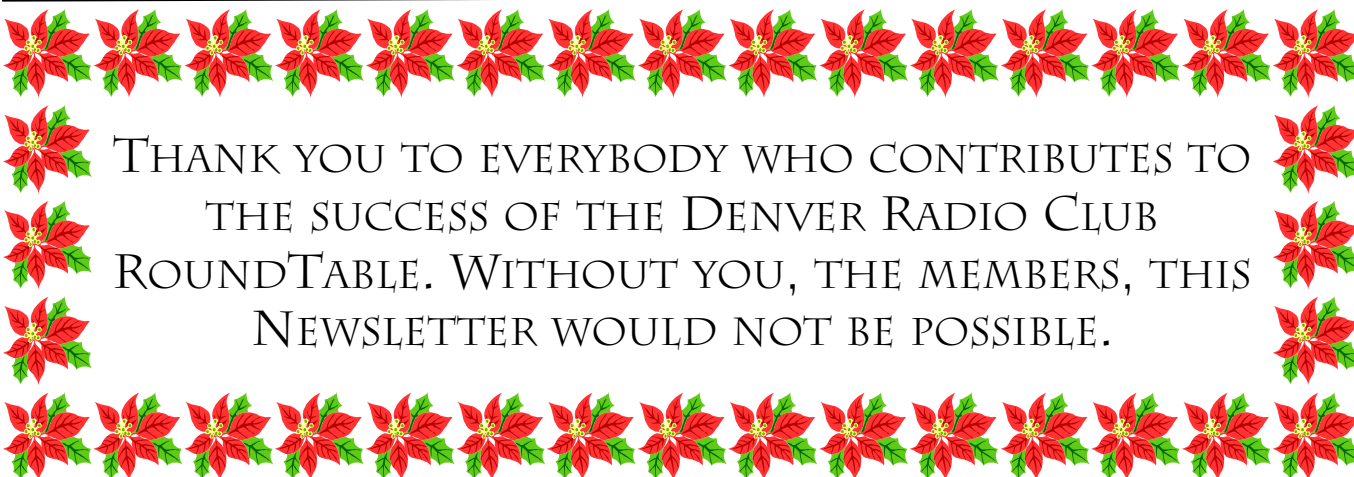


Figure 1 - Stone House Below Fire Lookout



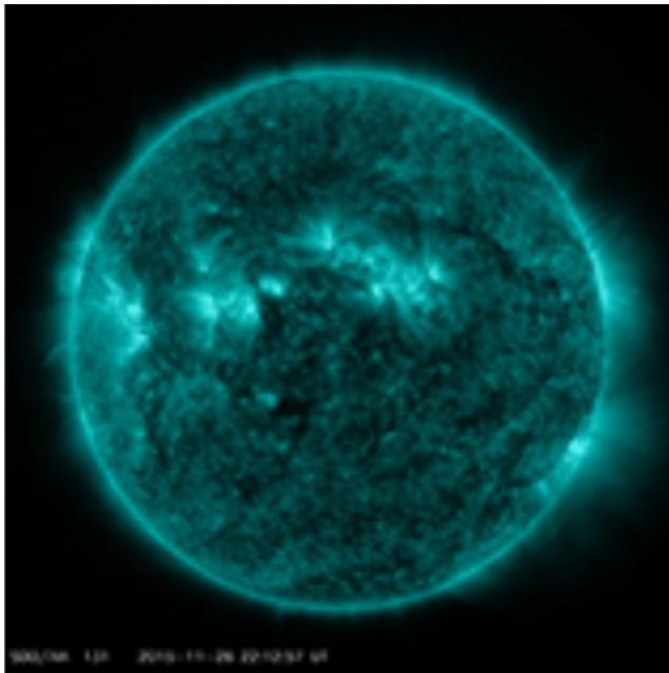
THANK YOU TO EVERYBODY WHO CONTRIBUTES TO THE SUCCESS OF THE DENVER RADIO CLUB ROUNDTABLE. WITHOUT YOU, THE MEMBERS, THIS NEWSLETTER WOULD NOT BE POSSIBLE.

W0TX SOLAR REPORT

By Fred, AA0JK

December Solar Report

First week of November saw the early arrival of a geomagnetic storm striking earth's magnetic field on the 6th. At first the impact had little effect. As the Earth moved deeper into the CME's wake, however, a class G2 storm broke out. This was great for the northern Light watchers, but not for the amateur radio operators. Propagation is usually better when the Northern light activity is low.



Week two saw sunspot AR2449 erupt, producing an M3 -solar flare and a bright CME. The CME did not hit Earth directly, but the glancing blow disrupted aircraft radar systems and HF communications, grounding flights from Helsinki Finland to London England.

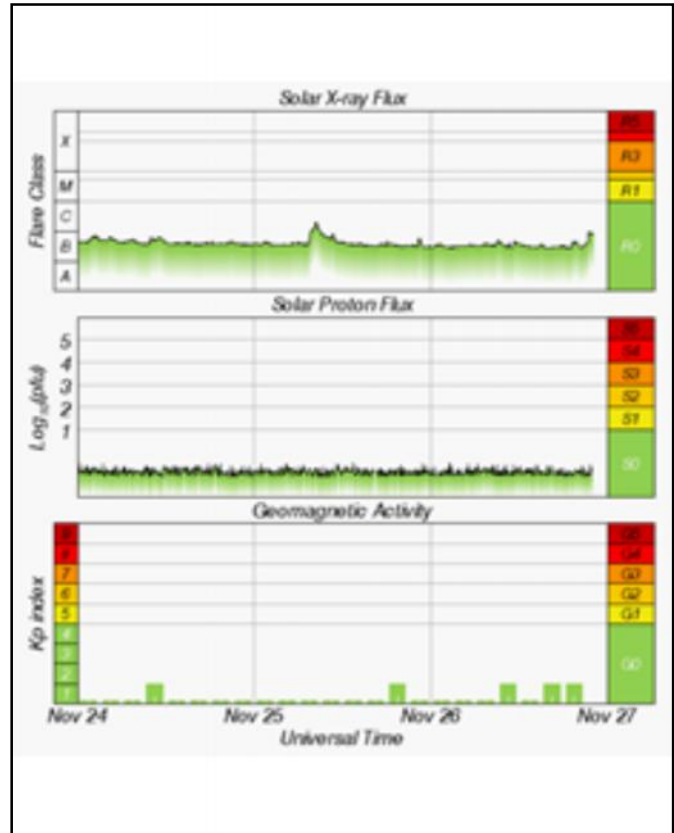
Week three, saw a magnetic filament erupt, hurling inky-black fragments into space. The resulting CME produced a second strike to the Earth's Magnetic field. A co-rotating interaction region zone, (CIR). A CIR is a transition zone between fast-and slow-moving solar wind streams. Solar wind plasma piles up in these regions, producing density gradients and shock waves that do a good job of sparking auroras.

Week four: The Sun has been keeping the aurora watchers busy and the amateur radio operators frustrated as it continues to rattle Earths shield with fast solar wind and Earth-directed solar storms.

Space Weather Highlights

Space Weather Outlook

The Sun is expected to be quiet. Solar activity low. There are four sunspot groups on the Earth-facing side of the sun, but not one of them has the type of unstable magnetic field that poses a threat for strong explosions.



Wishing You All a Great Holiday and a Prosperous New Year.

73,
Fred (AA0JK)

LOOKING BACK AT THE DRC PROVIDED BY WOUI) ROUNDTABLE, OCTOBER 1960

A nice bio of W0WYX on Squaw Mountain written by long time DRC member K0PGM (SK).

CLUB CHARACTERS

By Lys, K0PGM



Can you imagine a Competent amateur radio station with an antenna at an elevation of 11,500 feet and doesn't work dx stations unless he's called first by them. Well Bob Swandlund, better known as W0WYX, is just that. Space in this publication does not permit a full explanation of Bob's activities, but it all leads back to radio communications.

We all would envy Bob's QTH as far as radio reception is concerned, for he's on top of Squaw Mountain and can look down in all directions. It's no problem to work Cheyenne, Wyo. or Pueblo, Colo. on ten meters.

Let's say it's winter and about six feet of snow on the peak and closed in. You would think all Bob has to do is ham and have the gracious wife Margaret, bring him lunch. Not so. He and Margaret both have work to do all year 'round.

Bob and Margaret lease the mountain top from the forestry service and have built a fine stone cabin for their residence. It also houses a multitude of equipment for various services for radio relay such as Denver Water Co., State Patrol, REA power service and even the FBI.

Margaret is the fire lookout for the forestry service. Her duty quarters are a few hundred feet from the cabin which is also radio equiped and operated by her. She doesn't have a ham ticket but could pass the theory at any time if she so desired. Now who can say that Margaret isn't an integral part of radio station W0WYX?

Bob takes fire readings and also does some maintenance work for the various radio services that have transmitters in

Page Two

his QTH. DX and traffic? No, Bob would rather ragchew with locals and build. You can hear W0WYX on all bands 6 through 160 and this winter will get the surplus gear converted and be on 2 meters.

Antennas "Oh Boy"—there are sixteen for the services ranging from beams, verticals and dipoles to microwave dishes. Then there are seven for ham use with two more to be added soon.

You may have thought band hopper when you tried to check into RACES, but what happens is this: he picks up all stations on RACES net frequency 29.624 and retransmits on 28.7 on his home brew rig (or he may just use the DX-40), therefore serving a valuable service to the area RACES and CD nets. We can not say "thanks" enough for this, in addition to it being a privilege to hear all the stations on the net.

For 12 years Bob was chief radio engineer for the Highway Patrol and 5 years for the Denver Police Dept. Bob has worked WAS on 160 meters and accomplished the fete twice on ten, since getting his ticket in 1936 as "9WYX."

Bob and Margaret will tell you humorously that they mow the lawn once a week with a stick of dynamite. Grass doesn't grow fast in a rock garden, huh? So Margaret raises some inside in flower pots.

Visitors are plentiful, particularly on a summer weekend. (The day of the interview, there were 218 visitors to the lookout station) yet Bob and Margaret always say, "Come on up, we're glad to have you." But identify yourself as one of the ham lot.

Family sure, but they're all grown. One son a Marine S/Sgt. in Okinawa. Two daughters one married to a doctor of electrical engineering at Colorado State University and the other to a Naval Chief W. O. stationed in the state of Washington. All in the communication or electronic field.

I must say as I stand here in the lookout and see as far away as Estes Park, Ft. Collins and Denver with the many valleys of aspen in their colorful brilliance, "What could be more beautiful." Words can not do it justice.

In Denver the temperature is a warm 80 degrees while on Squaw Mountain there is a light snow falling.

Many thanks for all your hospitality, Bob and Margaret, you are envied by all.

This puzzle is provide courtesy of Chris Codella - W2PA. The URL for his web-site is <http://www.w2pa.com>. The solution for the puzzle is on page 15.

Sport Sort

Across

- 1. Internet spec.
- 4. Word with radiation
- 9. A contest meth.
- 14. Wil' Wright's bro'?
- 15. Acquired relative
- 16. Icom rig
- 17. Word with CQ
- 19. Cut loose
- 20. Western ham org.
- 21. Add 50 ohms, say
- 23. Types of cap.
- 26. DXCC awd. unit
- 27. Contester's objective, often
- 30. The end of CW
- 31. Amp. opp.
- 32. FMT unit
- 35. Wire coating
- 37. W4 state
- 38. Market type
- 39. Rock group calculators?
- 42. Coalition
- 43. QRS followers
- 44. Belonging to WIAW
- 45. Non-OMs
- 46. Game piece
- 47. Dot follower
- 48. ZL dir. from JA
- 49. Military address
- 50. Navigation acronym
- 52. Cover, as with fabric
- 56. New Englanders
- 60. Emit photons
- 61. Words with Europe or Continents
- 64. Hidden
- 65. In the ether
- 66. PY or CT saint
- 67. It's clean, in November
- 68. City in 37-across

1	2	3		4	5	6	7	8		9	10	11	12	13
14				15						16				
17			18							19				
20					21			22						
			23	24	25			26						
27	28	29		30			31				32	33	34	
35			36				37				38			
39						40				41				
42					43			44						
45				46			47				48			
			49				50				51			
52	53	54				55					56	57	58	59
60						61			62	63				
64						65						66		
67						68						69		

69. SWR meter label

Down

- 1. Kind of hall
- 2. Gator's cousin
- 3. Eastern ham org.
- 4. A hand
- 5. LA dir. from JA
- 6. Murphy's work
- 7. Puts on cargo
- 8. The America's Cup trophy, e.g.
- 9. Quick test
- 10. Ain't right?
- 11. VE1 first name
- 12. JA assembly
- 13. Lot of loot
- 18. Polarized light disp.
- 22. Figure of speech

24. Footnote word

- 25. Officers, and others
- 27. Like duck feet
- 28. Collectively
- 29. Milli-micros?
- 31. 1996 Olympic flame lighter
- 32. They're entered in court
- 33. Makes waves?
- 34. All together, with en
- 36. W3 sect.
- 37. One way to C U on the bands
- 38. Cone maker
- 40. Solder target
- 41. Mike lead-in
- 46. Hoped-for response to CQ test
- 47. OK was one

49. Weather balloon unit, with radio

- 50. 9L ender
- 51. Affirmative action
- 52. IRC seller
- 53. "That was close!"
- 54. Take on
- 55. New Yorkers and others
- 57. Sat. org.
- 58. Flamboyance
- 59. Tab target
- 62. P5 authority
- 63. Diamond stat

FACT OF THE DAY

Heat Shrink Tubing

Heat shrinkable tubing is widely used to insulate irregularly shaped objects, such as cable splices, to provide cable strain relief, to bundle cables, to provide moisture protection, to provide abrasion protection, and for other purposes. Most people who need some go to an electronic supply house and simply ask for whatever diameter they need. However, there is more to heat shrinkable tubing than diameter. Many types are available with vastly differing characteristics. Common heat shrinkable tubing is initially two to three times the diameter it will shrink to when heated, but some types are initially five to six times their heated diameters. Some types can tolerate extremely hot or cold environments after shrinking, some cannot. Some are damaged by common chemicals; others can withstand strong chemicals. All those varieties are available in a range of wall thicknesses. Prices range widely, depending on these differences.

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Don't forget to join in Wednesday nights at 7:30p.m. for the DRC Learning Net ! 145.49/448.625 Repeaters



THE ROUNDTABLE ARCHIVE

Scan the QR code or go to <http://www.w0tx.org/RoundtableAccessPage.htm>

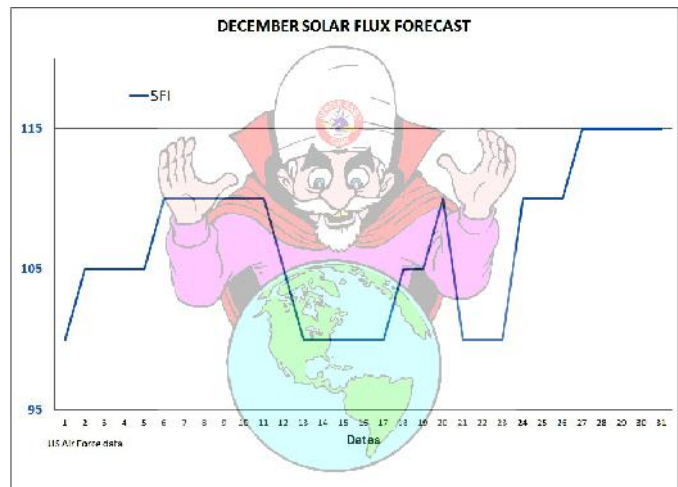
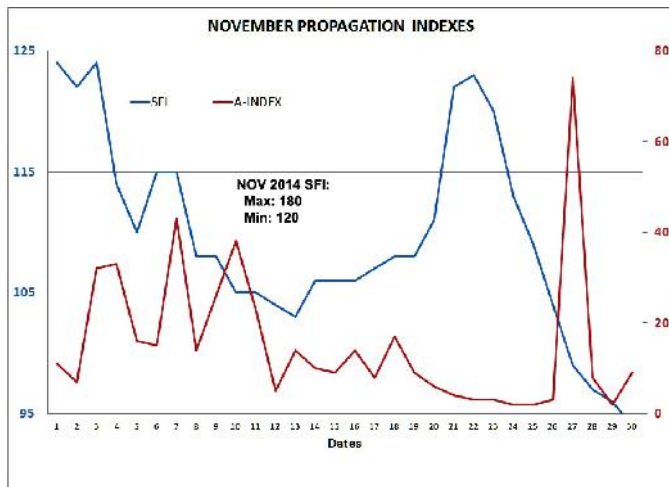


PAST & FUTURE PROPAGATION CONDITIONS

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>.



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UP COMING EVENTS
HAMFESTS & CONVENTIONS

Event	Date	Location	Sponsor Website
Winter 2016 Hamfest	01/23/16	Loveland, CO	http://www.ncarc.net
The SwapFest	02/07/16	Brighton, CO	http://www.n0ara.org
Rocky Mountain Division Convention	05/13/16	Keystone, CO	http://www.hamconcolorado.org

UP COMING CONTESTS AND QSO PARTIES

NEW

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
Montana	01/23/2016	01/24/2016	http://www.fvarc.org/?q=MT-QSO-Party	
British Columbia	02/06/2016	02/07/2016	http://www.orcadxcc.org/bcqp.html	
Vermont	02/06/2016	02/07/2016	http://www.ranv.org/vtqso.html	Based on 2015 date.
Minnesota	02/06/2016	02/06/2016	http://www.w0aa.org	Based on 2015 date.
New Hampshire	02/13/2016	02/14/2016	http://www.w1wqm.org	Based on 2015 date.
North Carolina	02/28/2016	02/29/2016	http://www.rars.org/ncqsoparty/	
Idaho	03/12/2016	03/13/2016	http://www.idahoarrl.info/qsoparty/	
Louisiana	03/12/2016	03/13/2016	http://laqp.org/	Based on 2015 date.
Wisconsin	03/13/2016	03/14/2016	http://www.warac.org/wqp/wqp.htm	
Oklahoma	03/19/2016	03/20/2016	http://okdxa.net/	Based on 2015 date.
Virginia	03/19/2016	03/20/2016	http://www.qsl.net/sterling/VA_QSO_Party/QSOParty.htm	

Contest Websites

ARRL Contest Calendar

<http://www.arrl.org/contest-calendar>

WA7BNM Contest Calendar

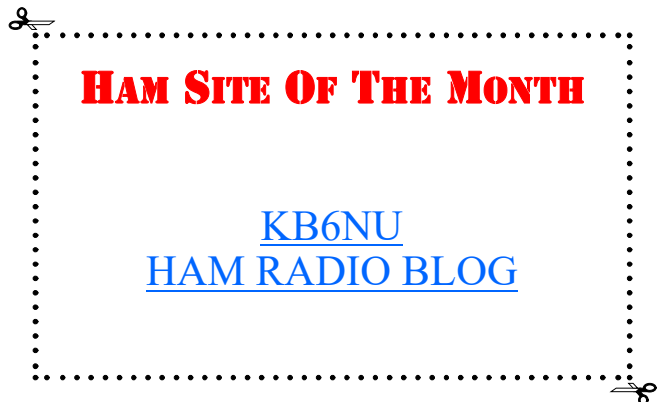
<http://www.hornucopia.com/contestcal/>

SM3SER Contest Service

<http://www.sk3bg.se/contest/>

Contesting Dot Com

<http://www.contesting.com/>



DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	HF side of the Gateway is currently down!
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	449.775 MHz (-) 100Hz PL	Yaesu Fusion Digital / Analog, 100 Hz Tone Required for Analog.
70cm	446.7875MHz (-)	MotoTRBO Repeater Slot 1 – DMR-MARC WW, Slot 2 – Local



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DECEMBER 2015		DRC Net Sunday's at 8:30 p.m. on 145.490 / 448.625 (No PL)				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	3  <small>Lax:cw:rbcr</small>	4 ARRL 160 Meter CW Begins 2200 UTC	5
6 ARRL 160 Meter CW Ends 1600 UTC	7	8	9 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	10	11  <small>New moon</small>	12 ARRL 10 Meter Begins 0000 UTC
13 ARRL 10 Meter Ends 2359 UTC	14	15	16 DRC Christmas Party!	17	18  <small>First quarter</small>	19
20 ARRL Rookie Roundup CW Begins 1800 UTC Ends 2359 UTC	21 <i>FIRST DAY OF WINTER</i>	22	23 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	24	25   <small>Full moon</small>	26 
27	28	29	30 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	31		

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~ GET PUBLISHED ~

We welcome and encourage all members to share their experiences and stories so that we can all learn from one another. It can be long or short. If we can't fit it into one newsletter, we can split it across multiple issues. Not a writer? We have volunteers that will listen to your story and put it into an article, and of course you will have the opportunity to review and approve prior to publication. Your contribution to the club is welcomed and appreciated. ~Editor

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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 n0hi@arrl.net. The submission deadline is the 20th of the Month. ~ Editor