



THE ROUND TABLE

Monthly Newsletter Of The Denver Radio Club

Since 1917

July 2024

PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members.

I hope all of you are surviving the extremely hot weather we are experiencing. I have seen a high temperature of 101.4 two times at my place. Take care and drink plenty of water.

The big news is we had another very successful Field Day event! Lots of thank yous go out to the many members and non-members who put in a lot of effort with the setup and tear down of the site in not so great weather conditions. If you are one of these folks, and there were many, please accept a "Very Well Done and Thank You". I want to especially thank Dick Nelson, N6WHV for chairing the event for a second time. I believe the layout of the site was the best we have had. It kept us more together which was very good. Also, a huge thank you to Kathy Nelson for doing a Superb Job on our food tent with the able help of her grandsons. Our contact scores were better than last year too. You can see that information on our website.

Thanks to Pete Sobanski, AB8WN for a successful Pico Balloon launch. This was a very exciting event and I am happy that it was done at Field Day where we had lots of folks to view it first hand. The balloon proceeded on an Easterly course to the Colorado Kansas line; where we lost communication with it and presumed it came down in that area. It was heard by about 50 or more sites including Australia. Was this a failure? Definitely not! It is an opportunity to improve our processes and try again. Thanks again Pete, we look forward to the next launch.

Thanks to Matt McMahon, WU2V for his Pico Balloon presentation at our June meeting. As he reported they had a Pico Balloon circle the earth 4.5 times before it came down in central Russia. This gives us more hope for our next launch, which will be more successful.

The program subject for our July meeting is yet to be determined.

Denver Radio Club Lunch

An informal face-to-face meeting of DRC members will start on the third Wednesday of each month at 11:30 a.m. The location is at the Valley Inn Restaurant, 1997 S Wadsworth Blvd, in Lakewood. This restaurant is on the southern edge of the King Soopers Shopping Center at Jewell and Wadsworth. No reservations are required. If you are interested in meeting and talking about radio, or other topics, don't hesitate in coming by.

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

73 for now,

Gerry
W0GV
President



FIELD DAY PHOTOS

FROM KYLE COX, K0XKE



WHO'S NEW IN THE DRC?

FROM CATHY VILLHAUER, N0CRZ, DRC MEMBERSHIP

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 welcome them to the club and repeaters. Welcome to our newest members:

Jake Groenhof - NØLX	Samuel Martin - KFØORQ
Kate Richie	Jason Warr - WØDBA
Casey Davis - NV9P	Timothy Humrich - ADØHO
	David Avery - KFØQQV

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.

QUESTION OF THE MONTH

BY BILL RINKER, W6OAV

Can ground rods replace radials on vertical HF antennas?

The answer can be found on page 4 of the December 2007 issue of the *Roundtable*: [https://w0tx.org/RoundtableArchive/2007-RoundTables/RT200712\(DEC\).pdf](https://w0tx.org/RoundtableArchive/2007-RoundTables/RT200712(DEC).pdf)

2024 DRC HAMFEST

BY BILL WORTHINGTON, KE0YKV

The DRC 2024 Hamfest is scheduled for Sunday, August 25th and will be held at the Adams County Fairgrounds, 9:00 am to 1:00pm. As the new Hamfest coordinator, I am going to need some help. The most pressing need is to arrange the food and drinks. I also need help with ticket sales, door prize raffle, VE testing, equipment sales, and vendor registration. If anyone can offer some help, I would greatly appreciate it. I can be reached at drcfest@w0tx.org or 720-626-5485.



N6LF's ANTENNA PUBLICATIONS

BY BILL RINKER, W6OAV

N6LF's Antenna Pub is a website created by Les Field, N6LF, an amateur radio operator with over 65 years of experience. The website contains articles, notes, and projects on a variety of antenna topics, including:

- Antenna theory
- Antenna design
- Antenna construction
- Antenna measurement
- Antenna troubleshooting

The website also includes a forum where amateur radio operators can discuss antenna topics and share their experiences.

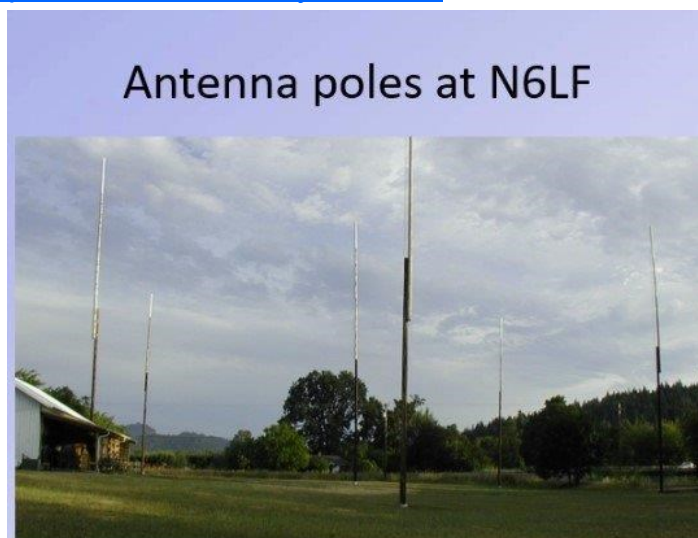
N6LF's Antenna Pub is a valuable resource for amateur radio operators of all experience levels. The website is well-organized and easy to navigate, and the articles and projects are clear and concise. The forum is a great place to get help and advice from other amateur radio operators.

Below are some of the most popular articles on N6LF's Antenna Pub:

- The Ultimate Guide to Antenna Design
- How to Build a Ham Radio Antenna
- Troubleshooting Antenna Problems
- The Best Antennas for 2 Meters
- The Best Antennas for 440 MHz

If you are interested in learning more about antennas, visit N6LF's Antenna Pub. It is a great resource for amateur radio operators of all experience levels.

Antennas By N6LF: <https://www.antennasbyn6lf.com/>



SHOULD THE PL259 CONNECTOR BE USED AT VHF/UHF?

BY BILL RINKER, W6OAV

The PL259 connector is very misunderstood. The PL259 is often referred to as a UHF connector. Nothing could be further from the truth!

The PL259 connector was developed in the early 1930s by the Amphenol Corporation. At that time frequencies above 30 MHz were considered UHF. The PL259 was then referred to as a UHF connector and that nomenclature has carried over to today. However, it should never be used in the UHF bands because:

- The PL-259 connector has an impedance that varies with frequency beginning at about 50 MHz. Thus, the connector does not match the characteristic impedance of the coaxial cable at all frequencies especially at VHF/UHF, causing reflections and losses of the signal. At higher RF powers the PL259 can get warm due to impedance mismatches.
- The PL-259 connector has poor shielding that allows leakage of the signal to the outside or interference from the outside. This can degrade the signal quality and increase the noise level, especially at VHF and UHF.

There are a lot of discussions concerning the use of PL259 connectors above 30 MHz! Several sources are listed below:

- According to Wikipedia, the PL-259 connector reliably carries signals up to 100 MHz [1].
- Some sources suggest that the PL-259 connector works ok from 0-400 MHz [2], while others claim that it has poor performance at frequencies above 30 MHz [3].
- A YouTube video by the IMSAI Guy shows a measurement of the usable frequency range of the PL-259 compared to N-type connectors. He concludes that the PL-259 connector is usable up to about 200 MHz, but not beyond that [4].

For VHF and UHF use better connectors such as N-type or BNC. N-type connectors are commonly used in applications ranging from DC to 11 GHz or higher. They provide better impedance matching and performance at higher frequencies.

BNC connectors are designed to operate at frequencies up to 4 GHz. However, due to their bayonet-style locking mechanism, BNC connectors may be more prone to accidental disconnections or loosening, especially in applications with vibrations or movements.

PL-259 connectors have one disadvantage at any frequency. Unlike the N-type or BNC connectors, the PL-259 has a threaded shell which can easily loosen over time. This can become detrimental at any frequency since the shell provides signal continuity to the coax path.

References:

[1]. UHF Connector – Wikipedia: https://en.wikipedia.org/wiki/UHF_connector

[2]. Connectors – N vs. PL259: <https://www.cosjvt.com/connectors-n-vs-pl259/>

[3]. Pretty Lousy? (PL) 259 Connectors: <https://www.hamradio.me/connectors/pretty-lousy-pl-259-connectors-the-test.html>

[4]. SO-239, PL-259 Usable Frequency Range: <https://www.youtube.com/watch?v=Sq3zEpYgCYo>

[5]. PL-259/SO-239 vs N Type vs BNC which is best connector to use when? <https://ham.stackexchange.com/questions/13061/pl-259-so-239-vs-n-type-vs-bnc-which-is-best-connector-to-use-when>



Figure 1 - Common coax connectors

WHAT DOES “WI-FI” STAND FOR?

BY BILL RINKER, W6OAV

The term "Wi-Fi" does not actually stand for anything specific like "Wireless Fidelity". It was coined in 1999 by the branding firm Interbrand, which was hired by the Wireless Ethernet Compatibility Alliance (WECA, now the Wi-Fi Alliance) to create a user-friendly name for the IEEE 802.11 wireless networking standards.

The key points regarding the origin of the "Wi-Fi" term are:

- It was invented by Interbrand in 1999 as a catchier name than "IEEE 802.11b Direct Sequence".
- It was conceived as a pun on the term "hi-fi" (high-fidelity), though Wi-Fi itself doesn't literally mean anything.
- The "Wi-Fi" name was chosen for its appealing sound and similarity to "hi-fi", rather than being an abbreviation.
- The Wi-Fi Alliance, which held the trademark, hired Interbrand specifically to create a more consumer-friendly branding term.

References:

Origin of the word “Wi-Fi”:

https://www.reddit.com/r/etymology/comments/vwi8tz/origin_of_the_word_wifi/

The History of Wi-Fi:

<https://www.cablefree.net/wireless-technology/history-of-wifi-technology/>



DRC's Trading Post

Don't forget you can find **locally-sourced, ham-grown** merchandise at:
w0tx.org/trade

The DRC needs you!

Please contact W0GV (president@w0tx.org) if you are interested in helping with the open positions.
See the list at the end of the newsletter.

PAST ROUND TABLE PAGES

PROVIDED BY WOODY LINWOOD, W0UI

From the September 1960 edition.



MYRON OLINER, K0QGO, operates a two-meter walkie-talkie at "Operation Aircrash." In the background can be seen part of the sprawling headquarters campsite.

Amateurs Impress CD Officials At Jefferson "Aircrash" Exercise

Highlight of August ham activity in the Denver area was "Operation Aircrash," staged by Jefferson County Civil Defense. The two-day exercise involved a simulated midair collision between a civilian passenger aircraft and a military aircraft carrying radioactive materials.

The theoretical crash took place above the rugged mountain terrain near the base of Mount Evans, on the State Game and Fish Preserve. The call for Civil Defense personnel went out early on the morning of Saturday, August 13.

By noon Saturday, the communications tent at the headquarters site was surrounded by cars bearing amateur radio license plates. Seventy-five-meter links with Denver were in operation long before the actual search for "wreckage" began. Mobile units, particularly those operated by Ralph Asbury, W0VDY, and Ray Kramer, W0OZV, handled the bulk of morning traffic with Denver and surrounding communities until the Jefferson County communications van arrived to serve as RACES headquarters. Several Denver area amateurs were on hand throughout the day and night to serve as operators in the van.

Ten-meter mobile units were spotted around the exercise site to provide communications for various agencies involved in the exercise. Mike Lyons, W0PG, super-

vised amateur operations as RACES Radio Officer for Jefferson County.

Complete realism was stressed during the exercise. At the crash sites, a short distance from the main camp over almost impassable roads, Boy Scouts served as "casualties." First-aid teams applied splints and dressings, then evacuated the injured by Jeep and horseback.

Because of the "radioactive materials" released by the military craft, radiological monitoring teams patrolled the area and carefully checked every person leaving the contaminated zone. At one point, Roy Raney, K0OVQ, attempted to set up communications with a two-meter walkie-talkie at one of the crash sites, but was chased out of the area by radiological monitors

(Continued on Page 9)

Page Two

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](#)

Kings Soopers Reward Program—Help the DRC.
kingsoopers.com/i/community/community-rewards
citymarket.com/i/community/community-rewards



RANDOM SITE OF THE MONTH
[Island County ARC](#)



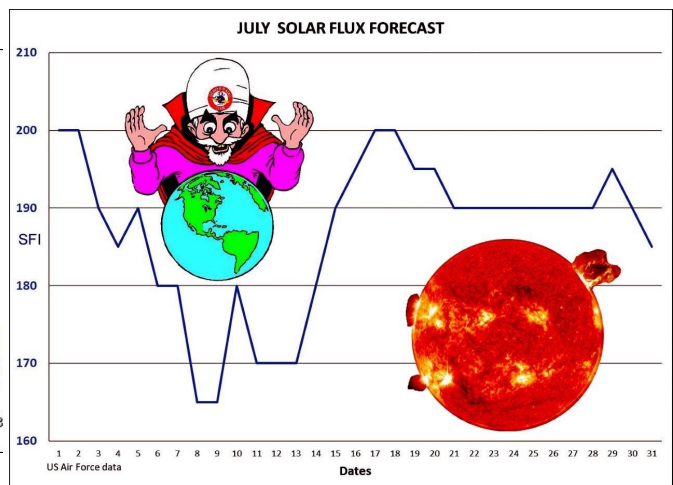
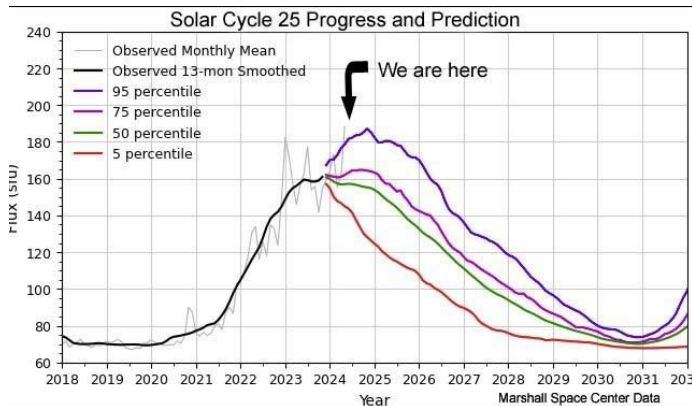
THE ROUND TABLE ARCHIVE AND ARTICLE INDEX
w0tx.org/roundtable

PAST & FUTURE PROPAGATION CONDITIONS

By Bill Rinker, W6OAV

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

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



UPCOMING EVENTS HAMFESTS & CONVENTIONS

Event	Date	Location	Sponsor Website
Megafest	7/27/24	Lewis-Palmer High School	ppraa.org/megafest
WCARC Hamfest	8/10/24	First Christian Church	ARRL Listing

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
Maryland-DC	08/10/2024	08/11/2024	Anne Arundel Radio Club	
Hawaii	08/24/2024	08/26/2024	Hawaii QSO Party	
Kansas	08/24/2024	08/25/2024	Kansas QSO Party	
Ohio	08/24/2024	08/25/2024	Ohio QSO Party	
Tennessee	09/01/2024	09/02/2024	Tennessee Contest Group	
Colorado	09/07/2024	09/08/2024	Pikes Peak Radio Amateur Association	
Alabama	09/14/2024	09/15/2024	Alabama QSO Party	
Iowa	09/21/2024	09/22/2024	Story County ARC	
New Hampshire	09/21/2024	09/22/2024	Port City Amateur Radio Club	
New Jersey	09/21/2024	09/22/2024	Burlington County Radio Club	
Texas	09/21/2024	09/22/2024	Texas DX Society	
Washington	09/21/2024	09/22/2024	Western Washington DX Club	
Maine	09/28/2024	09/29/2024	Wireless Society of Southern Maine	
California	10/05/2024	10/06/2024	California QSO Party	
Nevada	10/11/2024	10/13/2024	Sierra Nevada Amateur Radio Society	

Source: qsoparty.eqth.net/index.html See contestcalendar.com/contestcal.html for a larger QSO parties list.

ATTENTION

The DRC Board of Directors meetings are held on the 4th Wednesday of each month via Google Meet and are open to any member. If you wish to attend, please contact a board member prior to the meeting night for specific information.






DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz	Metro Denver Area Coverage
2m	145.490MHz (-) 100Hz PL	Linked to 70cm / 448.625MHz. Primary frequency during emergency net.
2m	147.330MHz (+) 100Hz PL	Local area. Has voting receivers. Does not TX a PL.
2m	147.330MHz (+) 131.8Hz PL	Test mode operation. Send signal reports to Tech Committee.
1.25m	224.380MHz (-) 100Hz PL	
70cm	447.825MHz (-) DCS~073; NB 12.5; +/- 2.5	Saint Anthony's. Note: This is a narrow band repeater requiring DCS.
70cm	448.625MHz (-) 100Hz PL	Linked to 2m / 145.490MHz. 1° disaster net freq.
70cm	449.350MHz (-) 100Hz PL	Wide area coverage with Echolink, node # 4140. Secondary frequency during emergency net.
70cm	449.775 MHz (-)	Yaesu digital, C4FM, Wires-X, DN, VW & Data. No analog FM. W0TX Room 40931.
70cm	446.7875MHz (-)	BrandMeister Repeater: Slot 1 – Wide Area Traffic, Slot 2 – Local Talk Group 310804

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JULY 2024		<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	2	3 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	4 	5  New Moon	6
7	8	9	10 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	11	12	13 IARU HF World Championship - Begins 1200  First Quarter
14 IARU HF World Championship - Ends 1159 UTC	15	16	17 DRC Lunch 11:30 @ Valley Inn Restaurant, Lakewood. DRC Monthly Online Meeting Elmer 6 PM Meeting 7 PM	18	19	20
21  Full Moon	22	23	24 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	25	26	27  Last Quarter
28	29	30	31 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)			

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

DRC BOARD OF DIRECTORS

President	W0GV	Gerry Villhauer	303-467-0223	president@w0tx.org
Vice-President	K0KPS	Kevin Schmidt	303-475-9234	k0kps@arrl.net
Secretary	WW0LF	Orlen Wolf	303-279-6264	secretary@w0tx.org
Treasurer	N0CRZ	Cathy Villhauer	303-467-0223	treasurer@w0tx.org
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Benevolent		Carolyn Wolf	303-279-1328	benevolent@w0tx.org
Club Librarian	WG0N	Dave Baysinger	303-987-0246	wq0n@arrl.net
Digital Committee	W6OAV	Bill Rinker	Check Roster	digital@w0tx.org
Education Coordinator	Open			elmer@w0tx.org
EmComm Coordinator	KE0HFH	Michael Vespoli	303-215-8862	emcomm@w0tx.org
Field Day Chairman	N6WHV	Dick Nelson		fieldday@w0tx.org
Membership	N0CRZ	Cathy Villhauer	303-467-0223	membership@w0tx.org
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Public Relations	K0AXP	Dave Verlinde	248-515-2371	publicrelations@w0tx.org
RT Managing Editor	AD0UZ	Brennan Pate	Check Roster	roundtable@w0tx.org
RT Associate Editor	W6OAV	Bill Rinker	Check Roster	Check Roster
Hamfest Manager	KE0YKV	Bill Worthington	720-626-5485	drcfest@w0tx.org
Tech. Committee Chair	Open			tech@w0tx.org
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VE Team	K0RAP	Robert Pickett	720-336-0114	k0rap@w0tx.org
Website & YouTube	K1DBC	Doron Ben Chaim	720-254-1561	websiteadmin@w0tx.org

Please Let Us Know

Over the years we occasionally hear from hams who have read the Round Table in other states and countries around the world. We appreciate the comments and we would like to know where you are located. So if you live outside the Front Range or Denver Metro Area and read the newsletter either online, email or hard copy please send a short note via email with your *City, State or City, Country*.

We will publish it at a later date in our new regular feature called Round Table Round World.

To respond to this request send your information to roundtable@w0tx.org.

Subject: I'm located in...

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DRC members - this is your newsletter. Please email your club or amateur radio related suggestions to the editor. Members are the heart of The Denver Radio Club, so if you have an expertise or an interest in a particular segment of ham radio that you'd like to write about, you may email your submissions to roundtable@w0tx.org. The submission deadline is the 25th of the Month. ~ Editor