



THE ROUND TABLE

Monthly Newsletter Of The Denver Radio Club

Since 1917

September 2024

PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

We are getting closer to being over with the hot days. From the 100's to 80's feels much better. Time to get those outdoor antenna projects completed before we are complaining about the cold and snow.

Our September program will be two fold. We will have our annual meeting and election of officers followed by a program presented by Mr. Riley Hollingsworth, K4ZDH, retired Special Counsel to the FCC's Enforcement Bureau. Since retirement, Riley has taken on the duty of heading up the Volunteer Monitor Service. You will find the results of the Volunteer Monitor Service Reports in the monthly issues of QST Magazine. Riley is a dynamic speaker and I am sure will have some very interesting stories to share. Mark your calendars for Wednesday September 18th at 7 pm. Don't miss it!

On Saturday, August 31st, another DRC Saturday event was held at Prospect Arena in West Arvada. This coincided with the Colorado State QSO Party. A portable antenna was set up along with a battery powered HF radio. Many contacts were made and logged. A turn at the mic was passed around and for several operators this was their first opportunity to actually get on the air. Refreshments were provided including donuts, hot dogs and soft drinks. The weather was great as was the attendance, which was approximately 25 folks.

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



WHO'S NEW IN THE DRC?

First of all, we have a new Membership Chairperson, Kelly Sobanski, KB8OGP taking over for Cathy Villhauer, N0CRZ. A big thank you to Cathy for all her work with the membership care-taking. We really appreciate it. Kelly, thank you for stepping in.

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:

Sam Chrisbens - NOKEI	Kathy Samaras - NOGLA
Joe Dickinson - WTOC	Jay Burnham - KB0MPF
Aaron Kinman - W0AJK	Richard (Rik) Plass - ACOFY
Aidan Keiser - KF0PYH	Karen Goodgie - KE0FWE
Bruce Kirkpatrick - KE0VR	Casey Davis - NV9P
Thomas Cornett - AC3TM	Peter Kozacik - KEØTSF
Jamie Lightner - KF0RLC	Charlie Marshall - No Call
Len Koppl - KD0RC	Mark Hutchinson - N7CD
Jeremy Broin - KF0PVI	

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

What are the Effects of Raising a VHF/UHF Antenna?

The answer can be found on page 12 of the December 2017 issue of the Roundtable:

[https://w0tx.org/RoundtableArchive/2017-RoundTables/RT201712\(DEC\).pdf](https://w0tx.org/RoundtableArchive/2017-RoundTables/RT201712(DEC).pdf)

UNDERSTANDING SOLAR FLUX NUMBERS

BY BILL RINKER, W6OAV

When accessing QRZ.com and many other ham related websites we see the chart shown in Figure 1. So, what do these numbers mean? The following videos provide good explanations of the solar numbers:

What exactly are the key Solar Indices?

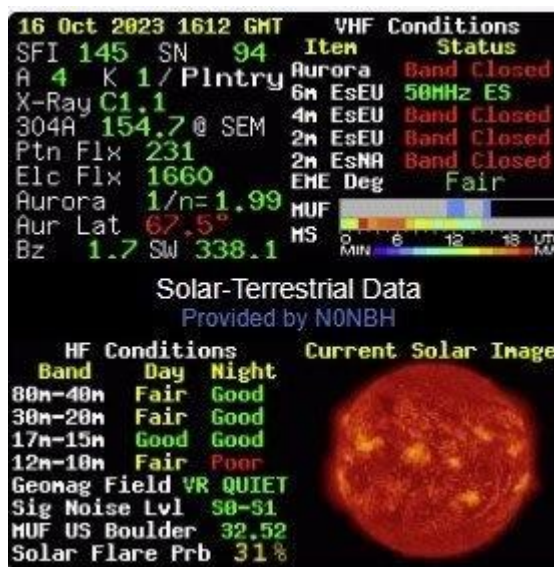
<https://www.youtube.com/watch?v=hsI0JezFZ80>

How Solar Indices Work: SFI, SN, A & K (#324)

<https://www.youtube.com/watch?v=Yp01Cxiu0jk>

Making sense of Solar Indices

<https://www.youtube.com/watch?v=JoXvdPPAe6c&t=74s>



TUNING A DIPOLE

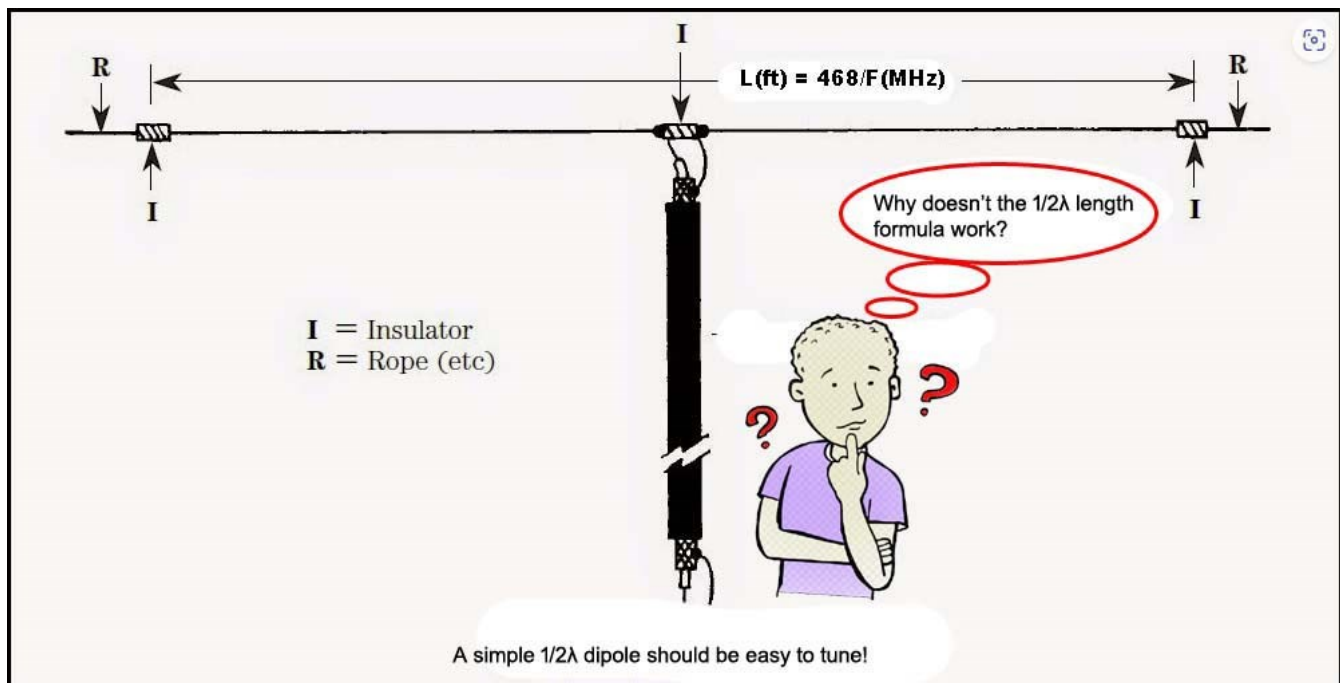
BY BILL RINKER, W6OAV

1/2λ dipole antennas are great, but they can be a pain to install. The standard formula for calculating the length of a 1/2λ dipole antenna, $L(\text{feet}) = 468 / F(\text{MHz})$, is often inaccurate. This can lead to a lot of trial and error when trying to get the antenna to the correct length.

The standard 1/2λ dipole formula is an *approximation* that can be used to calculate the length of a dipole antenna. However, the actual length of the antenna will vary depending on several factors, including the height of the antenna, the ground conductivity [1], nearby trees, houses, etc. The standard 1/2λ dipole formula was derived experimentally by G. Wm. Lang in 1926 and was included in the 1926 Antenna Handbook. The formula is still a good starting point for calculating the length of a dipole antenna. However, it is important to keep in mind that the actual length of the antenna may vary from the calculated value. [2].

There is a simple procedure for installing a $1/2\lambda$ dipole antenna in a particular environment. The procedure involves determining a new constant to replace the constant 468 in the standard formula. This new "[standard formula](#)" will take into account the effects of the environment around the dipole. This new "standard formula" will be useful for future antenna installations in that same environment. The following illustrates the procedure for installing a dipole for 7.2 MHz:

1. Let (F1) be the desired dipole frequency:
 - a. Let F1 = 7.2 MHz.
2. Choose a frequency (F2) slightly lower than the desired frequency (F1) to allow for cutting:
 - a. Assume F2 = 7.1 MHz.
3. Using F2, calculate and cut the length (L1) of the dipole using the standard formula:
 - a. $L1(\text{ft}) = 468 / F2 = 468 / 7.1 = 65.9155'$.
4. Raise the dipole and measure its resonance frequency (F3):
 - a. For this example, assume the measured frequency (F3) is 7.044 MHz.
5. Use the (F3) to calculate a new formula constant (C1) to replace the constant 468:
 - a. $C1 = (L1) \times (F3) = 65.9155' \times 7.044 \text{ MHz} = 464.3088$.
6. Replace 468 with the new constant (C1) and calculate the new length (L2) of the dipole:
 - a. $L2(\text{new ft}) = C1 / F1 = 464.3088 / 7.2 = 64.4873'$.
7. Lower and cut the dipole to the new length L3:
 - a. $L3 = L1 - L2$.
 - b. Cut off a total of $65.9155' - 64.4873' = 1.4282'$ or $17.1384''$ from the total length of the dipole or $8.5692''$ from each end.
8. Reraise the dipole and remeasure to verify proper resonance:
 - a. The resonance frequency should now be close to the desired frequency.
9. Save the new "standard" formula developed in step 6 ($L = 464.3088/F$) for installing future antennas in this same environment.



A better solution

Why not install a dipole that does not require tuning, functions better than a tuned dipole and provides multiband operation with gain? [3] [4].

References

[1]. Ground Conductivity in the United States:

<https://www.fcc.gov/media/radio/m3-ground-conductivity-map>

[2]. QST, October 1929, "The Length of the Hertz Antenna."

<https://worldradiohistory.com/hd2/IDX-Short-Wave/QST-IDX/IDX/20s/QST-1926-10-OCR-Page-0018.pdf>

[3]. *Roundtable*, Feb 2016, P 10, "Building a Simple Lossless All Band Dipole":

[https://w0tx.org/RoundtableArchive/2016-RoundTables/RT201602\(FEB\).pdf](https://w0tx.org/RoundtableArchive/2016-RoundTables/RT201602(FEB).pdf)

[4]. THE ALL BAND HF DOUBLET:

<http://www.hamuniverse.com/hfdoublet.html>

CFT1—5 BAND CW FIELD TRANSCEIVER

FROM JONATHAN KAYNE, KM4CFT

(Editors Note: Jonathan is a member of the DRC and over the past year has been working on designing and releasing the CFT1. The kits will be up for sale soon. <https://www.qrz.com/db/KM4CFT>)

Here is some information from the brochure:

The perfect companion for the POTA/SOTA activator as well as Portable or base station!

Amazing performance on the five most useful CW portable op bands (40-30-20-17-15M). Smooth break-in CW (no pops in between characters or letters) and low internal noise receiver, yet very sensitive. AGC to automatically control most strong signals from overloading. No fatigue to listen to this radio all day long.

Best of all, this radio has just the most important features that are well thought out to access via the simple and limited "single level" menu. So easy to operate that most CW ops will be able to use almost all functions right away and just a quick glance at the operating manual will be there for confirming the functions. CW message memories are performed all from the menu so there is no problems with having to re-record over errors in paddle entry systems.

Actual knobs for volume and frequency change, no clumsy up/down buttons! Push the frequency knob to change tuning rate. Use your earphones or a powered external speaker.

Reliable, forgiving with poor loads and will get you on the air even with compromised antennas as can be found in many POTA/SOTA/apartment conditions.

Some unique features not found in other small QRP radios, like XIT. Why XIT (transmit offset)? Tune in the station you wish to call and if there are more than one station calling, you can use XIT to move your transmit frequency up or down while still not moving your receive frequency

to present a different and easier to copy difference tone to the receiving station. Every QRP radio should have RIT/XIT but most do not have XIT.

Dual function (long press) buttons to access RIT/XIT, not buried in a menu!

Logical layout and FOUR memory playback buttons on the front panel - no digging thru menus to playback your memories! Excellent for calling CQ and saying 73!

Easy to build for the intermediate builder, lots of fun to use, just turn on and start making contacts!

Features and Specs:

- 40-15m Bands, 40m-8W, 30/20m-5W, 17/15m-3W
- 60-90mA Receive, 0.7-1.5A Transmit
- 8-14V wide input voltage range
- Dedicated buttons for message playback
- Simple User Interface
- AGC, RIT and XIT
- 2.75"L x 4"W x 1.5"D, weighs less than 8 ounces
- Variable Key Speed, Straight, Iambic A/B
- Paddle Reverse, Adjustable Sidetone and Tx Offset
- 350 Hz Crystal Filter (hand matched for precise filtering)



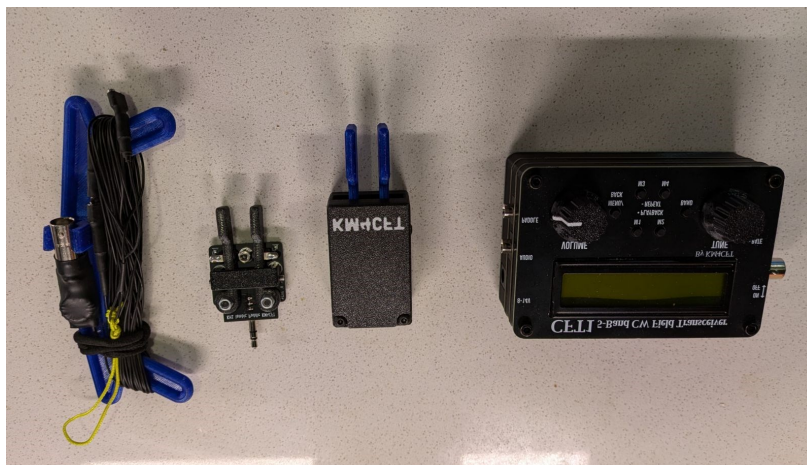


Image: Charlie NJ7V, Red Summit RF activating a SOTA summit with the CFT1

<https://www.ebay.com/str/radiodanw7rf> or <https://HamGadgets.com>

QRZ Bio: My name is Jonathan, a young Extra Class Operator. I am a graduate from Virginia Tech and currently live south of Denver, Colorado.

My freshman year in high school, I stopped by the library to pick up a book about electronics. The "brobarian", noticed this and told me about the Make Club, which was still in development, and he later introduced me to a Senior named Zach Thompson. Zach and I became really good friends and during the annual Moogfest, he asked me if I wanted to get a ham radio license. After lots of studying (and joking), on May 19th, 2014 Zach earned his tech under the callsign KM4BLG. I found out that you could study for more than one class and so I studied for General and extra. As a result, on June 16th, 2014 I earned my Technician and General class license (I missed the extra by 1 question!) under the callsign KM4CFT. At the following WCARS Hamfest, Zach upgraded to General, and the Next year, I upgraded to Extra on July 25th, 2015. So far, amateur radio has had a massive influence on my life, and my all time favorite hobby!



DRC SATURDAY RESULTS

FROM MARK THOMAS, N0XRX

The recent DRC Saturday was another great event with a lot of people attending.

Here are the numbers from the logs:

Total Contracts	70
Total QSO Points	77
Total Multipliers	31
Total Score	2387

The software worked great and I asked people while they were using it and they all seemed to like it.

Thanks for everyone's help!!

USB CONFUSION

BY BILL RINKER, W6OAV

Computers are an essential tool for radio amateurs. They are used for a variety of tasks, from logging contacts to controlling radios. Computers make amateur radio more efficient, more enjoyable, and more accessible. However, even though widely used there is a lot of confusion about USB. So, why the confusion? Well, there are a few reasons:

- The naming conventions are confusing. USB standards have been renamed several times over the years, which can make it difficult to keep track of which standard is which. For example, USB 3.0 was originally called SuperSpeed USB, and USB 3.1 Gen 1 was originally called USB 3.0.
- There are many different USB connectors. USB devices use a variety of different connectors, each with its own advantages and disadvantages. For example, USB-A connectors are the most common USB connector, but they are not reversible. USB-C connectors are reversible, but they are not as widely available as USB-A connectors.
- The power delivery capabilities of USB devices vary. USB devices can draw different amounts of power, depending on their needs. This can be confusing when trying to choose the right cable for a particular device.
- The USB Implementers Forum (USB-IF) is working to address some of the confusion around USB by simplifying the naming conventions and making it easier to choose the right cable for a particular device. However, it may take some time for these changes to be fully implemented.

USB standards and connectors are closely related. The USB standard defines the electrical and mechanical specifications for USB connectors, as well as the data transfer rates and power delivery capabilities of USB devices.

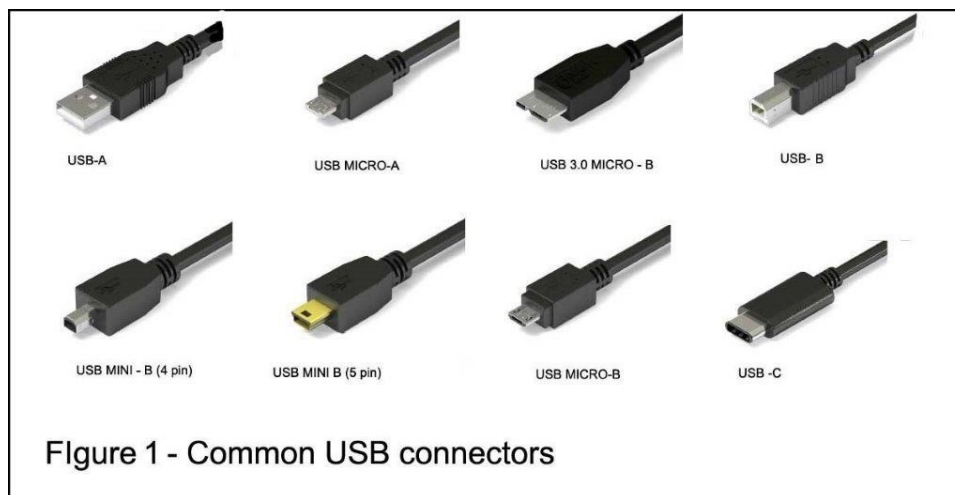
USB Standards

The different USB standards are:

- **USB 1.0:** This is the original USB standard, released in 1996. It supports a data transfer rate of up to 12 Mbps.
- **USB 1.1:** This is a revision of the USB 1.0 standard, released in 2000. It supports a data transfer rate of up to 12 Mbps.
- **USB 2.0:** This is a major revision of the USB standard, released in 2001. It supports a data transfer rate of up to 480 Mbps.
- **USB 3.0:** This is a major revision of the USB standard, released in 2008. It supports a data transfer rate of up to 5.0 Gbps.
- **USB 3.1:** This is a revision of the USB 3.0 standard, released in 2013. It supports a data transfer rate of up to 10.0 Gbps.
- **USB 3.2:** This is a major revision of the USB 3.0 standard, released in 2013. It supports a data transfer rate of up to 20 Gbps.
- **USB 4:** This is the latest USB standard, released in 2019. It supports a data transfer rate of up to 40 Gbps.

Figures 1 and 1A illustrate the common USB connectors. The following briefly describes these connectors.

- **USB-A:** This is the most common USB connector. It is used for a variety of devices, including computers, printers, and external hard drives.
- **USB Micro A:** Micro A is a smaller version of the standard USB-A connector. It is typically used on the host device, while USB Micro-B is used on the peripheral device. USB Micro A is not as common as USB Micro-B, but it can still be found on some devices.
- **USB Micro USB 3.0:** Micro B is a version of the USB Micro-B connector that supports faster data transfer speeds (up to 5 Gbps). It is typically used for connecting external hard drives, printers, and other devices that require a lot of data transfer.
- **USB-B:** This connector is often used for devices that require more power, such as printers and external hard drives.
- **USB-Micro-B:** This connector is smaller than USB-B and is often used for mobile devices, such as smartphones and tablets.
- **USB-C:** This connector is the newest USB connector and is designed to replace USB-A and USB-B. It is reversible, so it can be plugged in either way up.



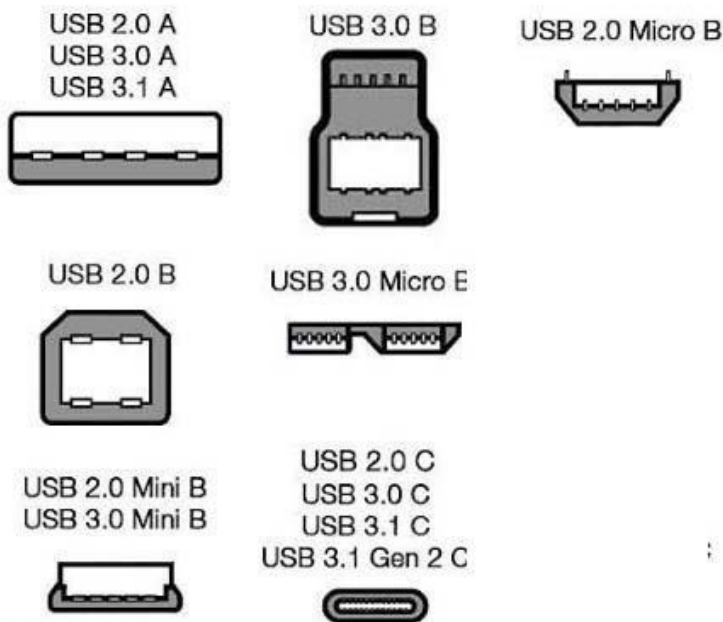


Figure 1A - USB CONNECTORS

The table below summarizes the capabilities of USB connectors.

SUMMARY OF THE DIFFERENT USB CONNECTORS (SEE FIGURES 1,1A & 2)				
Connector	Max speeds	Power Delivery	USB Standard	Common uses
USB-A	480 Mbps	500 mA	1.0, 2.0	Host devices, such as computers and printers
USB Micro A	480 Mbps	500 mA	1.0, 2.0	Host devices
USB Micro USB 3.0	5 Gbps	900 mA	2.0, 3.0	External hard drives, printers, and other devices requiring a lot of data transfer
USB-B	480 Mbps	500 ma	1.0, 2.0, 3.0	Peripheral devices, such as printers and
USB Mini-B 4-pin	480 Mbps	500 ma	1.0, 2.0, 3.0	Older devices, such as digital cameras and MP3 players
USB Mini-B 5-pin	480 Mbps	500 ma	1.0, 2.0, 3.0	Newer devices, such as smartphones and tablets
USB Micro B	480 Mbps	900 ma	1.0, 2.0, 3.0	Smartphones, tablets, cameras, and other portable devices
USB-C #	40 Gbps	100 watts	3.0, 3.1, 3.2, 4.0	Dual 4K & 8K displays at 60Hz

USB-C connectors are a new type of connector that offers a number of advantages over traditional USB connectors. They are reversible, faster, can deliver more power, and support multiple protocols such as the newest USB 4. As a result, USB-C connectors are becoming increasingly common, and they are likely to become the standard connector for many devices in the future.

The table below summarizes the relationship between USB standards and connectors.

SUMMARY OF THE RELATIONSHIP BETWEEN USB STANDARDS AND CONNECTORS			
USB Standard	Connectors	Data Transfer Rate	Cable Length #
USB 1.0	USB-A, USB-B	12 Mbps	5 m
USB 1.1	USB-A, USB-B	12 Mbps	5 m
USB 2.0	USB-A, USB-B USB-Micro A&B USB-Mini A&B USB-C	480 Mbps	5 m
USB 3.0	USB-A, USB-C, USB Micro-B	5.0 Gbps	3 m
USB 3.1	USB-A, USB-C, USB Micro-B	10 Gbps	1 m
USB 3.2	USB-A, USB-C, USB Micro-B	20 Gbps	1 m
USB 4	USB-C	40 Gbps	0.8 m

These are just the maximum recommended cable lengths. The actual cable length that can be used will vary depending on the quality of the cable and the environment in which it is used.

The different USB standards and connectors are compatible with each other, but the data transfer rate and power delivery capabilities will be limited to the capabilities of the older standard. For example, if you use an adapter cable to connect a USB 3.0 device to a USB 2.0 port, the device will only be able to transfer data at the USB 2.0 speed of 480 Mbps.

USB Cables

Figure 3 shows 8 types of USB cables, but not all of them are in active use today. The most common types of USB cables are:

- **USB Type-A to Type-A:** This is the most common type of USB cable. It has a rectangular connector on both ends. It is used to connect devices such as flash drives, keyboards, and mice to computers.
- **USB Type-A to Type-B:** This cable has a rectangular connector on one end and a square connector on the other end. It is used to connect devices such as printers and scanners to computers.
- **USB Type-C to Type-C:** This cable has a reversible connector on both ends. It can be plugged in either way. It is the latest type of USB cable and is becoming increasingly com-

mon.

- **Micro USB:** This cable has a small, rectangular connector on one end and a USB Type-A connector on the other end. It is used to connect smartphones, tablets, and other portable devices to computers.
- **Mini USB:** This cable is similar to micro USB, but it is slightly larger. It is not as common as micro USB, but it is still used by some devices.
- **USB Extension Cable:** This cable extends the length of a USB cable. It is useful if you need to connect a device that is far away from the USB port.
- **USB On-The-Go (OTG):** This cable allows you to connect a device that normally uses a USB Type-A connector to a device that normally uses a USB Type-B connector. For example, you can use an OTG cable to connect your smartphone to a printer.
- **Active USB Cable:** This cable has a built-in amplifier that boosts the signal strength. It is useful for connecting devices that are located in areas with poor signal reception.

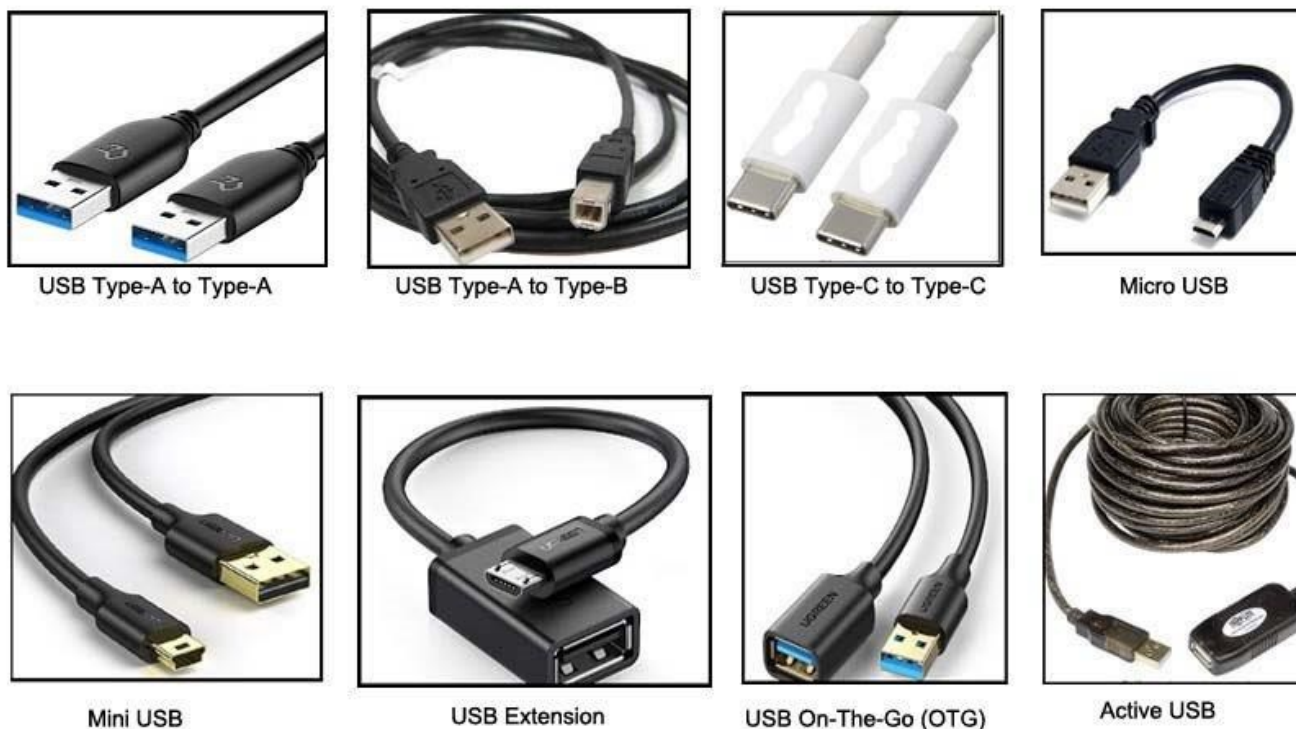


Figure 3 - The most common types of USB cables

Port Colors

USB port colors are not officially defined by the USB standard, but they are often used by manufacturers to indicate the capabilities of the USB port. See Figure 2.

It is important to note that the color of a USB port is not always a reliable indicator of its capabilities. Some manufacturers may use different colors for different ports, even if they have the same capabilities. It is always best to check the documentation for your device to see what type of USB port it is compatible with.

Color	Type	USB Specification
White	USB-A or USB-B. Micro USB-A	USB 1.x
Black	USB-A or USB-B. Micro USB-B	USB 2.0 Hi-Speed
Blue	USB-A or USB-B	USB 3.0 SuperSpeed
Teal	USB-A or USB-B	USB 3.1 Gen 1
Red	USB-A Sleep-and-Charge	USB-A USB 3.1 Gen 2 USB 3.2
Yellow	USB-A Sleep-and-Charge	USB-A USB 2.0 or USB 3.0
Orange	USB-A Sleep-and-Charge	USB-A USB 3.0

Figure 2 - USB Port Color Coding

Recommendations

Below are some tips on how to avoid confusion about USB.

Do your research. Before you buy a new USB device, take some time to read the documentation and make sure you understand the capabilities of the device and the cables you need to connect it.

Pay attention to the colors of the ports. USB ports are often color-coded to indicate their capabilities. For example, blue ports are typically used for USB 3.0 devices, while black ports are typically used for USB 2.0 devices.

Use a reversible connector. USB-C connectors are reversible, which means you don't have to worry about plugging them in the wrong way. This can be helpful if you are often connecting and disconnecting devices.

Make sure your cables are up to date. Older cables may not be compatible with newer USB standards. If you are unsure, check the documentation for your device or contact the manufacturer for help.

References

Clearing Up the Confusion About USB... Again:

<https://www.bhphotovideo.com/explora/computers/tips-and-solutions/clearing-up-the-confusion-about-usb-again>

USB: Port Types and Speeds Compared

<https://tripplite.eaton.com/products/usb-connectivity-types-standards/>

USB Generation Guide: What you Need to Know:

<https://www.yugatech.com/guides/usb-generation-guide-what-you-need-to-know/>

USB Cables:

<https://tripplite.eaton.com/products/usb-cables-usba~264-948>

A Simple Guide to USB Port Colors and Their Meanings:

<https://www.usbmemorydirect.com/blog/usb-port-colors/>

PAST ROUND TABLE PAGES

PROVIDED BY WOODY LINWOOD, W0UI

From the September 1960 edition.

The Round Table

Published Monthly by
THE DENVER RADIO CLUB, INC.
 P. O. Box 356 Denver 1, Colorado, U.S.A.

HARLEY FEHLMAN, Printer

BOARD OF DIRECTORS

Fontaine LaRue WØRQI	President
Charles Cotterell WØSIN	Vice-President
Howard Eldridge KØDCW	Treasurer
Les Richards WØICR	Secretary

140 So. Canaan Ct.
Denver 19, Colo.

Ralph Asbury WØVDY
 Larry Moesta WØJGW
 Mike Lyons WØPG

EDITOR:

Lys, KØPGM 45 So. King	WE. 5-2285
---------------------------	------------

ASSOCIATE EDITORS:

Chic, WØSIN 430 So. Swadley	YU. 5-0128
Major, KØAOA 695 Nile St., Golden	CR. 9-4103
Pat, KØEVG RFD 1, Box 469, Arvada	HA. 4-4060

TECHNICAL EDITOR:

Bill, KØAYG 1340 Ironton, Aurora	EM. 6-3641
-------------------------------------	------------

ADVERTISING MANAGER:

Roy, KØOVQ 770 Holly	FL. 5-5278
-------------------------	------------

Readers are cautioned that material meant for publication must be directed to the proper staff members of **THE ROUND TABLE**. All editorial matter should be directed to the editor or the proper associate editor. Advertising material, including "Buy-Sell-Swap" ads, must be directed to the advertising manager. **THE ROUND TABLE** staff cannot be responsible for material improperly directed.

Page Four

EDITORIAL

Lessons from "Aircrash"

It is the purpose of simulated emergencies like "Operation Aircrash" not only to train volunteer personnel but to give us warning of our weaknesses. Analysis of our performance during the two-day drill will be left to the proper authorities. There are, however, certain conclusions which can be drawn here.

The exercise did credit to its planners. It was not a game based on a make-believe enemy attack. It was a highly realistic exercise based on the very real every-day danger of a mid-air collision between a civilian and a military aircraft. It underlined the role of well-trained Civil Defense personnel in disasters of a domestic nature. It was a wise approach. The Civil Defense worker who feels that he will be useful only if and when there is a nuclear war often loses interest.

The role of the amateur radio operator in this exercise was particularly significant. Activity of the participating groups was spread over a wide area of rugged terrain. Communication was the hub on which the entire operation turned.

Then, too, amateur radio served as the guardian of the more than 200 people who took part in the drill. With such a large number of people so far from civilization, this was the ever-present danger that a very real emergency would develop.

These two factors made "Operation Aircrash" not only a good training exercise but a good demonstration of the capabilities of amateur radio. And the operators who took part did a creditable job.

Now, what did we learn? For one thing, we were reminded that CD not only depends upon our skill as operators, but on our equipment as well. A mobile unit that isn't in reliable working order isn't a mobile unit. Emergencies won't wait until you replace that burned-out screen resistor.

Versatility must also be considered. Some of the most important areas of the exercise could not be reached by car. We needed pack sets and walkie-talkies. We didn't have them, save for a few two-meter units, which were shown little mercy by the jagged terrain around Mount Evans. A mobile transmitter under the dash and a

(Continued on Page Eleven)

© Denver Radio Club

W0TX

Page 14

w0tx.org

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
[Montgomery ARC \(MD\)](#)

THE ROUND TABLE ARCHIVE AND ARTICLE INDEX

w0tx.org/roundtable

PROPAGATION FORECAST

By Bill Rinker, W6OAV

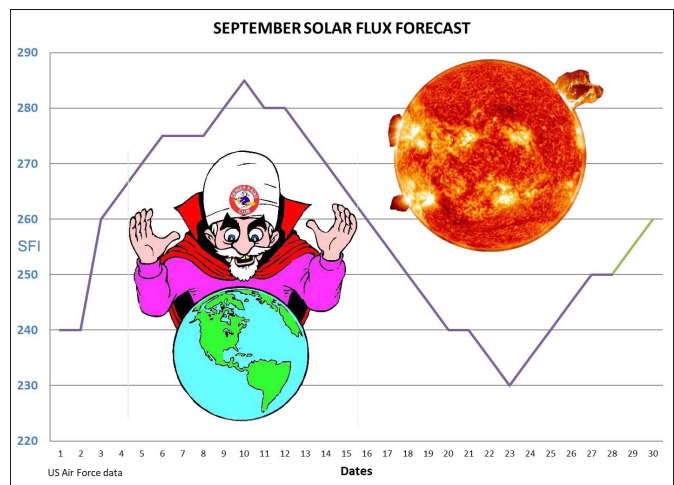
The charts below show the Solar Flux and “A” indexes for last month and the forecast for this month’s Solar Flux index.

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)

Amateur Radio Propagation Website
Carl Luetzelschwab, K9LA

k9la.us

The purpose of this website is to provide a comprehensive resource for hams, particularly focusing on propagation and solar topics. The website contains propagation articles, tutorials, specific band information, monthly features and timely topics.



UPCOMING EVENTS HAMFESTS & CONVENTIONS

Event	Date	Location	Sponsor Website
BARCfest	10/6/24	Boulder Cty Fairgrounds Exhibit Bldg	Barcfest Info

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
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	
Arizona	10/12/2024	10/13/2024	Arizona QSO Party	
Pennsylvania	10/12/2024	10/13/2024	The PA QSO Party Association	
South Dakota	10/12/2024	10/13/2024	Prairie Dog Amateur Radio Club	
New York	10/19/2024	10/20/2024	New York State QSO Party	
Illinois	10/27/2024	10/28/2024	Western Illinois Amateur Radio Club	

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

**HAM
RADIO
OUTLET**

NOBODY BEATS AN HRO DEAL!

COME VISIT US AT
8400 E ILIFF AVE #9, DENVER, CO 80231
 TOLL FREE: 800.444.9476 | DIRECT: 303.745.7373 | EMAIL: DENVER@HAMRADIO.COM
HAMRADIO.COM

SEPTEMBER 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  New Moon	3	4 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	5	6	7
8	9	10	11 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)  First Quarter	12	13	14 September VHF
15 September VHF	16 September VHF	17  Full Moon	18 DRC Lunch 11:30 @ Valley Inn Restaurant, Lakewood. DRC Monthly Online Meeting Elmer 6 PM Meeting 7 PM	19	20	21 EME 2.3 GHz & Up 10 GHz & Up - Round 2
22 EME 2.3 GHz & Up 10 GHz & Up - Round 2	23	24  Last Quarter	25 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	26	27	28
29	30					

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
Board Member	N0XRX	Mark Thomas	720-438-0848	n0rx@w0tx.org
Board Member	K1DBC	Doron Ben Chaim	720-254-1561	k1dbc@w0tx.org
Board Member	WG0N	Dave Baysinger	303-987-0246	wq0n@arrl.net
Board Member	KB0CHT	Jeff Irvin	Check Roster	Check Roster

DRC STAFF AND VOLUNTEERS

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	KB8OGP	Kelly Sobanski		membership@w0tx.org
Net Control	KS0E	Alex Acerra	Check Roster	net@w0tx.org
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
Trustee	WW0LF	Orlen Wolf	303-279-6264	trustee@w0tx.org
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...

EDITOR'S NOTE © 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 roundtable@w0tx.org. The submission deadline is the 25th of the Month. ~ Editor